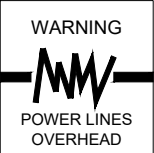


SOUTH SAN JOAQUIN IRRIGATION DISTRICT

LONG TUNNEL MAINTENANCE

UPSTREAM PORTAL - SHOTCRETE SHORING WALL



COPYRIGHT 2023 BY PROVOST & PRITCHARD ENGINEERING GROUP, INC. ALL RIGHTS RESERVED. The firm of Provost & Pritchard Engineering Group, Inc. is not responsible for the use of these plans for any purpose other than that for which they were prepared. These plans are not to be reproduced, changed, or copied in any form without the written permission and consent of Provost & Pritchard Engineering Group, Inc. In the event of a third party claim against the firm of Provost & Pritchard Engineering Group, Inc. or its employees, and shall the third party shall hold the firm of Provost & Pritchard Engineering Group, Inc.'s legal fees associated with defending and enforcing these rights.

SCOPE OF WORK

- WORK CONSISTS OF CONSTRUCTING A SHOTCRETE SHORING WALL ON THE SOUTH SIDE OF THE OAKDALE IRRIGATION DISTRICT AND SOUTH SAN JOAQUIN IRRIGATION DISTRICT JOINT SUPPLY CANAL NEAR THE LONG TUNNEL UPSTREAM PORTAL.
- WORK INCLUDES, BUT IS NOT LIMITED TO:
 - PERFORM SAFETY SCALING OF THE EXISTING UNSUPPORTED ROCK SLOPE.
 - REMOVE ROCK AND SOIL RUBBLE IN THE CANAL AND PLACE AS GENERAL STOCKPILE FILL IN THE DISPOSAL AREA AS SHOWN ON THE DRAWINGS.
 - REMOVE VEGETATION FROM AREAS TO RECEIVE SHOTCRETE AND DISPOSE OFFSITE.
 - PREPARE GROUND SURFACES FOR SHOTCRETE PLACEMENT AND INSTALL DRAIN STRIPS.
 - PLACE FIRST 3-INCH FIBER-REINFORCED SHOTCRETE LAYER.
 - DRILL AND INSTALL CEMENT-GROUTED ROCK DOWELS.
 - PLACE SECOND 3-INCH FIBER-REINFORCED SHOTCRETE LAYER.

PROJECT SITE

THE WORK AREA IS IN THE VICINITY OF KNIGHTS FERRY, CALIFORNIA - SOUTH SAN JOAQUIN IRRIGATION DISTRICT, JOINT SUPPLY CANAL, STANISLAUS COUNTY, CALIFORNIA. SEE VICINITY MAP AND SHEET 2.0.

OWNER'S CONTACT:

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

PREPARED BY:

PROVOST & PRITCHARD
CONSULTING GROUP (P&P)
19969 GREENLEY ROAD
SUITE J
SONORA, CALIFORNIA 95370

SCOTT LEWIS, CEG, PRINCIPAL
(209) 601-5585
slewis@ppeng.com

ANDY KOSITSKY, GE, PE
(209) 768-5489
akositsky@ppeng.com

SURVEY NOTES

- THE GROUND TOPOGRAPHY SURVEY (GT) SHOWN WAS COLLECTED BY ERIK OHLSON & ASSOCIATES, DATED: JUNE 14, 2023. FILE: 02305b Long Tunnel.dwg. HORIZONTAL AND VERTICAL DATUM NAD 83 CALIFORNIA STATE PLANE ZONE 3 AND NAVD88, RESPECTIVELY.

ACCESS

- THE CONTRACTOR SHALL PREPARE STAGING AND LAYDOWN AREAS FOR THE PROJECT AT THE ALLOWABLE LOCATIONS SHOWN ON THESE DRAWINGS AND ACCORDING TO THE CONTRACT DOCUMENTS. IF A DIFFERENT AREA IS DEEMED NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER PRIOR TO MOBILIZATION.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DISTRICT ACCESS ROADS DURING CONSTRUCTION. ANY DAMAGE OR ALTERATION TO THE DISTRICT'S ACCESS ROADS SHALL BE REESTABLISHED BY THE CONTRACTOR AT THE DISCRETION OF THE ENGINEER.
- THE CONTRACTOR SHALL KEEP SITE AND CANAL ACCESS ROUTES CLEAR OF DEBRIS, MATERIALS AND EQUIPMENT AT ALL TIMES.
- THE CONTRACTOR AND ALL OTHER PROJECT PERSONNEL SHALL KEEP THE GATES CLOSED AND LOCKED WHEN THEY ARE NOT IN USE.
- THE MAXIMUM SPEED LIMIT IS 15 MPH ALONG ON-SITE ACCESS ROADS. CONTRACTOR SHALL POST TEMPORARY SPEED LIMIT SIGNS.
- REMOVE ALL MATERIALS AND EQUIPMENT FROM CANAL WHEN CONTRACTOR IS NOT ON-SITE.

