

**Meeting of the Central Valley Flood Protection Board
July 22, 2011**

Staff Report – Encroachment Permit

Kent Lang

Irrigation Pipe Removal and Replacement, Yolo County

1.0 – ITEM

Consider approval of Permit No. 18667 (Attachment B)

2.0 – APPLICANT

Kent Lang

3.0 – LOCATION

The project is located on the right (west) bank levee of the Sacramento River at RM 76.4 near the intersection of County Road 16/Reigo Road and County Road 17. (Sacramento River, Yolo County, see Attachment A)

4.0 – DESCRIPTION

Applicant proposes to remove an existing 18-inch diameter irrigation pipe that is in the foundation of the levee and replace it with an 18-inch diameter irrigation pipe up and over the right (west) bank levee of the Sacramento River.

5.0 – PROJECT ANALYSIS

The 18-inch diameter irrigation pipe to be removed is approximately 60 years old. The pipe is located in the foundation of the levee approximately 20-feet below the levee crown. The new 18-inch diameter steel pipe will be routed up and over the levee so the invert of the new pipe will be above the design water surface elevation. Installation of the new pipe will conform to all pertinent standards in Title 23, Section 123.

5.1 – Hydraulic Analysis

The 18-inch diameter steel replacement pipe will be buried in the waterside berm and the pump platform is existing therefore no hydraulic analysis is required.

5.2 – Geotechnical Analysis

The scope of work for this project does not require a geotechnical analysis. A geotechnical engineer will be onsite to observe and approve backfilling operations.

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- Reclamation District No. 1600 endorsed this project on April 19, 2011 and their conditions are incorporated into the permit.
- The U.S. Army Corps of Engineers 208.10 comment letter has not yet been received for this application. Upon receipt of a favorable letter and review by Board staff the letter will be incorporated into the permit as Exhibit A.

7.0 – CEQA ANALYSIS

Board staff has prepared the following CEQA determination:

Yolo County, as lead agency under CEQA, approved the project (Lang Encroachment Permit PW 2011-0083) on April 19, 2011 and determined that the project was categorically exempt under Class 2 (CEQA Guidelines Section 15302(c)) covering replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.

The Board, acting as a responsible agency under CEQA, has reviewed the Yolo County determination and has independently determined that the project is exempt from CEQA Class 2 (CEQA Guidelines Section 15302(c)) covering replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.

8.0 – SECTION 8610.5 CONSIDERATIONS

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the entire State Plan of Flood Control:

The irrigation pipe was present prior to the adoption of the area into the State Plan of Flood Control. Furthermore the new pipe will be buried above the design water surface elevation; therefore there will be no effect on the State Plan of Flood Control.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

There will be minimal effects to the pipe due to reasonable projected future events. Higher flows could require that the invert of the pipe be raised.

