

**Meeting of the Central Valley Flood Protection Board  
May 29, 2015  
Staff Report  
San Joaquin County  
Austin Road Bridge (29C-259) Scour Mitigation, San Joaquin County**

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**1.0 – ITEM**

Consider Central Valley Flood Protection Board (Board) approval to modify the North Fork of South Littlejohns Creek channel under Austin Road Bridge by placing rock slope protection (RSP) and concrete baffles in the channel bed and on the banks (Attachment A) by Draft Permit No. 19001 (Attachment B).

**2.0 – APPLICANT**

San Joaquin County

**3.0 – PROJECT LOCATION**

The Austin Road Bridge (29C-259) crosses the North Fork of South Littlejohn's Creek south of State Route 4 in a rural agricultural area of San Joaquin County southeast of the City of Stockton (approximate population of 292,000, 2010 census) (Attachment A).

**4.0 – PROJECT DESCRIPTION**

The existing bridge is a two-span continuous reinforced concrete bridge (Board Permit No. 6538) with a 1 foot wide center pier wall, span of approximately 37 feet, and an overall width of approximately 26 feet. The abutments are vertical walls located within the channel. The bridge was identified as scour critical in a hydraulics report dated July 30, 2003. Specifically identified in the report, was scour at the right side of Abutment 1 and the downstream wing wall at Abutment 1.

The purpose of the project is to modify the North Fork of South Littlejohns Creek (Attachment C) channel under Austin Road Bridge to mitigate for scours by placing rock slope protection (RSP) and concrete baffles. Temporary installation of an access ramp, coffer dams, or alternative diversion methods will be necessary to access the channel during minimal potential flow periods.

## **5.0 – AUTHORITY OF THE BOARD**

California Water Code § 8534, 8590 – 8610.5, and 8700 – 8710

2012 California Code of Regulations, Title 23 (Title 23):

- § 6 - Need for a Permit
- § 108 - Existing Encroachments
- § 112 - Streams Regulated and Nonpermissible Work Periods
- § 128 - Bridges
- § 121 - Erosion Control

## **6.0 – AGENCY COMMENTS AND ENDORSEMENTS**

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

- The U.S. Army Corps of Engineers (USACE) Sacramento District 408 Decision letter was received on April 20, 2015, and indicated that the USACE District Engineer approves the request to alter the Federal flood risk reduction project, subject to conditions. This letter has been incorporated into the permit as Exhibit A.
- The San Joaquin County Flood Control & Water Conservation District (District) has conditionally endorsed this project with their letter to the Board (Attachment D). No additional special conditions were needed to incorporate the intent and scope of the District conditions.

## **7.0 – PROJECT ANALYSIS**

### **7.1 – Hydraulic Analysis**

A HEC-RAS model was created in order to analyze the hydraulic impacts and scour limits at the project site. Manning's n-values for the channel were modeled at 0.03 for existing and proposed conditions. The channel banks, consisting of a mix of scattered weeds, grass, and rock, were modeled with a Manning's n-value 0.035. Downstream of the bridge the overbanks contained some brush and small trees which increased the overbank Manning's n-values to 0.04 and 0.045 in some places. The top of the existing bridge deck (not including railing) is at elevation 46.26 feet (NAVD88) and the bottom soffit of the bridge deck is at elevation of 44.26 feet. Note that the 100-year water surface elevations are approximately 1.51 feet below the soffit of the bridge deck.

For the scour mitigation study, it was necessary to provide 2-, 50-, and 100-year analyses, and an overtopping analysis to determine the required scour protection. Table 1 shows the different modeled flows.

Table 1 - Flows at Austin Road

Bridge	2-Year Flow (cfs)	50-Year Flow (cfs)	100-Year Flow (cfs)	Overtopping Flow (cfs)
Austin Road	1,109	2,278	2,336	2,510

Once the existing conditions model was established, a proposed conditions model was created to evaluate the proposed channel improvements at the project site. The existing and proposed models were run with the flows in Table 1 above. The proposed conditions 100-year model results show a decrease in WSE's upstream of the Austin Road Bridge and a smoother water surface transition through the bridge.

The existing condition observed by the design team was consistent with the findings in the latest Caltrans 2009 Bridge Inspection Report. The south abutment (Abutment 1) has experienced significant scour erosion and the footing of the center pier has been exposed. Based on these findings, the proposed project has been designed using the following recommendations:

- Fill in scoured channel and provide scour protection at the north side of the center pier.
- Fill in scoured channel and provide scour protection at the south abutment.
- Construct two reinforced concrete slabs with baffles and fill in gaps with Caltrans light class RSP.
- Use Caltrans ¼ Ton Class RSP for scour protection upstream and downstream of the Bridge.

Based on the review, the Board staff has no issues with the proposed designs.

## 7.2 – Geotechnical Analysis

All fill, RSP placement, and temporary structures will be constructed in compliance with Draft Permit No. 19001 and applicable Title 23 standards. Board staff has reviewed the information submitted by San Joaquin County and has determined that the proposed

project is expected to result in no adverse geotechnical impacts to the South Littlejohns Creek floodway or to downstream State Plan of Flood Control facilities.

## **8.0 – CEQA ANALYSIS**

Board staff has prepared the following CEQA determination:

The Board, as a Responsible Agency under CEQA, has reviewed the Initial Study, Mitigated Negative Declaration (IS/MND) (SCH No. 2014062027, June 2014) for the Austin Road Bridge Scour Mitigation Project, prepared by the lead agency, San Joaquin County. These documents including project design and San Joaquin County Board Order may be viewed or downloaded from the Board's website at <http://www.cvfpb.ca.gov/meetings/2015/05-29-2015.cfm> under a link for this agenda item. The documents are also available for review in hard copy at the Board and County offices.

San Joaquin County determined that the project would not have a significant effect on the environment and filed a notice of determination with the State Clearinghouse on September 10, 2014. Board staff finds that although the proposed project could have a potentially significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. The project proponent has incorporated mandatory mitigation measures into the project plans to avoid identified impacts or to mitigate such impacts to a point where no significant impacts will occur. These mitigation measures address impacts to biological resources and hydrology. The documents and other materials which constitute the record of the Board's proceedings in this matter are in the custody of Leslie Gallagher, Acting Executive Officer, Central Valley Flood Protection Board, 3310 El Camino Ave., Rm. 151, Sacramento, California 95821.

## **9.0 – WATER CODE SECTION 8610.5 CONSIDERATIONS**

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

The Board has considered all available evidence, including the application for Permit No. 19001, supporting technical documentations provided by San Joaquin County, and comments and endorsements from relevant agencies in regard to this proposed project, as well as any evidence that will be submitted up to the date of the decision on this application.

- The best available science that related to the scientific issues presented by the Executive Officer, legal counsel, the Department of Water Resources or other parties that raise credible scientific issues.

In making its findings, the Board has used the best available science relating to the issues presented by all parties. On the important issue of hydraulic impacts San Joaquin County used the HEC-RAS one-dimensional flow model. This model is considered by many experts as one of the best available and applicable scientific tools for the purpose of modeling river hydraulics in this region.

- Effects of the decision on the facilities of the State Plan of Flood Control, and consistency of the proposed project with the Central Valley Flood Protection Plan as adopted by Board Resolution 2012-25 on June 29, 2012:

This project is expected to result in no adverse impacts on facilities of the State Plan of Flood Control, and is consistent with the adopted 2012 Central Valley Flood Protection Plan and current Title 23 standards because the proposed project is predicted to result in no increase in water surface elevation, substantial increase in channel velocities, or adverse geotechnical impacts to the system.

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

San Joaquin County has determined that the proposed project does not conflict with any future foreseeable projects, nor are there any calculated and known foreseeable impacts anticipated to affect the proposed project.

## **10.0 – STAFF RECOMMENDATION**

Staff recommends that the Board:

**Adopt** the CEQA findings;

**Approve** Encroachment Permit No. 19001, in substantially the form provided; and

**Direct** the Executive Officer to take the necessary actions to execute the permit and file a Notice of Determination with the State Clearinghouse.

## **11.0 – LIST OF ATTACHMENTS**

A – Project Maps

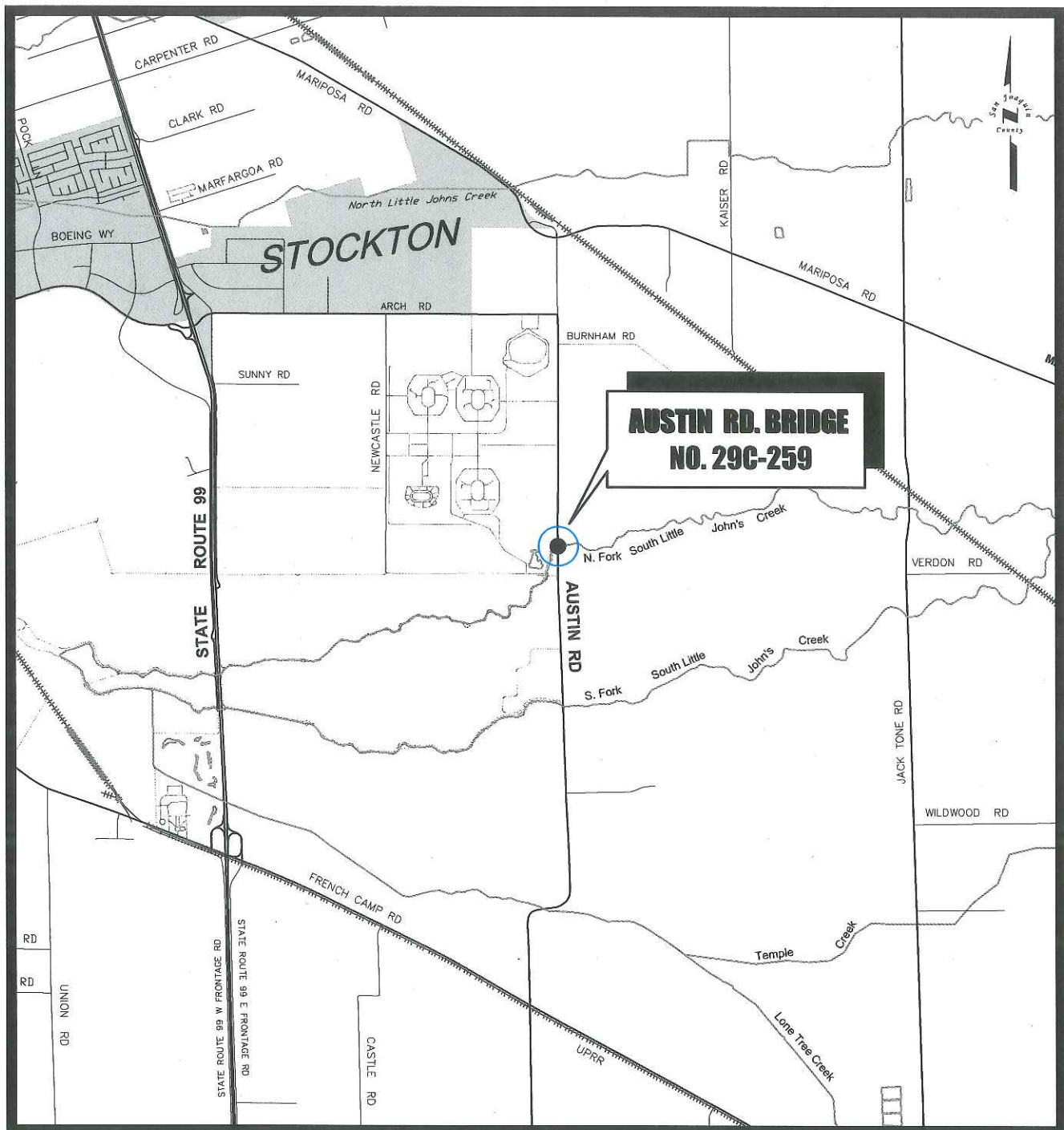
B – Draft Permit No. 19001

Exhibit A: USACE 408 Decision Letter

C – Project Drawings

D – District Endorsement Letter

Report/Technical Review:	Deb Biswas, PhD, PE, Engineer, WR
Environmental Review:	James Herota, Senior Environmental Scientist (Specialist)
Document Review:	Nancy Moricz, PE, Senior Engineer
	Eric Butler, PE, Projects and Environmental Branch Chief
	Len Marino, PE, Chief Engineer
	Nicole Rinke, Deputy Attorney General