GENERAL

- ALL WORK SHALL TAKE PLACE WITHIN 50-FT. OF THE CANAL CENTERLINE, WHICH IS THE OWNER'S RIGHT-OF-WAY, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, MATERIALS, SUPPLIES, AND EQUIPMENT FOR CONSTRUCTION OF THE IMPROVEMENTS SHOWN IN THE CONTRACT DOCUMENTS.
- IT IS INTENDED THAT THESE PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE PROPOSED WORK / IMPROVEMENTS AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES AND AMBIGUITIES WHICH MAY EXIST IN THE PLANS AND SPECIFICATIONS.
- IF THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS, BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIAL AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.
- THE OWNER SHALL RETAIN A CONSTRUCTION MATERIALS TESTING AND INSPECTION AGENCY (TESTING AGENCY) FOR THE REQUIRED TESTING AND INSPECTIONS. THE CONTRACTOR SHALL PROVIDE THE OWNER, THE ENGINEER (PROVOST & PRITCHARD), AND THE TESTING AGENCY AT LEAST TWO WORKING DAYS NOTICE PRIOR TO STARTING WORK.
- WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS IN THE LATEST VERSIONS OF THE CALIFORNIA BUILDING CODE (CBC), CALTRANS STANDARD SPECIFICATIONS AND THE SOUTH SAN JOAQUIN IRRIGATION DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF STANISLAUS COUNTY, AND GOOD TRADE PRACTICE.
- THE CONTRACTOR SHALL BE APPROPRIATELY LICENSED BY THE STATE OF CALIFORNIA TO PERFORM THE WORK SHOWN/DESCRIBED IN THE CONSTRUCTION DOCUMENTS AND SHALL BE EXPERIENCED IN THESE TYPES OF WORK.
- THE CONTRACTOR SHALL SECURE NECESSARY PERMITS FROM AGENCIES, AS NECESSARY, BEFORE CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) BEFORE STARTING EARTHWORK, DRILLING GROUND, AND OTHER EXCAVATION WORK, AND THEY SHALL NOT BEGIN EXCAVATION UNTIL THE USA-INDICATED EARLIEST START DATE AND TIME.
- THE CONTRACTOR SHALL RENEW USA TICKETS BEFORE THEY EXPIRE AND MAINTAIN UNTIL COMPLETION OF DRILLING AND EXCAVATION WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING UTILITIES IN THE FIELD. COSTS OF REPAIRING ANY DAMAGES OR INJURIES CAUSED BY THE CONTRACTOR SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL KEEP EXISTING UTILITIES IN SERVICE AT ALL TIMES OR COORDINATE REQUIRED UTILITY SHUT-DOWNS WITH THE OWNER AND THE UTILITY OWNERS.
- THE CONTRACTOR SHALL PROTECT EXISTING MONUMENTS, FACILITIES AND IMPROVEMENTS FROM DAMAGE RESULTING FROM CONTRACTOR'S WORK. ANY DAMAGE CAUSED BY CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ANY EXISTING MONUMENTS THAT MUST BE REMOVED DURING THE WORK SHALL BE REPLACED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REVIEW THE WORK SCOPE AND NOTIFY THE OWNER AND PROVOST & PRITCHARD IF THE DESIGN CREATES SAFETY CONCERNS.
- THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION FOR THIS PROJECT, INCLUDING SAFETY OF PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS.
- PROVOST & PRITCHARD AND OWNER ARE NOT RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES FOR SAFETY PRECAUTIONS.
- SHOULD ANY CONTRACTOR OR SUBCONTRACTOR FIND DEFICIENCIES, ERRORS, CONFLICTS OR OMISSIONS IN THESE CONTRACT DRAWINGS OR THE CONTRACT SPECIFICATIONS OR SHOULD THERE BE ANY DOUBT AS TO THEIR MEANING OR INTENT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. IF THERE IS A CONFLICT, THEN NOTIFY THE ENGINEER TO OBTAIN A CLARIFICATION. NO DEVIATION OR SUBSTITUTION SHALL BE ALLOWED WITHOUT OBTAINING WRITTEN APPROVAL FROM THE ENGINEER.
- BOUNDARY LINES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND ARE FOR REFERENCE ONLY.
- THE DESIGN IS LIMITED TO THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS. THESE DRAWINGS SHOW EXISTING IMPROVEMENTS FOR REFERENCE ONLY.
- ALL USERS OF THESE DRAWINGS AGREE TO HOLD PROVOST & PRITCHARD HARMLESS FOR ANY AND ALL WORK THAT DOES NOT CONFORM TO REQUIREMENTS AND MINIMUM STANDARDS OF THE RELEVANT AND CURRENT BUILDING CODE, LOCAL ORDINANCES, AND ACCEPTABLE STANDARDS.
- PROVOST & PRITCHARD ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF PRODUCTS OR MATERIALS NOT SPECIFIED IN THESE DRAWINGS.
- THE CONTRACTOR SHALL DISPOSE ALL DEMOLISHED MATERIALS, VEGETATION, EXCESS CONSTRUCTION MATERIALS, AND OTHER WASTE LEGALLY AT AN OFFSITE LOCATION.

STORM WATER MANAGEMENT

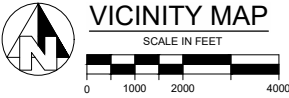
- THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING, MAINTAINING, OPERATING AND REMOVING TEMPORARY STORM WATER FACILITIES, MANAGING STORM WATER FLOWS, AND PREPARING AND IMPLEMENTING THE STORM WATER POLLUTION CONTROL PROGRAM (WPCP).

SYMBOLS



ABBREVIATIONS

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



DRAWING INDEX

SHEET NO.	TITLE
1.0	COVER SHEET AND NOTES
1.1	NOTES
2.0	OVERALL SITE PLAN
2.1	SHOTCRETE SHORING WALL PLAN
2.2	LAYDOWN AREA
3.0	SHOTCRETE SHORING WALL ELEVATION
3.1	SHOTCRETE SHORING WALL SECTIONS
4.0	SHOTCRETE SHORING WALL DETAILS

LONG TUNNEL MAINTENANCE
SOUTH SAN JOAQUIN IRRIGATION DISTRICT
STANISLAUS COUNTY, CALIFORNIA

COVER SHEET AND NOTES



DESIGN ENGINEER: ANDREW KOSITSKY LICENSE NO: GE 2532	CHECKED BY: SWL
DRAFTED BY: KGM	DATE: 09/06/2023
JOB NO: 1055-23005	PROJECT NO: 23
PHASE: 005	ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.
SHEET 1.0	1 OF 8