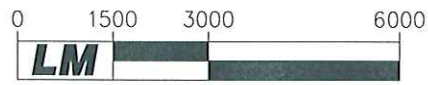
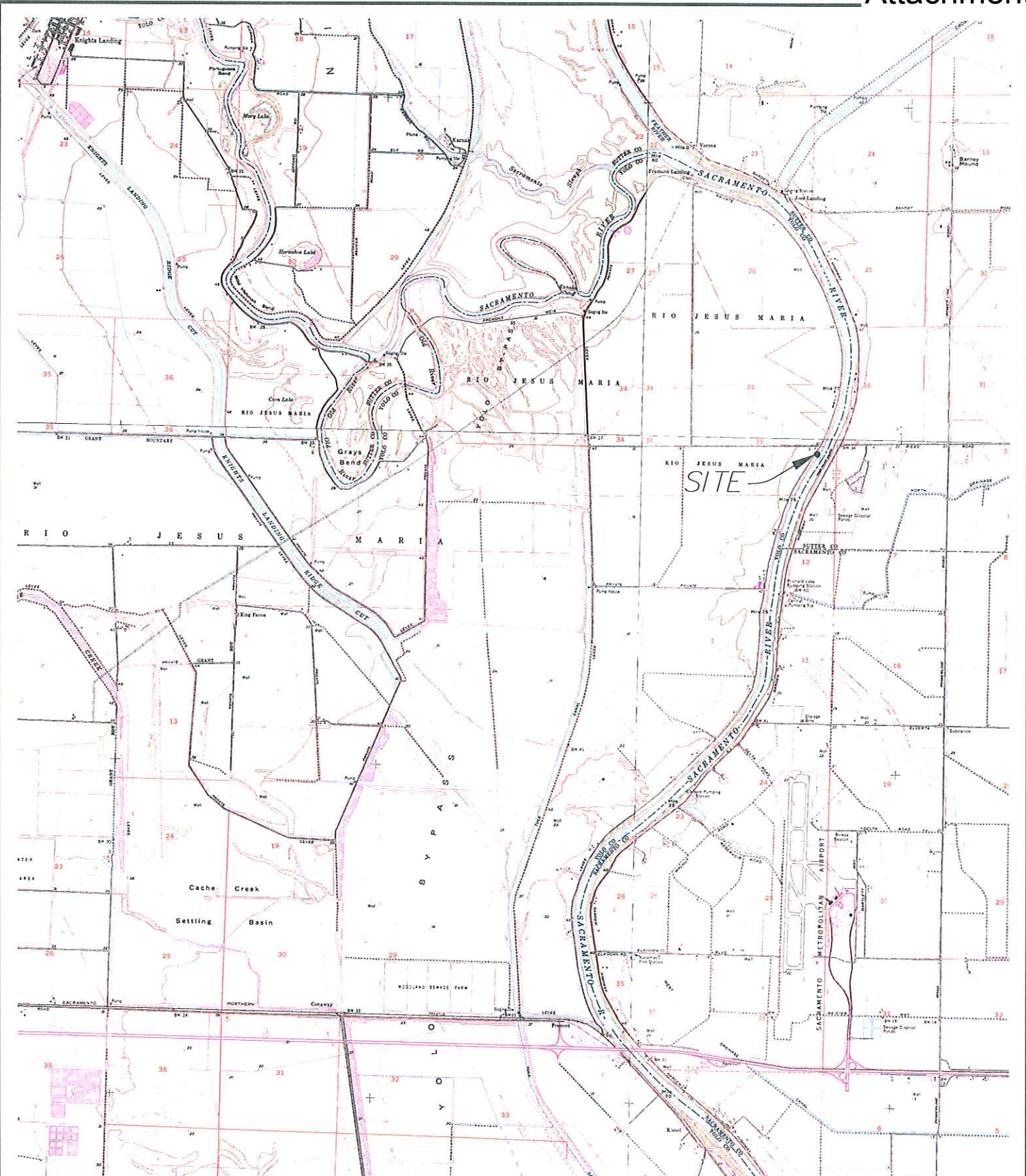
9.0 – STAFF RECOMMENDATION

Staff recommends that the Board determine the project to be exempt from CEQA, approve Permit No. 18657 conditioned upon receipt of a USACE 208.10 letter of determination confirming that the Corps has no objection to the project, and direct the Executive Officer to take necessary actions to execute the permit and to file a Notice of Exemption with the State Clearinghouse.

10.0 – LIST OF ATTACHMENTS

- A. Location Maps and Photos
- B. Draft Permit No. 18667
- C. Design Drawings

Design Review:	Gary W. Lemon P.E.
Environmental Review:	James Herota / Andrea Mauro
Document Review:	Mitra Emami P.E., Len Marino P.E.



SCALE: 1"=6000'



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VICINITY/LOCATION MAP
 FOR
LANG PIPE REPLACEMENT
 LOCATED IN A PORTION OF
 PROJECTED SECTION 1,
 TOWNSHIP 10 NORTH, RANGE 3 EAST,
 MOUNT DIABLO MERIDIAN,
 YOLO COUNTY, CALIFORNIA



LOOKING EAST FROM TOP OF LEVEE



LOOKING NORTH FROM TOP OF LEVEE



LOOKING EAST FROM DISTRIBUTION BOX

DRAFT

STATE OF CALIFORNIA
THE RESOURCES AGENCY
THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18667 BD

This Permit is issued to:

Kent Lang
21548 Old River Road
West Sacramento, California 95691

To remove an existing 18-inch diameter irrigation pipe through the levee and replace it with an 18-inch diameter irrigation pipe up and over the right (west) bank levee of the Sacramento River. The project is located on the right (west) bank levee of the Sacramento River at RM 76.4 near the intersection of County Road 16/Reigo Road and County Road 17 (Section 1, T15N, R3E, MDB&M, Reclamation District 1600, Sacramento River, Yolo County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

(SEAL)

Dated: _____

Executive Officer

GENERAL CONDITIONS:

ONE: This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

TWO: Only work described in the subject application is authorized hereby.

