

# OAKDALE IRRIGATION DISTRICT

## SOUTH MAIN CANAL IMPROVEMENTS

### SEGMENT 3

#### SCOPE OF WORK

- WORK CONSISTS OF CONSTRUCTING IMPROVEMENTS TO PORTIONS OF THE CANAL ALONG THE OAKDALE IRRIGATION DISTRICT SOUTH MAIN CANAL FROM ABOUT 200 FEET DOWNSTREAM OF FLUME NO. 2 TO APPROXIMATELY 325 FEET DOWNSTREAM OF THE OUTLET OF WILLMS SIPHON.
- WORK INCLUDES, BUT IS NOT LIMITED TO:
  - ROCK, SOIL, AND RUBBLE REMOVAL.
  - VEGETATION REMOVAL, DEMOLITION, AND SITE PREPARATION.
  - PLACING SHOTCRETE LINERS AND REINFORCED CONCRETE INVERTS IN THE CANAL.
  - CONSTRUCT TWO CANAL RAMPS THAT INCLUDE REINFORCED CONCRETE BOTTOMS AND SHOTCRETE WALLS.
  - CONSTRUCTING CUTOFF/KEYWAY WALL(S).
  - BACKFILLING DEPRESSIONS ON GROUND SURFACE BEHIND CANAL LINER WITH LEAN CONCRETE.
  - PERFORMING CONCRETE HEADWALL, APRON, AND APRON WALL CRACK REPAIRS FOR SELECTED CRACKS.

#### PROJECT SITE

OAKDALE IRRIGATION DISTRICT, SOUTH MAIN CANAL STANISLAUS COUNTY, CALIFORNIA. THE WORK AREAS ARE IN THE VICINITY OF KNIGHTS FERRY, CA. AND ARE SHOWN ON THE VICINITY MAP AND ON DRAWING 2.0

**OWNER'S CONTACT:**  
 OAKDALE IRRIGATION DISTRICT (OID)  
 1205 EAST F STREET  
 OAKDALE, CA 95361  
 JOE KOSAKIEWICZ, CONSTRUCTION AND MAINTENANCE MANAGER  
 Direct (209) 840-5535  
 Mobile (209) 896-7502  
 jkosakiewicz@oakdaleirrigation.com

**ENGINEER CONTACT:**  
 PROVOST & PRITCHARD  
 CONSULTING GROUP (P&P)  
 19969 GREENLEY ROAD  
 SUITE J  
 SONORA, CALIFORNIA 95310  
 SCOTT LEWIS, CEG, PRINCIPAL  
 (209) 601-5585  
 slewis@ppeng.com

**PREPARED BY:**  
 PROVOST & PRITCHARD  
 CONSULTING GROUP (P&P)  
 19969 GREENLEY ROAD  
 SUITE J  
 SONORA, CALIFORNIA 95310  
 ANDY KOSITSKY, GE, PE  
 (209) 768-5489  
 akositsky@ppeng.com

#### SPECIFIC NOTES

- THE AERIAL TOPOGRAPHY (AT) SHOWN ON THESE PLANS WAS COLLECTED BY TRISTATE PHOTOGRAMMETRY DATED APRIL 29, 2009 FILE 09057.DWG. A GROUND TOPOGRAPHY SURVEY (GT) WHICH IS ALSO SHOWN WAS COLLECTED BY GIULLIANI AND KULL DATED FEBRUARY 28, 2012.
  - CANAL CENTERLINE ESTABLISHED BY GIULLIANI AND KULL. LIMIT OF CONSTRUCTION BASED UPON A 50 FOOT OFFSET OF ESTABLISHED CANAL CENTERLINE.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING AND/OR RE-ESTABLISHING ALL EXISTING SURVEY MONUMENTS. RESETTling AND/OR RE-ESTABLISHING EXISTING SURVEY MONUMENTS SHALL BE CONDUCTED BY A CALIFORNIA LICENSED LAND SURVEYOR.
- #### ACCESS
- DRAWINGS 2.0, 2.1 AND 2.2 SHOW ACCESS CONDITIONS.
  - 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.
  - THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DISTRICT ACCESS ROADS DURING CONSTRUCTION.
  - THE CONTRACTOR SHALL KEEP SITE AND CANAL ACCESS ROUTES CLEAR OF DEBRIS, MATERIALS AND EQUIPMENT.
  - THE CONTRACTOR AND ALL OTHER PROJECT PERSONEL SHALL KEEP THE GATES AT WILLMS ROAD CLOSED AND LOCKED WHEN THEY ARE NOT IN USE.
  - SPECIAL PROVISIONS FOR ACCESS ROUTE THROUGH WILLMS RANCH COMPOUND:
    - FREE ACCESS LIMITED TO 30 WORK DAYS ONLY FOR ENTIRE PROJECT DURATION; ADDITIONAL ACCESS DAYS SHALL REQUIRE A FEE PER THE CONTRACT DOCUMENTS.
    - NO ACCESS ALLOWED ON SUNDAYS, THANKSGIVING WEEKEND (NOVEMBER 24-27) AND CHRISTMAS HOLIDAY (DECEMBER 24-26).
    - ALLOWED ACCESS HOURS 6am TO 6pm ONLY.
    - GATE AT WILLMS ROAD SHALL BE MANNED BY A CONTRACTOR REPRESENTATIVE FULL-TIME DURING ACCESS DAYS.
  - TRAVEL ON WILLMS RANCH (OUTSIDE OF OID RIGHT-OF-WAY) LIMITED TO EXISTING ROADS ALONG ROUTES SHOWN ON SHEET 2.2; OFF-ROAD TRAVEL OR EQUIPMENT ACCESS SHALL NOT BE ALLOWED BEYOND OID RIGHT-OF-WAY. WILLMS RANCH ROADS UTILIZED BY CONTRACTOR SHALL BE IN AS GOOD OR BETTER THAN PRE-EXISTING CONDITION AT THE COMPLETION OF THE PROJECT.
  - SPEED LIMIT 10 MPH ALONG ON-SITE ACCESS ROADS. CONTRACTOR SHALL POST TEMPORARY SPEED LIMIT SIGNS.

#### 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.
- 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 OAKDALE 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 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.
- FADED BACKGROUND REPRESENTS EXISTING TOPOGRAPHIC AND SITE FEATURES BASED ON GROUND SURVEYED TOPOGRAPHY FROM GIULLIANI AND KULL, DRAWING FILE X-TOPO.DWG, DATED APRIL 9, 2009 AND AERIAL PHOTOGRAMMETRY PROVIDED BY TRI STATE PHOTOGRAMMETRY DRAWING FILE 09057.DWG, DATED MARCH 18, 2009. HORIZONTAL AND VERTICAL DATUM NAD 83 CALIFORNIA STATE PLANE ZONE 3 AND NAVD83, RESPECTIVELY.
- 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 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, EXCAVATED MATERIALS, EXCESS CONSTRUCTION MATERIALS, AND OTHER WASTE LEGALLY AT AN OFFSITE LOCATION.

#### STORM WATER MANAGEMENT

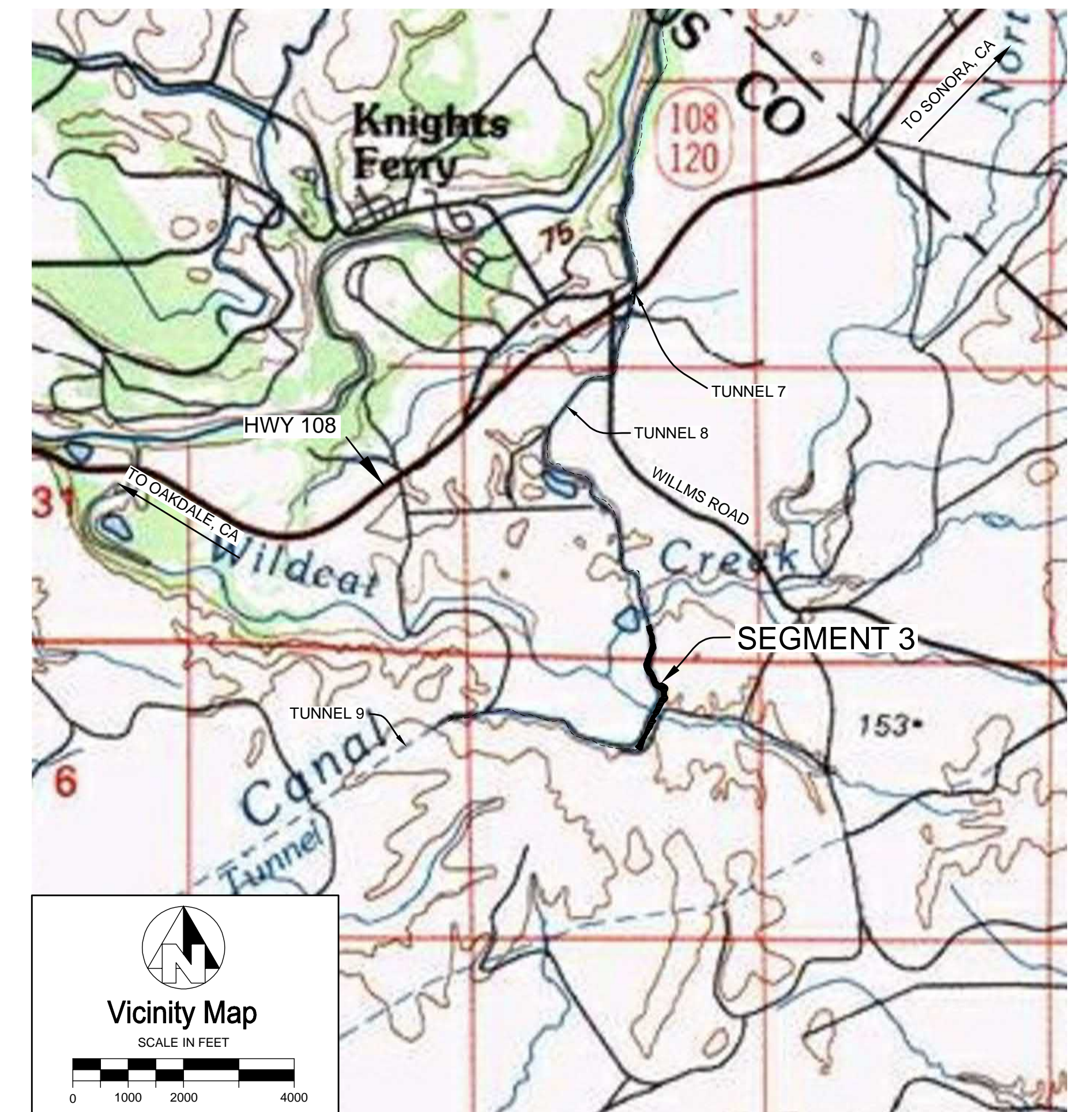
- THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING, MAINTAINING, OPERATING AND REMOVING TEMPORARY STORM WATER FACILITIES, MANAGING STORM WATER FLOWS, AND PREPARING AND IMPLEMENTING THE STORM WATER POLLUTION PROTECTION PLAN (SWPPP).

#### LEGEND

	DETAIL IDENTIFICATION		(AT) AERIAL TOPO CONTOURS
	SHEET NUMBER		(GT) GROUND TOPO CONTOURS
	REVISION NUMBER		WATER LEVEL (APPROX.)
	AREA OF REVISION		APPROXIMATE CANAL CENTERLINE FROM GIULLIANI & KULL SURVEY
	LOCKED GATE		
	CLOSED GATE		

#### ABBREVIATIONS:

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

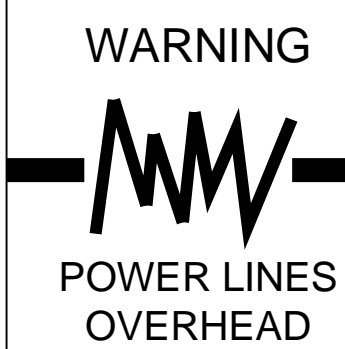


#### DRAWING INDEX

SHEET NO.	TITLE
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2.1	SITE PLAN AND KEY MAP
2.2	SITE ACCESS PLAN
3.1	SITE PLAN AND IMPROVEMENT SUMMARY
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3.3	SITE PLAN AND IMPROVEMENT SUMMARY
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4.0	SECTIONS AND PROFILES
5.0	LINER AND REPAIR DETAILS
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DATE SIGNED: 06/29/2022



OAKDALE IRRIGATION DISTRICT			
SOUTH MAIN CANAL IMPROVEMENTS SEGMENT 3			
COVER SHEET AND DRAWING INDEX			
EST. 1988 <b>PROVOST &amp; PRITCHARD</b> CONSULTING GROUP An Employee Owned Company		19969 GREENLEY RD SUITE J SONORA, CA 95310 (209) 449-2700 fax (209) 449-2715 www.ppeng.com	
JOB#:	1783	DRAWN: K. MCKINLEY	SCALE: AS SHOWN
DATE:	06/22/2022	CHECKED: SWL	FILE: 1783 COVER

**SHEET**  
1.0  
1 of 15

**EARTHWORK:**

- REFER TO CONTRACT SPECIFICATION SECTION 02320 FOR EARTHWORK.
- THE CONTRACTOR SHALL VISUALLY INSPECT THE SITE TO DETERMINE THE EXTENT OF SITE PREPARATION AND GRADING TO BE PERFORMED.
- THE CONTRACTOR SHALL REMOVE TREES AND VEGETATION, CLEAR AND GRUB AT LEAST 2-FEET BEYOND THE LIMITS OF THE WORK.
- CANAL INVERT IN HARD ROCK AREAS: SMOOTH OUT EXISTING SEDIMENT MATERIAL AND ADD AGGREGATE BASE ROCK AS NEEDED OVER HARD ROCK AND TRACK-WALK WITH EQUIPMENT AS DIRECTED BY THE ENGINEER; REMOVE EXCESS LOOSE LAVA ROCK AND BOULDER MATERIALS TO ACHIEVE A UNIFORM SURFACE.
- CANAL INVERT IN SOIL AREAS: REMOVE LOOSE AND SOFT MATERIAL TO FIRM SUBGRADE, AS DIRECTED BY THE ENGINEER, TO ACHIEVE A UNIFORM SURFACE. BACKFILL AREAS OVER-EXCAVATED MORE THAN 12-INCHES, OR AS DIRECTED BY THE ENGINEER, USING AGGREGATE BASE ROCK COMPACTED TO 95% RELATIVE COMPACTION PER ASTM D1557.
- ALTERNATE CANAL SUBINVERT BACKFILL USING LEAN CONCRETE, CLASS F, AS DIRECTED BY THE ENGINEER.

**SHOTCRETE:**

- REFER TO CONTRACT SPECIFICATION SECTION 03470 FOR SHOTCRETE.
- DIMENSIONS SHOWN IN DETAILS ARE TYPICAL.
- SHOTCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
- ADD SYNTHETIC FIBER TO SHOTCRETE AT A RATE OF 4 LBS/CU. YD. PER MANUFACTURER'S SPECIFICATIONS.
- ADD FLY ASH OR SLAG AT A RATE OF 10% TO 25% OF PORTLAND CEMENT BY WEIGHT.
- SHOTCRETE SHALL HAVE A GUN FINISH.
- INSPECTION AND ACCEPTANCE BY ENGINEER OF SUBGRADES, REINFORCEMENT AND SHOTCRETE IS REQUIRED.
- 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.

