Meeting of the Central Valley Flood Protection Board
September 28, 2012
Staff Report – Encroachment Permit
Burlington Northern Santa Fe Railroad
Lone Tree Creek Railroad Bridge Replacement, San Joaquin County

1.0 – ITEM

To consider Board approval of Permit No. 18768.

2.0 – APPLICANT

Burlington Northern Santa Fe Railroad (BNSF).

3.0 – LOCATION

The project is located approximately 450 feet west of Sexton Road and 1,150 feet south of Lone Tree Road, at the BNSF Railroad Bridge No. 1104.6 crossing of Lone Tree Creek, in Escalon, California. The approximate site coordinates are 37.82458 north latitude and 121.03614 west longitude (See Attachment A for Location Map, Vicinity Map, Site Plan and Site Photos). According to California Code of Regulations, Title 23 (CCR 23), Lone Tree Creek is a regulated minor stream based on published low flow rates and an observed low debris load. The FEMA Engineering Library flow rates for the entire reach of Lone Tree Creek range from a low of 160 cubic feet per second (cfs) to a high of 1,200 cfs for the 100-year flood event. However at the subject replacement bridge location, the flow rate for the 100-year flood event in Lone Tree Creek is 450 cfs.

4.0 – DESCRIPTION

The applicant proposes to replace the existing 70 foot long timber BNSF Railroad Bridge No. 1104.6 over Lone Tree Creek with a new 83 foot long by 20 foot wide flat-slab concrete bridge. The proposed bridge will only have three sets of piles in Lone Tree Creek as compared to four sets of piles for the existing bridge. New concrete abutments are also proposed at each end of the new bridge. Also proposed is rip rap along the creek bed and slopes for erosion protection 20 feet north and south of the bridge, along with rip rap protection underneath the new bridge (See Attachment B for general and pile plans for the new bridge).

5.0 – PROJECT ANALYSIS

5.1 – Project Background

CVFPB staff researched its existing encroachment permit records and did not find an existing permit for this bridge. It is assumed the existing railroad bridge structure was built when the original Atchison Topeka and Santa Fe railroad line was constructed through this portion of Central California many years ago.

5.2 – Authority of the Board

- Title 23, §112, Regulated Streams, Table 8.1, §128, Bridges

5.3 – Hydraulic Analysis

The applicant utilized the one-dimensional hydraulic modeling program HEC-RAS 4.1.0 to perform hydraulic modeling for the existing and proposed conditions. Ten new channel cross sections were generated from HEC-GeoRAS software, which used a project site hard-point survey, supplemented with LiDAR and USGS 10 meter digital elevation model (DEM) data, to create the existing conditions HEC-RAS model. (See Attachment C, Figure 1). A typical channel was added to the model based on the survey near the bridge and channel bed slope to account for the lack of channel detail for the DEM data areas outside of the project survey area. The channel location was determined from aerial photography. Manning's n values for all cross sections were estimated from site photos and field notes.

The October 16, 2009 FEMA Flood Insurance Study (FIS) for San Joaquin County was used to determine downstream boundary conditions and other relevant parameters (See Attachment C, Figures 2 and 3), such as the 100-year water surface elevation (WSE) of 94.60 feet that was used as the boundary condition for the 100-year analysis. Peak discharges were obtained from the FEMA Engineering Library (See Attachment C, Figure 4). At the subject replacement bridge, the flow rate for the 100-year flood event in Lone Tree Creek is 450 cfs. From the peak discharges, the HEC-RAS model calculated existing and proposed condition WSE's as shown in the following table:

HEC-RAS River Station	River Station Location	Condition	WSE (feet, NGVD88)	WSE Difference (feet)
66141.38 (feet)	Upstream of existing & proposed bridge	Existing	95.28	- 0.04
		Proposed	95.24	
66072.73 (feet)	Downstream of existing & proposed bridge	Existing	95.12	- 0.02
		Proposed	95.10	

Based on these computed WSEL values, there is no adverse impact in WSE due to construction of this proposed bridge replacement project (See Attachment C, Figures 5 and 6).

Minimum soffit elevations for both the existing and proposed bridges are 97.50 feet. Based on upstream computed WSE's and minimum soffit elevations, there is 2.22 feet of freeboard for the existing bridge, and 2.26 feet of freeboard for the proposed bridge. CCR 23 requires 2.0 feet of freeboard below the minimum soffit elevation for minor streams, therefore the proposed bridge is compliant with CCR 23.

5.3.1 – Stream and Bank Scour Analysis

The HEC-RAS software also uses direct hydraulic results from the HEC-RAS model to provide scour estimates. From a comparison of flow line elevations from FEMA FIS flood profiles (generated from the 1977 HEC-2 Model) and the project survey, it does not appear the channel is degrading and no significant long term degradation is estimated. However, based on the proposed bridge details and current assumptions used for scour evaluation purposes, the HEC-RAS model estimated local pier scour depth at 3.0 feet for the 100-year event, and 3.6 feet for the 500-year event. Also, at the left bridge abutment, scour is estimated to be 0.26 feet, and at the right bridge abutment, scour is estimated to be 1.18 feet. The proposed driven H-Pile bents to support the replacement bridge are capable of withstanding these estimated scour depths without any additional countermeasures, as are the bridge abutments.

5.3.2 – Additional Staff Hydraulic Analysis

At 1,000 feet upstream of the bridge, the design existing condition WSE is 0.5 feet below the top of the left bank per Attachment C, Figure 5. The proposed condition WSE is 0.7 feet below the top of the left bank per Attachment C, Figure 6. Although the hydraulic situation would be improving with the proposed project, the applicant should understand that they may have some responsibility to monitor this area during design storm events to prevent possible flood damages to adjacent property owners.

Although the HEC-RAS model results do not seem to indicate any adverse hydraulic impacts between existing and proposed conditions, the proposed replacement bridge would (from a qualitative perspective): (1) provide a slightly longer bridge waterway opening width, (2) reduce the total number of piers in the waterway from four to three, and 3) increase available open-span lengths for drift passage between the piers.

5.4 – Geotechnical Analysis

No geotechnical investigation was completed for this project as there are no scour issues observed. BNSF Standard Plans for concrete replacement bridges of this type use driven pile foundations supporting concrete caps. Estimated pile tips have been established for this bridge replacement structure based on existing pile driving records from past bridge projects in the area. The applicant also provided a 61.5 foot deep

boring log from November 2000, conducted at milepost 1104.52, which indicates the soil underlying the proposed project is mostly Sandy Silt and Clayey Silt, which can adequately support this type of proposed replacement bridge as designed.

5.5 – Protest Received and Action Taken to Resolve Protest

On June 28, 2012, the CVFPB received a protest letter from adjacent property owners David & Carrie Dorosh (see Attachment D, Figure 1). CVFPB staff immediately informed BNSF of the received protest and suggested BNSF contact the Dorosh's to resolve their local drainage concerns about a 16-inch drainage pipe near the railroad bridge on the north side of the railroad tracks that the Dorosh's claimed had not been maintained over the years (see Attachment D, Figure 2). After CVFPB staff discussed the issue further with the applicant to help resolve this issue, BNSF suggested replacing the existing pipe with a new 24-inch reinforced concrete pipe, with headwalls at both ends and a flap gate on the downstream end, and additional rip rap at each end of the new pipe to prevent unwanted vegetation growth.

CVFPB and BNSF staff then met with Mr. Dorosh at the project site in Escalon, CA on August 17, 2012 to discuss his drainage concerns. The proposed pipe improvement plan was presented and Mr. Dorosh supported the proposed plan. He also suggested a thorough cleaning of the drainage ditch which drains into this pipe as part of the overall solution. BNSF later added a note to a detailed drainage plan (see Attachment D, Figure 3) which was required by CVFPB staff as part of this protest resolution. CVFPB staff then sent a certified letter to the Dorosh's informing them of the proposed detailed drainage plan prepared by BNSF, and how it would be incorporated into the applicant's permit (see Attachment D, Figure 4) to resolve their protest. On September 7, 2012, CVFPB staff received a letter from the Dorosh's indicating their drainage protest concerns have been satisfied and they are withdrawing their protest to the proposed bridge replacement project (see Attachment D, Figure 5).

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

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

- The U.S. Army Corps of Engineers 208.10 comment letter dated June 19, 2012 has been received for this application. The USACE District Engineer has no comments or recommendations regarding flood control because the proposed project does not affect a federally constructed flood damage reduction project. The draft permit (see Attachment E) reflects the receipt of this letter in special condition FORTY-THREE. The letter is incorporated into the permit as Exhibit A.

- The San Joaquin County Flood Control & Water Conservation District submitted a comment letter dated April 11, 2012 with conditions. The draft permit (see Attachment E) reflects the receipt of this letter in special condition FORTY-FOUR. This letter with conditions is incorporated into the permit as Exhibit B.

7.0 – CEQA ANALYSIS

Board staff has prepared the following CEQA findings:

The Board, as a responsible agency under CEQA, has reviewed Initial Study/ Negative Declaration (March 2011, SCH No. 2011032039) for the Site Approval No. PA-1100031 (Burlington Northern and Santa Fe Railroad) prepared by the lead agency, San Joaquin County. These documents, including project design, may be viewed or downloaded from the Central Valley Flood Protection Board website at http://www.cvfpb.ca.gov/meetings/2012/09-28-2012.cfm under a link for this agenda item. These documents are also available for review in hard copy at the Board and the San Joaquin County offices.

San Joaquin County has determined that the project would not have a significant effect on the environment and approved the project on March 15, 2011 and subsequently filed a Notice of Determination on April 20, 2011 with the County Clerk. Board staff has independently reviewed the subject documents and finds that the proposed project will not have a potentially significant effect on the environment.

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 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:

   The proposed project has no adverse effect on facilities of the State Plan of Flood Control and is consistent with the Central Valley Flood Protection Plan.

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

   Changes in hydrology, climate and development within the applicable watershed may affect the flows within Lone Tree Creek over time.