--- VICINITY MAP ---

# **AUSTIN ROAD BRIDGE NO. 29C-259 over N. FORK S. LITTLE JOHNS CREEK**

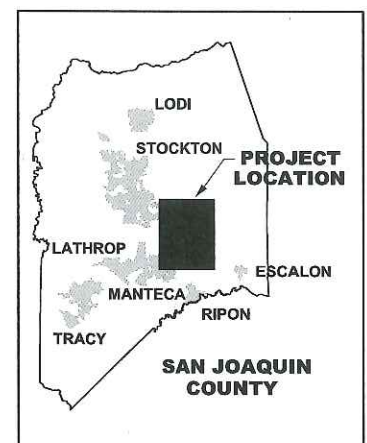
NO SCALE

DATE: May 3, 2010

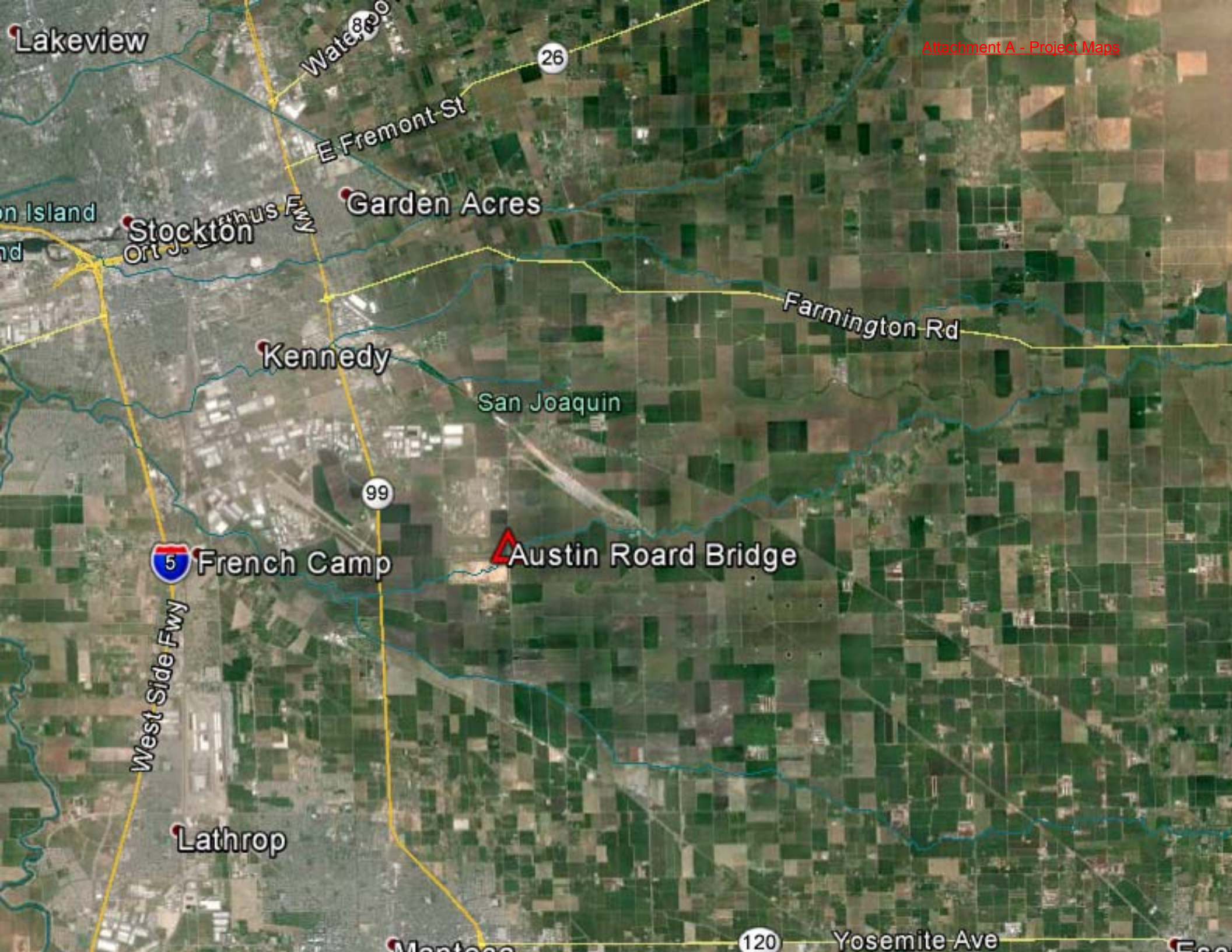
SAN JOAQUIN COUNTY, Dept. of Public Works

The County of San Joaquin does not warrant the accuracy, completeness, or suitability for any particular purpose. The information on this map is not intended to replace engineering, financial or primary records research.

\\sjpwgov.org\shares\Engineering\EBridge\BRIDGE29C-259 AUSTIN ROAD\Drawings\259 Vicinity Map.dwg .







Lakeview

Water 890

26

E Fremont St

on Island  
nd

Stockton  
Ort J.

atus Fwy

Garden Acres

Kennedy

San Joaquin

Farmington Rd

99

5

French Camp

Austin Road Bridge

West Side Fwy

Lathrop

Manteca

120

Yosemite Ave

Eco



**DRAFT**

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

**PERMIT NO. 19001 BD**

**This Permit is issued to:**

San Joaquin County  
1810 E. Hazelton Avenue  
Stockton, California 95205

To modify the North Fork of South Littlejohns Creek channel under Austin Road Bridge (29C-259) by placing rock slope protection (RSP) and concrete baffles in the channel bed and on the banks. Temporary installation of an access ramp, coffer dams, or alternative diversion methods, will be necessary to access the channel during minimal potential flow periods within the creek.

The project is located in San Joaquin County. (Section 34 & 35, T1N, R7E, MDB&M, San Joaquin County Flood Control and Water Conservation District, Littlejohns Creek, San Joaquin 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. 19001 BD**

#### **LIABILITIES / INDEMNIFICATION**

**THIRTEEN:** The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board (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 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.

**FOURTEEN:** The permittee is responsible for all liability and shall defend, indemnify, and hold the 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.

**FIFTEEN:** The Board and Department of Water Resources (DWR) shall not be held liable for damages to the permitted project resulting from releases of water from reservoirs, flood fight, operation, maintenance, inspection, or emergency repair.

**SIXTEEN:** If the permittee does not comply with the conditions of the permit and enforcement by the Board is required, the permittee shall be responsible for bearing all costs associated with the enforcement action, including reasonable attorney's fees. Permittee acknowledges that State law

allows the imposition of fines in enforcement matters.

## **PERMITTING AND AGENCY CONDITIONS**

SEVENTEEN: The permittee shall comply with all conditions set forth in the 408 decision letter from the U.S. Army Corps of Engineers, Sacramento District dated April 20, 2015, which is attached to this permit as Exhibit A and is incorporated by reference.

EIGHTEEN: The permittee agrees to incur all costs for compliance with local, State, and Federal permitting. If any conditions issued by other agencies conflict with any of the conditions of this permit, then the permittee shall resolve conflicts between any of the terms and conditions that agencies might impose under the laws and regulations it administers and enforces.

NINETEEN: Access roads shall be kept open at all times for maintenance activities.

## **REAL ESTATE**

TWENTY: If the construction project extends onto land owned in fee and/or easement by the Sacramento and San Joaquin Drainage District acting by and through the Board, the permittee shall secure an easement, license, or temporary entry permit from the Board prior to commencement of work. Contact Tom O'Neil at (916) 653-7654.

## **PRE-CONSTRUCTION**

TWENTY-ONE: The permittee shall contact the Board by telephone at (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-TWO: The permittee shall provide construction supervision and inspection services acceptable to the Board.

TWENTY-THREE: Prior to commencement of work, the permittee shall create a photo record, including associated descriptions, of the existing site conditions. The photo record shall be certified (signed and stamped) by a licensed land surveyor or licensed civil engineer registered in the State of California and submitted to the Board within thirty (30) calendar days of beginning the project.

TWENTY-FOUR: Thirty (30) calendar days prior to the start of any demolition and / or construction activities within the floodway or within the existing levee prism, the permittee shall submit two sets of detailed plans and specifications and supporting geotechnical and / or hydraulic impact analyses to the Board's Chief Engineer, for any and all temporary, in channel, or levee prism work that may have an impact during the flood season from November 1 through April 15. The Board may request additional information as needed and will seek comment from the USACE and / or the local maintaining agency when necessary. The Board will provide written notification to the permittee if the review period is likely to exceed thirty (30) working days.

## CONSTRUCTION

TWENTY-FIVE: 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 Board.

TWENTY-SIX: No construction work of any kind shall be done during the flood season from November 1 to April 15 without prior approval of the Board.

TWENTY-SEVEN: All addenda and contract change orders made to the approved plans and / or specifications by the permittee after Board approval of this permit shall be submitted to the Board's Chief Engineer for review and approval prior to incorporation into the permitted project. The submittal shall include all supplemental plans, specifications, and necessary supporting geotechnical, hydrology and hydraulics, or other technical analyses. The Board shall acknowledge receipt of the addendum or change submittal in writing within ten (10) working days of receipt, and shall work with the permittee to review and respond to the request as quickly as possible. Time is of the essence. The Board may request additional information as needed and will seek comment from the U.S. Army Corps of Engineers and / or local maintaining agencies when necessary. The Board will provide written notification to the permittee if the review period is likely to exceed thirty (30) calendar days. Upon approval of submitted documents the permit shall be revised, if needed, prior to construction related to the proposed changes.

TWENTY-EIGHT: Rock Slope Protection (RSP) shall be uniformly placed and properly transitioned into the bank, or adjacent revetment and in a manner which avoids segregation.

TWENTY-NINE: RSP shall be quarry stone or cobbles and shall meet the following grading or equivalent:

Quarry Stone		Cobbles	
Stone Size	Percent Passing	Stone Size	Percent Passing
15 inches;	100	15 inches;	100
8 inches;	80-95	10 inches;	55-95
6 inches;	45-80	8 inches;	35-65
4 inches;	15-45	6 inches;	10-35
2 inches;	0-15	3 inches;	1-5

THIRTY: The RSP shall not contain any reinforcing steel, floatable, or objectionable material. Asphalt or other petroleum-based products may not be used as fill or erosion protection within the floodway.