9/6/2023 10:23 AM g:\south san joaquin id\1055\05523005-long tunnel portal shoring\340 CAD\340 sheet set\01_Design\1.0 COVER SHEET AND NOTES.dwg Ken McKinley

EARTHWORK:

1. SOILS AND ROCK DEBRIS SHALL BE PLACED IN THE ROCK/SOIL DISPOSAL AREA AS UNCOMPACTED FILL.
2. THE CONTRACTOR SHALL VISUALLY INSPECT THE SITE TO DETERMINE THE EXTENT OF SITE PREPARATION AND GRADING TO BE PERFORMED.
3. THE CONTRACTOR SHALL REMOVE TREES AND VEGETATION, CLEAR AND GRUB AT LEAST 2-FEET BEYOND THE LIMITS OF THE WORK.

SHOTCRETE SHORING WALL

1. SPECIAL INSPECTIONS ARE REQUIRED. SEE INSPECTIONS TABLE ON THIS SHEET.
2. SHOTCRETE WALLS SHALL HAVE A GUN FINISH.

SHOTCRETE

1. REFER TO CONTRACT SPECIFICATION SECTION 03470 FOR SHOTCRETE.
2. THE CONTRACTOR SHALL SUBMIT SHOTCRETE MIX DESIGNS TO PROVOST & PRITCHARD FOR ACCEPTANCE PRIOR TO CONSTRUCTION.
3. DIMENSIONS SHOWN IN DETAILS ARE TYPICAL AND ARE MINIMUMS WHERE NOTED.
4. SHOTCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
5. ADD SYNTHETIC FIBER TO SHOTCRETE AT A RATE OF 4 LBS/CU. YD. PER MANUFACTURER'S RECOMMENDATIONS.
6. ADD FLY ASH OR SLAG AT A RATE OF 10% TO 25% OF PORTLAND CEMENT BY WEIGHT.
7. THE ROCK AND SOIL SURFACES TO RECEIVE SHOTCRETE SHALL BE THOROUGHLY CLEANED OF ALL VEGETATION AND DEBRIS BEFORE RECEIVING SHOTCRETE. THESE SURFACES SHALL BE WETTED AND DAMP BEFORE SHOTCRETE IS PLACED.
8. INSPECTION AND ACCEPTANCE BY ENGINEER OF SUBGRADES, SUBSURFACE DRAINAGE, REINFORCEMENT AND SHOTCRETE IS REQUIRED.
9. SHOTCRETE SHALL HAVE NO CONTRACTION JOINTS. THE FINISHES SHALL CONFORM TO PROJECT SHOTCRETE SPECIFICATIONS, OR AS DIRECTED BY PROVOST & PRITCHARD OR THE OWNER'S REPRESENTATIVE.

ROCK DOWEL

1. SPECIAL INSPECTIONS ARE REQUIRED, SEE INSPECTIONS TABLE.
2. THE CONTRACTOR SHALL INSTALL ROCK DOWELS ACCORDING TO SPECIFICATION SECTION 02460, OR AS DIRECTED BY P&P.
3. THE CONTRACTOR SHALL PERFORM ROCK DOWEL LOAD TESTS ON SACRIFICIAL ROCK DOWELS.
4. SEE LOAD TEST NOTES FOR REQUIRED TEST FREQUENCY, TEST REQUIREMENTS, LOAD TEST SCHEDULE/PROCEDURES, AND ACCEPTANCE CRITERIA.
5. BARS FOR PRODUCTION ROCK DOWELS SHALL BE GRADE 75, #8 ALL-THREAD, AND EPOXY COATED OR GALVANIZED.
6. ROCK DOWEL DRILL HOLES SHALL BE 4 INCHES IN DIAMETER MINIMUM. DRILL HOLES FOR TEST DOWELS SHALL BE 4 INCHES IN DIAMETER.
7. THE DESIGN COMPRESSIVE STRENGTH OF CEMENT GROUT FOR ROCK DOWELS IS 4,000 PSI AT 28 DAYS.
8. THE GROUT MIX SHALL NOT EXCEED 4.75 GALLONS OF WATER PER SACK OF CEMENT (94 LBS). IF THE CONTRACTOR CAN PUMP A STIFFER MIX, THEN THEY SHALL USE 4.5 GALLONS OF WATER PER SACK OF CEMENT.
9. THE CONTRACTOR SHALL DRILL ROCK DOWELS NEARLY PERPENDICULAR IN PLAN VIEW TO THE SHOTCRETE FACE.
10. BARS SHALL BE FULLY CEMENT GROUTED.

ROCK DOWEL LOAD TESTS

1. SPECIAL INSPECTIONS ARE REQUIRED, SEE INSPECTION NOTES.
2. ROCK DOWEL TESTING SHALL CONFORM TO SPECIFICATIONS SECTION 02460 OR AS DIRECTED BY P&P.
3. ROCK DOWEL LOAD-TEST PROGRAM SHALL INCLUDE:

•PROOF/VERIFICATION TEST AT LOCATIONS SELECTED BY P&P.

•FREQUENCY: AT LEAST ONE TEST FOR EVERY 20 PRODUCTION DOWELS.
4. TEST DOWELS SHALL CONSIST OF GRADE 75, #8 BARS.
5. JACK CAPACITY SHALL BE 30 TONS OR OTHERWISE APPROVED BY ENGINEER.
6. CAUTION: DO NOT OVERLOAD TEST DOWELS.

•ALLOWABLE LOAD IS 90% OF THE YIELD STRENGTH.

•THE MAXIMUM ALLOWABLE LOAD FOR GRADE 75 #8 BAR IS 53 KIPS.
7. MIN. UN-BONDED LENGTH (TEST DOWELS) = 2 FEET.