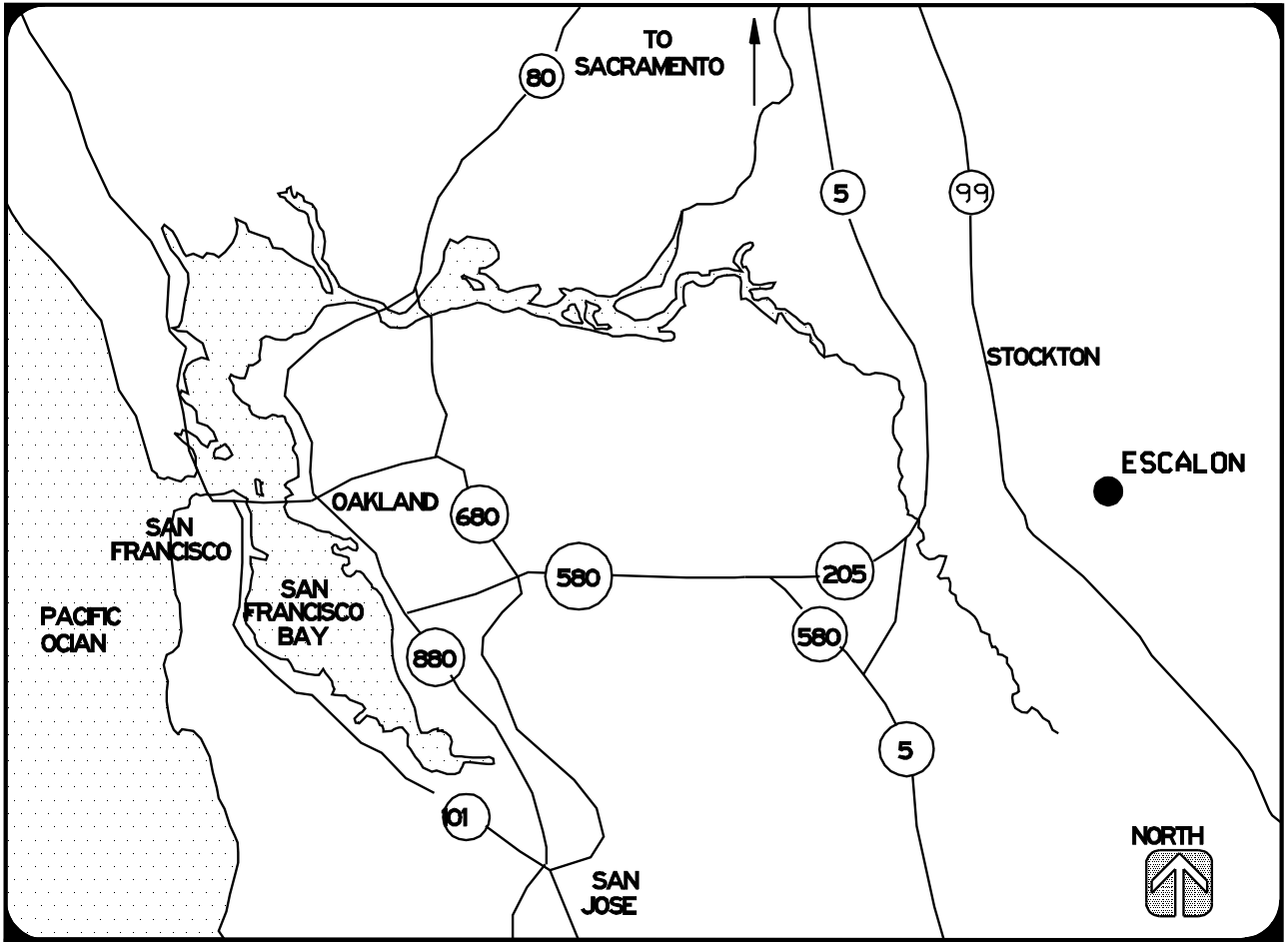
9.0 – STAFF RECOMMENDATION

Staff recommends that the Board adopt the CEQA findings, approve the permit, and direct the Executive Officer to take the necessary actions to execute the permit and file a Notice of Determination with the State Clearinghouse.

10.0 – LIST OF ATTACHMENTS

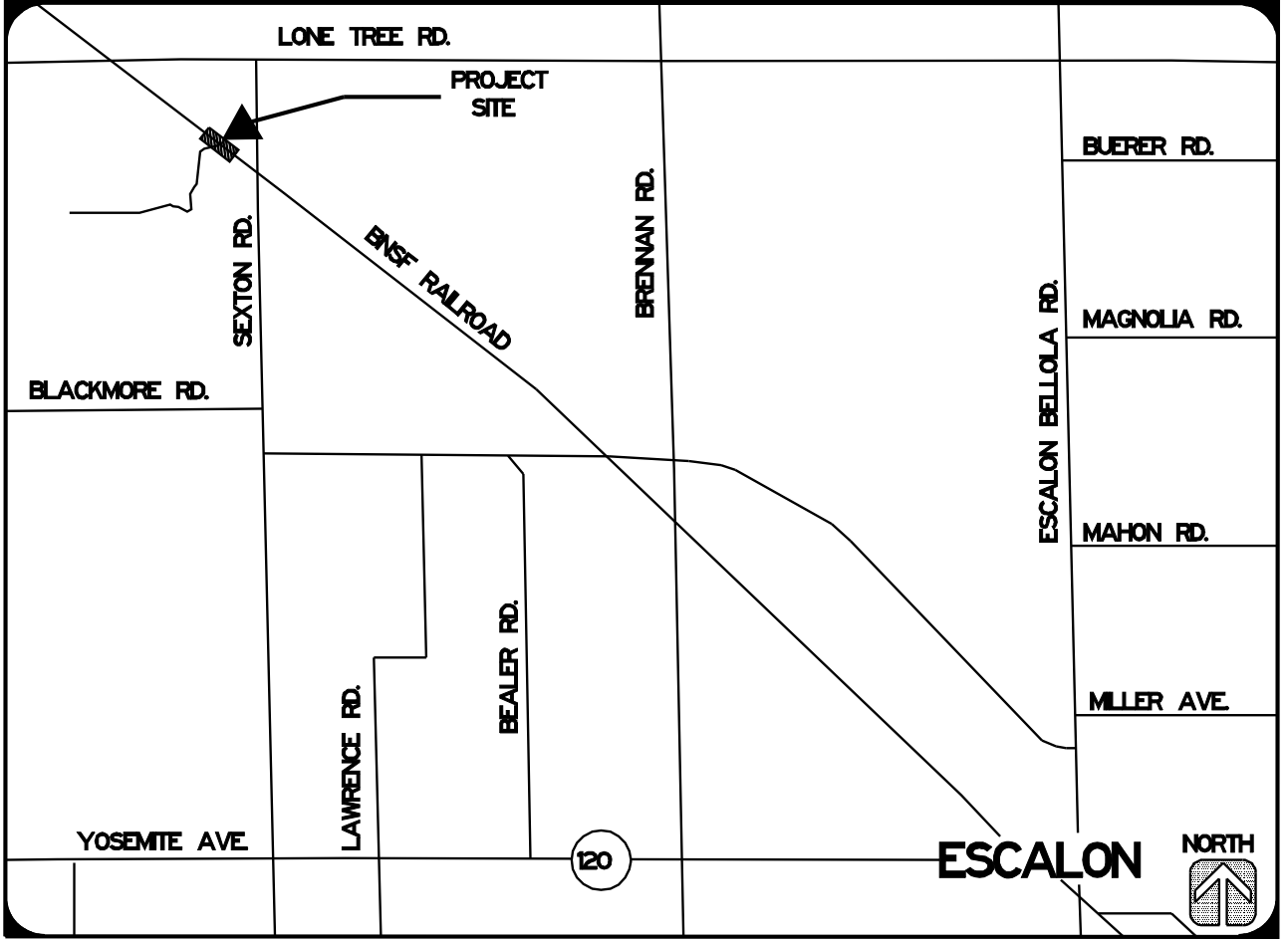
A. Location Maps and Photos
B. Plan, Profile and Foundation Plans
C. Lone Tree Creek Hydraulic Information
D. Protest Letter Information
E. Draft Permit No. 18768

Technical/Design Review:	Jon P. Tice, Jr., PE
Permit Author:	Jon P. Tice, Jr., PE
Environmental Review:	James Herota / Andrea Mauro
Document Review:	David R. Williams, PE; Eric Butler, PE; and Len Marino, PE