THIRTY-ONE: No material stockpiles, temporary buildings, or equipment shall remain in the floodway during the flood season from November 1 to April 15 unless otherwise approved by the Board, and shall be removed after completion of the project.

THIRTY-TWO: All debris generated by this project shall be disposed of outside of the North Fork of



South Littlejohns Creek floodway.

THIRTY-THREE: The permittee shall be responsible for all damages due to any construction-induced activities.

## **VEGETATION / ENVIRONMENTAL MITIGATION**

THIRTY-FOUR: Trees, brush, sediment, and other debris shall be kept cleared from the site and disposed of outside the floodway to maintain the design flow capacity and flowage area.

THIRTY-FIVE: No further work, other than that covered by this application, shall be performed in the area without prior approval of the Board.

## **POST-CONSTRUCTION**

THIRTY-SIX: The work area shall be restored to the condition that existed prior to start of work.

THIRTY-SEVEN: Within 120 days of completion of the project, the permittee shall submit to the Board as-built drawings and a certification report, stamped and signed by a licensed civil engineer registered in the State of California, certifying the work was performed and inspected in accordance with the Board permit conditions and submitted drawings and specifications.

## **OPERATIONS AND MAINTENANCE**

THIRTY-EIGHT: The permittee shall be responsible for repair of any damages to the channel, banks, floodway, or any other flood control facilities due to construction, operation, or maintenance of the proposed project.

THIRTY-NINE: The permittee shall maintain the permitted project within the utilized area in accordance with applicable current or future local, State, and federal standards in the manner required as requested by an authorized representative of the Board, DWR, or any other agency responsible for maintenance.

FORTY: The permitted project shall not interfere with operation and maintenance of the flood control project. If the permitted project is 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 project under direction of the Board. If the permittee does not comply, the Board may modify or remove the project at the permittee's expense.

FORTY-ONE: If the permitted structure results in any adverse hydraulic impact or scouring the permittee shall provide appropriate mitigation measures subject to review and approval of the Board.

FORTY-TWO: At the request of either the permittee or Board the permittee and Board shall conduct joint inspections of the project and floodway after significant flood events or flood seasons to assess the integrity and operation of the project, and to assess and respond to any adverse impacts on the

floodway or adjacent properties.

#### **PROJECT ABANDONMENT, CHANGE IN PLAN OF FLOOD CONTROL**

FORTY-THREE: If the project works, or any portion thereof, is significantly damaged or is to be abandoned in the future, the permittee shall abandon or repair the project under direction of the Board at the permittee's cost and expense.

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

#### **END OF CONDITIONS**



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT  
1325 J STREET  
SACRAMENTO CA 95814-2922

Flood Protection and Navigation Section (19001)

APR 20 2015

Ms. Leslie M. Gallagher, Acting Executive Officer  
Central Valley Flood Protection Board  
3310 El Camino Avenue, Room 151  
Sacramento, California 95821

Dear Ms. Gallagher:

We have reviewed a permit application by San Joaquin County (application number 19001). These plans include placing rock slope protection and gabion mats in the channel bed and on the banks of the North Branch of South Littlejohns Creek. The work also includes installing a temporary access ramp and coffer dams. The project is located under Austin Road Bridge (29C-259), at 37.885917°N 121.183750°W NAD83, San Joaquin County, California.

The Sacramento District has reviewed this application and determined that the alteration will not be injurious to the public interest and will not impair the usefulness of the project works. Pursuant to Section 14 of the Rivers and Harbors Act of 1899, 33 U.S.C. 408 (Section 408), the District Engineer approves the request to alter the Federal flood risk reduction project subject to the following conditions:

- a. That in the event trees and brush are cleared, they shall be properly disposed of by either complete burning or complete removal outside the limits of the project right-of-way.
- b. That the proposed work shall not be performed during the flood season of November 1 to April 15, unless otherwise approved in writing by your Board.
- c. That the proposed work shall not reduce the channel flow capacity or change the channel flow in such a way that may cause damage to the existing channel embankment.
- d. That the proposed work shall not interfere with the integrity of the flood risk reduction project; easement access; or maintenance, inspection, and flood fighting procedures.
- e. That the proposed rockwork shall be placed uniformly and properly transitioned into the natural bank at both ends.

-2-

f. That in the event erosion occurs at the site, the eroded areas shall be repaired and bank protection placed to prevent future erosion.

g. That the temporary ramp and coffer dams shall be removed immediately after construction.

h. That any debris generated by this project shall be disposed of outside the limits of the project right-of-way.

i. That the proposed streambed material shall be placed so there are no abrupt grade changes in the channel.

A Section 404 permit application (SPK-2014-1086) is in process for this work.

A copy of this letter is being furnished to Mr. Don Rasmussen, Chief, Flood Project Integrity and Inspection Branch, 3310 El Camino Avenue, Suite 200, Sacramento, CA 95821.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Farrell".

Michael J. Farrell  
Colonel, U.S. Army  
District Commander



COUNTY OF SAN JOAQUIN  
**DEPARTMENT OF PUBLIC WORKS**  
STOCKTON, CALIFORNIA  
PROJECT PLANS FOR  
**AUSTIN ROAD BRIDGE**  
**NO. 29C-259 SCOUR MITIGATION PROJECT**  
**AT SOUTH LITTLEJOHN'S CREEK,**  
**FEDERAL AID PROJECT NO. BPMP-5929 (223)**  
TO BE SUPPLEMENTED BY STANDARD PLANS 2010

Attachment C - Project Drawings

100% PLANS

NOT FOR CONSTRUCTION

COUNTY OF SAN JOAQUIN

Submitted \_\_\_\_\_, 2015

MICHAEL SELLING  
DEPUTY DIRECTOR OF PUBLIC WORKS



Joseph W. Domenichelli  
Registered Civil Engineer

INDEX OF SHEETS

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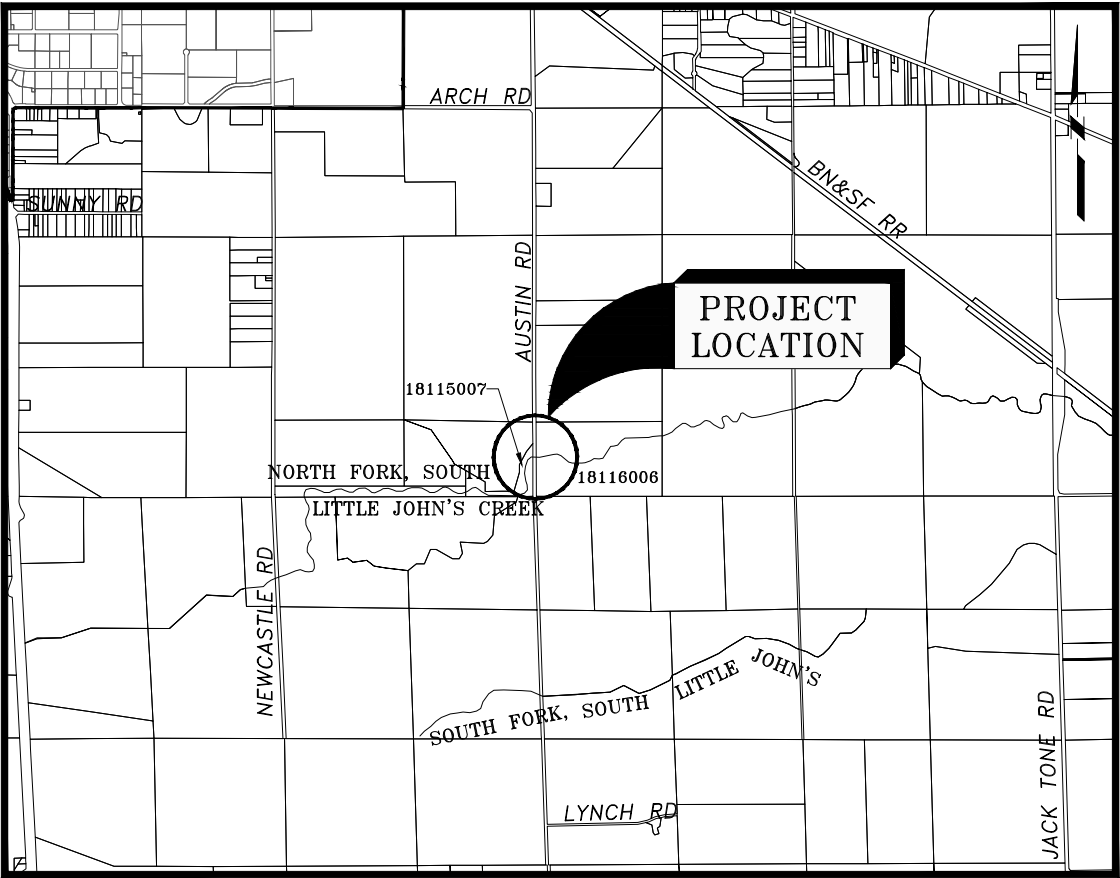
APPLICABLE STANDARDS PLANS

A10A  
RSP A10B

ABBREVIATIONS

(In addition to abbreviation shown on Standard Plan  
A10A and RSP A10B and Standard Specification  
1-1.106 Abbreviation)

NTS	= Not to Scale
Rdwy	= Roadway
SJ Co Std	= San Joaquin County Standard
San	= Sanitary
SP	= Standard Plans
SDI	= Storm Drain Inlet



PROJECT LOCATION MAP  
NTS

The Contractor shall possess a Class A  
license at the time this contract is awarded.



PROJECT ENGINEER		DATE		CHECKED	DATE	AUSTIN ROAD BRIDGE NO. 29C-259 SCOUR MITIGATION PROJECT AT SOUTH LITTLEJOHN'S CREEK FEDERAL AID PROJECT NO. BPMP-5929 (223)			COUNTY OF SAN JOAQUIN DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION 1810 EAST HAZELTON AVENUE STOCKTON, CALIFORNIA 95205 PHONE: (209) 468 - 3000 FAX: (209) 468 - 2999	<b>DOMENICHELLI &amp; ASSOCIATES</b>  1101 Investment Blvd, Suite 115 El Dorado Hills, CA 95762 Ph: (916) 933-1997 Fax: (916) 933-4778	SHEET NO. 1 of 9
DRAWER		SHEET NO.		SHEET NAME			SCALE				
				TITLE SHEET			NTS				

Attachment C - Project Drawings

PROJECT NOTES:


1. PROJECT DESIGN SURVEY WAS COMPLETED IN NAD 83 AND NAVD 88.
2. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ROAD SURFACES TO THE FULLEST EXTENT POSSIBLE. IF IT IS DETERMINED BY THE COUNTY THAT THE CONTRACTOR IS USING EXCESSIVE EQUIPMENT OR NOT TAKING REASONABLE MEASURES TO PROTECT THE ROADWAY SURFACE, THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAVING OF THE ROADWAY AND ALL ASSOCIATED COSTS.
3. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING HEALTH AND SAFETY OF ALL PERSONS (INCLUDING EMPLOYEES, SUBCONTRACTORS, SERVICE PERSONNEL AND SITE VISITORS) AND PROPERTY DURING PERFORMANCE OF THE WORK.
4. CONTRACTOR IS RESPONSIBLE TO OBTAIN PERMISSION FROM PROPERTY OWNERS FOR STAGING AREA OUTSIDE THE PERMISSION TO ENTER AND PERFORM WORK.
5. BENCHMARK INFORMATION  
ID: BD 2.5" SJ CO 0-28.6  
N: 2145843.959  
E: 6364353.176  
ELEV: 46.26'  
  