8. LOAD INCREMENTS AND LOAD TIME SCHEDULE

LOAD INCREMENT	HOLD TIME
AL	UNTIL STABLE
0.25TL	UNTIL STABLE
0.50TL	UNTIL STABLE
0.75TL	UNTIL STABLE
1.00TL	UNTIL STABLE
1.25TL	UNTIL STABLE
1.50TL (CREEP TEST LOAD)	10 OR 60 MIN. (SEE BELOW)
1.75TL	UNTIL STABLE
2.00TL (MAX TEST LOAD)	10 OR 60 MIN. (SEE BELOW)
AL	UNTIL STABLE
MAX BAR LOAD OR PULLOUT (VERIFICATION TEST)	UNTIL STABLE OR PULLOUT
AL (IF NO PULLOUT)	UNTIL STABLE
(TL IN POUNDS = TEST LOAD = [3.14 X HOLE DIA. IN INCHES X BONDED LENGTH IN INCHES] X DESIGN BOND STRESS IN PSI] SEE NOTE 9)	
(AL = ALIGNMENT LOAD = 0.10TL)	

9. HOLE DIAMETER, GROUTED LENGTHS, DESIGN BOND STRESS TEST LOADS

TESTS FOR ROCK DOWELS GROUTED IN ROCK:

- TEST HOLE DIAMETER = 4 INCHES

•GROUTED LENGTH = 8 FEET

•DESIGN BOND STRESS = 12.5 PSI

•FOR A 4-INCH DIAMETER DRILL HOLE, USE 1,885 LBS. PER LINEAL FOOT OF GROUTED NAIL LENGTH TO CALCULATE TL

•FOR A 8-FOOT GROUTED LENGTH, TL = 15.1 KIPS
10. DEFINITION AND PROCEDURES:

•PULLOUT DEFINITION: UNABLE TO SUSTAIN LOAD BECAUSE OF SIGNIFICANT BAR END MOVEMENT.

•APPLY EACH TEST LOAD INCREMENT IN LESS THAN ONE MINUTE.

•HOLD EACH NON-CREEP TEST LOAD LONG ENOUGH TO OBTAIN STABLE LOAD/BAR-END DEFLECTION READINGS (IF NO PULLOUT).

•CREEP TESTS: PERFORM EITHER A 10-MINUTE OR A 60-MINUTE CREEP TEST AT THE CREEP TEST LOADS. START THE CREEP PERIOD (AND START RECORDING ELAPSED TIME) IMMEDIATELY AFTER APPLYING THE CREEP LOAD AND MAKE MEASUREMENTS AT ELAPSED TIMES OF 1, 2, 3, 5, 6 AND 10 MINUTES.

•IF THE DIFFERENTIAL MEASURED BAR-END DEFLECTIONS BETWEEN THE 1 MINUTE INCREMENT AND THE 10 MINUTE INCREMENT IS MORE THAN 0.04-INCH, THEN:

•• MAINTAIN THE LOAD

•• CONTINUE RECORDING ELAPSED TIME

•• CONTINUE THE CREEP TEST FOR AN ADDITIONAL 50 MINUTES

•• MAKE MEASUREMENTS AT ELAPSED TIMES OF 15, 20, 25, 30, 45 AND 60 MINUTES

•• TERMINATE THE CREEP TEST AND CONTINUE WITH THE NEXT LOAD INCREMENT

•IF THE DIFFERENTIAL MEASURED BAR-END DEFLECTIONS BETWEEN 1 MINUTE AND 10 MINUTE INCREMENTS IS 0.04-INCHES OR LESS, THEN TERMINATE THE CREEP TEST AND CONTINUE WITH THE NEXT LOAD INCREMENT.

•AFTER COMPLETING CREEP TESTS AT 2.0TL AND REDUCING THE LOAD TO AL (AND MAKING MEASUREMENTS AT THE AL), PERFORM THE VERIFICATION TEST

•VERIFICATION TEST: PULL TEST NAILS TO PULLOUT OR TO THE MAXIMUM BAR ALLOWABLE LOAD WHICHEVER IS LESS.

•THE CONTRACTOR MAY REMOVE THE BAR-END DEFLECTION DIAL-GAUGE BEFORE PERFORMING THE VERIFICATION TEST (TO AVOID DAMAGING THE GAUGE).

•DURING THE VERIFICATION TEST, MONITOR THE APPLIED LOAD (OR CHANGE IN THE APPLIED LOAD). IF THE BAR SUSTAINS THE MAXIMUM LOAD (WITH NO PULLOUT), THEN RECORD THE MAXIMUM LOAD, THE MAXIMUM BOND STRESS, AND THE CORRESPONDING BAR END DEFLECTION (IF THE DEFLECTION DIAL GAUGE IS STILL IN PLACE). IF THE DEFLECTION DIAL GAUGE IS STILL IN PLACE, THEN REDUCE THE LOAD TO THE AL AND MAKE/RECORD MEASUREMENTS AT THE AL.

•MEASURE AND RECORD THE LOAD AND THE BAR END DEFLECTION FOR EACH LOAD AND LOAD/TIME INCREMENT, INCLUDING THE AL INCREMENTS (AFTER APPLIED LOAD AND BAR-END MEASUREMENTS ARE STABLE). FOR THE CREEP TESTS, MEASURE AND RECORD THE ELAPSED TIME FOR EACH TIME INCREMENT. IF PULLOUT OCCURS, IDENTIFY/RECORD THE ATTEMPTED LOAD INCREMENT DURING WHICH PULLOUT OCCURS AND THE MAXIMUM LOAD AT PULLOUT.