**CONCRETE**

- REFER TO CONTRACT SPECIFICATION SECTIONS 03070 AND 03300 FOR CONCRETE REINFORCEMENT AND CONCRETE, RESPECTIVELY.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
- ADD SYNTHETIC FIBER TO CONCRETE FOR NEW INVERTS AND INVERT OVERLAYS AT RATE OF 4 LBS./CU. YD. PER MANUFACTURER'S SPECIFICATIONS.
- ADD FLY ASH OR SLAG AT A RATE OF 10% TO 25% OF PORTLAND CEMENT BY WEIGHT.
- CONCRETE FINISHES SHALL BE "U-1" PER CONTRACT SPECIFICATION SECTION 03300, UNLESS NOTED OTHERWISE.
- INSPECTION AND ACCEPTANCE BY ENGINEER OF CONCRETE AND REINFORCEMENT IS REQUIRED.
- TO REDUCE CONCRETE INVERT QUANTITIES, THE FOLLOWING CRITERIA SHALL BE USED: LOCAL INVERT HARD ROCK GROUND RESULTING IN MINIMUM 4-INCH THICKNESS OF CONCRETE ARE ACCEPTABLE, "PONDS" OF LESS THAN 12 INCHES IN DEPTH ARE ACCEPTABLE.
- CONTRACTOR SHALL LAY OUT FINAL INVERT GRADES FOR ACCEPTANCE BY ENGINEER PRIOR TO PLACEMENT OF CONCRETE INVERT.

**INSPECTIONS TABLE:**

ITEM	TYPE (INSPECTION / TEST) BLANK IF NOT REQUIRED OR NOT APPLICABLE	DESCRIPTION (PERIODIC / CONTINUOUS INSPECTION OR TEST FREQUENCY)	GOVERNING CODE FOR SPECIAL INSPECTIONS AND TEST METHODS	NOTES
EARTHWORK	INSPECTION	PERIODIC		
LINER SHOTCRETE	INSPECTION	PROPER MIX DESIGN VERIFICATION	CBC 1705.3 ACI 318, CH.19, 26.4.3, 26.4.4	
LINER SHOTCRETE PLACEMENT	INSPECTION	PERIODIC	CBC 1705.3 ACI 318.26.4.5	
LINER SHOTCRETE	TESTS	20 BY 20 BY 5.5-INCH PANEL PER 50 CUBIC YARDS PLACED	CBC 1705.3 IBC 1908.10 ACI 318.26.4.5, 26.12 ASTM C177, C31	
INVERT SUBGRADE	INSPECTION	PERIODIC	CBC 1705.6	
CONCRETE INVERT	INSPECTION	PROPER MIX DESIGN VERIFICATION		
CONCRETE INVERT/FOOTING PLACEMENT	INSPECTION	PERIODIC	CBC 1705.3, A4318: 26.4.5	
EPOXY ANCHORS	INSPECTION	PERIODIC	CBC 1705.3	
CONCRETE REINFORCEMENT	INSPECTION			
CONCRETE TESTS	TESTS	ONE CYLINDER SET PER 50 CY	ASTM C31 ASTM C143 ASTM C150	
LINER SHOTCRETE REINFORCEMENT	INSPECTION			

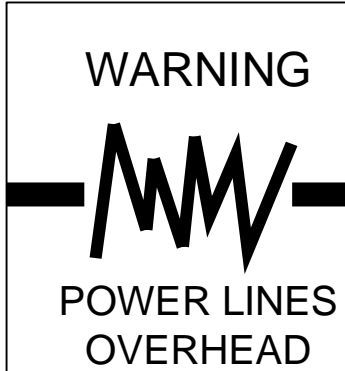


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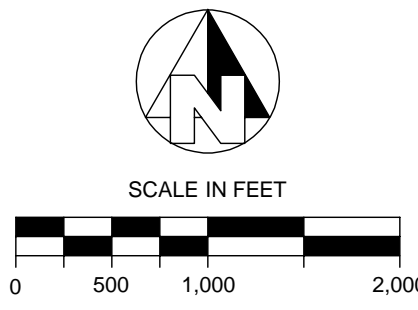
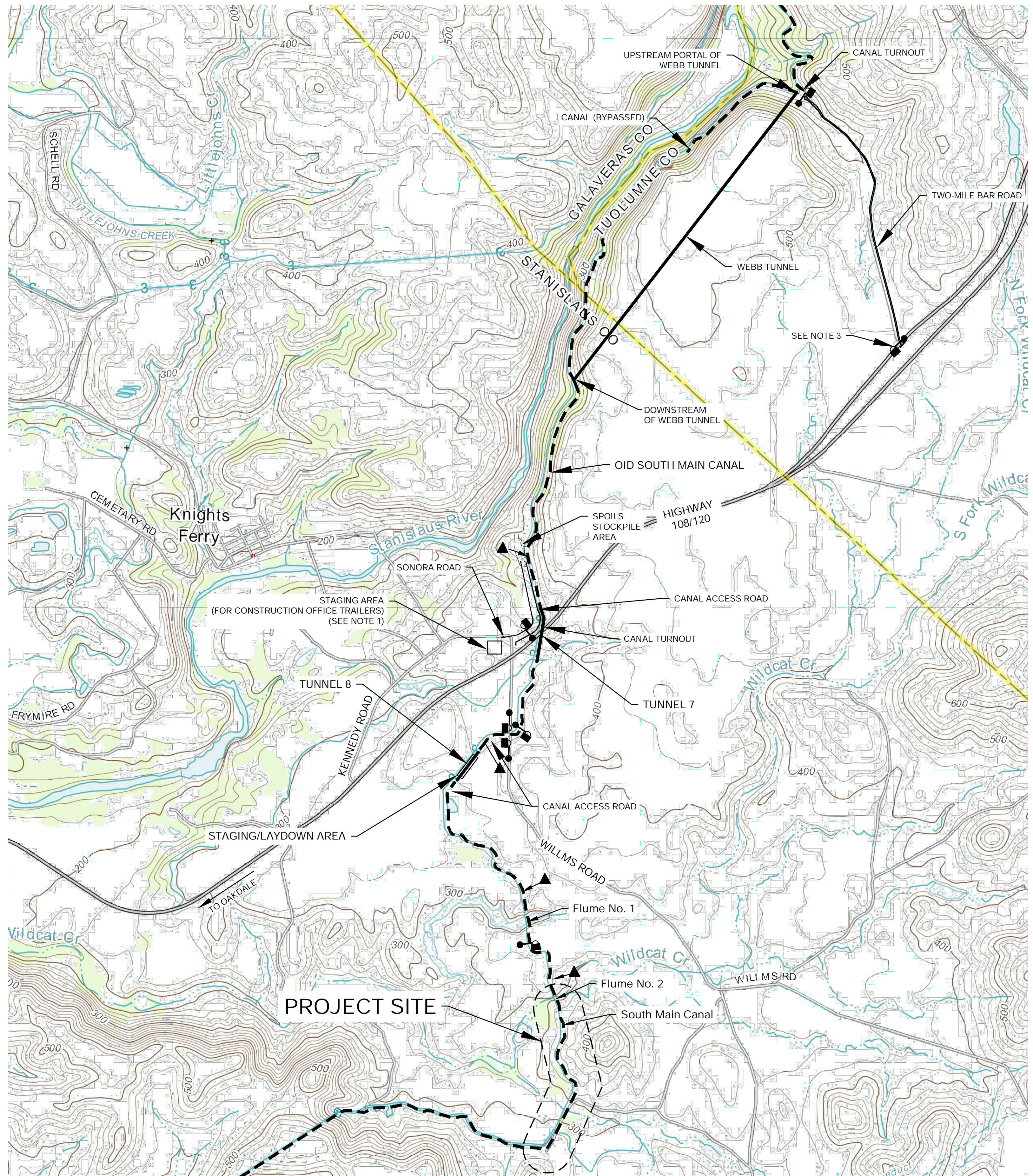
**OAKDALE IRRIGATION DISTRICT**  
SOUTH MAIN CANAL IMPROVEMENTS  
SEGMENT 3

**NOTES**



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	JOB#: 1783 DATE: 06/22/2022	

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**LEGEND**

- ▲ CANAL ACCESS RAMP
- LOCKED GATE

**NOTES**

1. SONORA ROAD STAGING AREA, IF USED FOR OFFICE TRAILERS, SHALL BE IMPROVED BY CONTRACTOR BY MINOR GRADING AND PLACEMENT OF AGGREGATE BASE ROCK, IF NECESSARY. SPECIFIC IMPROVEMENTS SHALL BE CONFIRMED BY OWNER PRIOR TO CONSTRUCTION.
2. STAGING/LAYDOWN AREA AT TUNNEL 8 LIMITED TO 100-FOOT WIDE OLD RIGHT-OF-WAY; CONTRACTOR TO PROVIDE MINOR GRADING AND PLACEMENT OF AGGREGATE BASE ROCK AS NECESSARY.
3. GATE AT TWO MILE BAR ROAD LOCKED BY US ARMY CORPS OF ENGINEERS AT CERTAIN TIMES.
4. THE CANAL TURNOUTS UPSTREAM OF THE PROJECT SITE LOCATED NEAR THE UPSTREAM PORTALS OF THE WEBB TUNNEL AND TUNNEL 7, AS SHOWN, MAY BE USED AT CONTRACTOR'S DISCRETION FOR STORM WATER CONVEYANCE TO THE STANISLAUS RIVER.



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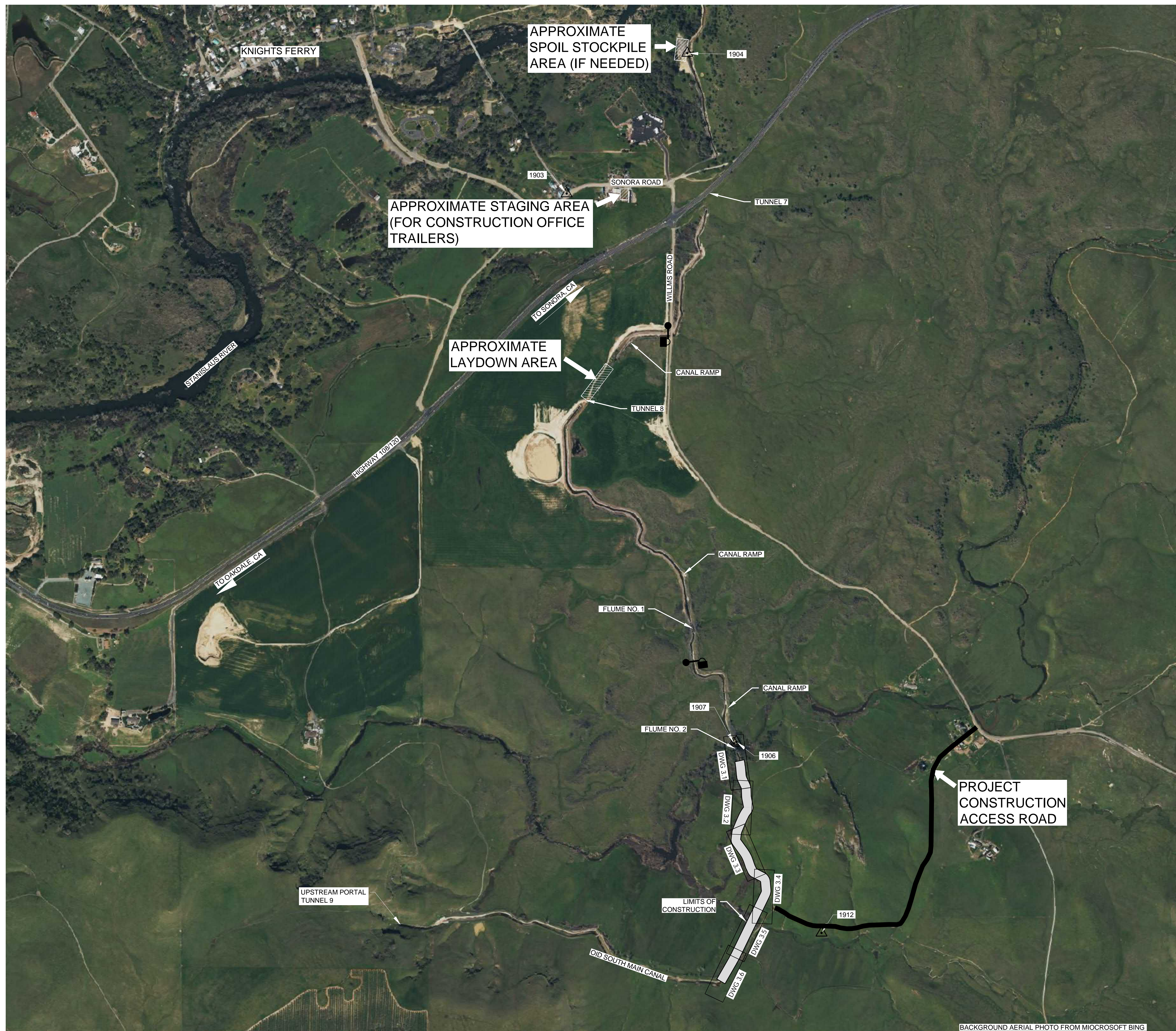
**OAKDALE IRRIGATION DISTRICT**

SOUTH MAIN CANAL IMPROVEMENTS  
SEGMENT 3

**OVERALL SITE PLAN**

<b>PROVOST &amp; PRITCHARD</b> CONSULTING GROUP <i>An Employee Owned Company</i>	EST. 1968 19969 GREENLEY RD SUITE J SONORA, CA 95310 (209) 449-2700 fax (209) 449-2715 www.ppeng.com	<b>SHEET</b> <b>2.0</b> 3 of 15
	JOB#: 1783 DATE: 06/22/2022	

BACKGROUND IMAGE: USGS 7.5 MINUTE QUADRANGLE, KNIGHTS FERRY 2012  
 DISCLAIMER: THIS MAP REPRESENTS FEATURES FOR ILLUSTRATION PURPOSES ONLY. IT IS NOT A LEGAL SURVEY AND IS NOT INTENDED FOR USE IN DETERMINING BOUNDARIES. ANY USE OF THIS MAP FOR PURPOSES OTHER THAN FOR APPROXIMATE LOCATION OF FEATURES IS DONE SO AT THE USER'S RISK AND WITHOUT THE CONSENT OF PROVOST & PRITCHARD.

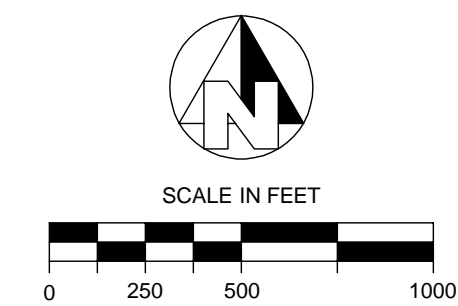


APPROXIMATE SPOIL STOCKPILE AREA (IF NEEDED)

APPROXIMATE STAGING AREA (FOR CONSTRUCTION OFFICE TRAILERS)

APPROXIMATE LAYDOWN AREA

PROJECT CONSTRUCTION ACCESS ROAD



CONTROL POINT COORDINATE TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1903	2119436.29	6515338.2	312.68	PK NAIL/FLY X
1904	2120912.14	6516605.19	328.59	5/8" RBR W/CAP
1906	2113673.43	6517121.86	320.69	SET RR SPIKE
1907	2113658.78	6517096.81	318.98	BOLT ON HANDRAIL
1912	2111664.39	6518017.38	298.09	N & S/FLY X

OID SEGMENT 3 STATION MONUMENTS				
STATION	NORTHING	EASTING	ELEVATION	DESCRIPTION
296+18	2113375.41	6517157.00	319.01	MAGNAIL/WASHER
298+00	2113199.97	6517208.86	318.53	MAGNAIL/WASHER
300+00	2113004.67	6517233.62	318.94	MAGNAIL/WASHER
302+00	3112833.58	6517154.72	318.78	MAGNAIL/WASHER
304+00	2112632.76	6517099.60	318.67	MAGNAIL/WASHER
306+00	2112462.35	6517212.03	318.26	MAGNAIL/WASHER
308+00	2112276.13	6517304.99	318.50	1/2" REBAR/WASHER
310+00	2112154.31	6517416.31	318.51	MAGNAIL/WASHER
312+00	2111968.66	6517377.22	302.68	MAGNAIL/WASHER
314+00	2111788.86	6517289.73	290.02	MAGNAIL/WASHER
316+00	2111609.14	6517202.00	296.76	MAGNAIL/WASHER
319+00	2111347.70	6517055.93	316.19	MAGNAIL/WASHER
321+15	2111167.42	6516938.49	315.29	MAGNAIL/WASHER

**LEGEND**

- LOCKED GATE
- APPROXIMATE CONSTRUCTION EQUIPMENT ACCESS ROUTE (SEE NOTE 2)
- CONTROL POINT

**NOTE**

1. FINAL LOCATIONS AND SIZES OF LAYDOWN, STAGING, AND STOCKPILE/SPOIL AREAS TO BE DETERMINED AND APPROVED BY OAKDALE IRRIGATION DISTRICT.
2. ROAD IMPROVEMENTS FROM LOCKED GATES AT WILLM'S ROAD TO LIMITS OF CONSTRUCTION BY OAKDALE IRRIGATION DISTRICT. RETURN TO PRE-CONSTRUCTION CONDITION.
3. CONTRACTOR MAY UTILIZE THE CANAL FOR LIMITED ACCESS, REFER TO SHEET 2.2.