ID: MK PK  
N: 2145903.822  
E: 6364349.714  
ELEV: 45.33'
6. CONTRACTOR IS RESPONSIBLE FOR PLACING TEMPORARY WATER DIVERSION UPSTREAM AND DOWNSTREAM OF EXISTING BRIDGE
7. UNFORSEEN CONDITION OR MATERIAL ENCOUNTERED DURING EXCAVATION FOR THE PLACEMENT OF ROCK SLOPE PROTECTION SHALL BE INCLUDED IN THE CONTRACT PRICE PAID FOR ROCK SLOPE PROTECTION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
8. PRIOR TO COMMENCING ANY WORK, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE IN THE FIELD THEIR MAIN SERVICE LINES AND LATERALS. THE CONTRACTOR MUST NOTIFY MEMBERS OF THE UNDERGROUND SERVICE ALERT (U.S.A.) 48 HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK BY CALLING THE TOLL FREE NUMBER (1-800-227-2600).
9. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING HIGHWAY AND UTILITY FACILITIES' LOCATIONS AND DEPTHS. IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING HIGHWAY AND UTILITY FACILITIES, SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. THE CONTRACTOR WILL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICES TO THE PROJECT. PAYMENT FOR THIS WORK WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF WORK.
10. IF ACCESS IS NEEDED ON THE WEST SIDE OF THE BRIDGE, ACCESS WILL ONLY BE ALLOWED ON THE NORTHWEST SIDE OF THE CHANNEL. THE CONTRACTOR SHALL REMOVE AND REPLACE FENCE AND RESTORE ORIGINAL SITE CONDITION IN KIND AS NEEDED FOR ACCESS ON THE NORTHWEST SIDE. FULL COMPENSATION FOR REMOVE AND REPLACE FENCE IN KIND AS NEEDED SHALL BE INCLUDED IN THE VARIOUS ITEMS OF WORK.


LEGEND:


- CENTERLINE
- <-


FLOWLINE
- EDGE OF PAVEMENT (EP)
- OH —

OVERHEAD (OH)
- PERMISSION TO ENTER AND PERFORM WORK
- LIMITS OF CLEARING AND GRUBBING
- - - -

EXISTING RIGHT OF WAY
- EXISTING FENCE
- 

EXISTING RSP
- 

PROPOSED RSP
- 

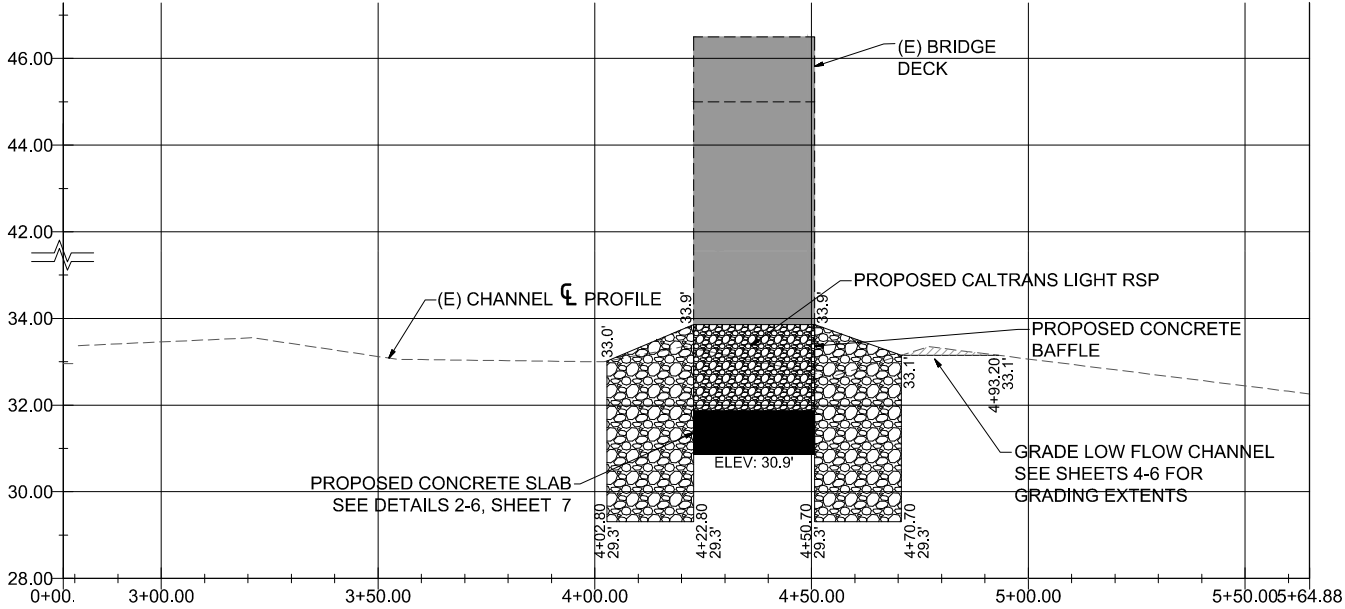
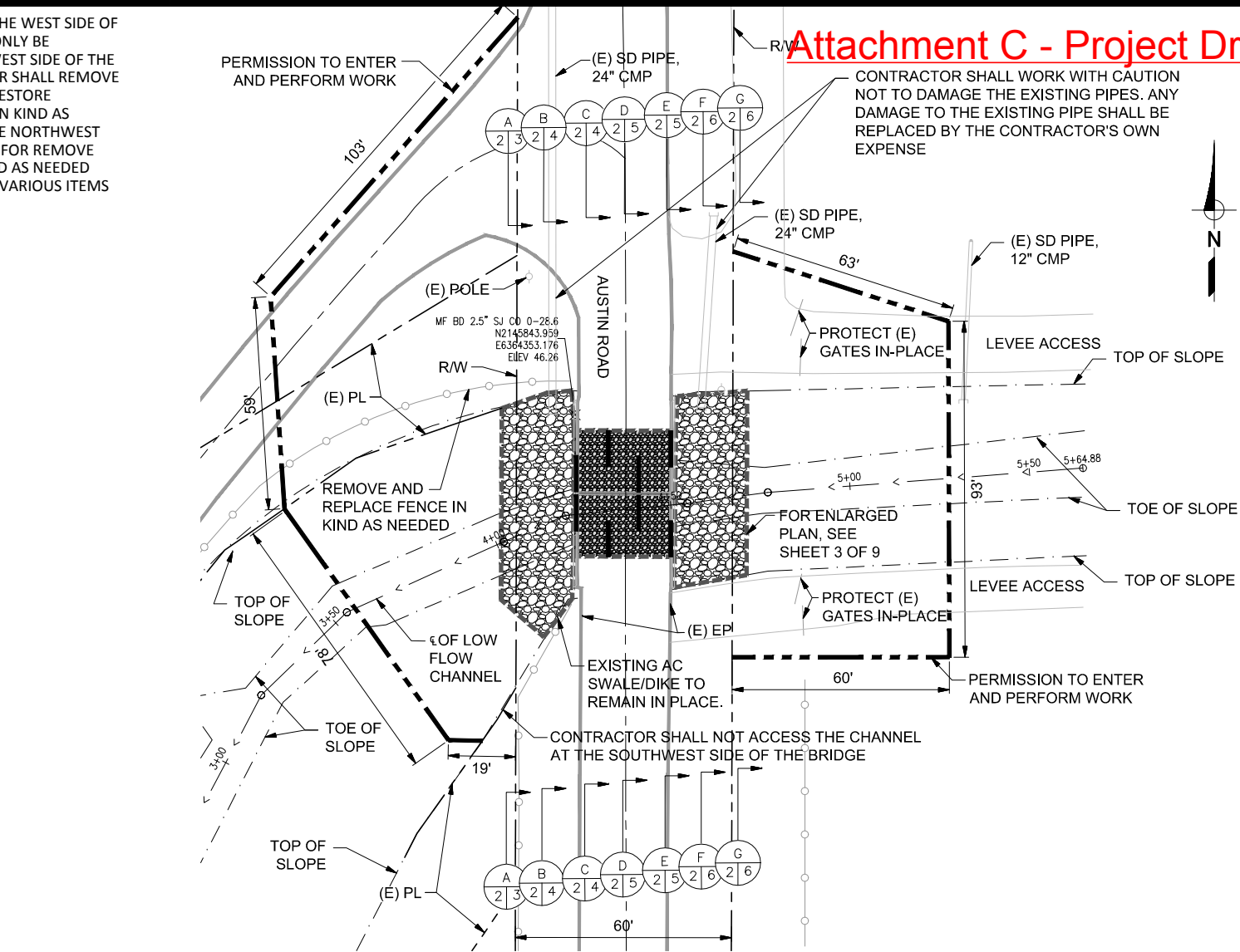
EXISTING GABION MATTRESS
- 