•IF PULLOUT OCCURS AT A LOAD INCREMENT LESS THAN 1.5TL OR IF THE CREEP TEST AT 1.5TL DOES NOT MEET ACCEPTANCE CRITERIA, THEN REDUCE THE LOAD TO THE AL AND THEN PERFORM A CREEP TEST THAT MEETS ACCEPTANCE CRITERIA AT THE HIGHEST SUSTAINABLE LOAD

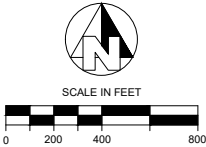
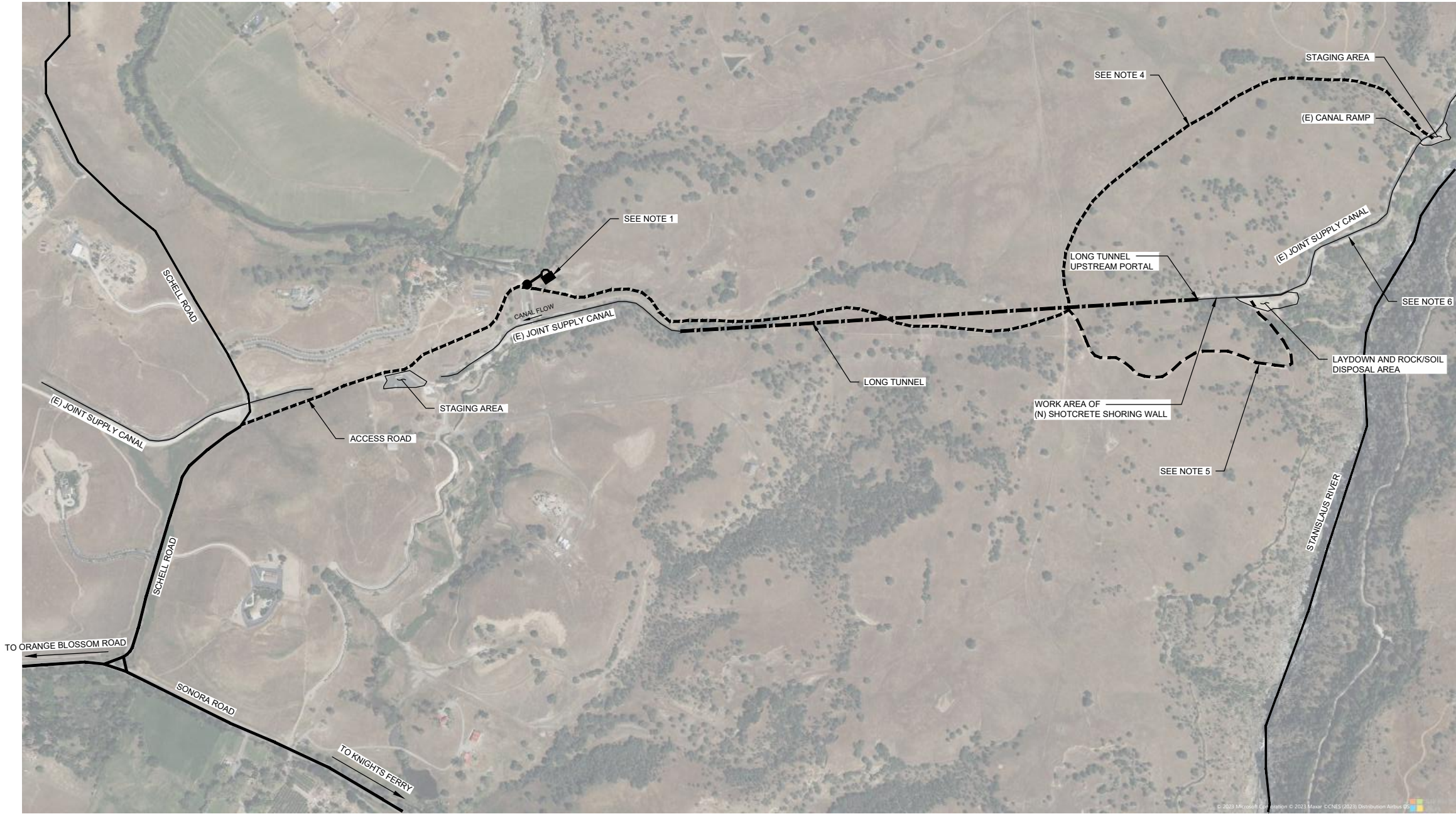
•THE ENGINEER SHALL RE-EVALUATE THE DESIGN IF ACCEPTANCE CRITERIA IS NOT MET.
11. ACCEPTANCE CRITERIA:
- TOTAL MOVEMENT OF NO MORE THAN 0.04 INCHES BETWEEN 1 MIN. AND 10 MIN. READINGS OR NO MORE THAN 0.08 INCHES BETWEEN 6 MIN. AND 60 MIN. READINGS DURING THE CREEP TEST AT 1.5TL.

