



AGENDA MATERIALS
TRI-DAM PROJECT



TRI-DAM POWER
AUTHORITY



BOARD MEETING

November 17, 2022

**REGULAR BOARD MEETING
AGENDA
TRI-DAM PROJECT
of THE OAKDALE IRRIGATION DISTRICT and
THE SOUTH SAN JOAQUIN IRRIGATION DISTRICT
NOVEMBER 17, 2022
9:00 A.M.**

**Oakdale Irrigation District
1205 East F Street
Oakdale, CA 95361**

*** SEE BELOW FOR INSTRUCTIONS REGARDING PUBLIC COMMENT AND
PARTICIPATION**

NOTICE: Coronavirus (COVID-19)

A COMPLETE COPY OF THE AGENDA PACKET WILL BE AVAILABLE ON THE OAKDALE IRRIGATION DISTRICT WEB SITE (www.oakdaleirrigation.com) ON MONDAY, NOVEMBER 14, 2022 AT 9:00 A.M. ALL WRITINGS THAT ARE PUBLIC RECORDS AND RELATE TO AN AGENDA ITEM WHICH ARE DISTRIBUTED TO A MAJORITY OF THE BOARD OF DIRECTORS LESS THAN 72 HOURS PRIOR TO THE MEETING NOTICED ABOVE WILL BE MADE AVAILABLE ON THE OAKDALE IRRIGATION DISTRICT WEB SITE (www.oakdaleirrigation.com).

**INFORMATION FOR MEETING DURING CONTINUED PROCLAIMED STATE OF
EMERGENCY**

(Effective 3/27/2020 – until further notice):

Pursuant to California Governor Gavin Newsom’s Executive Order N-29-20, a local legislative body is authorized to hold public meetings via teleconferencing and to make public meetings accessible telephonically or otherwise electronically to all members of the public who wish to participate and to provide public comment to the local legislative body during the current health emergency. The Tri-Dam Project and Tri-Dam Power Authority Board of Directors (Tri-Dam Directors) will adhere to and implement the provisions of the Governor’s Executive Order related to the Brown Act and the utilization of technology to facilitate participation.

*The location of the Tri-Dam meeting will be at the office of the Oakdale Irrigation District, 1205 East F Street, Oakdale and will be open to the public based on a reservation system. Be advised these facilities only have 3 – 4 seats available for public access due to implemented protection measures for the COVID-19 virus.

****Public members who wish to participate, listen to, and provide comment on agenda items can do so by telephone by calling 1 (669) 900-9128, Access Code: 358-572-1867. All speakers commenting on Agenda Items are limited to five (5) minutes.**

Members of the public may also submit public comments in advance by e-mailing nfiez@oakdaleirrigation.com by 4:30 p.m., Wednesday, November 16, 2022.

In addition to the mandatory conditions set forth above, the Tri-Dam Directors will use sound discretion and make reasonable efforts to adhere as closely as reasonably possible to the provisions of the Brown Act, and other applicable local laws regulating the conduct of public meetings.

In compliance with the Americans with Disabilities Act, a person requiring an accommodation, auxiliary aid, or service to participate in this meeting should contact the Executive Assistant at (209) 840-5504, as far in advance as possible but no later than 24 hours before the scheduled event. Best efforts will be made to fulfill the request.

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL: John Holbrook, Bob Holmes, Dave Kamper, Glenn Spyksma, Mike Weststeyn
Brad DeBoer, Herman Doornenbal, Tom Orvis, Linda Santos, Ed Tobias

PUBLIC COMMENT

CONSENT CALENDAR

ITEMS 1 - 3

1. Approve the regular board meeting minutes of October 20, 2022.
2. Approve the October statement of obligations.
3. Approve the Financial Statements of the nine months ending September 30, 2022.

ACTION CALENDAR

ITEMS 4 - 6

4. Review and possible action to approve of holiday time off between Christmas and New Year's for all Tri-Dam employees.
5. Review and possible action to approve of the Associated California Water Agencies Annual 2023 Membership Dues.
6. Review and possible action to approve the purchase of a milling machine and corresponding budget amendment.

DISCUSSION

ITEMS 7 - 11

7. 2022 IBEW Incentive Program.
8. Canyon Tunnel Update Presentation – 90% Design Proposal.
9. Discussion regarding the 1988 Agreement Conservation Accounting – *to be presented at the meeting.*
10. Discussion regarding the Power Purchase agreement process in negotiation.

11. Discussion of the 2023 Draft Budget – *to be presented at the meeting.*

COMMUNICATIONS

ITEMS 12 - 15

12. Staff reports as follows:
a. General Manager Report
b. Operations & Maintenance Report
c. Compliance Report
13. Generation Report
14. Fisheries studies on the Lower Stanislaus River
15. Directors' Comments

CLOSED SESSION

ITEM 16

16. a. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
Government Code § 54956.9(d)(1)
1. *SJTA v. State Water Resources Control Board*
Judicial Council Coordination Proceeding 5013
- b. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION
Possible Initiation of Litigation
Government Code § 54956.9(d)(4)
Four (4) cases
- c. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION
Significant Exposure to Litigation
Government Code § 54956.9(d)(2)
Two (2) cases
- d. PUBLIC EMPLOYMENT
Government Code sec. 54957(b)
1. General Manager
2. Finance & Administrative Manager
3. Finance Clerk

ADJOURNMENT

ITEM 17

17. Adjourn to the next regularly scheduled meeting

BOARD AGENDA REPORT

Date: 11/17/2022
Staff: Genna Modrell

SUBJECT: Tri-Dam Project October 2022 Minutes

RECOMMENDED ACTION: Review and possible approval of October 20, 2022 Minutes

BACKGROUND AND/OR HISTORY:

Draft minutes attached.

FISCAL IMPACT: None

ATTACHMENTS: October 20, 2022 Minutes

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)

**TRI-DAM PROJECT
MINUTES OF THE JOINT BOARD
OF DIRECTORS REGULAR MEETING**

October 20, 2022
Manteca, California

The Joint Boards of Directors of the Oakdale Irrigation District and the South San Joaquin Irrigation District met in joint session at the office of South San Joaquin Irrigation District in Manteca, California, on the above date for the purpose of conducting business of the Tri-Dam Project, pursuant to the resolution adopted by each of the respective Districts on July 29, 1955.

President Holmes called the meeting to order at 9:00 a.m.

OID DIRECTORS

SSJID DIRECTORS

DIRECTORS PRESENT:

BRAD DeBOER
ED TOBIAS
LINDA SANTOS
TOM ORVIS
HERMAN DOORNENBAL

JOHN HOLBROOK
BOB HOLMES
MIKE WESTSTEYN
GLENN SPYKSMA
DAVE KAMPER

Also, Present:

Jeff Shields, Interim General Manager; Scot A. Moody, General Manager, Oakdale Irrigation District; Peter Rietkerk, General Manager, South San Joaquin Irrigation District; Sharon Cisneros, Chief Financial Officer, Oakdale Irrigation District; Susan Larson, License Compliance Coordinator, Tri-Dam Project; Genna Modrell, Finance Asst., Tri-Dam Project; Chris Tuggle, Operations and Maintenance Manager, Tri-Dam Project; Katie Patterson, Public & Government Relations Manager, SSJID; Mia Brown, Counsel, SSJID; Tim O'Laughlin, Counsel, via zoom.

PUBLIC COMMENT

No public comment.

CONSENT CALENDAR

- ITEM #1** Approve the regular board meeting minutes of September 15, 2022.
- ITEM #2** Approve the September statement of obligations.
- ITEM #3** Approve the Financial Statements for the seven months ending July 31, 2022.
- ITEM #4** Approve the Financial Statements for the eight months ending August 31, 2022.

Director DeBoer moved to approve items one through four on the consent calendar. Director Spyksma seconded the motion.

The motion passed by the following roll call vote:

AYES: Orvis, DeBoer, Doornenbal, Santos, Tobias, Holbrook, Holmes, Kamper, Spyksma, Weststeyn
NOES: None
ABSTAINING: None
ABSENT: None

ACTION CALENDAR

ITEM #5 Discussion and possible action to approve the 2022 unrepresented employee pay

schedule.

Jeff Shields presented an updated unrepresented pay schedule which includes the Interim General Manager position.

Director Holbrook moved to approve as presented. Director Santos seconded the motion.

The motion passed by the following roll call vote:

AYES: Orvis, DeBoer, Doornenbal, Santos, Tobias, Holbrook, Holmes, Kamper, Spyksma, Weststeyn

NOES: None

ABSTAINING: None

ABSENT: None

ITEM #6 Discussion and possible action to approve the purchase of a CyberLock Security System.

Chris Tuggle presented the CyberLock Security System and responded to Director questions.

Director Holbrook moved to approve purchasing the security system as presented. Director Santos seconded the motion.

The motion passed by the following roll call vote:

AYES: Orvis, DeBoer, Doornenbal, Santos, Tobias, Holbrook, Holmes, Kamper, Spyksma, Weststeyn

NOES: None

ABSTAINING: None

ABSENT: None

ITEM #7 Discussion and possible action to authorize Interim General Manager to purchase a new General Manager vehicle not to exceed \$65,000.

Director Kamper moved to approve as presented and included a budget amendment since this item was pulled from the revised budget in May 2022. Director Orvis seconded the motion.

The motion passed by the following roll call vote:

AYES: Orvis, DeBoer, Doornenbal, Santos, Tobias, Holbrook, Holmes, Kamper, Spyksma, Weststeyn

NOES: None

ABSTAINING: None

ABSENT: None

ITEM #8 Discuss and consider approving submittal of comments regarding California Air Resources Board, proposed "Advanced Clean Fleets" regulation.

Katie Patterson presented the proposed "Advanced Clean Fleets" regulations and the need to provide input during public comment on October 27, 2022.

Director Orvis moved to approve submitting Tri-Dam comments on proposed "Advanced Clean Fleets" regulation. Director Kamper seconded the motion.

The motion passed by the following roll call vote:

AYES: Orvis, DeBoer, Doornenbal, Santos, Tobias, Holbrook, Holmes, Kamper, Spyksma, Weststeyn

NOES: None

ABSTAINING: None

ABSENT: None

Communications

ITEM #9 Staff Reports:

- A. Interim General Manager, Jeff Shields
- Mr. Shields advised the Board about an employee appreciation dinner to be held Saturday, December 3, 2022.
 - Mr. Shields added a budget meeting is scheduled for October 27th.
- B. Operations and Maintenance Manager, Chris Tuggle
- Mr. Tuggle reminded the board of current outages at Beardsley and Sandbar and expects to be back online by December 1st.
- C. License Compliance Coordinator, Susan Larson
- Beardsley Cultural Resources will be complete by year end. No comments in addition to what was provided in the Board packet.

ITEM #10 Generation Report

No report.

ITEM #11 Fisheries Studies on the Lower Stanislaus River

No report.

ITEM #12 Directors Comments

Director Holmes, thanked staff for keeping things moving. Directors Orvis also thanked her.

Director DeBoer talked about a study to create a pressurized system from Goodwin.

President Holmes recessed to the Tri-Dam Power Authority Board of Commissioners meeting at 10:27 a.m.

The Tri-Dam Project meeting resumed at 10:28 a.m. after the Tri-Dam Power Authority meeting adjourned.

President Holmes announced before closed session that the following items would be discussed. The Board took a brief recess at 10:28 a.m. and convened to Closed Session at 10:40 a.m.

ITEM #13 Closed Session

18. a. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
Government Code § 54956.9(d)(1)
1. *Lee Tyler et al. v Oakdale Irrigation; et al.*
Calaveras Superior Court Case No. 17CV42319
 2. *SJTA v. State Water Resources Control Board*
Judicial Council Coordination Proceeding 5013
- b. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION
Possible Initiation of Litigation
Government Code § 54956.9(d)(4)
Four (4) cases
- c. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION

Significant Exposure to Litigation
Government Code § 54956.9(d)(2)
Two (2) cases

- d. PUBLIC EMPLOYMENT
Government Code sec. 54957(b)
 - 1. General Manager
 - 2. Finance & Administrative Manager

At the hour of 11:57 a.m., the Board reconvened to open session.

Disclosure of reportable actions taken in Closed Session, pursuant to Government Code Section 54957.1: There were no reportable actions taken in closed session.

ADJOURNMENT

President Holmes adjourned the meeting at 11:58 a.m.

The next regular board meeting is scheduled for November 17, 2022, at the offices of Oakdale Irrigation District beginning at 9:00 a.m.

ATTEST:

Jeff Shields, Interim Secretary
Tri-Dam Project

BOARD AGENDA REPORT

Date: 11/17/2022
Staff: Genna Modrell

SUBJECT: Tri-Dam Project October Statement of Obligations

RECOMMENDED ACTION: Recommend Approval of October Statement of Obligations

BACKGROUND AND/OR HISTORY:

Submitted for approval is the October Statement of Obligations for Tri-Dam Project.

FISCAL IMPACT: See Attachments

ATTACHMENTS: Tri-Dam Project Statement of Obligations

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)

Tri-Dam Project

Statement of Obligations

Period Covered

October 1, 2022 to October 31, 2022

**TRI-DAM PROJECT
STATEMENT OF OBLIGATIONS
Period Covered
October 1, 2022 to October 31, 2022**

One-Half Oakdale Irrigation District	\$ 357,027.85
One-Half South San Joaquin Irrigation District	\$ 357,027.86
Total Obligations	<u>\$ 714,055.71</u>

CERTIFICATION

OAKDALE IRRIGATION DISTRICT

Thomas D. Orvis

Ed Tobias

Linda Santos

Herman Doornenbal

Brad DeBoer

SOUTH SAN JOAQUIN IRRIGATION DISTRICT

John Holbrook

Robert A. Holmes

Dave Kamper

Glenn Spyksma

Mike Weststeyn

Each of the undersigned certifies that he is President or Secretary of his respective District;
That the amounts designated above have been properly incurred as an obligation of the Tri-Dam Project; that
checks for payment of said amounts have been drawn on a Tri-Dam Project account at Oak Valley Community
Bank, Sonora, California.

**OAKDALE IRRIGATION DISTRICT
PRESIDENT,**

Thomas D. Orvis

SECRETARY,

Scot A. Moody

Date

**SOUTH SAN JOAQUIN IRRIGATION DISTRICT
PRESIDENT,**

Robert A. Holmes

SECRETARY,

Peter M. Rietkerk

Date

Tri Dam Project Statement of Obligations

Period Covered

From To

October 1, 2022 to October 31, 2022

	<u>No. Chks.</u>	<u>Amount</u>
<u>Vendor Check Register Report</u> (Please see attached Check Listing)	111	\$492,384.91
 <u>Payrolls - Net Charges</u>		
<u>Pay Date</u>	<u>Type</u>	<u>Payroll Amount</u>
13-Oct-22	Payroll	\$ 110,729.25
27-Oct-22	Payroll	\$ 110,941.55
 Total Net Payroll		 <u>\$ 221,670.80</u>
 Total Disbursements for the Period		 <u><u>\$714,055.71</u></u>
 Distribution Between Districts ~		
Oakdale Irrigation District		\$ 357,027.85
South San Joaquin Irrigation District		\$ 357,027.86
 Total Districts		 <u><u>\$ 714,055.71</u></u>

Project

October Checks by Amount



Check Number	Vendor No	Vendor Name	Check Date	Description	Amount
129294	10183	Cal PERS S457 Plan	10/04/2022		925.00
129295	10815	Cal PERS System	10/04/2022	EE/ER Retirement Plan	16,462.90
129296	10811	IBEW	10/04/2022	EE Union Dues	1,259.95
129297	10812	Nationwide Retirement Solution	10/04/2022	EE Retirement Plan	3,500.41
129298	10663	Standard Insurance Co.	10/04/2022		624.90
129299	10013	Acme Rigging and Supply Co. Inc.	10/05/2022		781.86
129300	11086	Benefit Resource, LLC	10/05/2022		125.00
129301	11424	John Botfield	10/05/2022	Mini hydro alternator repair - Donnell's Dam	209.58
129302	11010	Calaveras County Water District	10/05/2022		613.76
129303	10184	Clark Pest Control - Pest	10/05/2022		160.00
129304	11425	Jonathan & Amanda Cloward	10/05/2022	Tulloch Performance Deposit Refund	3,000.00
129305	10202	Condor Earth Technologies	10/05/2022		328.50
129306	11208	Cover's Apple Ranch	10/05/2022		545.58
129307	10935	Data Path, Inc.	10/05/2022	Network Support	2,743.40
129308	11423	Data Weighing Systems, Inc.	10/05/2022	Dillon EDXtreme Communicator & Dynamometer	1,190.48
129309	10225	Debco Automotive Supply Inc.	10/05/2022		279.92
129310	10227	Del Oro Water Co. Inc.	10/05/2022		793.17
129311	10288	Fastenal Co.	10/05/2022		759.41
129312	10320	General Supply Co.	10/05/2022		267.81
129313	10938	Great America Financial Svcs.	10/05/2022		358.42
129314	10846	H & S Parts & Service	10/05/2022		196.61
129315	10347	HDR Engineering Inc.	10/05/2022		438.26
129316	11238	HERC RENTALS	10/05/2022	Telehandler rental - Mill Creek Bridge Repair	3,385.88
129317	11049	Hunt & Sons, Inc.	10/05/2022		384.76
129318	10402	Kamps Propane	10/05/2022		17.06
129319	10872	Kelly-Moore Paint Company, Inc.	10/05/2022		531.59
129320	10439	McMaster-Carr Supply Co.	10/05/2022		917.82
129321	10466	Mountain Oasis Water Systems & Btl Co L	10/05/2022		344.25
129322	11396	Hydra Pro	10/05/2022		800.00
129323	11011	Pacific Gas & Electric	10/05/2022	Utilities	3,022.29
129324	11147	Pacific Gas & Electric	10/05/2022		9.86
129325	10514	Pacific Gas & Electric Co.	10/05/2022	Utilities	8,824.47
129326	10535	Pitney Bowes GFS LLC	10/05/2022		237.96
129327	10547	Power Plan	10/05/2022		699.49
129328	10618	Sierra Motors	10/05/2022		250.20
129329	10933	Smile Business Products	10/05/2022		256.51
129330	11005	Sonora Lumber Company	10/05/2022		96.91
129331	10735	Tuolumne Co. Tax Collector	10/05/2022	Property Tax	1,332.50
129332	10749	UPS	10/05/2022		553.96
129333	10891	Wagner & Bonsignore Consulting Civil En	10/05/2022	Water Rights Reporting	1,362.80
129334	10154	Calaveras Telephone Co.	10/05/2022		228.70
129335	10225	Debco Automotive Supply Inc.	10/05/2022	Fuel and oil filtes for generators - DPH, BPH	1,998.42
129336	10320	General Supply Co.	10/05/2022		24.36
129337	11049	Hunt & Sons, Inc.	10/05/2022		283.90
129338	11343	Tim O'Laughlin, PLC	10/05/2022	Legal	33,955.00
129339	10618	Sierra Motors	10/05/2022		957.30
129340	11258	Verizon	10/05/2022		172.11
129341	10771	W.D. Edwards Co. LLC	10/05/2022	PFMA Reviews	1,000.00
129342	11076	Wright's Tire Inc.	10/05/2022	Tires	13,606.15
129343	11397	K.W. Emerson, Inc.	10/11/2022	Tulloch Day Use Site	48,338.62
129344	10813	ACWA Joint Powers Insurance Authority	10/13/2022	EE Health Benefits	2,906.75
129345	10183	Cal PERS S457 Plan	10/13/2022		925.00
129346	10815	Cal PERS System	10/13/2022	EE/ER Retirement Plan	16,311.46
129347	10811	IBEW	10/13/2022	EE Union Dues	1,330.46
129348	10812	Nationwide Retirement Solution	10/13/2022	EE Retirement Plan	3,500.41

129349	10663	Standard Insurance Co.	10/13/2022		624.90
129350	11240	Arnett Industries, LLC	10/18/2022		529.80
129351	10067	AT&T - SBC - Pac Bell	10/18/2022	Telephone	5,171.15
129352	10866	AT&T Teleconference Services	10/18/2022		38.44
129353	10126	CA Cooperative Snow Survey	10/18/2022		140.00
129354	10151	Calaveras Co Treas & Tax Collector	10/18/2022	Property Tax	13,806.30
129355	10986	Cal-Waste Recovery Systems, LLC	10/18/2022		27.14
129356	10225	Debco Automotive Supply Inc.	10/18/2022		294.59
129357	11083	Eric Everhart	10/18/2022	EE - FR clothing reimbursement	447.03
129358	11333	Fedak & Brown LLP	10/18/2022	2021 Audit - Final	1,206.00
129359	10294	FISHBIO Environmental LLC	10/18/2022	Fish Studies	50,096.68
129360	10333	Grainger Inc. W. W.	10/18/2022		897.25
129361	10938	Great America Financial Svcs.	10/18/2022		290.46
129362	11049	Hunt & Sons, Inc.	10/18/2022	Fuel	21,762.82
129363	10399	JS West Propane Gas	10/18/2022		30.69
129364	10402	Kamps Propane	10/18/2022		624.44
129365	10879	Lowe's	10/18/2022		680.32
129366	10428	M C I	10/18/2022		23.56
129367	10439	McMaster-Carr Supply Co.	10/18/2022	ethernet cord, data connectors, safety bottle lift, socket, degreaser	1,314.32
129368	10500	OID ~ Routine	10/18/2022	Admin / Finance Services	6,559.21
129369	10513	Pacific Gas & Elec - Non Util	10/18/2022	Interconnection costs - Tulloch unit 3	168.28
129370	11004	Pacific Gas & Electric	10/18/2022		86.86
129371	11389	Paris Kincaid Wasiewski	10/18/2022	Legal Fees	3,615.00
129372	10709	Tidy Tech	10/18/2022		362.93
129373	11380	Pathens Inc.	10/18/2022	Tulloch Performance Deposit Refund	3,000.00
129374	10536	Pitney Bowes Purchase Power Inc.	10/18/2022		402.50
129375	11002	Rancheria Del Rio Estanislau, LLC	10/18/2022		800.00
129376	10892	Siemens Industry, Inc.	10/18/2022	Annual licensing and support - year 2 of 3	23,500.00
129377	10618	Sierra Motors	10/18/2022		551.39
129378	10641	Sonora Airco Gas & Gear	10/18/2022	welding supplies, lens, hood, tips, gloves, pliers & brush	1,044.76
129379	11005	Sonora Lumber Company	10/18/2022		36.92
129380	10665	Staples	10/18/2022		554.19
129381	10718	Tractor Supply Credit Plan	10/18/2022		251.19
129382	10891	Wagner & Bonsignore Consulting Civil En	10/18/2022	Water Rights Reporting	1,001.00
129383	11261	Jay Wallace Plumbing & Backflow	10/18/2022		60.00
129384	10776	Waste Mgmt of Cal Sierra Inc.	10/18/2022		391.32
129385	10778	Watermark Engineering Inc.	10/18/2022	Streamgaging	6,250.00
129386	10900	Chase Cardmember Service	10/03/2022	Fuel, training, travel exp, small tools, GPS clock	15,784.81
129387	10813	ACWA Joint Powers Insurance Authority	10/27/2022	Health Benefits	54,589.97
129388	10183	Cal PERS S457 Plan	10/27/2022		925.00
129389	10815	Cal PERS System	10/27/2022	EE/ER Retirement Plan	17,739.26
129390	10811	IBEW	10/27/2022	EE Union Dues	1,330.46
129391	10812	Nationwide Retirement Solution	10/27/2022	EE Retirement Plan	3,527.72
129392	10663	Standard Insurance Co.	10/27/2022		624.90
129393	10068	AT&T Corp - Data Link	10/27/2022		305.22
129394	10250	Downey Brand Attorneys LLP.	10/27/2022	Tulloch Litigaton	19,482.00
129395	10347	HDR Engineering Inc.	10/27/2022	Part 12D Follow up	1,668.93
129396	11049	Hunt & Sons, Inc.	10/27/2022		208.73
129397	11427	Joan and Douglas A. Lucas	10/27/2022	Tulloch Performance Deposit Refund	3,000.00
129398	10908	McMillen Jacobs Associates	10/27/2022	FERC Part 12D Inspections / Reporting	19,225.00
129399	10477	National Flooring & Supply	10/27/2022	New flooring materials - GM house	2,502.24
129400	11011	Pacific Gas & Electric	10/27/2022	Utilities	3,748.52
129401	10514	Pacific Gas & Electric Co.	10/27/2022	Utilities	5,883.82
129402	11274	PAR Environmental Services, Inc.	10/27/2022	Hells Half Acre Data Recovery and Cultural Resources	10,749.43
129403	11050	Nicholas Payne	10/27/2022	EE - safety boot reimbursement	200.00
129404	10749	UPS	10/27/2022		155.59

Report Total: 492,384.91

BOARD AGENDA REPORT

Date: 11/17/2022
Staff: Sharon Cisneros

SUBJECT: Tri-Dam Project Financial Statements for the Nine Months ending September 30, 2022

RECOMMENDED ACTION: Approve the Financial Statements for the Nine Months ending September 30, 2022

BACKGROUND AND/OR HISTORY:

As of the financial statement date of September 30, 2022, the Tri-Dam Project (TDP) cash and investments increased by \$4.0M combined over the prior year due primarily to the increase in Power sales over the prior year.

TDP has realized 91% of its annual budgeted operating revenues for 2022, and utilized 64% of its budgeted operating expenses.

Further details are available in the attachments.

FISCAL IMPACT: none

ATTACHMENTS: Financial Statements 9/30/22 (unaudited)

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)



Tri-Dam Project

Statement of Net Position

(unaudited)

	<u>September 30, 2022</u>	<u>September 30, 2021</u>
Assets		
1 Cash	\$ 10,342,490	\$ 5,735,459
2 Investment Securities & Money Market	14,840,490	15,428,483
3 Accounts Receivable	2,259,871	2,209,192
4 Due from Tri-Dam Power Authority	225,104	176,171
5 Prepaid Expenses	446,594	586,507
6 Capital Assets	112,084,764	111,781,734
7 Accumulated Depreciation	(55,713,896)	(53,860,160)
8 Intangible Assets	8,213,938	8,213,938
9 Accumulated Amortization - Intangibles	(2,799,406)	(2,558,332)
10 Deferred Outflows - Pension Related	610,452	1,703,113
11 Total Assets & Deferred Outflows	<u>90,510,401</u>	<u>89,416,105</u>
Liabilities		
12 Accounts Payable	35,876	54,279
13 Unearned Revenue	152,442	130,669
14 Deposits	80,000	71,000
15 Other Current Liabilities	101,655	238,540
16 Long-Term Liabilities	1,492,409	1,310,857
17 Net Pension Liability	459,338	3,331,950
18 Deferred Inflows - Pension Related	547,447	1,112,546
19 Total Liabilities & Deferred Inflows	<u>2,869,167</u>	<u>6,249,841</u>
Net Position		
21 Net Position - Beginning of Year	90,868,089	85,049,341
22 Contributed Capital - Districts	-	-
23 Distributions	(19,700,000)	(10,958,000)
24 YTD Net Revenues	16,473,145	9,074,923
25 Total Net Position	<u>87,641,234</u>	<u>83,166,264</u>
26 Total Liabilities and Net Position	<u>\$ 90,510,401</u>	<u>\$ 89,416,105</u>



Tri-Dam Project

Statement of Revenues and Expenses

Period Ending September 30, 2022

	YTD Budget	YTD Actual	YTD Budget Variance	Budget Variance %	Prior Year Actual	Prior Year Variance	Prior Year Variance %	2022 Budget
1 Operating Revenues								
2 Power Sales	\$ 17,988,520	\$ 24,550,099	\$ 6,561,579	36.5%	\$ 16,205,250	\$ 8,344,849	51.5%	\$ 26,982,780
3 Headwater Benefit	245,901	267,598	21,697	8.8%	270,000	(2,402)	(0)	368,852
4 Total Operating Revenues	<u>18,234,421</u>	<u>24,817,697</u>	<u>6,583,276</u>	<u>36.1%</u>	<u>16,475,250</u>	<u>8,342,447</u>	<u>51%</u>	<u>27,351,632</u>
Operating Expenses								
4 Salaries and Wages	1,083,774	1,643,482	559,708	51.6%	1,625,081	18,401	1.1%	2,561,648
5 Benefits and Overhead	2,026,447	2,274,100	247,653	12.2%	1,414,083	860,017	60.8%	2,664,671
6 Operations	346,070	179,027	(167,043)	-48.3%	239,432	(60,405)	-25.2%	519,105
7 Maintenance	909,533	428,931	(480,602)	-52.8%	398,728	30,203	7.6%	1,364,300
8 General & Administrative	3,125,573	2,808,698	(316,875)	-10.1%	2,525,737	282,961	11.2%	4,688,360
9 Depreciation & Amortization	1,418,564	1,623,213	204,649	14.4%	1,585,435	37,778	0	2,127,846
10 Total Operating Expenses	<u>8,909,962</u>	<u>8,957,451</u>	<u>47,489</u>	<u>0.5%</u>	<u>7,788,496</u>	<u>1,168,955</u>	<u>15%</u>	<u>13,925,930</u>
11 Net Income From Operations	9,324,459	15,860,246	6,535,787	70.1%	8,686,754	7,173,492	82.6%	13,425,702
12 Nonoperating Revenues (Expenses)								
13 Investment Earnings (Expenses)	93,000	233,108	140,108	150.7%	27,611	205,497	744.3%	139,500
14 Lawsuit Settlement Proceeds	-	2,150,500	2,150,500	0.0%	-	-	-	-
14 Change in Market Value of Investments	-	(469,029)	(469,029)	0.0%	(11,527)	(457,502)	3969.0%	-
15 Water Sales	125,373	124,500	(873)	-0.7%	124,500	-	0.0%	188,059
16 Rental Income	-	60,856	60,856	0.0%	70,973	(10,117)	-14.3%	-
17 Gain/(Loss) on Asset Disposal	-	22,703	22,703	0.0%	24,048	(1,345)	-5.6%	-
18 Reimbursements/Govt Entities	140,889	167,640	26,751	19.0%	145,094	22,546	15.5%	211,333
19 Other Nonoperating Revenue	53,924	28,386	(25,538)	-47.4%	171,109	(142,723)	(1)	80,886
20 Total Nonoperating Revenues (Expenses)	<u>413,185</u>	<u>2,318,664</u>	<u>1,905,479</u>	<u>461.2%</u>	<u>551,808</u>	<u>(383,644)</u>	<u>-70%</u>	<u>619,778</u>
21 Net Revenues	<u>\$ 9,737,645</u>	<u>\$ 18,178,910</u>	<u>\$ 8,441,265</u>	<u>\$ 1</u>	<u>\$ 9,238,562</u>	<u>\$ 6,789,848</u>	<u>73.5%</u>	<u>\$ 14,045,480</u>
Memo:								
22 Capital Expenditures	1,824,550	315,608	(1,508,942)					\$ 2,736,825
23 Tulloch Day Use Site	1,024,883	1,390,156	365,273					\$ 1,537,325
24 Major Repairs - Hells Half Acre & 4700 Roads	146,667	-	(146,667)					\$ 220,000
25 Major Repairs - Tulloch Unit 3 Access Rd	166,667	-	(166,667)					\$ 250,000
26 Net Revenue after Capital Expenditures		16,473,146						
27 Transfer from Reserves	2,150,000	2,150,000						\$ 2,150,000

BOARD AGENDA REPORT

Date: 11/17/2022

Staff: Jeff Shields

SUBJECT: Year-End Staff Appreciation

RECOMMENDED ACTION: Discussion and possible action to approve paid time off between Christmas and New Year's for all Tri-Dam employees

BACKGROUND AND/OR HISTORY:

In previous years, the Board has shown appreciation to Tri-Dam staff by providing additional paid time off between Christmas and New Year's. Even with the low water year, Tri-Dam staff has completed an exceptional amount of maintenance and upgrades, and even on a reduce budget. They have found ways to reduce expenditures by performing much of the work in-house, which will result in additional savings for the Districts and more reliable generation equipment and facilities.

The General Manager recommends providing paid time off for the work days in between Christmas and New Year's Day for all Tri-Dam employees. If an employee is unable to take the time off due to their position requirements, such as a shift operator, they have until March 31, 2023 to use the time. If not used by that date, it will roll over into their vacation accrual balance to use at a later date.

FISCAL IMPACT: None

ATTACHMENTS: None

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)

BOARD AGENDA REPORT

Date: 11/17/2022

Staff: Jeff Shields

SUBJECT: ACWA 2023 Membership Dues

RECOMMENDED ACTION: Discussion and possible action to approve the 2023 ACWA membership dues

BACKGROUND AND/OR HISTORY:

The Association of California Water Agencies (ACWA) met in September of 2022 to approve a two-year budget, with a rate increase of 4% from 2022 to 2023. These dues are based on operations and maintenance expenses for its public agency members. Membership in ACWA allows Tri-Dam to enroll in their insurance programs, training programs, and to benefit from active lobbying. This year's annual dues are \$20,230.

FISCAL IMPACT: \$20,230 to be paid in January 2023

ATTACHMENTS: ACWA Invoice
ACWA Memorandum

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Weststeyn (Yes/No) Spyksma (Yes/No)



Bringing
Water
Together

Date: October 19, 2022

Tri-Dam Project
P.O. Box 1158
Pinecrest, CA 95364

2023 Annual Agency Dues	\$20,230.00
Total Amount Due	<hr/> \$20,230.00

Thank you for your continued support with ACWA. Please remit payment by **January 31, 2023**.

ACH Payment Information: Wells Fargo Bank
Routing #: 121042882
Checking Account #: 6071344052

*****MEMBERSHIP DUES*****MEMBERSHIP DUES*****MEMBERSHIP DUES*****

Association of California Water Agencies
2023 Member Dues Calculation

Date: October 19,2022

Name: Tri-Dam Project

(1) Operating Expenses	\$6,677,111.00
(2) All Other Expenses	
(3) Total Expenses	\$6,677,111.00
 <<< LESS >>>	
(4) Purchased Power	
(5) Water Purchases	
(6) Groundwater Replenishment	
(7) Depreciation	\$2,122,667.00
(8) Fixed Assets	
(9) Total Adjusted Expenses	\$4,554,444.00
 <<< LESS >>>	
(10) Pumping	
(11) Total Expenses Adjusted for Pumping	\$4,554,444.00
(12) Line 11 times 2	\$9,108,888.00
(13) Dues O&M (lessor of line 9 or 12)	\$4,554,444.00
DUES AMOUNT	\$20,230.00

*** THIS IS NOT A BILL – PLEASE DO NOT PAY FROM THIS WORKSHEET ***

MEMORANDUM

TO: ACWA Public Water Agency Members

FROM: Dave Eggerton, Executive Director

DATE: October 6, 2022

SUBJECT: ACWA's 2023 Membership Dues

With inflation over 8% affecting every one of our member agencies and ACWA itself, it is a very challenging time to develop a budget that is both financially and organizationally responsible. Thanks to the hard work of ACWA's Finance Committee and Board of Directors, the Association is addressing these inflationary pressures in a manner that maintains the strength of the organization and valuable services we provide for our members while being responsive to the real fiscal challenges our members face during these economically uncertain times.

At its September meeting, the ACWA Board of Directors approved a two-year 2023-24 Budget that protects the financial and operational well-being of the Association while strengthening the long-term health of the organization by beginning to pay-down ACWA's unfunded CalPERS' pension liability. This effort, prioritized by the Board with the recent sale of the 910 K Street office, builds on the Association's recent success fully funding its retiree healthcare OPEB (other post-employment benefits) liability.

The budget also includes continued funding for the Association's most significant statewide public education campaign in many years, QuenchCA. Launched this year, QuenchCA is raising public awareness of the importance of investing in water infrastructure for the future of our people, economy, food supply and the environment. This program was created in response to the widespread call of our member agencies who have repeatedly emphasized the importance of educating the public on this critical issue facing our industry.

To accomplish these and other important goals for our members during this time of high inflation, every aspect of the budget was scrutinized in detail in developing a recommendation for the Board's consideration. The Board approved the budget based on the recommendation of the ACWA Finance Committee and following a thorough review of the Association's expenses and revenue. After much deliberation, the adopted two-year budget includes dues increases of 4% in 2023 and 3% in 2024.

With the Board's leadership in adopting the budget, I can assure you that ACWA staff will continue to deliver high-level, effective services for our members, including strong advocacy in Sacramento and Washington D.C., first-class conferences, timely information and communication tools, as well as many other important services.



As a reminder, ACWA's financial strategy is guided by our 2020-24 Five-Year Strategic Plan. The general approach of this strategy is to maintain modest dues increases each year to first pay off ACWA's unfunded OPEB liability for retiree healthcare by 2023 (which we achieved this year), then pay down ACWA's CalPERS unfunded liability, and avoid the need for any unplanned spikes in membership dues in the future. This budget keeps us on course to strengthen ACWA's long-term financial health.

ACWA's dues are based on the operations and maintenance (O&M) expenses for individual public agency members, which vary from year to year. If there was an increase or decrease in your agency's O&M expenses, the actual dollar increase associated with your agency's membership dues may vary based on that change. **If you have questions related to your agency's dues calculation, please contact ACWA Controller Dan Gumpert at (916) 669-2426 or dang@acwa.com.**

To view ACWA's full 2023 dues schedule, please visit www.acwa.com.

We value your participation in ACWA and thank you for your membership. ACWA's voice and influence is enhanced with each and every member. Your dues contribution allows ACWA to provide high-quality benefits and services, such as:

- A statewide voice on behalf of California water agencies on key state and federal legislative and regulatory water issues.
- Award-winning communications to support and advance the Association's legislative, regulatory, and policy agenda by reaching key audiences, such as the Legislature, the media and the public; and by helping water agencies with outreach at the local level.
- Participation in ACWA's grassroots Outreach Program, a vital tool for members to engage on key legislative and regulatory efforts.
- Exclusive cost-saving opportunities through ACWA JPIA insurance for liability, property workers compensation and employee benefits programs.
- Two major annual conferences, numerous topic-specific workshops, regional events, webinars and other professional development programs to help educate members and give them an opportunity to connect with each other.
- Opportunities to shape water policy by serving on ACWA's 13 committees and engaging locally through ACWA's 10 Regions.
- Access to ACWA's Preferred Provider Program, which offers a variety of value-added programs and services.

For more information on these services, as well as all of the benefits of continued ACWA membership, please visit www.acwa.com.

We thank you so much for your membership and look forward to your continued participation in 2023. **If you have questions about your ACWA membership, please contact ACWA's Member Services Manager Katie Dahl at (916) 669-2439 or katied@acwa.com.**

BOARD AGENDA REPORT

Date: 11/17/2022
Staff: Chris Tuggle

SUBJECT: Replace the Milling Machine at Beardsley Service Center

RECOMMENDED ACTION: Review and possible action to approve replacing the milling machine at the Beardsley Service Center

BACKGROUND AND/OR HISTORY:

Our Enco milling machine was built in the 1980's and the parts supplier is no longer able to get parts/support for this machine. We have been making in-house repairs for a few years now, but would recommend that we replace this machine before it breaks down and we are without. Current lead time for a new machine is from 3 to 6 months per a verbal from vendor.

This was not included in the 2022 budget. The 2022 budget included \$40,000 for a SF6 Gas Analyzer. The SF6 breakers are inspected on an eight year cycle and SF6 gas is checked during that inspection. Staff requests a budget amendment be approved to delete the SF6 Gas Analyzer in order to allow purchase of the milling machine instead of the SF6 Gas Analyzer.

FISCAL IMPACT: \$40,000 Delete from 2022 Budget--SF6 Gas Analyzer
\$26,487.75 Add for purchase of Milling Machine from Sterling

ATTACHMENTS: \$26,487.75 Sterling quote – including tax & shipping
\$24,229 Hardinge quote – not including tax & shipping
\$28,975 World Wide quote – not including & shipping

Board Motion:

Motion by: _____ Second by: _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)



9310 Garvey Avenue
 South El Monte, CA 91733
 Phone: (626) 720-4742

DATE: 10/12/2022

QUOTE

<u>BILL TO:</u>	<u>SHIP TO:</u>
Company: Tri-Dam Project Address: 31885 Old Strawberry Road Strawberry, CA 95375 Contact: Gary Sawyer Phone: 209.743.2720 Email: gsawyer@tridamproject.com	Company: Tri-Dam Project Address: 31885 Old Strawberry Road Strawberry, CA 95375 Contact: Gary Sawyer Phone: 209.743.2720

SALESPERSON	P.O. NUMBER	SHIPPED VIA	F.O.B. POINT	TERMS
MM	Verbal Gary	Solid State Logistics	Hardinge	Net Prior to Shipping

Quantity	Description	Price
1	New Bridgeport 9"x49" Milling Machine	\$17,500.00
	Model # Series 1, SME# SMSERIES1, <i>Power: Choose 208/230/460v 3-Phase</i>	
1	SKU# BP11810521INS – X & Y Axis Digital Readout 200S	\$3,225.00
1	SKU# BPXPOWERFEED – X-Axis Powerfeed	\$1,175.00
	Sub-Total	\$21,900.00
1	Strawberry, CA 95375 sales tax @ 7.25%	\$1,587.75
1	Freight Cost via Flatbed service	\$3,000.00
	TOTAL	\$26,487.75
	Manufacturer's Warranty	

<i>Comments /Special Instructions</i>
Customer to pay by wire transfer Current Price, Freight Cost, and Lead-Time subject to Verification at time of order



Hardinge
One Hardinge Drive
Elmira, New York 14903

www.hardinge.com

Quotation to: TRI DAM PROJECT
Quotation Number: QUO-56451-9JNSN0
Contact: GARY SAWYER
Address:

Date: 10/14/2022
Prices Valid for 30 Days

Your Hardinge Representative
Rachael Martin

Rachael.Martin@hardinge.com

BRIDGEPORT® by HARDINGE SERIES I STANDARD MILLING MACHINES

The Bridgeport® name is synonymous with the world's finest turret milling machines. This reputation has been established since 1938 when the first Bridgeport® Milling Machine was produced. The Series I Standard continues to fulfill the industry's need for a machine that is accurate, reliable, versatile, and easy to operate. In just over seventy years, Bridgeport® craftsmen have produced over 370,000 Series I Standard Mills. Hardinge Inc. stands behind every machine it builds with parts, service and applications support. With these traditions in mind we are pleased to present the following quotation for your consideration and look forward to the favor of your order.



The Bridgeport® by Hardinge Series I Standard (Features and Specifications)

- 3-hp (30-minute duty rated) head, 2-hp (continuous)
- Infinitely variable: Low gear: 60-500 rpm; High gear: 500-4,200 rpm
- R-8 spindle taper; Collet capacity up to 3/4"
- Inch Screws and Dials
- 360-degree rotation of Ram/Turret
- Worm and gear controls used for angular settings of the head: 90 degrees left & right; 45 degrees front & back
- 9" x 49" precision ground and hand spotted table with dual locks
- 36" of table travel; X-axis (Note 'X' axis travel is reduced to 33.5" with power feed option)
- 12" of saddle travel, Y-axis
- 16" of knee travel, Z-axis (Reduced by 1." with Chip Pan)
- 5" of quill travel with built-in power quill feed (.0015, .003, .006 IPR) Quill is 3 3/8" Dia, hard chrome plated, and hand lapped for extreme accuracy and long life. Quick release micrometer depth adjustment.
- Chrome/Nickel alloy spindle is heat treated and ground with precision bearings, preloaded and accurately spaced for maximum radial and thrust capability
- Manual feed on table, saddle, and knee
- Large, graduated, easy reading dials
- Metered, One-Shot lubrication system
- Spindle guard included standard
- Color: Bridgeport® machine tool gray
- Space & weight: 7 x 10' (2.13 x 3m) 1,930 Lbs.
- Standard electrics: 208V / 230V / 460V, 60 Hz

Hardinge Inc. stands behind every Bridgeport® by Hardinge Series I Standard Machine it builds with a full one-year parts warranty. Nationwide parts are available through Hardinge Inc. directly at 1-800-843-880 or online at www.kneemills.com.