THREE: This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

FOUR: The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

FIVE: Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 18667 BD

THIRTEEN: The permittee should contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250, as compliance with Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act may be required.

FOURTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

FIFTEEN: Submitted drawings and specifications shall be stamped and signed by a registered engineer and a copy sent to the Central Valley Flood Protection Board prior to the commencement of work.

SIXTEEN: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

SEVENTEEN: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California

Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

EIGHTEEN: The Central Valley Flood Protection Board, Department of Water Resources, and Reclamation District No. 1600 shall not be held liable for any damages to the permitted encroachment(s) resulting from flood fight, operation, maintenance, inspection, or emergency repair.

NINETEEN: No construction work of any kind shall be done during the flood season from November 1st to April 15th without prior approval of the Central Valley Flood Protection Board.

TWENTY: The permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

TWENTY-ONE: A temporary bench mark, set to a known datum, shall be placed at the project site during construction.

TWENTY-TWO: Trees and brush cleared for construction shall be completely burned or removed from the floodway.

TWENTY-THREE: Excavations below the design flood plane and within the levee section or within 10 feet of the projected waterward and landward levee slopes shall have side slopes no steeper than 1 horizontal to 1 vertical. Flatter slopes may be required to ensure stability of the excavation.

TWENTY-FOUR: The existing pipe shall be entirely removed from the project works.

TWENTY-FIVE: The new steel pipe shall be corrosion-proofed externally with a coating of coal-tar enamel; asphalt-saturated felt wrap; cement mortar; or PVC or polyethylene tape wrapped to a thickness of 30 mils, or equivalent.

TWENTY-SIX: The invert of the pipe through the levee section shall be above the design flood plane elevation of 37.1 feet, NGV Datum.

TWENTY-SEVEN: The new pipe shall be installed through the levee section at a right angle to the centerline of the levee.

TWENTY-EIGHT: The pipe shall be placed in the center of an open trench 2 feet wider than the diameter of the pipe or 2 times the diameter, whichever is greater.

TWENTY-NINE: A positive-closure device that is readily accessible during periods of high water shall be installed on the waterward side of the levee.

THIRTY: A suitable siphon breaker and protective housing shall be installed on the apex of the pipe and shall be located off the levee patrol road.

THIRTY-ONE: The pipe shall be buried at least 12 inches below the levee slopes and 24 inches below the levee crown.

THIRTY-TWO: All pipe joints within the levee section shall be butt welded.

THIRTY-THREE: Backfill material for excavations within the levee section and within 10 feet of the levee toes shall be placed in 4- to 6-inch layers, moisture conditioned above optimum moisture content, and compacted to a minimum of 90 percent relative compaction as measured by ASTM Method D1557-91.

THIRTY-FOUR: Density tests by a certified materials laboratory will be required to verify compaction of backfill within the levee section.

THIRTY-FIVE: The project area shall be restored to at least the condition that existed prior to commencement of work.

THIRTY-SIX: The pipeline shall be tested using video or sonar equipment at least once every five-years or by annual pressure readings to show there is no significant loss in pressure. The results shall be submitted through the Central Valley Flood Protection Board to the Department of Water Resources, Flood Project Integrity and Inspection Branch and the Corps of Engineers.

THIRTY-SEVEN: The permittee is responsible for repairing any damage to the levees caused by the installation or operation of the pipeline.

THIRTY-EIGHT: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources or any other agency responsible for maintenance.

THIRTY-NINE: The permitted encroachment(s) shall not interfere with operation and maintenance of the flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of the Central Valley Flood Protection Board or Department of Water Resources. If the permittee does not comply, the Central Valley Flood Protection Board may modify or remove the encroachment(s) at the permittee's expense.

FORTY: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

FORTY-ONE: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

FORTY-TWO: The permittee shall comply with all conditions set forth by Reclamation District 1600 which is attached to this permit as Exhibit A and is incorporated by reference.