•BAR DEFLECTION AT 1.5TL > 80% OF THE THEORETICAL ELASTIC ELONGATION OF THE BAR LENGTH EXTENDING FROM THE TOP OF THE GROUT TO THE JACK NUT.
- INSPECTIONS TABLE:
- | ITEM | TYPE (INSPECTION / TEST)
BLANK IF NOT REQUIRED OR NOT APPLICABLE | DESCRIPTION (PERIODIC / CONTINUOUS INSPECTION OR TEST FREQUENCY) | REFERENCES FOR INSPECTION CODES AND TEST METHODS | NOTES |
|--|---|--|--|---------------------|
| SITE PREPARATION | INSPECTION | PERIODIC | CBC 1705.6 | |
| EARTHWORK | INSPECTION | PERIODIC | CBC 1705.6 | |
| SHOTCRETE WALL BACKDRAINAGE | INSPECTION | PERIODIC | | DESIGN REQUIREMENT |
| ROCK DOWEL DRILLING AND INSTALLATION | INSPECTION | PERIODIC | CBC 1705.8 | |
| ROCK DOWEL GROUTING | TESTS | CONTINUOUS ONE CYLINDER SET PER SHIFT | CBC 1705.8, 1705.3
ASTM C31 | |
| ROCK DOWEL GROUT | TESTS | EACH CYLINDER SET | ASTM C39 | |
| ROCK DOWEL LOAD TESTS | INSPECTION | CONTINUOUS | | DESIGN REQUIREMENTS |
| SHOTCRETE SHORING WALL SHOTCRETE | INSPECTION | PROPER MIX DESIGN VERIFICATION | CBC 1705.3 | |
| SHOTCRETE SHORING WALL SHOTCRETE PLACEMENT | INSPECTION | CONTINUOUS ONE 20 X 20 X 5.5-INCH PANEL PER SHIFT (MAX. 50 CY PLACED) NOT INCLUDING BACKFILL SHOTCRETE | CBC 1705.3
ASTM C1140 | |
| SHOTCRETE SHORING WALL SHOTCRETE | TESTS | EACH PANEL | ASTM C1604 | |
| EPOXY ANCHORS | INSPECTION | PERIODIC | CBC 1705.3 | |
-
-
- COPYRIGHT 2023 BY PROVOST & PRITCHARD ENGINEERING GROUP, INC. ALL RIGHTS RESERVED. The firm of Provost & Pritchard Engineering Group, Inc. is the author of these plans and the designs shown hereon. These plans are not to be reproduced, changed, or copied in any form or by any means, without the prior written permission and consent of Provost & Pritchard Engineering Group, Inc. in the event of any dispute, the parties shall submit to arbitration. The third party shall hold the firm of Provost & Pritchard Engineering Group, Inc. harmless, and shall defend, indemnify, and hold the firm of Provost & Pritchard Engineering Group, Inc.'s legal fees associated with defending and enforcing these rights.
- | | | | |
|-------------|-----|----|------------|
| FOR BIDDING | SWL | BY | DATE |
| | | | 09/06/2023 |
| No. | | | |
| REVISION | | | |
-
- LONG TUNNEL MAINTENANCE

SOUTH SAN JOAQUIN IRRIGATION DISTRICT
STANISLAUS COUNTY, CALIFORNIA

NOTES
- PROVOST & PRITCHARD

1866 GREENLEY RD. SUITE J
SONOMA, CALIFORNIA 94970
559449-2700 FAX 559448-2715
https://provostandpritchard.com
- | | |
|---|--------------------|
| DESIGN ENGINEER:
ANDREW KOSITSKY | |
| LICENSE NO:
GE 2532 | |
| DRAFTED BY:
KGM | CHECKED BY:
SWL |
| DATE: 09/06/2023 | |
| JOB NO: 1055-23005 | |
| PROJECT NO: 23 | |
| PHASE: 005 | |
| ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS. | |
| SHEET | |
| 1.1 | |
| 2 | OF 8 |
- 9/5/2023 10:23 AM g:\south san joaquin id-1055\05523005-long tunnel portal\portal shoring\300 CAD\340 sheet set\01_Design\1.1 NOTES.dwg -Ken McKinley



LEGEND

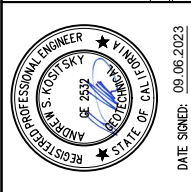
- LOCKED GATE
- SITE ACCESS ROADS

NOTES

- SEE ACCESS NOTES ON SHEET 1.0.
- FINAL LOCATIONS AND SIZES OF LAYDOWN, STAGING, AND MATERIAL DISPOSAL AREAS SHALL BE APPROVED BY SSJID.
- THE CONTRACTOR MUST ENSURE PROPERTY OWNER OPERATIONS ARE NOT IMPEDED DURING CONSTRUCTION. THIS INCLUDES BUT NOT LIMITED THE ABILITY TO MOVE AND OPERATE EQUIPMENT NEAR STAGING/LAYDOWN AREAS AND MAINTAIN ACCESS TO AND FROM CANAL BANK.
- PRIMARY ALL-WEATHER SITE ACCESS ROAD.
- SECONDARY FAIR-WEATHER SITE ACCESS ROAD.
- LIMITED CANAL BANK ACCESS BETWEEN STAGING AREA AND LAYDOWN AREA.

Copyright 2023 by PROVOST & PRITCHARD ENGINEERING GROUP, INC. ALL RIGHTS RESERVED. The firm of Provost & Pritchard Engineering Group, Inc. is not responsible for the accuracy of these plans or the results of their use. These plans are not to be reproduced, changed, or copied in any form without the written permission of the firm of Provost & Pritchard Engineering Group, Inc. The third party shall hold the firm of Provost & Pritchard Engineering Group, Inc. harmless, and shall defend and hold the firm of Provost & Pritchard Engineering Group, Inc. harmless, and shall enforce these rights.