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0	06/29/22	SWL	FOR BIDDING

**OAKDALE IRRIGATION DISTRICT**

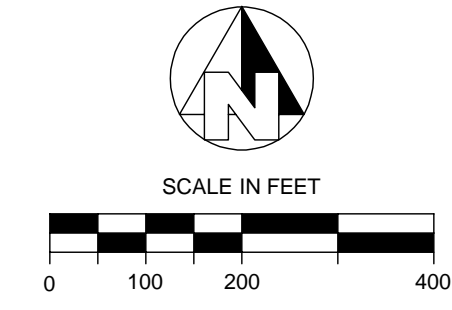
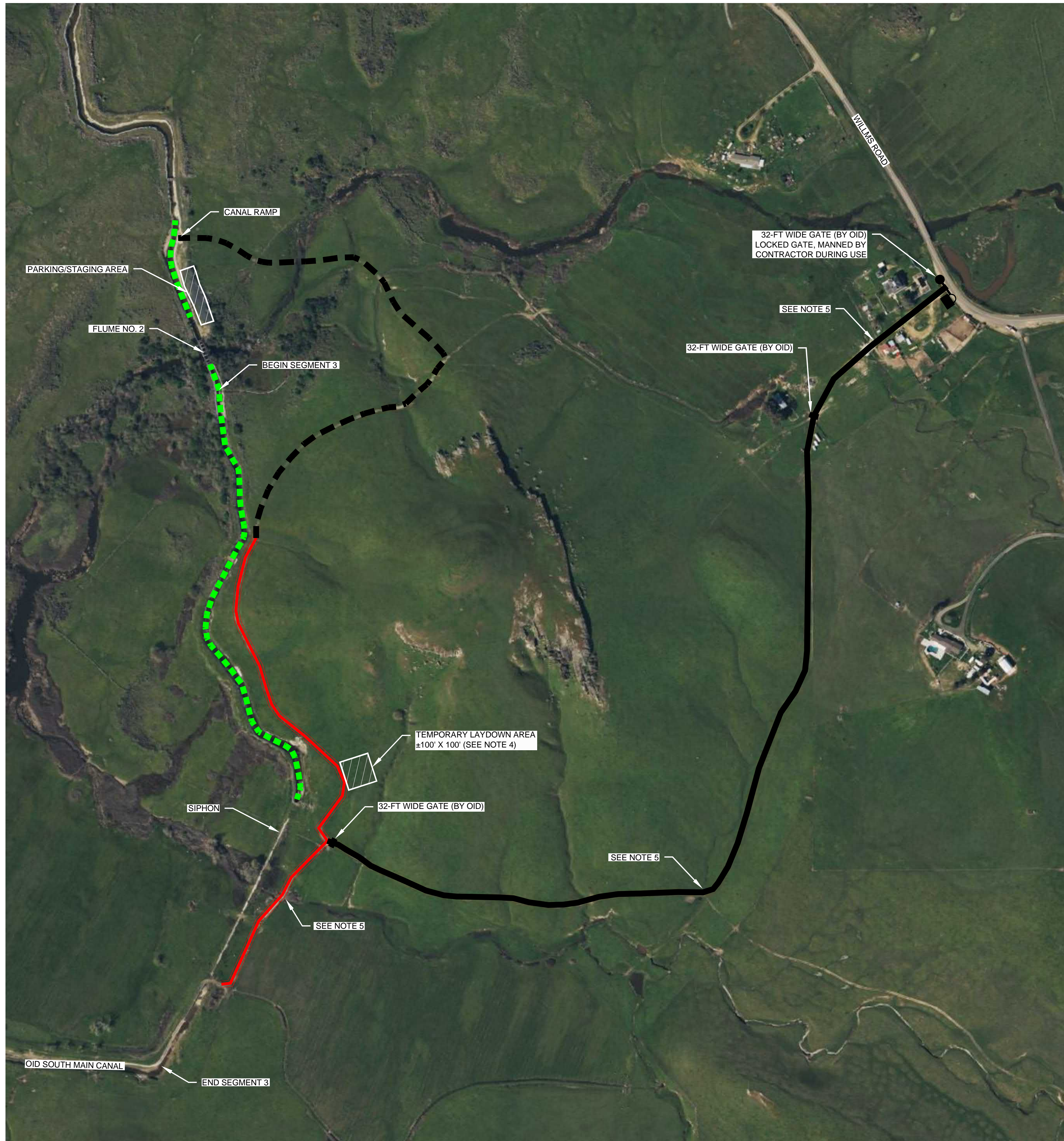
**SOUTH MAIN CANAL IMPROVEMENTS  
SEGMENT 3**

**SITE PLAN  
AND KEY MAP**

<p><b>PROVOST &amp; PRITCHARD</b> CONSULTING GROUP An Employee Owned Company</p>	<p>EST. 1968</p> <p>19969 GREENLEY RD SUITE J SONORA, CA 95310 (209) 449-2700 fax (209) 449-2715 www.ppeng.com</p>	<p><b>SHEET</b> <b>2.1</b> 4 of 15</p>
	<p>JOB#: 1783 DRAWN: K. MCKINLEY SCALE: AS SHOWN DATE: 06/22/2022 CHECKED: SWL FILE: 1783-20</p>	

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

BACKGROUND AERIAL PHOTO FROM MICROSOFT BING



**NOTE**

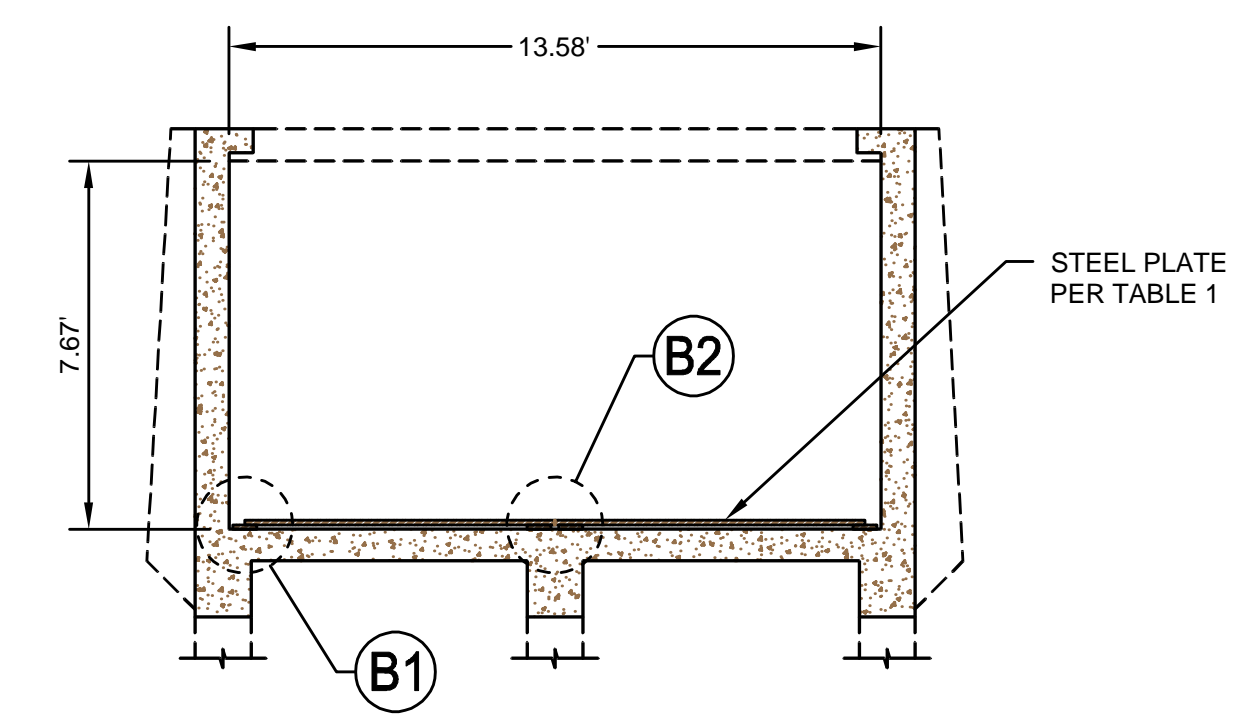
1. SEE SHEET 1.0 AND 2.1 FOR ADDITIONAL ACCESS NOTES.
2. FLUME NO. 2 (BRIDGE OVER WILDCAT CREEK) HAS LOAD AND CLEARANCE LIMITATIONS
  - a. ONLY ONE VEHICLE SHALL BE ALLOWED ON THE FLUME STRUCTURE AT ANY ONE TIME.
  - b. LOADED VEHICLE WEIGHTS SHALL BE RESTRICTED BASED ON THE WHEEL AND AXLE LOADS PROVIDED IN TABLE 1/2.2.
  - c. CONTRACTOR SHALL VERIFY AND SUBMIT A FLUME 2 EQUIPMENT LOADING PLAN PRIOR TO INITIATION OF CONSTRUCTION.
  - d. CLEARANCE DIMENSION LIMITATIONS ARE SHOWN IN DETAIL A/2.2.
3. CONTRACTOR SHALL PROVIDE DUST CONTROL MEASURES ALONG ALL PROJECT ACCESS ROADS FOR THE DURATION OF THE PROJECT, AS PER THE SPECIFICATIONS.
4. TEMPORARY LAYDOWN AREA AVAILABLE FOR CONTRACTOR'S USE AT CONTRACTORS DISCRETION. CONTRACTOR RESPONSIBLE, AT CONTRACTORS EXPENSE, FOR TEMPORARY GRADING, MAINTENANCE DURING WET WEATHER (PLACE BASE ROCK AS NEEDED) AND SITE RESTORATION AT PROJECT COMPLETION (REMOVE ANY BASE ROCK, REGRADE AND REVEGETATE).
5. CONTRACTOR SHALL PROTECT THREE (3) EXISTING CULVERT PIPES DURING CONSTRUCTION (USING TEMPORARY FILL, STEEL PLATE, ETC.) IN LOCATIONS AS SHOWN. IF THE PIPES ARE DAMAGED DURING CONSTRUCTION, CULVERT PIPES SHALL BE REPLACED AT CONTRACTORS EXPENSE.

**LEGEND**

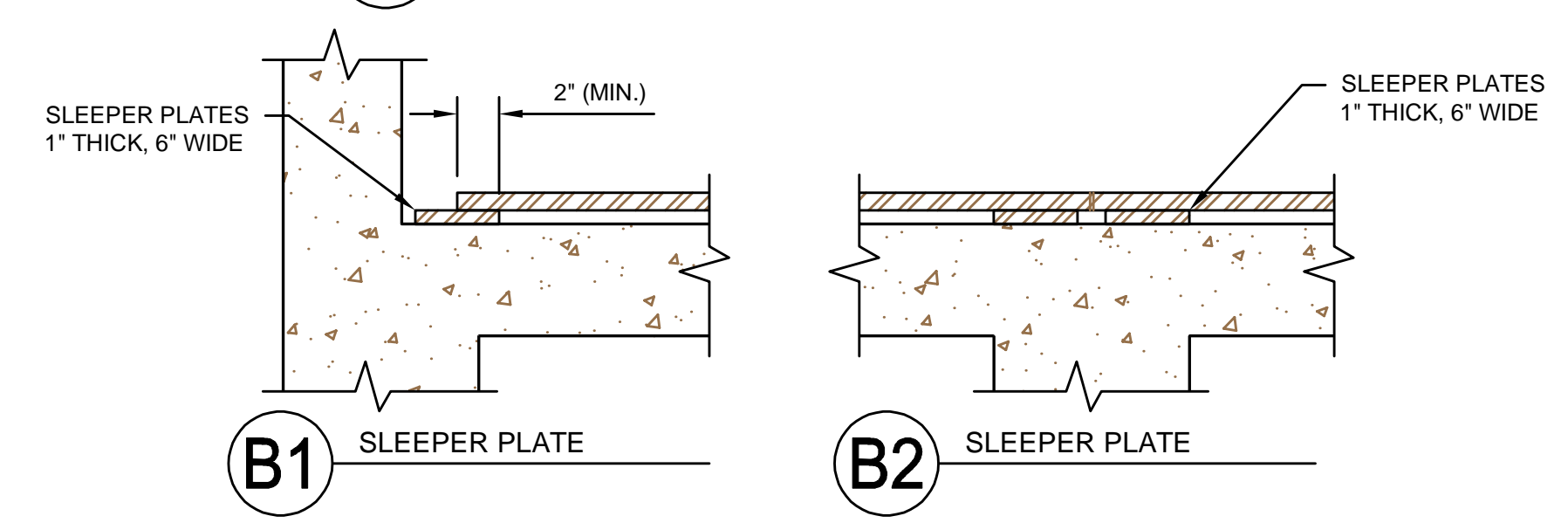
- LOCKED GATE
- 30-DAY LIMIT HEAVY ACCESS ROUTE  
ROCK BY OID, MAINTAIN BY CONTRACTOR
- DRY WEATHER ONLY LIGHT ACCESS ROUTE  
NO ROCK
- OID AND CONTRACTOR ACCESS ROUTE  
ROCK AS NEEDED, MAINTAINED BY CONTRACTOR
- PERSONNEL TRANSPORT AND LIGHT ACCESS  
(SEE NOTE 2)

Condition:	Max. Wheel Load	Max. Axle Load	Plate Deflection Under Max Load
Load Conc. (1" Thick Cover Plate without sleepers, only for protection)	2500#	5000#	N/A
Elevated Pl.: 1"	4747#	9494#	0.980"
Elevated Pl.: 1 1/8"	6005#	12010#	0.871"
Elevated Pl.: 1 1/4"	7414#	14828#	0.784"
Elevated Pl.: 1 3/8"	8971#	17942#	0.713"
Elevated Pl.: 1 1/2"	10676#	21352#	0.653"