Series I Options

Machine Package:

- Inch Screws & Dials, R-8 Spindle, Chrome Ways & Gibs, One-Shot Lube
- Inch Screws & Dials, R-8 Spindle, Chrome Ways & Gibs, One-Shot Lube, X-Axis Servo Power Feed
- Inch Screws & Dials, R-8 Spindle, Chrome Ways & Gibs, One-Shot Lube X & Y Axis Servo Power Feed
(Y-Axis travel stop is not available for this model)

- Inch Screws & Dials, Erickson #30 Quick Change Spindle, Chrome Ways & Gibs One-Shot Lube

- Inch Screws & Dials, Erickson #30 Quick Change Spindle, Chrome Ways & Gibs One-Shot Lube, X-Axis Servo Power Feed

- Inch Screws & Dials, Erickson #30 Quick Change Spindle, Chrome Ways & Gibs One-Shot Lube, X & Y Axis Servo Power Feed

Coolant System: (Installed Prior to Shipment)

- Accu-Lube Mist Coolant System (pneumatic operations)
- Accu-Lube Mist Coolant System (w/NFPA Electrics)

Spindle Tooling:

- R8-Tooling Package 1 – Most Popular (see page 5)
- R8 Tooling Package 2 (see page 5)
- CoroMill 390 ½" Indexable End Mill 5/8" Shank (see page 5)
- CoroMill 390 All Purpose Inserts (Sold Individually) – Most Popular (see page 5)
- CoroMill 300 ½" Indexable End Mill 5/8" Shank (see page 5)
- CoroMill 300 All Purpose Inserts (Sold Individually) (see page 5)
- Set of R-8 Collets (11 collets, 1/8" to ¾" (1/16" increments)
- #3-2J Right-Angle Attachment (accommodates R-8 collets)

Power Drawbars: (Installed Prior to Shipment)

Power Drawbar for R-8 Spindle without NFPA Electrics
Power Drawbar for R-8 Spindle for use with NFPA Electrics
Power Drawbar for QC#30 Spindle for use with NFPA Electrics
Power Drawbar for QC#30 Spindle without NFPA Electrics

NOTE: DOES NOT INCLUDE NFPA ELECTRICS

Digital Readouts:

XY Axis Acu-Rite Digital Readout 200 S (.0002" minimum Resolution)
XYZ Axis Acu-Rite Digital Readout 200 S (.0002" minimum Resolution)

Hardinge 5C Indexing:

5C Indexer w/ Control Box, Brushless Motor and Manual Closer

Optional Accessories:

6" Machine Kurt Vise
Vise Step Key Kit (1 1/19"x5/8")
Swivel Base for Machine Vise
Work Light
Work Light (Twist-Loc Plug, used with NFPA Electrics)
R-8 Collet Tray (Installed Prior to Shipment)
Y-Axis Travel Stop (Can't be sold with Y-Axis Power Feed or on X&Y axis machines) (Installed Prior to Shipment)

NFPA Electrics 208-234-460V, 60Hz (Installed Prior to Shipment)
Additional Installation, Operation and Maintenance Manuals
(One Set Included with each machine)
Export Crating

R8 Tooling Package By:



Package 1- Light Cutting Face Mill Package w/ Med. Sized Tools **(Most Popular)**

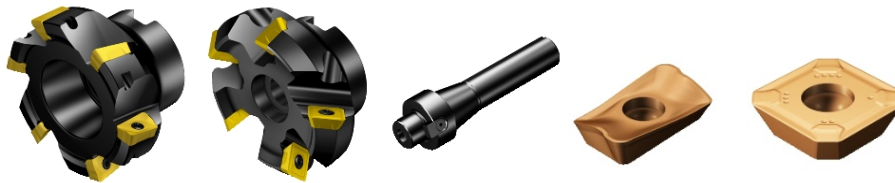
RA390-051R19-11M - CoroMill 390: Indexable Shoulder Face Mill – 2” ([more details](#))

RA245-051R19-12M - CoroMill 245: Indexable Face Mill – 2” ([more details](#))

A392.R8.05-19 020 – R8 Tooling Adapter (Arbor)

R390-11 T3 08E-PL 1030 – Sold Individually – All Purpose Grade Inserts for CoroMill 390

R245-12 T3 E-PL 1130 – Sold Individually - All Purpose Grade Inserts for CoroMill 245



CoroMill 390

CoroMill 245

R8 Adapter

390 Inserts

245 Inserts

Package 2- Edge Economy Face Mill Package w/ Med. Sized Tools

A345-051R19-13M - CoroMill 345: Indexable Face Mill ([more details](#))

A490-051R19-08M - CoroMill 490: Indexable Shoulder Face Mill ([more details](#))

A392.R8.05-19 020 – R8 Tooling Adapter (Arbor)

345R-1305E-PL 1130 - Sold Individually - All Purpose Grade Inserts for CoroMill 345

490R-08T308E-ML 1130 – Sold Individually - All Purpose Grade Inserts for CoroMill 490



CoroMill 345

CoroMill 490

R8 Adapter

345 Inserts

490 Inserts

Individual End Mills:

RA390-013M16-11L - CoroMill 390: ½” Indexable End Mill 5/8” Shank – **(Most Popular)**
R390-11 T3 08E-PL 1030 - Sold Individually - All Purpose Grade Insert for CoroMill 390



RA300-013M16-07L – CoroMill 300: ½” Indexable Profile Mill -Used for Profiling/3D Contour 5/8” Shank
R300-0720E-PM 1030 – Sold Individually - All Purpose Grade Insert for CoroMill 300



TO: TRI DAM PROJECT

ISSUED: 10/14/2022 8:12 AM

EXPIRATION: 11/13/2022

Quote Number: QUO-56451-9JNSN0

Quote Revision: 1

ATTN: GARY SAWYER

SALES CONTACT: Rachael Martin

PHONE: 1-209-743-2730

DIRECT:

E-MAIL: GSAWYER@TRIDAMPROJECT.COM

E-MAIL: Rachael.Martin@hardinge.com

Machine	Qty	Price	Total Price
SERIES I KNEE MILL-R8 SPIN-XP Part Number: BPKMR8PF	1	\$21,000.00	\$21,000.00
Installed Kneemill Options	Qty	Price	Total Price
DRO 200S SYS 48 X&Y AXIS INSTL Part Number: BP 11810521INS	1	\$3,229.00	\$3,229.00
			\$24,229.00

Configuration Total Amount	\$24,229.00
Customer Specific Items Total Amount	\$0.00
Total Amount	\$24,229.00

Net terms: 10% down payment / Net 30 days / UCC filings may apply / Subject to Credit Approval

To accept this quotation, sign, date and return with Purchase Order: _____ DATE: _____

HARDINGE INC. TERMS AND CONDITIONS OF SALE FOR NEW PRODUCTS

All sales of Products are subject to the following Terms and Conditions of Sale ("Terms").

1. Definitions. The word "**Seller**" as used herein shall mean Hardinge Inc. and its subsidiaries and the word "**Buyer**" shall mean the Party to whom the Product is sold. Seller and Buyer are collectively the "Parties". The term "**Product**" means new machines, parts and any other new equipment sold by Seller to Buyer. The word "**Contract**" means collectively (i) these Terms, (ii) any additional "Supplement to Terms and Conditions of Sale" provided by Seller to Buyer from time to time, (iii) the Buyer's purchase order (but solely with respect to quantity and identity of Products ordered and expressly excluding all other terms), (iv) any written quotation provided by Seller to Buyer and (v) invoice(s) issued by Seller to Buyer and any documentation included therewith by Seller.

2. Contract Formation. No agreement between the Parties shall exist until the Contract has been accepted in writing by Seller. The Contract constitutes the only agreement between the Seller and the Buyer governing the purchase of Products. Any other terms and conditions originating with the Buyer (including but not limited to any terms and conditions of the Buyer in a purchase order or referenced on the Buyer's website or in any documentation or correspondence submitted by the Buyer or any terms implied by trade custom, practice or course of dealing) are all hereby expressly rejected and shall not become part of the Contract even if Seller effected delivery of Products or rendered services without reservation. The availability of Products identified in Seller's quotation is made subject to prior sales to third parties. In any event, said quotation will become void if not accepted by the Buyer by issuing a purchase order either (i) 30 days from the date of the quotation or (ii) the date for acceptance indicated in the quotation. Seller reserves the right to hold shipment of Products until a Contract has been entered into with the Buyer. The Buyer assumes full responsibility for inaccurate or incomplete data supplied in any Contract.

3. Prices. All prices in the Contract are subject to change by Seller without notice at any time and are based in part on market prices for Seller at the time of quotation and the applicability of the Terms set forth herein. Without limiting the foregoing, in the event Seller incurs increased costs for component parts of the Products in order to perform the Contract of more than two percent (2%) from the market price of such component parts as of the date of quotation, Seller shall have the right to add a surcharge to reflect such actual increase in the price of producing the relevant Product under the Contract (the "**Surcharge**"). The Surcharge covers any increased costs to Seller for component parts including, without limitation, as a result of increases in the cost of raw materials, the cost of components or sub-assemblies, the cost of premium freight or expedited delivery to ensure supply from suppliers, and the cost of labor. Should the Buyer desire other or different terms, the prices may be subject to adjustment by Seller in its sole discretion. All Prices are

F.O.B. Seller's plants (either Elgin, IL 60123 or Elmira, NY 14902) for equipment boxed, crated or skidded for domestic shipment (export packing charges are extra). Prices are those in effect at the time the Contract is accepted by Seller. IF THE BUYER DELAYS SHIPMENT BEYOND THE ORIGINAL SHIPMENT DATE SPECIFIED IN THE CONTRACT, ALL OUTSTANDING AMOUNTS FROM THE BUYER UNDER THE CONTRACT ARE IMMEDIATELY DUE AND PAYABLE; THE BUYER WILL BE LIABLE FOR ALL COSTS OF STORAGE, INSURANCE, HANDLING AND OTHER COSTS AS DETERMINED BY SELLER; AND SELLER RESERVES THE RIGHT TO AMEND THE PRICES CHARGED UNDER THE CONTRACT TO MATCH THOSE IN EFFECT AT THE TIME THE SHIPMENT IS MADE. Seller reserves the right to cancel the Contract in the event that (a) any government price regulation, schedule or ceiling prescribes a price lower than Seller's price as set forth in the Contract, or in any way prevents Seller from purchasing or otherwise acquiring any commodity or service necessary to the performance of the Contract, or in any way prevents Seller from adjusting its prices when the cost of any such commodity or service is increased and, (b) in the event any major change in economic conditions renders Seller's performance of the Contract unprofitable. A Surcharge, if applicable, will be added to the invoice by Seller (and will become part of the price under the Contract) without the obligation to revise or amend the Contract or any purchase order with Buyer.

4. Taxes. Prices do not include any sales, use, excise, property or other taxes that may be levied on the transaction by local, state, federal or foreign governments. Any taxes Seller is required to collect from Buyer will be added to the invoice or billed separately to the Buyer.

5. Terms of Payment (Domestic). Unless otherwise specified in the Contract, the terms of payment will be net cash seven (7) days from date of invoice and are subject to credit approval by Seller's credit department. Unless otherwise agreed in the Contract, the terms of payment will be forty percent (40%) upon Seller's written confirmation of its acceptance of the Contract with sixty percent (60%) upon shipment from the Seller's facility. If the Contract specifically provides for acceptance testing after shipment, the terms of payment will be thirty percent (30%) upon Seller's written confirmation of its acceptance of the Contract, sixty percent (60%) prior to shipment from the Seller's facility and ten percent (10%) upon acceptance as provided in Paragraph "9". The Seller reserves the right to file a Uniform Commercial Code (UCC) Financing Statement for all machine purchases not fully paid for prior to shipment from Seller's premises. Late charges at the rate of 1.5% per month (18% annually) may be charged on past due accounts.

6. Terms of Payment (Foreign). Unless otherwise specified in the Contract, the terms of payment shall be as stated herein for domestic purchases and all payments to be made in United States Dollars. Seller reserves the right

to require the Buyer to post an irrevocable Letter of Credit to be established through and confirmed by a New York bank providing for payment against Seller's sight draft accompanied by a commercial invoice and Buyer's forwarding agent's receipt acknowledging pick up of shipment FOB location stated in the Contract. The Seller also reserves the right to file the applicable country equivalent of a United States Uniform Commercial Code (UCC) Financing Statement for all machine purchases not fully paid for prior to shipment from Seller's premises.

7. Production Estimates. Any projected production figures and performance data are estimates based on Seller's understanding of the machinability of material, amount of material to be removed, accuracy desired, available facilities, operator skill, and other specified factors affecting Production, and do not constitute a guarantee of production.

8. Delivery; Risk of Loss; Title. Any quoted delivery dates are approximate and only the delivery date specified in the Contract will be binding; provided, however, delivery dates are subject to revision at any time due to causes beyond the Seller's control (as notified to Buyer) including without limitation delay in receipt of Buyer's signature to the Contract or Buyer's complete specifications; fire, shortages of material, transportation delays, strikes, failure of suppliers or subcontractors to meet delivery schedules, war, riots, acts of God, epidemics, pandemics, any action by any government agency and any priority or rationing system imposed by authority of any government agency. Delivery to a common carrier or licensed trucker shall constitute tender of delivery, passing of risk of loss to the Buyer and all risk of loss or damage in transit shall be borne by the Buyer. Seller shall not be liable to Buyer for any costs, damages or expenses arising, in any way, from any late delivery or non-delivery. Seller reserves the right to stoppage in transit and to repossess equipment notwithstanding delivery to the carrier until payment in full has been made to Seller. Title to the Products will not pass to Buyer, and Buyer hereby grants a security interest to Seller in such Products (together with all of the rights and remedies of a secured party under the Uniform Commercial Code), until all Seller invoices have been paid in full. During the period of reservation of title, Buyer must, at its own cost, maintain the Products and insure them for the benefit of Seller against all risks. No claim relating to quantity, condition, loss or damage to the Products made by Buyer will be accepted by Seller unless Seller is given written notice of said claim within thirty (30) days after date of shipment and Buyer establishes that such condition, loss or damages to the Products existed prior to shipment.

9. Acceptance. Where the Contract expressly provides for acceptance of the Product by the Buyer (whether at Seller's plant or Buyer's facility), Seller shall notify Buyer that the Product is available for acceptance testing and Buyer shall: (i) test where appropriate and evaluate the Product to determine whether it substantially conforms to the specifications and performance requirements specifically set forth in the Contract; and (ii) will provide a written notice to Seller of its acceptance of the Product, or provide a written notice of nonconformity specifying why and how the Product does not substantially

conform to the specifications and performance requirements set forth in the Contract. Buyer will use commercially reasonable efforts to complete this acceptance testing within five (5) calendar days from Product being made available by Seller for testing, but, in any event, will provide written notice of its acceptance or rejection of the Product within ten (10) calendar days (unless another time period is specified in the Contract). If Buyer does not respond within the ten (10) calendar days' period, then the Product will be deemed accepted. If Seller receives a notice of nonconformity from Buyer, it shall promptly: (a) take such steps as are necessary to remedy the error or deficiency to ensure that the Product does substantially conform to the applicable description and criteria as set forth above; and (b) provide to Buyer a written notice of remedy. Upon receipt of a notice of remedy, Buyer may, within a subsequent ten (10) calendar day period, conduct such further tests and evaluations on the Product as necessary to determine whether the Product substantially conforms with the specifications set forth in the Contract and either finally accept or reject such Product as non-conforming. If the Product is rejected as non-conforming, Seller's maximum liability shall not exceed an obligation to either (a) repair or replacement of the defective part or Product, or, at the Seller's option, (b) accept the return of the Product and make a full refund of the amount paid by Buyer for the relevant Product. In either case, such remedy shall be the Buyer's sole and exclusive legal and equitable remedy for a Product that does not pass acceptance testing. Any return of the Product will be subject to the provisions of Paragraph "12".

10. Material sent for Repair. Buyer's material sent to Seller for modernization or repair or being returned pursuant to the provisions of these Terms will be delivered by Buyer, at its expense, to the repair or manufacturing plant designated by Seller where the work is to be performed. Title to the Buyer's material will remain at all times with Buyer. Risk of loss or damage to material will transfer to Seller upon its arrival at the repair or manufacturing plant and will transfer back to Buyer upon its delivery by Seller to the carrier at the repair or manufacturing plant after the work is performed. When repair work is performed by Seller at Buyer's site, title and risk of loss or damage to the Buyer's material and other property shall remain at all times with the Buyer.

11. Warranty, Disclaimer and Remedy. Subject to payment in full by Buyer in accordance with the terms of the Contract, Seller warrants to the original Buyer only that new Products manufactured by the Seller and sold directly by the Seller or through an authorized representative and used by the original Buyer within limits of rated and normal usage will be free from defects which are not commercially acceptable in material and workmanship for the following periods, measured from the date of shipment: (i) six (6) months for repair parts purchased after the original machine warranty expires; and (ii) twelve (12) months for all new grinding machines. Wear parts such as bearings, bellows, belts, cables, contactors, perishable tooling (quills, wheels, etc.), relays, switches and the like are not covered. For vendor supplied Products on Hardinge Grinding Group

Contracts, the warranty will be the vendor warranty or one year, whichever is shorter. This warranty shall apply only to new Products sold, installed and maintained in the forty eight (48) continental United States. Installation must take place no later than 3 months from the date of shipment. Any Product not so sold, installed and maintained shall be sold "as is" and any repairs or service shall be provided in accordance with Paragraph "15" unless otherwise expressly agreed to in writing by Seller. In no event shall the Buyer have any rights greater hereunder than if all components were manufactured by Seller. The terms of this warranty do not in any way extend to any Product or part thereof which has a life under normal usage inherently shorter than one year, secondhand Products or Products which were not manufactured by the Seller and not sold under the Hardinge Inc. trade name. Different terms and conditions are applicable to secondhand Products. Seller's obligation and liability with respect to components not manufactured by the Seller shall be limited to the extent of express warranties received by Seller from such component manufacturers unless said components are sold under the Hardinge Inc. trade name, in which case, the new machine warranty shall be applicable. This warranty is void and of no effect and Seller shall not be liable for any breach of warranty, express or implied, if the equipment or any part or component thereof shall have been repaired or altered by persons other than the Seller (unless expressly authorized in writing by Seller), or if the equipment is operated or installed contrary to Seller's instruction or subjected to misuse, negligence or accident. Written notice of any claimed defect within the warranty period must be presented to the Seller immediately upon Buyer's discovery of the defect. Seller shall have the option to inspect any parts claimed to be defective either at the Buyer's place of business or at the Seller's place of manufacture while the Product is in the claimed defective condition. No return shall be accepted unless Seller has had an opportunity to inspect the equipment or has expressly authorized the return. If the equipment defect constitutes a safety hazard, operation of the Product must be suspended until corrective action is completed. Seller, upon receipt of written notice of a claimed defect, will proceed without unreasonable delay to remedy any defect coming within the warranty which is found to exist. During the warranty period, parts found to be defective by Seller's inspection will be furnished free of charge, shipment F.O.B. Point of Origin. **THERE ARE NO OTHER WARRANTIES THAT EXTEND BEYOND THE WARRANTY HEREIN CONTAINED. THE WARRANTY STATED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND IS IN LIEU OF ANY AND ALL OTHER OBLIGATIONS OR LIABILITIES ON SELLER'S PART.** No statement, oral or written, inconsistent with this warranty is binding on the Seller. No agent, employee or representative of the Seller, other than a duly authorized officer, has any authority to bind the Seller to any confirmation, representation or warranty concerning the Product beyond that specifically included in the warranty contained herein. **UNDER NO**

CIRCUMSTANCES WILL THE SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGE OR EXPENSE OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, PERSONAL INJURIES AND LOSS OF PROFITS, ARISING IN CONNECTION WITH ANY CONTRACT OR WITH THE USE, ABUSE, UNSAFE USE OR INABILITY OF BUYER TO USE THE PRODUCTS.

Seller's maximum liability shall not exceed an obligation to either (a) repair or replacement of the defective part or Product, or, (b) at the Seller's option, accept the return of the Product and make a full refund of the purchase price. In either case, such remedy shall be the Buyer's sole and exclusive legal and equitable remedy. If the Buyer and the Seller agree that it would be in the best interest of both Parties to return the Product and refund the purchase price, the Buyer shall be liable for the rental cost of the Product for the period from the date of shipment to the date the Product is returned to Seller (the "Rental Period"). The rental cost of Product shall be based on the latest Seller rental price for renting a similar product as the Product being returned for the Rental Period. This cost shall be deducted from the purchase price refunded to the Buyer. The sole purpose of the stipulated exclusive remedy shall be to provide the Buyer with free repair or replacement of defective Products, or refund of the purchase price, in the manner provided herein. This exclusive remedy shall not be deemed to have failed of its essential purpose so long as Seller is willing and able to repair or replace defective Products, or to refund the purchase price, in the prescribed manner.

12. Returns Procedure. All Products returned to Seller require a Return Material Authorization (RMA) to be issued by Seller. The RMA number must be clearly printed on each returned container. Any container received by Seller without an RMA number shall be returned to sender collect. Made-to-order items, special collets, items with special bore sizes, batteries, altered or etched items are not accepted for return. Products which are returned in new and unused condition in the original package within thirty (30) days of the shipment date will be eligible for full refund less a ten percent (10%) restocking charge (minimum restocking charge of \$30.00). Returned parts must be shipped prepaid by Buyer. After thirty (30) days, new and unused parts will be accepted for return for up to three (3) months from the original shipment date with a thirty percent (30%) restocking charge applicable. After three (3) months from the original shipment date, Seller will not accept any returned Product. If the returned item is not what the Buyer ordered (as set forth in the RMA), Seller will replace the item, pay any additional shipping charges incurred and waive any restocking charge. If the seal is broken on returned printed circuit boards and the machine is out of warranty, or if the Seller's service technician did not perform the service, a two hundred dollar (\$200) testing fee shall be applicable. Before returning out of warranty printed circuit boards, Seller must be contacted for information. Not all circuit boards will be accepted for return. Seller reserves the right to inspect returned Products and to reject the return of Products in accordance with these policies. All rejected returns shall be reshipped to the Buyer at Buyer's

expense. For all returns within the U.S., call 800-843-8801 Option 2 or 607-734-2281 or fax 607-734-3886. For all other returns, call 607-734-2281 or fax 607-734-3886.

13. Limitation of Liability. NOTWITHSTANDING ANY OTHER PROVISIONS OF THE CONTRACT AND TO THE EXTENT PERMITTED BY APPLICABLE LAW, SELLER, AND ITS SUBCONTRACTOR(S) AND SUPPLIERS AT ANY TIER, SHALL NOT BE LIABLE IN CONTRACT, IN TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY), OR OTHERWISE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUE, LOSS OF USE OF EQUIPMENT OR SYSTEM, COST OF CAPITAL, COST OF TEMPORARY EQUIPMENT, CLAIMS OF CUSTOMERS OF THE BUYER, PERSONAL INJURY OR DAMAGE OR LOSS OF PROPERTY OR EQUIPMENT NOT SUPPLIED BY SELLER UNDER THE CONTRACT. THE REMEDIES OF THE BUYER SET FORTH HEREIN ARE EXCLUSIVE, AND THE TOTAL AGGREGATE LIABILITY OF SELLER, ITS AFFILIATES, AND ITS SUBCONTRACTOR(S) AND SUPPLIER(S) AT ANY TIER, WITH RESPECT TO THE CONTRACT, OR ANYTHING DONE IN CONNECTION THEREWITH SUCH AS THE PERFORMANCE, FAILURE TO PERFORM, OR BREACH THEREOF, OR FROM ANY ACTIVITY UNDERTAKEN BY SELLER WITH RESPECT TO THE PRODUCT BUYER'S MATERIAL, OR TECHNICAL ASSISTANCE, INCLUDING, BUT NOT LIMITED TO, THE MANUFACTURE, SALE, DELIVERY, RESALE, INSTALLATION, MAINTENANCE, FIELD ENGINEERING SERVICE, FIELD ADVISORY SERVICE, REPAIR OR USE OF ANY PRODUCT COVERED BY OR FURNISHED UNDER THE CONTRACT, WHETHER IN CONTRACT, IN TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE FOR THE RELEVANT PRODUCT.

14. Indemnification. Buyer agrees to indemnify, defend and hold Seller harmless from any and all liability, loss or damages which Seller may suffer as a result of claims, demands, costs or judgments made against Seller arising out of any use whatsoever of the Products sold pursuant to the Contract, which liability, loss or damages, claims, demands or judgments are based upon or result from (a) any alteration or modification of the Product by Buyer, Buyer's officers, agents or employees; or (b) the failure of Buyer, Buyer's officers, agents or employees to follow manufacturer's instructions, warnings or recommendations which are communicated by Seller to Buyer in any form before, during or after the date of the Contract; or (c) the failure of Buyer, Buyer's officers, agents or employees to comply with federal, state, local or foreign laws or regulations applicable to the use of such machinery or equipment, including but not limited to, the 1970 Occupational Safety and Health Act as amended; or (d) the failure of Buyer, Buyer's officers, agents or employees to properly train and instruct anyone using the Product.

15. Repairs and Service Non-Warranty. The cost of all servicing of Products not provided for in preceding sections of these Terms may be charged for by the Seller at a per diem rate per worker per working day plus transportation and living expenses.

16. Cancellation. Upon written request from Buyer to cancel all or part of a Contract, the Seller will stop all work as promptly as possible. All cancellations shall be assessed a minimum cancellation fee of 15% of the quoted purchase price to cover the cost of order processing. In addition, Seller may recover a further cancellation fee based on percentage of completion of the Product with such further cancellation charge computed on the basis of the Seller's full cost plus 15% (for all engineering work, all work in process and raw materials, all supplies and commitments made by the Seller in connection with the Contract), less such allowances as the Seller may be in a position to make for any standard components and for the balance of the material as scrap. Products that are complete on date of notification in writing to stop work or cancel shall be invoiced and paid in full and Buyer shall promptly instruct Seller as to the disposition of the Product and the Seller, if instructed, shall hold the Product for Buyer's account. All costs of storage, insurance, handling, boxing or other costs in connection therewith shall be borne by the Buyer.

17. Property Rights. Seller retains for itself any and all intellectual property rights in and to all designs, engineering details and other data pertaining to any Product or materials designed in connection herewith and to all rights of discovery, invention or patent rights arising out of work done for Buyer. The Buyer expressly agrees that it will not assert any intellectual property rights therein, except the rights for itself and subsequent owners to use the Product. Any prints, brochures, drawings or other information furnished to the Buyer by the Seller are intended solely for the confidential use by the Buyer and shall remain the property of the Seller and shall not be used by Buyer for any commercial purpose, including to the detriment of the Seller's competitive position.

18. Patent Indemnity. If any Product furnished by the Seller is rightfully claimed to infringe any United States Patent issued at the time the Contract is accepted, Seller agrees at its option: (1) to procure for Buyer the right to use the Product, or (2) to modify or replace the Product so as to avoid infringement, or (3) to accept redelivery of the Product and reimburse Buyer for the purchase price and any transportation expenses incurred by Buyer. Should any litigation be instituted against Buyer based on a claim that any Product in the condition as shipped by Seller infringes any United States Patent, Seller will undertake the defense thereof in Buyer's behalf and pay any damages and costs awarded therein against Buyer, provided Seller is given prompt written notice and is furnished with copies of all demands, process and pleadings and Buyer cooperates fully in giving Seller authority, information and assistance at Seller's expense for such defense, as well as control over the defense and any negotiations with regard to settlement. **THE**

FOREGOING REPRESENTS SELLER'S ENTIRE AND EXCLUSIVE OBLIGATION WITH RESPECT TO ANY CHARGE OF INFRINGEMENT AND IS IN LIEU OF ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO INFRINGEMENT. SELLER SHALL HAVE NO RESPONSIBILITY INSOFAR AS ANY PRODUCT MODIFIED BY BUYER OR MADE OR MODIFIED BY SELLER IN ACCORDANCE WITH THE CONTRACT AND BUYER SHALL INDEMNIFY SELLER IN ACCORDANCE WITH THE INDEMNITY IN PARAGRAPH "14" ABOVE FOR ANY CLAIM WHICH ARISES OUT OF SELLER'S COMPLIANCE WITH BUYER'S SPECIFICATIONS. SELLER SHALL ALSO HAVE NO RESPONSIBILITY WITH REGARD TO ANY SETTLEMENT, ADMISSION OR PROMISE MADE BY BUYER WITHOUT SELLER'S PRIOR WRITTEN CONSENT, NOR SHALL SELLER BE LIABLE FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER, INCLUDING LOSS OF PROFITS, CLAIMED TO HAVE BEEN SUSTAINED BY BUYER OR ANY USER OF THE PRODUCT ARISING OUT OF ANY CLAIM OF INFRINGEMENT. Seller is entitled to indemnity from certain of its suppliers and the rights and options vested in Seller shall extend to such suppliers and may be exercised by them.

19. Confidentiality Agreement. Buyer agrees to treat in confidence any information that may be received from Seller in connection with this Contract and designated by Seller as confidential or proprietary. Buyer shall have the limited right to use such Seller proprietary information for system maintenance and operations purposes and agrees not to disclose such Seller proprietary information to any third party without prior written consent from Seller. Buyer further agrees to make such Seller proprietary information available to its employees only on a need to know basis. Where consent is granted by Seller for disclosure of any of its proprietary information, Buyer shall require the recipient to execute a confidentiality agreement approved in advance by Seller.

20. Reservation of Rights. Seller reserves the right to make subsequent improvements and changes in design in its Products without imposing any obligation to make such changes or improvements upon Products sold to the Buyer.

21. Limitation of Action. Any action based upon an alleged breach of warranty must be commenced within twelve (12) months from the date that Buyer knew or should have known of the alleged defect or breach. Any other action against Seller must be commenced within twelve (12) months from the time the cause of action accrues unless the period for action shall be extended by Seller in writing. In the interpretation of this limitation of action for breach of Seller's warranty it is expressly agreed that there are no warranties of future performance of the equipment that would extend the period of limitation herein contained for bringing an action. IT IS EXPRESSLY UNDERSTOOD THAT ANY EFFORT BY BUYER, SELLER OR AGENTS TO REPAIR ANY PRODUCT SHALL NOT EXTEND THE TWELVE (12) MONTH

PERIOD OF LIMITATION UNLESS SELLER AGREES IN WRITING. THE WARRANTY SET FORTH IN PARAGRAPH "11" APPLIES TO REPLACEMENT PARTS AS WELL AS PRODUCTS ORIGINALLY SOLD, AND NOTHING EXCEPT SELLER'S WRITTEN CONSENT SHALL EXTEND ITS OBLIGATION IN WARRANTY MORE THAN THE PERIOD SPECIFIED IN PARAGRAPH "11".

22. Installation Costs. All costs associated with Product installation and/or erection shall be borne solely by Buyer.

23. Unnecessary Delay. If the Buyer causes unnecessary delay to the Seller's turnkey, installation process or warranty service calls, the Buyer shall be liable for all costs associated with Seller's waiting time including, but not limited to, time and material costs, travel expenses and any other costs associated with Seller's requirement to wait due to unnecessary delay. This cost shall be charged at the standard service or turnkey rates and shall be added to the first invoice sent to the Buyer following the occurrence of the unnecessary delay.

24. Interpretation. The Contract shall be governed by and construed in accordance with the substantive and procedural laws of the State of Illinois, USA. The Parties agree to specifically exclude the application of the United Nations Convention on Contracts for the International Sale of Goods. All references to "Dollars" are to "U.S. Dollars."

25. Reformation. In the event that any provision of these Terms is held illegal or unenforceable under applicable law by a court of competent jurisdiction, the validity or enforceability of the remaining provisions will not be affected, provided that the fundamental terms and conditions of these Terms (including without limitation Paragraphs 2, 3, 5, 6, 8, 11, 13, 14, 18, 19, 21 and 24) remain legal and enforceable. To the extent that any non-fundamental terms and conditions of these Terms are determined by a court of competent jurisdiction to be unenforceable, the unenforceable provision or provisions may be reformed to as closely as possible effectuate the intent of Seller and Buyer.

26. Alternate Dispute Resolution. In the event a dispute between the Parties cannot be resolved, an appeal shall be made to a committee consisting of a corporate officer or other legal representative authorized to act on behalf of the respective Party under local law. The corporate officers or legal representatives authorized to act on behalf of the respective Party under local law shall negotiate in good faith to properly assign the disputed cost to or between the Party(s). If an amicable settlement cannot be reached after thirty (30) days, either Party may request that the issue be decided through mediation in accordance with the procedure set forth in the following Paragraph "27".

27. Mediation: The Parties agree that any dispute or controversy arising out of this Contract or any interpretation of this Contract which the Parties are not able to resolve themselves through negotiation shall be submitted to non-binding mediation before any other legal

action is taken. The Parties shall mutually agree upon a single third party mediator. The costs and expenses of the mediation shall be borne equally by the Parties. Mediation shall take place at Elgin, Illinois, within two (2) weeks after notification by the aggrieved Party of a request for mediation unless extended by the mediator. If the mediation does not result in an agreement acceptable to all Parties, any Party may take such other further action as it deems advisable under law or equity.

28. VENUE. WITHOUT LIMITING THE MANDATORY ALTERNATE DISPUTE RESOLUTION AND MEDIATION PROVISIONS CONTAINED IN PARAGRAPHS 26 AND 27 OF THESE TERMS, ANY LITIGATION BASED ON THE CONTRACT, TORT, OR ANY COURSE OF ACTIONS, CONDUCT, COURSE OF DEALING OR STATEMENTS (WHETHER ORAL OR WRITTEN) OF BUYER OR SELLER, SHALL BE BROUGHT AND MAINTAINED EXCLUSIVELY IN THE STATE COURTS OF THE STATE OF NEW YORK THAT ARE LOCATED IN CHEMUNG COUNTY, NEW YORK, AND FEDERAL COURTS IN THE WESTERN DISTRICT OF NEW YORK. BUYER AND SELLER EACH IRREVOCABLY CONSENTS TO THE SERVICE OF PROCESS OF ANY OF THE AFOREMENTIONED COURTS IN ANY SUCH LITIGATION BY THE MAILING OF COPIES THEREOF BY CERTIFIED MAIL, POSTAGE PREPAID, RETURN RECEIPT REQUESTED, TO SUCH PARTY'S ADDRESS SET FORTH IN THE CONTRACT, SUCH SERVICE SHALL BECOME EFFECTIVE 10 DAYS AFTER SUCH MAILING.

29. WAIVER OF JURY TRIAL. BUYER AND SELLER HEREBY EACH KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES TO THE EXTENT PERMITTED BY APPLICABLE LAW ANY RIGHTS IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION ARISING UNDER THE CONTRACT.

30. Assignment of Contract. Neither Party shall assign, transfer or convey the Contract or its rights, title, interest, obligations or responsibilities hereunder without the prior written consent of the other Party, which consent shall not be unreasonably withheld.

31. Entire Agreement. The Contract replaces all previous agreements and any course of dealing between Seller and Buyer and embodies the entire agreement between Buyer and Seller. The Parties shall not be bound by or be liable for any statement, representation, promise, inducement or understanding of any kind or nature not set forth therein. No changes, amendments or modifications of any of the terms or conditions of the Contract shall be valid unless reduced to writing and signed by both Parties.

32. Canadian Sales. (1) Each reference to "United States port" could be deemed to be "Canadian port"; (2) Each reference to "Uniform Commercial Code" shall be deemed to be "Personal Property Security Act"; (3) Each reference to "forty eight (48) continental United States" shall be deemed to be "Canada"; (4) Each reference to "1970 Occupational Safety and Health Act" shall be deemed to be "applicable Canadian, Provincial, and

Territorial occupational, safety, and health laws and regulations"; (5) Each reference to "United States Patent" shall be deemed to be "Canadian or United States Patents."

33. Mexican Sales. (1) Each reference to "United States port" shall be deemed to be "Mexican port"; (2) Each reference to "Uniform Commercial Code" shall be deemed to be "Codigo DeComerico"; (3) Each reference to "forty-eight (48) continental United States" shall be deemed to be "Mexico"; (4) Each reference to "1970 Occupational Safety and Health Act" shall be deemed to be "applicable Mexican, Territorial occupational, safety, and health laws and regulations"; (5) Each reference to "United States Patent" shall be deemed to be "Mexican or United States Patents."

34. European Sales. (1) Each reference to "United States port" shall be deemed to be a port in the relevant European country; (2) Each reference to "Uniform Commercial Code" shall be deemed to be a reference to comparable European legislation protecting the interests of creditors; (3) Each reference to "forty-eight (48) continental United States" shall be deemed to be a reference to the relevant European country; (4) Each reference to "1970 Occupational Safety and Health Act" shall be deemed to be comparable European legislation regarding occupational, safety, and health laws and regulations; (5) Each reference to "United States Patent" shall be deemed to be to United States Patents or patents in the relevant European country (if applicable).

35. Asian Sales. (1) Each reference to "United States port" shall be deemed to be a port in the relevant Asian country; (2) Each reference to "Uniform Commercial Code" shall be deemed to be a reference to comparable legislation protecting the interests of creditors in the relevant Asian country; (3) Each reference to "forty-eight (48) continental United States" shall be deemed to be a reference to the relevant Asian country; (4) Each reference to "1970 Occupational Safety and Health Act" shall be deemed to be comparable legislation regarding occupational, safety, and health laws and regulations in the relevant Asian country; (5) Each reference to "United States Patent" shall be deemed to be to United States Patents or patents in the relevant Asian country (if applicable).

HARDINGE INC.

One Hardinge Drive, Elmira, NY 14903 USA

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FEATURES:

- Chrome Plated Ways & Gibs
- One Shot Lube
- Variable Speed Drive System
- Back Gear For Heavy Milling
- Dovetail Ways
- Manual Draw Bar
- Power Down Feed To Spindle



SPECIFICATIONS:

Table Size	9" x 49"
Longitudinal Travel	36"
Cross Travel	12"
Knee Travel	16"
Quill Travel	5"
Spindle Taper	R-8
Spindle Speeds	60-4,200 RPM
Table Weight Capacity	750 Lbs.
Spindle Motor	2 H.P.
Machine Weight	1,950 Lbs

Optional Accessories:

- A. 2 Axis Digital Readout - Installed ... \$3,075.00
 - B. X Axis Servo Power Feed - Installed \$1,300.00
 - C. Shipping To Strawberry, CA 95375 \$2,650.00
- Note: Machine ships on a flat bed, air ride, tarped truck

MODEL:
Series 1

BASE PRICE:
\$21,950.00

Terms: Check With Order
F.O.B. Factory

Total Package Price ... \$28,975.00



BOARD AGENDA REPORT

Date: November 17, 2022

Staff: Jeff Shields

2022 IBEW Incentive Program

Background Summary:

Article 21.2 of the Memorandum of Understanding (MOU) between the IBEW and Tri-Dam provides that represented employees of the Project be entitled to a wage bonus each year based on not exceeding a cumulative number of hours for unplanned or forced outages. The total bonus amount is calculated based on the number of eligible employees.

The basis of the plan establishes a threshold of 200 hours or less for unplanned outages per year. The time period is December 1 through November 30. If unplanned outages do not exceed 200 hours then the total incentive bonus amount is divided equally amongst the eligible, represented employees.

If unplanned outages exceed 200 hours, the bonus is reduced by 10% for each 24-hour period of outage time exceeding the 200-hour threshold. Therefore, if an outage or combination of outages exceeds 8.3 days the bonus is reduced by 10% for each 24-hour period.

The cumulative hourly amount of unplanned outages in the period of December 1, 2021 through November 8, 2022 is as follows:

	<u>2022</u>	<u>2021</u>
Donnells Powerhouse:	1.43 hours	13.37 hours
Beardsley Powerhouse:	11.19 hours	0.00 hours
Tulloch Powerhouse:	2.26 hours	5.49 hours
Sandbar Powerhouse:	0.00 hours	0.00 hours
Total Unplanned outage time:	15.28 hours	19.26 hours

The total unplanned outage hours are projected to be less than the threshold of 200 hours, and thus the entire bonus of \$36,000 is payable. A bonus payment of \$1,894.74 will be made to each of the 19 eligible represented employees. Incentive Bonus payments were made in 2011 – 2017, 2019, 2020, 2021 and were not made in 2009, 2010 and 2018 due to the Donnells Powerhouse generator failure and the Donnells thrust bearing failure.

Excerpt from IBEW MOU 2018-2024

21.2 The Project Incentive Program is based on the Plant system's performance. We know that unforeseen circumstances will sometimes result in unplanned outages. This program is intended to reduce such outages by providing an incentive that acknowledges the commitment and dedication of Tri-Dam employees to limit outages and assure the safe and continuous operation of Project facilities. To that end, an annual incentive pool of \$32,000 has been established to focus all of our attention on doing the little things that prevent interruptions in service. For each additional Bargaining Unit employee hired after the effective date of this MOU, the Project will increase the annual incentive pool by \$2,000 for each additional employee. Additional Bargaining Unit employee shall mean an employee(s) that is 1) eligible for the incentive bonus, and 2) will increase the number of Bargaining Unit employees above the current number of seventeen (17).

The goal of the program is to have no power outages. An outage for the purposes of this program is defined as:

- a) When a Tri-Dam Plant or System fails to function such that generation is restricted by 20%.
- b) Generation is suspended entirely or requires unusual operating circumstances (such as 24 hour station attendance).

An annual outage allowance of 200 hours will be established that will not be considered in determining the incentive under this program. Once the 200 hour threshold is exceeded then each hour thereafter shall be recorded and will reduce the value of the potential payout. The incentive calculation shall be adjusted such that for each 24 hour outage period, the potential incentive award will be reduced by 10%.

Note: the Project anticipates a 1-3 week annual maintenance outage that is separate from and will not affect this program.

Example:

Incentive Fund equals \$32,000
Annual outage hours recorded: 248
Incentive Reduction: 248 penalty hours - 200 hour allowance = 48 hours
 $48 / 24 = 2$
 $2 \times 10\% = 20\%$
 $\$32,000 \times 20\% = \$6,400$
Net incentive payment = $\$32,000 - \$6,400 = \$25,600$

Method and Timing of Payment:

The Program will run from December 1 through November 30 of each Program year. All Bargaining Unit employees who are on the active payroll and who have completed their probationary period as of November 30 of each year will be eligible to receive an award. The net incentive payment will be divided equally among the eligible Bargaining Unit employees on the payroll as of November 30. Payment will be made after the first pay day, but prior to second pay day in December. Incentive payments, by law, are subject to normal state and federal payroll tax deductions. Should the plan not be continued under a subsequent Memorandum of Understanding, the Parties will meet and confer concerning the effects of ending the Program should the Program terminate prior to the end of a full Program year.

OUTAGES 2022

Donnells

Start Time	End Time	Down Time	Cause
3/8/22 0:11	3/8/22 1:54	1:43:00	86N GEN HIGH TEMP
		0:00:00	

TOTAL FORCE 1:43:00

Beardsley

Start Time	End Time	Down Time	Cause
12/2/21 8:03	12/2/21 10:59	2:56:00	GEN HOUSING WATER LEAK REPAIR INSPECTION
6/10/22 12:20	6/10/22 12:46	0:26:00	HIGH DATA GRAPH ALARM FOR BEARING TEMP
6/10/22 17:49	6/10/22 20:03	2:14:00	HIGH DATA GRAPH ALARM FOR BEARING TEMP
6/12/22 0:43	6/12/22 3:49	3:06:00	HIGH DATA GRAPH ALARM FOR BEARING TEMP
9/12/22 14:30	9/12/22 15:09	0:39:00	COOLING WATER LINE REPAIR ON PACKING BOX GLAND
9/30/22 16:01	9/30/22 17:59	1:58:00	HIGH DATA GRAPH ALARM FOR BEARING TEMP

TOTAL FORCE 11:19:00

Sandbar

Start Time	End Time	Down Time	Cause
		0:00:00	
		0:00:00	

TOTAL FORCE 0:00:00

Tulloch

Start Time	End Time	Down Time	Cause
12/19/21 11:41	12/19/21 11:47	0:06:00	TPH #1 86N BEARING OIL LEVEL
5/26/22 6:45	5/26/22 9:03	2:18:00	TPH #3 BEARING REPLACEMENT.
9/15/22 15:14	9/15/22 15:16	0:02:00	TPH #3 GOVERNOR PLC FAILURE

TOTAL FORCE 2:26:00

TOTAL OUTAGE HOURS 15:28:00

BOARD AGENDA REPORT

Date: 11/17/2022

Staff: Forrest Killingsworth

SUBJECT: Canyon Tunnel Progress Update

RECOMMENDED ACTION:

No action recommended. Staff seeks consensus from the Board to proceed with the approval process to initiate the 90 Percent Design Proposal as presented by Provost and Pritchard Consulting Group (“P&P”), to be performed on a time and expense basis, not to exceed \$902,000. The OID and SSJID Boards will independently consider approvals at subsequent board meetings.