Location Map

Attachment A



Vicinity Map

Attachment A

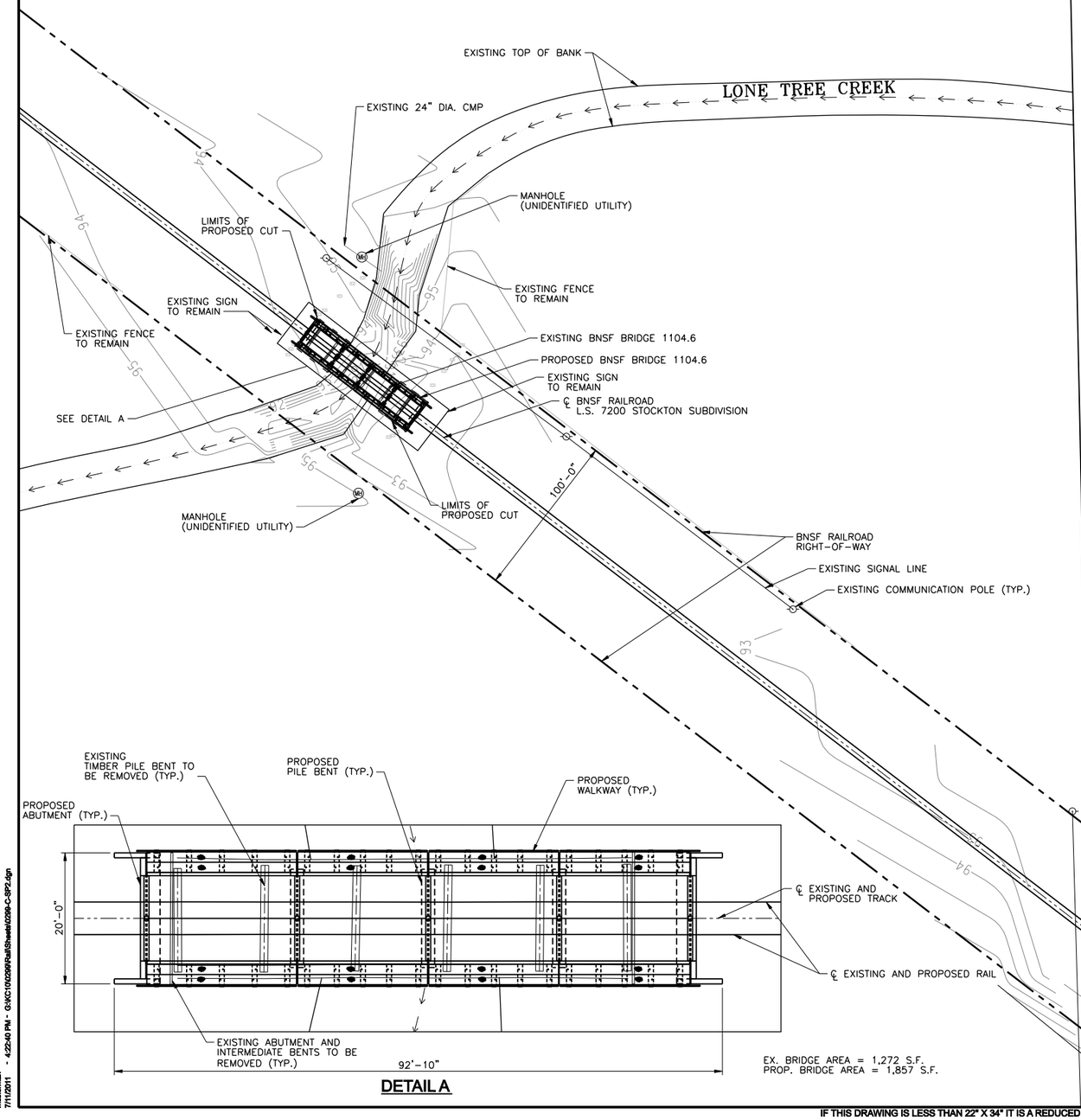
NOTES:

1. NO EXISTING OR PROPOSED WATER WELLS OCCUR WITHIN 150 FEET OF THE PROPOSED DEVELOPMENT.
2. NO EXISTING OR PROPOSED SEWAGE SYSTEMS OCCUR WITHIN 150 FEET OF THE PROPERTY.
3. NO STORM DRAINAGE FACILITIES ARE PROPOSED. THE SITE DRAINS NATURALLY.
4. NO EXISTING OR PROPOSED LANDSCAPING OCCURS WITH 150' OF THE PROPOSED DEVELOPMENT. NO 6" DIA. OR GREATER TREES WILL BE REMOVED.
5. EXISTING SIGNS AND FENCES ARE CALLED OUT.
6. NO STORAGE OR TRASH ENCLOSURES OCCUR WITHIN 150 FEET OF THE PROPERTY.
7. SEE ATTACHED PRELIMINARY PLAN FOR DETAILED PLAN AND ELEVATION.

LEGEND

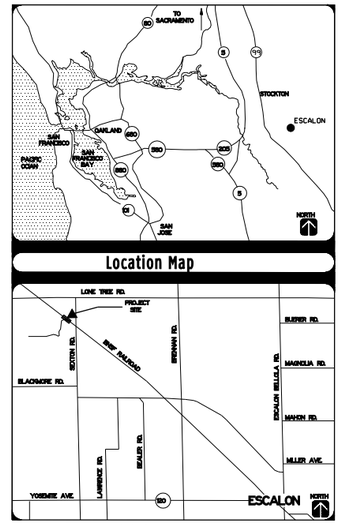
EXISTING MAJOR CONTOUR ——— 95 ———
EXISTING MINOR CONTOUR ——— 92 ———
PROPOSED MINOR CONTOUR ——— 92 ———
EXISTING FLOWLINE → → → –

NOTE:
LESS THAN 1 ACRE OF LAND DISTURBANCE WILL OCCUR, THEREFORE A CONSTRUCTION GENERAL PERMIT IS NOT REQUIRED.



PRIVATE DRIVE

SEXTON RD.



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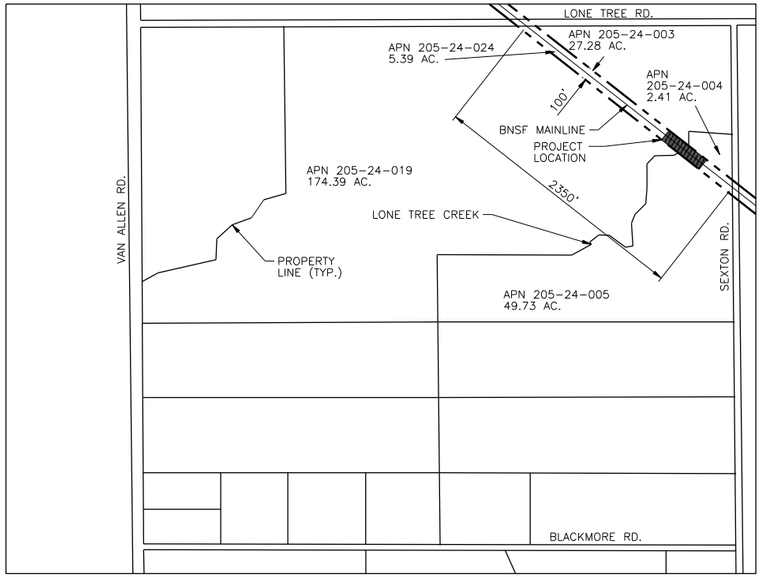

PARCEL MAP

DETAIL A

EX. BRIDGE AREA = 1,272 S.F.
PROP. BRIDGE AREA = 1,857 S.F.

N

40 0 40 80
SCALE IN FEET

- PRELIMINARY -
NOT FOR CONSTRUCTION

Tran Systems
505 14TH STREET
SUITE 1000
OAKLAND, CA 94612
PHONE: 510-835-2781
FAX: 510-835-5839

CONSULTANTS:

BNSF BRIDGE REPLACEMENT
1104.6 L.S. 7200

BNSF RAILWAY

REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ NO:	101100299
SCALE:	1"= 40'
DATE:	7/11/2011
DESIGNED BY:	CJM
DRAWN BY:	CJM
CHECKED BY:	LJT

SHEET TITLE:
Attachment A
SITE PLAN

SHEET NO.
SHEET 1 OF 1

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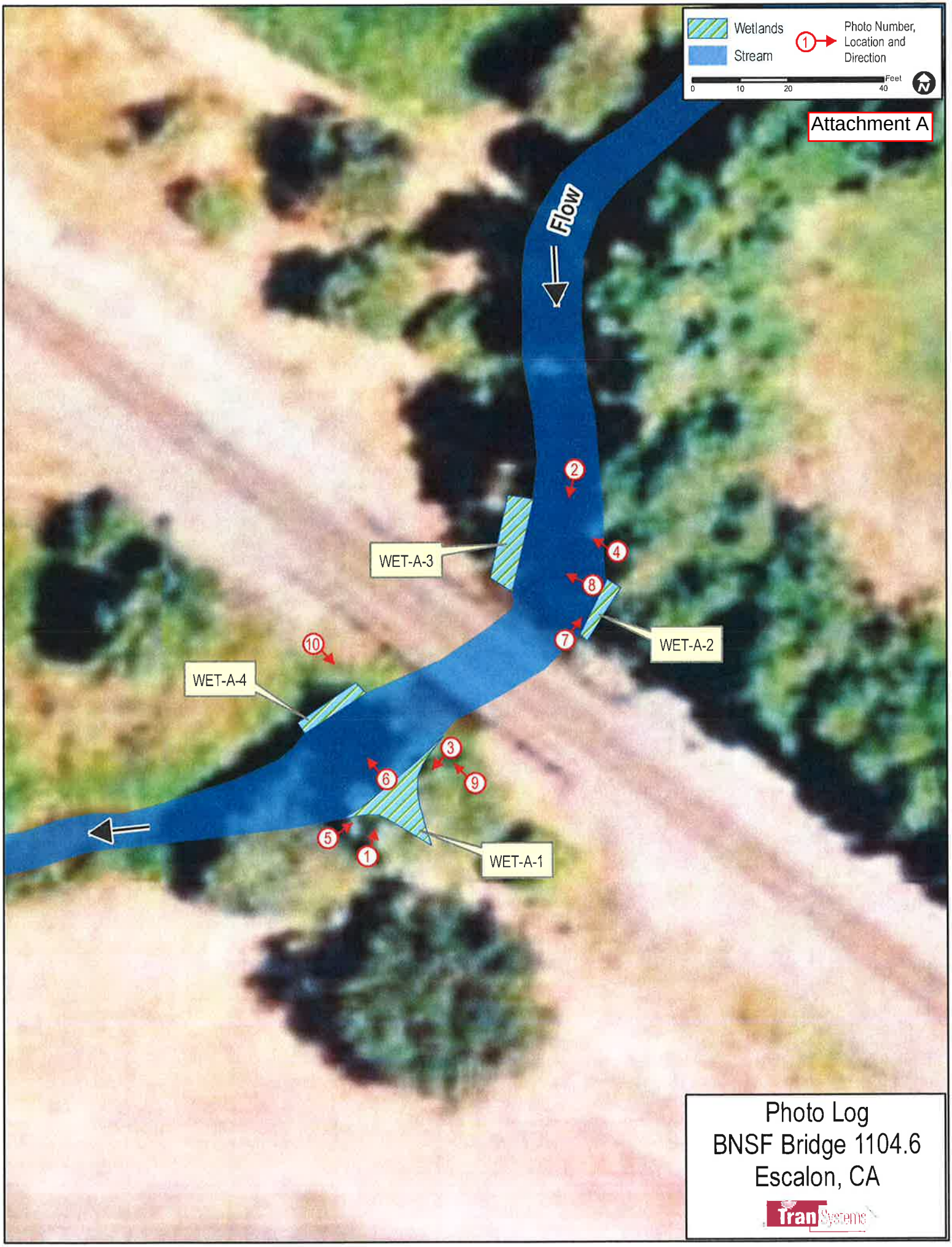
Wetlands
Stream
Photo Number, Location and Direction
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40
Feet
N
Attachment A
Flow
WET-A-3
WET-A-2
WET-A-4
WET-A-1
1
2
3
4
5
6
7
8
9
10
Photo Log
BNSF Bridge 1104.6
Escalon, CA
TranSystems

Attachment A

Photo 1. Looking northeast downstream at bridge crossing of Lone Tree Creek.