**1** TABLE 1 - FLUME 2 LOAD LIMITATIONS



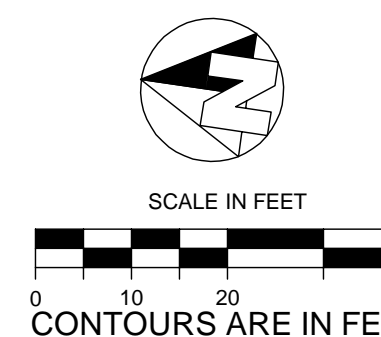
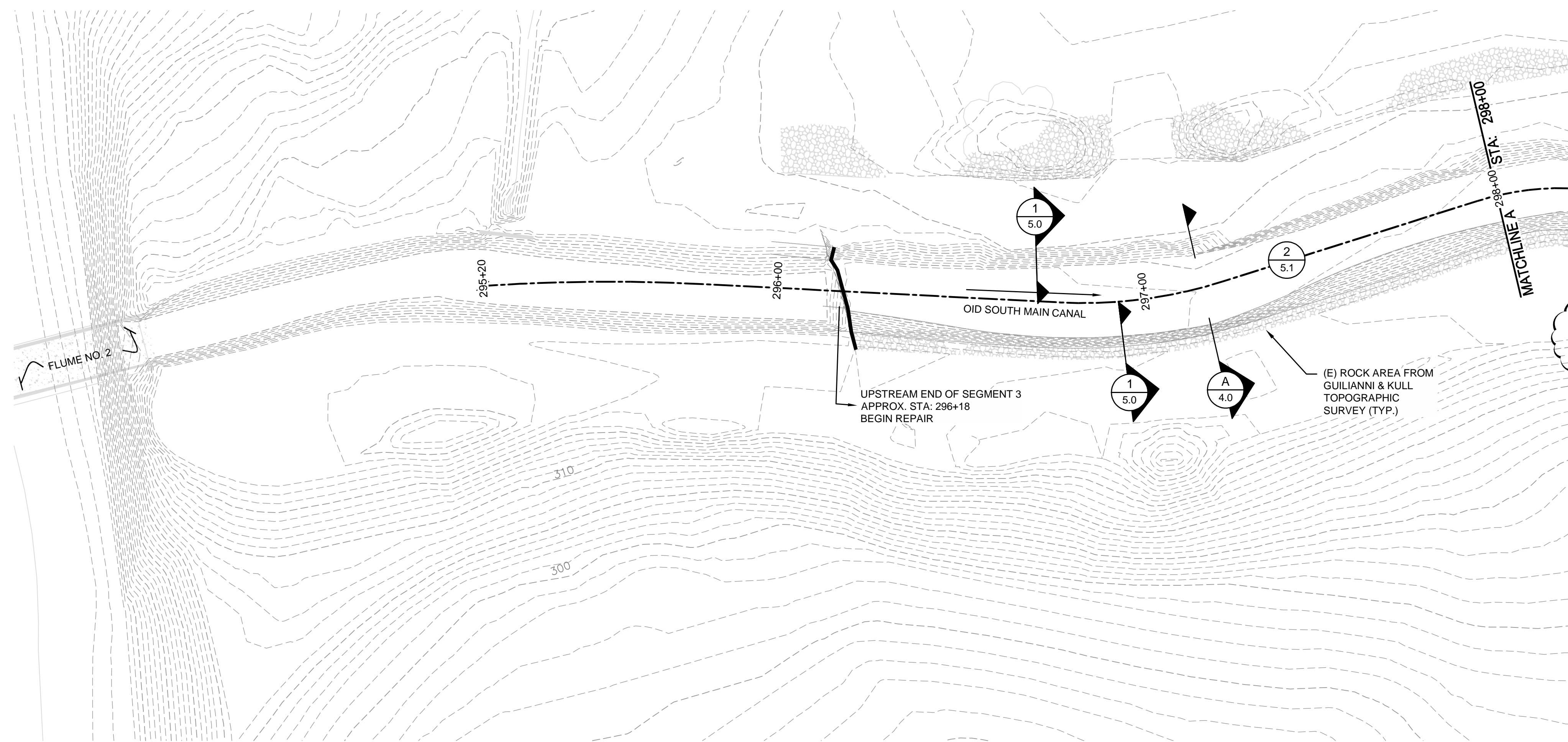
**A** DETAIL - FLUME 2 SECTION



DATE SIGNED: 06/29/2022

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">REV#</td> <td style="width: 15%;">DATE</td> <td style="width: 15%;">BY</td> <td style="width: 65%;">DESCRIPTION</td> </tr> <tr> <td>0</td> <td>6/29/22</td> <td>SWL</td> <td>FOR BIDDING</td> </tr> </table>	REV#	DATE	BY	DESCRIPTION	0	6/29/22	SWL	FOR BIDDING	<p><b>OAKDALE IRRIGATION DISTRICT</b></p> <p>SOUTH MAIN CANAL IMPROVEMENTS SEGMENT 3</p> <p><b>SITE ACCESS PLAN</b></p>
REV#	DATE	BY	DESCRIPTION						
0	6/29/22	SWL	FOR BIDDING						
<p><b>PROVOST &amp; PRITCHARD</b> CONSULTING GROUP <small>An Employee Owned Company</small></p> <p>19969 GREENLEY RD SUITE J SONORA, CA 95310 (209) 449-2700 fax (209) 449-2715 www.ppeng.com</p>	<p><b>SHEET 2.2 5 of 15</b></p>								
<p>JOB#: 1783 DATE: 06/22/2022</p>	<p>DRAWN: K. MCKINLEY CHECKED: SWL SCALE: AS SHOWN FILE: 1783-20</p>								

BACKGROUND AERIAL PHOTO FROM MICROSOFT BING  
DISCLAIMER: THIS MAP REPRESENTS FEATURES FOR ILLUSTRATION PURPOSES ONLY. IT IS NOT A LEGAL SURVEY AND IS NOT INTENDED FOR USE IN DETERMINING BOUNDARIES. ANY USE OF THIS MAP FOR PURPOSES OTHER THAN FOR APPROXIMATE LOCATION OF FEATURES IS DONE SO AT THE USER'S RISK AND WITHOUT THE CONSENT OF PROVOST & PRITCHARD.



TOP OF SHOTCRETE LINER - UPSLOPE SIDE						BEGIN	1 5.0												
SHOTCRETE LINER						BEGIN		A 4.0											
CONCRETE INVERT						BEGIN	2 5.1												
TOP OF SHOTCRETE LINER - DOWNSLOPE SIDE						BEGIN	1 5.0												
CRACK, SEAM & JOINT REPAIR																			
CUTOFF / KEYWAY WALL																			
CANAL RAMP																			
SIPHON 2" SHOTCRETE OVERLAY																			
OTHER SITE WORK																			
	295+20			296+00	296+20	APPROX. STA. 296+18				4 5.1									298+00



DATE SIGNED: 06/29/2022

0	6/29/22	SWL	FOR BIDDING
REV#	DATE	BY	DESCRIPTION

**OAKDALE IRRIGATION DISTRICT**

**SOUTH MAIN CANAL IMPROVEMENTS  
SEGMENT 3**

**SITE PLAN AND  
IMPROVEMENT SUMMARY**

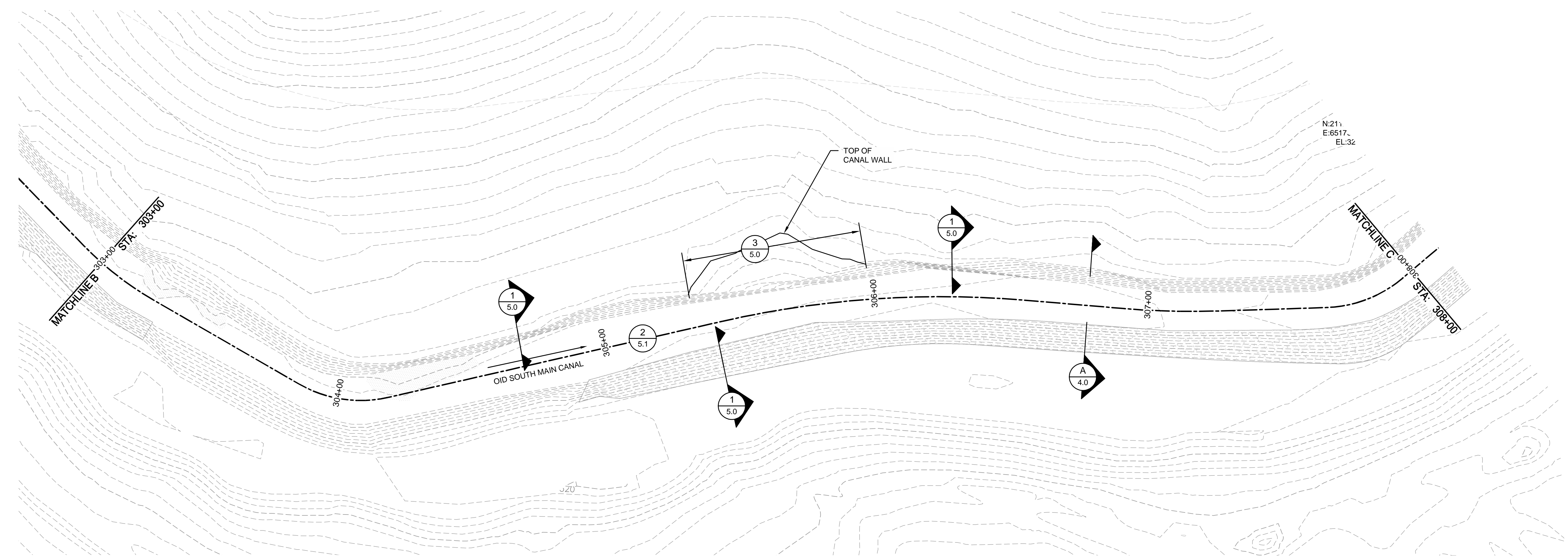
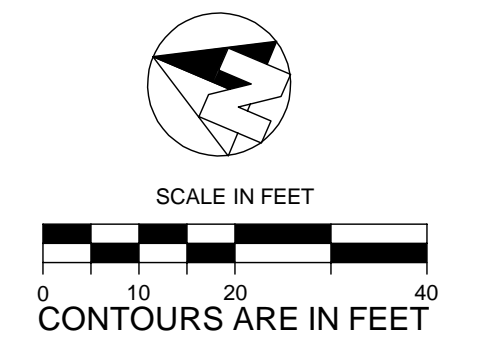
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**SHEET**  
**3.1**  
 6 of 15

JOB#:	1783	DRAWN:	K. MCKINLEY	SCALE:	AS SHOWN
DATE:	06/22/2022	CHECKED:	SWL	FILE:	1783-30





TOP OF SHOTCRETE LINER - UPSLOPE SIDE			1/5.0					1/5.0	END	BEGIN	3/5.0		END	BEGIN	1/5.0				1/5.0			
SHOTCRETE LINER			A/4.0																A/4.0			
CONCRETE INVERT				2/5.1															2/5.1	END	BEGIN	1/5.1
TOP OF SHOTCRETE LINER - DOWNSLOPE SIDE			1/5.0																1/5.0			
CRACK, SEAM & JOINT REPAIR																						
CUTOFF / KEYWAY WALL																						
CANAL RAMP																						
SIPHON 2" SHOTCRETE OVERLAY																						
OTHER SITE WORK																						
	303+00			304+00				305+00					306+00						307+00			308+00

APPROX. STA. 305+34  
ENGINEER TO VERIFY

APPROX. STA. 305+98  
ENGINEER TO VERIFY

APPROX. STA. 308+00  
ENGINEER TO VERIFY



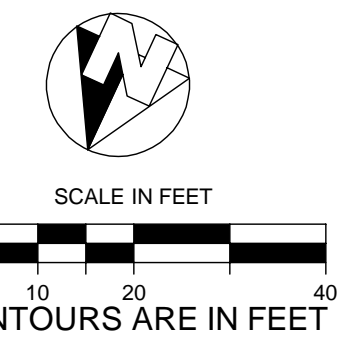
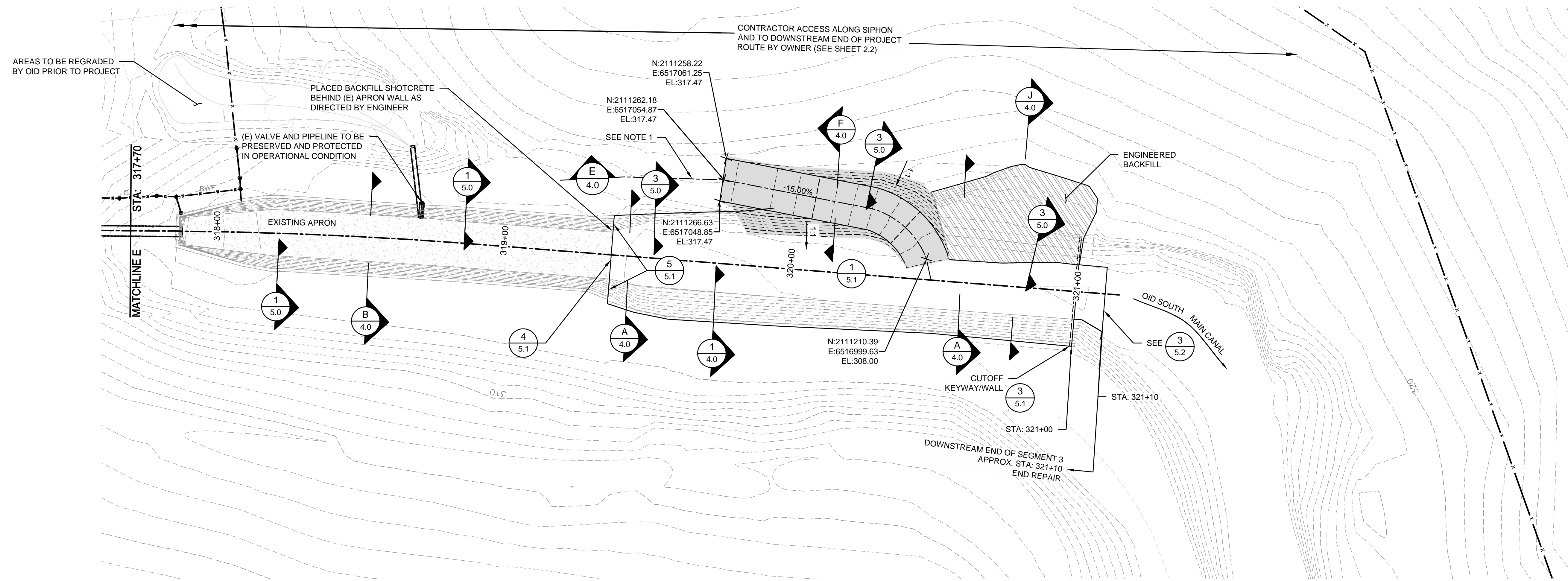
DATE SIGNED: 06/29/2022

0	6/29/22	SWL	FOR BIDDING
REV#	DATE	BY	DESCRIPTION
<b>OAKDALE IRRIGATION DISTRICT</b>			
SOUTH MAIN CANAL IMPROVEMENTS SEGMENT 3			
SITE PLAN AND IMPROVEMENT SUMMARY			
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JOB#: 1783	DATE: 06/22/2022	DRAWN: K. MCKINLEY	CHECKED: SWL
SCALE: AS SHOWN	FILE: 1783-30	<b>SHEET 3.3</b> 8 of 15	

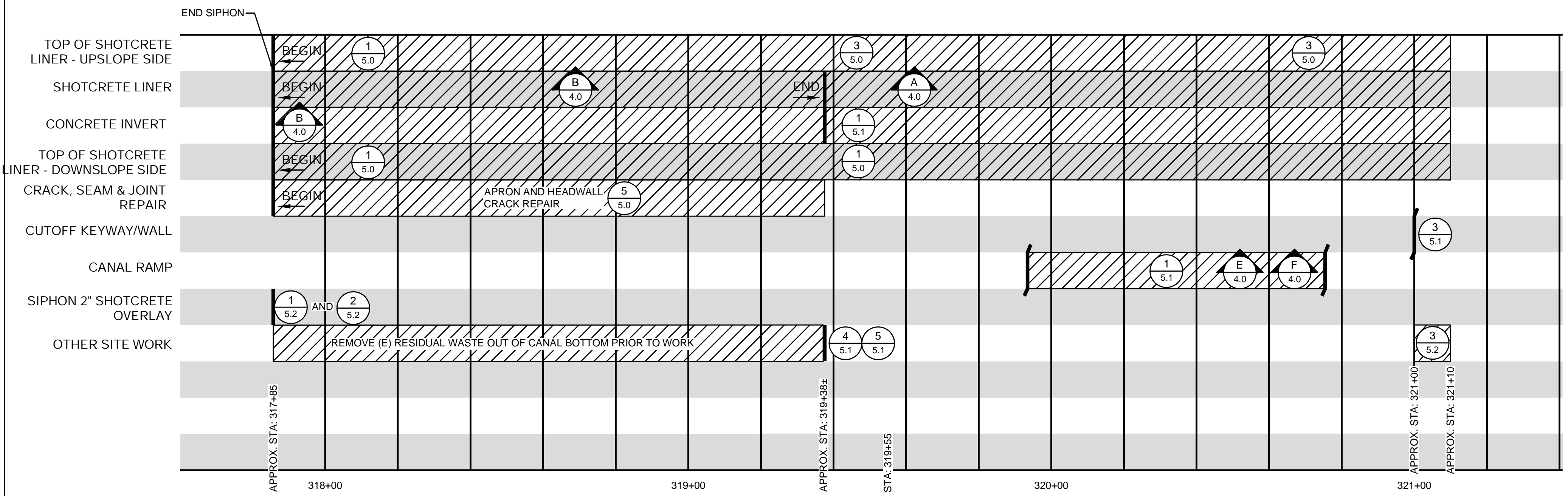








- NOTES**
1. MINOR GRADING BEYOND TOP OF RAMP TO CONFORM WITH EXISTING TOPOGRAPHY. VERIFY IN FIELD WITH ENGINEER.