BACKGROUND AND/OR HISTORY:

In July of 2022, the Canyon Tunnel Design team provided an update to the Tridam Board regarding the status of the 60% Design Report. Staff provided an overview of the Canyon Tunnel Project including the preferred upstream portal design (Alternative 1A) assuming the California Department of Fish and Wildlife (CDFW) provides notice that a fish screen would not be required for the project. The process to establish whether a fish screen would be required is determined through the Lake and Streambed Alteration Agreement (LSA) application process. The District submitted an LSA application to CDFW on May 5th and received a draft LSA agreement from CDFW on August 24th. Fortunately, the draft agreement did not propose a fish screen for this project. As a result, the following activities were immediately engaged:

- Completion of 60% Design Report
- Preparation of Environmental Permit applications (Clean Water Act Section 401 and 404)
- Preparation of 90% Design Proposal
- Tribal consultation necessary to complete CEQA document

To date, the District is in receipt of the completed 60% Design Report and the 90% Design Proposal. Scott Lewis, the P&P Project Manager, will provide a presentation at the Board meeting regarding each document. Deliverables for the 60% Design included the following:

- Definition of the tunnel length, alignment, and tunneling conditions
- Identification of preferred portal locations
- Identification of temporary construction and permanent access facilities
- 60% Geologic Data Report
- 60% Geotechnical Baseline Report
- 60% Design Report Documentation and Plans
- Geologic Hazards Study at Upstream Portal
- Preliminary Construction Cost Estimate

ANALYSIS:

The 90 Percent Design Proposal will continue to build on the work completed in the 60% design phase. The proposal is broken down into eight (8) phases:

- *Phase 1 – Consultation and Coordination*
 - Preliminary design meetings with SSJID, OID, and TID to identify specific needs, requirements, and objectives of the Project

- Coordination and meetings with regulatory agencies, as necessary, including DSOD, USGS, CDFW, etc.
- Landowner negotiations support
- *Phase 2 – Documentation of Existing Conditions*
 - DSOD Historical research of Goodwin Dam
 - Survey and investigation of materials and foundation to support design of barge landing, intake structure, and other select areas (e.g., access road, parking area, ram pump replacement site, etc.)
- *Phase 3 – Hydrogeology Evaluation*
 - Investigation to understand and document the potential rate of groundwater inflow into the proposed tunnel during construction.
 - Development of field work plan to coordinate site access with landowners
 - Memorandum to summarize findings
- *Phase 4 – 90 Percent Civil Design*
 - Preparation of 90% civil engineering design plans and specifications involving water intake structure, flow control facilities, gauging system, re-establishment of private water supply systems (i.e., Ram Pump), maintenance barge, final hydraulics, etc.
- *Phase 5 – 90 Percent Geotechnical Design*
 - Preparation of 90% geotechnical design and specifications involving tunnel dimensions, profiles, slope, liner, and invert elevations.
 - Retrieval of groundwater level data and inclusion in Geologic Data Report (GDR)
- *Phase 6 – 90 Percent Electrical Design*
 - Preparation of 90% electrical engineering design and specifications including portal gate operations, gauging station, temporary construction power, permanent and backup power, SCADA and Telemetry systems, etc.
- *Phase 7 – Construction Cost Estimate*
 - Update the Construction Cost Estimate to reflect 90% design
- *Phase 8 – Geological Data and Geotechnical Baseline Reports*
 - Update and finalize Geotechnical Baseline Report (GBR) and Geologic Data Report (GDR) based on 90% design

Project Schedule:

Assuming the OID and SSJID Boards provide authorization to proceed at the individual board meetings following this Tridam meeting, P&P has indicated that work can begin immediately. It is anticipated that final delivery of the 90 Percent Design deliverables will occur in 10 months following the Notice-to Proceed. Assuming a start date around the first of the year, we anticipate 90% completion in November of 2023. Included below is a tentative schedule of remaining Canyon Tunnel activities:

- November 2022 Complete 60% Design, Initiate 90% Design, Adopt CEQA
- February 2023 Receive RWQCB CWA Section 401 Certification
- May 2023 Finalize 90% Design, Initiate 100% Design
- October 2023 Receive USACE CWA Section 404 Permit
- November 2023 Finalize 90% Design
- January 2024 Initiate 100% Design
- June 2024 Finalize 100% Design and Begin Bid Solicitation

- December 2024 Award Construction Contract
- March 2025 Begin Construction
- March 2028 Complete Construction

FISCAL IMPACT:

Adequate funds have been budgeted in each of the proposed 2023 District budgets to support the 90% design effort. A breakdown of anticipated costs is provided below:

Phase	Estimated Fee	SSJID Portion (72%)	OID Portion (28%)
Phase 1 - Consultation and Coordination	\$ 50,000	\$ 36,000	\$ 14,000
Phase 2 - Documentation of Existing Conditions	\$ 53,000	\$ 38,160	\$ 14,840
Phase 3 - Hydrogeology Evaluation	\$ 83,000	\$ 59,760	\$ 23,240
Phase 4 - 90 Percent Civil Design	\$ 473,000	\$ 340,560	\$ 132,440
Phase 5 - 90 Percent Geosturctural Design	\$ 109,000	\$ 78,480	\$ 30,520
Phase 6 - 90 Percent Electrical Design	\$ 79,000	\$ 56,880	\$ 22,120
Phase 7 - Construction Cost Estimate	\$ 29,000	\$ 20,880	\$ 8,120
Phase 8 - GDR and GBR Documents	\$ 26,000	\$ 18,720	\$ 7,280
Total Estimate Fee:	\$ 902,000	\$ 649,440	\$ 252,560

Including the 90% design effort, remaining expenditures to complete the Canyon Tunnel Project are anticipated to amount to approximately \$62M.

ATTACHMENTS:

- Attachment A – 90% Design Proposal
- Attachment B – 60% Design Plans
- Attachment C 60% Design Report**

Board Motion:

Motion by: _____ Second by: _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)

November 8, 2022

Forrest Killingsworth
South San Joaquin Irrigation District
PO Box 747
Ripon, CA 95366-9750

**Subject: Proposal for 90 Percent Design
Canyon Tunnel Project
South San Joaquin Irrigation District and Oakdale Irrigation District
Calaveras County, California**

Dear Mr. Killingsworth:

Thank you for the opportunity to submit this Proposal to continue providing engineering services to South San Joaquin Irrigation District (SSJID or District) for the proposed Canyon Tunnel project. This Proposal discusses our understanding of the project, recommends a scope of services together with associated fees, deliverables, and approximate schedules, sets forth our assumptions and discusses other services that may be of interest as the project proceeds.

Project Understanding

SSJID is in the process of designing an approximately 12,000-foot-long tunnel to increase the reliability of the District's surface water delivery system. The proposed tunnel will re-route the Joint Supply Canal (JSC) – co-owned by SSJID and Oakdale Irrigation District (OID) – and will bypass the portion of the existing canal between Goodwin Dam and the canal access ramp. Previously performed geologic hazard studies conclude that the portion of the canal that Canyon Tunnel will bypass is susceptible to significant geologic hazards.

Previous work completed by the team at Condor Earth (Condor), now employed by Provost & Pritchard Consulting Group (P&P), for the proposed tunnel project was performed between March 2018 through onboarding at P&P in January 2022. This work has included an engineering study at the preliminary (30 percent) design level to evaluate the ground and sub-surface conditions along the potential tunnel alignments to assess tunnel feasibility, and a preliminary Geotechnical Data Report. In November 2022, an update at the 60 percent design level was provided, including our recommendations for the final tunnel alignment, conceptual temporary and final site facilities, tunnel intake alternatives and selection of the preferred alternative. As discussed, our Construction Cost Estimate (CCE) will be updated from our preliminary numbers provided in April 2021 as part of our 90% effort. Our deliverables for the previous work included the following:

- Definition of the tunnel length, alignment, and tunneling conditions pertaining to tunnel excavation and ground support
- Identification of portal locations, grading, and ground support types
- Identification of temporary construction and permanent access facilities
- Geologic Data Report (GDR; including data from 30 and 60 percent design phases)

- Design Report (updated through the 60 percent design phase), including documentation of alternate tunnel intake configurations and tunnel excavation methods studied
- Preliminary Construction Cost Estimate, including conventional (roadheader) and Tunnel Boring Machine (TBM) tunnel excavation alternatives (updated through the 60 percent design phase)
- 60 percent design drawings, including the preferred alternative of the upstream portal location and intake facilities
- 60 percent design drawings showing only the preferred alternative of the upstream portal for submission to DSOD
- Geotechnical Baseline Report (GBR; outline only)
- Geologic Hazards Study (related to the upstream portal location)

Previous engineering and geologic studies included surface and subsurface exploration to evaluate the geologic conditions along the tunnel alignment. Based on the results, we recommend additional investigation of the tunneling ground conditions is not warranted, except, as noted herein, further groundwater investigation.

P&P understands that SSJID would like to present this Proposal for continued design of the Canyon Tunnel to the Board of Directors of both South San Joaquin and Oakdale Irrigation Districts for acceptance and approval. This document presents our proposed scope of services and fee estimate for P&P's work during the 90 Percent Design work.

The primary components of the 90 percent design phase are as follows:

- Refining the engineering design of the preferred upstream portal and intake facilities alternative
- Finalize tunnel hydraulic analysis
- Finalize the downstream tunnel portal location/layout and perform engineering design of the portal shoring wall
- Evaluate and design construction and maintenance barge and guide cable infrastructure
- Evaluate and design the new water diversion gauging structure/system(s)
- Evaluate and design plans to reestablish existing SSJID and OID water service to adjacent users, including Ram pump replacement and others identified in existing Agreements
- Compile 90 Percent Drawings and Technical Specifications, Design Report, GDR and GBR
- Update the Construction Cost Estimate

Our 90 Percent Design scope and fee estimate includes work with several of the subconsultants we partnered with in previous design efforts. Our subconsultants include Watermark Engineering (water diversion structure and gauge), J. Calton Engineering (electrical design), Mid-Cal Construction (barge structure), Greg Korbin (Specialty Tunneling Consultant) and Mike Gowing (Specialty Construction Consultant).

We will continue to perform the work in phases to control costs and allow SSJID to determine how to move forward with project budgeting as our design work progresses.

Scope of Services

Our proposed scope of work for this Proposal is segregated into several phases, described herein.

Phase 1: Consultation and Coordination

To help facilitate the 90% design scope included in this Proposal, P&P has identified Phase 1 for Consultation and Coordination to lead and facilitate study sessions with SSJID, OID and Tri-Dam Project (TDP) to discuss specific project components and approaches for design prior to moving forward with other phases of work. These sessions will be required to work together with all three agencies to identify needs, requirements and the objectives of the Project.

The result of the study sessions may identify needs that were not anticipated or defined in the scope of the services that are presented at the time of this Proposal and may require an adjustment in Project fees if the scope changes significantly.

Support related to landowner negotiations will be discussed in detail during the study sessions. We anticipate the need to develop additional documents, exhibits, descriptions and to participate in field visits as we assist the Districts in working through these negotiations.

This phase will also encompass future meetings and consultation that may be requested or required by the Client, Department of Water Resources Division of Safety of Dams (DSOD), US Geologic Survey (USGS), or other regulatory agencies, in addition to any remaining research or document retrieval from DSOD. We anticipate consultation with DSOD after their review of the 60% Design Drawings that may included in-person or virtual meetings and possible design considerations for 90% design to address DSOD concerns and/or comments.

Additionally, this phase includes 8 monthly meetings with SSJID, OID, and/or TDP to review Project milestones and check sets.

Phase 2: Documentation of Existing Conditions

P&P will compile historical data, perform additional investigation and materials sampling of existing structures and foundation areas, and perform necessary surveys to confirm design parameters. Note that no boundary survey will be performed at this time. Our work in this phase includes:

- Visit DSOD office to review historical data and request copies
- Investigation and sampling of existing intake structure materials and foundation areas for design of barge guide cable, landings and intake structure
- Survey work for final design of intake structure, outlet tie in and other select areas (including forebay structure at the north dam abutment, access road, parking area on south side of dam, Ram pump replacement, waterline replacement and downstream portal area)

Phase 3: Hydrogeology Evaluation

P&P will perform an investigation to better understand the potential rate of formation groundwater inflow into the proposed tunnel to assist the contractors in bidding, planning and construction. Nine 1.5-inch piezometer wells (ranging in depth from 240 to 350 feet below ground surface) indicate the presence of formation water in the Mehrten Formation within the proposed Project

site. The proposed Canyon Tunnel is below the water level of Goodwin Reservoir pool and will potentially encounter increased inflow of groundwater into the tunnel during construction. This phase will include the following activities:

- Review of previously collected and historical data, including published reports on groundwater, geology and geologic conditions in the local area.
- Review of existing documentation regarding groundwater inflows during construction of the Goodwin Tunnel.
- Preparation of a field work plan for SSJID's use to coordinate site access with the landowners, including the anticipated schedule, duration and scope of field activities.
- Preparation of a field work Site Safety Plan (SSP) prior to performing field work.
- Initial field testing of the piezometers. Based on the results of initial testing, additional assessment of the piezometers may be performed.
- P&P will analyze the results and summarize our findings in a Memorandum to SSJID. Due to the depths and small diameter of the existing piezometers, the options for down-hole testing equipment are limited and may not provide results meaningful enough to draw conclusions regarding potential groundwater inflow during construction. Therefore, P&P will consider and evaluate additional cost-effective methods to determine the best solution to obtain additional hydrogeologic data, if needed for the GBR. Should additional testing be necessary, a separate proposal will be provided to the District for consideration.
- Data assembled with this work will be included in the GDR and implications regarding tunneling will be included in the GBR.

Phase 4: 90 Percent Civil Design

P&P will complete the 90 percent civil engineering design, preparation of plans, and preparation of technical specifications for the Canyon Tunnel upstream and downstream facilities. This phase will include the following activities:

- Site visits to review site for design considerations.
- Evaluation of existing upstream water intake structure to understand current components and required additional structural support, as needed.
- Preparation of 90 percent plans for the tunnel upstream water flow control facilities for the preferred upstream portal option. Plans will include facility modifications at the upstream and downstream portal areas, and 90 percent design of the water diversion gauge system.
- 90 percent design of the tunnel hydraulics and downstream canal connection for verification of the hydraulic assumptions for final design, and diversion gauging communication to the existing SCADA system.
- Preparation of 90 percent plans for to re-establish water supply obligations identified in existing Agreements, including a solar-powered Ram pump replacement well, holding tank and sump. Recommendations for pump type and size will be provided.
- Preparation of 90 percent plans for a temporary construction and permanent maintenance barge and guide cable infrastructure.
- Preparation of the civil technical specifications.
- Internal Project coordination and review meetings between the P&P design team.

Phase 5: 90 Percent Geostuctural Design

P&P will complete the 90 percent geostuctural engineering design, preparation of plans and technical specifications for the 12,000-foot Canyon Tunnel. This phase will include the following activities:

- Preparation of 90 percent design plans for the tunnel dimensions, profiles, slope, liner and invert.
- Site visit to retrieve the groundwater level data from the data loggers and update our Geologic Data Report (GDR) with the new groundwater level data.
- Preparation of the technical specifications.
- Preparation of the overall 90 percent design report in PDF format.
- Internal Project coordination and review meetings between the P&P design team.

Phase 6: 90 Percent Electrical Design

In collaboration with J. Calton Engineering, P&P will complete the 90 percent electrical engineering design, preparation of plans, and preparation of electrical technical specifications for the Canyon Tunnel upstream portal gate operations and gauging station telemetry. This phase will include the following activities:

- Site visits to review site for design considerations.
- Evaluation of temporary power operations for tunnel construction (power drop vs. on-site generation) and coordination with PG&E, as needed.
- Discussion and evaluation with TDP of permanent power generator upgrade at Goodwin Dam.
- Preparation of 90 percent electrical plans for operations of the upstream portal gates including: single line diagram(s), load calculations, site plans, sections, details, conduit and cable schedule, valve schematics, solar plan schematics, flowmeter schematic, and RTU panel and interconnects.
- Preparation of the electrical technical specifications.
- Coordination with TDP for RTU Standards.
- Project meetings for coordination and review of progress between P&P and J. Calton Engineering.

Phase 7: Construction Cost Estimate

Phase 7 will consist of preparing a CCE for the 90 percent plans and specifications prepared in above Phases. This phase will include collaboration with our Specialty Construction Subconsultant that has worked on previous phases of the Canyon Tunnel project and has specialized experience in similar construction projects. The CCE will be included in the 90 percent design report.

Phase 8: Geologic Data and Geotechnical Baseline Reports

Phase 8 will include the preparation of a Geotechnical Baseline Report (GBR) per the outline provided in the 60 percent design phase and the update of the preliminary Geologic Data Report

(GDR) published November 4, 2022, including new data along with data collected in 30 and 60 percent design phases.

The GBR is developed to provide an economic and technical balance between the desire for sufficient data for final design, and risk management of construction claims that could result from changed subsurface conditions. The GBR establishes the subsurface ground conditions that bidders shall assume will be present during the construction phase when preparing their bids and will serve as the baseline condition when evaluating change order requests during construction due to changed conditions.

While the basis for the conditions presented in the GBR will begin with a review of geologic conditions documented in the GDR, the GBR will dictate assumed ground conditions of those areas along the tunnel alignment between core holes, such as rock type, rock hardness, blasting requirements, etc. The more conservative the assumptions (those that would result in higher construction costs) stated in the GBR, the higher the bid prices would be, but coupled with a lower risk of construction claims from changed subsurface conditions. Conversely, a less conservative GBR would likely result in lower bids, but with a less defined final construction cost at the beginning of construction due to the potential for changed conditions, and thus additional costs. P&P will work with SSJID and OID to determine the desired approach to finalize the GBR.

Professional Fees

P&P will perform the services in this Proposal on a time and expense basis, in accordance with our Standard Fee Schedule in effect at the time services are rendered. These fees will be invoiced monthly as they are accrued, and our total fees, including reimbursable expenses, will not exceed our estimate of \$902,000 without additional authorization.

Proposed Fee – Canyon Tunnel 90 Percent Design	
Phase	Estimated Fee
Phase 1 – Consultation and Coordination	\$50,000
Phase 2 – Documentation of Existing Conditions	\$53,000
Phase 3 – Hydrogeology Evaluation	\$83,000
Phase 4 – 90 Percent Civil Design	\$473,000
Phase 5 – 90 Percent Geotechnical Design	\$109,000
Phase 6 – 90 Percent Electrical Design	\$79,000
Phase 7 – Construction Cost Estimate	\$29,000
Phase 8 – Geological Data and Geotechnical Baseline Reports	\$26,000
Total Estimated Fee:	\$902,000

The line items shown above are estimates and are not intended to limit billings for any given Phase. Required phase effort may vary up or down from the line-item estimates shown, however total billings will not exceed the Total Estimated Fee shown without additional authorization. If the scope changes materially from that described above, as a result of any agency’s decision or because of design changes requested by the Owner, we will prepare a revised estimate of our fees for your approval before we proceed.

Schedule

P&P's work for the Canyon Tunnel Project can begin immediately following Notice-to-Proceed (NTP) or as directed. P&P will work with SSJID to meet milestone dates and objectives that will be determined in our initial kickoff meeting and subsequent study sessions identified in Phase 1. We anticipate submittal of final 90 Percent Design deliverables within 10 months of NTP.

Assumptions

- Of the alternatives presented to the district on April 21, 2021, Alternative 1A is the chosen preferred alternative for the upstream portal design.
- P&P CAD standards and title block will be used for the design of this project.
- Reviews by external agencies (USGS, DSOD, etc.) will not significantly change the scope, layout, or design of the Project. If so, the proposed fees may need to be adjusted.
- Field survey to locate right of way monuments and existing property corners to resolve boundary for the site and adjacent properties is not included at this time but is recommended at a later date for potential landowner negotiation.

Additional Services

We anticipate that after the work scope included in this Proposal is completed, P&P will provide a proposal for 100% Design and Construction Documents Support. This work will include finalizing the design and drawings to For Bid documents, preparing contract documents in coordination with SSJID's counsel, finalizing the technical specifications and preparing For Bid Contract and reference documents to assist in contractor bidding. We anticipate this work scope will also include an update of the Construction Cost Estimate from our 90% Design efforts included in the current proposed work scope. Finally, P&P's 100% Design proposal will include contractor bidding support including pre-qualified contractor solicitation and selection, leading a pre-bid site walk and review of rock cores that were collected in our 30% and 60% design efforts, and construction phase engineering/CM services. The CM proposal will be based on our preliminary estimate of the construction schedule; actual schedule and any implications regarding our CM fees to be confirmed after the contractor is selected and the contractor's baseline schedule is submitted.

Terms and Conditions

P&P offers a range of investigative, engineering and design services to suit the varying needs of our clients. Although risk can never be eliminated, more detailed and extensive investigations or assessment yield more information, which may help understand and manage the degree of risk. Because such detailed services involve greater expense, our clients participate in determining the level of service that will provide adequate information for their purposes at an acceptable level of risk. It should be recognized that definition and evaluation of subsurface and geologic conditions are difficult and inexact arts. Although, judgments leading to conclusions and recommendations are based on the (limited) data collected and are considered to be representative of site conditions, the data will not provide complete knowledge of the subsurface conditions present.

P&P may, during the preparation of the work product, review and reference work conducted by others including the Client. P&P is not responsible to independently verify work prepared by others intended to be utilized under this contract, when said work products is represented as true,

accurate and precise for intended use. Verification can be provided by P&P upon request and with additional scope and fee authorized by the client.

Acceptance of this Proposal will indicate that the client has reviewed the scope of service and determined that it does not need or want more services than are being proposed at this time. Any exceptions should be noted and may result in a change in fees.

P&P will perform its services in a manner consistent with the standards of care and skill ordinarily exercised by members of the profession practicing under similar conditions in the geographic vicinity and at the time the services will be performed. Regulations and professional standards applicable to P&P's services are continually evolving. Techniques are, by necessity, often new and relatively untried. Different professionals may reasonably adopt different approaches to similar problems. Therefore, no warranty or guarantee, express or implied, will be included in P&P's scope of service.

If this Proposal is acceptable, please provide a Professional Services Agreement that includes this scope of work. This will serve as our Notice to Proceed. This Proposal is valid for 60 days from the date above.

Sincerely Yours,
Provost & Pritchard Consulting Group



Scott W. Lewis, CEG 1835
Principal Tunneling Consultant



Alex Collins, RCE 78242
Director of Operations

Attachment
Standard Fee Schedule

2022 Standard Fee Schedule

This schedule supersedes previously published fee schedules as of the effective date of January 1, 2022.

Multi-year contracts are subject to any subsequent changes in these rates.

Staff Type	Fee Range
Engineering Staff	
Assistant Engineer	\$97.00 – \$125.00
Associate Engineer	\$115.00 – \$147.00
Senior Engineer	\$153.00 – \$184.00
Principal Engineer	\$195.00 – \$235.00
Associate Structural Engineer	\$120.00 – \$146.00
Senior Structural Engineer	\$150.00 – \$170.00
Principal Structural Engineer	\$180.00 – \$230.00
Specialists	
Associate Biologist	\$95.00 – \$115.00
Assistant Environmental Specialist	\$90.00 – \$120.00
Associate Environmental Specialist	\$126.00 – \$155.00
Senior Environmental Specialist	\$155.00 – \$185.00
Principal Environmental Specialist	\$195.00 – \$235.00
Assistant GIS Specialist	\$75.00 – \$93.00
Associate GIS Specialist	\$100.00 – \$127.00
Senior GIS Specialist	\$135.00 – \$170.00
Assistant Geologist/Hydrogeologist	\$95.00 – \$113.00
Associate Geologist/Hydrogeologist	\$120.00 – \$150.00
Senior Geologist/Hydrogeologist	\$150.00 – \$180.00
Principal Geologist/Hydrogeologist	\$195.00 – \$235.00
Associate Water Resources Specialist	\$105.00 – \$130.00
Senior Water Resources Specialist	\$135.00 – \$160.00
Environmental & Roof Specialist	\$120.00 – \$200.00
External Affairs Specialist	\$98.00 – \$128.00
Principal Tunneling Consultant	\$235.00 – \$255.00
Planning Staff	
Assistant Planner/CEQA-NEPA Specialist	\$85.00 – \$105.00
Associate Planner/CEQA-NEPA Specialist	\$110.00 – \$133.00
Senior Planner/CEQA-NEPA Specialist	\$140.00 – \$168.00
Principal Planner/CEQA-NEPA Specialist	\$173.00 – \$196.00
Technical Staff	
Assistant Technician	\$75.00 – \$97.00
Associate Technician	\$102.00 – \$125.00

Staff Type	Fee Range
Senior Technician	\$130.00 – \$150.00
Construction Services Staff	
Associate Construction Manager	\$120.00 – \$140.00
Senior Construction Manager	\$145.00 – \$167.00
Principal Construction Manager	\$180.00 – \$210.00
Construction Inspector ⁽¹⁾	\$152.00 – \$177.00
Construction Inspector ⁽²⁾	\$187.00 – \$218.00
Support Staff	
Administrative Assistant	\$70.00 – \$90.00
Project Administrator	\$80.00 – \$105.00
Senior Project Administrator	\$115.00 – \$200.00
Intern	\$65.00 – \$80.00
Surveying Services Staff	
Assistant Surveyor	\$95.00 – \$115.00
Licensed Surveyor	\$145.00 – \$175.00
1-Man Survey Crew	\$175.00/\$200.00 ⁽¹⁾
2-Man Survey Crew	\$245.00/\$285.00 ⁽¹⁾
2-Man Survey Crew including LS	\$280.00/\$295.00 ⁽¹⁾
UAV (Drone) Services	\$210.00
<small>(Field work not including survey equipment billed at individual standard rate plus vehicle as appropriate.)</small>	
<small>(1) Prevailing wage rates shown for San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kings, and Kern counties; other counties as quoted.</small>	
<small>(2) Overtime for Construction Services prevailing wage will be calculated at 125% of the standard prevailing wage rate.</small>	

Additional Fees

Expert Witness / GIS Training: As quoted.

Project Costs

Mileage: IRS value + 15%

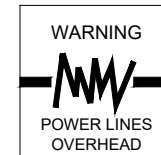
Outside Consultants: Cost + 15%

Direct Costs: Cost + 15%

SOUTH SAN JOAQUIN IRRIGATION DISTRICT



CANYON TUNNEL PROJECT 60 PERCENT DESIGN



SHEET INDEX	
SHEET NO.	SHEET TITLE
0.1	COVER SHEET, NOTES & DRAWING INDEX
0.2	SITE LOCATION MAP
0.3	UPSTREAM ACCESS PLAN
0.4	DOWNSTREAM ACCESS PLAN
1.0	TUNNEL PLAN AND PROFILE
1.1	TUNNEL GEOLOGIC PROFILE
1.2	TUNNEL DETAILS
2.0	UPSTREAM FACILITIES ALTERNATE 1
2.1	UPSTREAM FACILITIES ALTERNATE 2
3.0	DOWNSTREAM PORTAL GRADING PLAN
3.0.1	DOWNSTREAM PORTAL PROFILES
3.0.2	DOWNSTREAM TEMPORARY SPOILS STOCKPILE PLAN
3.1	DOWNSTREAM FACILITIES PLAN
4.0	DETAILS
5.0	WATER FLOW CONTROL STRUCTURES ALTERNATE 1A
5.0.1	UPSTREAM PORTAL SITE PLAN
5.0.2	UPSTREAM PORTAL SECTION
5.0.3	UPSTREAM PORTAL PLAN
5.0.4	UPSTREAM PORTAL ELEVATION
5.1	WATER FLOW CONTROL STRUCTURE ALTERNATE 2B
5.1.1	WATER FLOW CONTROL STRUCTURES ALTERNATE 1B DOWNSTREAM
5.2	WATER FLOW CONTROL STRUCTURES ALTERNATE 2A
5.3	WATER FLOW CONTROL STRUCTURES ALTERNATE 2B

SURVEY CONTROL

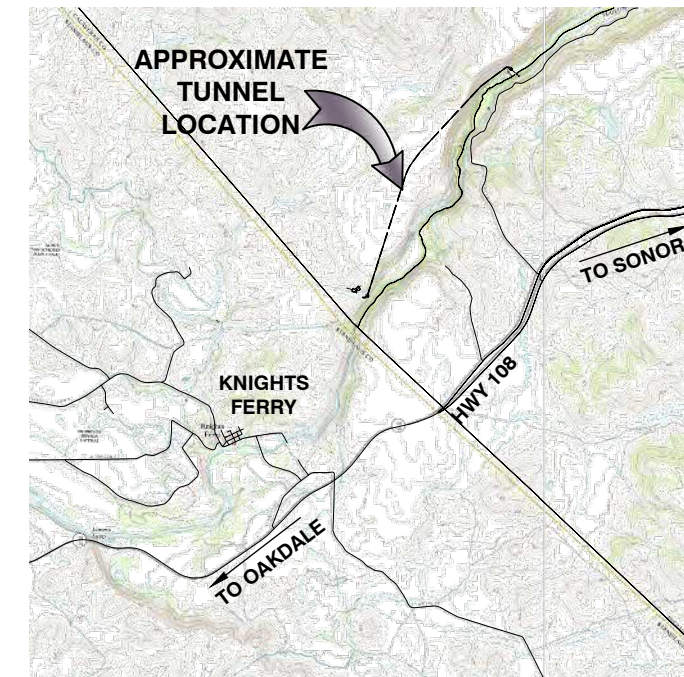
1. UAV AERIAL TOPOGRAPHIC SURVEY PERFORMED IN JULY 2020 BY ERIK OHLSON & ASSOCIATES. SEE SHEET 0.2 FOR TUNNEL PORTAL COORDINATES.

SPOILS

1. FOR CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) PLANNING AND PERMITTING PURPOSES, ASSUME THAT ALL EARTHWORKS AND TUNNEL EXCAVATION SPOILS WILL BE PERMANENTLY DISPOSED OF AT AN APPROVED OFF-SITE LOCATION.
2. SEE SHEET 3.2 FOR PROPOSED TEMPORARY SPOILS STOCKPILE PLAN AND CONFIGURATION.

GENERAL NOTES

1. THE PURPOSE OF THIS PROJECT IS TO IMPROVE THE SAN JOAQUIN IRRIGATION DISTRICT (SSJID) AND OAKDALE IRRIGATION DISTRICT (OID) EXISTING JOINT SUPPLY CANAL, AND TO CONSTRUCT A NEW BYPASS TUNNEL.
2. ALTERNATE TUNNEL INLET AND OUTLET FACILITIES WERE STUDIED AS PART OF THIS 60% DESIGN AND ARE INCLUDED FOR REFERENCE. ALTERNATE 1A HAS BEEN SELECTED AS THE PREFERRED ALTERNATIVE.
3. FADED BACKGROUND REPRESENTS EXISTING TOPOGRAPHIC AND SITE FEATURES BASED ON USGS TOPOGRAPHIC MAP, AND THE TOPOGRAPHIC AND SITE INFORMATION FROM THE SURVEY WORK PERFORMED BY ERIK OHLSON & ASSOCIATES, UAV AERIAL DATE 09 JULY 2020 AND TRI-STATE SURVEY LTD, AERIAL IMAGERY DATED 08 MAY 2006.
4. BOUNDARY LINES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY.



VICINITY MAP
NOT TO SCALE

SCOPE OF WORK:

THE WORK CONSISTS OF CONSTRUCTING A BYPASS TUNNEL ALONG THE EXISTING SOUTH SAN JOAQUIN IRRIGATION DISTRICT AND OAKDALE IRRIGATION DISTRICT JOINT SUPPLY CANAL.

WORK INCLUDES:

- A. TUNNEL AND PORTAL CONSTRUCTION
- B. CANAL MODIFICATION NEAR THE PORTALS
- C. CANAL PLUGS
- D. PORTAL ACCESS ROAD
- E. TEMPORARY FACILITIES
- F. WATER FLOW CONTROL STRUCTURES

PROJECT SITE:

SOUTH SAN JOAQUIN IRRIGATION DISTRICT, CALAVERAS COUNTY AND STANISLAUS COUNTY, CALIFORNIA. THE WORK AREA IS IN THE VICINITY OF KNIGHTS FERRY, CALIFORNIA.

OWNER CONTACT:

SOUTH SAN JOAQUIN IRRIGATION DISTRICT
PO BOX 747
RIPON, CALIFORNIA 95366
FORREST KILLINGSWORTH
(209) 249-4620
fkillingworth@ssjid.com

PREPARED BY:

PROVOST & PRITCHARD
19969 GREENLEY ROAD
SUITE J
SONORA, CALIFORNIA 95370
SCOTT LEWIS, CEG, PROJECT MANAGER
(209) 601-5585
slewis@ppeng.com

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CANYON TUNNEL PROJECT
SOUTH SAN JOAQUIN IRRIGATION DISTRICT
CALAVERAS COUNTY, CALIFORNIA



DESIGN ENGINEER:
ANDREW KOSITSKY
LICENSE NO:
GE 2532

DRAFTED BY: KGM
CHECKED BY: SWL
DATE: 11/04/2022
JOB NO: 1055

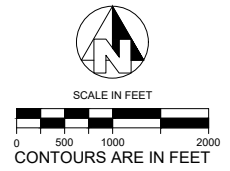
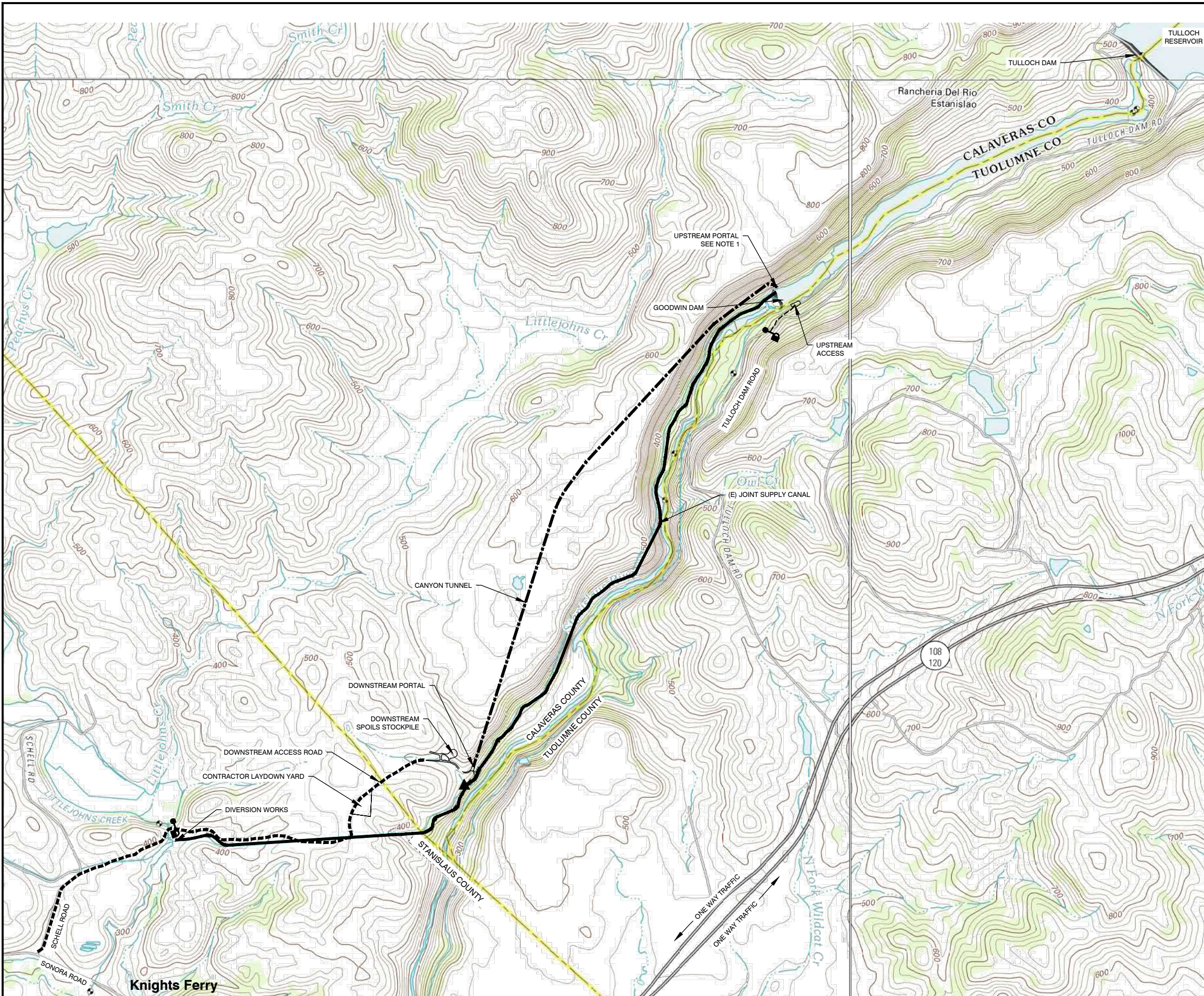
PROJECT NO: 22
PHASE: 001

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SHEET
0.1
1 OF 23

SYMBOLS	
	SECTION/ELEVATION/DETAIL IDENTIFICATION
	SECTION/ELEVATION/DETAIL LOCATION
	REVISION NUMBER
	AREA OF REVISION

ABBREVIATIONS:					
AB	AGGREGATE BASE ROCK	FDR	FULL DEPTH RECLAMATION	PRF	PAVEMENT REINFORCING FABRIC
AC	ASPHALTIC CONCRETE	FF	FINISH FLOOR GRADE	PSI	POUNDS PER SQUARE INCH
AD	AREA DRAIN	FG	FINISH GRADE	PVC	POLYVINYL CHLORIDE PIPE
AVE	AVERAGE	FL	FLOW LINE	P.W.	PROCESS WASTE
BBL	BARREL	FOC	FACE OF CONCRETE	R	RADIUS
BF	BOTTOM OF FOOTING	FS	FINISH SURFACE	RCP	REINFORCED CONC. PIPE
BHC	BEGIN HORIZONTAL CURVE	FRC	FIBER REINFORCED CONCRETE	S	SLOPE
BK	BOTTOM OF KEY	FRS	FIBER REINFORCED SHOTCRETE	SCH	SCHEDULE
BW	BOTTOM OF WALL	FT	FOOT	SD	STORM DRAIN
CDF	CONTROLLED DENSITY FILL	GB	GRADE BREAK	SF	SQUARE FEET
CIP	CAST-IN-PLACE	GAL	GALLON	SG	SUBGRADE
CPP	CORRUGATED PLASTIC PIPE	HMA	HOT MIX ASPHALT	SS	SANITARY SEWER
CL	CENTER LINE	INV	INVERT	SAD	SEE ARCHITECTURAL DOCUMENTS
CMP	CORRUGATED METAL PIPE	IN	INCH	SCD	SEE CIVIL DOCUMENTS
CPP	CORRUGATED PLASTIC PIPE	ID	INSIDE DIAMETER	SCE	STABILIZED CONSTRUCTION ENTRANCE
C	CONC CONCRETE	LBS	POUNDS	SLD	SEE LANDSCAPE DOCUMENTS
CY	CUBIC YARD	LF	LINEAR FEET	SMD	SEE MECHANICAL DOCUMENTS
DI	DROP INLET	MAX	MAXIMUM	SSD	SEE STRUCTURAL DOCUMENTS
DIA	DIAMETER	MH	MANHOLE	STA	STATION
Ø	DIAMETER	MIN	MINIMUM	SWPPP	STORM WATER POLLUTION PREVENTION PLAN
DL	DESIGN LOAD	(N)	NEW	TC	TOP OF CONCRETE
(E)	EXISTING	OC	ON CENTER	TBD	TO BE DETERMINED
EF	EACH FACE	OG	ORIGINAL GROUND	TF	TOP OF FOOTING
EG	EXISTING GROUND	(P)	PROPOSED	TYP	TYPICAL
EHC	END HORIZONTAL CURVE	P.C.	POINT OF CURVATURE	TW	TOP OF WALL
EL	ELEVATION	P.C.C.	POINT OF COMPOUND CURVATURE	U.N.O.	UNLESS NOTED OTHERWISE
ELEC	ELECTRICAL	P.I.	POINT OF INTERSECTION	VERT	VERTICAL
ES	EACH SIDE	PIP	PROTECT IN PLACE	V.I.F.	VERIFY IN FIELD
EW	EACH WAY	P.R.C.	POINT OF REVERSE CURVATURE	W	WIDTH
ETW	EDGE OF TRAVELED WAY	P.T.	POINT OF TANGENCY	WWF	WELDED WIRE FABRIC



- LEGEND**
- CANAL ACCESS RAMP
 - LOCKED GATE

- NOTES**
- SEE SHEETS 2.0 AND 2.1 FOR ALTERNATE UPSTREAM PORTAL ARRANGEMENTS.
 - REFER TO SHEET 0.1, GENERAL NOTE 2 FOR SELECTED ALTERNATE.

PORTAL COORDINATES				
POINT No.	DESCRIPTION	EASTING		ELEV.
		1	U/S PORTAL TUNNEL ζ ALTERNATE 1	2136889.6759
1	U/S PORTAL TUNNEL ζ ALTERNATE 2	2136816.6506	6517891.4558	330.00
2	D/S PORTAL TUNNEL ζ	2127167.0887		

- * BASIS FOR BEARINGS IS THE CALIFORNIA COORDINATE SYSTEM, ZONE 3, N.A.D. 83
- ** ELEVATIONS SHOWN ARE GIVEN AS FINISH INVERT ELEVATIONS.

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 SOUTH SAN JOAQUIN IRRIGATION DISTRICT
 CALAVERAS COUNTY, CALIFORNIA

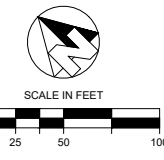
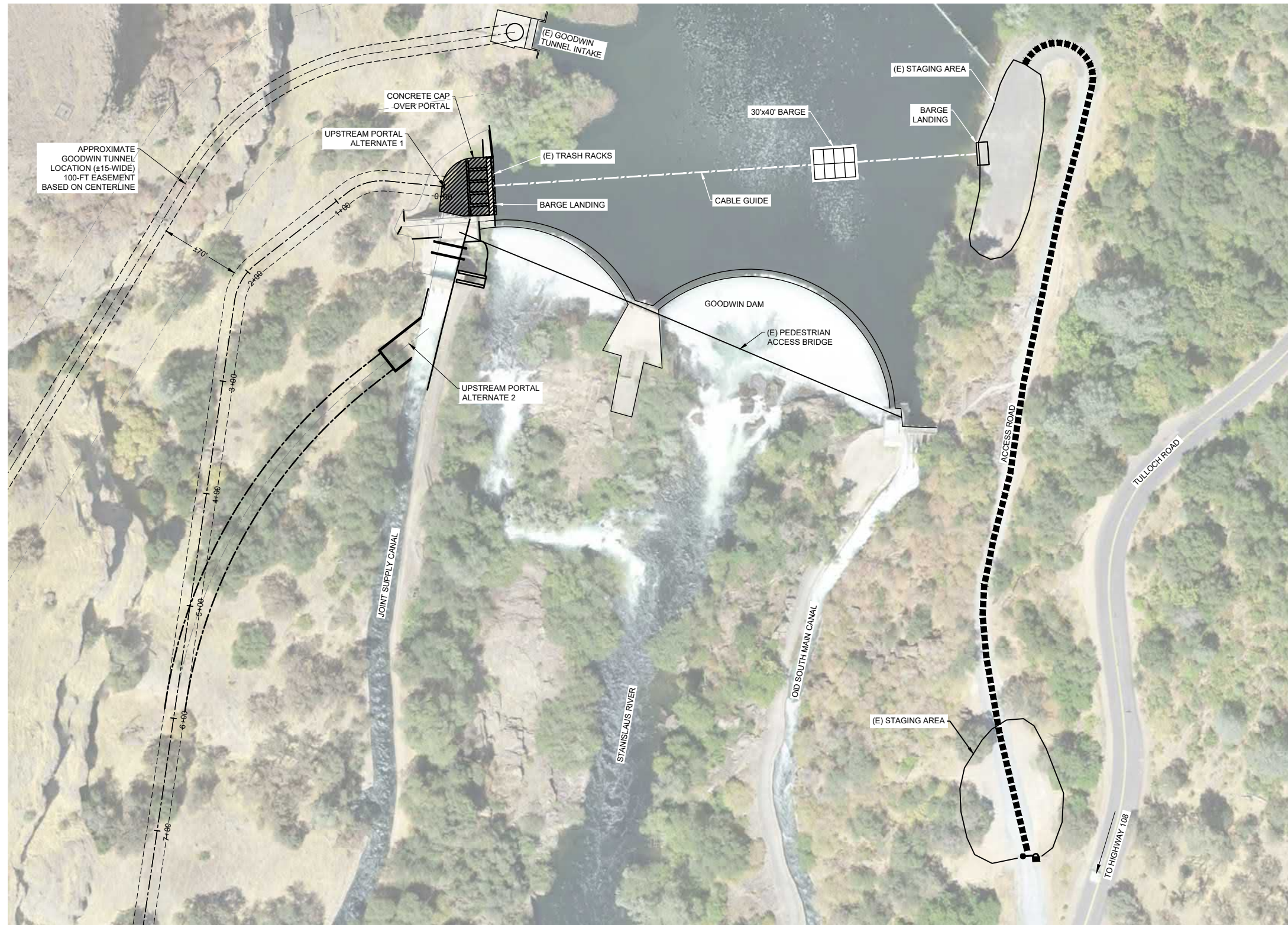
PROVOST & PRITCHARD
 CIVIL ENGINEERS
 1860 GREENEY RD. SUITE J
 SONORA, CALIFORNIA 95370
 559.49.2700 FAX 559.49.2715
<http://www.provastpritchard.com>

DESIGN ENGINEER:
 ANDREW KOSITSKY
 LICENSE NO:
 GE 2532
 DRAFTED BY: KGM CHECKED BY: SWL
 DATE: 11/04/2022
 JOB NO: 1055
 PROJECT NO: 22
 PHASE: 001

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 SHEET **0.2**
 2 OF 23

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LEGEND

LOCKED GATE

NOTES

1. UPSTREAM ACCESS FACILITIES SHOWN APPLY TO UPSTREAM PORTAL ALTERNATE 1 ONLY. SEE SHEET 2.0.
2. EQUIPMENT ACCESS TO UPSTREAM PORTAL ALTERNATE 2 MAY BE AVAILABLE THROUGH NEW TUNNEL AND THROUGH EXISTING JOINT SUPPLY CANAL DURING THE NON-IRRIGATION SEASON. SEE SHEET 2.1.