Photo 2. Looking southwest upstream at bridge crossing of Lone Tree Creek.

Photo 3. Looking southwest upstream of bridge crossing of Lone Tree Creek.

Photo 4. Looking northwest downstream of bridge crossing of Lone Tree Creek.

Photo 5. Looking northeast at PEM habitat of Wetland A-1 within stream bed of Lone Tree Creek.

Photo 6. Looking northwest at PEM habitat of Wetland A-2 within stream bed of Lone Tree Creek.

Photo 7. Looking northeast at PEM habitat of Wetland A-3 within stream bed of Lone Tree Creek.

Photo 8. Looking northwest at Data Plot WET-A-4 within Wetland A on southwest corner of bridge.

Photo 9. Looking northwest at bridge piers and within Lone Tree Creek.

Photo 10. Looking southeast at BNSF railroad track crossing at Lone Tree Creek.

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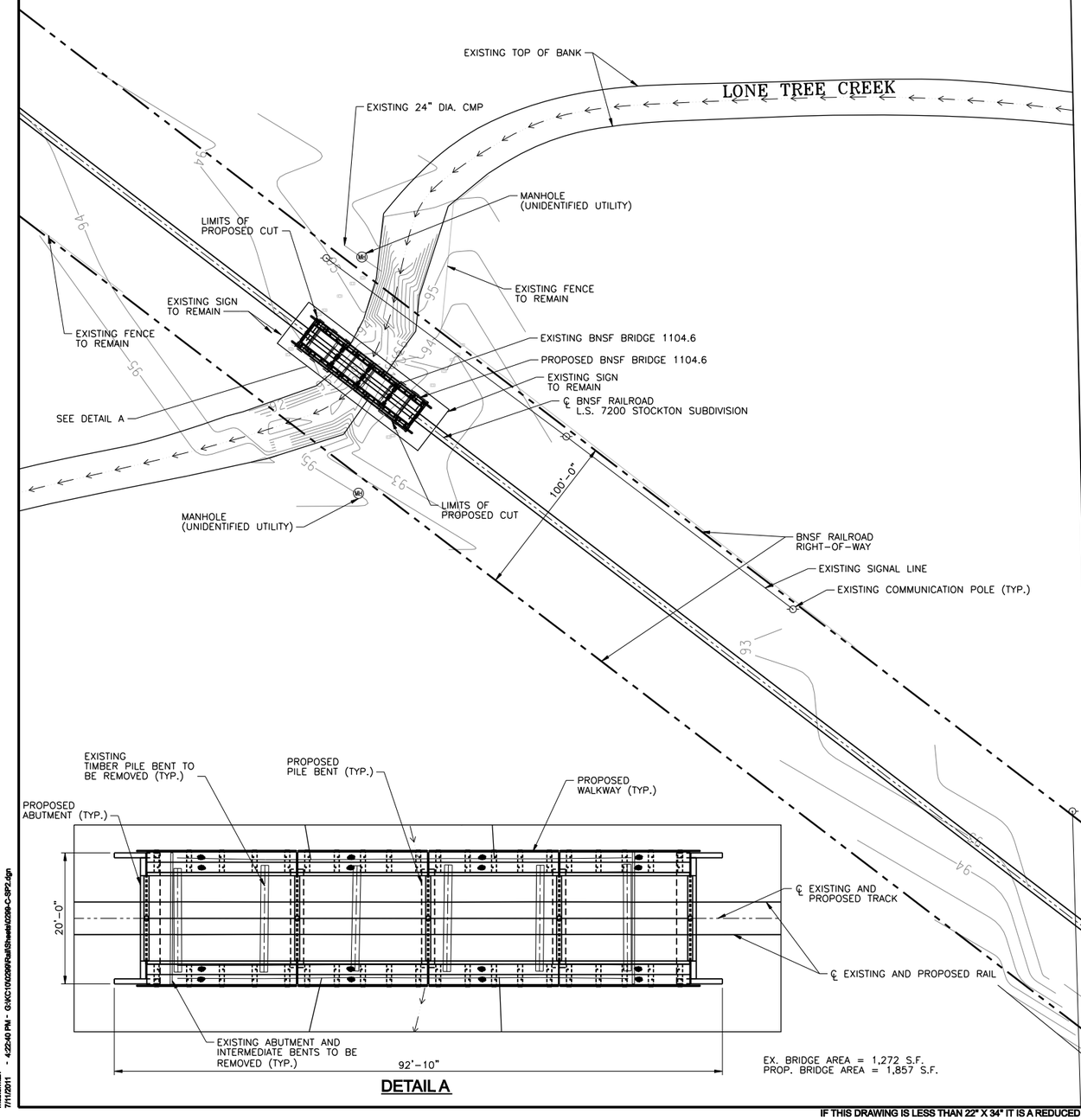

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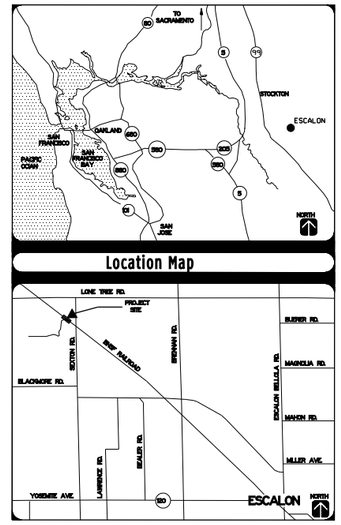
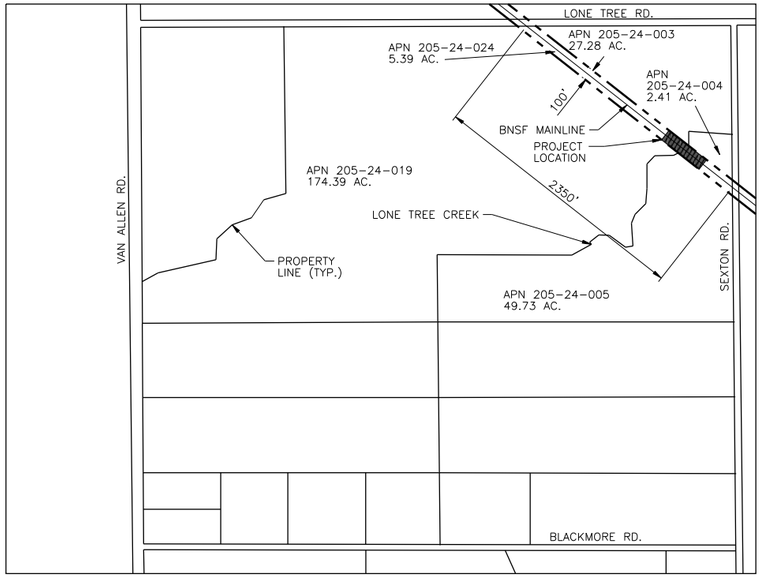


Vicinity Map



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SHEET TITLE:
Attachment B
SITE PLAN

SHEET NO.
SHEET 1 OF 1

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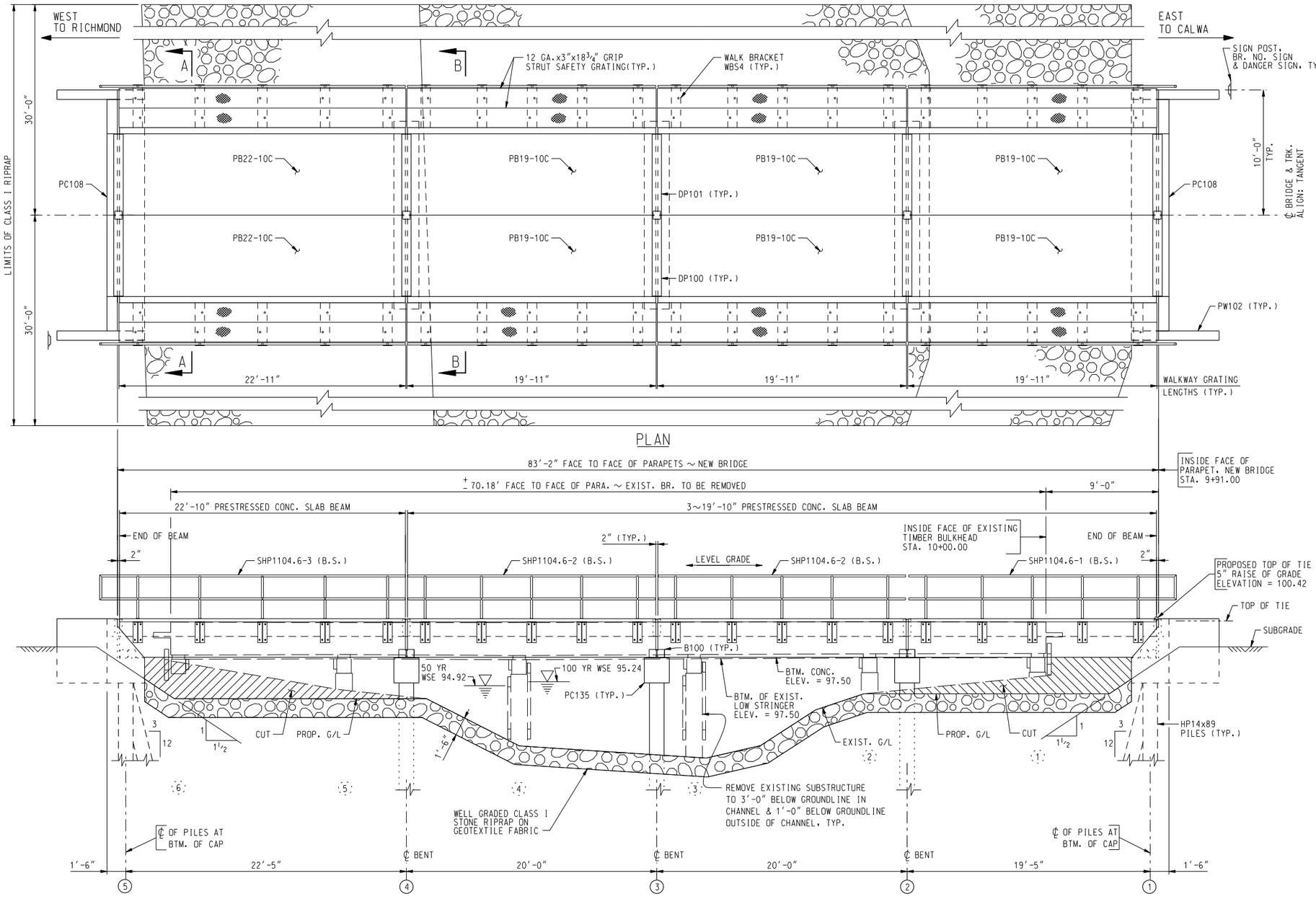