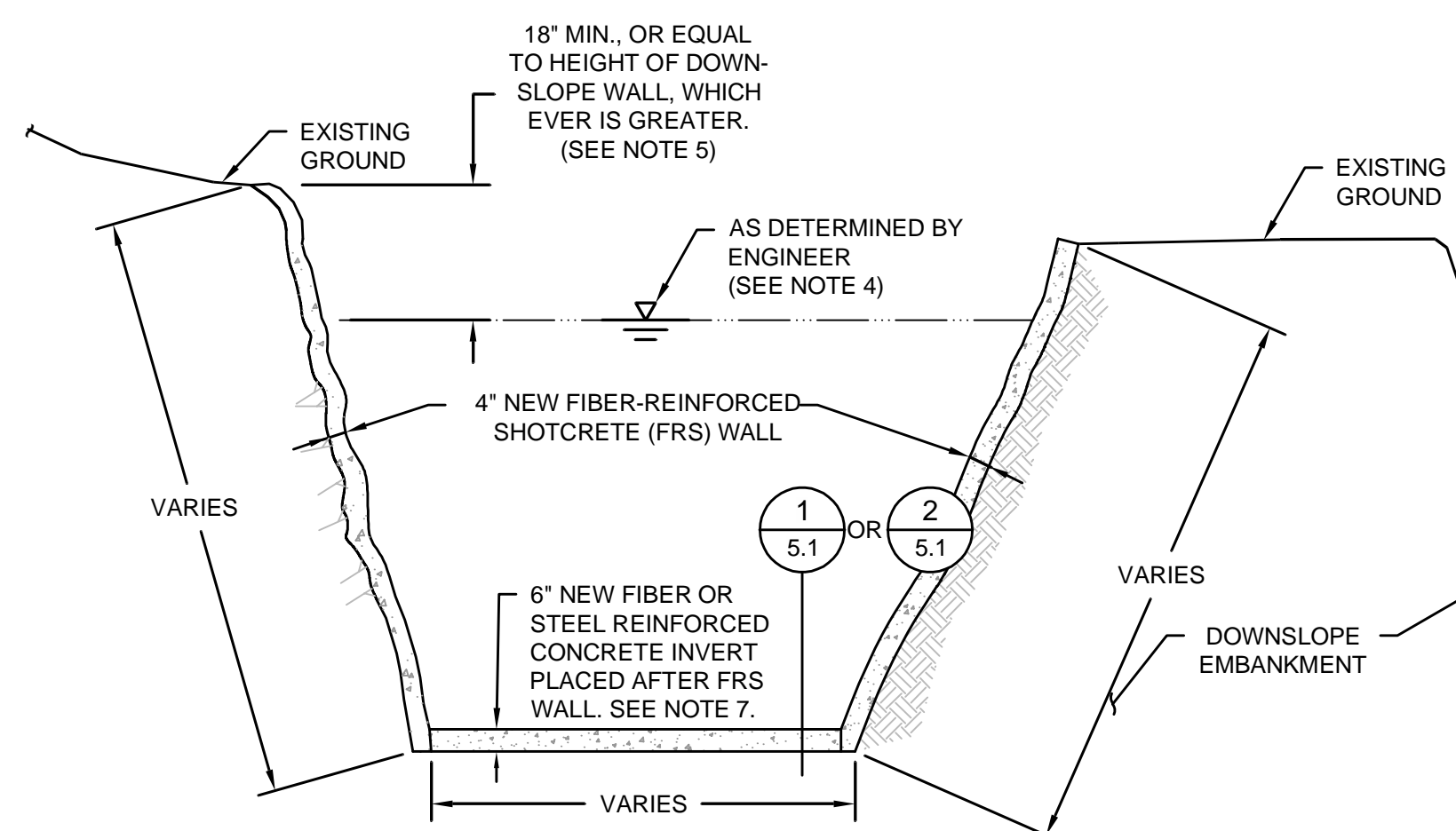
0	6/29/22	SWL	FOR BIDDING
REV#	DATE	BY	DESCRIPTION

**OAKDALE IRRIGATION DISTRICT**

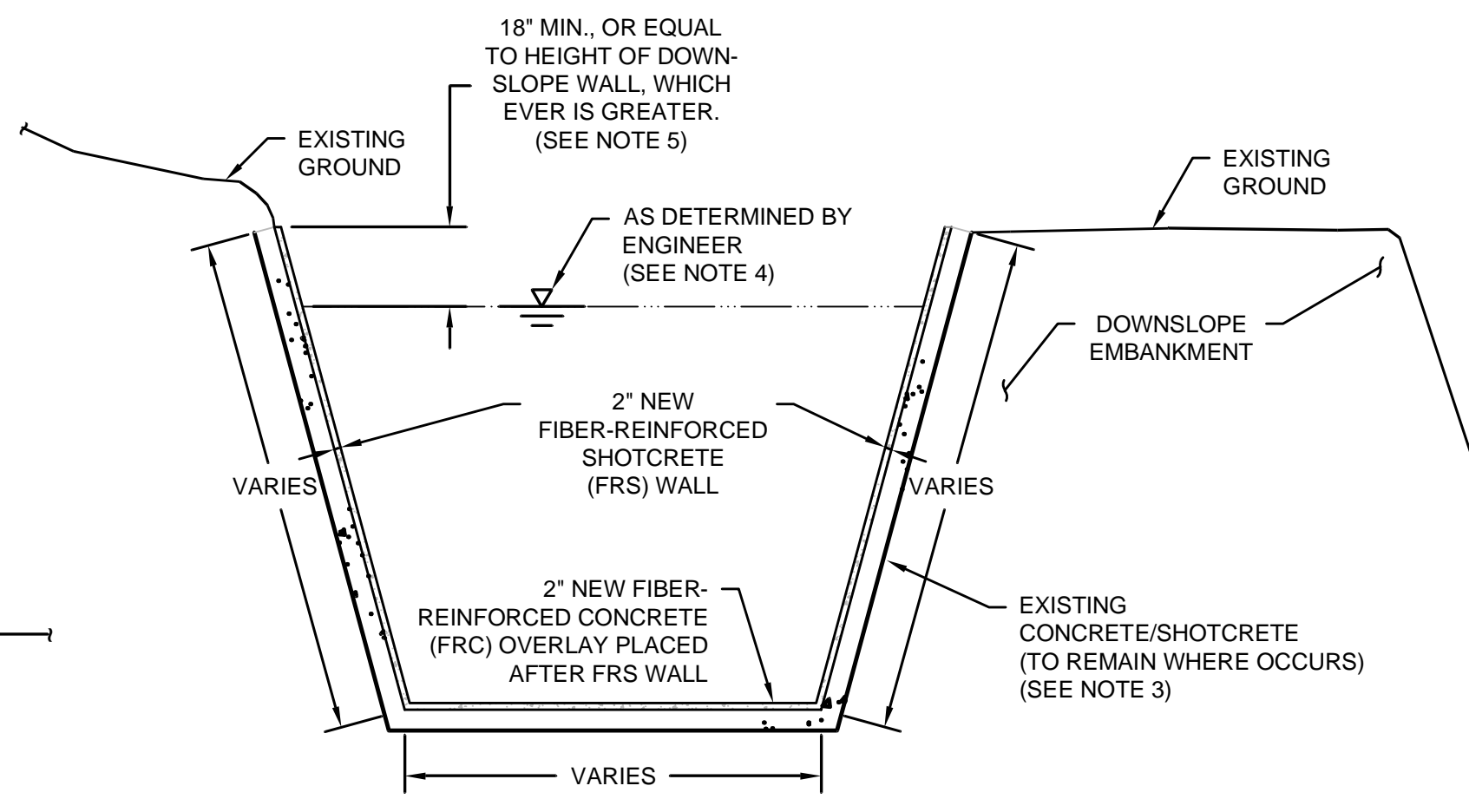
SOUTH MAIN CANAL IMPROVEMENTS  
SEGMENT 3

**SITE PLAN AND  
IMPROVEMENT SUMMARY**

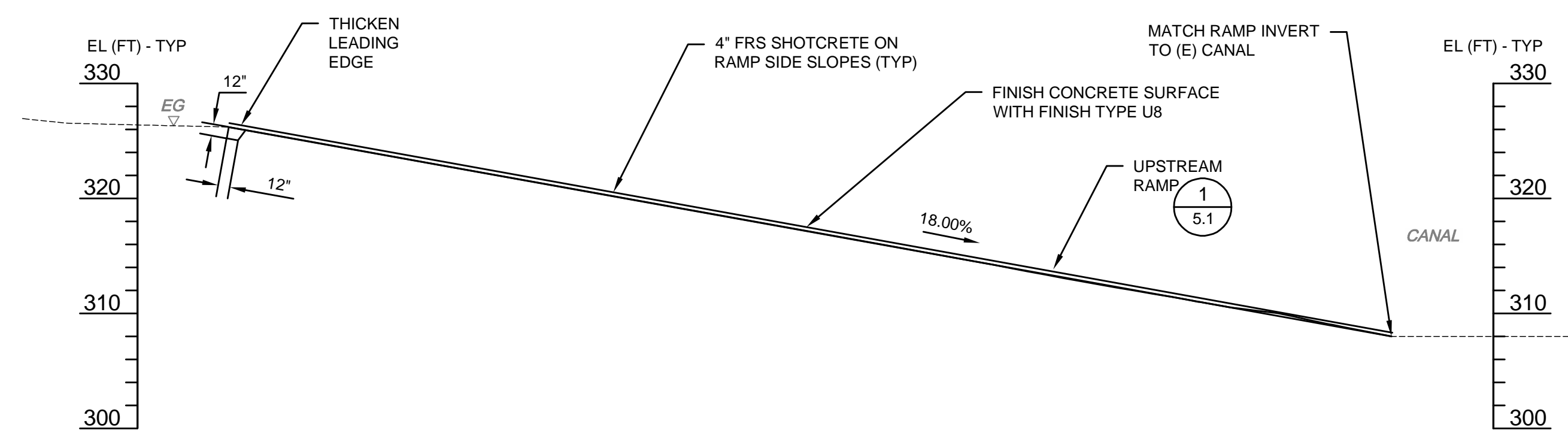
<b>EST. 1968</b> <b>PROVOST &amp; PRITCHARD</b> CONSULTING GROUP <i>An Employee Owned Company</i>	19969 GREENLEY RD SUITE J SONORA, CA 95310 (209) 449-2700 fax (209) 449-2715 www.ppeng.com	<b>SHEET</b> <b>3.6</b> 11 of 15
	JOB#: 1783 DATE: 06/22/2022	



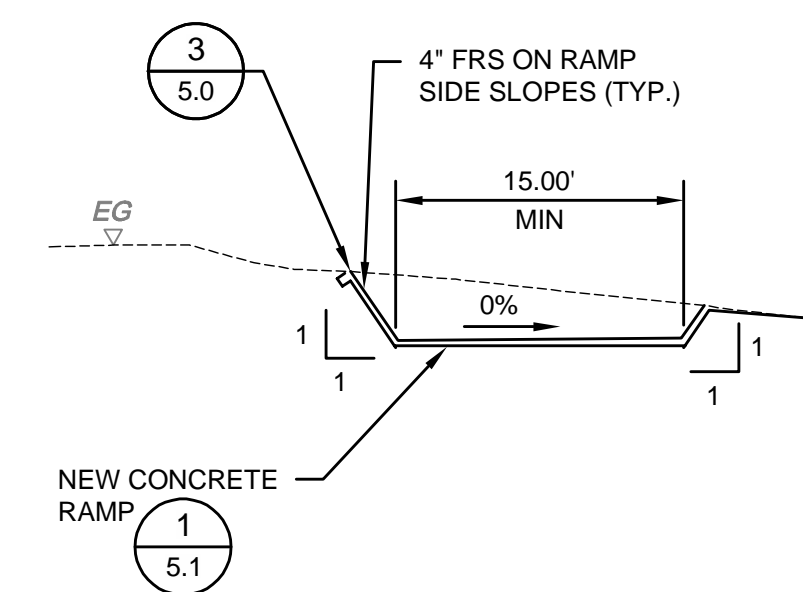
**A** TYPICAL SHOTCRETE LINER SECTION



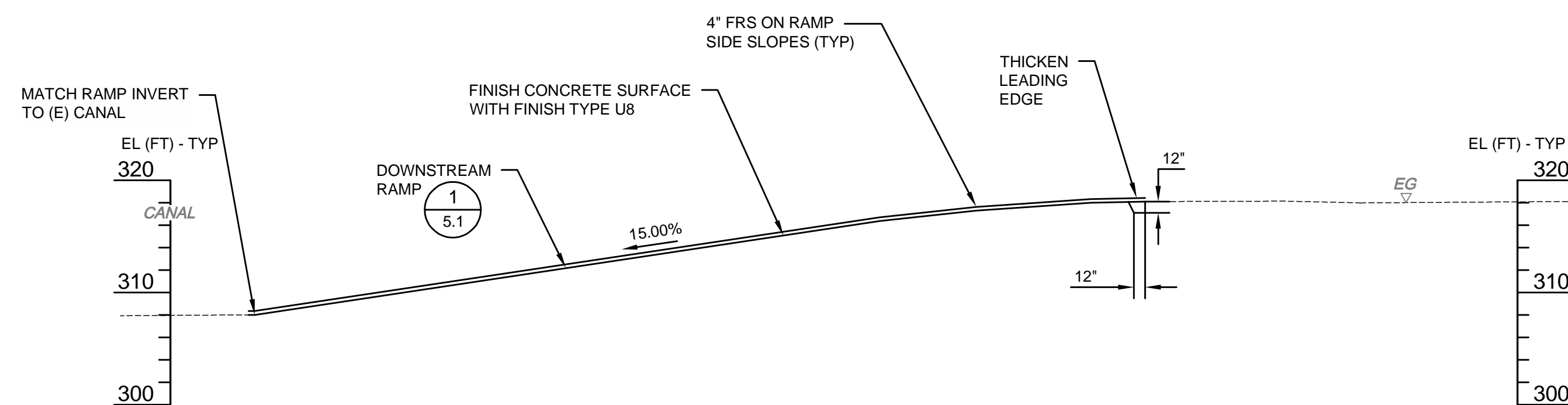
**B** APRON SHOTCRETE LINER OVERLAY SECTION