PROPOSED GABION MATTRESS
- X

Y

Z

X = CROSS SECTION IDENTIFICATION  
Y = SHEET ON WHICH CROSS SECTION IS TAKEN  
Z = SHEET ON WHICH CROSS SECTION IS SHOWN

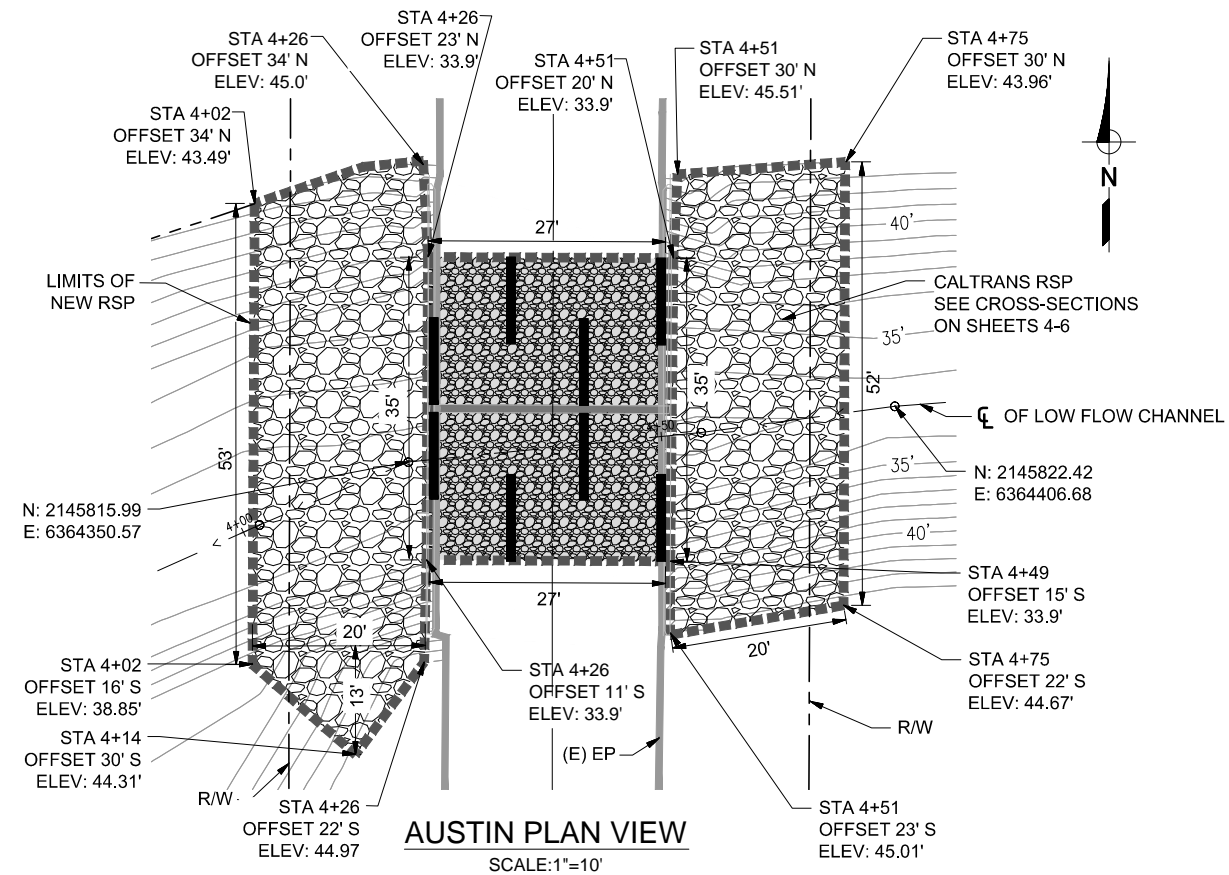


SOUTH LITTLEJOHN'S CREEK C PROFILE

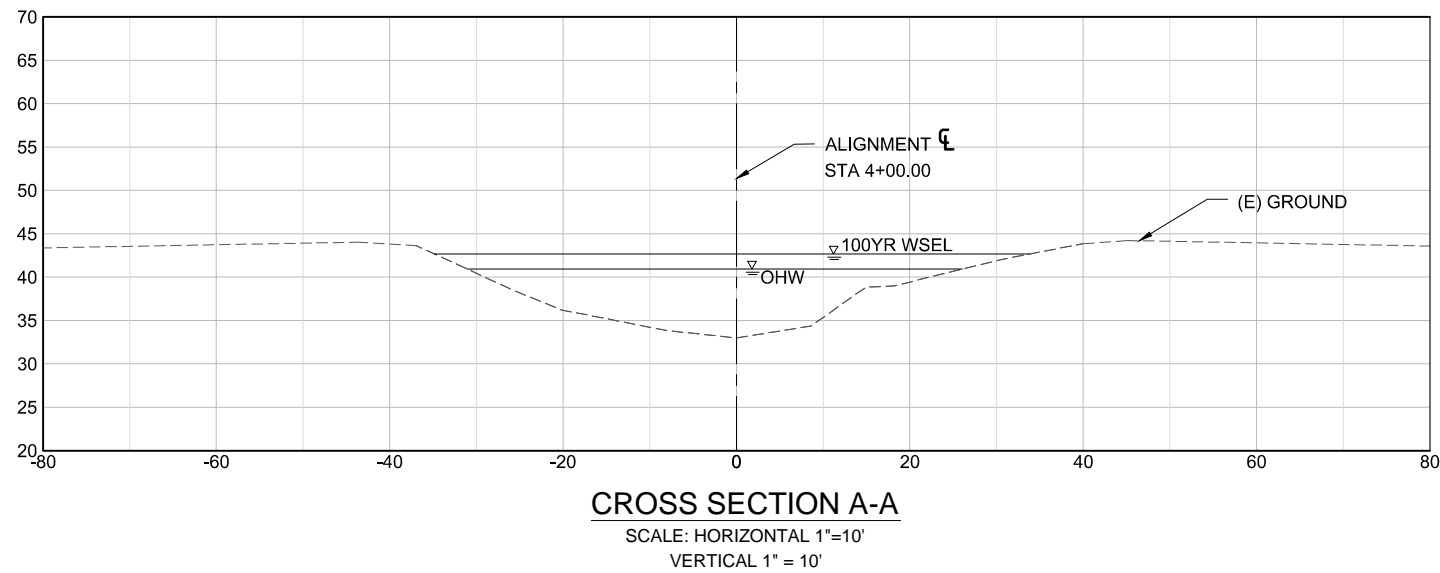
SCALE: HORIZONTAL 1"=20', VERTICAL 1" = 2'

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TYPICAL STA 0+00 TO 4+01

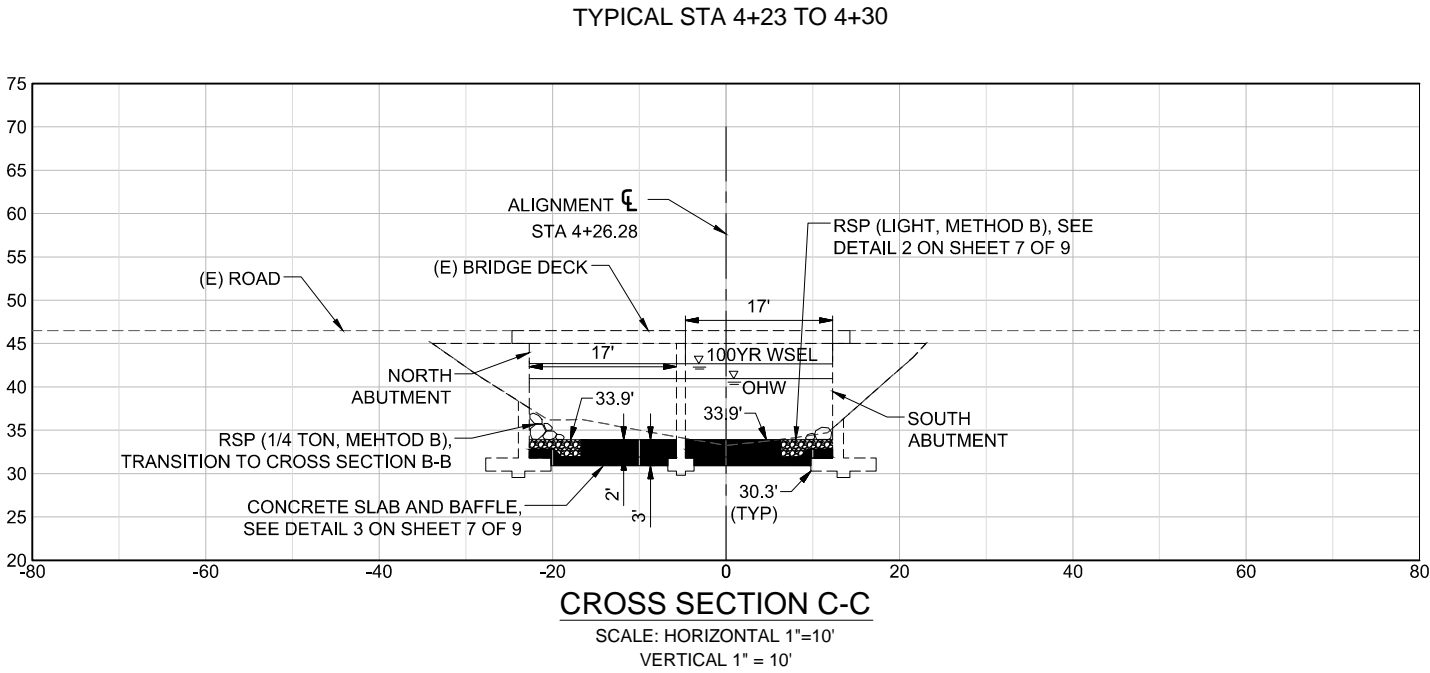
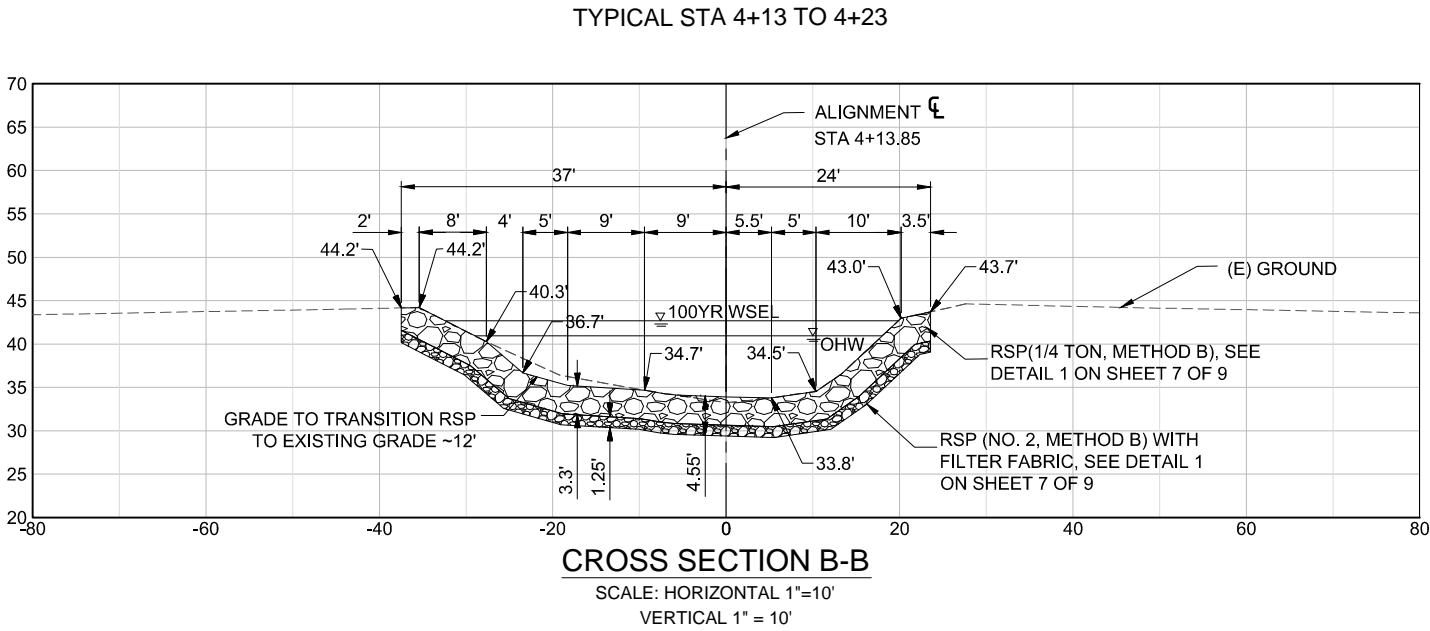