BACKGROUND IMAGE: UAV FLIGHT FROM EOA REPORT DATED JULY 9, 2020
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 CALAVERAS COUNTY, CALIFORNIA

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 ANDREW KOSITSKY
 LICENSE NO:
 GE 2532

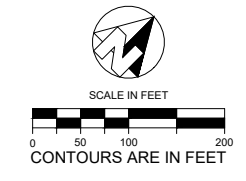
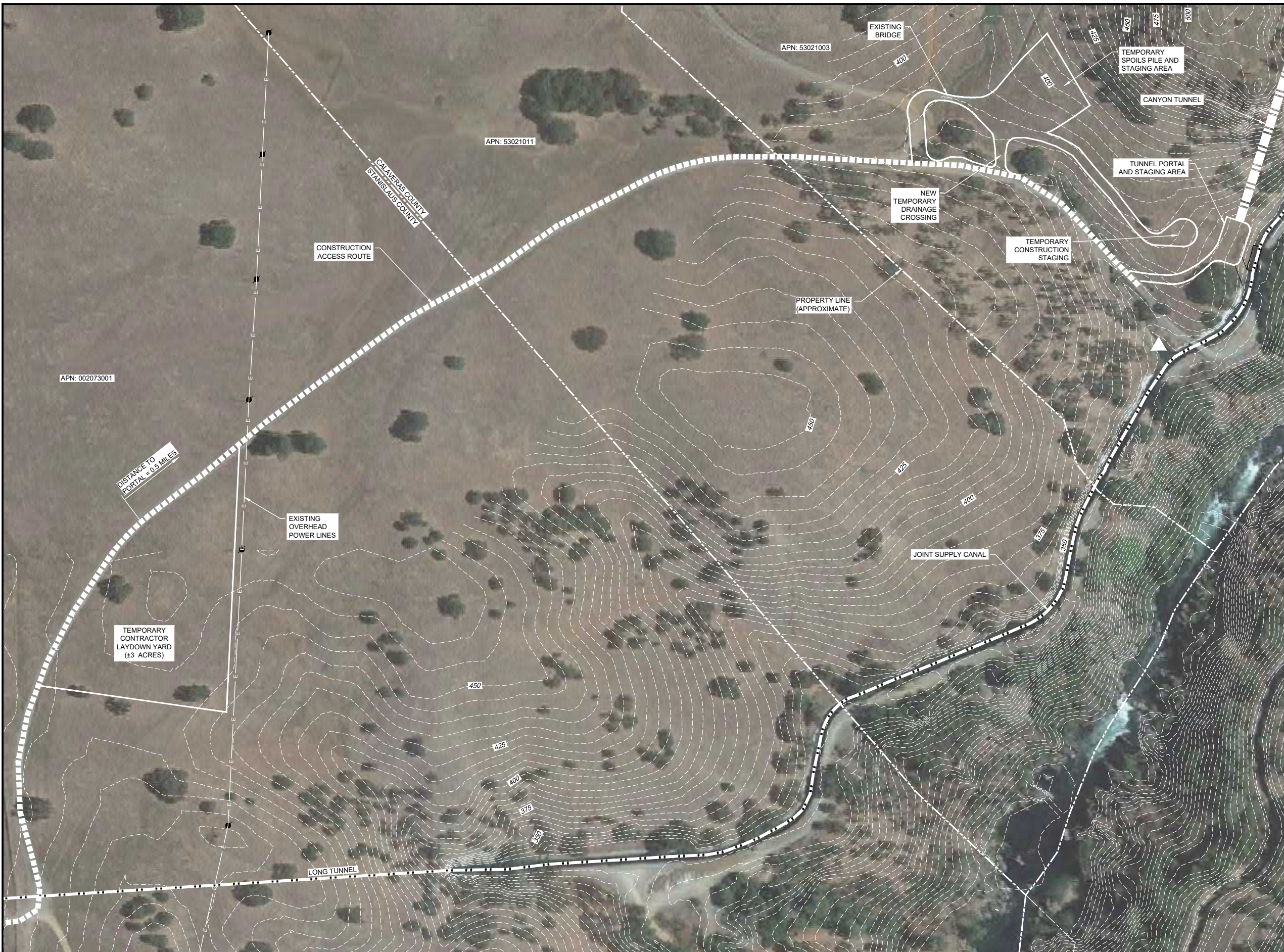
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SHEET **0.3**
 3 OF 23



LEGEND
 ▲ CANAL ACCESS RAMP

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DATE: 11/04/2022

JOB NO: 1055

PROJECT NO: 22

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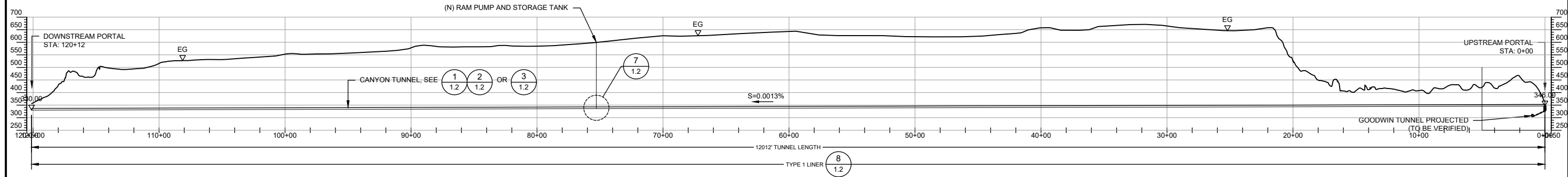
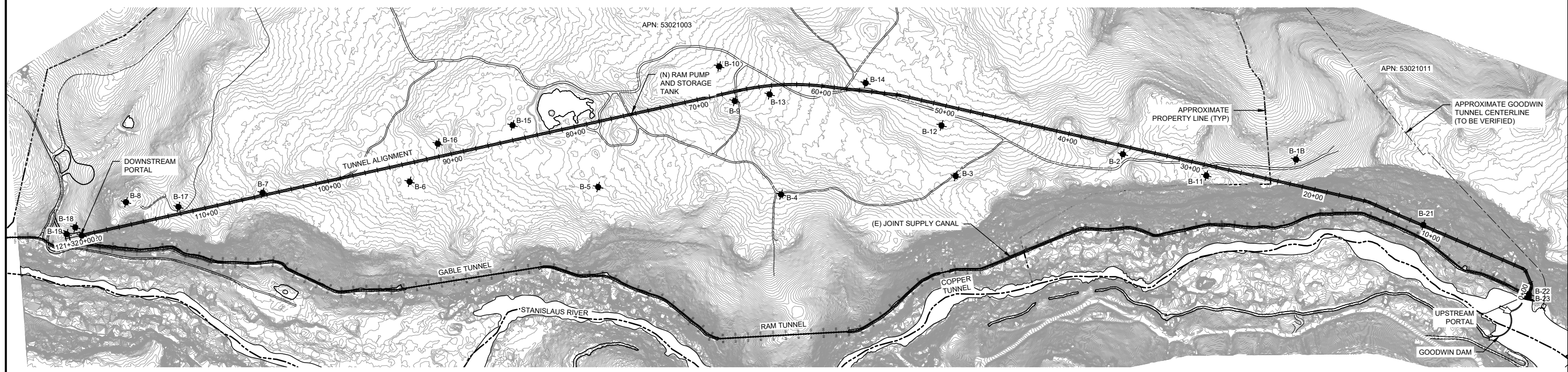
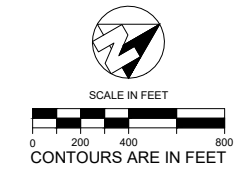
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SHEET **0.4**

4 OF 23

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LEGEND

B-8 ● CORE HOLE LOCATIONS

- NOTES**
- STATION NUMBERS ARE APPROXIMATE AND FOR REFERENCE ONLY.
 - GEOLOGIC CONDITIONS ARE SHOWN ON SHEET 1.1.
 - TUNNEL PLAN AND PROFILE SHOWN IS FOR UPSTREAM PORTAL ALTERNATE 1 ONLY. SEE SHEETS 2.0 AND 2.1 FOR ALTERNATE ARRANGEMENTS AT THE UPSTREAM PORTAL.

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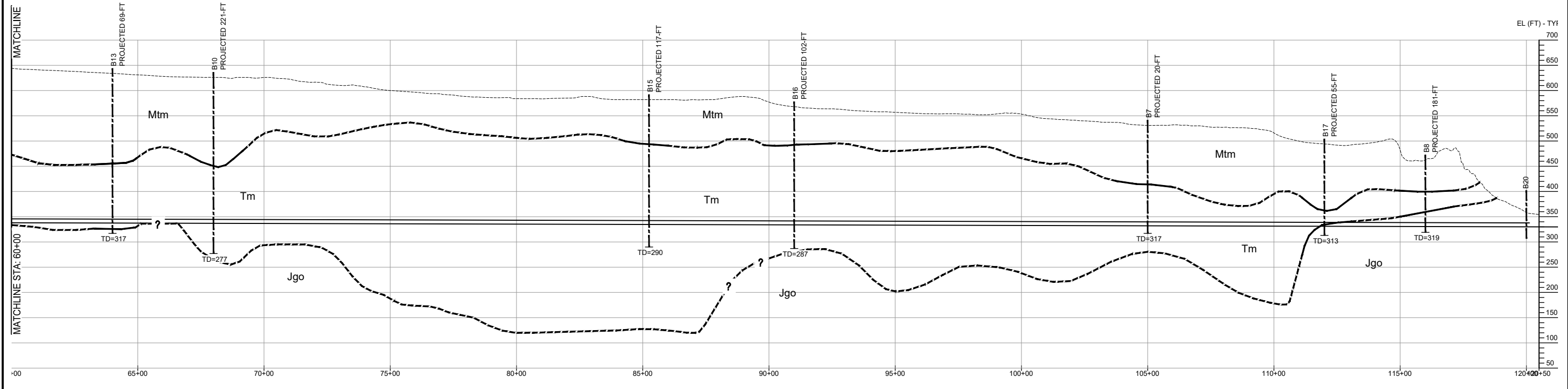
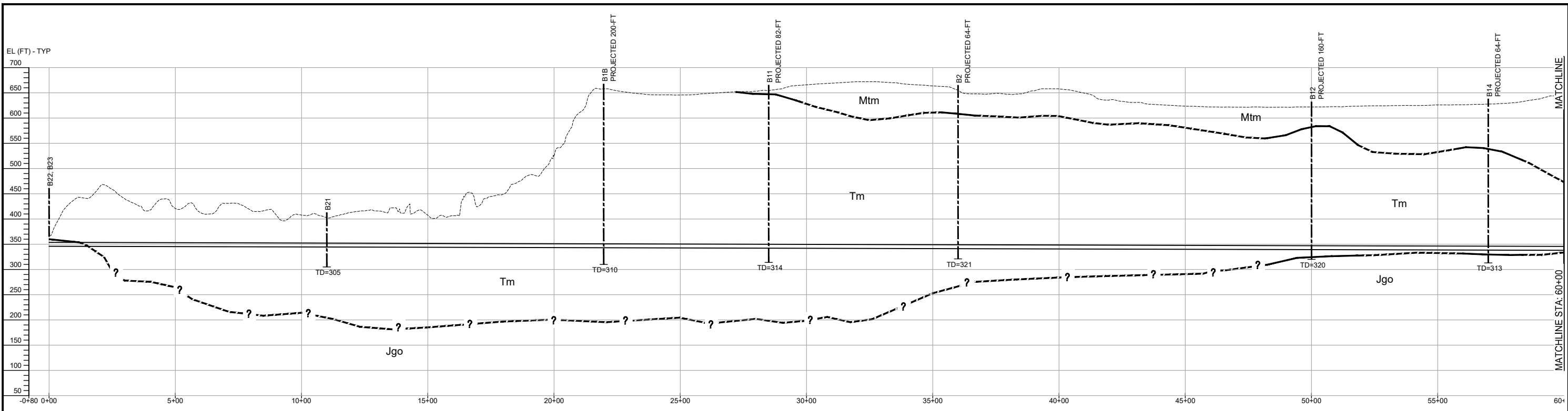
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TUNNEL PLAN AND PROFILE

PROVOST & PRITCHARD
AN ENGINEERING COMPANY
18669 GREENEY RD. SUITE 1
SONOMA, CALIFORNIA 95370
559449-2700 FAX 559449-2715
https://provostpritchard.com

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5 OF 23	

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1 CANYON TUNNEL GEOLOGIC PROFILE



NOTES
1. SHOWN FOR UPSTREAM PORTAL ALTERNATE 1 ONLY.

LEGEND

	GEOLOGIC CONTACT, DASHED WHERE UNCERTAIN; COREHOLE-VERIFIED CONTACT, SOLID
Mtm	TABLE MOUNTAIN LATITE - PROMINENT FLOWS OF DARK LATITE CHARACTERIZED BY ABUNDANT LABRADORITE PHENOCRYSTS.
Tm	MEHRTZEN FORMATION - INTERBEDDED SANDSTONE, COBBLE CONGLOMERATE, SILTSTONE, AND VOLCANIC FLOWS
Jgo	GOPHER RIDGE FORMATION - METAVOLCANIC ROCK ("GREENSTONE")
B11	CORE HOLE LOCATION.
TD	TERMINATION OF HOLE (ELEVATION).

NOTE: GEOLOGIC INTERPRETATION BETWEEN CORE HOLES BASED IN PART ON GEOPHYSICAL TEM (TRANSIENT ELECTROMAGNETIC) DATA. REFER TO GBR.

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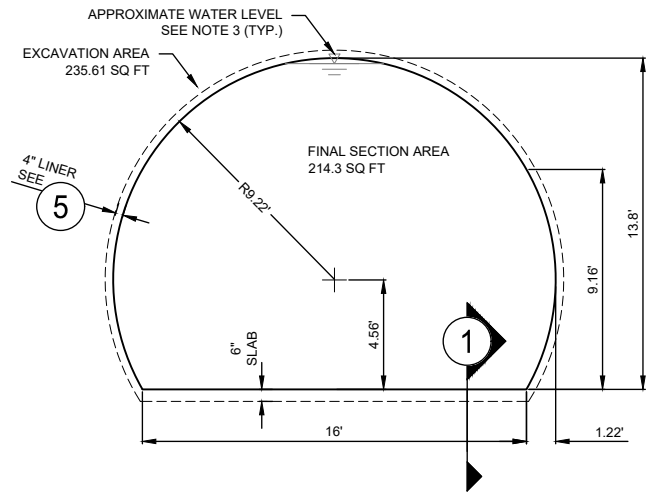
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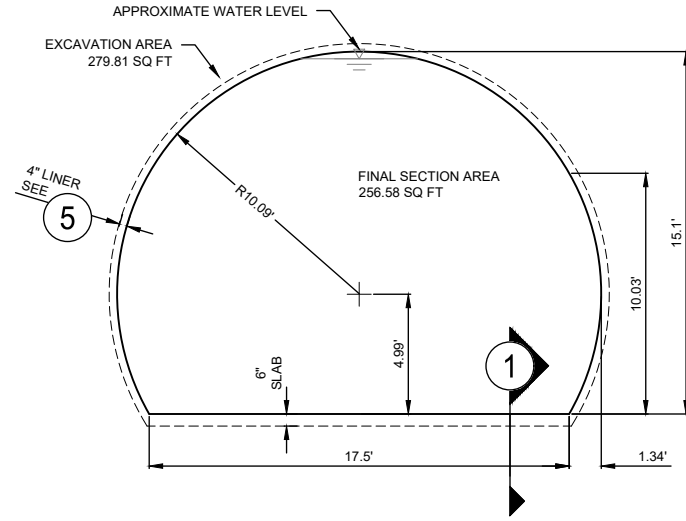
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TUNNEL GEOLOGIC PROFILE

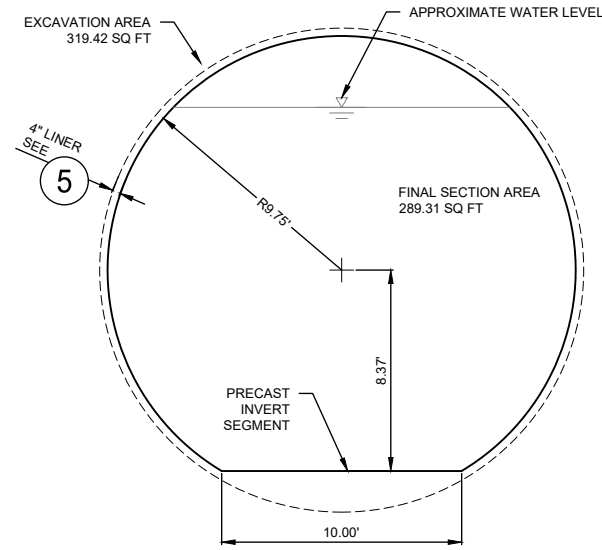
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DATE: 11/04/2022	
JOB NO: 1055	
PROJECT NO: 22	
PHASE: 001	
ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.	
SHEET 1.1	
6 OF 23	



A 16.0'W X 13.8'H ROADHEADER TUNNEL
UPSTREAM PORTAL ALTERNATE 1 SCALE: N.T.S.



B 17.5'W X 15.1'H ROADHEADER TUNNEL
UPSTREAM PORTAL ALTERNATE 2. SEE NOTE 2. SCALE: N.T.S.



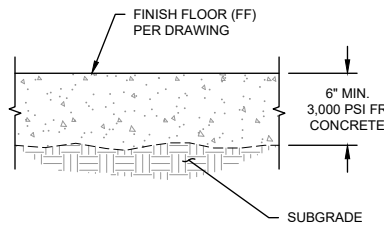
C 19.5' DIAMETER TBM TUNNEL
SEE NOTE 2 SCALE: N.T.S.

NOTES

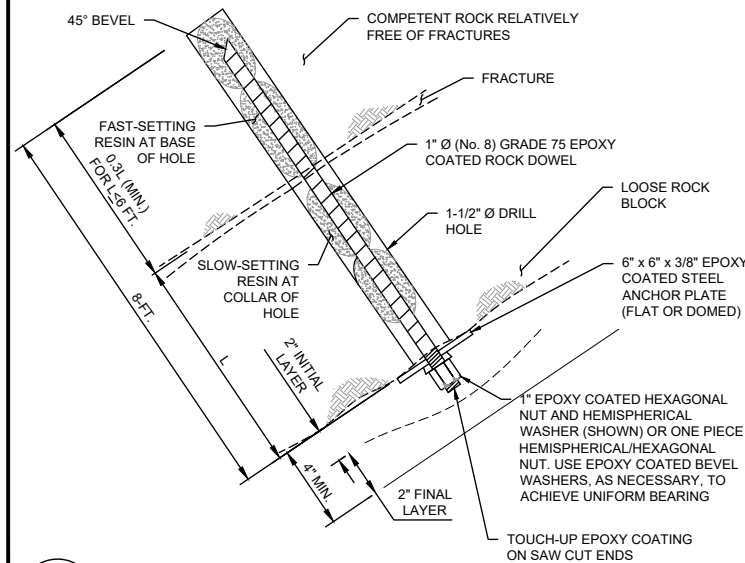
1. TUNNEL SECTIONS SHOWN ILLUSTRATE THE MINIMUM REQUIRED DIMENSIONS BASED ON UPSTREAM PORTAL LOCATION/GRADE AND TUNNEL EXCAVATION METHOD.
2. TBM ALTERNATE AND ALTERNATE 2 SHOWN FOR REFERENCE, BUT NOT RECOMMENDED FOR FURTHER CONSIDERATION FOLLOWING 60% DESIGN.
3. APPROXIMATE WATER LEVEL BASED ON DESIGN FLOW OF 1,250 CFS. HYDRAULIC CALCULATIONS TO BE CONFIRMED DURING FINAL DESIGN AND APPROPRIATE FREEBOARD WILL BE ADDED.

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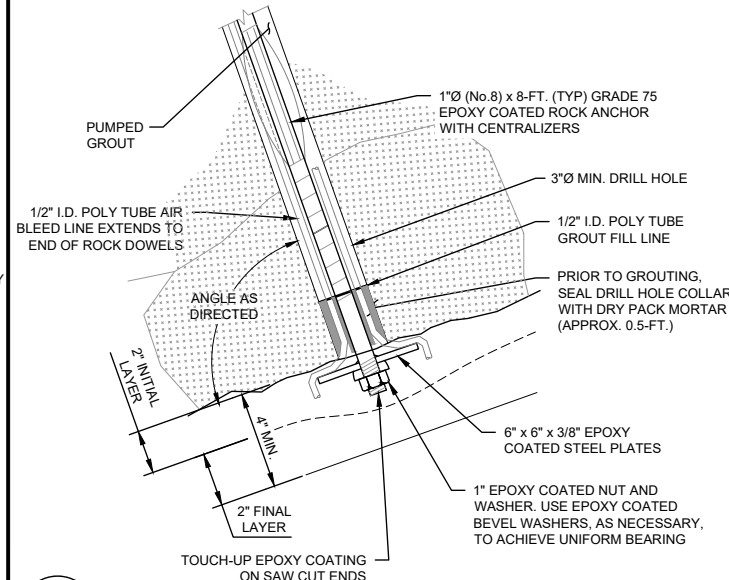
60% DESIGN
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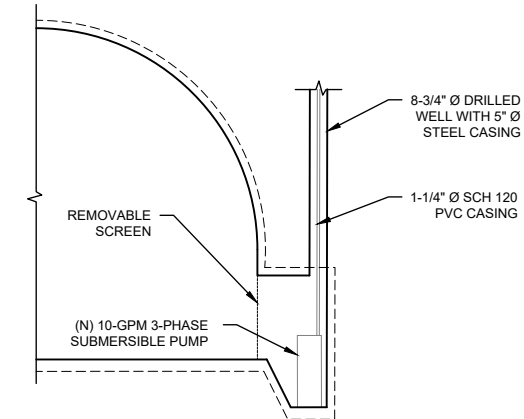
1 6-INCH MINIMUM CONCRETE SLAB
SCALE: N.T.S.



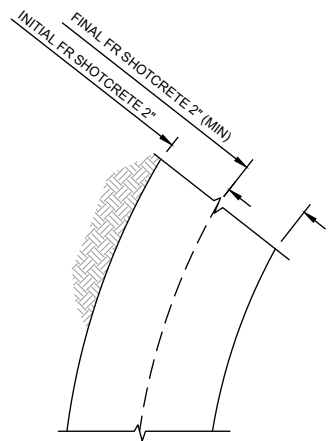
2 EPOXY-RESIN ROCK DOWEL
SCALE: N.T.S.



3 CEMENT GROUT ROCK DOWEL
SCALE: N.T.S.



4 RAM PUMP
SCALE: N.T.S.

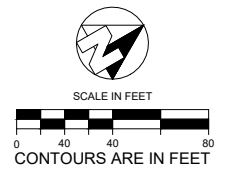


5 TYPE 1 - 4 IN STRUCTURAL LINER
SCALE: N.T.S.

CANYON TUNNEL PROJECT
 SOUTH SAN JOAQUIN IRRIGATION DISTRICT
 CALAVERAS COUNTY, CALIFORNIA
 TUNNEL DETAILS
 11/3/2022 1:56 PM G:\South San Joaquin ID-1055105522001-Canyon Tunnel 80% Design\300 CAD\340 Sheet Sels 04_Details\1.2 Tunnel Details.dwg -Ken McKinley

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DESIGN ENGINEER: ANDREW KOSITSKY LICENSE NO: GE 2532	CHECKED BY: SWL
DRAFTED BY: KGM	DATE: 11/04/2022
JOB NO: 1055	PHASE: 001
PROJECT NO: 22	ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.
SHEET 1.2	7 OF 23



- NOTES**
1. BARGE AND CABLE GUIDE TO REMAIN AFTER CONSTRUCTION FOR FUTURE USE BY OWNER.
 2. EXISTING GOODWIN TUNNEL APPROXIMATELY 50 TO 100 FEET BELOW PROPOSED CANYON TUNNEL, TO BE VERIFIED.
 3. REFER TO SHEETS 5.0, 5.0.1, 5.0.2, 5.0.3 AND 5.0.4 FOR CONTROL STRUCTURE, PORTAL WALL LOCATION AND TUNNEL INLET DIMENSIONS, TO BE VERIFIED.

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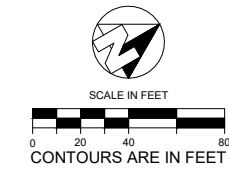
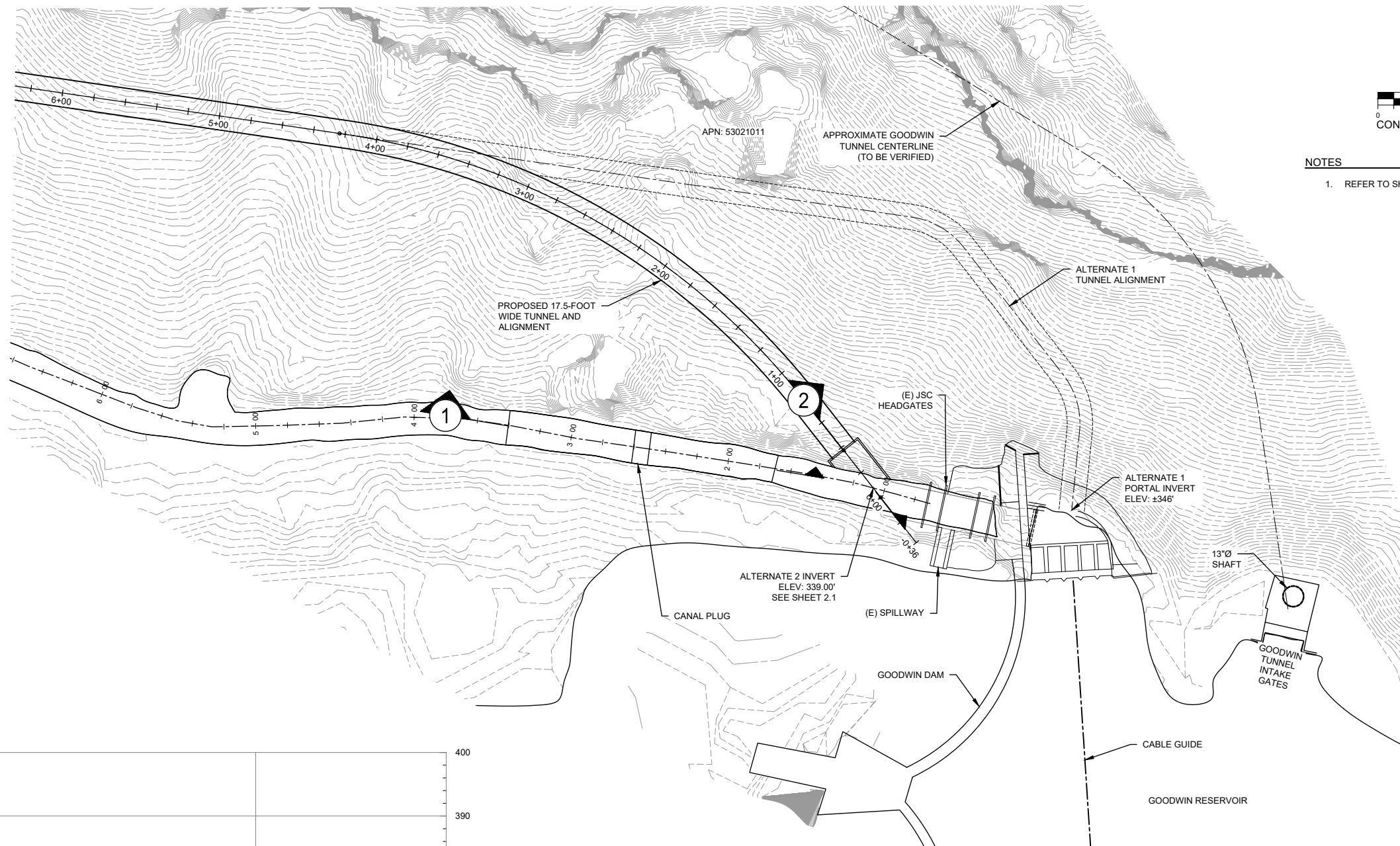
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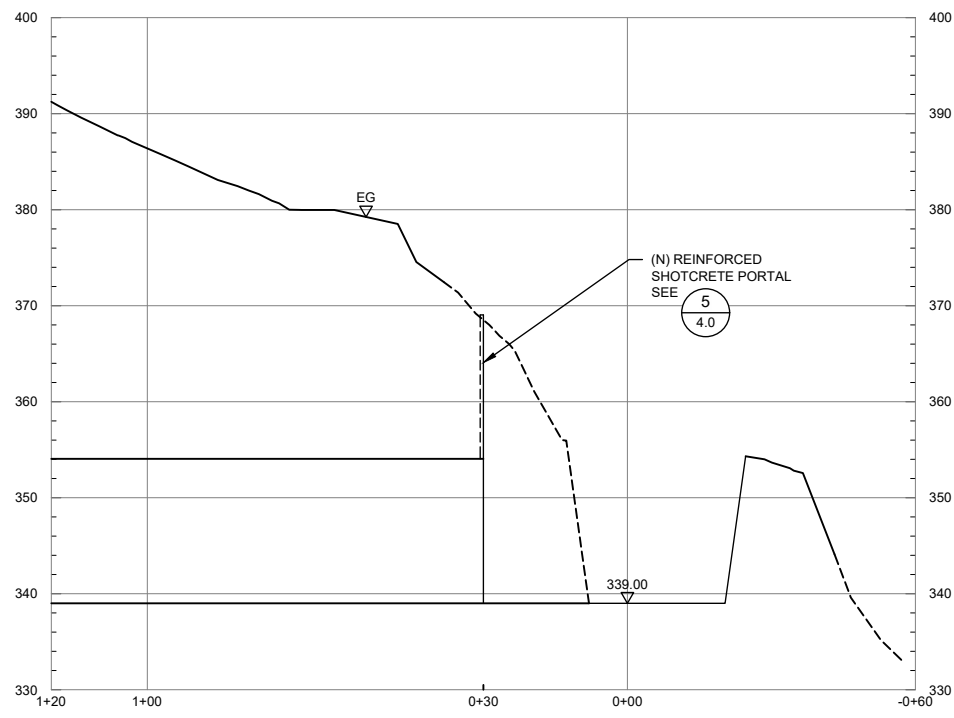
CANYON TUNNEL PROJECT
 SOUTH SAN JOAQUIN IRRIGATION DISTRICT
 CALAVERAS COUNTY, CALIFORNIA
 UPSTREAM FACILITIES ALTERNATE 1

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PROJECT NO: 22	
PHASE: 001	
ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.	
SHEET 2.0	
8 OF 23	

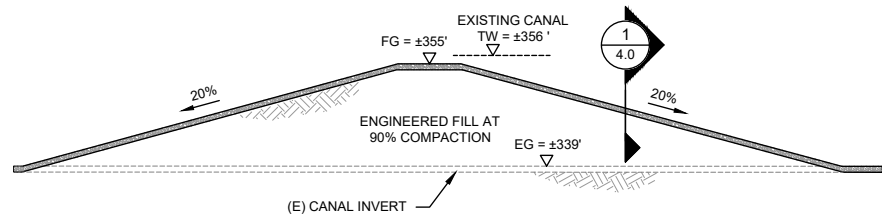
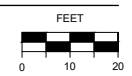
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NOTES
 1. REFER TO SHEET 0.1, GENERAL NOTE 2.



1 CANYON TUNNEL UPSTREAM PORTAL PROFILE



2 CANAL PLUG PROFILE

SCALE: N.T.S.

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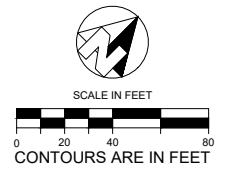
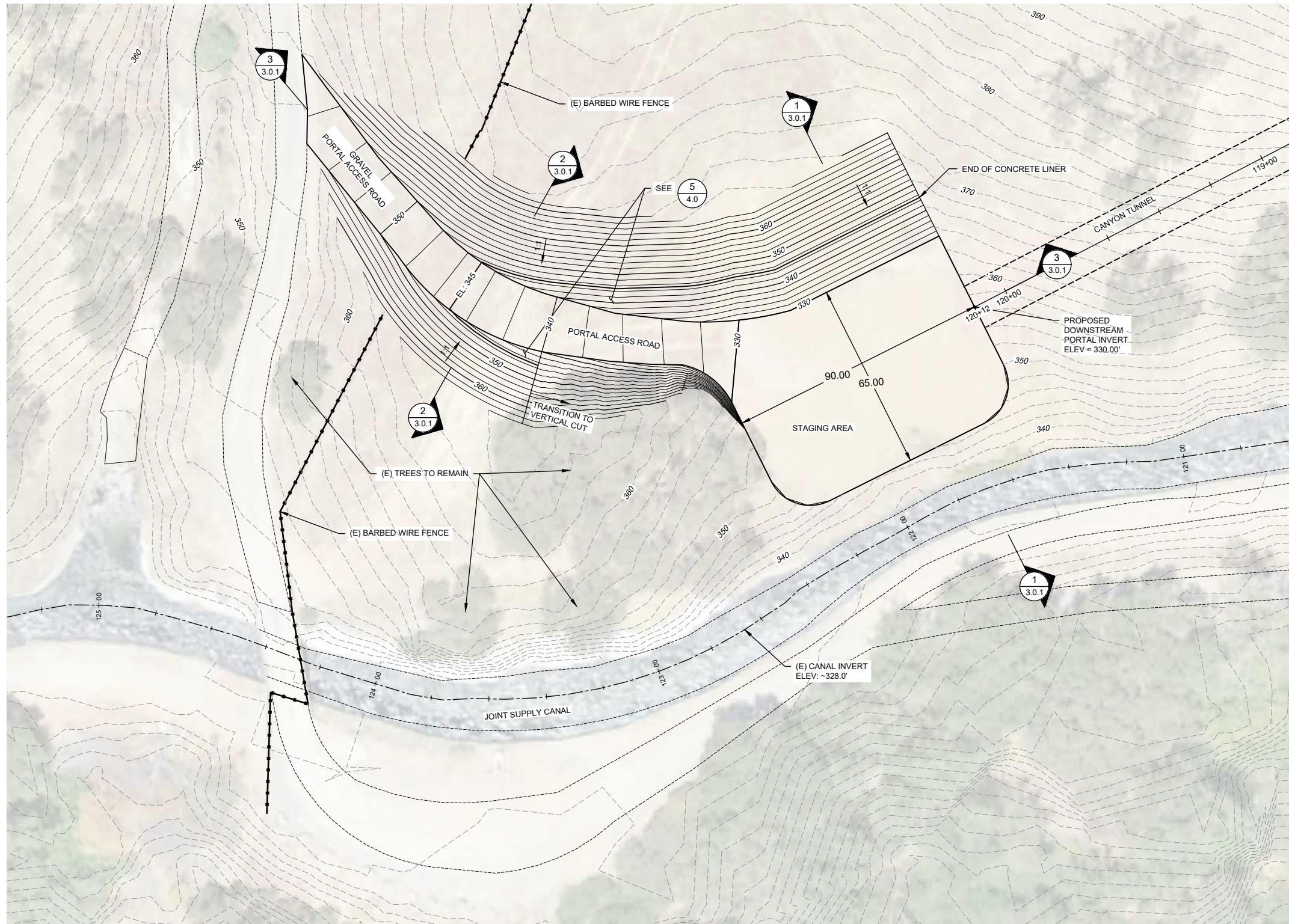
CANYON TUNNEL PROJECT
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 CALAVERAS COUNTY, CALIFORNIA

UPSTREAM FACILITIES ALTERNATE 2

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PHASE: 001	
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SHEET 2.1	
9 OF 23	

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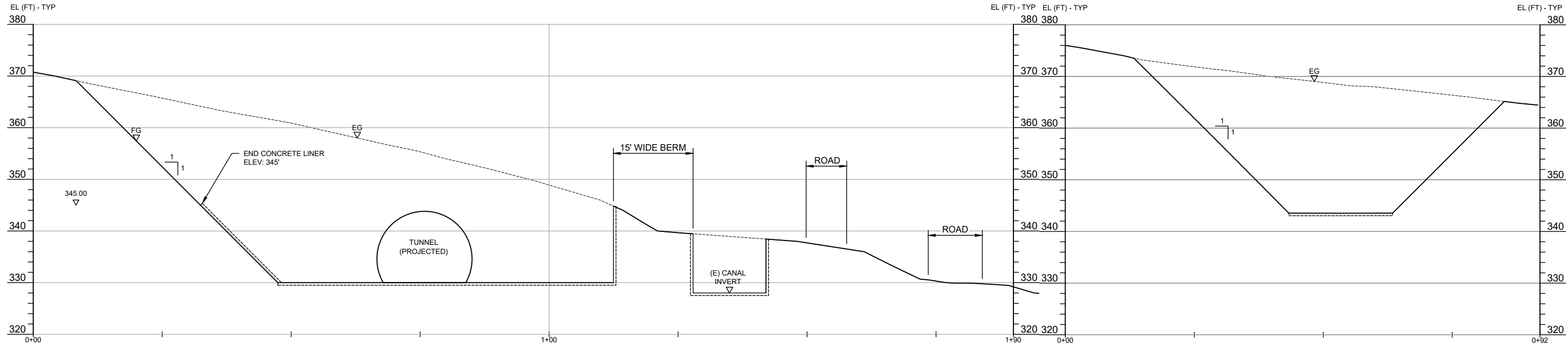
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CANYON TUNNEL PROJECT
 SOUTH SAN JOAQUIN IRRIGATION DISTRICT
 CALAVERAS COUNTY, CALIFORNIA
 DOWNSTREAM PORTAL GRADING PLAN

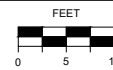
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PROJECT NO: 22	
PHASE: 001	
ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.	
SHEET 3.0	
10 OF 23	

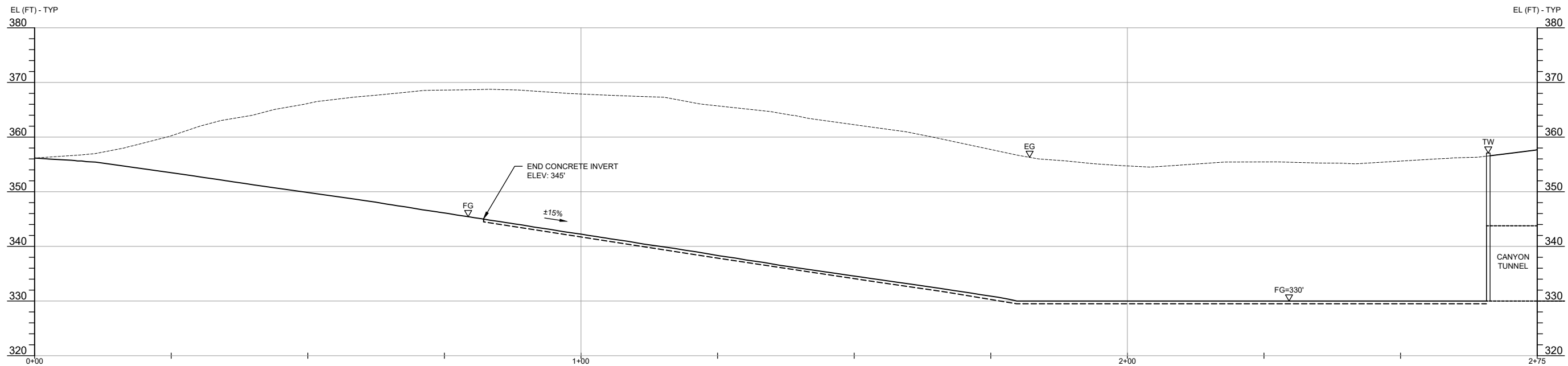
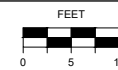
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1 PORTAL STAGING CROSS SECTION/ELEVATION



2 PORTAL ACCESS ROAD CROSS SECTION



3 PORTAL ACCESS ROAD PROFILE



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CANYON TUNNEL PROJECT
SOUTH SAN JOAQUIN IRRIGATION DISTRICT
CALAVERAS COUNTY, CALIFORNIA

DOWNSTREAM PORTAL PROFILE

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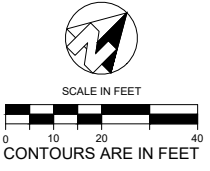
PROJECT NO: 22

PHASE: 001

ORIGINAL SCALE SHOWN IS ONE
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SHEET
3.0.1

11 OF 23



- NOTES**
- TEMPORARY FACILITIES TO BE REMOVED AND RESTORED TO PRE-CONSTRUCTION CONDITIONS.

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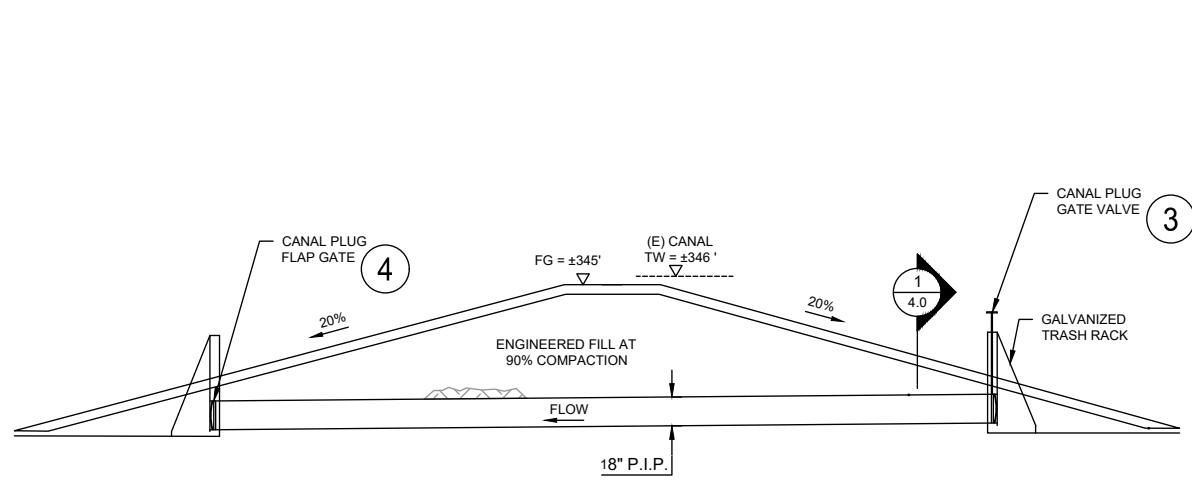
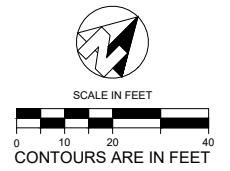
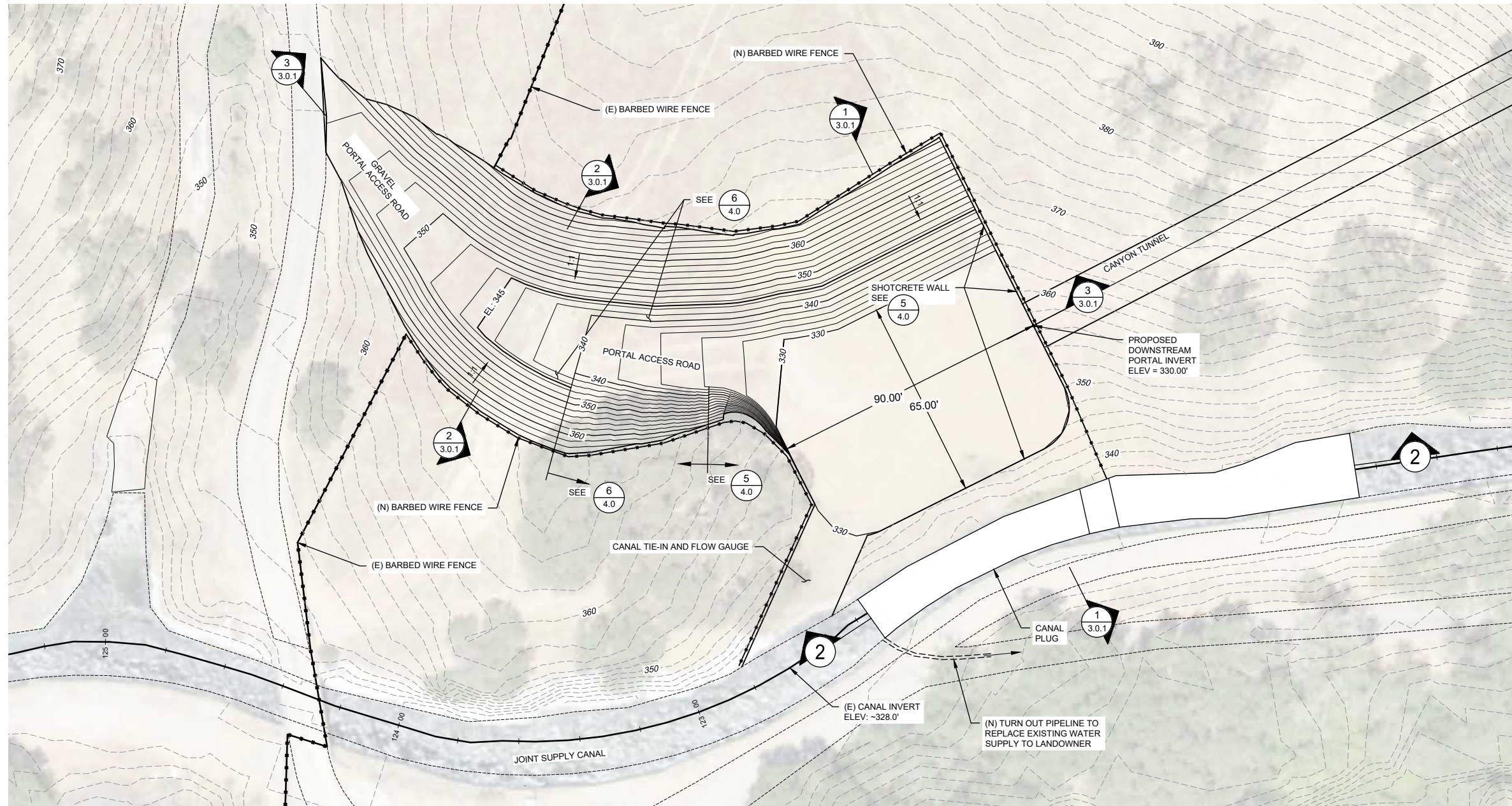
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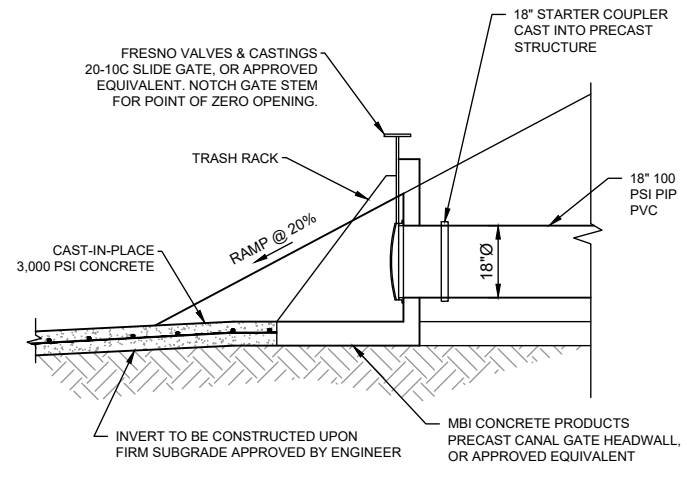
CANYON TUNNEL PROJECT
 SOUTH SAN JOAQUIN IRRIGATION DISTRICT
 CALAVERAS COUNTY, CALIFORNIA
 DOWNSTREAM TEMPORARY SPOILS STOCKPILE PLAN

DESIGN ENGINEER: ANDREW KOSITSKY LICENSE NO: GE 2532	CHECKED BY: SWL
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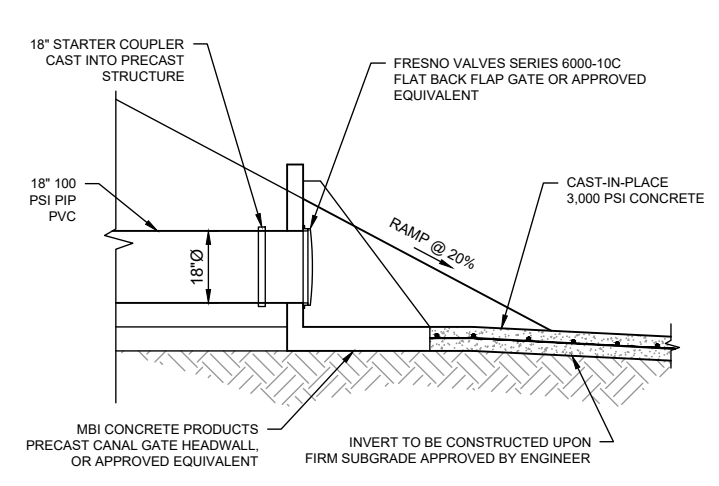
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2 CANAL PLUG PROFILE
SCALE: N.T.S.