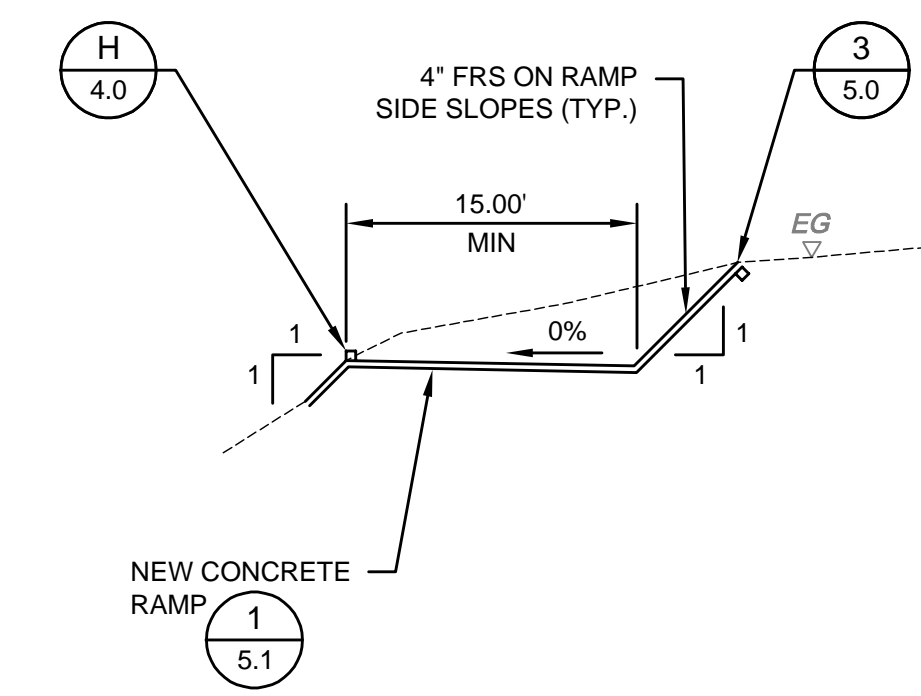
**C** UPSTREAM RAMP PROFILE



**D** UPSTREAM RAMP SECTION



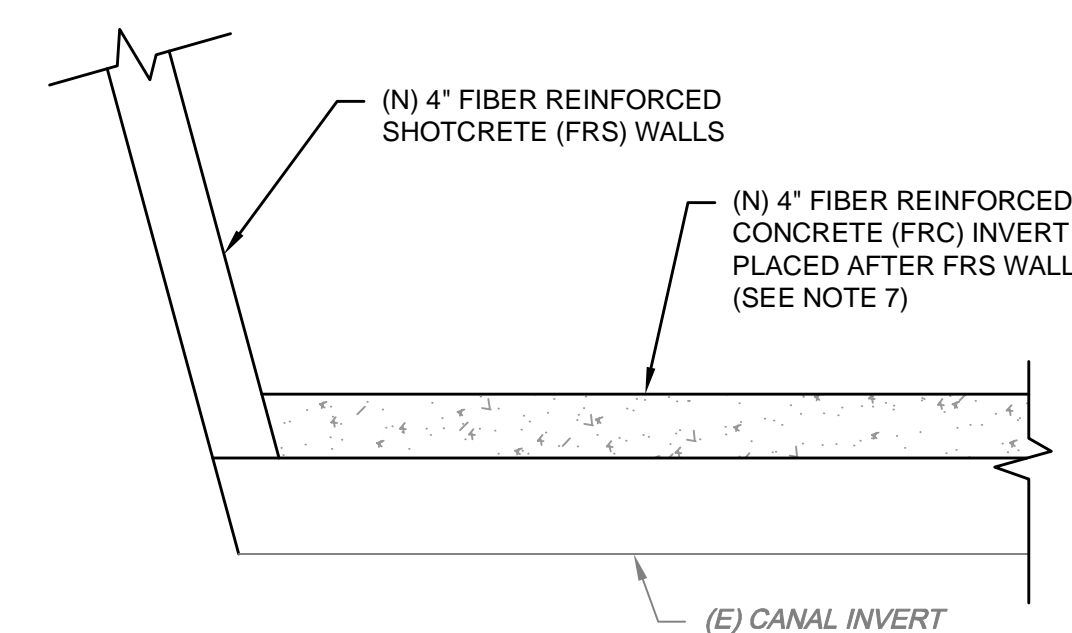
**E** DOWNSTREAM RAMP PROFILE



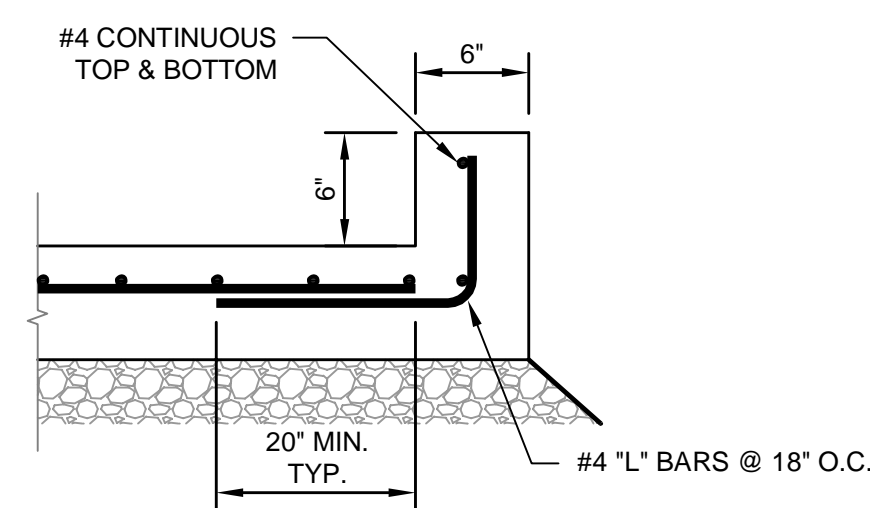
**F** DOWNSTREAM RAMP SECTION

**NOTES**

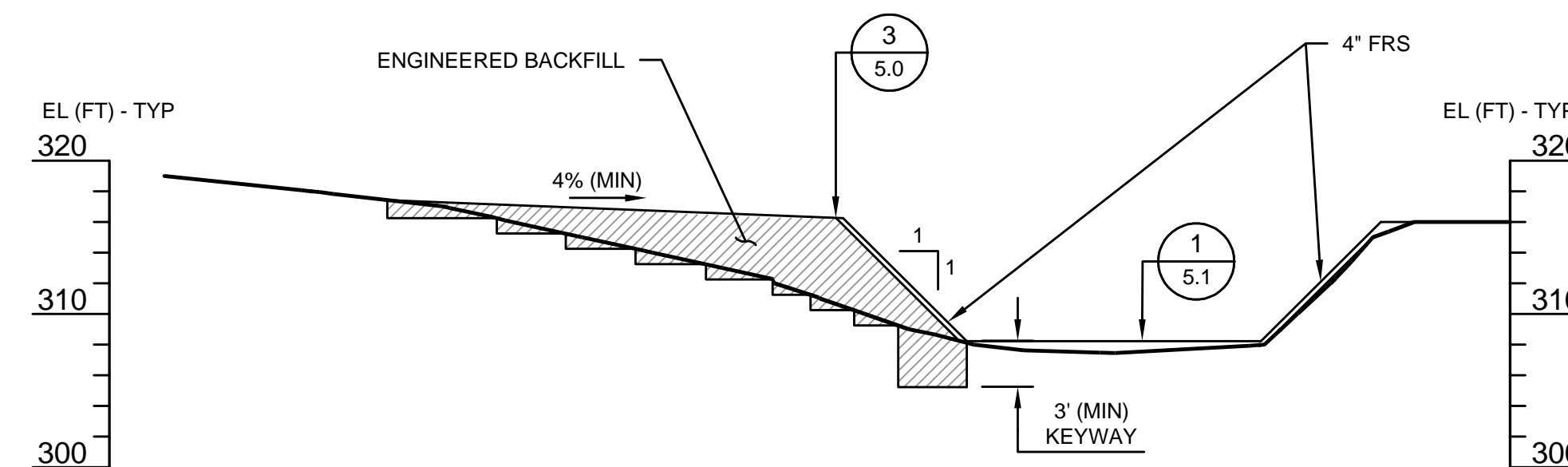
1. THE ROCK AND SOIL SURFACES TO RECEIVE SHOTCRETE SHALL BE THOROUGHLY CLEANED OF ALL VEGETATION AND DEBRIS BEFORE RECEIVING SHOTCRETE. THESE SURFACES SHALL BE WETTED AND DAMP BEFORE SHOTCRETE IS PLACED.
2. CHIP OUT EXISTING DEFECTIVE SHOTCRETE TO A SUFFICIENT DEPTH TO REACH A SOLID SUBSTRATE, AS APPROVED BY THE ENGINEER.
3. TOP OF LINER DETAIL VARIES AS EXISTING CONDITIONS VARY AND AS SPECIFIED ON SHEETS 3.1 THROUGH 3.6. REFER TO TOP OF SHOTCRETE LINER DETAILS SHEET 5.0.
4. CONTRACTOR TO PROVIDE PERSONNEL AND EQUIPMENT TO FACILITATE MARKING HIGH WATER MARK.
5. HEIGHT OF UPSLOPE SHOTCRETE TO BE VERIFIED BY ENGINEER PRIOR TO PLACEMENT. CONTRACTOR TO COORDINATE WITH ENGINEER.
6. CONCRETE FINISHES SHALL BE "F-1" OR "U-1" PER CONTRACT SPECIFICATION SECTION 03300, UNLESS NOTED OTHERWISE. RAMP INVERTS SHALL BE "U-8" FINISH.
7. TO REDUCE CONCRETE INVERT QUANTITIES, THE FOLLOWING CRITERIA SHALL BE USED: LOCAL ROCK PROTRUSION HAVING A MINIMUM 4-INCH COVER OF CONCRETE ARE ACCEPTABLE, "PONDS" OF LESS THAN 12 INCHES IN DEPTH ARE ACCEPTABLE.
8. CONTRACTOR SHALL LAY OUT FINAL INVERT GRADES FOR ACCEPTANCE BY ENGINEER PRIOR TO CONSTRUCTION.
9. SEE SHEET 1.1 FOR EARTHWORK NOTES.



**G** INVERT OVERLAY  
SCALE: N.T.S.



**H** TYPICAL CONCRETE CURB DETAIL  
SCALE: N.T.S.



**J** CANAL SECTION  
3.6 SEE NOTE 9

[ANDY - ADD GRADING NOTES]



DATE SIGNED: 06/29/2022

REV#	DATE	BY	DESCRIPTION
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**OAKDALE IRRIGATION DISTRICT**

SOUTH MAIN CANAL IMPROVEMENTS  
SEGMENT 3

**SECTIONS AND PROFILES**

EST. 1968  
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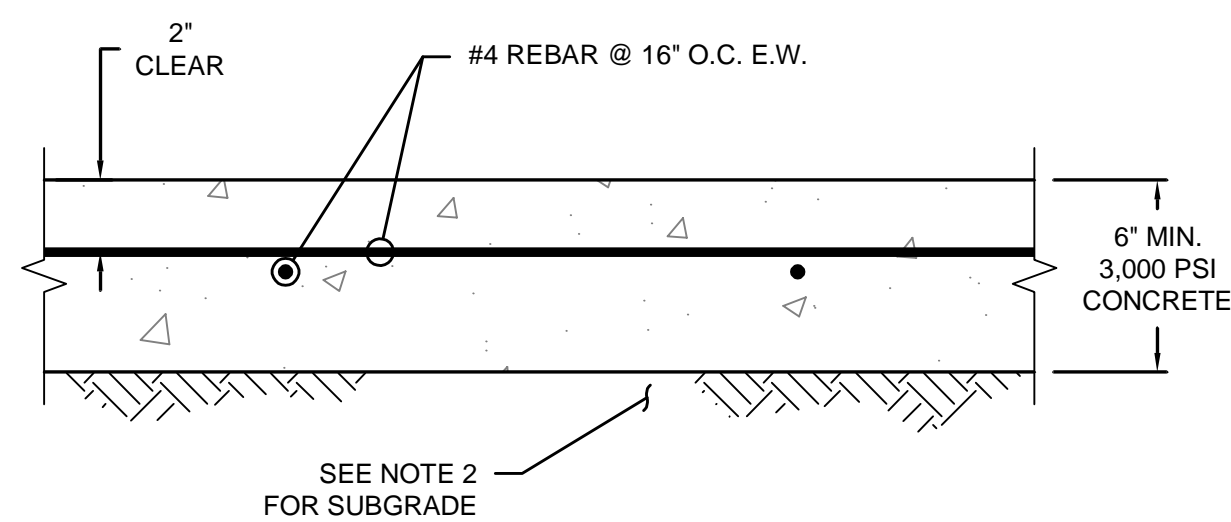
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**SHEET 4.0**  
12 of 15

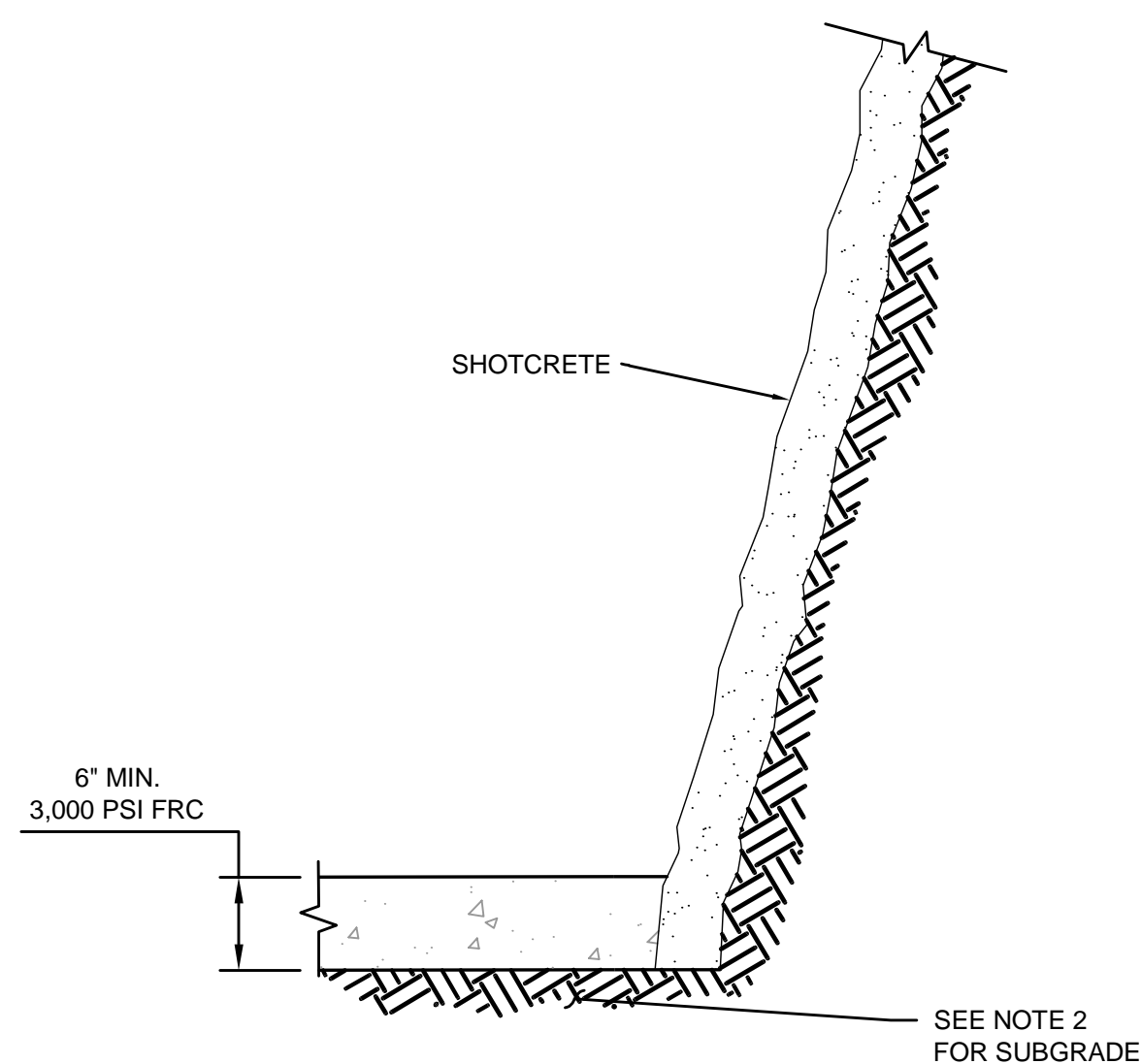
JOB#: 1783  
DATE: 06/22/2022  
DRAWN: K. MCKINLEY  
CHECKED: SWL  
SCALE: AS SHOWN  
FILE: 1783-30