Attachment C - Project Drawings

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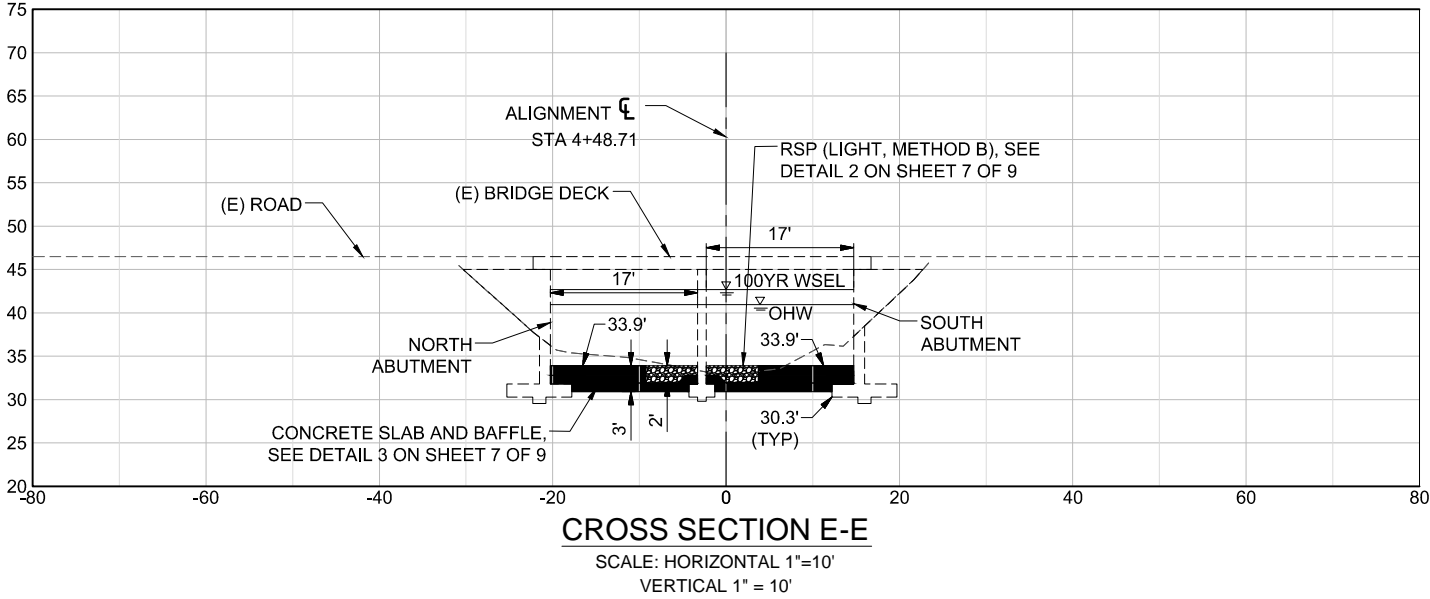
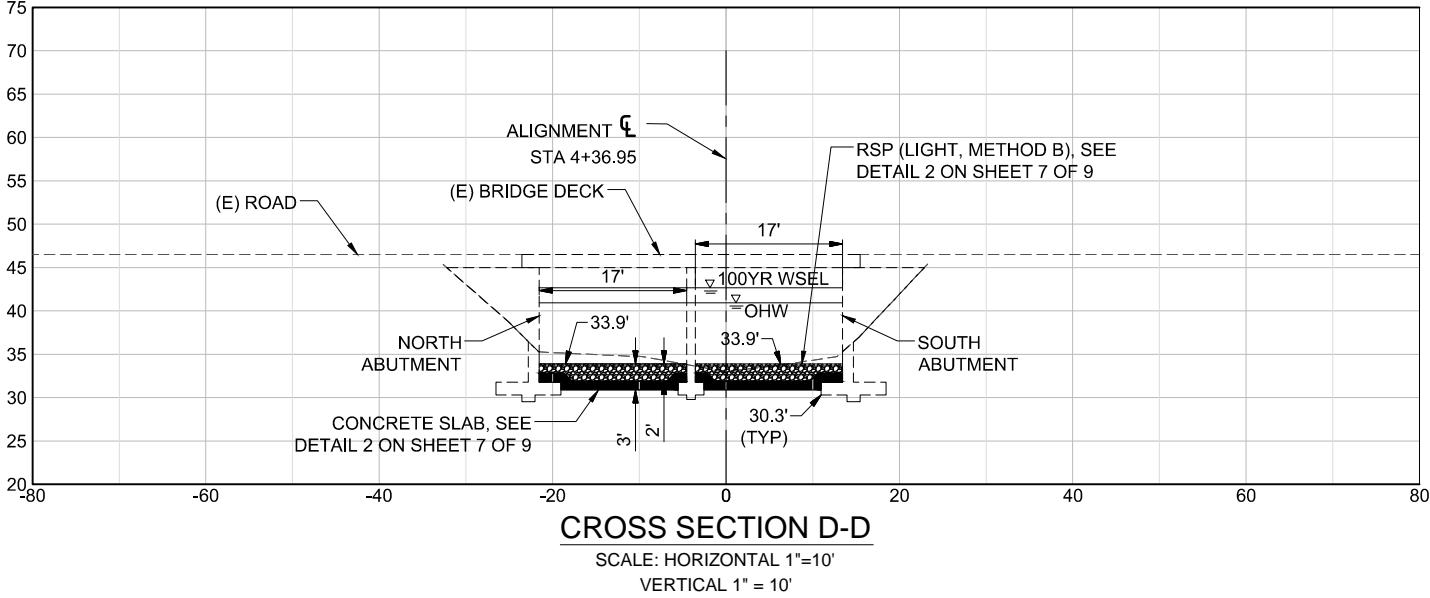
Attachment C - Project Drawings





## Attachment C - Project Drawings

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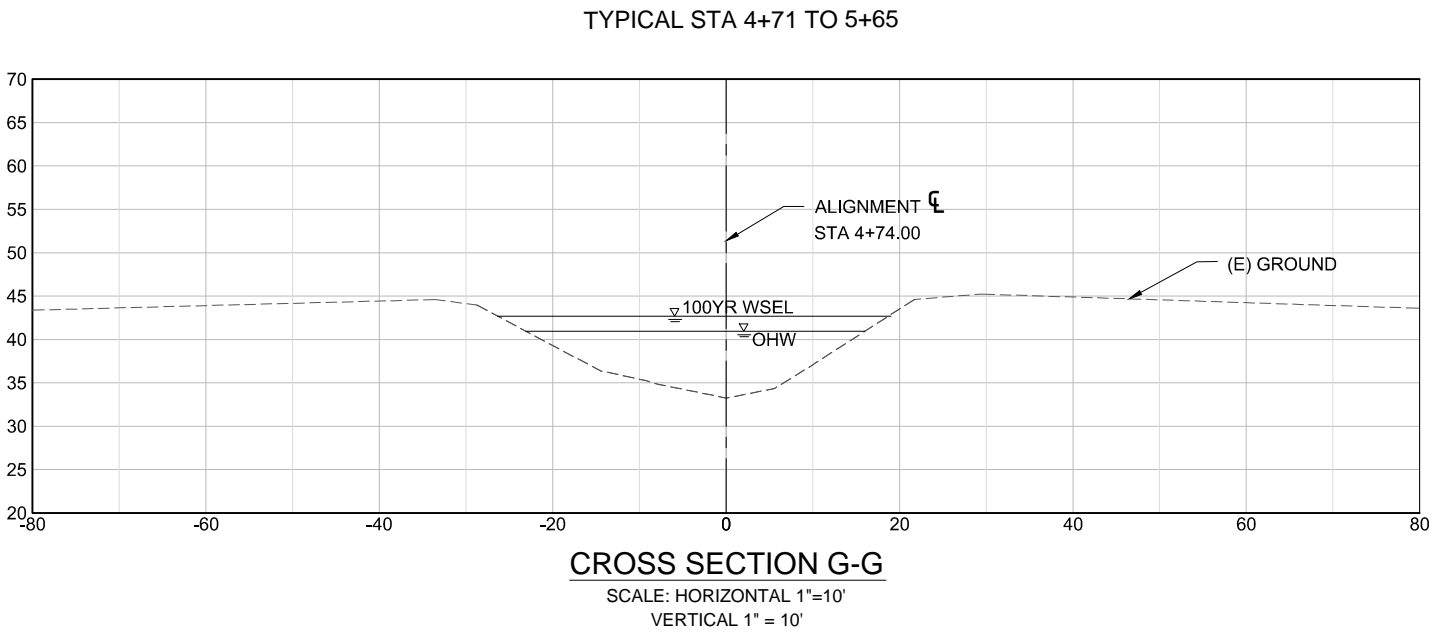
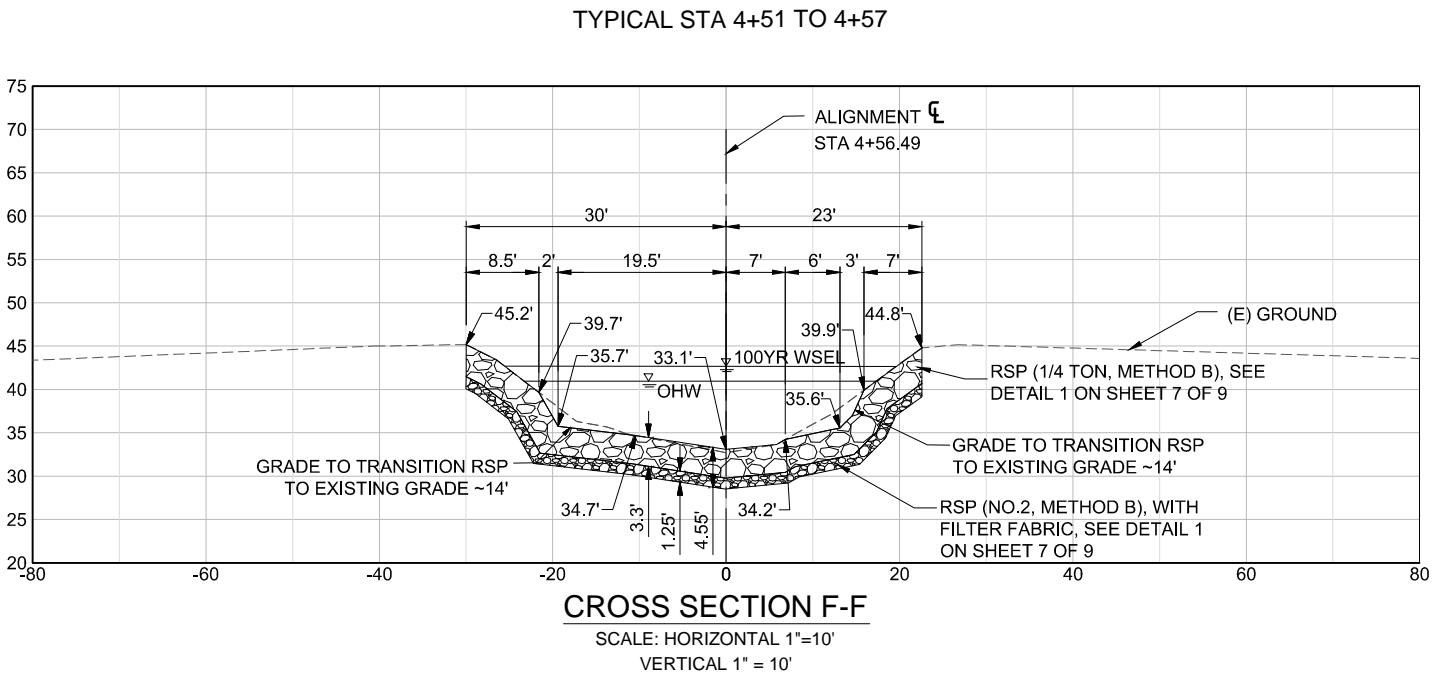