GENERAL NOTES:

DESIGN LOADING : COOPER E80 WITH DIESEL IMPACT.

NEW CONSTRUCTION SHOWN IN SOLID HEAVY LINES. EXISTING STRUCTURE TO BE REMOVED SHOWN IN LIGHT DASHED LINES.

BRIDGE STATIONING AND ELEVATIONS BASED ON TRANSYSTEMS CORPORATION. SURVEY DATED MARCH 30, 2005.

ALL ELEVATIONS BASED UPON NAVD88 DATUM.

BENCH MARK DATA:
T.B.M. #1 = STA. 9+10.63: 45.8' RIGHT OF ℄
RR SPIKE IN POWER POLE PAINTED ORANGE
NAVD88 ELEVATION = 95.95

STOCKPILED MATERIAL, TEMPORARY BUILDINGS, CONSTRUCTION EQUIPMENT, AND DETOURS THAT OBSTRUCT STREAM FLOWS MUST BE REMOVED FROM FLOODWAYS PRIOR TO THE FLOOD SEASON.

THE DISMANTLED BRIDGE MATERIAL TO BE REMOVED MUST BE DISPOSED OF OUTSIDE THE LIMITS OF THE LEVEE SECTION AND FLOODWAY.

THE AREA IN AND AROUND THE BRIDGE SITE MUST BE KEPT CLEAR TO MAINTAIN THE DESIGN FLOW CAPACITY. TREES, BRUSH, SEDIMENT MUST BE KEPT CLEARED FROM THE BRIDGE SITE AND BE DISPOSED OF OUTSIDE THE LIMITS OF THE FLOODWAY PRIOR TO THE FLOOD SEASON. ANY ACCUMULATION OF DEBRIS DURING HIGH FLOWS MUST BE IMMEDIATELY REMOVED FROM THE BRIDGE SITE AND DISPOSED OF OUTSIDE THE FLOODWAY.

STREAM FLOW DIVERSION: IT SHALL BE THE SUPERVISOR'S RESPONSIBILITY TO DIVERT THE STREAM FLOW DURING CONSTRUCTION OF RIPRAP IN THE CHANNEL IN ORDER TO KEEP THE CONSTRUCTION AREA FREE OF WATER.

RIPRAP: CLASS OF RIPRAP SHALL BE SPECIFIED BY THE ENGINEER. RIPRAP SHALL BE PLACED ON GEOTEXTILE FABRIC IN SUCH A MANNER AS TO AVOID SEGREGATION OF VARIOUS SIZES OF ROCK, AND DISTRIBUTED SO THAT THERE WILL BE NO LARGE ACCUMULATION OF EITHER THE LARGER OR SMALLER SIZES OF STONE. RIPRAP SHOULD BE PLACED OVER THE GEOTEXTILE FABRIC BY METHODS THAT DO NOT STRETCH, TEAR, PUNCTURE, OR REPOSITION THE FABRIC. A MAXIMUM DROP HEIGHT OF 3 FT IS RECOMMENDED.

INDIVIDUAL ROCKS SHALL VARY AS SHOWN:

RIPRAP CLASS	AVERAGE WEIGHT PER STONE (LBS.)	DIMENSION (INCHES)	UNIT OF MEASURE	LAYER THICKNESS	TYPICAL VELOCITIES
I	50 TO 200	9 TO 14	TON	1'-6"	6 - 8 FPS
II	200 TO 1,000	14 TO 24	TON	2'-0"	8 - 12 FPS

THE ENTIRE MASS OF RIPRAP SHALL BE WELL DISTRIBUTED WITHIN THE LIMITS SPECIFIED.

RIPRAP CONSTRUCTION REQUIREMENTS: RIPRAP PLACEMENT SHALL START IN A TRENCH AT THE TOE OF THE SLOPE, EXCAVATED TO THE DEPTH SHOWN ON THE PLANS AND PROGRESS UPWARD. THE SLOPES SHALL BE IN ACCORDANCE WITH THE PROPER CROSS SECTION AND SHALL BE COMPACTED TO A UNIFORM DENSITY AS REQUIRED FOR ADJACENT MATERIAL. THE ROCK OR BROKEN CONCRETE SHALL BE PLACED ON THE SLOPE, TO THE SPECIFIED THICKNESS, ELEVATION AND EXTENT, AND MANIPULATED SUCH THAT MOST OF THE FLAT SIDES ARE IN CONTACT, THEREBY ELIMINATING LARGE VOIDS. THE FINISHED SURFACE OF THE BLANKET SHALL PRESENT AN APPEARANCE FREE OF SEGREGATION AND WITH A PROPORTIONATE QUANTITY OF THE LARGER PIECES SHOWING.

ALL CHANGES TO THE ABOVE REQUIREMENTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

REFERENCE:

STANDARD PLANS 20' PRESTRESSED CONCRETE SPANS, PRECAST CONCRETE CAPS ON STEEL PILES, PLAN NO. 0000-22902-029.

STANDARD PLAN FOR PRECAST CONCRETE MEMBERS, PLAN NO. 0000-22899-002F & -003F.

STANDARD PLAN FOR 1'-8" x 7'-0" PRESTRESSED SLAB BEAM, PLAN NO. 0000-22003-001G THRU -003E.

CORR. FILE~BR. 1104.6, LINE SEG. 7200 NEAR ESCALON, CA.

NOTE:

FILL GAP BETWEEN ENDS OF BEAMS AND BETWEEN END OF BEAM AND FACE OF PARAPET WALL WITH 8~½" x 18" x 6'-10" PLIES OF PREMOLDED JOINT FILLER.

ATTENTION !

INFORMATION SHOWN ON THESE PLANS CONCERNING TYPE AND LOCATION OF UNDERGROUND OR ABOVE GROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE.

THE SUPERVISOR OF STRUCTURES OR THE FOREMAN IN CHARGE WILL VERIFY THE LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES BEFORE BEGINNING CONSTRUCTION AND PER THE BNSF ENGINEERING INSTRUCTIONS CHAPTER 26.

ESTIMATED LIFTING WEIGHTS:

PRECAST MATERIAL

PB19-10C	38,000 LBS.
PB22-10C	43,800 LBS.
PC135	10,100 LBS.
PC108	23,000 LBS.
PW102	3,800 LBS.

LIST OF DRAWINGS

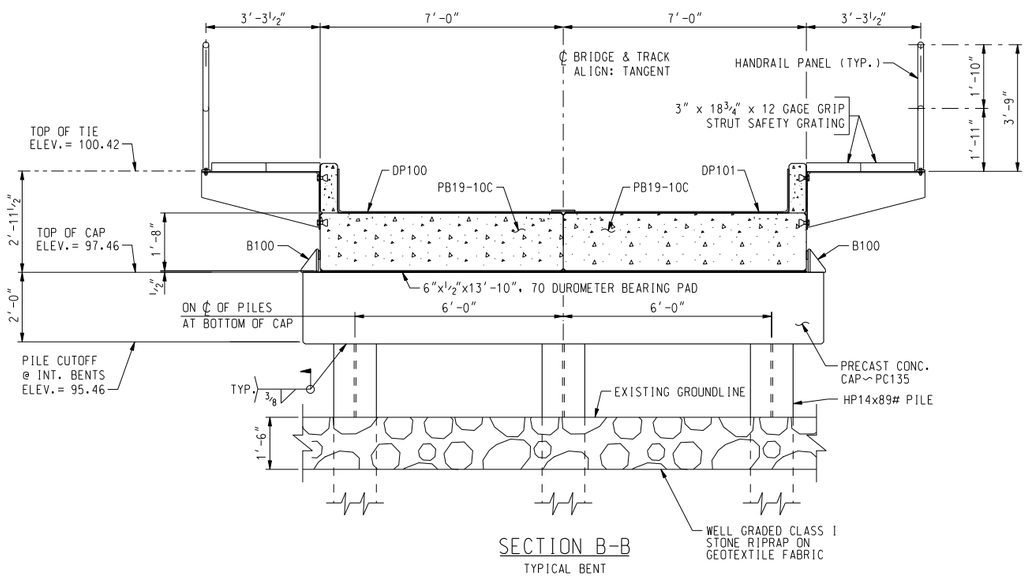
PLAN NO.	TITLE
7200-1104.6-001	GENERAL PLAN ~ REBUILD BRIDGE
7200-1104.6-002	PILE PLAN & SECTION VIEWS
7200-1104.6-003	HANDRAIL DETAILS
7200-1104.6-004	BILL OF MATERIAL

NOTES:
FOR SECTION A-A & B-B, SEE PLAN NO. 7200-1104.6-002.
REBUILD EXIST. 5 ~ 14' BPT SPANS WITH 3 ~ 20' & 1~23' PRESTRESSED CONCRETE SPANS ON STEEL "H" PILE BENTS.