FORTY-THREE: The permittee shall comply with all conditions set forth in the letter from the Department of the Army dated July XX, 2011, which is attached to this permit as Exhibit B and is

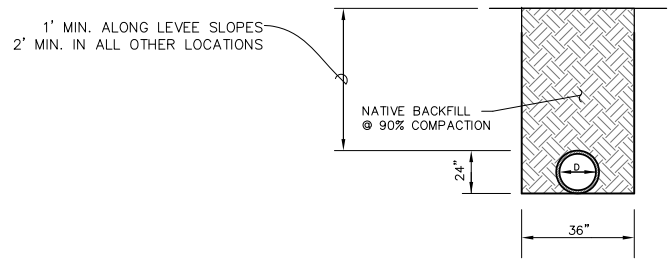
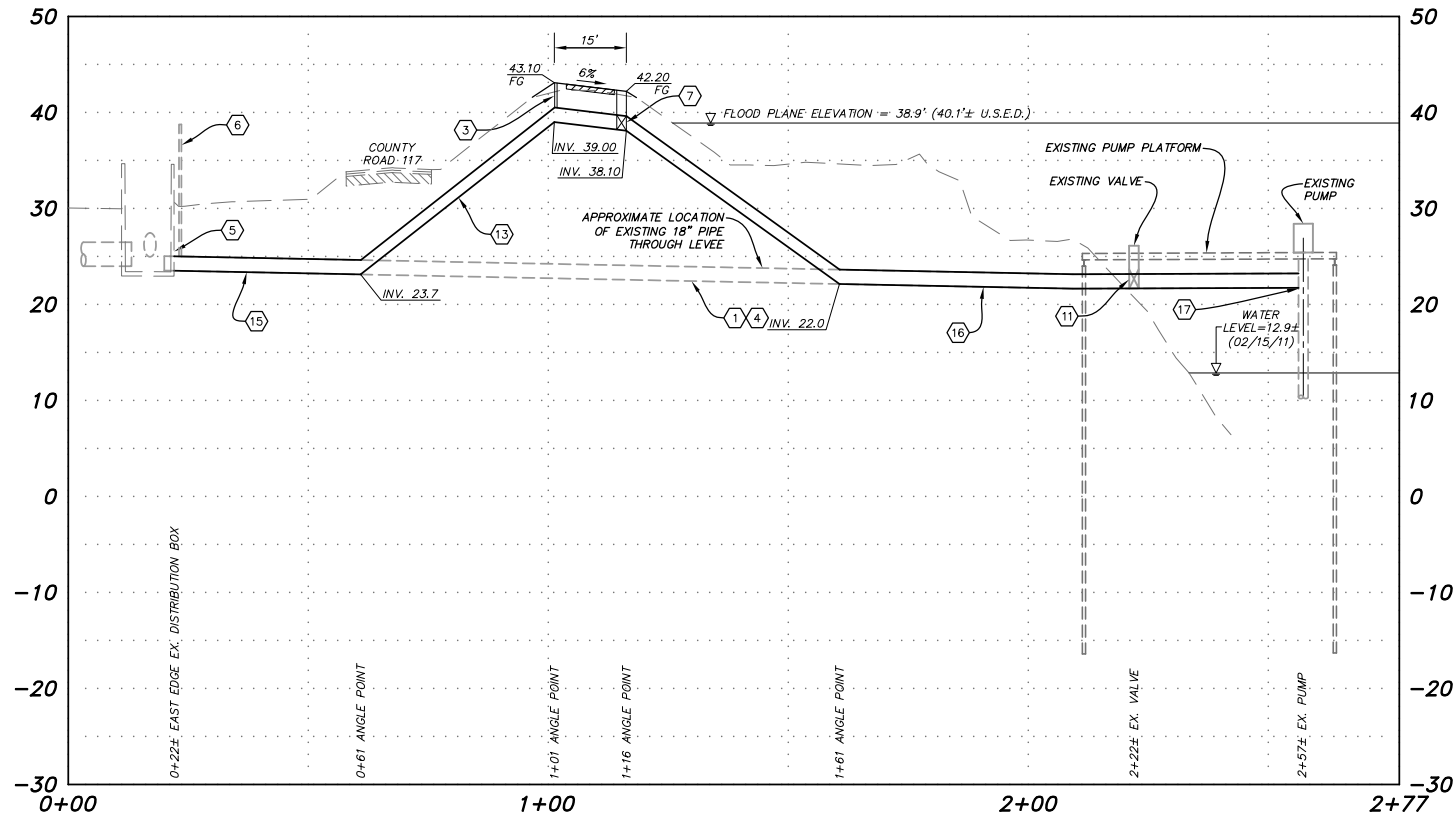
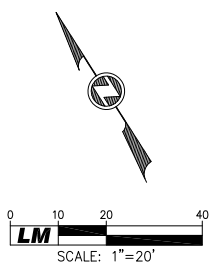
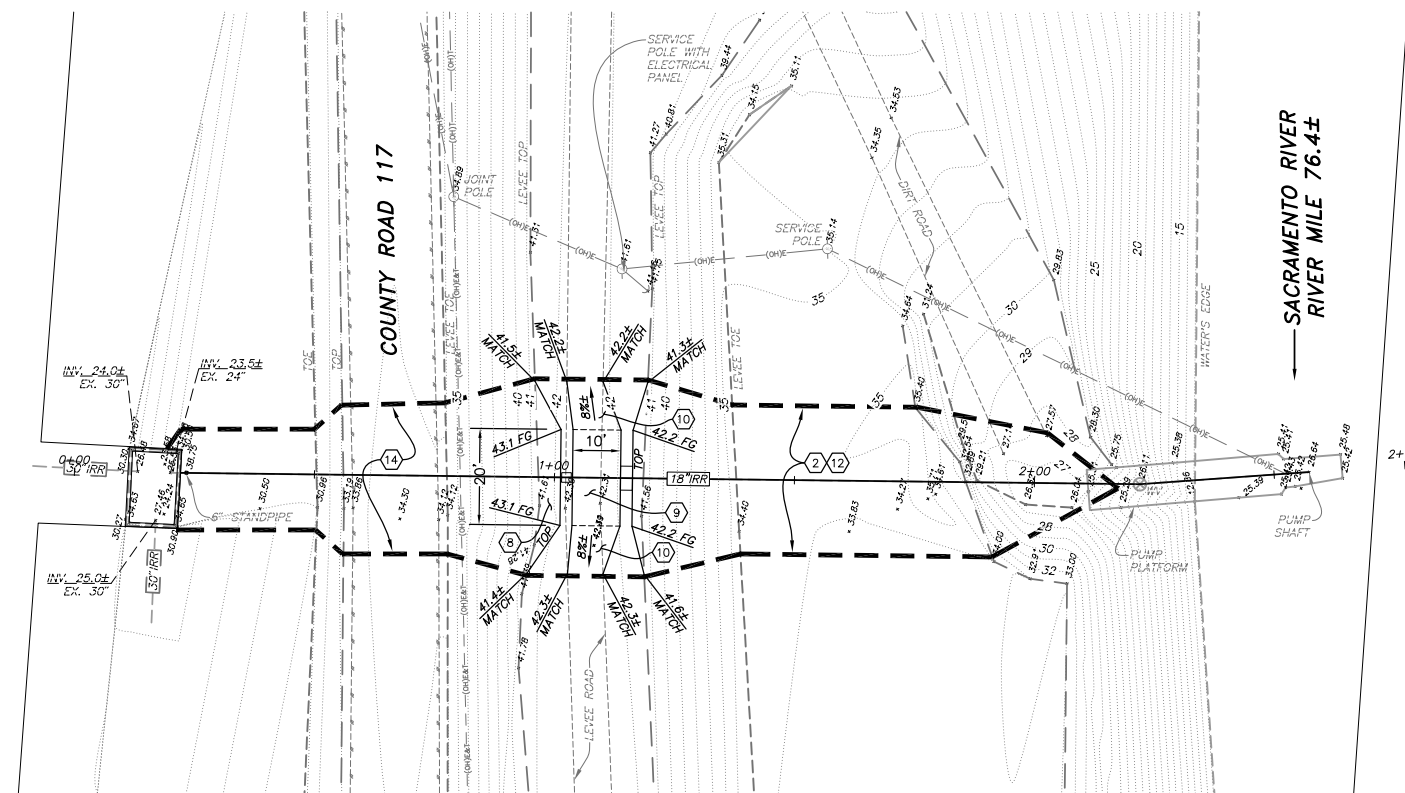
incorporated by reference.