PROJECT ENGINEER	DATE	CHECKED	DATE		AUSTIN ROAD BRIDGE NO. 29C-259 SCOUR MITIGATION PROJECT AT SOUTH LITTLEJOHN'S CREEK FEDERAL AID PROJECT NO. BPMP-5929 (223)		<b>COUNTY OF SAN JOAQUIN</b> <b>DEPARTMENT OF PUBLIC</b> <b>WORKS BRIDGE DIVISION</b> 1810 EAST HAZELTON AVENUE STOCKTON, CALIFORNIA 95205 PHONE: (209) 468 - 3000 FAX: (209) 468 - 2999	<b>DOMENICHELLI</b> <b>&amp; ASSOCIATES</b> 1101 Investment Blvd, Suite 115 El Dorado Hills, CA 95762 Ph: (916) 933-1997 Fax: (916) 933-4778	SHEET NO. 5 of 9
DRAWER	SHEET NO.	SHEET NAME	SCALE						
		CROSS SECTIONS	1"=10'						

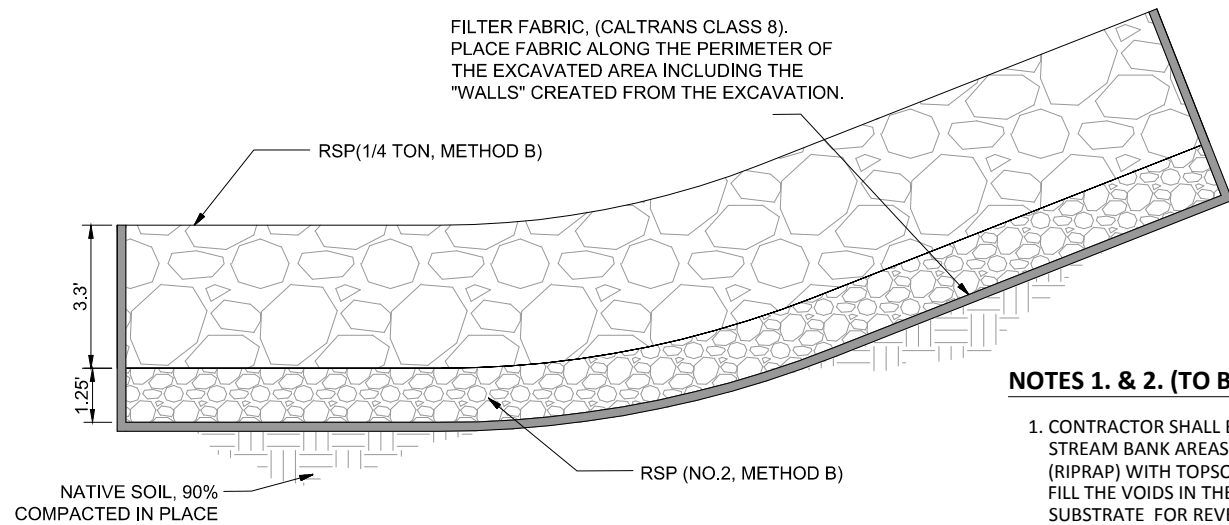
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Attachment C - Project Drawings



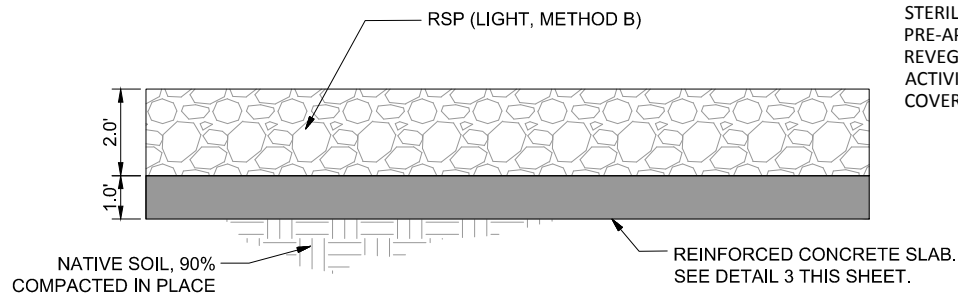
Attachment C - Project Drawings



RSP (1/4 TON, METHOD B)

DETAIL 1

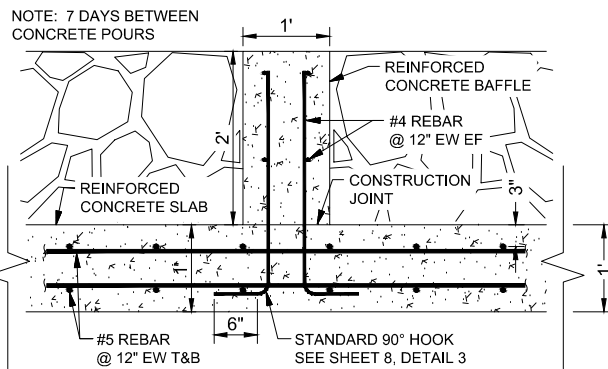
SCALE: HORIZONTAL 1"=2'



RSP (LIGHT, METHOD B) (A-A)

DETAIL 2

SCALE: HORIZONTAL 1"=2'



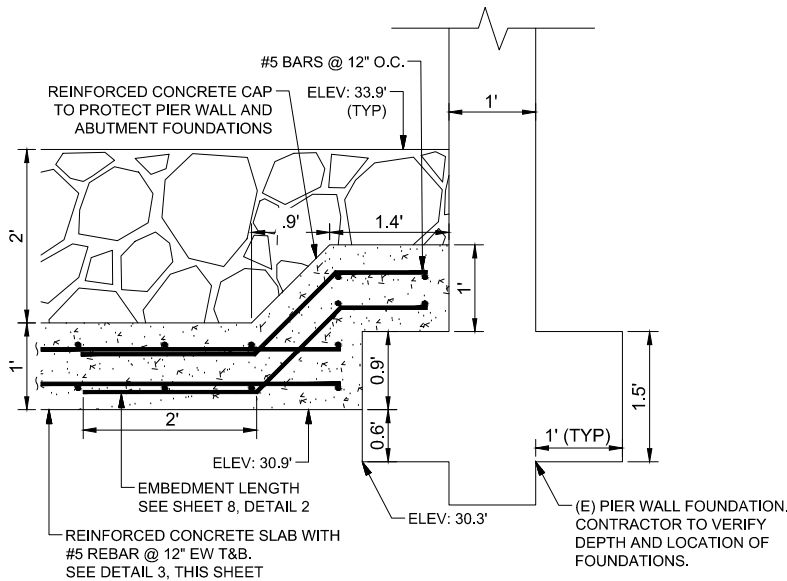
CONCRETE BAFFLE (B-B)

DETAIL 3

SCALE: 1" = 1'

NOTES 1. & 2. (TO BE PAID UNDER HYDROSEEDING):

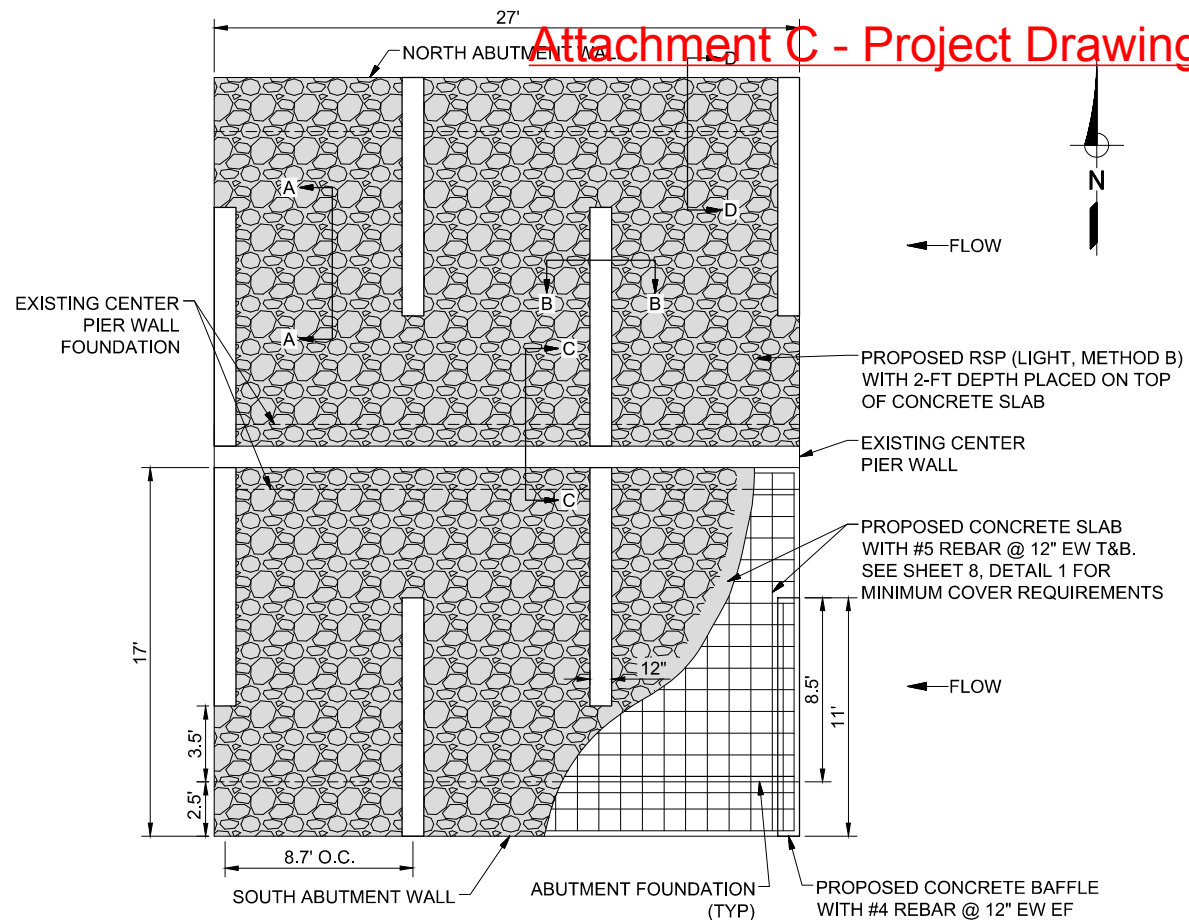
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PIER WALL FOUNDATION SECTION (C-C)

DETAIL 5

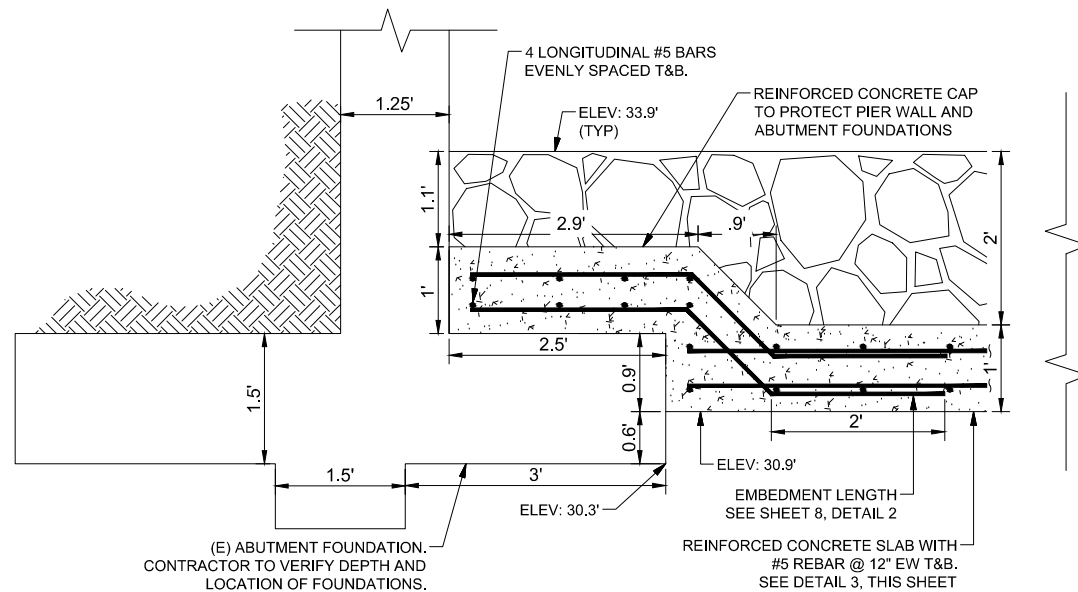
SCALE: 1" = 1'