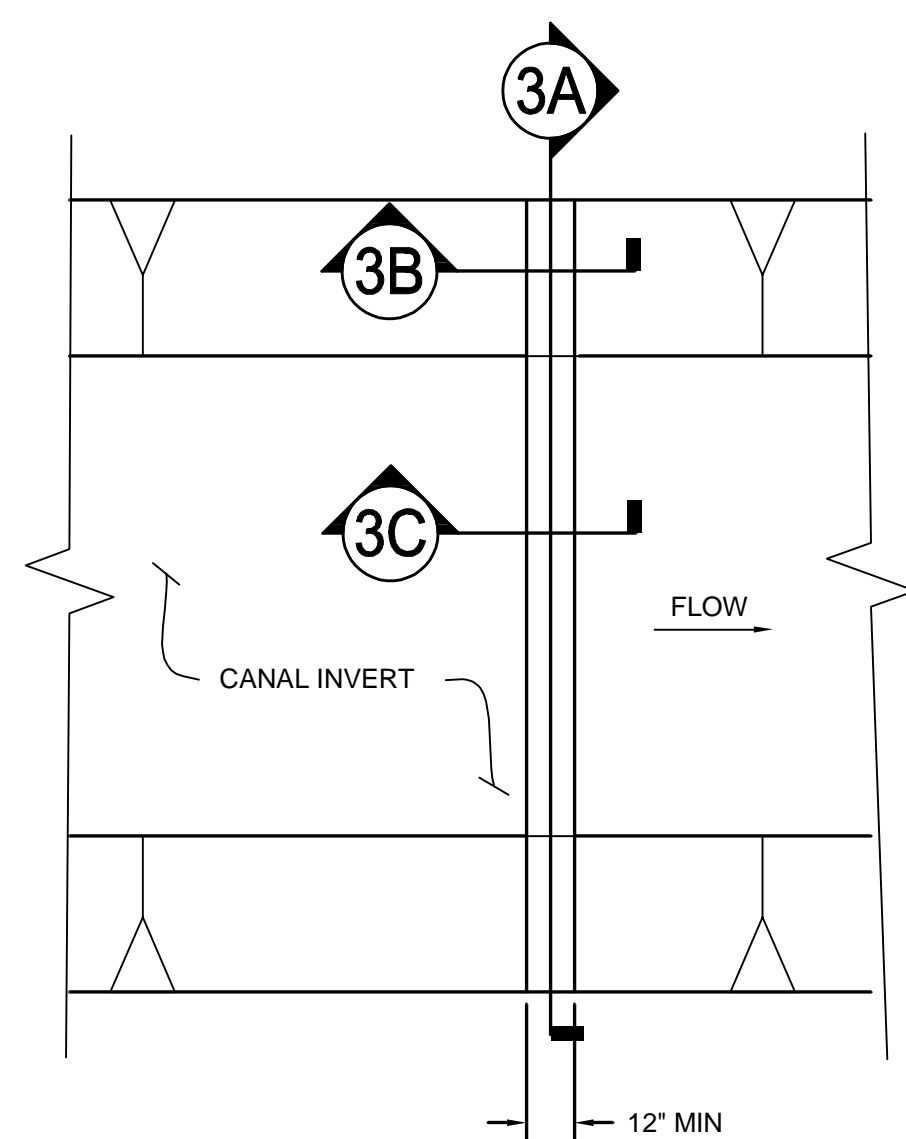
- NOTES**
- SEE SHEET 4.0 FOR NOTES.
  - SEE SHEET 1.1 FOR EARTHWORK NOTES.



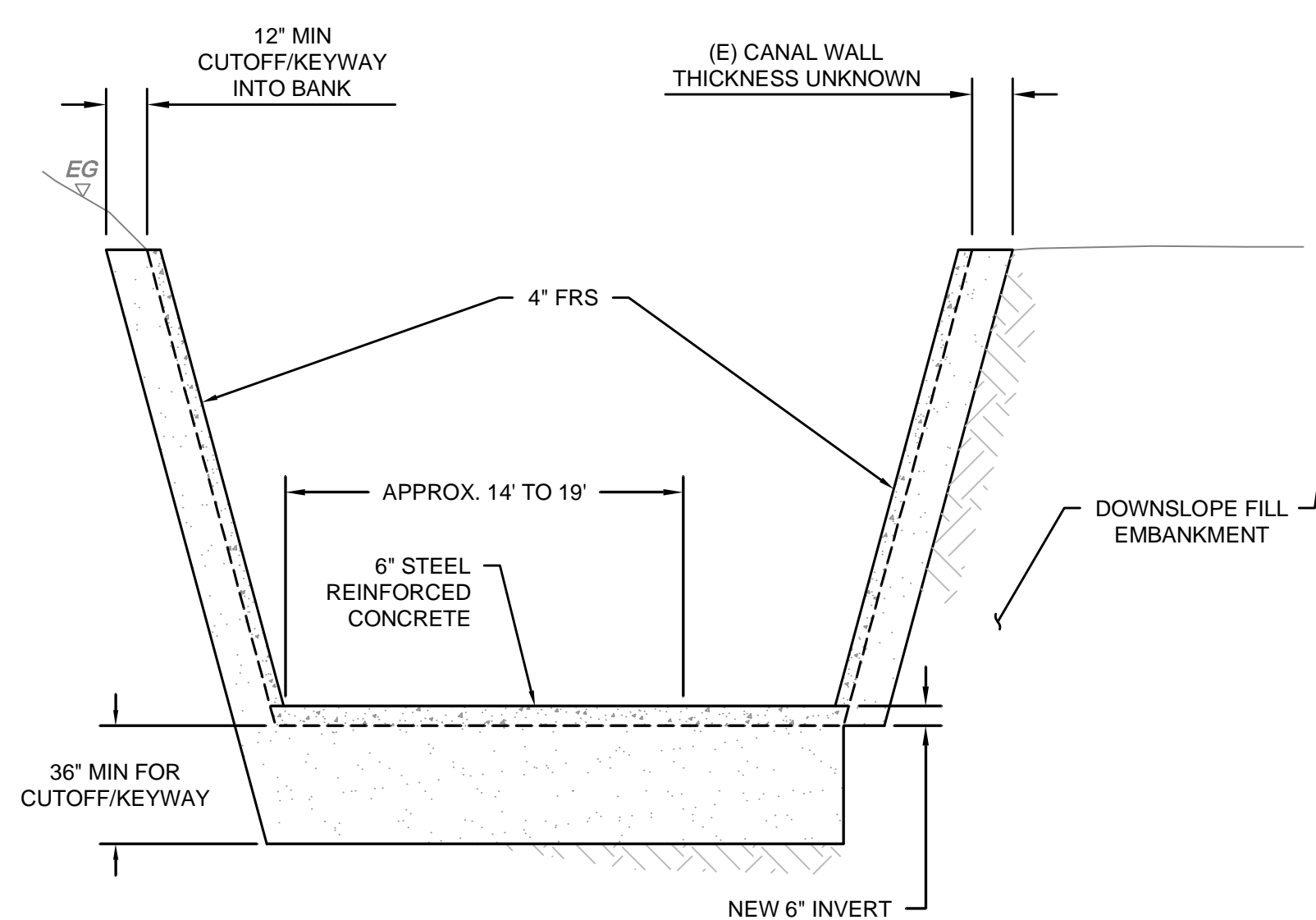
**1** STEEL REINFORCED CONCRETE INVERT



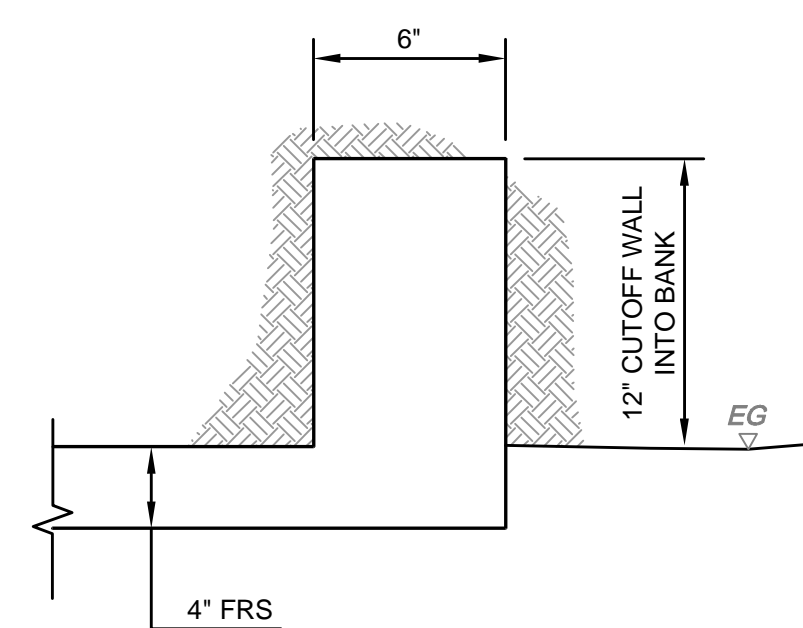
**2** FIBER REINFORCED CONCRETE INVERT



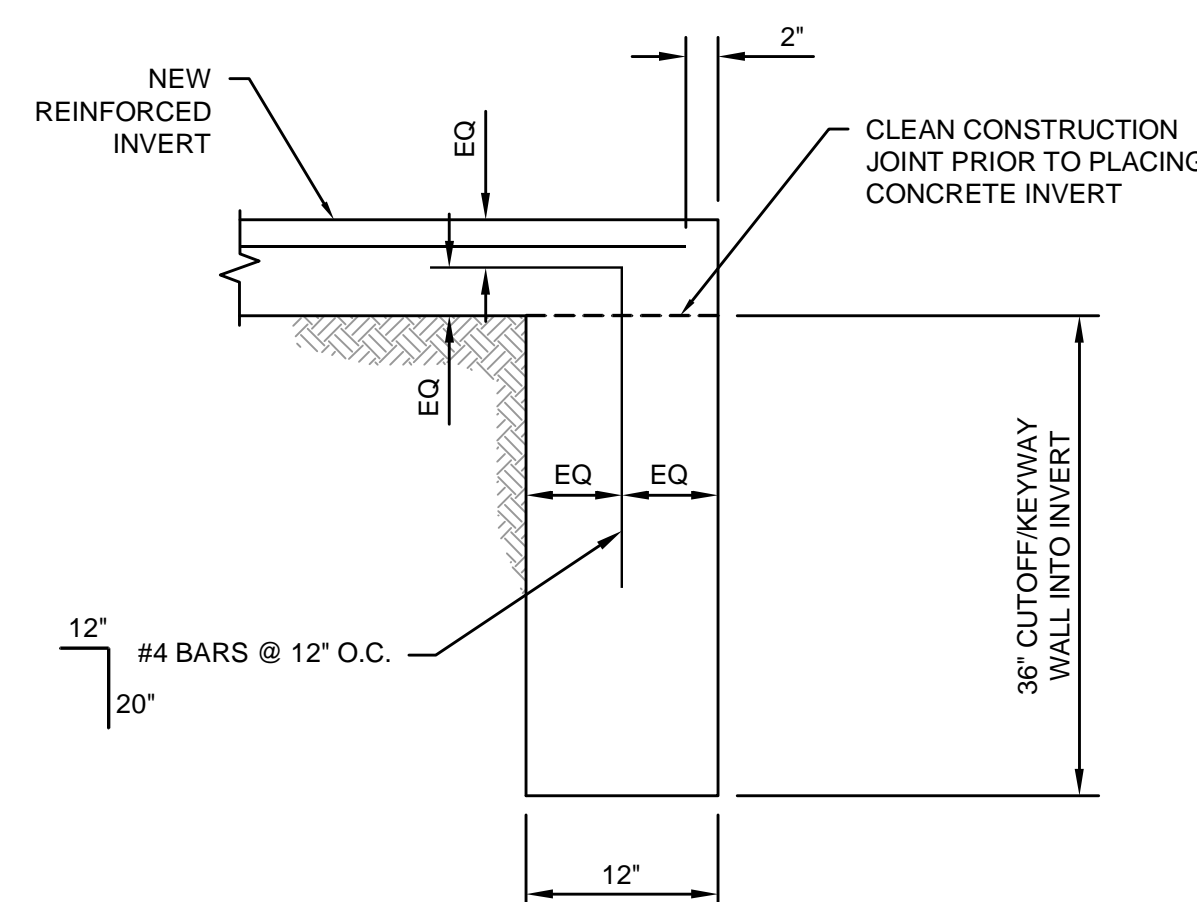
**3** CUTOFF/KEYWAY WALL DETAIL



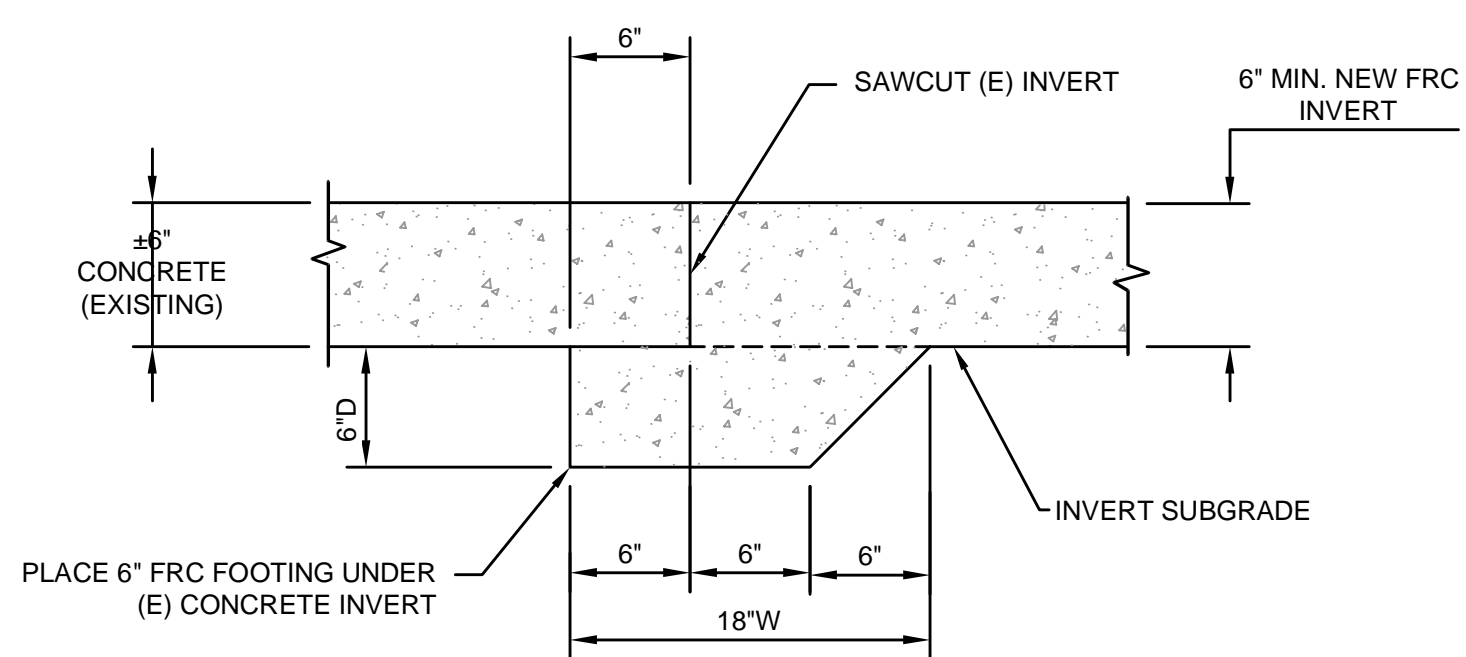
**3A** CUTOFF/KEYWAY WALL SECTION  
REINFORCEMENT NOT SHOWN FOR CLARITY