No.	REVISION	BY	DATE
1	FOR BIDDING	SWL	09/06/2023

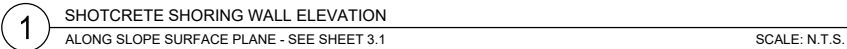


LONG TUNNEL MAINTENANCE
SOUTH SAN JOAQUIN IRRIGATION DISTRICT
STANISLAUS COUNTY, CALIFORNIA
OVERALL SITE PLAN

PROVOST & PRITCHARD
CONSULTING ENGINEERS
1866 GREENLEY RD. SUITE J
SONORA, CALIFORNIA 95370
559449-2700 FAX 559448-2715
https://www.provostandpritchard.com

DESIGN ENGINEER: ANDREW KOSITSKY LICENSE NO: GE 2532	CHECKED BY: SWL
DRAFTED BY: KGM	DATE: 09/06/2023
JOB NO: 1055-23005	PROJECT NO: 23
PHASE: 005	ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.
SHEET 2.0	3 OF 8

DISCLAIMER: THIS PLAN REPRESENTS FEATURES FOR ILLUSTRATION PURPOSES ONLY. IT IS NOT A LEGAL SURVEY AND IS NOT INTENDED FOR USE IN DETERMINING BOUNDARIES OR DIMENSIONS. ANY USE OF THIS PLAN FOR PURPOSES OTHER THAN LOCATION OF FEATURES IS DONE SO AT THE USER'S RISK AND WITHOUT THE CONSENT OF PROVOST & PRITCHARD. SEE CIVIL DOCUMENTS FOR LOCATION OF BOUNDARIES AND FEATURES.



- LEGEND**
- ROCK DOWEL
- TEST DOWEL

COPYRIGHT 2020 BY PROVOST & Pritchard Engineering Group, Inc. All rights reserved.
The firm of Provost & Pritchard Engineering Group, Inc. expressly reserves its common law copyright and all other rights in the drawings, designs, specifications, plans or any part thereof, and no part of the drawings, designs, specifications, plans or any part thereof, shall be reproduced, changed, or copied in any form or manner whatsoever, nor are they to be assigned to a third party without first obtaining the written permission and consent of Provost & Pritchard Engineering Group, Inc. In the event of unauthorized reuse of these plans by a third party, the third party shall forfeit the firm of Provost & Pritchard Engineering Group, Inc.'s legal fees associated with defending and enforcing these rights.

No.	FOR BIDDING	SWL	09.06.2023
		BY	DATE



DATE SIGNED: 09.06.2023

LONG TUNNEL MAINTENANCE

SHOTCRETE SHORING WALL ELEVATION

PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company
19089 GREENLEY RD, SUITE J
SONOMA, CALIFORNIA 95070
530/443-2700 FAX 530/449-2715
<https://provostandpritchard.com/>