FORTY-FOUR: Upon completion of the project, the permittee shall submit as-built plans to:
Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite
256, Sacramento, California 95821.

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CONSTRUCTION NOTES

1. CONTRACTOR TO VERIFY EXISTING MATERIALS.
2. APPROXIMATE EXCAVATION LIMITS FOR THE REMOVAL OF THE EXISTING 18" PIPE, ASSUMING 1:1 SIDE SLOPES ON THE EXCAVATION TRENCH.
3. INSTALL HARRIS-SIPHON BREAKER VALVE (HSB 05 A), OR EQUIVALENT, FOR 18" PIPE. INSTALL VALVE IN A CHRISTY B24 UTILITY BOX WITH A STEEL CHECKER PLATE LID, OR EQUIVALENT.
4. REMOVE EXISTING 18" PIPE FROM STATION 0+22± TO STATION 2+57± (235± LF).
5. CONTRACTOR TO INSPECT EXISTING CONNECTION TO THE DISTRIBUTION BOX AND COORDINATE WITH OWNER AND ENGINEER TO DETERMINE IF IT NEEDS TO BE REPLACED.
6. REMOVE EXISTING 6" STANDPIPE.
7. INSTALL POSITIVE CLOSURE DEVICE, CLOW VALVE COMPANY 4500 SERIES FLANGED BUTTERFLY VALVE WITH HANDWHEEL OPERATOR OR EQUIVALENT. INSTALL VALVE IN A CHRISTY B52 UTILITY BOX WITH 2 PIECE STEEL CHECKER PLATE LID, OR EQUIVALENT.
8. USE NATIVE MATERIALS AND PLACE FILL ON TOP OF THE EXISTING LEVEE SO THAT 2' MIN. OF COVER OVER THE NEW 18" PIPELINE IS OBTAINED. MAINTAIN 3:1 MAX. SLOPES ON THE LAND SIDE AND WATER SIDE OF THE LEVEE.
9. INSTALL 10' PATROL ROAD WITH 6" OF 3/4" CLASS 2 A.B. @ 95% MRC OVER COMPACTED SUBGRADE. 20' LENGTH CENTERED ON THE PIPE CROSSING.
10. TRANSITION TO THE EXISTING LEVEE PATROL ROAD AS SHOWN, MAINTAIN 6" OF 3/4" CLASS 2 A.B. @ 95% MRC OVER COMPACTED SUBGRADE ROAD SECTION.
11. REMOVE EXISTING VALVE.
12. CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL REPRESENTATIVE ON THE BENCHING REQUIREMENTS WHEN BACKFILLING THE EXCAVATED AREA.
13. INSTALL 235± LF OF 18" DIAMETER 3/8" WALL WELDED STEEL PIPE, SEE NOTE 11, SHEET 1.
14. EXISTING COUNTY ROAD TO BE REMOVED AND REPLACED PER COUNTY STANDARDS. AN ENCROACHMENT PERMIT WILL BE OBTAINED FROM THE COUNTY PRIOR TO BEGINNING WORK.
15. CONTRACTOR TO MAINTAIN A POSITIVE SLOPE/DRAINAGE FROM ANGLE POINT TO DISTRIBUTION BOX.
16. CONTRACTOR TO MAINTAIN A POSITIVE SLOPE/DRAINAGE FROM ANGLE POINT TO THE POINT OF CONNECTION AT THE EXISTING PUMP.
17. CONNECT TO EXISTING PIPE.



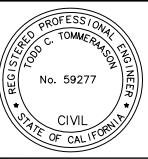
- NOTES:
- A. BACKFILL SHALL BE MECHANICALLY COMPACTED IN 6" LIFTS WITH NO JETTING
 - B. THE CONTRACTOR SHALL COORDINATE COMPACTION TESTING WITH THE PROJECT GEOTECHNICAL ENGINEER.

(C) TRENCH BACKFILL
NTS

DESIGNED BY	TCT				
DRAWN BY	JB				
CHECKED BY	TCT				
REV.	DATE	DESCRIPTION	BY	APP'D.	

LM LAUGENOUR AND MEIKLE
 CIVIL ENGINEERING · LAND SURVEYING · PLANNING
 808 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
 P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602

BY: TODD C. TOMMERAASON
 DATE: P.E. 59277



18" DIAMETER PIPE REPLACEMENT FOR
LANG FAMILY #1 LTD. PARTNERSHIP
 YOLO COUNTY CALIFORNIA

CROSS SECTION

SCALE	HORIZ.: 1"=20'	VERT.: 1"=10'	SHEET
			2
			OF
			2
CAD FILE:	567-9_C02		
DATE:	03-10-11		
JOB NO.	567-9		