CONCRETE SLAB & BAFFLE LAYOUT

DETAIL 4

SCALE: 1" = 4'



ABUTMENT FOUNDATION SECTION (D-D)

DETAIL 6

SCALE: 1" = 1'

Attachment C - Project Drawings

LOCATION	*MINIMUM COVER
UNFORMED SURFACES ADJACENT TO EARTH .....	3"
FORMED OR TOP SURFACES EXPOSED TO WEATHER OR SATURATED AIR, SUBMERGED OR IN CONTACT WITH EARTH .....	2"
SLABS AND JOISTS .....	2"
BEAMS AND COLUMNS STIRRUPS, SPIRALS AND TIES .....	2"
PRIMARY REINFORCEMENT .....	2½"
WALLS	
FOOTINGS AND BASE SLABS FORMED SURFACES .....	2"
TOP OF FOOTINGS AND BASE SLABS .....	2"
SHELLS AND FOLDED PLATE MEMBERS .....	1½"
CONDITIONS NOT COVERED ABOVE	
SLABS AND JOISTS #11 AND SMALLER .....	¾"
#14 AND #18 .....	1½"
BEAMS AND COLUMNS STIRRUPS, SPIRALS AND TIES .....	1½"
PRIMARY REINFORCEMENT .....	2"
WALLS #11 AND SMALLER .....	¾"
#14 AND #18 .....	1½"
SHELLS AND FOLDED PLATE MEMBERS #5 BARS, W31 OR D31 WIRE AND SMALLER .....	½"
#6 BARS AND LARGER .....	¾"

\*COVER FOR REINFORCING STEEL SHALL NOT BE LESS THAN THE MINIMUM GIVEN ABOVE (NO MINUS TOLERANCE) , AND SHALL NOT EXCEED THE MINIMUM BY MORE THAN 1/4 INCH WHERE THE CONCRETE THICKNESS IS 24" OR LESS, OR MORE THAN 1/2 INCH WHERE THE CONCRETE THICKNESS IS MORE THAN 24 INCHES.

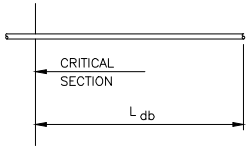
CONCRETE COVER FOR REINFORCEMENT

DETAIL 1

SCALE: NTS

f'c = 4,000 psi, NORMAL WEIGHT

BAR SIZE	TENSION EMBEDMENT LENGTH L <sub>db</sub> (INCHES)		LAP SPLICE LENGTH (INCHES)	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	22	14	29	19
#4	29	19	38	25
#5	36	24	47	32
#6	43	29	56	38
#7	63	42	82	55
#8	72	48	94	63
#9	80	54	104	70
#10	90	60	117	78



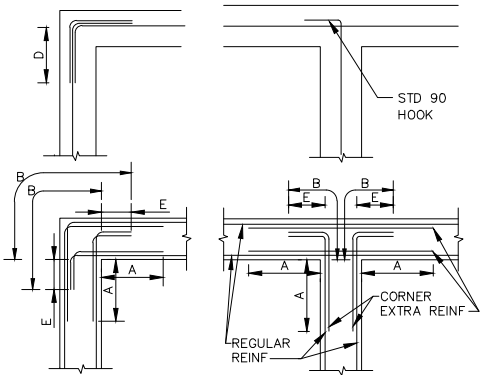
FOOTNOTES:

- TOP BARS ARE HORIZONTAL BARS SO THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.
- UNLESS OTHERWISE NOTED ON THE DRAWINGS, LAP SPLICE LENGTHS, AND TENSION EMBEDMENT LENGTHS SHALL BE NO LESS THAN (NO MINUS TOLERANCE) SHOWN ABOVE.
- LAP SPLICES SHALL NOT BE MADE AT POINTS OF MAXIMUM STRESS AS DETERMINED BY THE ENGINEER AND SHALL NOT BE SPACED CLOSER THAN 6" OC.
- IF THE CLEAR SPACING BETWEEN BARS < 2d<sub>b</sub> OR CONCRETE COVER < d<sub>b</sub> THE TENSION EMBEDMENT AND LAP SPLICE LENGTHS MUST BE INCREASED BY 50 PERCENT.
- TENSION EMBEDMENT LENGTH L<sub>db</sub> IS THE STRAIGHT LENGTH OF REINFORCING BAR THAT MUST BE EMBEDDED IN THE CONCRETE BEYOND THE CRITICAL SECTION FOR A STRAIGHT DOWEL TO BE SUBSTITUTED FOR A STANDARD END HOOK.
- THE TENSION EMBEDMENT AND LAP SPLICE LENGTHS SHOWN ABOVE ARE FOR NORMAL WEIGHT CONCRETE WITH f'c = 4,000 psi. INCREASE THE LENGTHS SHOWN ABOVE BY 20% FOR NORMAL WEIGHT CONCRETE WITH f'c = 3,000 psi. DECREASE THE LENGTHS SHOWN ABOVE BY 10% FOR NORMAL WEIGHT CONCRETE WITH f'c = 5,000 psi.

LAP SPLICE AND TENSION EMBEDMENT LENGTHS

DETAIL 2

SCALE: NTS



NOTES:

- "A" IS 1/5 THE CLEAR SPAN DISTANCE MEASURED HORIZ OR VERT, WHICHEVER IS THE SMALLER; BUT IN NO CASE LESS THEN THE REQ'D LENGTH OF LAPPED SPLICES FOR TOP BARS AS SHOWN ON THE REINF BAR LAP & EMBEDMENT TABLE.
- "B" IS SUFFICIENT LENGTH TO PERMIT BARS TO EXTEND THROUGH WALL TO OPPOSITE FACE AND TERMINATE IN A STANDARD HOOK BUT SHALL NOT BE LESS THAN THE LENGTH REQ'D FOR EMBEDMENT OF TOP BAR, AS SHOWN ON THE REINF BAR LAP & EMBEDMENT TABLE.
- "D" NOT LESS THAN THE REQ'D FOR LAPPED SPLICES FOR TOP BARS AS SHOWN ON THE REINF BAR LAP & EMBEDMENT TABLE.
- "E" IS NOT LESS THAN THE STD HOOK.
- EXTRA BARS ALTERNATING WITH AND SAME AS HORIZ STEEL.
- THIS DETAIL SHOWS THE HORIZ BARS ONLY.

TYPICAL CORNER REINFORCING DETAILS

DETAIL 3

SCALE: NTS



Attachment C - Project Drawings

HYDROSEEDING
1100 SF

ROCK SLOPE PROTECTION (LIGHT, METHOD B) (F)
52 CY

ROCK SLOPE PROTECTION (1/4 TON, METHOD B) (F)
330 CY

ROCK SLOPE PROTECTION (CALTRANS CLASS NO.2) (F)
125 CY

ROCK SLOPE PROTECTION FILTER FABRIC (CALTRANS CLASS NO. 8)
475 SY



SAN JOAQUIN COUNTY

**FLOOD CONTROL & WATER  
CONSERVATION DISTRICT**

P. O. BOX 1810  
1810 EAST HAZELTON AVENUE  
STOCKTON, CALIFORNIA 95201  
TELEPHONE (209) 468-3000  
FAX NO. (209) 468-2999

THOMAS M. GAU  
DIRECTOR OF PUBLIC WORKS  
FLOOD CONTROL ENGINEER

Central Valley Flood Protection Board  
3310 El Camino Avenue, Room 151  
Sacramento, California 95821

Attention: Mitra Emami

SUBJECT: CENTRAL VALLEY FLOOD PROTECTION BOARD PERMIT APPLICATION FOR  
SAN JOAQUIN COUNTY TO PROVIDE SCOUR MITIGATION FOR AUSTIN ROAD  
BRIDGE NO. 29C-259 OVER THE NORTH FORK OF SOUTH LITTLEJOHNS  
CREEK

Dear Ms. Emami:

Reference is made to the Central Valley Flood Protection Board (Board) Permit Application of San Joaquin County (Permittee) to modify the North Fork of South Littlejohns Creek channel under Austin Road Bridge No. 29C-259 (Bridge) by placing rock slope protection and concrete baffles in the channel bed and on north and south banks (Project). The Project is located at the Austin Road Bridge across the North Fork of South Littlejohns Creek, in San Joaquin County, Sections 35 and 36, Township 1 North, Ranges 7 East, Mount Diablo Base and Meridian.

The San Joaquin County Flood Control and Water Conservation District (District) has reviewed the Board's Permit Application of the Permittee and endorses the Project subject to the following conditions:

1. The District shall not be responsible for the maintenance of the facilities specified in this Permit.
2. The District shall not be held liable for damage(s) to the permitted encroachment(s) due to the District's operation, maintenance, flood fight, inspection, or emergency repairs.
3. The Permittee or the Successors-in-Interest shall be responsible for the modification or possible removal of the facilities, as requested by the District, if required for any future flood control plans at the Permittee or the Successors-in-Interest's sole cost and expense.
4. The Permittee shall be liable for any damage to the North Fork of South Littlejohns Creek that may occur as a result of this Project.
5. The Project shall be constructed in accordance with the plans submitted with the application dated October 31, 2014. Any revisions to the Project will require submittal of the revised plans to the District for review and approval.

Central Valley Flood Protection Board -2-  
AUSTIN ROAD BRIDGE OVER NORTH FORK  
OF SOUTH LITTLEJOHNS CREEK

6. No work shall be allowed in the North Fork of South Littlejohns Creek's channel between November 1st and April 15th without prior approval of the Board and the District.
7. The Permittee or Successors-in-Interest shall keep the encroachments properly maintained in accordance with applicable current or future local, State, and Federal standards.
8. The proposed encroachments shall be installed in a manner such that no reduction in channel cross-section or increase in base flood elevation will result.
9. Excess excavated material shall be transported from the Project site and disposed of at an approved location.
10. Access roads shall be kept open for maintenance at all times.
11. Stockpiled materials, coffer dams, and construction equipment shall be removed from the floodway prior to November 1st.
12. The Permittee shall restore the North Fork of South Littlejohns Creek's invert and levees/banks to the condition that existed prior to commencement of work.

Should there be any questions regarding these comments, please contact me at (209) 468-3060.

Sincerely,



MATTHEW WARD, P.E.  
Engineer IV

MW:me  
FM-14J034-ME2