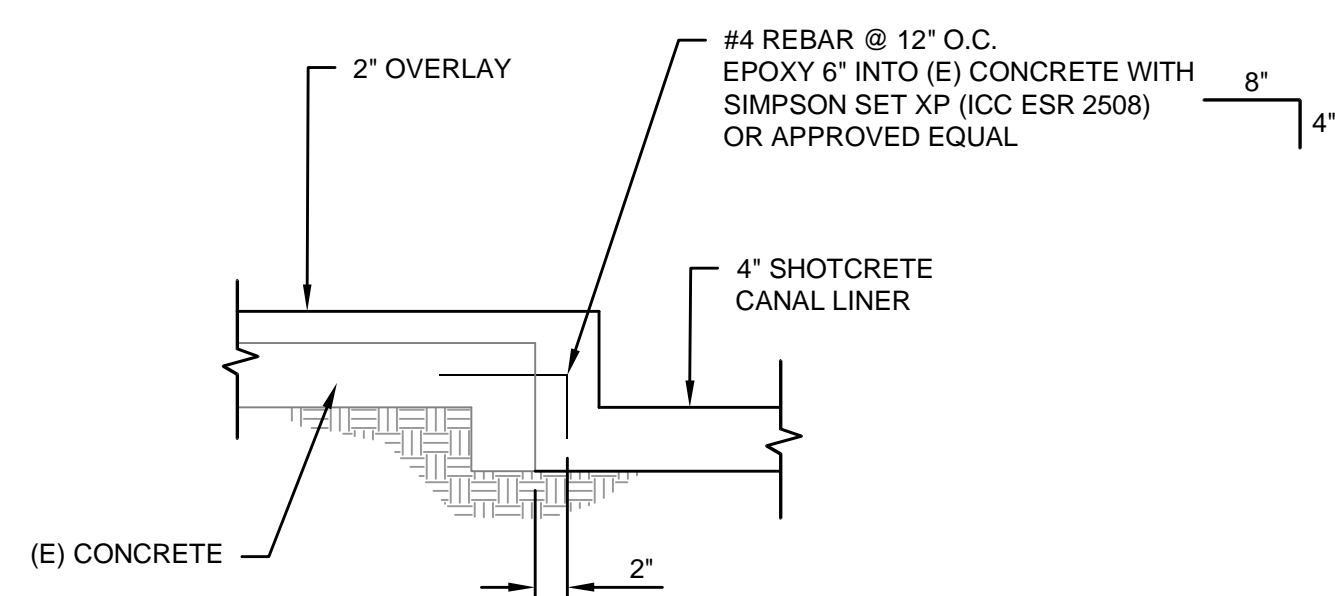
**3B** CUTOFF/KEYWAY WALL SECTION  
- CANAL WALL  
HORIZONTAL SECTION



**3C** CUTOFF/KEYWAY WALL SECTION-INVERT  
VERTICAL SECTION



**4** INVERT CONNECTION DETAIL  
VERTICAL SECTION



**5** CANAL WALL DOWEL DETAIL  
HORIZONTAL SECTION



DATE SIGNED: 06/29/2022

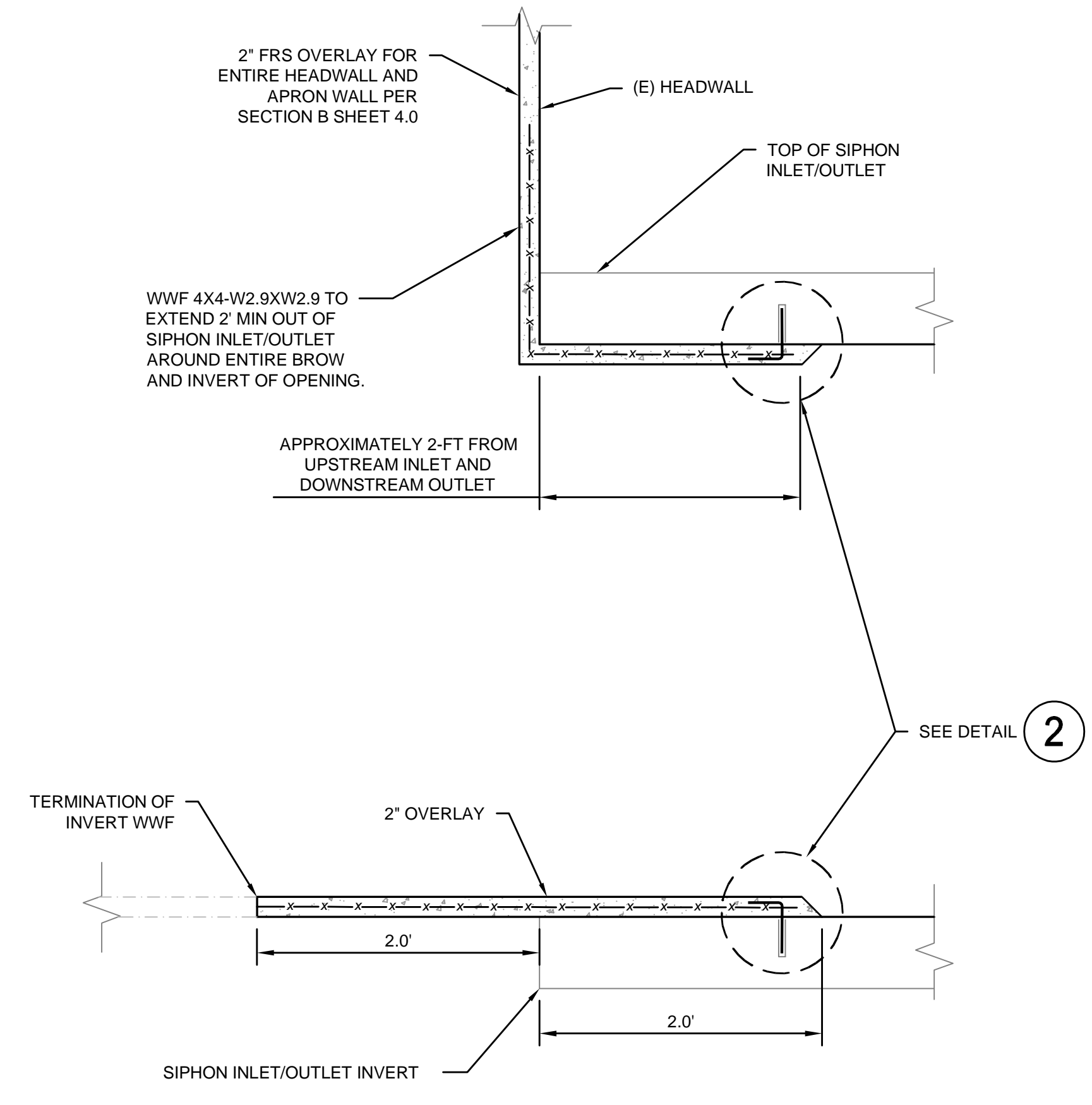
REV#	DATE	BY	DESCRIPTION
0	6/29/22	SWL	FOR BIDDING

**OAKDALE IRRIGATION DISTRICT**

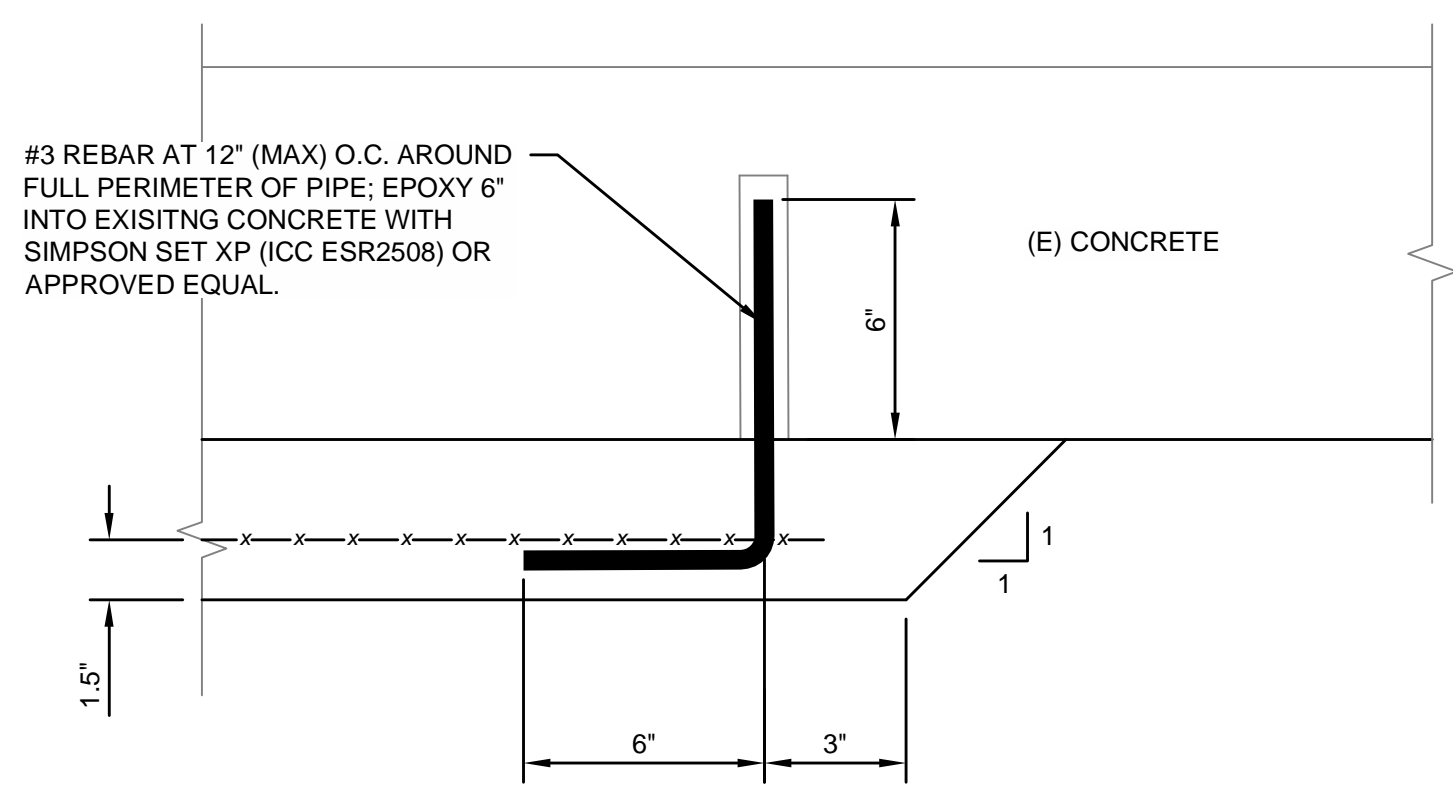
SOUTH MAIN CANAL IMPROVEMENTS  
SEGMENT 3

**LINER AND  
REPAIR DETAILS**

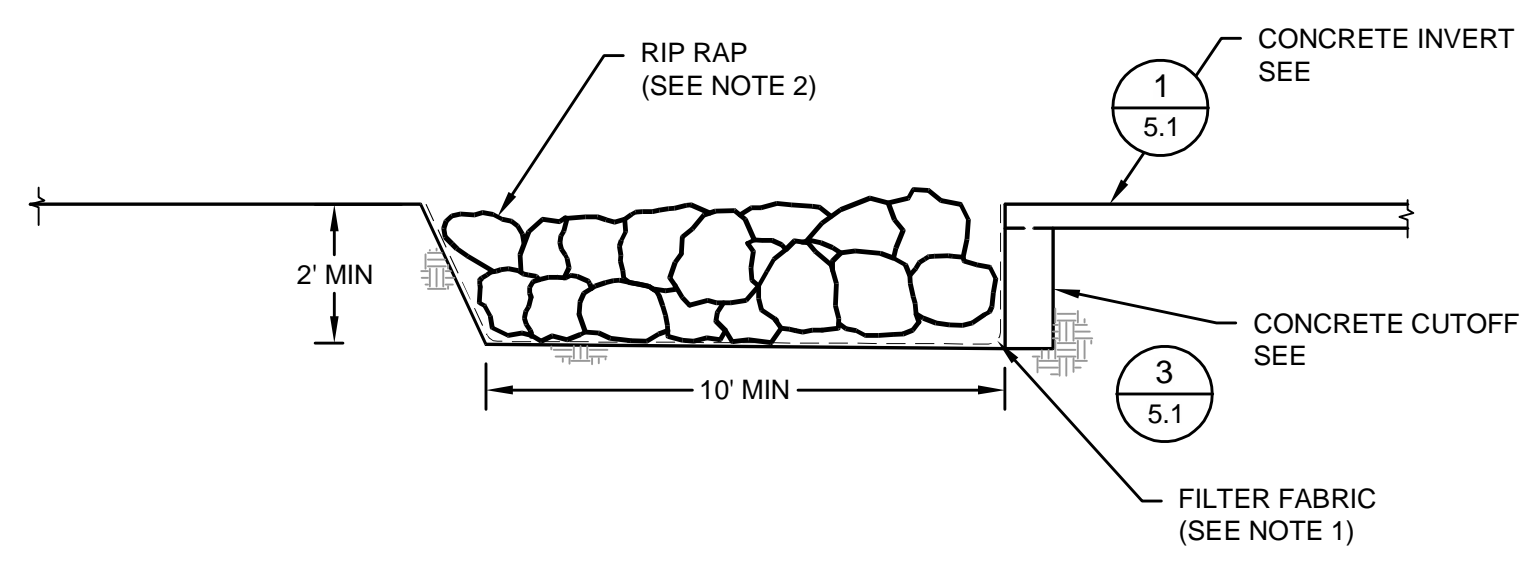
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	JOB#: 1783 DATE: 06/22/2022	



**1 SIPHON INLET/OUTLET SHOTCRETE OVERLAY DETAIL**  
 (MIRROR FOR DOWNSTREAM) SCALE: N.T.S.



**2 OVERLAY TERMINATION DETAIL**  
 (MIRROR FOR DOWNSTREAM) SCALE: N.T.S.



**3 RIP-RAP APRON DETAIL**  
 LONGITUDINAL VERTICAL SECTION SCALE: N.T.S.

- NOTES**
1. FILTER FABRIC SHALL BE NON-WOVEN MIRAFI 1120N OR APPROVED EQUAL. WRAP FABRIC AROUND EACH OVEREXCAVATION SIDE INCLUDING SIDES AT INVERT EDGES NOT SHOWN. THE CONTRACTOR SHALL PLACE THE FILTER FABRIC ACCORDING TO THE MANUFACTURERS GUIDELINES.
  2. RIP-RAP SHALL BE SUBANGULAR TO ANGULAR AND MEET CALTRANS REQUIREMENT FOR CLASS V ROCK SLOPE PROTECTION (METHOD B) WITH NOMINAL MEDIAN PARTICLE WEIGHT OF 1/4-TON.
  3. DO NOT CUT EXISTING CONCRETE REINFORCEMENT DURING ROUTING, IF ENCOUNTERED.



DATE SIGNED: 06/29/2022

0	6/29/22	SWL	FOR BIDDING
REV#	DATE	BY	DESCRIPTION
<b>OAKDALE IRRIGATION DISTRICT</b>			
SOUTH MAIN CANAL IMPROVEMENTS SEGMENT 3			
LINER AND REPAIR DETAILS			
<b>EST. 1968</b> <b>PROVOST &amp; PRITCHARD</b> CONSULTING GROUP <i>An Employee Owned Company</i>		19969 GREENLEY RD SUITE J SONORA, CA 95310 (209) 449-2700 fax (209) 449-2715 www.ppeng.com	
JOB#: 1783		DRAWN: K. MCKINLEY	
DATE: 06/22/2022		CHECKED: SWL	
		SCALE: AS SHOWN	
		FILE: 1783-40	

**SHEET**  
**5.2**  
 15 of 15