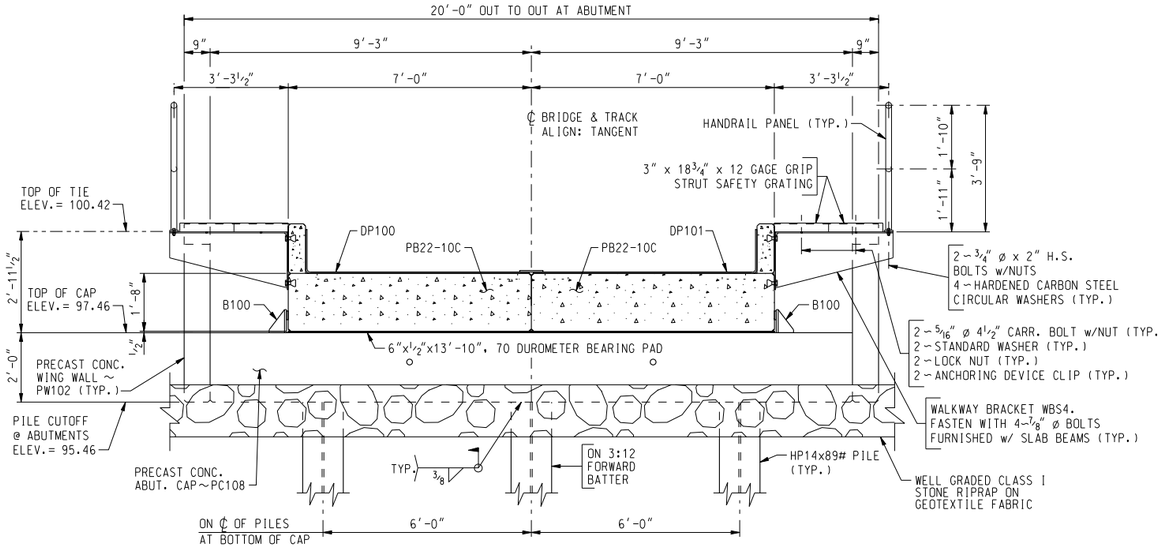
Attachment B

DES: JPH	BNSF RAILWAY	CALWA TO RICHMOND
DRAWN: MLD	BRIDGE ENGINEERING KANSAS CITY, KS	BRIDGE NUMBER 1104.6
CHECK: TAH		OVER LONE TREE CREEK NEAR ESCALON, CA
DATE: APRIL 2012		GENERAL PLAN~REBUILD BRIDGE
AUTH:	APPROVED:	
LINE SEG: 7200	ASST. DIRECTOR STRUCTURES DESIGN	PLAN NO: 7200-1104.6-001 SHEET: 1 of 4

TranSystems



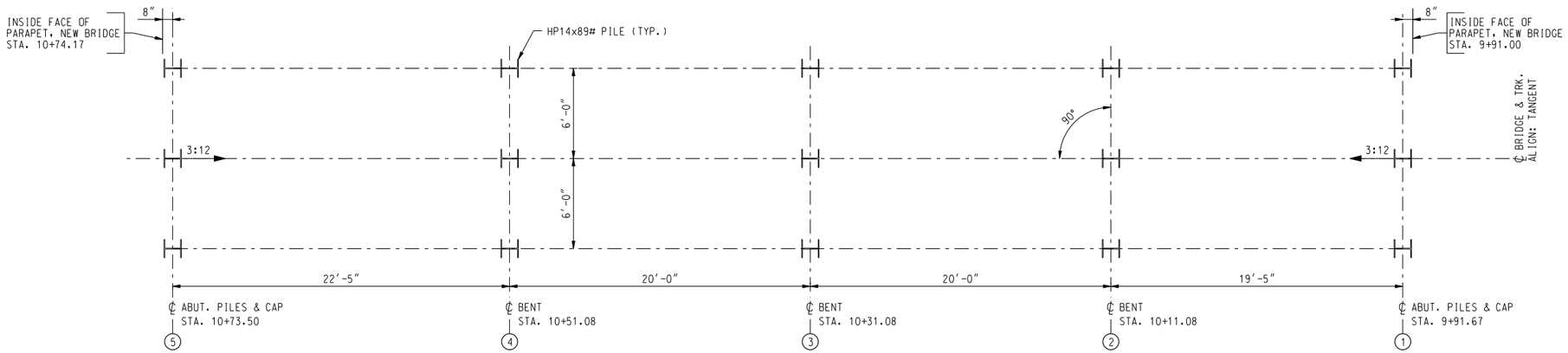
SECTION B-B
TYPICAL BENT



SECTION A-A
TYPICAL ABUTMENT

WEST
TO RICHMOND

EAST
TO CALWA



PILE PLAN

PILE NOTES:

PILES SHALL BE ACCORDANCE WITH BNSF STANDARD SPECIFICATIONS SECTION 04200.
PILE SPACINGS SHOWN ARE AT PILE CUTOFF ELEVATIONS.
PILES SHALL BE DRIVEN TO REFUSAL, IF POSSIBLE, OR TO A MINIMUM ULTIMATE RESISTANCE OF 250 TONS AS DETERMINED BY THE MODIFIED ENGINEERING NEWS RECORD FORMULA.

ESTIMATED PILE LENGTH BELOW CUTOFF = 60′.
PILE CUTOFFS IN EXCESS OF 10′ SHALL BECOME THE PROPERTY OF BNSF.
PILE PENETRATION SHALL BE PERMANENTLY MARKED ON EACH PILE GROUP AS DIRECTED BY THE ENGINEER.
MINIMUM PILE PENETRATION SHALL BE 25 FEET.
PAINT EXPOSED PILES WITH ONE FINISH COAT ZINC RICH BRIDGE PAINT.
PAINT TO EXTEND AT LEAST ONE FOOT BELOW FINISHED GROUND LINE.
PILE DRIVING IS SUBJECT TO APPROVAL BY THE ENGINEER.

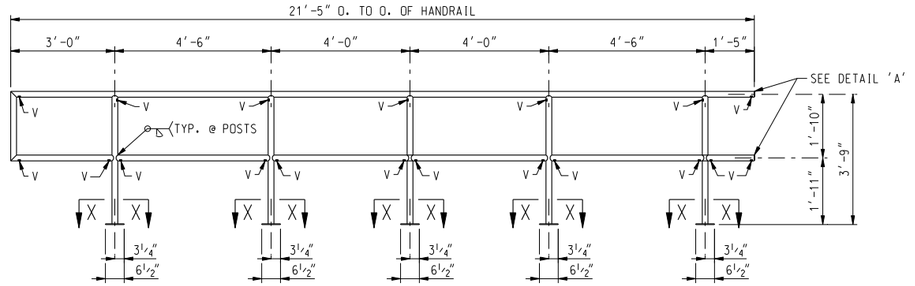
SYMBOL X:12 DENOTES DIRECTION AND AMOUNT OF PILE BATTER.

NOTE:
FOR LOCATION OF SECTION A-A & B-B, SEE PLAN NO. 7200-1104.6-001.

Attachment B

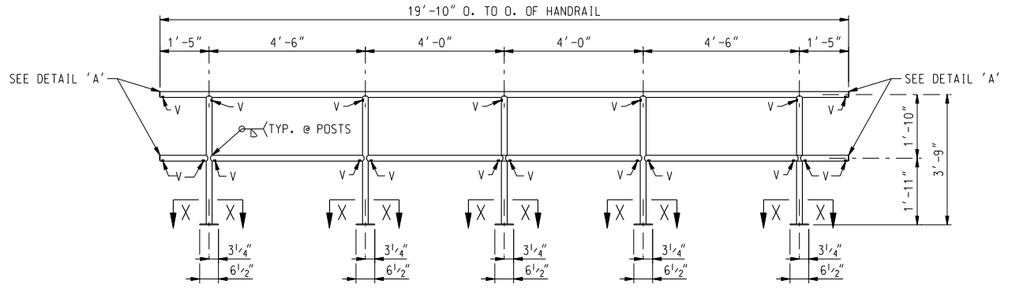
DES: JPH	BNSF RAILWAY	CALWA TO RICHMOND
DRAWN: MLD	BRIDGE ENGINEERING KANSAS CITY, KS	BRIDGE NUMBER 1104.6
CHECK: TAH		OVER LONE TREE CREEK NEAR ESCALON, CA
DATE: APRIL 2012		PILE PLAN & SECTION VIEWS
AUTH:	APPROVED:	
LINE SEG: 7200	ASST. DIRECTOR STRUCTURES DESIGN	PLAN NO: 7200-1104.6-002 SHEET: 2 of 4

TranSystems



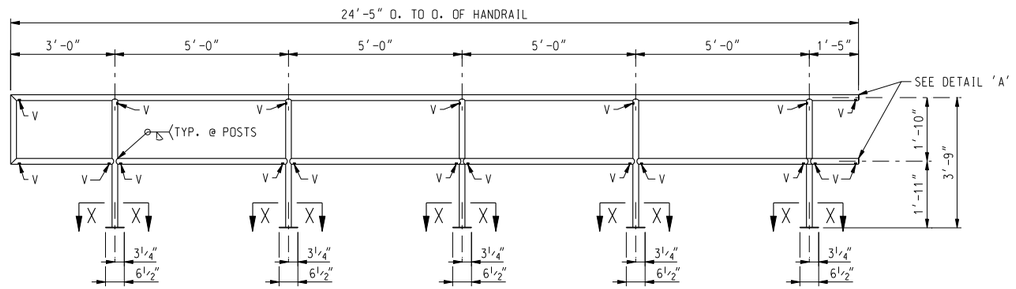
HANDRAIL PANEL ~ SHP1104.6-1

2 REQ'D. - MK. - SHP1104.6-1 (183 LBS. EA.)
HANDRAIL PANELS ARE TO BE FABRICATED USING 1½"ø STD. BLACK PIPE.
GALVANIZE AFTER FABRICATION.