3 DRAIN PLUG GATE VALVE SECTION
SCALE: N.T.S.



4 DRAIN PLUG FLAP GATE SECTION
SCALE: N.T.S.

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 SOUTH SAN JOAQUIN IRRIGATION DISTRICT
 CALAVERAS COUNTY, CALIFORNIA

DOWNSTREAM FACILITIES

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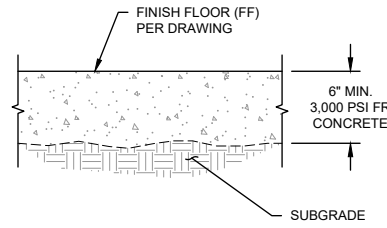
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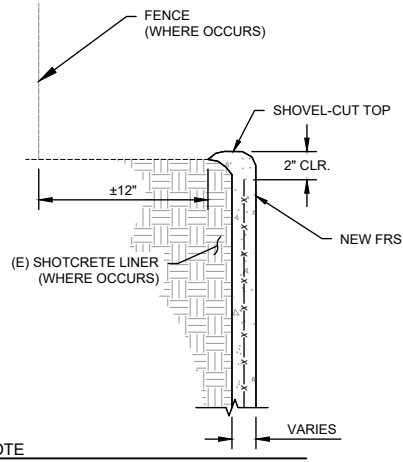
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 SHEET **3.1**
 13 OF 23

11/3/2022 1:59 PM G:\South San Joaquin ID-1055\105522001-Canyon Tunnel 60% Design\300 CAQ340 Sheet Ssis02_Plan_Mapa3.1 DOWNSTREAM FACILITIES.dwg - Ken McKinley



1 6-INCH MINIMUM CONCRETE SLAB

SCALE: N.T.S.

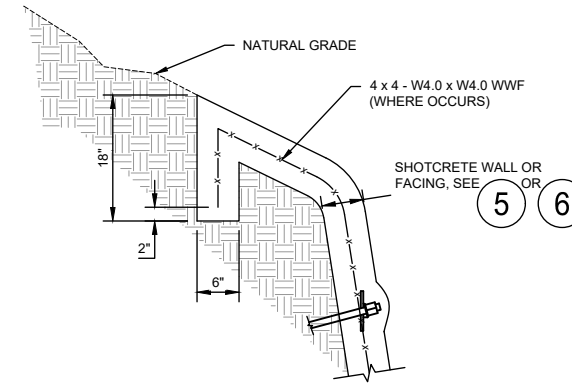


NOTE

- WHERE GRADE IS LEVEL OR SLOPES AWAY FROM SHOTCRETE, OR AT HARD ROCK SUBSTRATE.

2 TOP OF SHOTCRETE

SCALE: N.T.S.

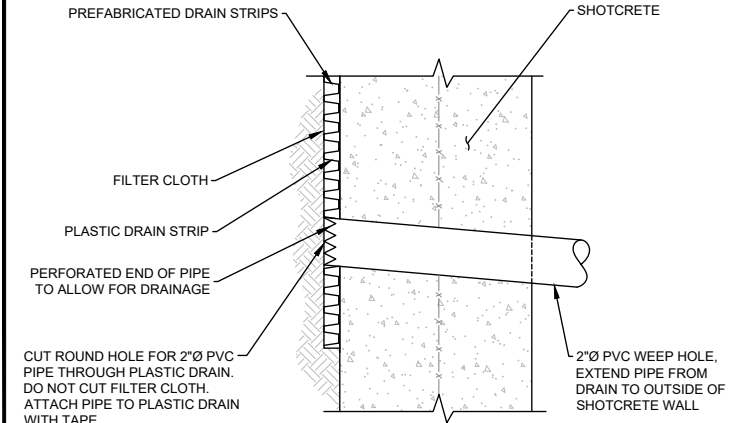


NOTE

- DRAIN TO CANAL OR SHOTCRETE SURFACE AT DISCHARGE POINT.
- WHERE GROUND SLOPES TO SHOTCRETE IN SOIL.

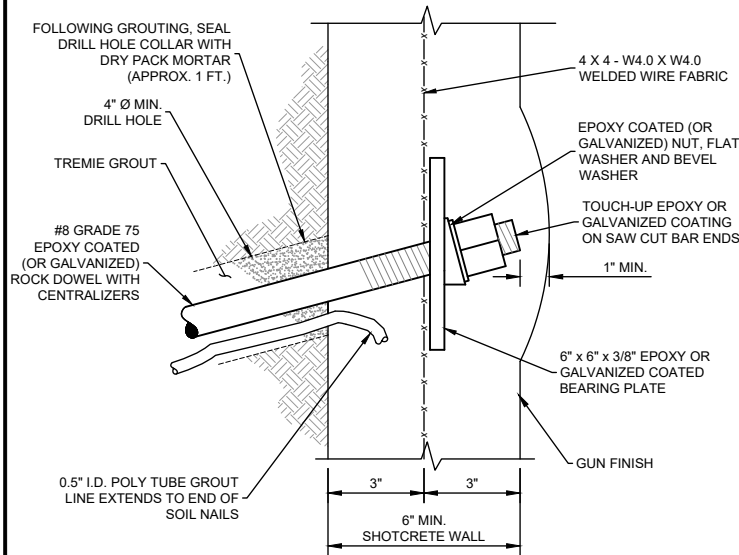
3 TOP OF SHOTCRETE

SCALE: N.T.S.



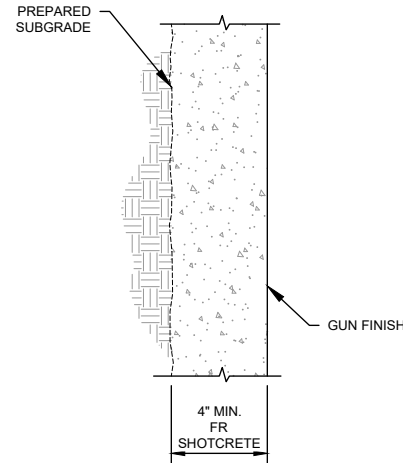
4 DRAIN STRIP WEEP HOLE DETAIL

SECTION SCALE: N.T.S.



5 ROCK DOWEL AND SHOTCRETE FACING

SECTION SCALE: N.T.S.



6 SHOTCRETE FACING

SCALE: N.T.S.

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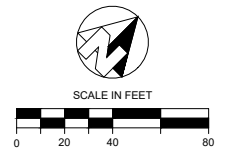
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CALAVERAS COUNTY, CALIFORNIA

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DESIGN ENGINEER:	ANDREW KOSITSKY
LICENSE NO.:	GE 2532
DRAFTED BY:	KGM
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DATE:	11/04/2022
JOB NO.:	1055
PROJECT NO.:	22
PHASE:	001
ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.	
SHEET	4.0
	14 OF 23



- NOTES**
1. BARGE AND CABLE GUIDE TO REMAIN AFTER CONSTRUCTION FOR FUTURE USE BY OWNER.
 2. EXISTING GOODWIN TUNNEL APPROXIMATELY 50 TO 100 FEET BELOW PROPOSED CANYON TUNNEL, TO BE VERIFIED.

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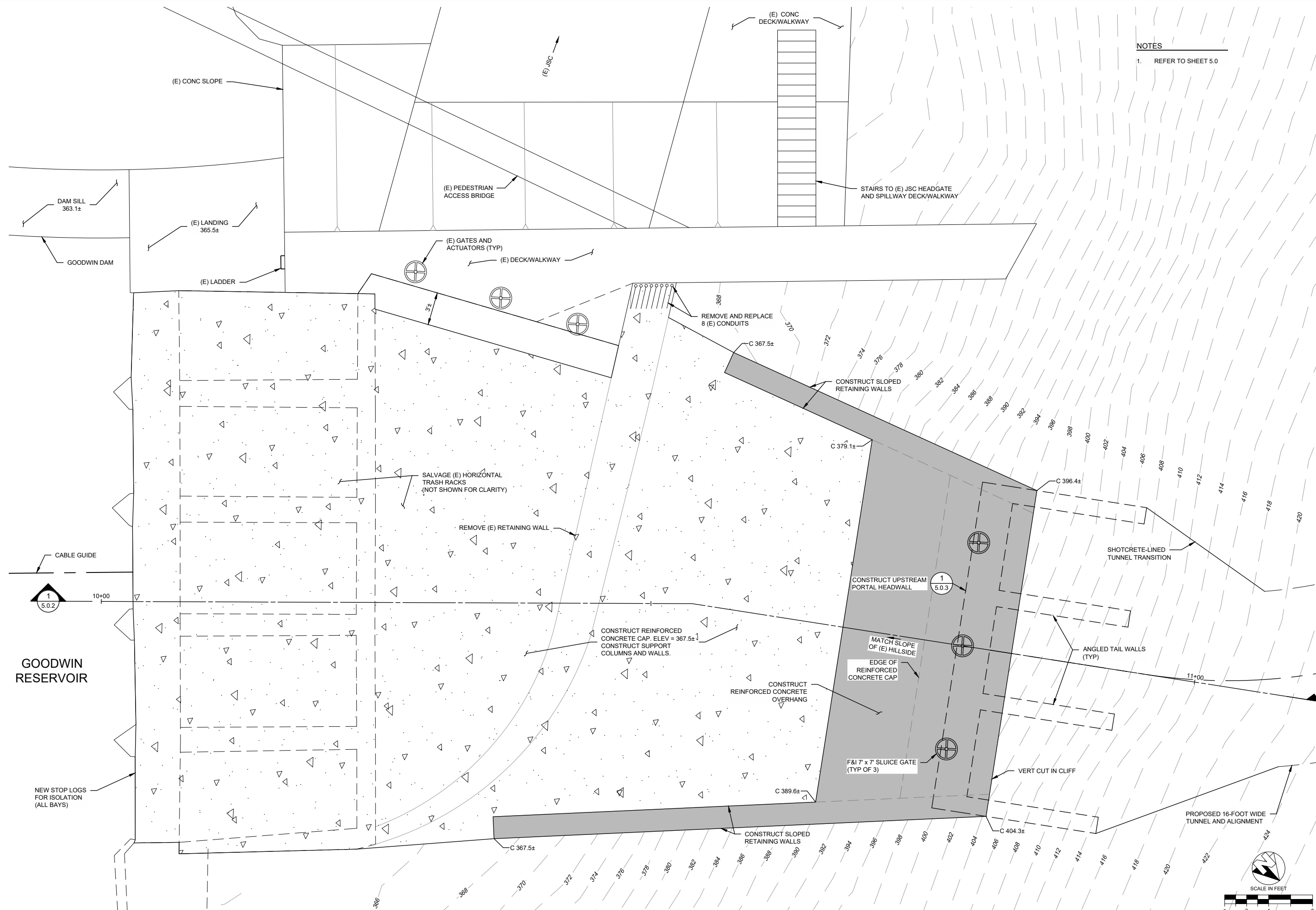
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**WATER FLOW CONTROL STRUCTURES
ALTERNATE 1A**



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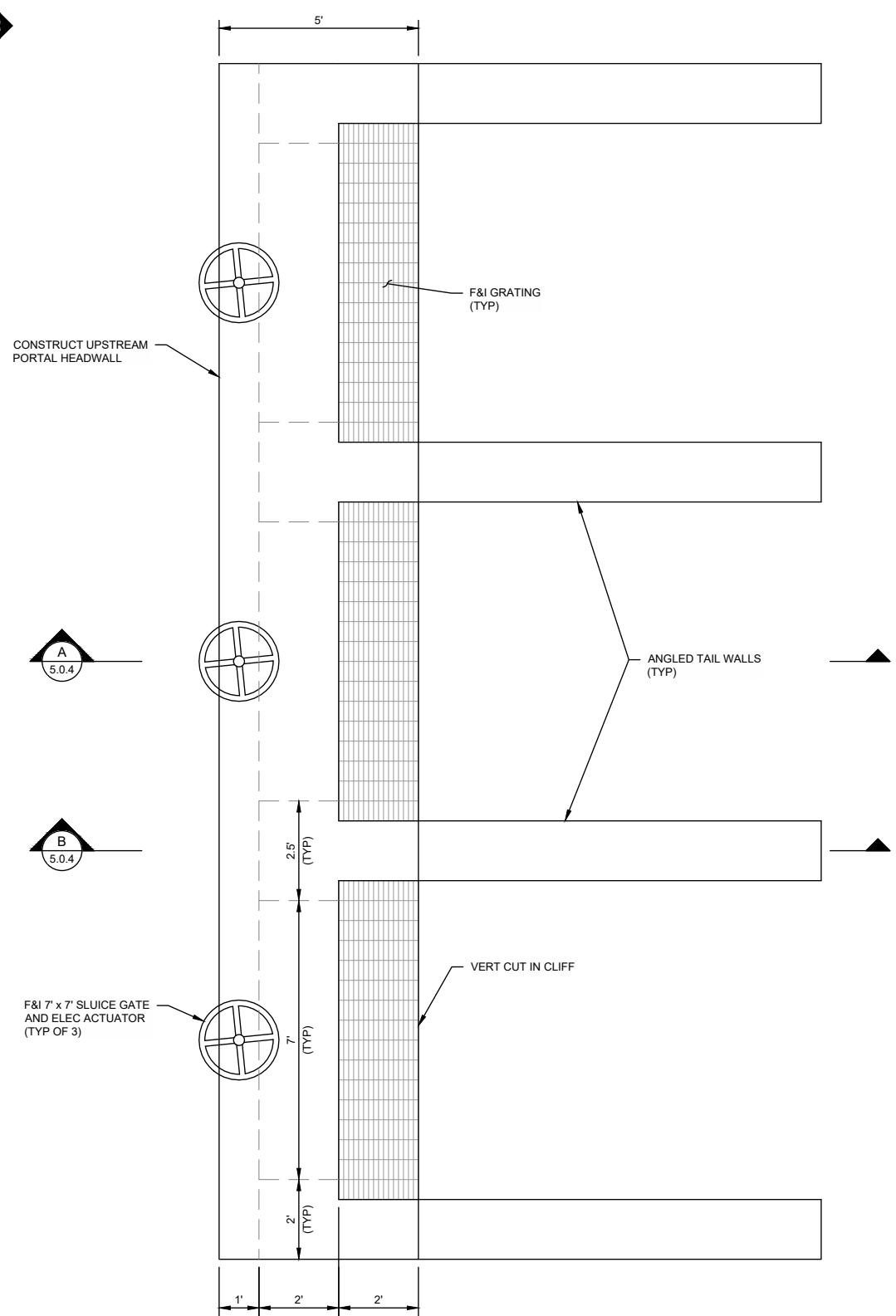
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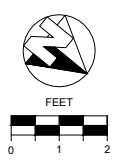
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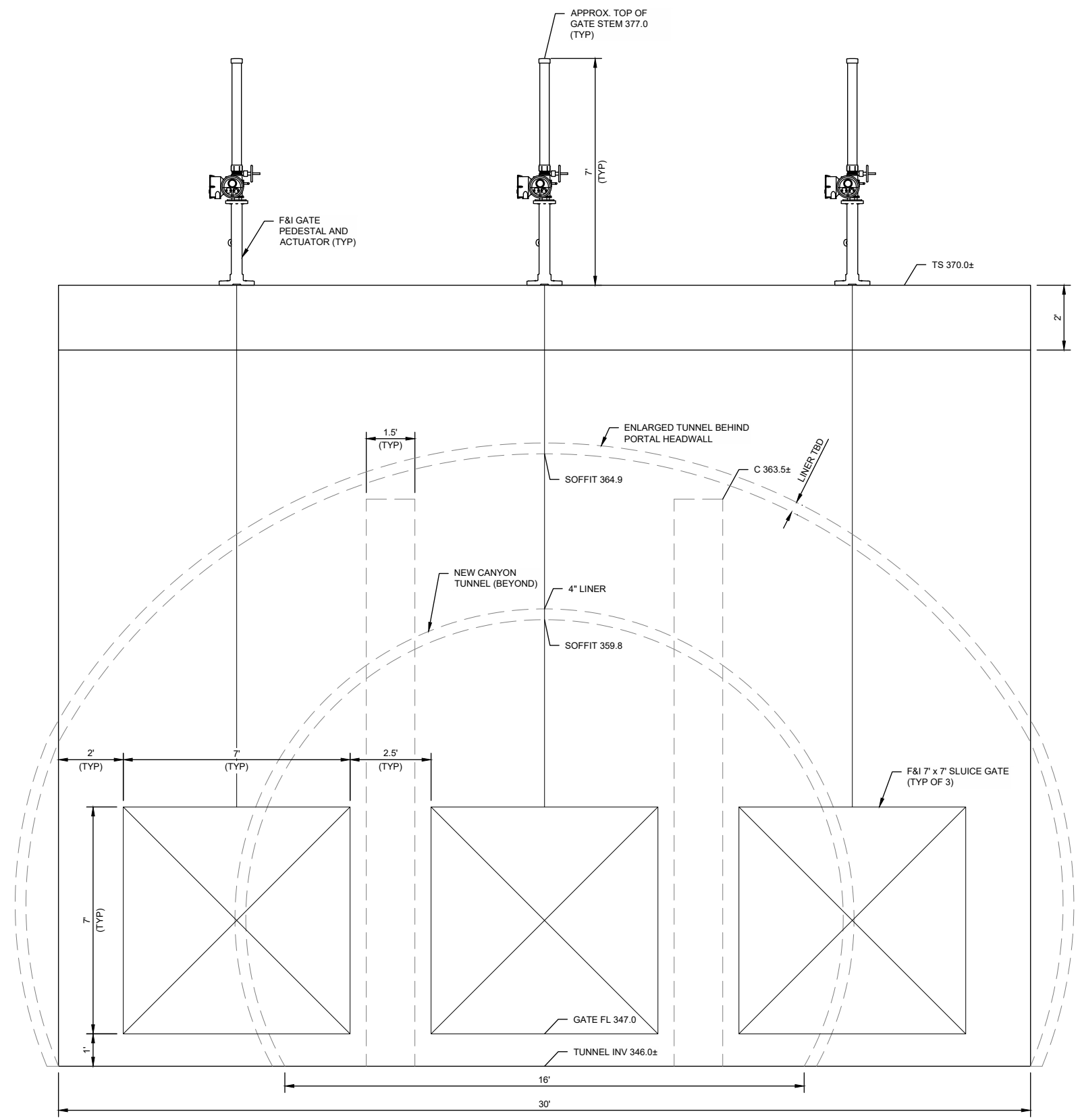
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HEADWALL PLAN



2



HEADWALL ELEVATION



1

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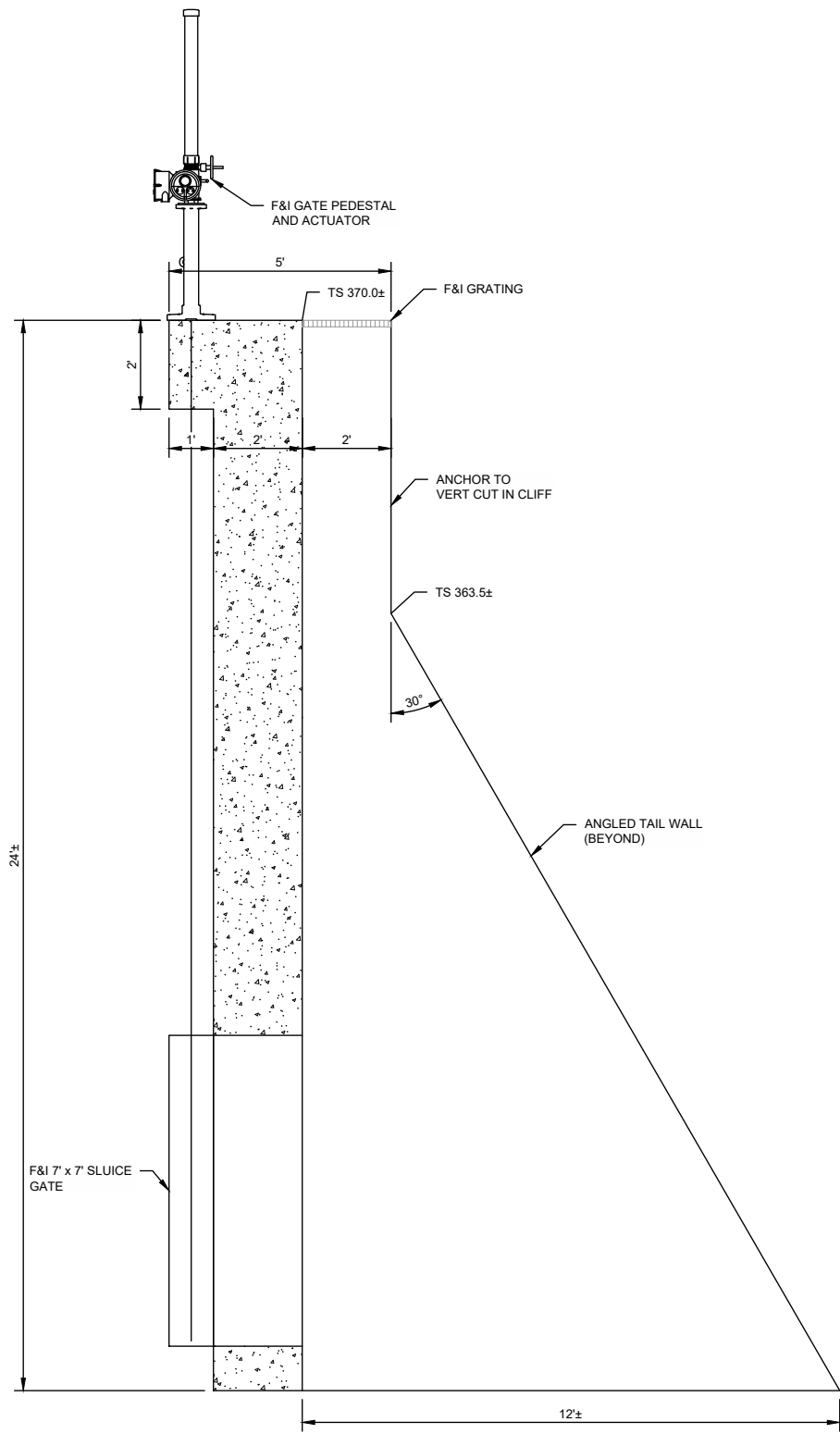
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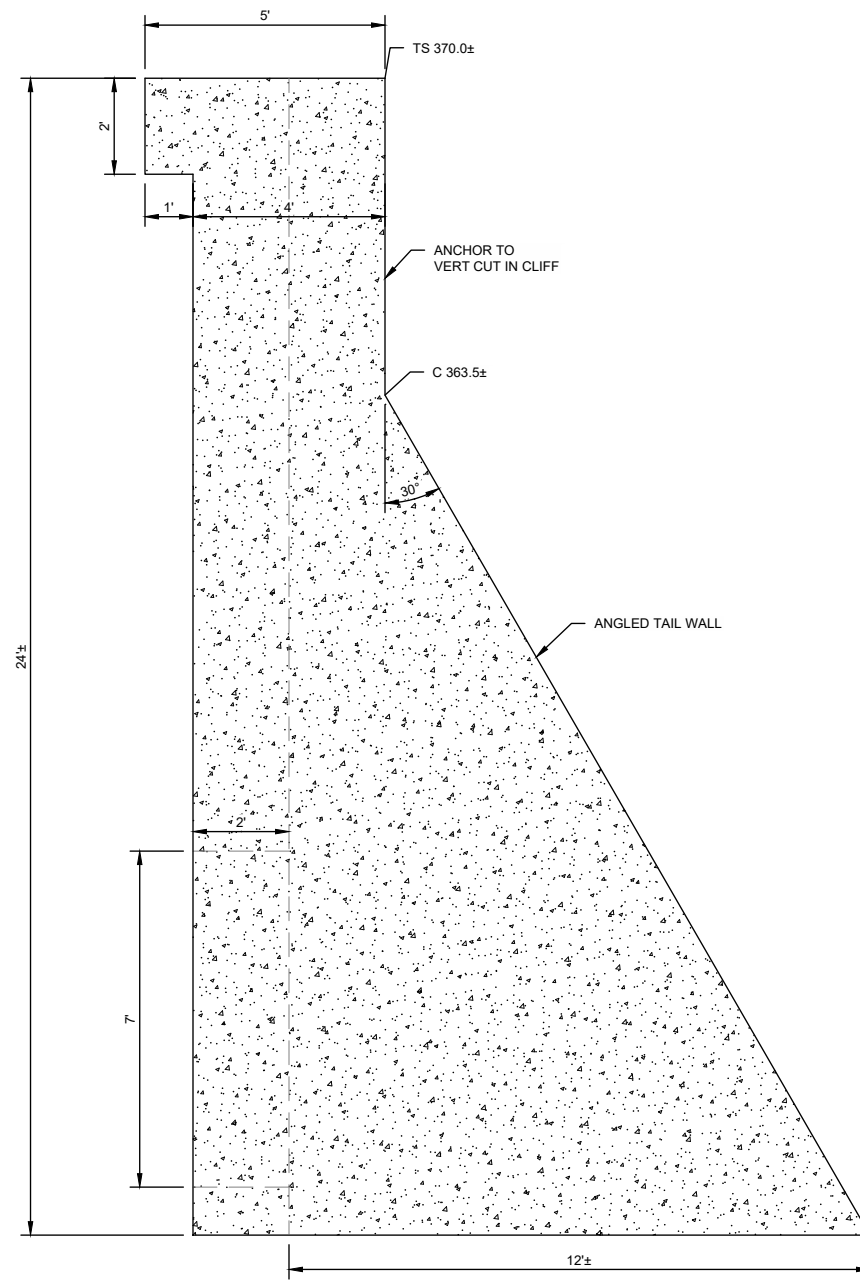
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HEADWALL SECTION A



A



HEADWALL SECTION B



B

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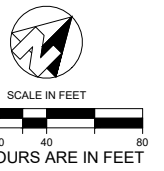
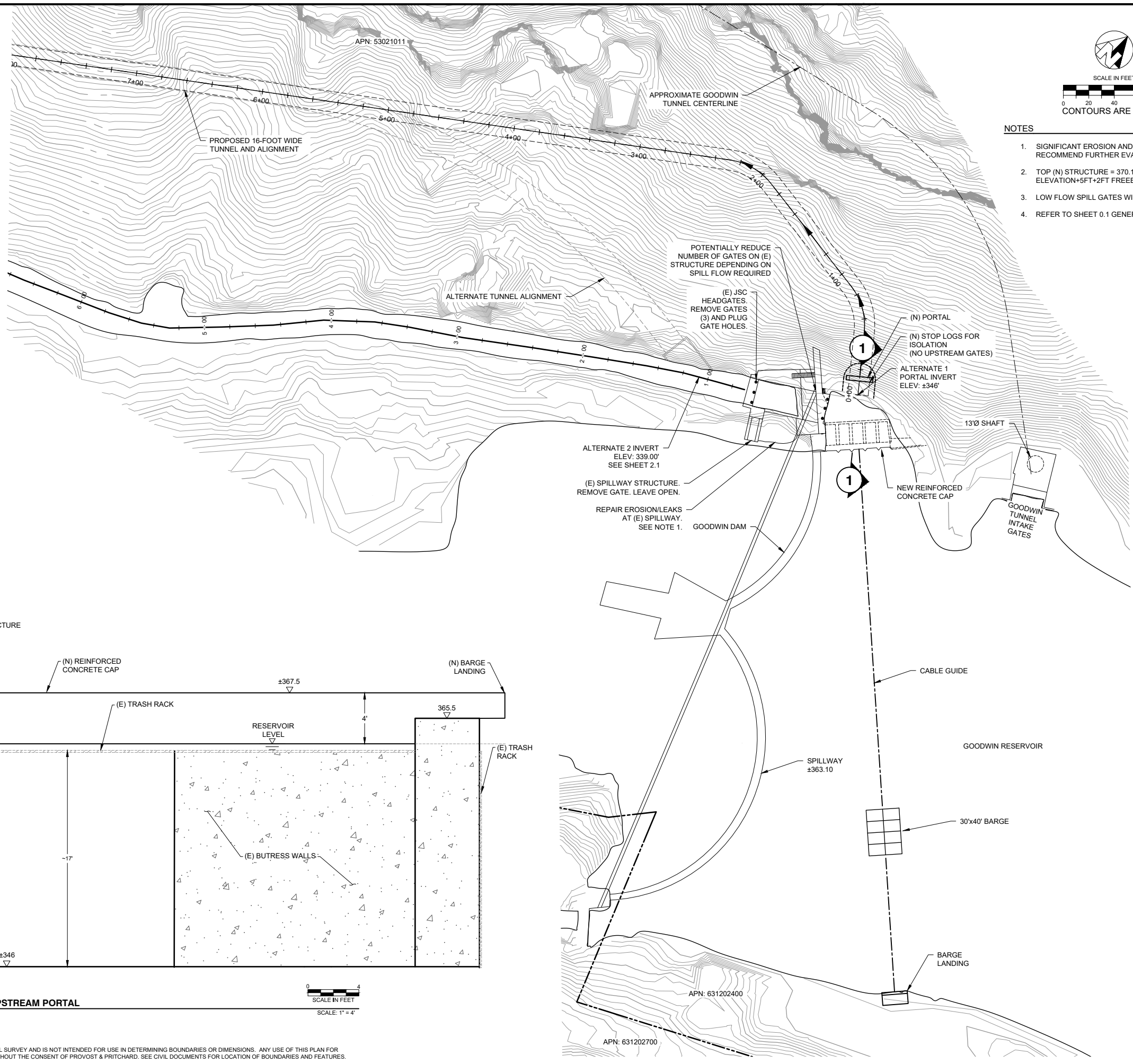
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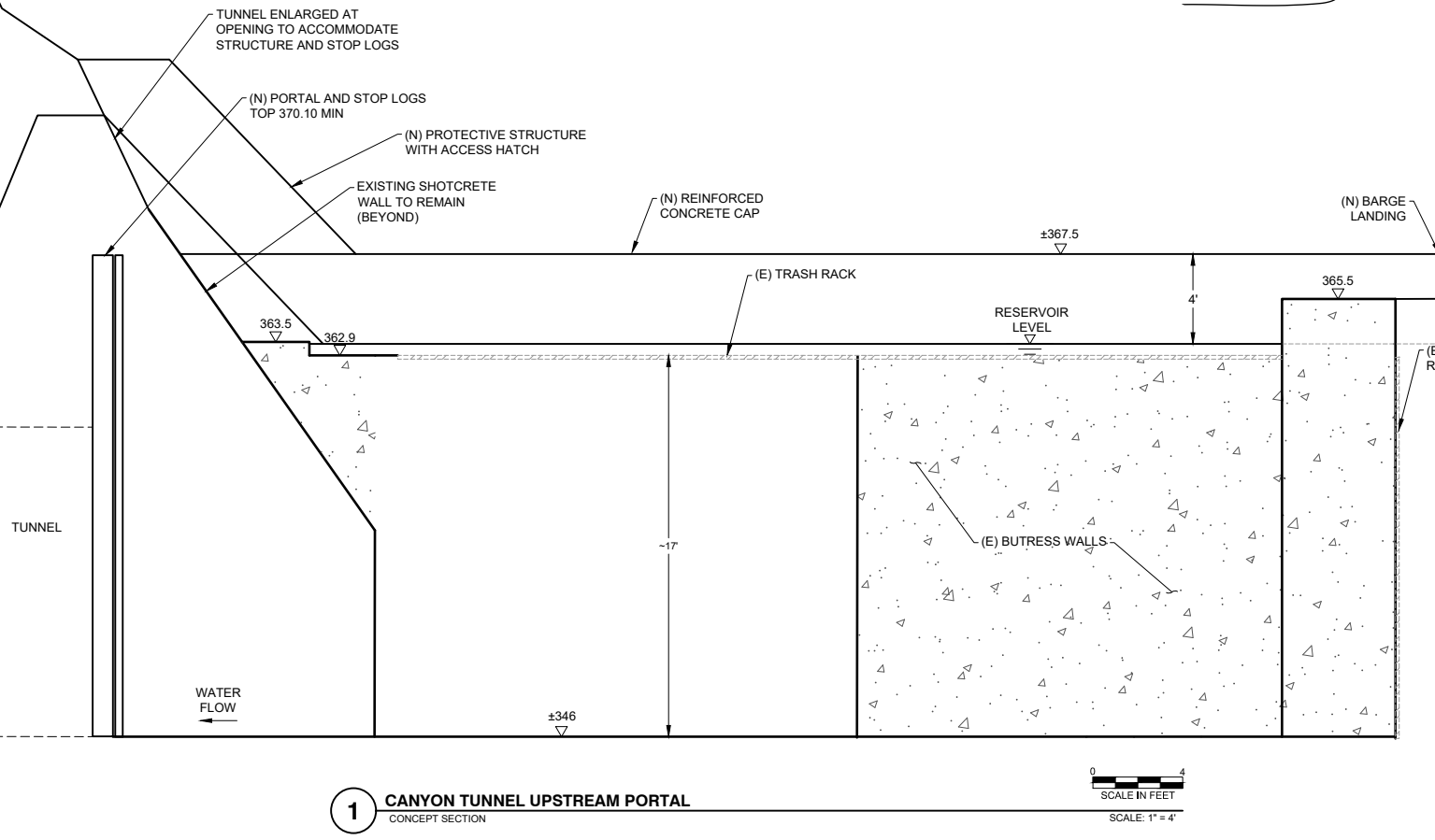
UPSTREAM PORTAL ELEVATION

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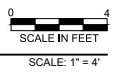
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- NOTES**
- SIGNIFICANT EROSION AND LEAKS WERE OBSERVED. RECOMMEND FURTHER EVALUATION.
 - TOP (N) STRUCTURE = 370.10 (SPILLWAY ELEVATION+5FT+2FT FREEBOARD)
 - LOW FLOW SPILL GATES WILL NORMALLY BE CLOSED.
 - REFER TO SHEET 0.1 GENERAL NOTE 2.



1 CANYON TUNNEL UPSTREAM PORTAL
CONCEPT SECTION



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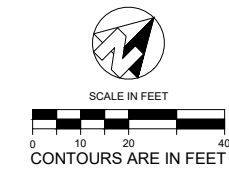
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CALAVERAS COUNTY, CALIFORNIA
WATER FLOW CONTROL STRUCTURES
ALTERNATE 2B

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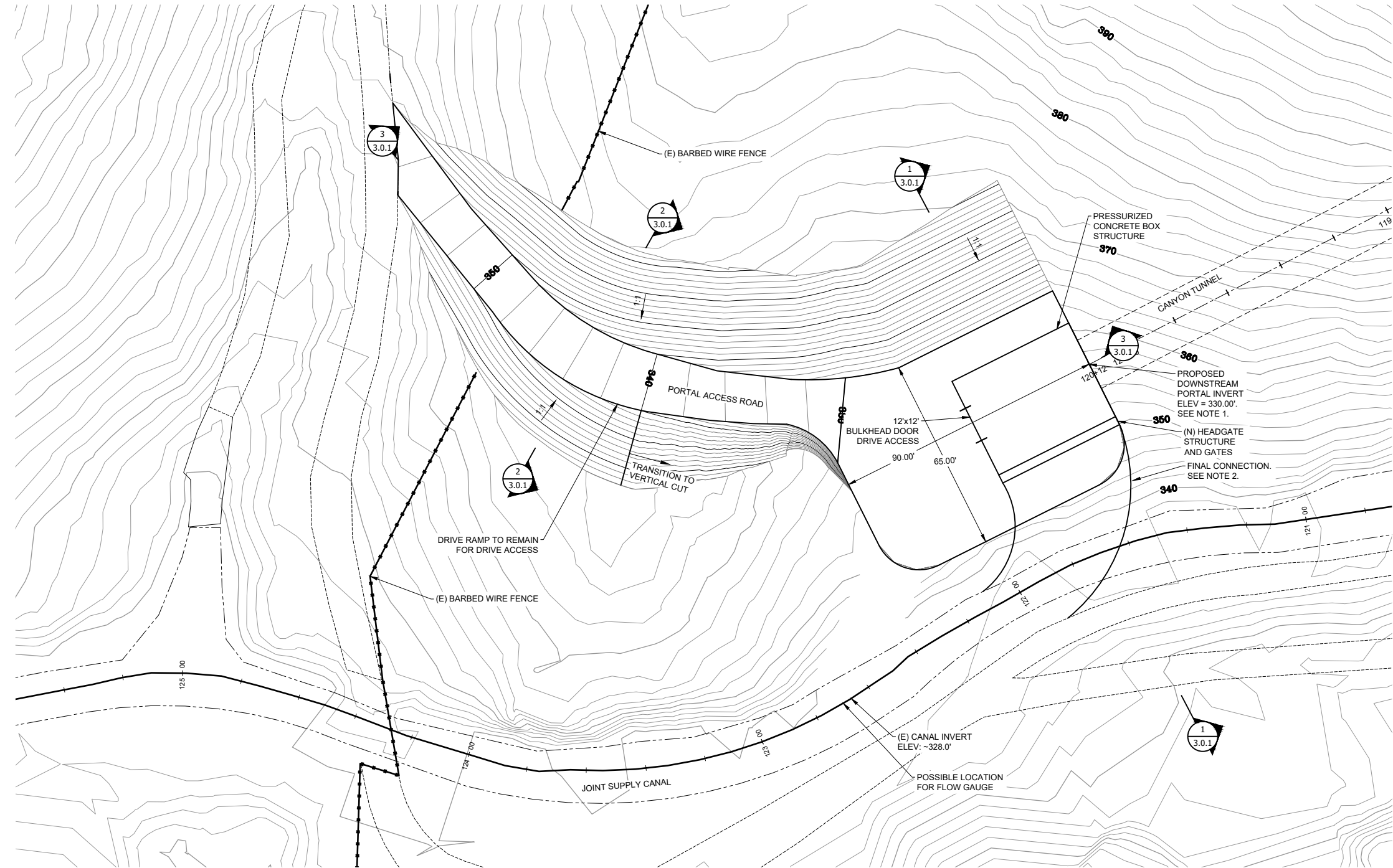
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- NOTES**
1. DOWNSTREAM PORTAL INVERT GRADE MAY BE LOWERED FOR ALTERNATE 1B.
 2. ENERGY DISSIPATION NEEDS FURTHER EVALUATION AND MAY BE REQUIRED FOR ACCURATE MEASUREMENT.
 3. ELECTRIC GATE ACTUATOR WILL BE USED DUE TO EASE OF USE/INSTALL AND LESS ENVIRONMENTAL CONCERNS.
 4. SLUICE GATES WOULD BE GATE OF CHOICE TO ALLOW FOR COMPLETE SHUTOFF.
 5. REFER TO SHEET 0.1 GENERAL NOTE 2.