DESIGN ENGINEER:
ANDREW KOSITSKY
LICENSE NO:
GE 2532

DRAFTED BY: KGM	CHECKED BY: SWL
--------------------	--------------------

DATE: 09/06/2023

JOB NO: 1055-23005

PROJECT NO: 23

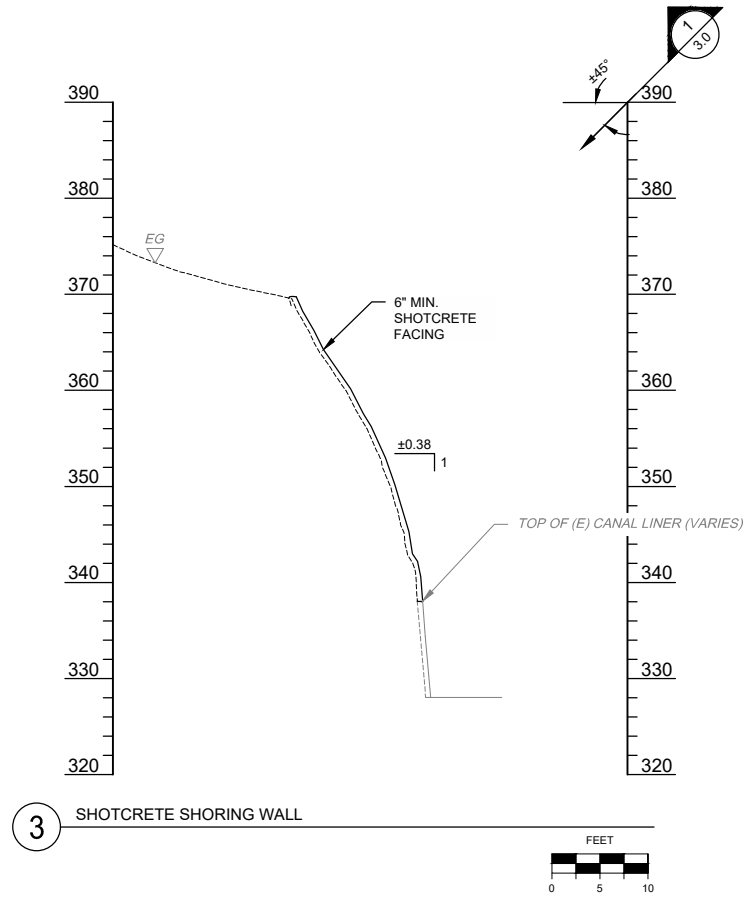
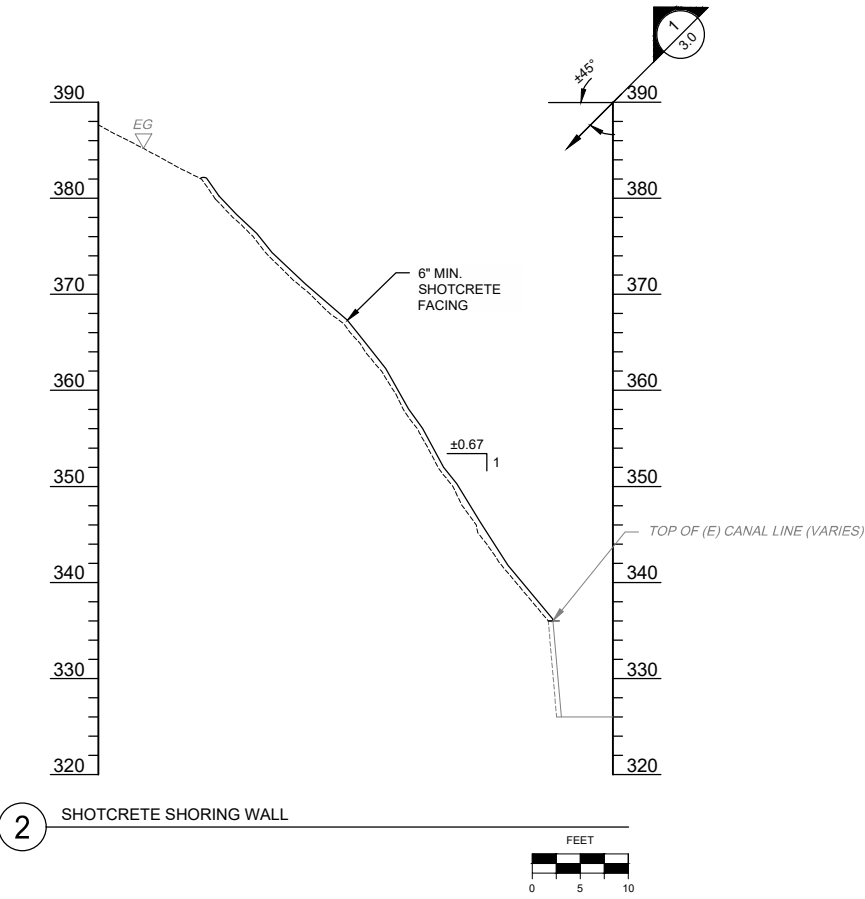
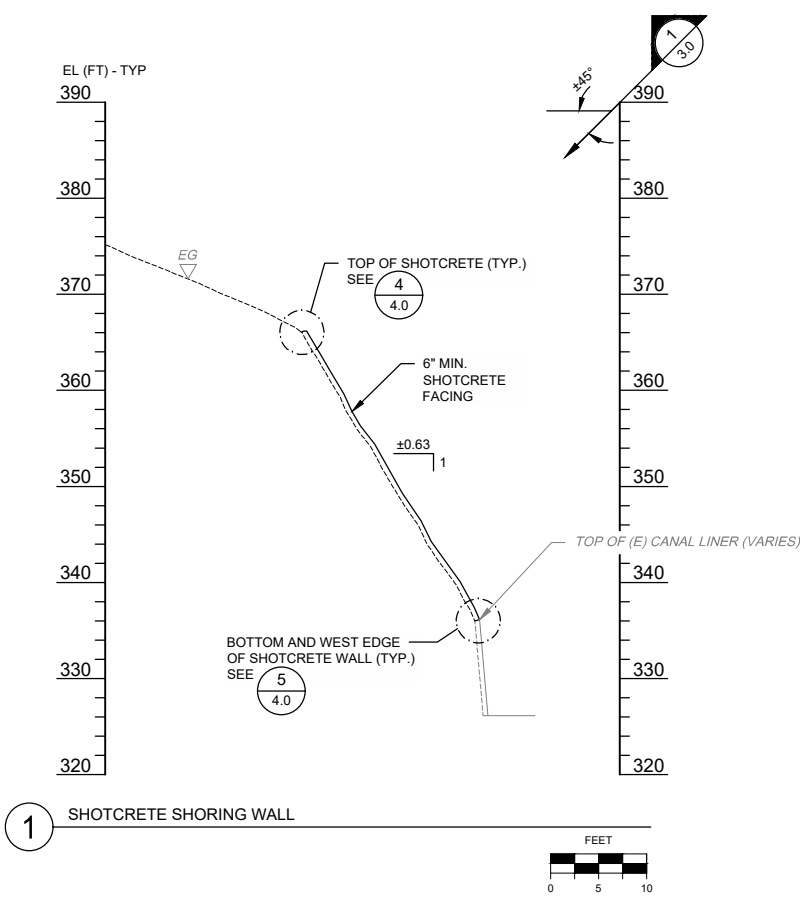
PHASE: 005

0 1"

ORIGINAL SCALE SHOWN IS ONE
INCH. ADJUST SCALE FOR
REDUCED OR ENLARGED PLANS.

SHEET **3.0**

6 OF 8



PROVOST & PRITCHARD

CONSULTING ENGINEERS

18665 GREENLEY RD. SUITE J
SONOMA, CALIFORNIA 95370
559/449-2700 FAX 559/448-2715
<https://provostandpritchard.com/>

DESIGN ENGINEER:

ANDREW KOSITSKY

LICENSE NO:

GE 2532

DRAFTED BY:

KGMM

CHECKED BY:

SWL

DATE:

09/06/2023

JOB NO:

1055-23005

PROJECT NO:

23

PHASE:

005

ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.

SHEET

3.1

7

OF

8

LONG TUNNEL MAINTENANCE

SOUTH SAN JOAQUIN IRRIGATION DISTRICT

STANISLAUS COUNTY, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER

ANDREW KOSITSKY

GE 2532

PROVOST & PRITCHARD

STATE OF CALIFORNIA

DATE SIGNED:

09.06.2023

SHOTCRETE SHORING WALL SECTIONS

FOR BIDDING

SWL

BY

DATE

09.06.2023

REVISION

No.

COPYRIGHT 2023 BY PROVOST & PRITCHARD ENGINEERING GROUP, INC. ALL RIGHTS RESERVED. The firm of Provost & Pritchard Engineering Group, Inc. is the owner of the copyright in these plans and other applicable property rights in these plans. These plans are not to be reproduced, changed, or copied in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without the written permission and consent of Provost & Pritchard Engineering Group, Inc. In the event of any dispute, the third party shall hold the firm of Provost & Pritchard Engineering Group, Inc. harmless, and shall defend, indemnify, and hold the firm of Provost & Pritchard Engineering Group, Inc.'s legal fees associated with defending and enforcing these rights.