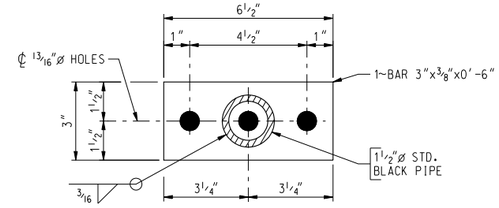
HANDRAIL PANEL ~ SHP1104.6-2

4 REQ'D. - MK. - SHP1104.6-2 (169 LBS. EA.)
HANDRAIL PANELS ARE TO BE FABRICATED USING 1½"ø STD. BLACK PIPE.
GALVANIZE AFTER FABRICATION.

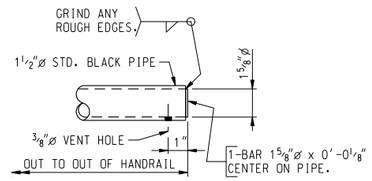


HANDRAIL PANEL ~ SHP1104.6-3

2 REQ'D. - MK. - SHP1104.6-3 (199 LBS. EA.)
HANDRAIL PANELS ARE TO BE FABRICATED USING 1½"ø STD. BLACK PIPE.
GALVANIZE AFTER FABRICATION.



SECTION X-X



DETAIL 'A'

NOTES:

MATERIAL: STRUCTURAL STEEL BARS SHALL MEET THE REQUIREMENTS OF THE CURRENT A.S.T.M. DESIGNATION: A36.

STANDARD BLACK PIPE SHALL MEET THE REQUIREMENTS OF THE CURRENT A.S.T.M. DESIGNATION: A53. UNCOATED PIPE SHALL BE USED.

SHOP NOTES: FABRICATION AND ARC WELDING OF STRUCTURAL STEEL AND HANDRAIL PANELS SHALL BE IN ACCORDANCE WITH CHAPTER 15, PART 3 OF THE CURRENT A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING. MIG WELDING SHALL BE USED ON HANDRAIL PANELS. OPEN HOLES: AS NOTED. SHOP PAINT: NONE.

GALVANIZING: SHP1104.6-1, SHP1104.6-2 & 3 SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH THE CURRENT A.S.T.M. DESIGNATION: A123.

AFTER GALVANIZING ALL ELEMENTS SHALL BE FREE OF FINS, ABRASIONS, ROUGH OR SHARP EDGES AND OTHER SURFACE DEFECTS.

Attachment B

DES: JPH	BNSF RAILWAY	CALWA TO RICHMOND
DRAWN: MLD	BRIDGE ENGINEERING KANSAS CITY, KS	BRIDGE NUMBER 1104.6
CHECK: TAH		OVER LONE TREE CREEK NEAR ESCALON, CA
DATE: APRIL 2012		HANDRAIL DETAILS
AUTH:	APPROVED:	
LINE SEG: 7200	ASST. DIRECTOR STRUCTURES DESIGN	PLAN NO: 7200-1104.6-003 SHEET: 3 of 4

TranSystems

REQ. NO.:	REQUEST ID.: SB00	LINE SEG.:7200	MILE POST: 1104.6	DELIV. DATE:	
SHIP TO BNSF CO.: YURI V. LOPEZ, SUPERVISOR STRUCTURES TRUCK SHIPMENT ESCALON, CA PH: (559) 457-7564		SEND SHIPPING PAPERS TO: YURI V. LOPEZ, SUPERVISOR STRUCTURES 2183 N. PLEASANT FRESNO, CA 93705-4730 PH: (559) 457-7564		ACCT: 2010	COST CLASS: 319
				WORK REASON: 130	COST CTR: 14816
				LOC. NO.: 481090	TAX CODE: 48
				AUTH.:	P.O. NO.: -

SIGNATURE: H.R. PERRY TITLE: MANAGER STRUCTURES DESIGN DATE:

BILL OF MATERIAL

ITEM	QUAN.	UNIT	DESCRIPTION	MARK	SIZE	LENGTH	REMARKS
1	80,100	LBS.	STEEL BEARING PILE (15 PCS.)		HP14" x 89#	60'-0"	ASTM A572 GR. 50
2							
3	6	EA.	PRESTR. CONC. BEAM w/CURB	PB19-10C	20"x 84"	19'-10"	PER STD. PLAN 0000-22003-01G
4	2	EA.	PRESTR. CONC. BEAM w/CURB	PB22-10C	20"x 84"	22'-10"	PER STD. PLAN 0000-22003-01G
5	3	EA.	PRECAST CONC. BENT CAP	PC135	2'-0"x2'-0"	15'-0"	PER STD. PLAN 0000-22899-03F
6	2	EA.	PRECAST CONC. ABUTMENT CAP	PC108	24"x 3'-0"	18'-6"	PER STD. PLAN 0000-22899-02F
7	4	EA.	PRECAST CONC. WING WALL	PW102	9"x 5'-1 1/2"	7'-0"	PER STD. PLAN 0000-22899-03F
8							
9	10	EA.	BRACKET	B100			PER STD. PLAN 0000-22902-37
10	5	EA.	DECK PLATE, GALV.	DP100			PER STD. PLAN 0000-22902-37
11	5	EA.	DECK PLATE, GALV.	DP101			PER STD. PLAN 0000-22902-37
12	2	EA.	HANDRAIL PANEL, GALV.	SHP1104.6-1	1 1/2" ø PIPE	21'-5"	PER PLAN NO. 7200-1104.6-003
13	4	EA.	HANDRAIL PANEL, GALV.	SHP1104.6-2	1 1/2" ø PIPE	19'-10"	PER PLAN NO. 7200-1104.6-003
14	2	EA.	HANDRAIL PANEL, GALV.	SHP1104.6-3	1 1/2" ø PIPE	24'-5"	PER PLAN NO. 7200-1104.6-003
15	16	EA.	WASHER, GALV.	W100	4" x 3/4"	0'-4"	PER STD. PLAN 0000-22902-37
16							
17	40	EA.	WALK BRACKET, ASTM A36, GALV.	WBS4			PER STD. PLAN 0000-50000-001D
18	12	EA.	GRIP STRUT SAFETY GRATING, 12 GA.		3"x18 3/4"	20'-0"	CUT TO LENGTH IN FIELD
19	4	EA.	GRIP STRUT SAFETY GRATING, 12 GA.		3"x18 3/4"	23'-0"	CUT TO LENGTH IN FIELD
20	80	EA.	GRIP STRUT ANCHOR DEVICE CLIP	12262			
21	80	EA.	H.S. STRUCT. BOLT WITH NUT & WASHER, GALV.		3/4" DIA.	2"	ASTM A325
22	80	EA.	CARRIAGE BOLT, ROUND HEAD, SQUARE NECK		5/16" DIA.	4 1/2"	
23	80	EA.	NUT, CENTER LOCKING, ZINC PLATED		5/16"		
24	80	EA.	WASHER, FLAT, ROUND		12 GA.	7/8" O.D.	FOR 5/16" DIA. BOLTS
25							
26	8	EA.	PAD, URETHANE, DUROMETER 70		6" x 1/2"	13'-10"	BEARING AREA
27	40	EA.	PREMOLDED JOINT FILLER ASPHALT IMPREGNATED		1/2" x 18"	6'-10"	BETWEEN BEAMS & BETWEEN END OF BEAMS AND ABUTMENT WALL
28							
29							
30							
31							
32	2	EA.	BRIDGE NUMBER SIGN	1104.6			DETAIL PLAN 3103.01.03
33	2	EA.	DANGER SIGN, NO. 70		16" x 30"		DETAIL PLAN 3070.01.04
34	2	EA.	SIGN POST, NO. 1 BLACK			11'-0"	
							(TRACK STD. PLAN BOOK)

SUMMARY OF ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT
RIPRAP, CLASS I ON GEOTEXTILE FABRIC	281.5	C.Y.

Attachment B

TranSystems

DES: JPH	BNSF RAILWAY BRIDGE ENGINEERING KANSAS CITY, KS	CALWA TO RICHMOND BRIDGE NUMBER 1104.6 OVER LONE TREE CREEK NEAR ESCALON, CA BILL OF MATERIAL
DRAWN: MLD		
CHECK: TAH		
DATE: APRIL 2012		
AUTH:	APPROVED: _____ ASST. DIRECTOR STRUCTURES DESIGN	PLAN NO: 7200-1104.6-004 SHEET: 4 of 4
LINE SEG: 7200		

INSTALL EROSION CONTROL NETTING IN ALL DISTURBED AREAS

PROPOSED RIP RAP

PROPOSED CONTOUR

DISTURBED AREA UNDER BRIDGE STRUCTURE WILL COVERED WITH RIP RAP AND WILL BE ALLOWED TO REVEGETATE PASSIVELY.

TOTAL AREA OF DISTURBED LAND 7515 SF (INCLUDES STAGING AREA)

TOTAL QUANTITY OF EXCAVATION IS APPROXIMATELY 282 CY

20'-0"

20'-0"

20'-0"

PROPOSED CONTOUR

AREA OF DISTURBANCE 5015 SF (0.12 AC) (AVERAGE DEPTH OF EXCAVATION = 1'-6")

FIGURE 1

Scale 1"=10'

LEGEND

EXISTING MAJOR CONTOUR	95
EXISTING MINOR CONTOUR	92
PROPOSED MINOR CONTOUR	92
EXISTING FLOWLINE	→ → → → –
PROPOSED RIP RAP	

SEXTON RD.