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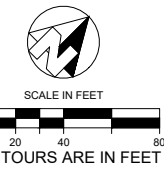
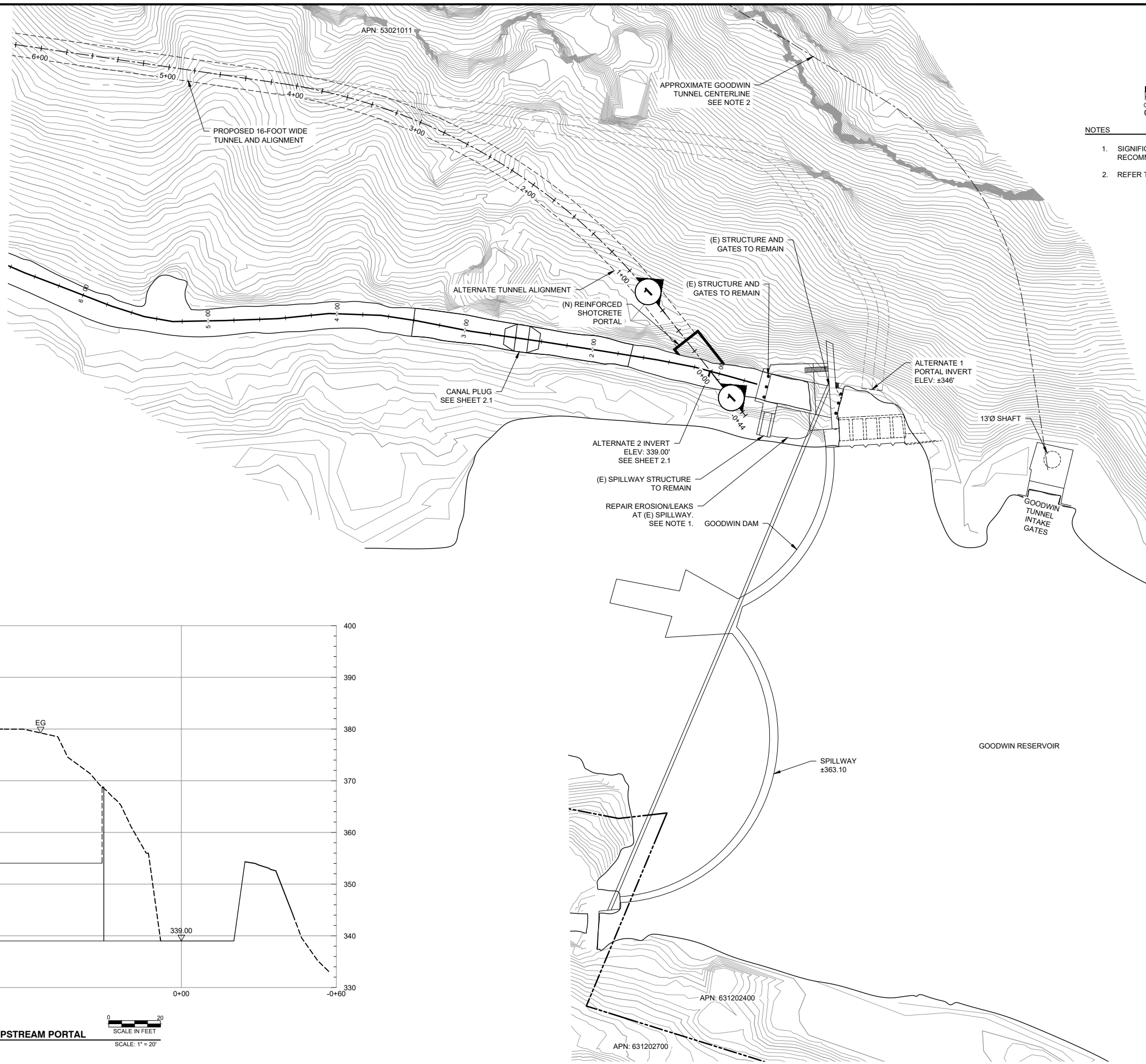
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**WATER FLOW CONTROL STRUCTURE
 ALTERNATE 1B DOWNSTREAM**

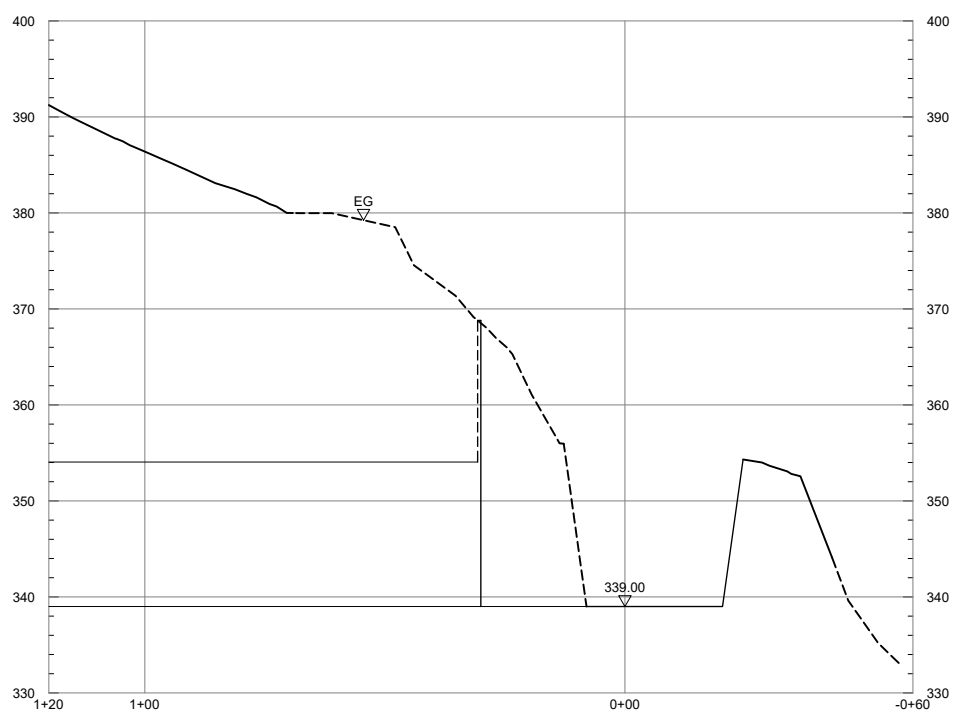
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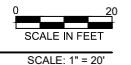
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1 CANYON TUNNEL UPSTREAM PORTAL
PROFILE
SCALE: 1" = 20'



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CALAVERAS COUNTY, CALIFORNIA
**WATER FLOW CONTROL STRUCTURES
ALTERNATE 2A**

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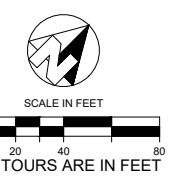
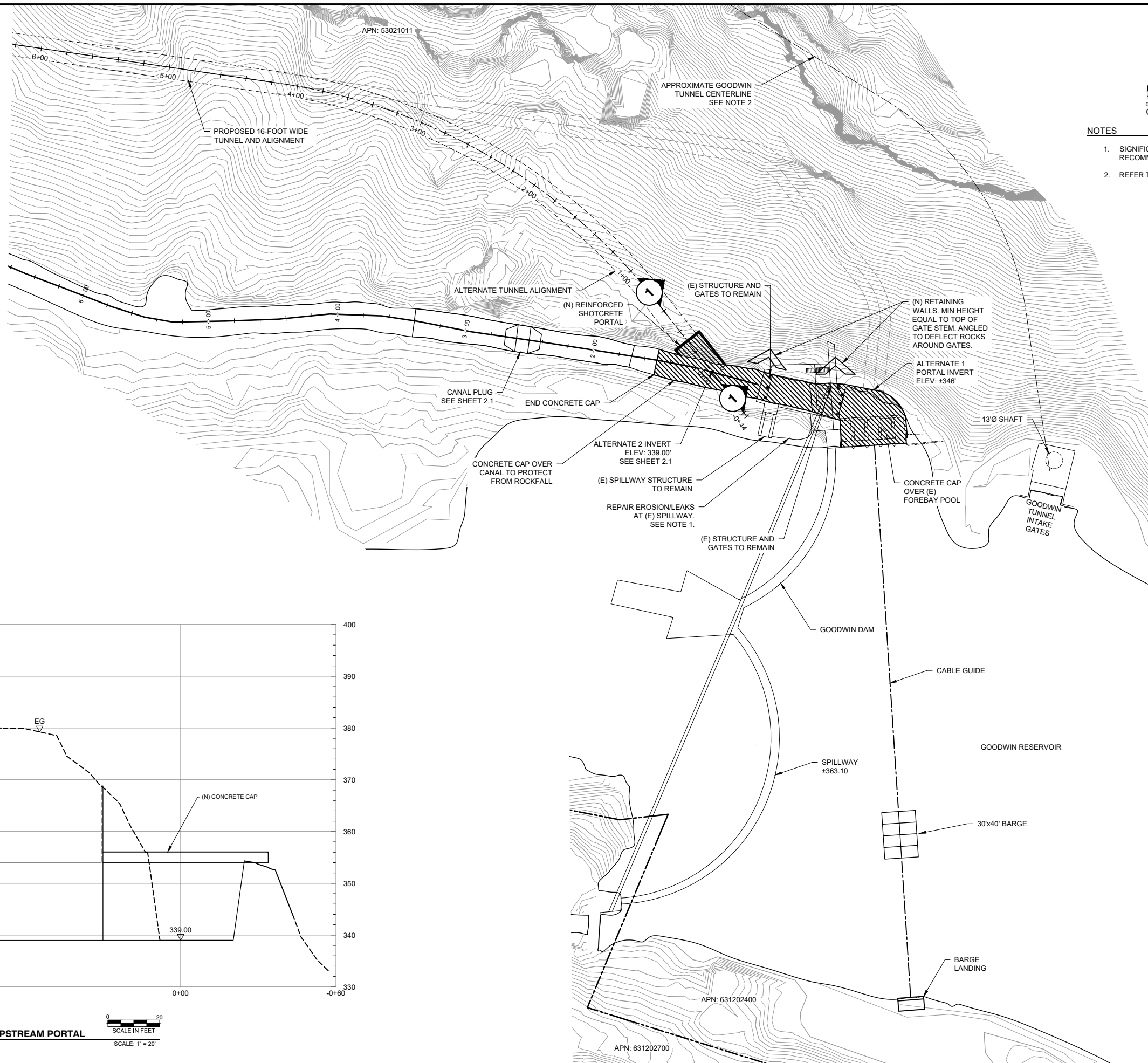
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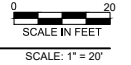
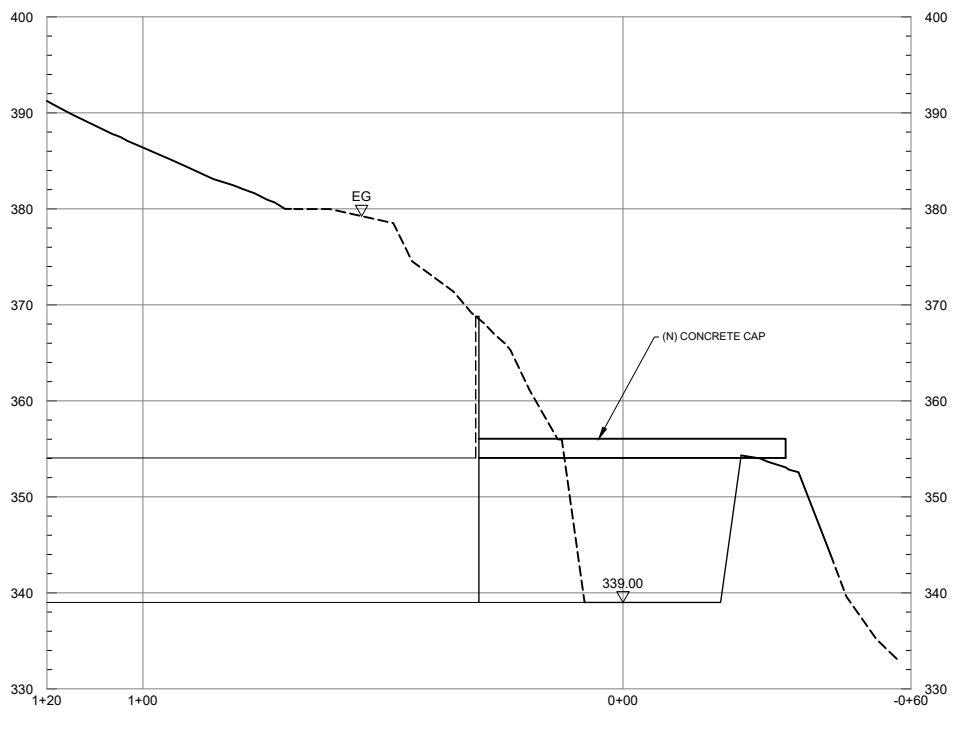
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1 CANYON TUNNEL UPSTREAM PORTAL
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ATTACHMENT C

South San Joaquin Irrigation District
Oakdale Irrigation District

Sixty Percent Design Report Canyon Tunnel

Calaveras County, California
November 4, 2022

Prepared for
South San Joaquin Irrigation District
PO Box 747
Ripon, CA 95366-9750

Prepared by:
Provost & Pritchard Consulting Group
19969 Greenley Road, Suite J
Sonora, California
Job No. 1055-22-001

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ATTACHMENTS

APPENDIX A

Geologic Hazards Study – Upstream Portal

APPENDIX B

60 Percent Design Drawings (reduced scale)

APPENDIX C

Preliminary Hydraulic Analysis

APPENDIX D

Preliminary Engineer’s Opinion of Probable Construction Cost Estimate

Sixty Percent Design Report Canyon Tunnel

South San Joaquin Irrigation District Oakdale Irrigation District Calaveras County, California

1.0 EXECUTIVE SUMMARY

Significant potential rock fall and rockslide hazards that pose substantial risk to future water delivery and worker safety have been identified along a segment of the South San Joaquin Irrigation District (SSJID) and Oakdale Irrigation District (OID) Joint Supply Canal (JSC) between Goodwin Dam and the SSJID Main Canal/OID North Main Canal Diversion Works. SSJID provides JSC maintenance and is the lead agency for this project. Provost and Pritchard Consulting Group (P&P) has prepared a preliminary design for a bypass tunnel (Canyon Tunnel) to avoid the high-risk areas.

The proposed Canyon Tunnel begins near Goodwin Dam and ties into the JSC approximately 2 miles downstream, near the existing canal access ramp between the Gable Tunnel and the Long Tunnel. The proposed Canyon Tunnel will be approximately 12,000 feet long. P&P developed the proposed alignment based on evaluation of subsurface ground conditions revealed during the geological drilling and exploration program; the alignment generally follows the softer ground of the Mehrten Formation and, to the extent possible, avoids strong to very strong basement rock of the Gopher Ridge Formation.

The proposed tunnel could be constructed using either conventional (roadheader) or Tunnel Boring Machine (TBM) tunneling methods. The tunnel will be an inverted horseshoe shape at about 16 feet wide by 14 feet high (conventional tunneling methods) or an approximate 19-foot diameter circular tunnel with a flat concrete invert (TBM). However, owing to significantly higher risk factors and higher estimated construction costs, we recommend that the TBM option should be eliminated from further consideration for this project. Diesel-powered trucks and equipment will be able to transit through the completed tunnel for future maintenance.

The 60 percent design effort also included developing proposed tunnel inlet and outlet permanent facilities, as well as temporary facilities necessary to support the project construction. A detailed geologic hazards study was performed for the steep rock cliffs above the north abutment at Goodwin Dam; the study confirmed that significant geologic hazards are present that threaten the existing JSC inlet facilities. Therefore, alternate intake concepts were evaluated considering hazards mitigation, aspects including future maintenance access and ease of facilities operation, and construction costs. A draft version of this report was prepared in April 2021, but CEQA permitting work was determined to be necessary to confirm that the preferred alternate for the tunnel inlet and control structures upstream of Goodwin Dam would not require a fish screen structure and therefore would be feasible; the preferred alternative (Alternate 1) has since been confirmed, with no fish screen required.

Based on the assumptions described in this report, our preliminary opinion of probable construction costs for Alternate 1A (tunnel inlet and control structures upstream of Goodwin Dam)

is approximately \$39.5 million in 2021 construction dollars. We estimate that contractor bidding could occur in late 2024, that construction could begin in early to mid 2025 and that the construction duration will be approximately 36 months. P&P recommends that the preliminary total project cost budget should include annual escalation of the probable construction costs, soft costs (including remaining limited site exploration, engineering, CEQA permitting and compliance, construction management, etc.), and contingencies; we therefore recommend a preliminary overall budget for remaining work items of \$61.6 million for 2025 - 2028 construction.

2.0 DESIGN

2.1 INTRODUCTION

This report presents the progress results of our ongoing engineering evaluation and design of a water conveyance “bypass” tunnel. The work completed to date, as described below, began with the tunnel design team previously employed by Condor Earth (Condor). The team transitioned to P&P and has continued with completing the 60 percent design under P&P.

Evaluation of the bypass tunnel was a result of recommendations presented in the Condor 2018 update to the Phase 2 Improvement Evaluation study for the joint SSJID and OID canal system. The bypass tunnel, herein referred to as the Canyon Tunnel, is located within the JSC system northeast of Knights Ferry, CA. SSJID is the lead agency for this Project. P&P has performed and finalized this phase of the work in accordance with our Client Consent Form dated January 3, 2022 authorizing the transfer of the Condor agreement and Proposal for Engineering Services – 60 Percent Design, Canyon Tunnel, Joint Supply Canal, dated April 9, 2020.

2.1.1 Purpose

This design report presents the proposed tunnel and the conceptual portal/control structure design at a 60 percent design level. The primary purpose of this effort is to evaluate the preferred tunnel alignment and dimensions, tunnel intake and outlet arrangements and alternatives, temporary facilities, and to provide an updated construction cost estimate for the project considering design developments made and additional subsurface data retrieved since the completion of the 30 percent design phase. The parameters described herein include the preferred tunnel alignment and dimensions, alternate portal configurations that were considered, and potential construction methods. The results of the 60 percent engineering design effort may be used as a basis for environmental permitting, land acquisition and 90 percent design for the project.

2.1.2 Background

The tunnel design team has provided support for evaluations and improvements to the JSC system for the past 15+ years. Other reports prepared by P&P’s team that are pertinent to the proposed Canyon Tunnel include:

- 1) *Joint Main Canal and Tunnels Improvement Project, Long-Term Improvement Evaluation, Phase 2 Report, South San Joaquin Irrigation District*, originally provided August 20, 2007 and updated January 26, 2018
- 2) *Canyon Tunnel Thirty Percent Design Report, South San Joaquin Irrigation District*, dated April 9, 2020
- 3) *Project Description for the Proposed Canyon Tunnel Project*, April 29, 2021

- 4) *5-Year Maintenance Plan Recommendations, Joint Supply Canal, South San Joaquin Irrigation District*, updated October 6, 2021
- 5) *Geologic Data Report, Canyon Tunnel, South San Joaquin Irrigation District*, 60 Percent dated November 4, 2022
- 6) *Geologic Hazards Study – Upstream Portal, Canyon Tunnel, South San Joaquin Irrigation District*, dated November 4, 2022

The 2007 and 2018 Phase 2 Reports evaluated geologic hazards along the JSC between Goodwin Dam and the Diversion Works and provided an opinion of hazard severity levels (low, medium or high) for various segments of the canal system. Furthermore, we evaluated several options for canal improvements and maintenance, and we explored alternative water conveyance systems to increase water storage and mitigate the risk of canal shutdowns for emergency repairs. Alternatives for mitigating the rockslide hazards above the canal included constructing a protective cover over the canal, re-constructing the canal further out-slope, installing rockfall protection along the slope above the canal, and constructing one or more bypass tunnels to avoid the high-risk areas.

The 2018 update to the Phase 2 Report also included construction cost estimates for the various canal improvement alternatives. The tunnel construction costs were “benchmarked” based on the contractor bid prices received in 2017 by OID for the nearby Two-Mile Bar Tunnel Project (now known as Webb Tunnel). Based on the construction costs, estimated future maintenance efforts, and estimated overall remaining hazards after hypothetical completion of the various mitigation alternatives, our team recommended construction of a single bypass tunnel from Goodwin Dam to the canal access ramp (“Bypass Tunnel 3” in the 2018 Report) as the most reliable method for improving the JSC for continued long-term use. The Canyon Tunnel design work described herein is a continuation of evaluating the bypass tunnel alternative.

Our team has provided support for interim maintenance repairs to the JSC system intermittently since 2007. We developed the initial 5-Year Maintenance Plan Recommendations in 2019/2020, which detailed the recommended scope for short-term repairs and hazard mitigation measures between Goodwin Dam and the canal access ramp (“bypass segment”; the segment of the JSC to be bypassed by the proposed Canyon Tunnel) as well as permanent repairs warranted between the canal access ramp and the Diversion Works (the segment of canal to remain in operation following completion of the proposed Canyon Tunnel). The primary intent of the temporary repairs along the bypass segment of the JSC was to provide safe, reliable worker access and water conveyance through the canal until the bypass tunnel is completed.

Temporary maintenance repairs were completed along high-hazard portions of the bypass segment of the JSC during the 2019/2020 and 2020/2021 maintenance seasons by a specialty rock slope maintenance contractor, per the recommendations provided by our team. As described in the October 2021 update to the 5-Year Maintenance Plan Recommendations report, the temporary maintenance repairs along the bypass segment are substantially complete. The remaining recommended repairs include long-term rock slope improvements along the JSC between the canal access ramp and the Diversion Works, which will remain in-use following completion of the bypass tunnel.

The November 2022 Geologic Hazards Study (Appendix A) details our preliminary evaluation of the rock fall hazards along the rock cliffs exposed directly above the northern abutment of

Goodwin Dam. We used the results of the Hazards Study to evaluate alternatives for the location of the upstream portal of the new bypass tunnel, conceptual designs of a protective barrier over the portal and inlet gates, and conceptual designs for permanent barge access to the portal, if needed.

The site investigation data (including geologic mapping, rock core drilling and subsurface investigation) gathered during the design work for the current tunnel project is presented in our November 4, 2022 Geologic Data Report, which is provided under separate cover.

2.1.3 Services Provided

Our scope of services conducted as part of this study included:

- Geologic mapping and subsurface exploration, the results of which are presented in a separate Geologic Data Report
- Performing a geologic hazards study for the upstream portal facilities
- Preliminary design of permanent upstream tunnel inlet and downstream outlet facilities
- Layout of anticipated temporary construction facilities
- Updating preliminary hydraulic analyses of the proposed tunnel to determine minimum tunnel dimensions and slopes to maintain the JSC water conveyance capacity
- Preparing a preliminary project description to facilitate CEQA studies (completed under Condor)
- Providing preliminary land acquisition support
- Updating probable construction cost estimates based on the preliminary design assumptions

2.2 ASSUMPTIONS

Preliminary design drawings that show the preferred tunnel alignment, the potential and preferred upstream portal alternates and the preferred downstream portal location are included in Appendix B. The potential tunnel dimensions and construction methods are based on the assumptions presented in the following subsections.

2.2.1 Hydraulic Analysis

We understand that the typical peak water flow of the JSC is approximately 1,100 cubic feet per second (cfs). We developed the minimum tunnel dimensions and conducted our analyses based on a design flow capacity of 1,250 cfs.

We evaluated two upstream portal locations with differing finished invert grades: one immediately upstream of Goodwin Dam (Alternate 1) at finished invert grade of ± 346 feet above sea level (+MSL), and one approximately 100 feet downstream of Goodwin Dam (Alternate 2) at a finished invert grade of ± 339 feet +MSL. Our hydraulic analyses assumed a fixed (preferred) location of the downstream portal at a finished grade of ± 330 feet +MSL and a uniform longitudinal slope between the portals for each alternative. A discussion of the upstream portal alternates is included in Section 2.3.2.

Our hydraulic analyses were performed with a focus on determining the minimum tunnel dimensions that would be required to convey the desired peak water flows without the tunnel pressurizing (i.e. maintaining open-channel flow). The minimum dimensions of the proposed tunnel are dependent upon the potential means and methods of tunnel construction and the longitudinal slope along the tunnel alignment; therefore, alternatives for minimum tunnel section dimensions (conventional and TBM) were considered in the hydraulic analyses, which are included as Appendix C.

The potential tunnel sections are presented on Sheet 1.2 of the 60 Percent Design Drawings included in Appendix B. Sections A and B are inverted horseshoe shape and assume that the tunnel will be constructed with conventional tunneling methods. Section A has a finished width of 16.0 feet at the invert, a finished height of 13.8 feet and a finished area of approximately 214 square feet (sf). Section B has a finished width of 17.5 feet at the invert, a finished height of 15.1 feet and a finished area of approximately 256 sf. If the tunnel is constructed with a TBM, our analysis indicates that a finished diameter of approximately 19.5 feet (Section C; finished area approximately 290 sf) is required to accommodate the design water flows and a flat concrete invert necessary for reliable vehicle access through the finished tunnel. The portal invert elevations, longitudinal slopes, lengths and minimum dimensions of the tunnel for each alternate are shown in Table 1.

TABLE 1
Proposed Tunnel Invert Slope Alternatives used in Hydraulic Analyses

Upstream Portal Location	Upstream Portal Finished Invert Grade (ft.)	Downstream Portal Finished Invert Grade (ft.)	Slope (DGrade ÷ Length)	Tunnel Length (ft.)	Tunnel Dimensions
Alternate 1	346	330	.0013	12,012	Conventional: Section A TBM: Section C
Alternate 2	339	330	.0008	11,836	Conventional: Section B TBM: Section C

2.2.2 Geology Along Tunnel Alignment

The geologic conditions present at the site and the results of our surface and subsurface investigations are presented in the Geologic Data Report, Canyon Tunnel, South San Joaquin Irrigation District, updated November 4, 2022. The following is a brief summary of pertinent site geologic information related to evaluating the tunnel alignment.

The prominent regional geologic feature of the project site is the sequence of sedimentary and volcanic flow deposits of the Mehrten Formation, which are typically capped by the volcanic flows of Table Mountain Latite. The Mehrten rock units were deposited as channel fill along an ancestral river channel that traversed approximately along the alignment of the present-day Stanislaus River. In the project area, the ancestral river eroded into the regional basement rock (the Gopher Ridge Formation), which the channel fill nonconformably overlies. The present-day Stanislaus River has eroded a canyon through the volcanic cap and channel fill deposits that exposes the complete geologic section in the project area. The ancient channel maximum depth appears to be approximately 100-150 feet lower than the present-day channel.

Mehrten Formation sedimentary and volcanic rocks are well exposed in un-lined portions of tunnels and canals in the general area. The engineering characteristics of the different facies within the formation vary. In general, the rock is typically weak, often does not stand well, and is generally subject to erosion by flowing water. The upper member of the Mehrten Formation in the project area is known as the Table Mountain Latite, comprised of a series of volcanic lava flows. The thickness of the latite flows that cap the channel fill in the project area ranges from nil to over 100 feet thick. The contact zone between the latite and the underlying Mehrten Formation sedimentary rocks, which was exposed during the excavation of the nearby OID Webb Tunnel, is generally poor tunneling ground; however, we do not anticipate that the contact zone will be encountered along the proposed Canyon Tunnel alignment.

The regional basement rock, the Gopher Ridge Formation, generally consists of a fine-grained metavolcanic rock unit that is colloquially referred to as “greenstone”. Fresh, unweathered metavolcanic rock is exposed along nearby OID South Main Canal Tunnels 1 through 6, which are unlined or partially lined. The fresh to slightly weathered rock is typically very strong and hard to extremely hard. Moderately to highly weathered zones with weak and moderately soft rock commonly occur near the contact with the overlying Mehrten Formation channel fill. An approximately 250-foot wide, E-W-trending mineralization zone of iron sulfide-rich rock occurs within the formation. The zone is exposed along the JSC and is roughly centered around the Copper Tunnel.

We evaluated multiple potential tunnel alignments between the potential upstream portal locations (near Goodwin Dam) and the downstream portal location. The results of the geologic mapping and rock core drilling indicate that a “bedrock high” in the Gopher Ridge Formation metamorphic basement rock unit coincides with the central portion of this tunnel alignment. The bedrock high represents the southeastern margin of an ancestral river channel that was infilled with Mehrten Formation sedimentary and volcanic rocks. We identified a tunnel alignment that traverses around the bedrock high to the northwest as the preferred tunnel alignment, as detailed in Section 2.3.1.

Owing to the extremely limited access to the upstream portal areas, P&P assumes that tunnel construction will proceed upstream from the downstream portal. Our site investigation data indicates that weathered to fresh metavolcanic rock of the Gopher Ridge Formation will be encountered during excavation of the downstream portal staging area and along the downstream-most 800 linear feet of the tunnel alignment (approx. tunnel Sta. 120+12 to 112+00). P&P anticipates that the ground conditions in the Gopher Ridge Formation will be generally good for tunneling and will consist of hard to very hard, strong rock that will require hard rock excavation methods, including drill-and-blast. Spot rock dowels may be required to stabilize rock blocks in localized fracture zones.

In general, the uppermost 5 to 20 feet of the Gopher Ridge Formation metavolcanic rock (nearest the contact zone with the overlying Mehrten Formation) is moderately to highly weathered; the subsurface investigation results indicate that much of the central and downstream portions of the tunnel will be excavated near the contact zone, as depicted in the tunnel geologic profile on Sheet 1.1 of the 60 Percent Design Drawings included in Appendix B. The Gopher Ridge Formation is generally softer and weaker in this zone and potentially unstable during excavation, especially immediately below the contact zone with the overlying Mehrten Formation.

As detailed above and in Section 2.3.1, the tunnel alignment traverses around a known bedrock high near the center of the alignment. Owing to the uncertainty of the extent of the bedrock high

at tunnel elevation, P&P anticipates that “mixed-face” conditions of Mehrten Formation sedimentary rocks overlying weathered Gopher Ridge Formation metavolcanic rock may be encountered in this area (between approximate Tunnel Sta. 68+00 to 51+00). Localized zones of poor ground may be encountered along this reach of the tunnel owing to the weathered nature of the rocks near the contact.

P&P anticipates that mixed-face conditions similar to those described above may be encountered along the tunnel alignment near the upstream portal, regardless of which portal alternate is selected. The results of our geologic mapping and rock core drilling work indicate that the north abutment of Goodwin Dam was constructed against Gopher Ridge Formation bedrock and the contact between the Mehrten Formation and Gopher Ridge Formation occurs just above the elevation of the existing JSC near the dam. The contact dips gently (approximately 10 to 20 degrees) to the west-northwest, roughly parallel to the tunnel alignment. We anticipate that the upstream-most 200 linear feet (approximate) of the tunnel alignment will be constructed along or just below the contact zone.

The geologic conditions along most of the tunnel alignment will predominantly consist of the various sedimentary and volcanic facies of the Mehrten Formation, as described above. Based on the subsurface investigation results and our team’s observations during construction of the nearby Webb Tunnel, P&P anticipates that the ground conditions will be generally favorable for tunneling except for potentially slow-raveling, loose sandstone beds that may slow production and require temporary support installation. We anticipate that the raveling ground will occur in localized areas across less than 10 percent of the total tunnel alignment.

Under our work scope, we installed groundwater-monitoring instrumentation in the exploration core hole borings. Based on our initial findings (refer to the Geologic Data Report, dated November 4, 2022), our team’s experience during construction of the nearby Webb Tunnel and construction reports from the nearby Goodwin Tunnel, we anticipate that little groundwater will be encountered during most of the tunnel construction and that production rates will not be significantly affected by groundwater. Along the upstream reach of the tunnel near Goodwin Reservoir, however, there is a potential for significant inflows. We understand the nearby Goodwin Tunnel encountered approximately 180 gpm water inflows within the Mehrten Formation at a location within a few hundred feet from the Goodwin Reservoir.

The following sections include our rationale and recommendations related to the proposed tunnel alignment, upstream portal alternates, and construction means and methods.

2.3 RECOMMENDATIONS

2.3.1 Tunnel Alignment

Based on the previous hazard assessment work during the 2018 Phase 2 Report update, the most hazardous portion of the JSC extends from the existing canal headgates at Goodwin Dam (canal Sta. 0+00) to just upstream of the canal access ramp at approx. canal Sta. 122+00. We recommend that the bypass tunnel extend from near Goodwin Dam to near the canal access ramp.

Our team evaluated numerous potential tunnel alignments during our 30- and 60 Percent Design investigations. The prominent geologic feature along the potential tunnel alignments between the proposed portal locations is the bedrock high in the Gopher Ridge Formation metamorphic

basement rock unit that occurs northwest of the existing Ram Tunnel (in the central portion of the proposed tunnel alignment area). The bedrock high defines the margin of the ancestral river channel in which the Mehrten Formation sedimentary and volcanic rocks were deposited.

The subsurface investigation focused on defining the northwest extent of the bedrock high at the elevation of the proposed tunnel. The results of our investigation indicate that the geologic conditions along the majority of the proposed tunnel alignment consist of the channel fill deposits (Mehrten Formation), including upstream and downstream of the bedrock high feature. Owing to the likely complications and decreased production rates that would be experienced by constructing the central portion of the tunnel through the less weathered metamorphic basement rock, P&P recommends that the tunnel alignment traverse northwest of the area where we interpret the bedrock high occurs at the elevation of the proposed tunnel. The tunnel length along this alignment is a maximum of 12,012 linear feet depending upon the desired location of the upstream portal, which is discussed in Section 2.3.2.

Our interpretation of the subsurface ground conditions is based on the geologic mapping, rock core drilling and geophysical survey work performed to date. Many of the rock core hole locations are several hundred feet (horizontally) from one another, and several of the rock core holes project up to a few hundred feet (horizontally) from the proposed tunnel alignment. Our interpretation of the ground conditions between the rock core holes is based primarily on the geophysical survey data. The results of the subsurface investigation are detailed in the November 4, 2022 Geologic Data Report. P&P concludes that performing additional subsurface exploration for evaluation of rock types along the tunnel alignment is not necessary. Groundwater conditions along the alignment, however, warrant additional investigation to evaluate potential groundwater inflow during construction and potential seepage out of the tunnel during future water conveyance operations.

2.3.2 Upstream Portal Alternates

Our team evaluated two primary locations/configurations for the Canyon Tunnel upstream portal. The locations (Alternate 1 and Alternate 2) are illustrated on Sheets 2.0 and 2.1 in the 60 Percent Design Drawings included in Appendix B. Each portal alternative is located within the vicinity of the north abutment of Goodwin Dam; Goodwin Dam is operated by Tri-Dam Project (TDP).

We identified potential significant rock fall hazards along the vertical cliffs immediately above the north abutment of Goodwin Dam, as described in our November 4, 2022 Geologic Hazards Study (Appendix A). P&P recommends that the new upstream portal and associated facilities should be designed to withstand a rock fall event and reduce the potential for associated water delivery disruptions.

Upstream portal Alternate 1 is located within the existing “forebay” immediately upstream of Goodwin Dam where water is diverted into the JSC. As-Built documentation for the existing forebay structure provided by SSJID and data from our preliminary field reconnaissance indicate that the forebay is a concrete-lined, box-shaped structure with interior concrete buttress walls designed to divert water flow to the headgates of the JSC. Water diversion is controlled via multiple gates located at the downstream end of the forebay structure. Goodwin Dam is a spill-over concrete-arch dam structure; a secondary spillway channel within the headworks of the JSC provides a mechanism to lower the reservoir level in Goodwin Reservoir below the crest level. A second set of JSC gates are located immediately downstream of the JSC headworks.

The upstream portal Alternate 1 would be a “submerged” intake – i.e., the tunnel inlet gates would be below the typical elevation of the reservoir level, as illustrated in the conceptual portal section on Sheet 5.02 in the 60 Percent Design Drawings included in Appendix B. The advantages of upstream portal Alternate 1 include:

- Reduced tunnel dimensions and reduced unit price for tunnel excavation and support, owing to the increased invert grade drop along the tunnel alignment (as described in Section 2.2.1)
- The ability to utilize the existing forebay structure as the foundation for a new reinforced concrete cap designed to protect the tunnel from rock fall debris
- Replacement of the existing canal headgates (which are exposed to potential damage from rock fall debris) with new gates (similar operations as existing) located beneath the new reinforced concrete protective structure (Alternate 1A on Sheet 5.0) or at the downstream portal (Alternate 1B on Sheets 5.1 and 5.1.1)
- Permanent access to the north abutment of Goodwin Dam via a new barge system

The disadvantages of Alternate 1A include the potential for additional agency oversight (owing to the work that would occur within Goodwin Reservoir) and increased construction costs relative to Alternate 2A, which are discussed in our updated construction cost estimate detailed in Section 3.0. Alternate 1B would allow better access to the control gates at the downstream portal but would also require upstream stop logs and would include a less-favorable pressurized tunnel as opposed to more-favorable open channel flow. Our current design does not consider permanent facilities beyond what would be required for water diversion into the new tunnel; additional permanent facilities may include other improvements that may be required by regulatory agencies or desired by the Owner. Such issues would be considered during subsequent design phases should SSJID chose to continue pursuing upstream portal Alternates 1A, 1B and some aspects of 2B.

Upstream portal Alternates 2A and 2B are located within the existing JSC approximately 100 feet downstream of the existing JSC headgate structure. Our preliminary design of portal Alternate 2 includes a reinforced shotcrete shoring wall and a concrete-lined canal plug downstream of the new portal to divert water flows into the new tunnel (refer to Sheet 2.1). The advantages of Alternate 2A include lower upstream facilities construction costs and avoidance of some potential access and environmental issues, but the primary disadvantage of Alternate 2A is the exposure to rock fall hazards from the rock cliffs immediately above this portion of the canal. If portal Alternate 2 were selected, P&P recommends that rock fall mitigation measures be considered (some or all of those included in Alternate 2B shown on Sheet 5.3). Mitigation measures may include protective barriers at the toe of the slope above the new portal and existing JSC headworks or new reinforced concrete protection structures. For both Alternates 2A and 2B, we suggest that the existing JSC gates would remain (refer to Sheets 5.2 and 5.3). For Alternate 2A, permanent access to the north abutment of Goodwin Dam would be via the tunnel; for Alternate 2B, permanent access to the north abutment would be via the proposed barge system.

The two upstream portal alternates are presented in our updated construction cost estimate in Section 3.0. It should be noted that the current design for each of the alternates is conceptual in nature.

SSJID opted to pursue the CEQA permitting phase to determine if Alternate 1A would be feasible. The primary concern with this Alternative was the possibility of a fish screen requirement that has since been determined not to be required. P&P therefore recommends Alternate 1A for final design of the upstream portal based on more favorable risk reduction.

2.3.3 Downstream Facilities

Temporary downstream facilities to support construction include a temporary construction laydown yard and excavation spoils and staging areas, as shown on Sheets 0.4 and 3.0.

Permanent downstream facilities will include an access ramp, shotcrete facing of inclined rock cuts below the high-water line, permanent shotcrete shoring of vertical cuts, permanent unsupported cut slopes, a short section of new canal with water flow gauging, concrete paving, fencing and a plug/ramp in the existing canal; refer to Sheet 3.1 for details.

2.3.4 Tunnel Construction Methods

Numerous considerations must be factored into tunnel construction methodology and equipment. Key considerations include tunnel dimensions, tunnel length, tunnel support requirements, location and access to the work area, project schedule requirements, and (perhaps most importantly) ground and groundwater conditions. Based on our evaluation of the site conditions, project components, and our previous tunnel design and construction experience, Our team evaluated two primary tunnel construction methods for the current project: conventional and tunnel boring machine (TBM).

TBM's are typically a viable construction method for tunnels longer than approximately 5,000 feet. Therefore, the use of a TBM is considered a feasible option for the current tunnel project by virtue of tunnel length. TBM's cost much more than conventional mining equipment, but production (i.e. tunnel advance) rates are typically much higher than conventional methods. The difference in production rates typically increases as tunnel section dimensions increase; the dimensions of the proposed Canyon Tunnel are relatively small, so conventional excavation methods are also a viable option for tunnel construction.

Conventional methods encompass numerous techniques and various styles of tunneling equipment. For the purposes of the Canyon Tunnel, we evaluated mechanical mining methods consisting of a roadheader and/or an excavator with a boom-mounted cutting head/impact hammer as viable options for tunnel excavation in weak to moderately strong rock and blasting in strong to very strong rock. A key consideration when evaluating conventional mining options is the removal of tunnel spoils ("muck") during tunnel advance (i.e. "mucking"). Roadheaders are capable of continuous muck removal as tunnel excavation progresses via the use of conveyers that translate the muck behind the machine to be deposited into haul trucks or muck cars (if temporary rail transport is employed). If an excavator is employed for tunnel excavation, the use of a secondary vehicle for muck removal ahead of the excavator is required, which significantly impacts tunnel production rate. Owing to the relatively long length and small dimensions of the Canyon Tunnel, P&P anticipates that a roadheader, supplemented by drilling and blasting as needed, will be the preferred conventional excavation method.

Owing to the extremely limited access to the upstream portal area (regardless of the selected upstream portal alternate), P&P assumes that the tunnel will be excavated in the upstream direction from the downstream portal. The results of the subsurface investigation indicate that the

geologic conditions at the downstream portal and along the downstream portion of the tunnel consist of hard, strong metamorphic basement rock of the Gopher Ridge Formation with a uniaxial compressive strength (UCS) of up to approximately 19,000 pounds per square inch (psi). The hard, strong rock will be encountered for up to approximately 800 linear feet along the downstream-most portion of the tunnel. Based on the strength of the rock and the length of tunnel along which it will likely be encountered, P&P assumes that the downstream portion of the tunnel will likely be constructed using drill-and-blast methods. This portion of the tunnel may be excavated prior to mobilization of the primary tunneling equipment.

As discussed in Section 2.2.2, the ground conditions along the remaining approximately 10,500+ linear feet of the tunnel alignment mostly consist of the sedimentary and volcanic rocks of the Mehrten Formation (except for localized mixed-face conditions and near the upstream portal). Based on our team's previous tunnel construction experience on nearby tunnel projects (including the Webb Tunnel) and the subsurface data gathered from the Canyon Tunnel site, we anticipate that the strength, hardness, and cohesion of the various Mehrten lithologies will be highly variable. The Mehrten Formation consists of interbedded sandstones, conglomerates and pyroclastic rock.

The distance that the tunnel can be advanced without permanent support will be a function of the length of time that the ground can remain unsupported, commonly referred to as "stand-up time". We estimate that the entire tunnel may be excavated and supported with an initial shotcrete layer prior to final support installation. We also estimate that several reaches of very weak, slowly raveling ground will be encountered throughout the tunnel that will require immediate support. Our preliminary design of the permanent tunnel support consists of a 4-inch-thick, fiber-reinforced shotcrete liner across the arch and a 6-inch-thick concrete invert slab. Installation of these permanent tunnel support elements is feasible for both conventional and TBM options.

Several key considerations must be factored into TBM design and feasibility for the current tunnel. The TBM cutter head design must be capable of advancing through rock types of vastly different characteristics. For example, substantial zones of very weak, soft rock are likely to be encountered along various reaches within the Mehrten Formation. The very weak rock, as well as the relatively weak sandstone is considered not sufficiently strong to reliably provide enough bearing and friction for the gripper pads to efficiently thrust the TBM and advance the tunnel. Therefore, the use of partial, pre-cast concrete segment liners, which serve as surfaces to provide adequate TBM thrust but often come at substantial cost, will likely be required. SSJID has requested that the finished tunnel contain a flat concrete invert to allow passage of maintenance trucks and equipment. Pre-cast, invert-only segments are available that would serve both purposes.

Roadheaders and TBM's are run by electric motors. Owing to the remote nature of the site, P&P estimates that on-site diesel generators with appropriate power output and support infrastructure will be utilized. Alternatively, a contractor may opt to drop power from the existing power transmission lines located approximately ½-mile west of the downstream portal. For the purposes of the current design, P&P anticipates that any new power transmission lines installed near the downstream portal would be temporary (for construction only) and not remain for future use, unless desired by the landowners or SSJID.

Based on discussions with our specialty tunneling consultants, P&P estimates that the use of a TBM on the Canyon Tunnel would expose SSJID to unnecessary contractual risk. Owing to the anticipated ground conditions, the potential risk posed using a TBM on the Canyon Tunnel

outweighs the potential benefits (faster production rate, relatively low labor costs). The difficulties associated with variable ground conditions – including mixed-face conditions, zones with large, hard boulders supported by relatively weak sand – increases the risk of a TBM being unable to advance or require significant reinforcement to provide forward thrust. Such situations may be cause for a potentially costly differing site conditions claim by the contractor.

A TBM was utilized for construction of the nearby Stockton East Water District (SEWD) Goodwin Tunnel, which was constructed in the late 1980's. The ground conditions along the tunnel alignment largely consisted of hard rock of the Gopher Ridge Formation in which the TBM performed well. However, an “underground river” was encountered along the tunnel alignment near Goodwin Dam that precluded TBM advance, as described in the construction documentation for Goodwin Tunnel that was obtained by our team. The ground conditions in this area likely consisted of interbedded relatively weak sandstone and conglomerate, which P&P anticipates will be encountered along the Canyon Tunnel alignment. We understand the situation at the Goodwin Tunnel resulted in a significant claim by the contractor that ultimately dramatically increased the cost of the tunnel.

TBM technology has improved since the construction of the Goodwin Tunnel. It is likely that a modern TBM could handle the varying ground conditions that are anticipated along the Canyon Tunnel; however, as noted above, the use of a TBM increases the risk to owner and P&P recommends that the use of a TBM not be considered for the current tunnel project. Our updated construction cost estimate indicates that bid prices for conventional tunneling will be less than bids that assume the use of a TBM (refer to the various assumptions described in Section 3.2). Additionally, we estimate that a roadheader is better suited for the varying and mixed-faced ground conditions that are likely to be encountered along the tunnel alignment and SSJID would be exposed to significantly less risk of contractor claims during construction.

3.0 PRELIMINARY CONSTRUCTION COST ESTIMATE

3.1 APPROACH

The Preliminary Engineer's Opinion of Probable Construction Cost Estimate (CCE) presented herein is mostly based on an estimated labor and materials approach for the tunnel and portal excavation and support elements, rather than a typical unit price approach (e.g. cost per linear foot). A unit price approach was used for estimating access barge and inlet/outlet control structure elements. Our detailed estimate is included in Appendix D and includes labor and materials costs, contractor overhead and profit. Engineering design, land entitlement (including Right-of-Way acquisition), contractor bidding support, and construction management and inspection services are not included in the current CCE estimate but are provided in Section 4 of this report.

For the tunneling estimates, labor rates, equipment rates and materials costs are based on the work and experience of our cost estimator, a retired heavy construction/tunnel contractor vice president. The presented CCE includes and is based on the following:

- The 2021 union/prevaling wage labor rates as published by the State of California for Calaveras County for Laborers and Operating Engineers, including worker's compensation and payroll taxes
- Tunneling equipment and materials procurement/rental rates are based on quotations from various suppliers

- Equipment operating rates compared to contractors’ rates, based on the experience of the estimator
- Concrete/shotcrete material prices are based on quotations from local suppliers
- A cost escalation schedule of approximately 7 percent per annum is included as a separate line item in the CCE; our estimator based the potential construction schedule and cost escalation on a Notice-to-Proceed date in early 2025
- A budget contingency is also included as a separate line item in the CCE to cover various current uncertainties related to design and construction
- Additional assumptions are described in Appendix D.

3.2 CONSTRUCTION COST SUMMARY

The backup documentation, compiled by our cost estimators, is included in Appendix D. A summary of the CCE for the use of a roadheader (Table 2) and TBM (Table 3) is as follows:

TABLE 2
Engineer's Estimate of Probable Construction Costs
Roadheader

Activity	RH Alt 1A	RH Alt 1B	RH Alt 2A	RH Alt 2B
Mob/demob	\$501,344	\$501,344	\$501,344	\$501,344
Portals/Turn-under	\$1,730,640	\$1,730,640	\$1,730,640	\$1,730,640
Excavate Tunnel	\$10,132,275	\$10,132,275	\$11,128,189	\$11,128,189
Muck haul off site	\$2,711,593	\$2,711,593	\$3,126,679	\$3,126,679
Shotcrete Tunnel Lining	\$2,614,034	\$2,614,034	\$2,899,340	\$2,899,340
Invert (cast in place)	\$1,755,207	\$1,755,207	\$1,891,318	\$1,891,318
Connection Channels/Diversion Walls	\$202,889	\$202,889	\$383,028	\$383,028
Barge Access	\$630,000	\$630,000	\$ -	\$630,000
Overhead/Equipment Rental	\$10,512,066	\$10,512,066	\$10,919,399	\$10,919,399
Landowner Items (Well, Waterline, Fence)	\$300,000	\$300,000	\$300,000	\$300,000
15% Profit	\$4,663,507	\$4,663,507	\$4,931,990	\$5,026,490
Inlet/Outlet Control Structures	\$3,755,000	\$5,004,000	\$215,000	\$5,976,000
Subtotal	\$39,508,555	\$40,757,555	\$38,026,927	\$44,512,427
Cost Escalation – 7% per annum (4 years)	\$11,062,395	\$11,412,115	\$10,647,540	\$12,463,480
Contingency – 10%	\$3,950,855	\$4,075,755	\$3,802,693	\$4,451,243
Total	\$54,521,805	\$56,245,425	\$52,477,159	\$61,427,149

TABLE 3
Engineer's Estimate of Probable Construction Costs
Tunnel Boring Machine

Activity	TBM Alt 1A	TBM Alt 1B	TBM Alt 2A	TBM Alt 2B
Mob/demob	\$501,344	\$501,344	\$501,344	\$501,344
Portals/Turn-under	\$1,730,640	\$1,730,640	\$1,730,640	\$1,730,640
Excavate Tunnel	\$8,395,762	\$8,395,762	\$7,200,514	\$7,200,514
Muck haul off site	\$4,029,606	\$4,029,606	\$3,972,825	\$3,972,825
Shotcrete Tunnel Lining	\$3,532,577	\$3,532,577	\$3,512,203	\$3,512,203
Invert (pre-cast segments)	\$4,567,333	\$4,567,333	\$4,497,550	\$4,497,550
Connection Channels/Diversion Walls	\$202,889	\$202,889	\$202,889	\$202,889
Barge Access	\$630,000	\$630,000	\$ -	\$630,000
Overhead/Equipment Rental	\$18,767,054	\$18,767,054	\$18,501,354	\$18,501,354
Landowner Items (Well, Waterline, Fence)	\$300,000	\$300,000	\$300,000	\$300,000
15% Profit	\$6,398,581	\$6,398,581	\$6,062,898	\$6,157,398
Inlet/Outlet Control Structures	\$3,755,000	\$5,004,000	\$215,000	\$5,796,000
Subtotal	\$52,810,786	\$54,059,786	\$46,697,216	\$53,002,716
Cost Escalation – 7% per annum (4 years)	\$14,787,020	\$15,136,740	\$13,075,220	\$14,840,760
Contingency – 15%	\$7,921,618	\$8,108,968	\$7,004,582	\$7,950,407
Total	\$75,519,424	\$77,305,494	\$66,777,019	\$75,793,884

The cost summaries detailed above are considered conservative with respect to equipment costs. The cost summaries include rental costs for a roadheader and TBM, respectively. Contractors that own the proper equipment may provide lower bid prices for these line items.

Cost escalation is included in the estimates. Based on the California Construction Cost Index (CCCI) data, the cost escalation between May 2017 and October 2022 is 35 percent, or approximately 7 percent annually.

4.0 PROJECT SCHEDULE AND SOFT COSTS

As mentioned in Section 3, P&P estimates that the project construction Notice-to-Proceed could be issued in 2025. Our estimated duration of construction included in Appendix D is approximately 36 months using Alternate 1A and the conventional tunneling method.

To substantiate the estimated 2025 construction start date, we have evaluated the potential schedule for the remaining work to be completed prior to tunnel construction. Our evaluation is based on our work on previous projects, including the nearby Webb Tunnel Project. Note that the schedule is considered reasonably optimistic and assumes no significant delays, especially as could be related to land entitlement. We understand that land entitlement and other related work should proceed relatively soon; these items are not included in P&P's work scope.

Discussion and potential schedule of each of the remaining engineering, permitting and land entitlement work items is included in the following subsections. An itemized summary of the estimated schedule and approximate soft costs of the remaining work is included in Section 4.5.

4.1 ENGINEERING, DESIGN AND PRE-CONSTRUCTION

The remaining phases of engineering and design, and the estimated schedule of completion of each phase is as follows:

- 60 Percent Engineering and Design – completion: November 2022
- 90 Percent Design and Contract Documents – estimated completion: October 2023
- 100 Percent Design and Contract Documents – estimated completion: June 2024
- Pre-Construction and Contractor Bidding Support – estimated bid date: Fall 2024

P&P will provide a Proposal and Fee Estimate for the 90 Percent Engineering and Design phase under separate cover.

Contract Documents, including the Geologic Data Report and the Geotechnical Baseline Report, will be updated and finalized during the 90 and 100 Percent Design phases. P&P will also provide updated Contract Drawings and Technical Specifications during these phases. Upon completing the 100 Percent Design phase, P&P will provide SSJID with Contract Drawings, Documents and Technical Specifications that will be used to solicit bids from qualified tunneling contractors. Based on past experience, we anticipate that the bidding process will require approximately 6 months to complete, including time for anticipated contractor prequalification, bid walks at the site, review of contractor questions, and bid evaluation/award.

4.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT PERMITTING AND MONITORING

Background studies, including biological and cultural resources site evaluations in relation to California Environmental Quality Act (CEQA) permitting and approval, have begun and are nearly complete. We understand most of the environmental monitoring and mitigation work will be required at the downstream portal and laydown areas. There will also be monitoring required at the upstream inlet for the Alternate 1 owing to the proximity of the Stanislaus River and required mitigations for permitting.

Implementation of mitigation measures will likely need to begin prior to contractor mobilization. The mitigation measures will also need to be monitored and preserved during tunnel construction. The estimated costs associated with additional CEQA permitting and monitoring are included in our 90% Proposal.

4.3 LAND ENTITLEMENT

The location and dimensions of the tunnel alignment and portal areas are included in the 60 Percent Design. The 60 Percent Design Drawings illustrate the locations of the permanent SSJID facilities that will require Right-of-Way (ROW) for land entitlement purposes. We understand that the proposed tunnel alignment is located on two privately owned parcels. We understand SSJID will negotiate the cost per acre of the land entitlement with each landowner prior to tunnel construction.

We assume the ROW will encompass a 100-foot-wide (verify) area along the entire tunnel alignment centered on the centerline of the tunnel. The costs associated with land entitlement are unknown at this time. Also the cost of the temporary easements for the construction laydown and staging areas are unknown at this time.

4.4 CONSTRUCTION MANAGEMENT AND INSPECTION

As described in Section 3.1, the current CCE assumes a Notice-to-Proceed date of 2025 for tunnel construction, which we currently believe to be a reasonably optimistic date based on the remaining work described herein. The costs associated with Construction Management and Inspection Services are largely dependent on the overall construction duration, which is currently estimated at approximately 36 months. Based on our experience during similar projects, we herein estimate that the costs associated with Construction Management and Inspection services is approximately 10 percent of the construction cost.

4.5 TOTAL PROJECT SOFT COSTS AND SCHEDULE

A summary of the projected schedule of project costs described above is as follows in Table 4:

**TABLE 4
 Engineer's Estimate Project Soft Costs and Schedule – Update**

Projected Completion Date	Description	Estimated Cost
January – October 2023	90 Percent Design (incl 10% contingency)	\$902,000
	CEQA and Permitting	\$65,000
	Land Entitlement	TBD
December 2023 – June 2024	100 Percent Design	\$90,000
	CEQA and Permitting	\$10,000
	Land Entitlement Completion	TBD
July – December 2024	Bidding Support	\$72,000
Spring 2028	Construction Management and Inspection	\$5,170,000
	CEQA Monitoring and Compliance	\$471,000
	Temporary Construction Easement	TBD
	Total	\$6,780,000

5.0 LIMITATIONS

The data, results of engineering evaluation, and referenced documents are for project planning and budgeting purposes for SSJID’s proposed Canyon Tunnel project. The preliminary design is based on our understanding of SSJID needs, site observations and exploration data. Our report does not reflect potential variations in client needs or subsurface conditions.

P&P should review any substantial future deviation from the assumptions or project description contained in this report and should provide additional recommendations, as needed.

SSJID should understand that P&P cannot control other consultants involved in the project or the specific decisions of government agencies. In addition, P&P does not have a contractor’s experience with factors such as: the means, methods, sequences, and operations of construction and related safety programs; the full cost and extent of labor, equipment, and materials; contractors’ techniques for determining prices and market conditions; and other factors that contractors consider and over which P&P has no control. Given the various assumptions P&P

has made to develop an opinion of probable construction costs, P&P's CCE will deviate from bids furnished by contractors. It should be noted that our CCE should not be regarded as a guaranteed maximum, and that uncertain annual price escalation will likely occur.

This report was prepared in accordance with the generally accepted standards of engineering geologic and civil/geotechnical engineering practice that exist in Calaveras County at the time the report was written. No other warranty, express or implied, is made.

It should be noted that changes in the standards of practice in the fields of engineering geology and civil/geotechnical engineering, changes in site conditions, new agency regulations, or modifications to the proposed project are grounds for this report and companion documents to be professionally reviewed. In light of this, there is a practical limit to the use of this report without critical professional review. It is suggested that 3 years be considered a reasonable time for the use of this report without critical review.

6.0 CLOSURE

Please contact us if you have any questions.

Prepared by,
Provost & Pritchard Consulting Group

Andrew S. Kositsky, GE No. 2532
Principal Engineer

Scott W. Lewis, CEG No. 1835
Principal Tunneling Consultant

BOARD AGENDA REPORT

Date: 11/17/2022
Staff: Brandon Nakagawa

SUBJECT: 1988 Agreement Conservation Accounting

RECOMMENDED ACTION: Discussion Item Only—No action to be taken.

BACKGROUND AND/OR HISTORY:

This item will be presented at the meeting.

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)

BOARD AGENDA REPORT

Date: November 17, 2022

Staff: Jeff Shields

SUBJECT: POWER PURCHASE AGREEMENT

RECOMMENDED ACTION: Discussion Item Only—No action to be taken.

BACKGROUND AND/OR HISTORY:

The Power Purchase Agreement process is ongoing, and moving forward as envisioned. Negotiations continue with the evaluation of options an integral part of this process.

A conference call is scheduled for November 8, 2022, regarding the current status and options for presentation, review and action by the Board of Directors in December. A complete update will be provided at the meeting of November 17, 2022.

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)

BOARD AGENDA REPORT

Date: 11/17/2022
Staff: Jeff Shields
Sharon Cisneros

SUBJECT: 2023 Draft Budget

RECOMMENDED ACTION: Discussion Item Only—No action to be taken.

BACKGROUND AND/OR HISTORY:

This item will be presented at the meeting.

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)

GENERAL MANAGER'S REPORT
TRI-DAM PROJECT
of the
Oakdale & South San Joaquin Irrigation Districts
Board of Directors Meeting
November 17, 2022

Project Activities

- This is a difficult week at Tri-Dam as it is shortened by two days. The office will be closed under the regular schedule on Friday and so the actual Veterans Day holiday will be Thursday. This is the week of the month we need to get the Board packets organized and distributed. And then, to complicate things more, it started snowing early Monday morning and by 2PM there was 6-8" accumulated in the yard. It is supposed to snow throughout the night and potentially into Wednesday. Of course, we need the snow so we will just have to get the Board packets out one way or another.

- I have four personnel matters for closed session which also complicated the Board packet process. Additionally, OID has completed the solicitation packet for the Finance Manager position and that is now posted on social media sites as well as the District's and Tri-Dam web sites. We are advancing the PPA negotiations with the successful bidder in a conference call tomorrow (Tuesday) afternoon I will have a report on the status of the winning bid and terms available at the Board meeting.

OPERATIONS AND MAINTENANCE MANAGER BOARD REPORT

Chris Tuggle
Nov 17, 2022

OPERATIONS:

Reservoir Data (A/F):

FACILITY	STORAGE	MONTH CHANGE
Donnells	42,459	(643)
Beardsley	70,501	(633)
Tulloch	56,246	(4,383)
New Melones	583,669	(35,381)

Outages:

Plant	Dates	Duration	Cause
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Operations Report:

New Melones Inflows:

Total inflows for water year 22/23 as of October 31: 18,516 A/F.

District Usage:

Total District usage for the water year 22/23 as of October 31: 23,620 A/F.

Precipitation:

Total precipitation for the month of October was .02 inches.

Other Activities:

- Completed irrigation season
- FERC Part 12D PFMA review with McMillan Jacobs
- Lead Operator attended WECC conference
- Generator clearances for both Beardsley and Sandbar Powerhouses
- Conducted inspection and daily checks at all facilities

MAINTENANCE:

Donnell:

1. Equipment in service.

Beardsley:

1. Annual Maintenance

Sandbar:

1. Annual Maintenance

Tulloch:

1. Equipment in service.

Misc.:

- Beardsley Annual Maintenance
 - Switchyard Maintenance
 - PRV Repair
 - Diffuser repaired
 - Valve transported to contractors' facility for repairs
 - Governor Upgrade
 - Plumbing and spool work complete
 - HMI Installed
 - Rewire in progress
 - Wicket gate lock repaired
 - Miscellaneous maintenance (filter, electrical inspections, trip test, etc.)
- Sandbar Annual Maintenance
 - Switchyard Maintenance
 - Cooling water lines
 - Miscellaneous maintenance (filter, electrical inspections, trip test, etc.)
 - Clear the access roads for the 115kV pole repairs
- Winterized the Donnell's Cottage

BEARDSLEY PRECIPITATION

YEAR	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1958-59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.40	1.39	1.40	1.04	0.00	11.23
1959-60	0.00	0.03	3.09	0.00	0.00	1.92	5.74	8.38	4.68	2.45	0.35	0.00	26.64
1960-61	0.05	0.00	0.44	0.63	5.33	2.43	1.60	3.04	4.96	1.49	1.84	0.29	22.10
1961-62	0.21	1.12	0.77	0.70	3.39	2.98	2.04	15.32	6.13	1.12	1.04	0.02	34.84
1962-63	0.30	0.16	0.35	2.98	1.05	2.66	5.91	8.37	6.08	8.24	3.70	0.74	40.54
1963-64	0.00	0.44	0.59	2.63	7.81	0.81	5.84	0.21	3.02	2.01	2.44	1.64	27.44
1964-65	0.00	0.00	0.34	2.08	7.40	17.93	5.90	1.34	2.44	5.27	0.32	0.29	43.31
1965-66	0.00	1.47	0.60	0.47	12.38	4.59	1.68	2.33	1.00	2.39	0.43	0.10	27.44
1966-67	0.13	0.00	0.28	0.00	7.55	8.48	8.77	0.67	10.02	10.25	2.04	1.05	49.24
1967-68	0.00	0.39	0.90	0.54	2.47	3.35	4.94	4.81	3.48	0.73	1.44	0.02	23.07
1968-69	0.10	0.65	0.00	2.12	6.22	8.28	19.45	8.35	1.88	3.39	0.21	0.39	51.04
1969-70	0.00	0.00	0.55	3.41	2.98	6.46	17.06	3.11	3.43	2.50	0.00	3.17	42.67
1970-71	0.00	0.00	0.00	0.91	10.71	8.44	2.83	1.16	4.87	1.49	1.80	0.77	32.98
1971-72	0.00	0.02	0.29	1.22	6.22	10.31	2.39	2.78	1.01	4.03	0.10	1.62	29.99
1972-73	0.00	0.58	0.17	1.85	6.27	5.57	12.08	12.06	5.31	1.11	0.72	0.74	46.46
1973-74	0.05	0.18	0.07	3.65	9.88	9.10	5.08	1.84	8.18	5.15	0.02	0.07	43.27
1974-75	2.57	0.10	0.00	2.82	2.38	4.95	4.25	10.16	9.90	5.41	0.84	0.63	44.01
1975-76	0.03	2.02	0.15	6.75	2.04	0.74	0.49	3.03	2.66	2.42	0.91	0.05	21.29
1976-77	0.10	2.43	1.00	0.93	1.54	0.24	2.50	2.68	2.06	0.25	4.65	0.38	18.76 RECORD LOW
1977-78	0.00	0.00	0.58	0.24	4.76	9.72	10.85	8.31	8.67	7.97	0.19	0.23	51.52
1978-79	0.08	0.00	3.98	0.07	3.17	4.43	8.45	7.60	6.05	1.86	2.88	0.02	38.59
1979-80	0.17	0.03	0.00	4.66	4.63	5.22	14.62	13.03	3.61	3.09	4.33	0.77	54.16
1980-81	0.43	0.02	0.03	0.71	0.58	3.04	8.05	2.69	6.26	1.67	1.42	0.00	24.90
1981-82	0.06	0.00	0.15	5.27	8.76	8.39	6.08	8.08	11.23	8.19	0.12	1.34	57.67
1982-83	0.03	0.02	4.02	8.78	11.30	7.32	10.83	14.34	12.86	6.29	0.74	0.12	76.65 RECORD HIGH
1983-84	0.01	0.09	3.86	1.35	16.44	12.75	0.27	5.51	3.56	2.70	0.84	1.31	48.69
1984-85	0.00	0.05	0.73	3.97	10.28	2.58	1.52	3.13	5.84	0.86	0.07	0.28	29.31
1985-86	0.30	0.12	2.64	3.09	7.71	4.52	4.70	21.98	8.43	2.37	1.58	0.00	57.44
1986-87	0.02	0.00	2.18	0.00	0.49	0.73	3.42	5.89	5.21	0.79	1.63	0.15	20.51
1987-88	0.00	0.00	0.00	2.19	2.22	5.79	5.42	0.88	0.73	3.15	1.66	0.79	22.83
1988-89	0.00	0.00	0.05	0.07	6.96	4.29	1.45	2.73	10.08	1.41	0.74	0.02	27.80
1989-90	0.00	0.33	3.28	4.30	3.02	0.00	4.75	3.40	2.75	1.66	3.46	0.21	27.16
1990-91	0.00	0.11	0.59	0.41	1.62	1.30	0.40	1.79	16.08	1.74	2.54	1.54	28.12
1991-92	0.17	0.10	0.32	5.54	2.32	3.10	1.97	7.68	4.58	0.45	0.45	1.66	28.34
1992-93	3.26	0.35	0.00	3.05	0.44	9.61	12.19	8.74	6.29	2.07	1.24	2.43	49.67
1993-94	0.00	0.00	0.00	1.25	2.11	1.97	2.93	7.08	0.86	3.71	2.22	0.00	22.13
1994-95	0.00	0.00	0.77	2.82	7.92	3.68	18.32	1.14	18.76	6.98	6.72	1.02	68.13
1995-96	0.05	0.00	0.00	0.00	0.35	9.13	10.32	11.17	6.81	3.94	5.51	1.24	48.52
1996-97	0.05	0.01	0.23	2.55	7.14	16.19	18.16	0.80	0.53	0.82	0.51	1.24	48.23
1997-98	0.17	0.00	0.33	1.39	4.99	3.70	12.86	16.30	6.69	4.94	6.46	1.35	59.18
1998-99	0.00	0.00	2.84	0.49	5.12	3.13	8.93	9.71	2.63	3.03	1.28	1.03	38.19
1999-00	0.00	0.13	0.18	1.05	3.51	0.51	11.68	14.13	2.58	3.70	2.72	1.06	41.25
2000-01	0.00	0.07	0.96	3.17	1.01	1.59	4.69	4.70	3.08	5.39	0.00	0.07	24.73
2001-02	0.02	0.00	0.60	1.17	6.97	9.75	2.56	2.13	6.88	2.29	2.02	0.00	34.39
2002-03	0.00	0.00	0.09	0.00	7.42	11.17	1.12	3.50	3.81	9.36	2.69	0.00	39.16
2003-04	0.09	1.32	0.06	0.00	2.88	9.97	2.79	8.52	1.07	0.17	0.55	0.02	27.44
2004-05	0.02	0.00	0.19	7.66	2.93	6.67	10.52	6.95	9.35	3.35	5.76	0.80	54.20
2005-06	0.00	0.11	0.71	1.70	3.34	17.72	7.75	5.26	10.14	10.55	1.97	0.10	59.35
2006-07	0.08	0.00	0.01	1.53	3.56	5.25	2.08	8.70	1.30	2.61	1.33	0.10	26.55
2007-08	0.01	0.17	0.34	1.02	0.95	5.01	10.15	6.69	0.87	0.26	2.85	0.00	28.32
2008-09	0.00	0.00	0.00	1.65	6.17	5.08	5.88	6.98	6.78	1.97	3.37	0.79	38.67
2009-10	0.00	0.10	0.00	4.37	1.31	5.89	7.97	5.86	4.92	6.66	3.65	0.06	40.79
2010-11	0.00	0.00	0.00	8.67	7.15	14.21	2.15	5.76	15.22	1.94	2.94	3.21	61.25
2011-12	0.00	0.00	1.56	3.13	1.77	0.00	6.25	1.62	5.96	4.76	0.37	0.92	26.34
2012-13	0.00	0.00	0.00	1.27	5.78	12.56	0.64	0.93	3.26	1.11	1.48	0.80	27.83
2013-14	0.00	0.00	0.72	0.56	1.80	1.22	1.59	9.23	6.17	3.43	0.98	0.05	25.75
2014-15	0.52	0.03	1.03	0.15	3.72	7.25	0.13	4.49	0.43	3.08	2.75	0.80	24.38
2015-16	0.39	0.00	0.11	2.26	5.36	9.74	9.53	1.74	9.19	3.13	1.82	0.34	43.61
2016-17	0.00	0.00	0.00	7.26	3.19	8.30	22.25	20.47	5.49	8.06	0.59	0.46	76.07
2017-18	0.00	0.09	1.44	0.50	7.34	0.42	5.20	0.76	14.50	3.70	1.02	0.00	34.97
2018-19	0.00	0.00	0.00	1.92	8.21	3.07	9.84	15.37	8.97	2.07	7.43	0.46	57.34
2019-20	0.00	0.00	0.63	0.00	1.39	10.58	2.09	0.08	7.50	3.87	3.09	0.33	29.56
2020-21	0.00	0.23	0.10	0.00	2.38	3.40	7.28	2.44	2.83	1.31	0.18	0.00	20.15
2021-22	0.09	0.00	0.18	7.51	0.95	13.37	0.04	0.36	0.96	4.14	0.39	0.31	28.30
2022-23	0.00	0.29	2.27	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.58 Current Year
Average	0.15	0.21	0.74	2.23	4.64	5.98	6.39	6.07	5.64	3.38	1.87	0.62	37.90
2021-22 +/-	(0.15)	0.08	1.53	(2.21)	(4.64)	(5.98)	(6.39)	(6.07)	(5.64)	(3.38)	(1.87)	(0.62)	(35.32)

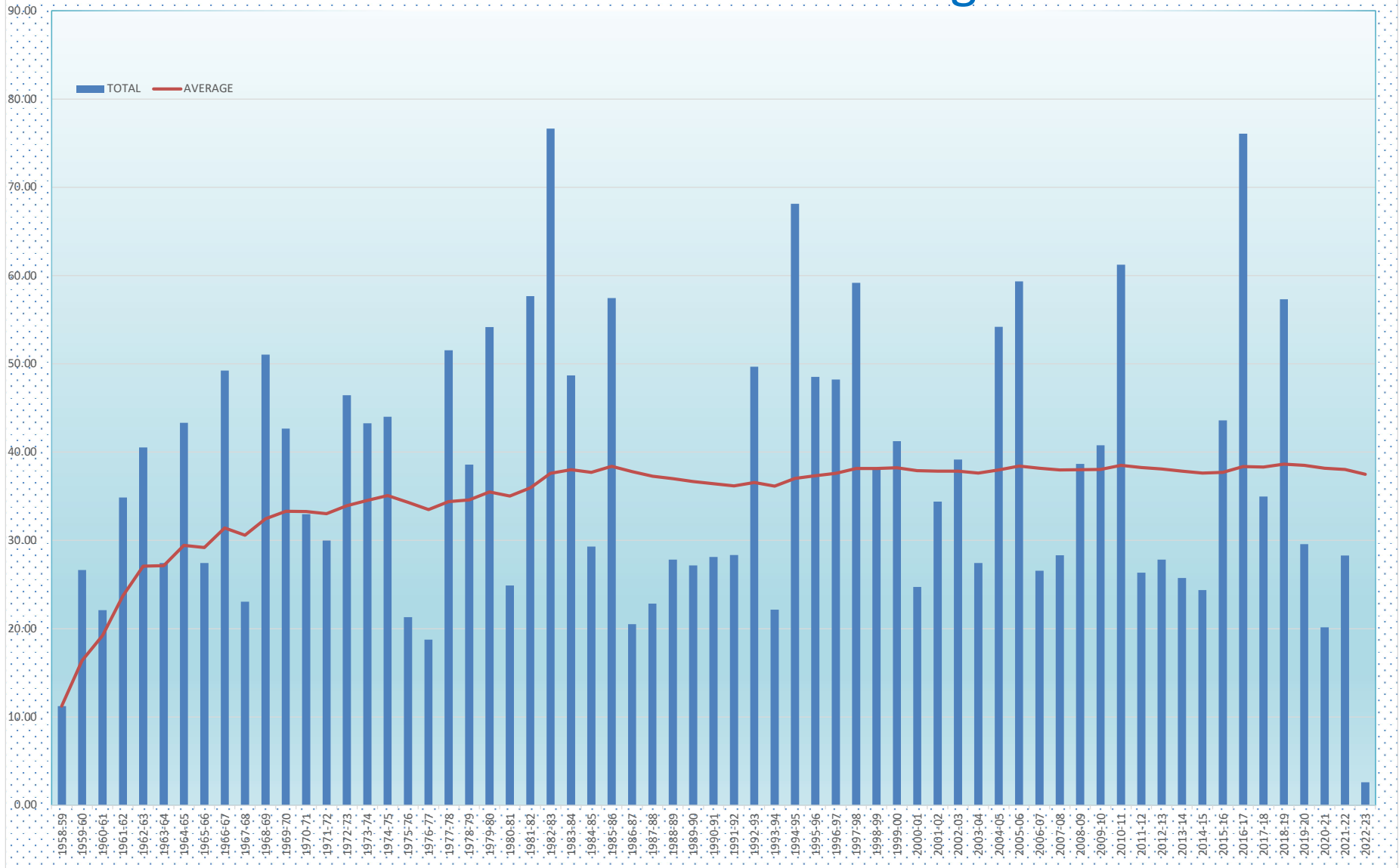
ANNUAL AVERAGE **37.90**

INCHES +/- ANNUAL AVERAGE **(35.32)**

PERCENT OF ANNUAL AVERAGE **7%**

Updated as of 2-Nov-22

Historical Rain VS Average



REGULATORY AFFAIRS BOARD REPORT

Susan Larson

November 17, 2022

FERC Compliance

- Hells Half Acre and Tulloch Spillway Road. Following the Board's approval of the P&P Engineering PSA, the initial kick off meeting was conducted on October 26, 2022 for both projects. The entire P&P engineering and design team walked both projects, and is now gathering the data to assist with both projects.
- Beardsley MOA for the Data Recovery Project. Work on this project is now complete, and all data and artifacts recovered over the past several years have been delivered to the USFS. Monitoring is also nearing completion.
- Coordination of license requirements for all licenses for inspection provisions within the D2SI (San Francisco Regional Office), and DHAC (Washington DC), to ensure proper coordination of pending requirements for gate inspections, shoreline erosion and other dam safety follow up, including Part 12 D follow up.
- FERC conference calls on dam safety matters, and multiple filings relative to Part 12 D matters, along with spillway and seismic safety issues of question by FERC. All current tasks are progressing well, timely, and will hopefully resort in resolution of questions that have been ongoing for the past several years. HDR has performed several studies on Tri-Dam's behalf, which are proving to be quite useful in bringing forth resolution of these outstanding items.

Permit and Other Assignments

- Work on permits, site reviews and compliance questions for various properties at Tulloch.
- Respond to daily inquiries from the public, and coordination with Calaveras and Tuolumne Marine Safety Units. Permits, inspections and file documentation.
- Tulloch compliance matters, as required.
- Working on pending litigation matters, as required.
- Working to wrap up the last set of open escrows at Tulloch, for project initiated many years ago.



Tri-Dam Project Generation & Revenue Report 2022

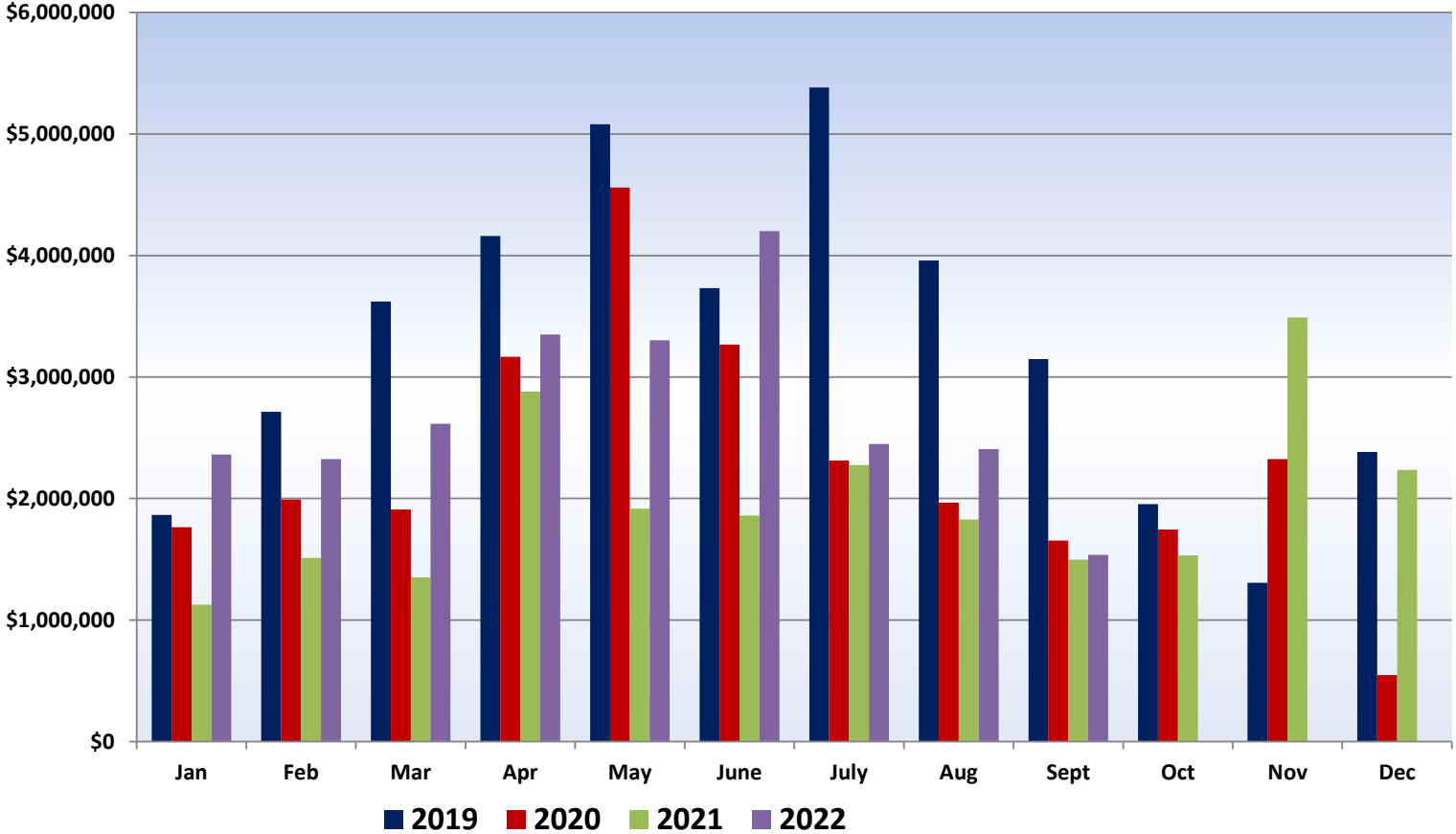
	Donnells				Beardsley				Tulloch				Project Total			
	Average Generation (1958-2018)	2022 Net Generation (kWh)	Avoided Generation (kWh)	2022 Energy Revenue	Average Generation (1958-2018)	2022 Net Generation (kWh)	2022 Energy Revenue	Average Generation (1958-2018)	2022 Net Generation (kWh)	2022 Energy Revenue	Average Generation (1958-2018)	2022 Net Generation (kWh)	2022 Energy Revenue	Average Generation (1958-2018)	2022 Net Generation (kWh)	2022 Energy Revenue
JAN	17,389,989	22,065,962	-	\$1,765,277	3,150,048	6,346,979	\$507,758	4,271,885	1,105,497	\$88,440	24,811,922	29,518,438	\$2,361,475	24,811,922	29,518,438	\$2,361,475
FEB	17,229,608	20,356,500	-	\$1,628,520	2,927,753	4,160,159	\$332,813	5,024,913	4,542,830	\$363,426	25,182,274	29,059,489	\$2,324,759	25,182,274	29,059,489	\$2,324,759
MAR	23,070,659	21,199,698	-	\$1,695,976	3,584,274	712,429	\$56,994	7,580,691	10,794,631	\$863,570	34,235,623	32,706,757	\$2,616,541	34,235,623	32,706,757	\$2,616,541
APR	31,686,865	25,641,336	-	\$2,051,307	4,717,464	6,239,458	\$499,157	10,811,027	9,993,391	\$799,471	47,215,356	41,874,184	\$3,349,935	47,215,356	41,874,184	\$3,349,935
MAY	41,216,149	23,096,110	-	\$1,847,689	5,799,593	3,884,238	\$310,739	12,131,040	14,298,993	\$1,143,919	59,146,782	41,279,340	\$3,302,347	59,146,782	41,279,340	\$3,302,347
JUN	42,555,036	30,939,288	-	\$2,475,143	6,336,073	6,160,441	\$492,835	12,084,818	15,417,779	\$1,233,422	60,975,928	52,517,508	\$4,201,401	60,975,928	52,517,508	\$4,201,401
JUL	36,444,466	12,729,928	-	\$1,018,394	6,629,514	4,981,005	\$398,480	12,609,174	12,915,743	\$1,033,259	55,683,154	30,626,677	\$2,450,134	55,683,154	30,626,677	\$2,450,134
AUG	27,568,740	17,237,748	-	\$1,379,020	6,269,748	1,317,251	\$105,380	11,868,293	11,530,563	\$922,445	45,706,781	30,085,561	\$2,406,845	45,706,781	30,085,561	\$2,406,845
SEP	20,111,167	6,477,711	-	\$518,217	5,223,523	4,704,246	\$376,340	8,577,620	8,026,323	\$642,106	33,912,310	19,208,280	\$1,536,662	33,912,310	19,208,280	\$1,536,662
OCT	12,743,535	2,323,885	-	\$185,911	3,752,220	496,473	\$39,718	4,664,124	6,814,313	\$545,145	21,159,879	9,634,670	\$770,774	21,159,879	9,634,670	\$770,774
NOV	12,042,987	-	-	\$0	2,794,775	-	\$0	2,487,256	-	\$0	17,325,019	-	\$0	17,325,019	-	\$0
DEC	14,354,891	-	-	\$0	3,713,920	-	\$0	3,288,702	-	\$0	21,357,513	-	\$0	21,357,513	-	\$0
Total	296,414,092	182,068,166	-	\$14,565,453	54,898,907	39,002,677	\$3,120,214	95,399,542	95,440,063	\$7,635,205	446,712,540	316,510,906	\$25,320,872	446,712,540	316,510,906	\$25,320,872

Note: Price per MWh is \$80.00

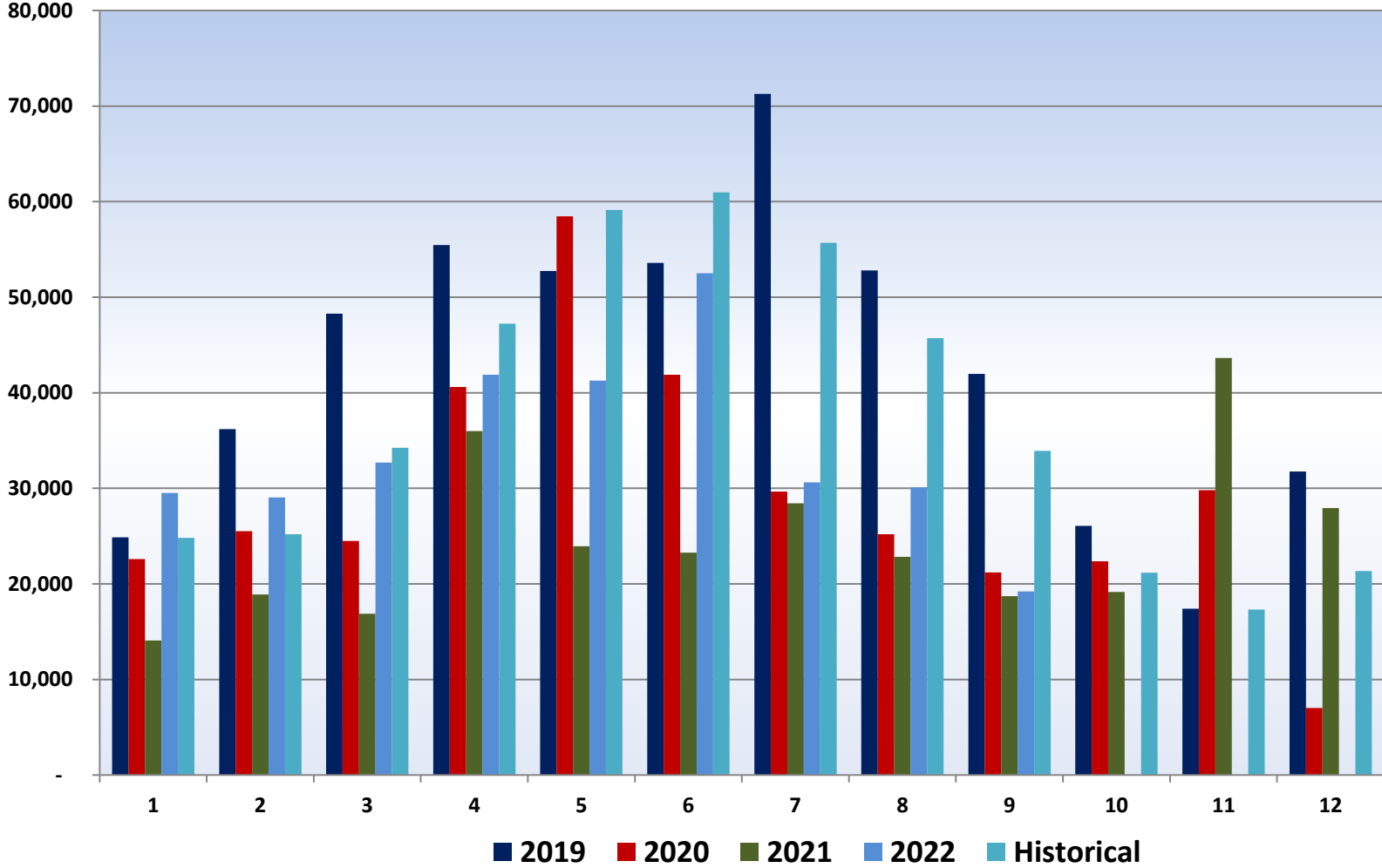
Tri-Dam Power Authority - Sand Bar

	Average Generation (1958-2018)	2022 Net Generation (kWh)	2022 Energy Revenue	PG&E Coordination Payment	Total Revenue
JAN	4,663,654	11,591,430	\$927,314	\$0	\$927,314
FEB	3,946,606	7,422,672	\$593,814	\$0	\$593,814
MAR	5,290,014	-	\$0	\$0	\$0
APR	6,873,822	7,146,240	\$571,699	\$0	\$571,699
MAY	8,065,189	7,151,326	\$572,106	\$0	\$572,106
JUN	8,750,023	8,488,900	\$679,112	\$0	\$679,112
JUL	9,133,101	6,996,309	\$559,705	\$0	\$559,705
AUG	8,560,581	1,083,010	\$86,641	\$0	\$86,641
SEP	6,928,285	6,777,927	\$542,234	\$0	\$542,234
OCT	4,898,944	755,759	\$60,461	\$0	\$60,461
NOV	2,947,604	-	\$0	\$0	\$0
DEC	5,554,123	-	\$0	\$0	\$0
Total	75,611,948	57,413,571	\$4,593,086	\$0	\$4,593,086

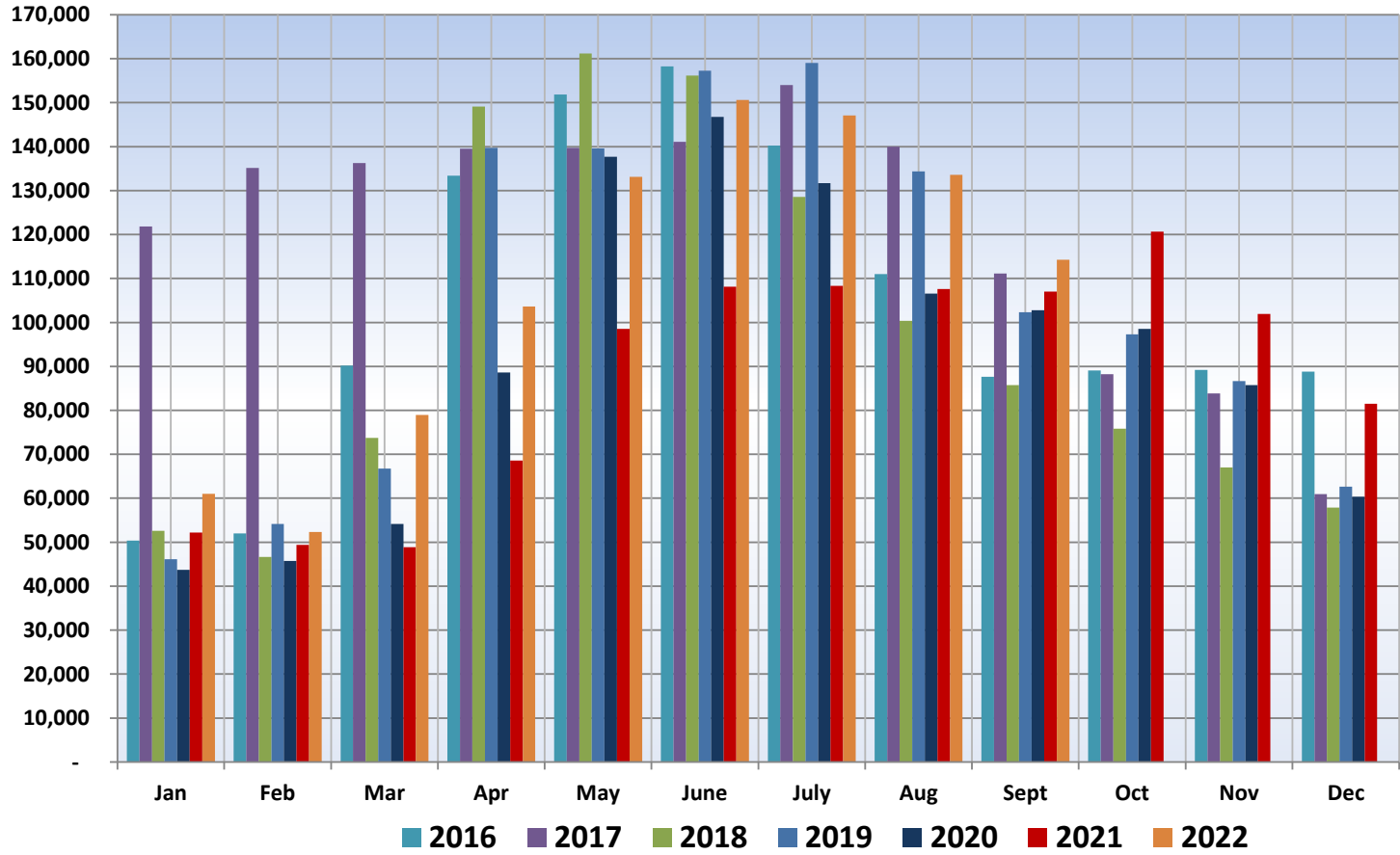
Tri-Dam Project Generation Revenue



Tri-Dam Project Total Generation - MWh



Tri-Dam Project Storage AF - Donnells & Beardsley



WESTERN PRICE SURVEY

[7] Energy Prices Up With Cooler Weather

Western natural gas prices increased as digits on thermometers across the region decreased.

Regional natural gas usage increased, elevating most natural gas values by more than a dollar in Oct. 27 to Nov. 3 trading.

California natural gas usage increased by 0.2 Bcf per day, or 4 percent, week over week, according to the U.S. Energy Information Administration, while Pacific Northwest demand rose by 1 Bcfd, or 6 percent.

The EIA specifically noted lower-than-average temperatures in the Sacramento area and mercury falling “significantly” across Seattle throughout the past two weeks.

Western natural gas values added between 57 cents and as much as \$3.80, led by Alberta gas, which jumped from \$1.15/MMBtu to \$4.95/MMBtu in trading. Seven hubs increased by a dollar or more in trading. Although it posted the most modest increase at 57 cents, PG&E CityGate had the highest regional price at \$8/MMBtu. Henry Hub natural gas, however, dropped 64 cents to \$4.66/MMBtu by Nov. 3.

Meanwhile, Western daytime power prices generally rose by between \$5.60 and as much as \$16.90 in trading. South of Path 15 gained the most value, up \$16.90 to \$69.25/MWh. Mid-Columbia peak power proved the exception, dropping \$21.30 to \$34.95/MWh.

Off-peak power values were uniformly higher, led by Mid-C nighttime power, which rose \$12.70 to \$72.10/MWh.

California Independent System Operator grid demand fell roughly 2,390 MW week over week, down to 27,207 MW on Nov. 3 compared with Oct. 21 demand of 29,594 MW. Western Power Pool demand peaked at 67,672 MW Nov. 3.

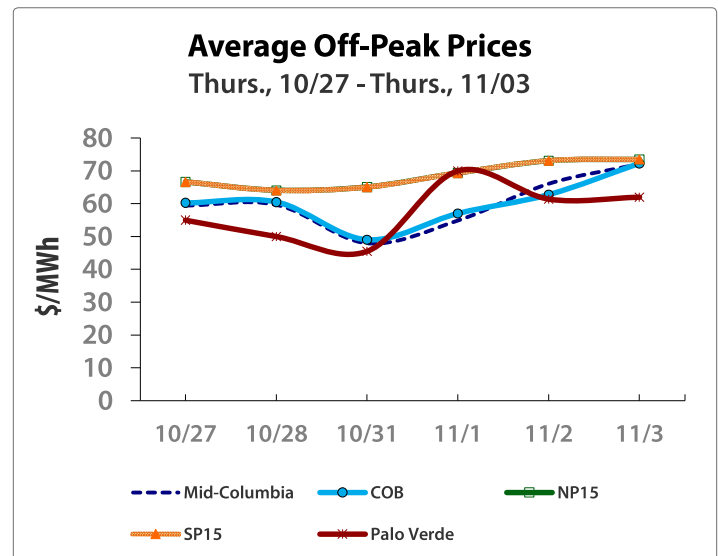
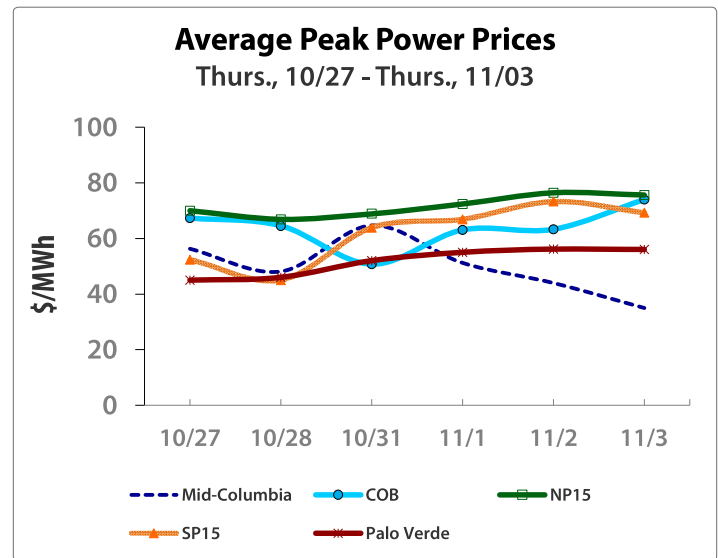
Southern California Gas Co. said maintenance on Line 225 that was to have wrapped up by Nov. 5 is now scheduled to end Nov. 12. Receipt capacity in the Wheeler Ridge Zone has decreased from 765 MMcf per day to 710 MMcf, while capacity in several other zones and areas will increase by between 70 MMcf and as much as 210 MMcf.

The utility on its ENVOY system reported a string of high operational flow orders between Oct. 27 and Nov. 3, save for Oct. 30. These were interspersed with low-OFO notices.

In October, the average high peak price at Henry Hub was \$6.91/MMBtu, 68 cents more than in 2021 (see “Price Trends,” next page).

PG&E CityGate was the only Western hub to post a year-over-year gain. It increased \$1.65 to \$8.19/MMBtu. Malin and SoCal Border gas hub prices moved lower by 53 cents and a penny, respectively, year over year. They ended at \$6.56/MMBtu and \$7.45/MMBtu.

Average Western peak power prices for October were generally higher compared with the year prior. Palo Verde added the most year over year, up \$31.15 to \$92.65/MWh. The high value at Mid-C dropped by \$7.25 year over year to \$74.80/MWh. **—Linda Dailey Paulson**



Average Natural Gas Prices (\$/MMBtu)

	Thurs. 10/27	Tues. 11/01	Thurs. 11/03
Henry Hub	5.30	4.47	4.66
Sumas	6.27	7.19	7.57
Alberta	1.15	5.18	4.95
Malin	6.40	7.31	6.98
Opal/Kern	5.54	6.41	6.52
Stanfield	6.30	7.23	7.40
PG&E CityGate	7.43	7.84	8.00
SoCal Border	5.38	6.47	6.78
SoCal CityGate	5.84	7.71	7.25
EP-Permian	0.89	2.48	1.86
EP-San Juan	4.66	5.89	6.39

Power/gas prices courtesy Enerfax

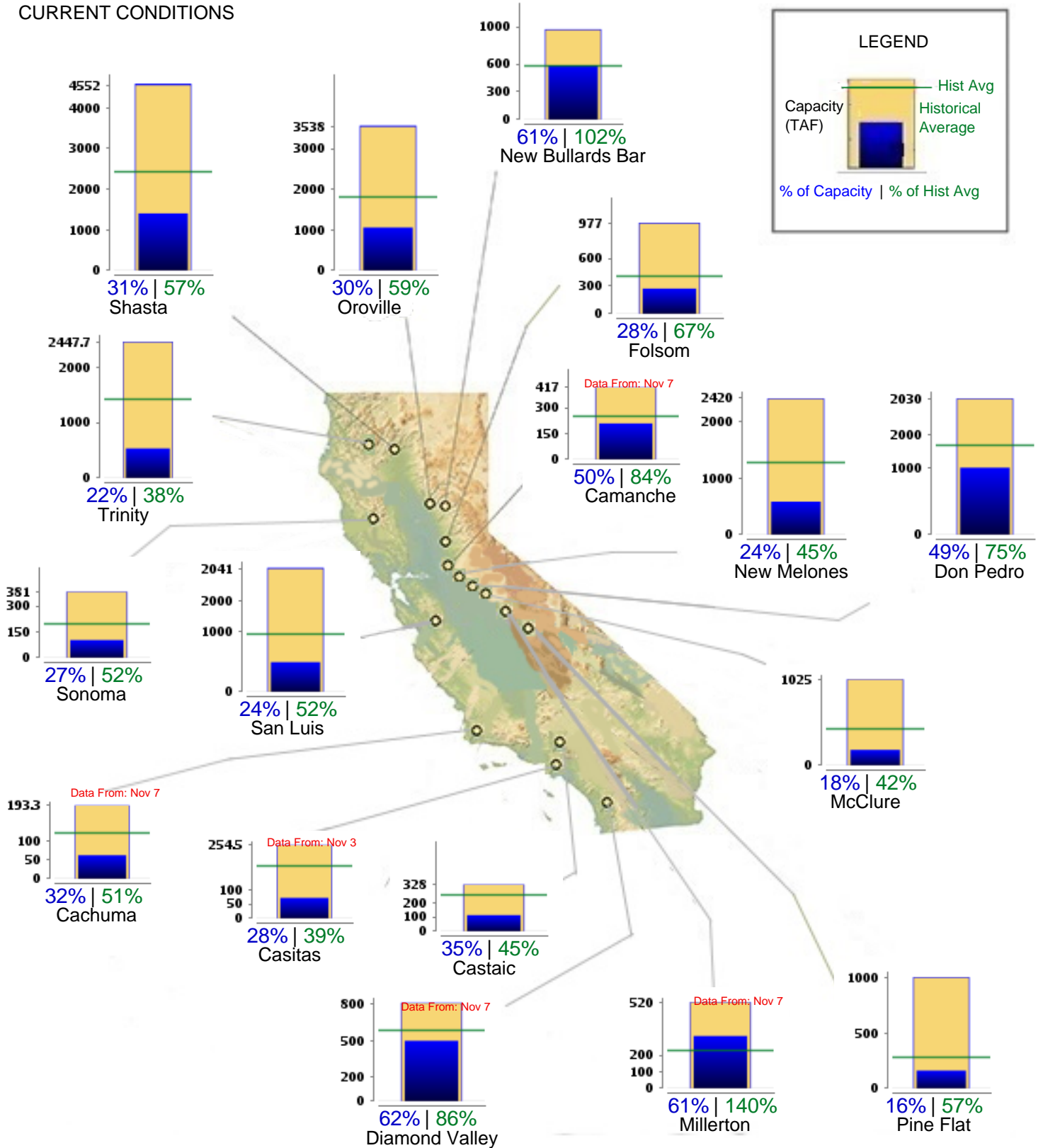


CURRENT RESERVOIR CONDITIONS

CALIFORNIA MAJOR WATER SUPPLY RESERVOIRS

Midnight - November 8, 2022

CURRENT CONDITIONS





1617 S. Yosemite Avenue • Oakdale, CA 95361 • Phone: (209) 847-6300 • Fax: (209) 847-1925

November 7, 2022

Tri Dam Project
Jeff Shields
P.O. Box 1158
Pinecrest, CA 95364

Re: October 2022 Invoices

Dear Mr. Shields:

Enclosed are invoices for consulting services provided by FISHBIO during October. Services provided for each project are summarized below.

Publications

Manuscripts characterizing predator diets and striped bass occupancy patterns were recently submitted to be considered for publication. Both are papers based primarily on the results on the non-native predator study which is the first multi-year assessment of predator abundance, distribution, and diets in the San Joaquin Basin. Comments on the predator diets manuscript were received in late October and revisions are underway to address the comments received before re-submitting the paper. Work also focused on modeling black bass abundance and survival for publication in development.

Non-Native Investigation/ Predator Study

During October efforts focused on reviewing video footage collected during sampling and entering data from the video review.

Consulting

On October 19 we met with Scot Moody and Peter Reitkerk regarding potential habitat restoration on the Stanislaus River and provided follow-up information regarding potential sites and quantities of habitat that could be created or restored.



Budget Summary

2022	<i>Life-cycle Monitoring</i>	<i>Publications</i>	<i>Consulting</i>	<i>Non-natives</i>	TOTAL
<i>Jan</i>	\$ 14,420.93	\$ -	\$ -	\$ 41,998.79	\$ 56,419.72
<i>Feb</i>	\$ 29,685.33	\$ 19,297.50	\$ -	\$ 80,925.68	\$ 129,908.51
<i>Mar</i>	\$ 21,981.66	\$ 4,302.50	\$ -	\$ 86,368.95	\$ 112,653.11
<i>Apr</i>	\$ 22,586.65	\$ 3,945.00	\$ 150.00	\$ 76,074.51	\$ 102,756.16
<i>May</i>	\$ 10,853.61	\$ 2,885.00	\$ -	\$ 61,864.22	\$ 75,602.83
<i>Jun</i>	\$ 4,303.43	\$ 9,870.00	\$ -	\$ 38,622.22	\$ 52,795.65
<i>Jul</i>	\$ 3,905.00	\$ 9,290.00	\$ 450.00	\$ 21,687.04	\$ 35,332.04
<i>Aug</i>	\$ 36,350.64	\$ 13,402.50	\$ -	\$ 34,471.54	\$ 84,224.68
<i>Sep</i>	\$ 11,272.30	\$ 10,402.50	\$ -	\$ 28,421.88	\$ 50,096.68
<i>Oct</i>	\$ -	\$ 20,667.50	\$ 5,145.00	\$ 7,819.96	\$ 33,632.46
TOTAL	\$ 155,359.55	\$ 94,062.50	\$ 5,745.00	\$ 478,254.79	\$ 733,421.84
<i>Estimated 2022</i>	\$ 150,000.00	\$ 125,000.00	\$ 25,000.00	\$ 475,000.00	\$ 775,000.00
<i>Remaining</i>	\$ (5,359.55)	\$ 30,937.50	\$ 19,255.00	\$ (3,254.79)	\$ 41,578.16

Sincerely,

Andrea Fuller

SJB October Field Report

Fall-run Adult Migration Monitoring

A total of 1,559 Chinook salmon were observed passing the Stanislaus River weir during October, increasing the season total to 1,561 (Figure 1). Fall attraction pulse flows occurred October 12-31 with flows and shaped into three peaks to simulate natural run-off events. Passage peaked at 336 Chinook on October 28 simultaneous with the final peak (Figure 2). Passage to date is less than half the number observed by end of October 2021 but slightly higher than in both 2019 and 2020. Total season passage at the weir over the last five years was highest in 2017 (8,500); however, this was approximately 40% less than the modern-day record number of 14,399 passages observed one year prior in 2016.

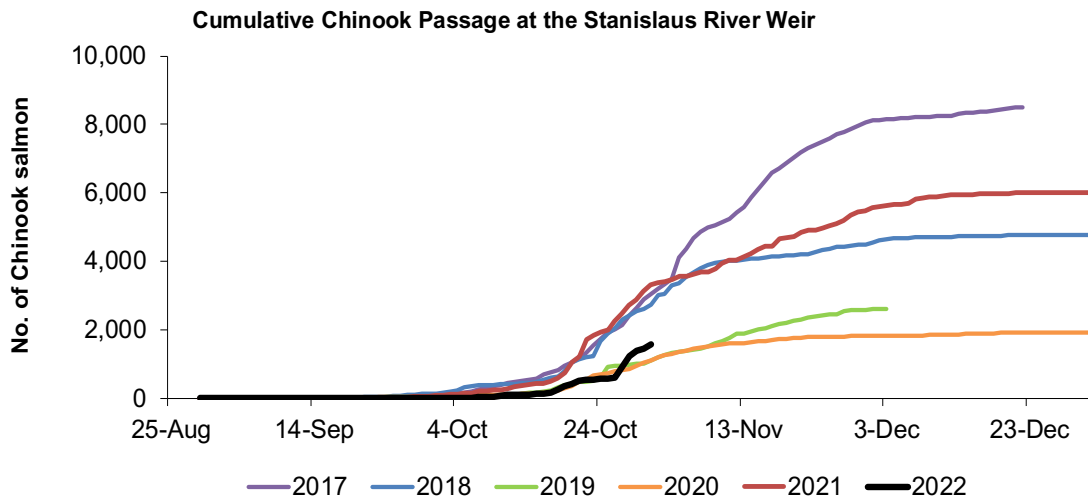


Figure 1. Cumulative Chinook salmon passage at the Stanislaus River weir, 2017-2022.

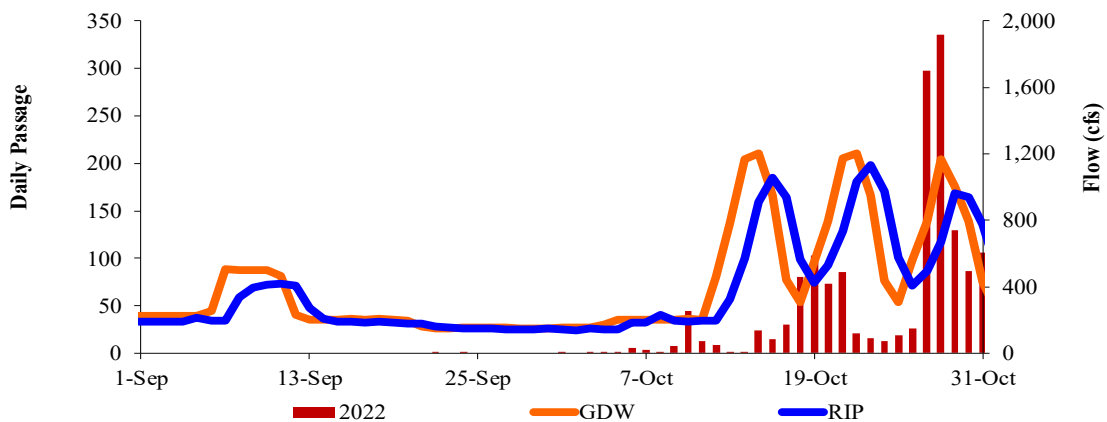


Figure 2. Daily Chinook salmon passage at the Stanislaus River weir and river flow at Goodwin (GDW) and Ripon (RIP).

As of October 31, a total of 233 Chinook salmon were observed in the Tuolumne River (Figure 3). Although passages to date at the Tuolumne weir were nearly double compared to the year before, Chinook salmon passages were 90% less than the numbers observed by the end of October in 2018 (n=2,029). The Tuolumne River fall attraction flow began on October 17 and consisted of two peaks of approximately 1,300 cfs (Figure 4). Passages during this time were likely underestimated since weir panels had to be temporarily submerged to allow massive amounts of water hyacinth to pass through the weir site with the increase in flow. Normal weir operations resumed once flows reached lower levels and the water hyacinth moved past the weir.

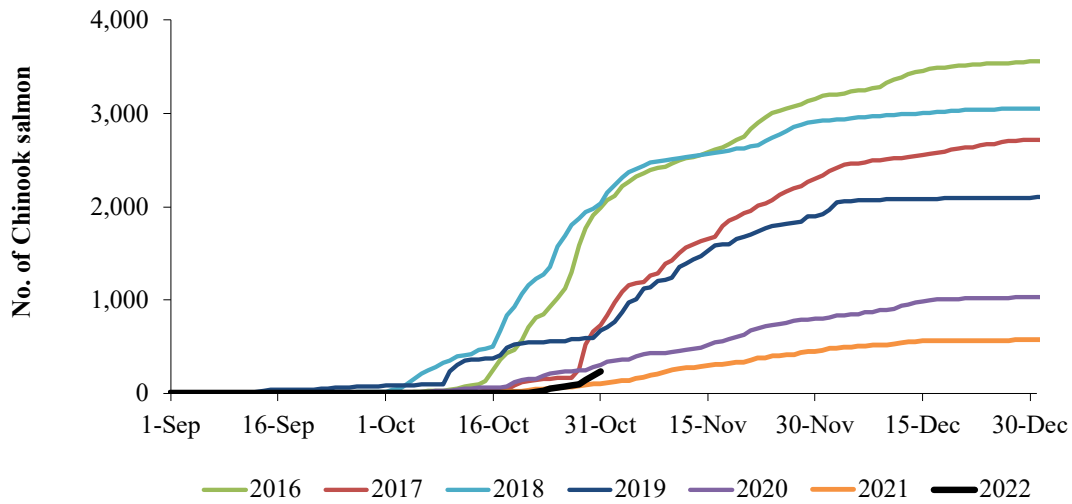


Figure 3. Cumulative Chinook salmon passage at the Tuolumne River weir, 2017-2022.

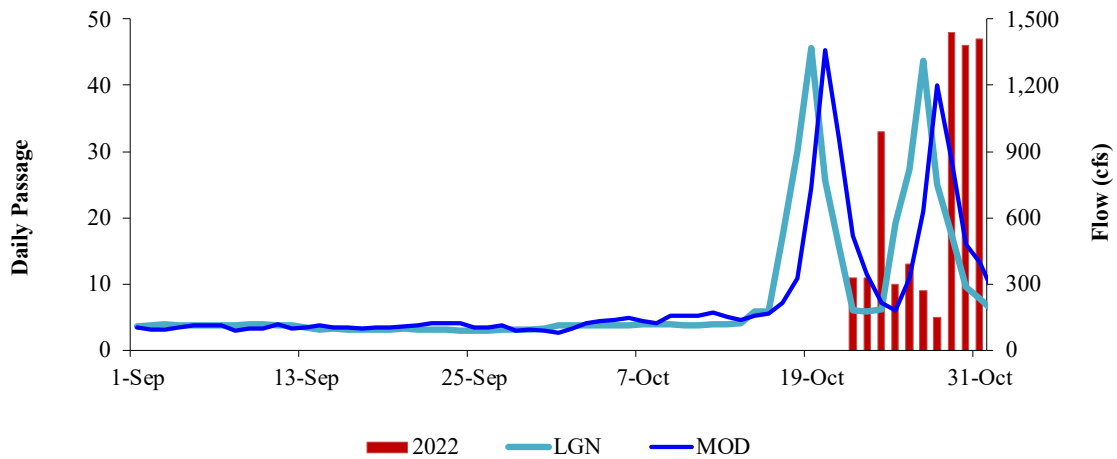


Figure 4. Daily Chinook salmon passage at the Tuolumne River weir and river flow at La Grange (LGN) and Modesto (MOD).

To date, 22% and 20% of all Chinook passing through the Stanislaus and Tuolumne weirs, respectively, have a clipped adipose fin indicating hatchery origin. As approximately 25% of hatchery production is adipose fin clipped, this suggests that most of the fish migrating into the Stanislaus and Tuolumne rivers are of hatchery origin. During September and early October 2022 observations of early spawning were reported in the Tuolumne River. Heads were recovered from spawned out carcasses to check for coded-wire tags (CWTs). Last year, early spawning was observed in both the Stanislaus and Tuolumne rivers. CWT results from 2021 confirmed the fish were all released as juveniles through the San Joaquin River Restoration Program (SJRRP) in the upper San Joaquin River (Steve Tsao of CDFW, personal communication). The Tuolumne weir operated normally prior to the pulse flow and no salmon were detected between September 30 and October 17, indicating the early spawners migrated upstream prior to the weir installation on September 30.

Escapement to the Mokelumne River through October 31 was approximately 1,000 fewer salmon than the number observed in 2021 during the same period but less than one-quarter of the numbers observed from 2017-2019 (Figure 5). A four-day pulse (peak: 1,125 cfs on October 18) followed by a smaller three-day pulse (peak: 650 cfs on November 1) occurred on the Mokelumne River during the month. The initial (largest) peak triggered 1,278 salmon to pass through the Woodbridge Fish Ladder over a four-day period.

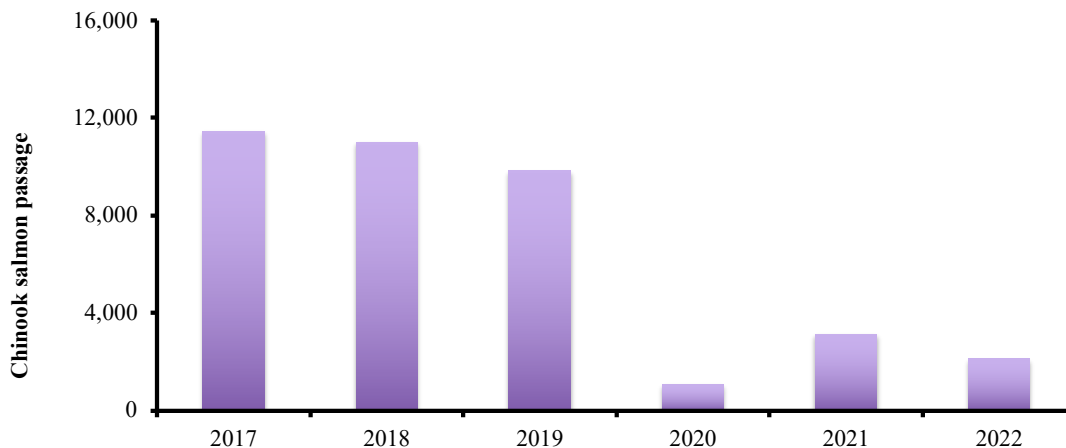


Figure 5. Chinook salmon passage through October 31 at the Mokelumne River fish ladder, 2017-2022.

Juvenile Outmigration Monitoring

Operation of the Calaveras River rotary screw trap (RST) began on October 31. The trap will sample weekdays and will be raised on the weekends from now through early to mid-summer. Last season, 1,272 *O. mykiss* (460 young-of-the-year [YOY], 808 Age 1+, and

four adult) were captured in the Calaveras RST, which was approximately 700 fewer *O. mykiss* captured than the previous year. Additionally, 380 juvenile Chinook salmon were captured in 2022 between late January and early June.

Summer Snorkel Surveys

Estimated abundance of *O. mykiss* (all life stages combined) in the Calaveras River in 2022, excluding the Dam reach, was 17,392 (95% confidence interval: 12,775 - 22,009), a slight increase over the 16,260 fish estimated in 2021 (Figure 6). Fish density was highest in the Jenny Lind reach (2,405 individuals per mile), followed by the Canyon (617 individuals per mile) and Shelton reaches (493 individuals per mile; Figure 3). Notably, fish density decreased by nearly 50% in the Canyon reach compared to the previous year, while abundance more than doubled in the Jenny Lind reach. In the Shelton reach, fish density remained stable.

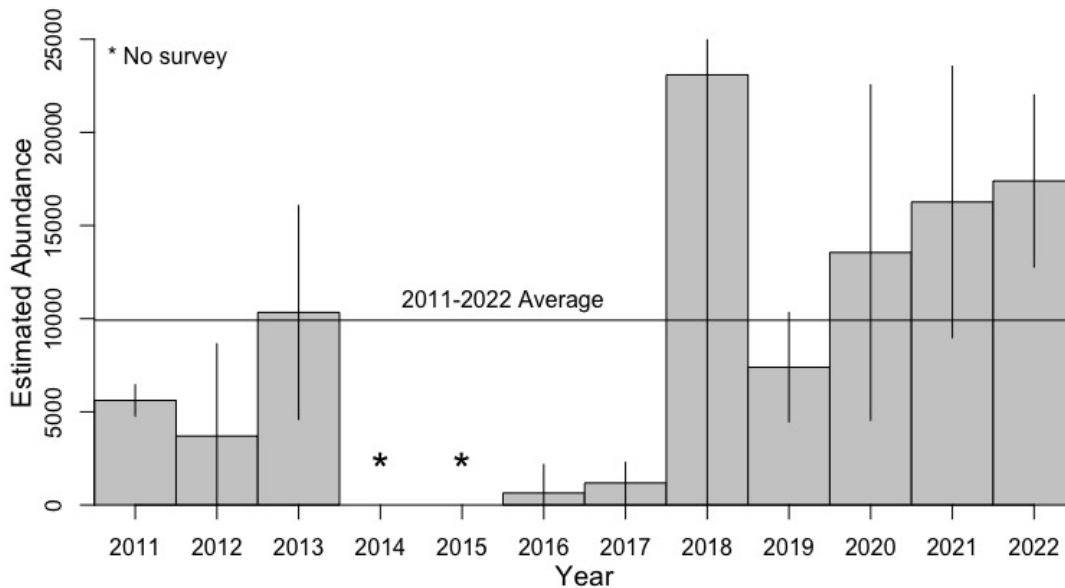


Figure 6. Annual *O. mykiss* abundance in the Calaveras River during 2011-2022.

Data is currently being analyzed for the Tuolumne and Stanislaus Rivers and abundance estimates should be available in the next month.

Native Fish Plan

The PIT tag antenna was installed at the Stanislaus River weir to collect additional data on movement of NFP tagged fish. A total of 16 individual fish (6 hardhead, 1 largemouth bass, 2 smallmouth bass, 6 spotted bass, 1 striped bass) were detected at the Stanislaus River weir between October 2-30. The striped bass was detected on three different days in October. Half of the fish were tagged in 2022 while the remaining eight were originally captured and tagged in 2020 or earlier. Only two of the individuals were initially captured

and tagged within half a mile of the weir while the remaining fish migrated approximately 1.5-27 miles from the initial location of capture (Table 1).

Table 1. Detection of PIT tagged predator species at the Stanislaus River weir.

Species	FishCode	Tagging Date	Tagging Location (RM)	Detection Date
Hardhead	NFP-2019-352	5/1/19	15.4	10/14/22
Hardhead	NFP-2019-1664	6/21/19	18.6	10/14/22
Hardhead	NFP-2019-1629	6/19/19	31.2	10/14/22
Hardhead	NFP-2019-261	4/1/19	31.8	10/14/22
Hardhead	NFP-2020-979	6/10/20	17.4	10/14/22
Hardhead	NFP-2020-483	5/15/20	36.1	10/22/22
Largemouth bass	NFP-2022-752	4/28/22	25.7	10/20/22, 10/23/22
Spotted bass	NFP-2022-164	2/10/22	4.8	10/20/22
Spotted bass	NFP-2020-895	6/11/20	5.8	10/13/22, 10/14/22
Spotted bass	NFP-2022-1119	5/4/22	13.6	10/14/22
Spotted bass	NFP-2022-591	4/1/22	20.1	10/9/22, 10/14/22
Spotted bass	NFP-2022-562	3/30/22	32.9	10/13/22
Spotted bass	NFP-2020-853	6/9/22	24.7	10/13/22
Striped bass	NFP-2022-1027	5/5/22	16.4	10/2/22, 10/3/22, 10/14/22
Smallmouth bass	NFP-2022-1211	5/17/22	24.7	10/14/22
Smallmouth bass	NFP-2022-859	4/26/22	32.9	10/30/22

TRI-DAM

POWER

AUTHORITY

**REGULAR BOARD MEETING
AGENDA
TRI-DAM POWER AUTHORITY
of THE OAKDALE IRRIGATION DISTRICT and
THE SOUTH SAN JOAQUIN IRRIGATION DISTRICT
NOVEMBER 17, 2022**

Start time is immediately following the Tri-Dam Project meeting
which begins at 9:00 AM

**Oakdale Irrigation District
1205 East F Street
Oakdale, CA 95361**

*** SEE BELOW FOR INSTRUCTIONS REGARDING PUBLIC
COMMENT AND PARTICIPATION**

NOTICE: Coronavirus (COVID-19)

A COMPLETE COPY OF THE AGENDA PACKET WILL BE AVAILABLE ON THE OAKDALE IRRIGATION DISTRICT WEB SITE (www.oakdaleirrigation.com) ON MONDAY, NOVEMBER 14, 2022 AT 9:00 A.M. ALL WRITINGS THAT ARE PUBLIC RECORDS AND RELATE TO AN AGENDA ITEM WHICH ARE DISTRIBUTED TO A MAJORITY OF THE BOARD OF DIRECTORS LESS THAN 72 HOURS PRIOR TO THE MEETING NOTICED ABOVE WILL BE MADE AVAILABLE ON THE OAKDALE IRRIGATION DISTRICT WEB SITE (www.oakdaleirrigation.com).

**INFORMATION FOR MEETING DURING CONTINUED PROCLAIMED STATE
OF EMERGENCY**

(Effective 3/27/2020 – until further notice):

Pursuant to California Governor Gavin Newsom's Executive Order N-29-20, a local legislative body is authorized to hold public meetings via teleconferencing and to make public meetings accessible telephonically or otherwise electronically to all members of the public who wish to participate and to provide public comment to the local legislative body during the current health emergency. The Tri-Dam Project and Tri-Dam Power Authority Board of Directors (Tri-Dam Directors) will adhere to and implement the provisions of the Governor's Executive Order related to the Brown Act and the utilization of technology to facilitate participation.

*The location of the Tri-Dam meeting will be at the office of the Oakdale Irrigation District, 1205 East F Street, Oakdale and will be open to the public based on a reservation system. Be advised these facilities only have 3 – 4 seats available for public access due to implemented protection measures for the COVID-19 virus.

****Public members who wish to participate, listen to, and provide comment on agenda items can do so by telephone by calling 1 (669) 900-9128, Access Code: 358-572-1867. All speakers commenting on Agenda Items are limited to five (5) minutes.**

Members of the public may also submit public comments in advance by e-mailing nfiez@oakdaleirrigation.com by 4:30 p.m., Wednesday, November 16, 2022.

In addition to the mandatory conditions set forth above, the Tri-Dam Directors will use sound discretion and make reasonable efforts to adhere as closely as reasonably possible to the provisions of the Brown Act, and other applicable local laws regulating the conduct of public meetings.

In compliance with the Americans with Disabilities Act, a person requiring an accommodation, auxiliary aid, or service to participate in this meeting should contact the Executive Assistant at (209) 840-5504, as far in advance as possible but no later than 24 hours before the scheduled event. Best efforts will be made to fulfill the request.

CALL TO ORDER

ROLL CALL: John Holbrook, Bob Holmes, Dave Kamper, Glenn Spyksma, Mike Weststeyn Brad DeBoer, Herman Doornenbal, Tom Orvis, Linda Santos, Ed Tobias

PUBLIC COMMENT

CONSENT CALENDAR

ITEMS 1 – 3

Matters listed under the consent calendar are considered routine and will be acted upon under one motion. There will be no discussion of these items unless a request is made to the Board President by a Director or member of the public. Those items will be considered at the end of the consent items.

1. Approve the regular board meeting minutes of October 20, 2022.
2. Approve the October statement of obligations.
3. Approve the Financial Statements for the nine months ending September 30, 2022.

DISCUSSION

ITEM 4

4. Discussion of the 2023 Draft Budget – *to be presented at the meeting*
-

ADJOURNMENT

ITEMS 5 - 6

5. Commissioner Comments.
6. Adjourn to the next regularly scheduled meeting.

BOARD AGENDA REPORT

Date: 11/17/2022
Staff: Genna Modrell

SUBJECT: Tri-Dam Power Authority October 2022 Minutes

RECOMMENDED ACTION: Review and possible approval of October 20, 2022 Minutes

BACKGROUND AND/OR HISTORY:

Draft minutes attached.

FISCAL IMPACT: None

ATTACHMENTS: Draft minutes attached.

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)

**TRI-DAM POWER AUTHORITY
MINUTES OF THE JOINT BOARD
OF COMMISSIONERS REGULAR MEETING**

October 20, 2022
Manteca, California

The Commissioners of the Tri-Dam Power Authority met at the office of the South San Joaquin Irrigation District in Manteca, California, on the above date for the purpose of conducting business of the Tri-Dam Power Authority, pursuant to the resolution adopted by each of the respective Districts on October 14, 1984.

President Doornenbal called the meeting to order at 10:27 a.m.

OID COMMISSIONERS

SSJID COMMISSIONERS

COMMISSIONERS PRESENT:

BRAD DeBOER
ED TOBIAS
LINDA SANTOS
TOM ORVIS
HERMAN DOORNENBAL

JOHN HOLBROOK
BOB HOLMES
MIKE WESTSTEYN
GLENN SPYKSMA
DAVE KAMPER

Also, Present:

Jeff Shields, Interim General Manager; Scot A. Moody, General Manager, Oakdale Irrigation District; Peter Rietkerk, General Manager, South San Joaquin Irrigation District; Sharon Cisneros, Chief Financial Officer, Oakdale Irrigation District; Susan Larson, License Compliance Coordinator, Tri-Dam Project; Genna Modrell, Finance Asst., Tri-Dam Project; Chris Tuggle, Operations and Maintenance Manager, Tri-Dam Project; Mia Brown, Counsel; Tim O'Laughlin, Counsel, via zoom.

PUBLIC COMMENT

No public comment.

CONSENT CALENDAR

- ITEM #1 Approve the regular board meeting minutes of September 15, 2022.**
- ITEM #2 Approve the September statement of obligations.**
- ITEM #3 Approve the Financial Statements for the seven months ending July 31, 2022.**
- ITEM #4 Approve the Financial Statements for the eight months ending August 31, 2022.**

Commissioner Weststeyn moved to approve items one through four on the consent calendar. Commissioner Santos seconded the motion.

The motion passed by the following roll call vote:

AYES: Doornenbal, DeBoer, Orvis, Santos, Tobias, Holbrook, Holmes, Kamper, Spyksma, Weststeyn
NOES: None
ABSTAINING: None
ABSENT: None

Communications

ITEM #5 Commissioner Comments

None.

ADJOURNMENT

President Doornenbal adjourned the meeting at 10:28 a.m.

The next Board of Commissioners meeting is scheduled for November 17, 2022, at the offices of Oakdale Irrigation District beginning at 9:00 a.m.

ATTEST:

Jeff Shields, Interim Secretary
Tri-Dam Project

DRAFT

BOARD AGENDA REPORT

Date: 11/17/2022
Staff: Genna Modrell

SUBJECT: Tri-Dam Power Authority October Statement of Obligations

RECOMMENDED ACTION: Recommend Approval of the October Statement of Obligations

BACKGROUND AND/OR HISTORY:

Submitted for approval is the October Statement of Obligations for Tri-Dam Power Authority.

FISCAL IMPACT: See Attachments

ATTACHMENTS: Tri-Dam Power Authority Statement of Obligations

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)

Tri-Dam Power Authority

Statement of Obligations

October 1, 2022 to October 31, 2022

**TRI-DAM POWER AUTHORITY
STATEMENT OF OBLIGATIONS**

Period Covered
October 1, 2022 to October 31, 2022

Total Obligations: **9** **checks in the amount of** **\$5,141.66**
(See attached Vendor Check Register Report)

CERTIFICATION

OAKDALE IRRIGATION DISTRICT

SOUTH SAN JOAQUIN IRRIGATION DISTRICT

Thomas D. Orvis

John Holbrook

Ed Tobias

Robert A. Holmes

Linda Santos

Dave Kamper

Herman Doornenbal

Glenn Spyksma

Brad DeBoer

Mike Weststeyn

To: Peter Rietkerk, SSJID General Manager:

THE UNDERSIGNED, EACH FOR HIMSELF, CERTIFIES THAT HE IS PRESIDENT OR SECRETARY OF THE TRI-DAM POWER AUTHORITY; THAT THE AMOUNTS DESIGNATED ABOVE HAVE BEEN ACTUALLY, AND NECESSARILY AND PROPERLY EXPENDED OR INCURRED AS AN OBLIGATION OF THE TRI-DAM POWER AUTHORITY FOR WORK PERFORMED OR MATERIALS FURNISHED FOR OPERATIONS AND MAINTENANCE OF THE SAND BAR PROJECT; THAT WARRANTS FOR PAYMENT OF SAID AMOUNTS HAVE BEEN DRAWN ON THE SAND BAR PROJECT O & M CHECKING ACCOUNT AT OAK VALLEY COMMUNITY BANK, SONORA, CALIFORNIA.

TRI-DAM POWER AUTHORITY
PRESIDENT,

TRI-DAM POWER AUTHORITY
SECRETARY,

Herman Doornenbal, President Date

Jeff Shields, Interim Secretary Date

Authority

October Checks by Amount



Check	Vendor No	Vendor	Date	Description	Amount
208290	10333	Grainger Inc. W. W.	10/18/2022		210.57
208291	10439	McMaster-Carr Supply Co.	10/18/2022		747.87
208292	10500	OID ~ Routine	10/18/2022	Admin / Finance services	1,210.43
208293	11343	Tim O'Laughlin, PLC	10/18/2022		315.00
208294	10749	UPS	10/18/2022		6.65
208295	10900	Chase Cardmember Service	10/03/2022		188.74
208296	11333	Fedak & Brown LLP	10/19/2022		744.00
208297	10516	Pacific Gas & Electric Co.	10/26/2022		309.40
208298	10588	Santa Fe Electric Inc.	10/26/2022	Rewind relay coils	1,409.00
Report Total:					\$ 5,141.66

BOARD AGENDA REPORT

Date: 11/17/2022
Staff: Sharon Cisneros

SUBJECT: Tri-Dam Power Authority Financial Statements for the Nine Months ending September 30, 2022

RECOMMENDED ACTION: Approve the Financial Statements for the Nine Months ending September 30, 2022

BACKGROUND AND/OR HISTORY:

As of the financial statement date of September 30, 2022, the Tri-Dam Power Authority (TDPA) cash increased by \$4.1M over the prior year primarily due to an increase in power sales of \$3.6M compared to the prior year. Reserve funds in investments total just under \$1.1M.

TDP has realized 104.4% of its annual budgeted operating revenues for 2022, and only utilized 58.2% of its budgeted operating expenses. With the maintenance scheduled in November and December, staff anticipates that expenses will increase in relation to the annual budget.

Further details are available in the attachments.

FISCAL IMPACT: none

ATTACHMENTS: Financial Statements 9/30/2022 (unaudited)

Board Motion:

Motion by: _____ **Second by:** _____

VOTE:

OID: DeBoer (Yes/No) Doornenbal (Yes/No) Orvis (Yes/No) Santos (Yes/No) Tobias (Yes/No)

SSJID: Holbrook (Yes/No) Holmes (Yes/No) Kamper (Yes/No) Spyksma (Yes/No) Weststeyn (Yes/No)

Tri-Dam Power Authority

Statement of Net Position

September 30, 2022 and 2021

(unaudited)

	<u>2022</u>	<u>2021</u>
Assets		
Cash	\$ 5,140,648	\$ 1,073,086
Investments	1,093,122	1,088,491
Accounts Receivable	545,953	1,717
Prepaid Expenses	120,862	124,101
Inventory	5,424	5,424
Capital Assets	45,275,609	45,375,609
Accumulated Depreciation	<u>(22,851,858)</u>	<u>(22,454,353)</u>
Total Assets	<u><u>29,329,760</u></u>	<u><u>25,214,075</u></u>
Liabilities		
Accounts Payable	-	(3,452)
Due to Tri-Dam Project	<u>225,104</u>	<u>155,322</u>
Total Liabilities	<u>225,104</u>	<u>151,870</u>
Net Position		
Net Position - Beginning of Year	26,363,000	27,642,989
Distributions	(800,000)	(2,505,000)
YTD Net Revenues	<u>3,541,656</u>	<u>(75,784)</u>
Total Net Position	<u>29,104,656</u>	<u>25,062,205</u>
Total Liabilities and Net Position	<u><u>\$ 29,329,760</u></u>	<u><u>\$ 25,214,075</u></u>



Tri-Dam Power Authority
Statement of Revenues and Expenses
 Period Ending September 30, 2022

	MTD Budget	MTD Actual	MTD Budget Variance	Budget Variance %	Prior Year MTD Actual	Prior Year MTD Var	Prior Year Variance %	2022 Budget
Operating Revenues								
1 Power Sales	\$ 361,969	\$ 542,234	\$ 180,265	49.8%	\$ -	\$ 542,234	#DIV/0!	\$ 4,343,626
2 Other Operating Revenue	-	-	-	-	-	-	-	-
3 Total Operating Revenues	<u>361,969</u>	<u>542,234</u>	<u>180,265</u>	<u>49.8%</u>	<u>-</u>	<u>542,234</u>	<u>#DIV/0!</u>	<u>4,343,626</u>
Operating Expenses								
5 Salaries and Wages	29,754	26,710	(3,044)	-10.2%	65,782	(39,072)	-59.4%	357,049
6 Benefits and Overhead	19,864	8,386	(11,478)	-57.8%	25,442	(17,056)	-67.0%	238,370
7 Operations	1,861	309	(1,552)	-83.4%	-	309	0.0%	22,330
8 Maintenance	9,958	463	(9,495)	-95.4%	4,658	(4,195)	-90.1%	119,500
9 General & Administrative	28,259	70,973	42,714	151.1%	16,876	54,097	320.6%	339,112
10 Depreciation & Amortization	41,017	40,880	(137)	-0.3%	40,812	68	0.2%	492,198
11 Total Operating Expenses	<u>130,713</u>	<u>147,721</u>	<u>17,008</u>	<u>13.0%</u>	<u>153,570</u>	<u>(5,849)</u>	<u>-3.8%</u>	<u>1,568,559</u>
12 Net Income From Operations	231,256	394,513	163,257	70.6%	(153,570)	548,083	-356.9%	2,775,067
Nonoperating Revenues (Expenses)								
14 Investment Earnings	833	10,040	9,207	1104.8%	4	10,036	250900.0%	10,000
15 Interest Expense	-	-	-	-	-	-	0.0%	-
18 Total Nonoperating Revenues (Expenses)	<u>833</u>	<u>10,040</u>	<u>9,207</u>	<u>1104.8%</u>	<u>4</u>	<u>10,036</u>	<u>250900.0%</u>	<u>10,000</u>
19 Net Revenues	<u>\$ 232,089</u>	<u>\$ 404,553</u>	<u>\$ 172,464</u>	<u>74.3%</u>	<u>\$ (153,566)</u>	<u>\$ 558,119</u>	<u>-363.4%</u>	<u>\$ 2,785,067</u>
Memo:								
20 Capital Expenditures	<u>\$ 38,000</u>	<u>\$ -</u>	<u>\$ (38,000)</u>					<u>\$ 456,000</u>



Tri-Dam Power Authority
Statement of Revenues and Expenses
 Period Ending September 30, 2022

	<u>YTD Budget</u>	<u>YTD Actual</u>	<u>YTD Budget Variance</u>	<u>Budget Variance %</u>	<u>Prior Year Actual</u>	<u>Prior Year Variance</u>	<u>Prior Year Variance %</u>	<u>2022 Budget</u>
1 Operating Revenues								
2 Power Sales	\$ 3,257,720	\$ 4,532,625	\$ 1,274,906	39.1%	\$ 892,477	\$ 3,640,148	407.9%	\$ 4,343,626
3 Other Revenue	-	-	-	-	-	-	-	-
4 Total Operating Revenues	<u>3,257,720</u>	<u>4,532,625</u>	<u>1,274,906</u>	<u>39.1%</u>	<u>892,477</u>	<u>3,640,148</u>	<u>408%</u>	<u>4,343,626</u>
5								
6 Operating Expenses								
7 Salaries and Wages	267,787	205,673	(62,114)	-23.2%	249,638	(43,965)	-17.6%	357,049
8 Benefits and Overhead	178,778	72,732	(106,046)	-59.3%	108,537	(35,805)	-33.0%	238,370
9 Operations	16,748	2,442	(14,306)	-85.4%	4,158	(1,716)	-41.3%	22,330
10 Maintenance	89,625	10,964	(78,661)	-87.8%	20,661	(9,697)	-46.9%	119,500
11 General & Administrative	254,334	250,284	(4,050)	-1.6%	216,670	33,614	15.5%	339,112
12 Depreciation & Amortization	369,149	371,494	2,346	0.6%	367,311	4,183	1.1%	492,198
13 Total Operating Expenses	<u>1,176,419</u>	<u>913,589</u>	<u>(262,830)</u>	<u>-22.3%</u>	<u>966,975</u>	<u>(53,386)</u>	<u>-5.5%</u>	<u>1,568,559</u>
14								
15 Net Income From Operations	2,081,300	3,619,036	1,537,736	73.9%	(74,498)	3,693,534	-4957.9%	2,775,067
16								
17 Nonoperating Revenues (Expenses)								
18 Investment Earnings	7,500	9,579	2,079	27.7%	4,728	4,851	102.6%	10,000
19 Interest Expense	-	-	-	-	-	-	0.0%	-
22 Total Nonoperating Revenues (Expenses)	<u>7,500</u>	<u>9,579</u>	<u>2,079</u>	<u>27.7%</u>	<u>4,728</u>	<u>4,851</u>	<u>102.6%</u>	<u>10,000</u>
23								
24 Net Revenues	<u>\$ 2,088,800</u>	<u>\$ 3,628,615</u>	<u>\$ 1,539,814</u>	<u>73.7%</u>	<u>\$ (69,770)</u>	<u>\$ 3,698,385</u>	<u>-5300.8%</u>	<u>\$ 2,785,067</u>
25								
26								
27 Memo:								
28 Capital Expenditures	<u>\$ 342,000</u>	<u>\$ 86,959</u>	<u>\$ (255,041)</u>					<u>\$ 456,000</u>

BOARD AGENDA REPORT

Date: 11/17/2022
Staff: Jeff Shields
Sharon Cisneros

SUBJECT: 2023 Draft Budget

RECOMMENDED ACTION: Discussion of the 2023 Draft Budget

BACKGROUND AND/OR HISTORY:

This item will be presented at the meeting.

FISCAL IMPACT: See Attachments

ATTACHMENTS: Draft Budget