PROPOSED BNSF BRIDGE 1104.6

BNSF RAILROAD RIGHT-OF-WAY

PROPOSED STAGING AREA

MIN. 25'

100'

EXISTING 15' RAILROAD MAINTENANCE ROAD

SEE FIGURE 1

25'

50'

100'

APPLY WATER TO ACCESS ROAD & STAGING AREA AS NECCESSARY TO CONTROL DUST. ENSURE THAT WATER USED FOR DUST CONTROL DOES NOT CAUSE RUNOFF INTO STREAM.

EXISTING GRAVEL DRIVE

PROPOSED STAGING AREA ACCESS

NO MATERIALS SHALL BE STORED OR SHALL REMAIN IN THE FLOODWAY AFTER CONSTRUCTION

LONE TREE CREEK

N

30 0 30 60

SCALE IN FEET

Attachment B

Tran Systems
505 14TH STREET
SUITE 1000
OAKLAND, CA 94612
PHONE: 510-835-2761
FAX: 510-3835-8839

CONSULTANTS:

BNSF BRIDGE REPLACEMENT
1104.6 L.S. 7200

BNSF RAILWAY

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	101100299
SCALE:	1" = 30'
DATE:	$DATE$
DESIGNED BY:	CJM
DRAWN BY:	CJM
CHECKED BY:	AML

SHEET TITLE:

SITE DISTURBANCE PLAN

SHEET NO.

SHEET 1 OF 1

$USER$ - $TIME$ - $FILE$
$DATE$

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING

BNSF Bridge 1104.6
San Joaquin County, CA

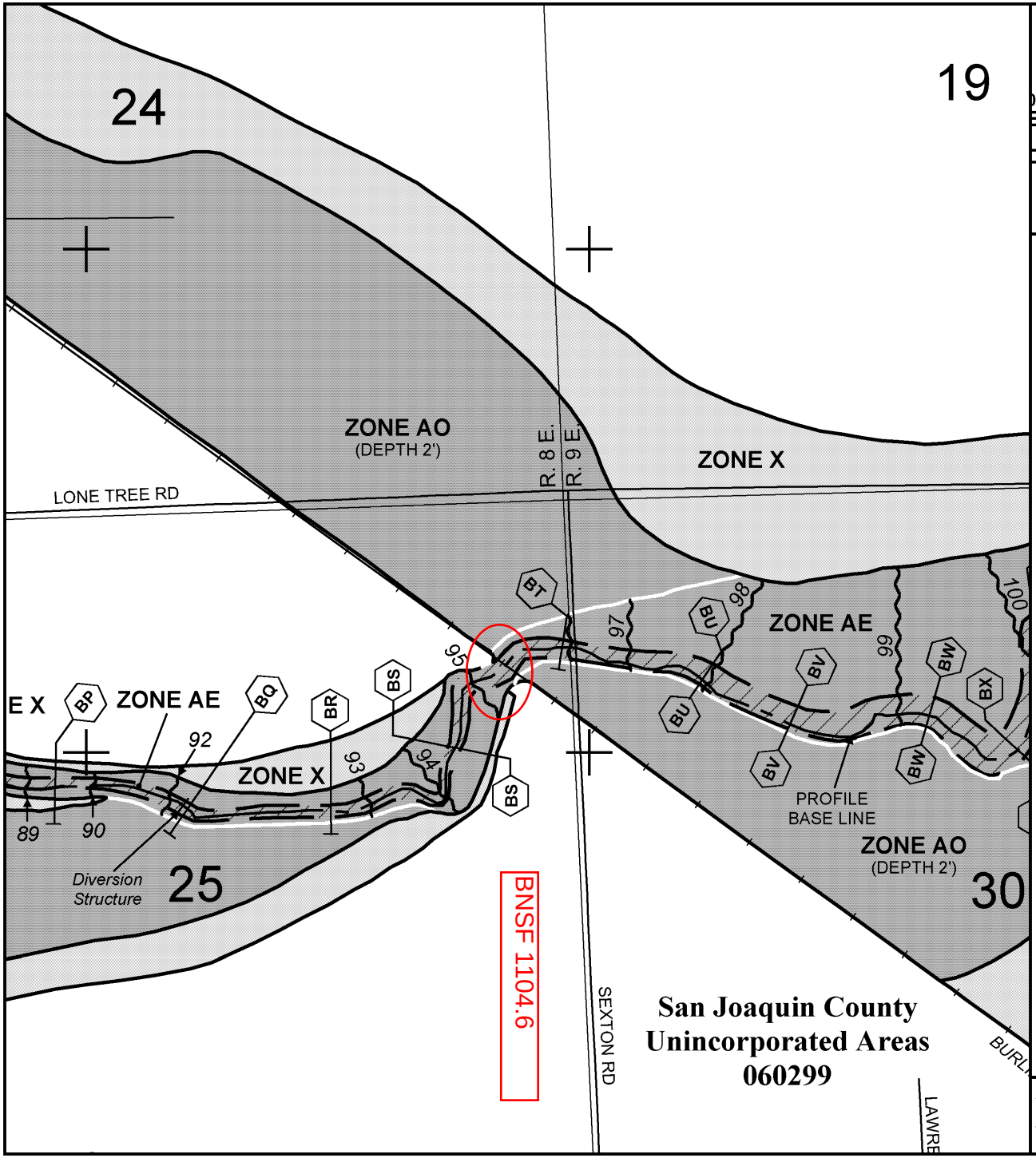
Attachment C, Figure 1

Legend

- Lone Tree Creek Cross Sections
- 1ft USGS DEM Contours

N
W E
S

0 312.5 625 1,250 1,875 2,500
Feet



MAP SCALE 1" = 1000'

0 1000 2000 FEET

0 300 600 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0660F

FIRM

FLOOD INSURANCE RATE MAP

SAN JOAQUIN COUNTY, CALIFORNIA

AND INCORPORATED AREAS

PANEL 660 OF 950

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SAN JOAQUIN COUNTY	060299	0660	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06077C0660F

EFFECTIVE DATE
OCTOBER 16, 2009

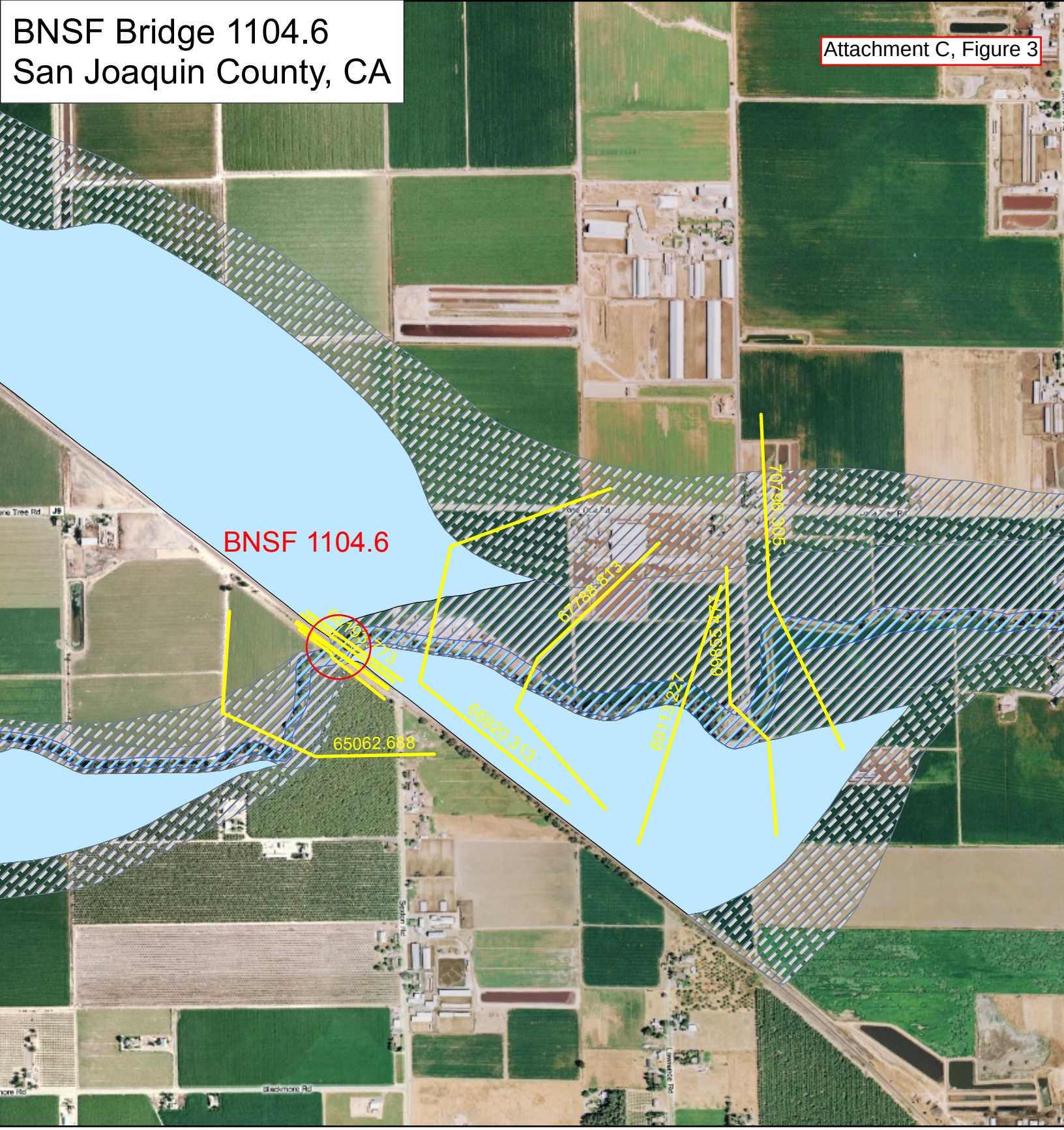
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Attachment C, Figure 2

BNSF Bridge 1104.6
San Joaquin County, CA

Attachment C, Figure 3



Legend

- Lone Tree Creek Cross Sections

FEMA Flood Hazard Areas

- Zone X
- AE
- AE FLOODWAY
- AO (1-3 Foot Depth)

N
W E
S

0 312.5 625 1,250 1,875 2,500
Feet

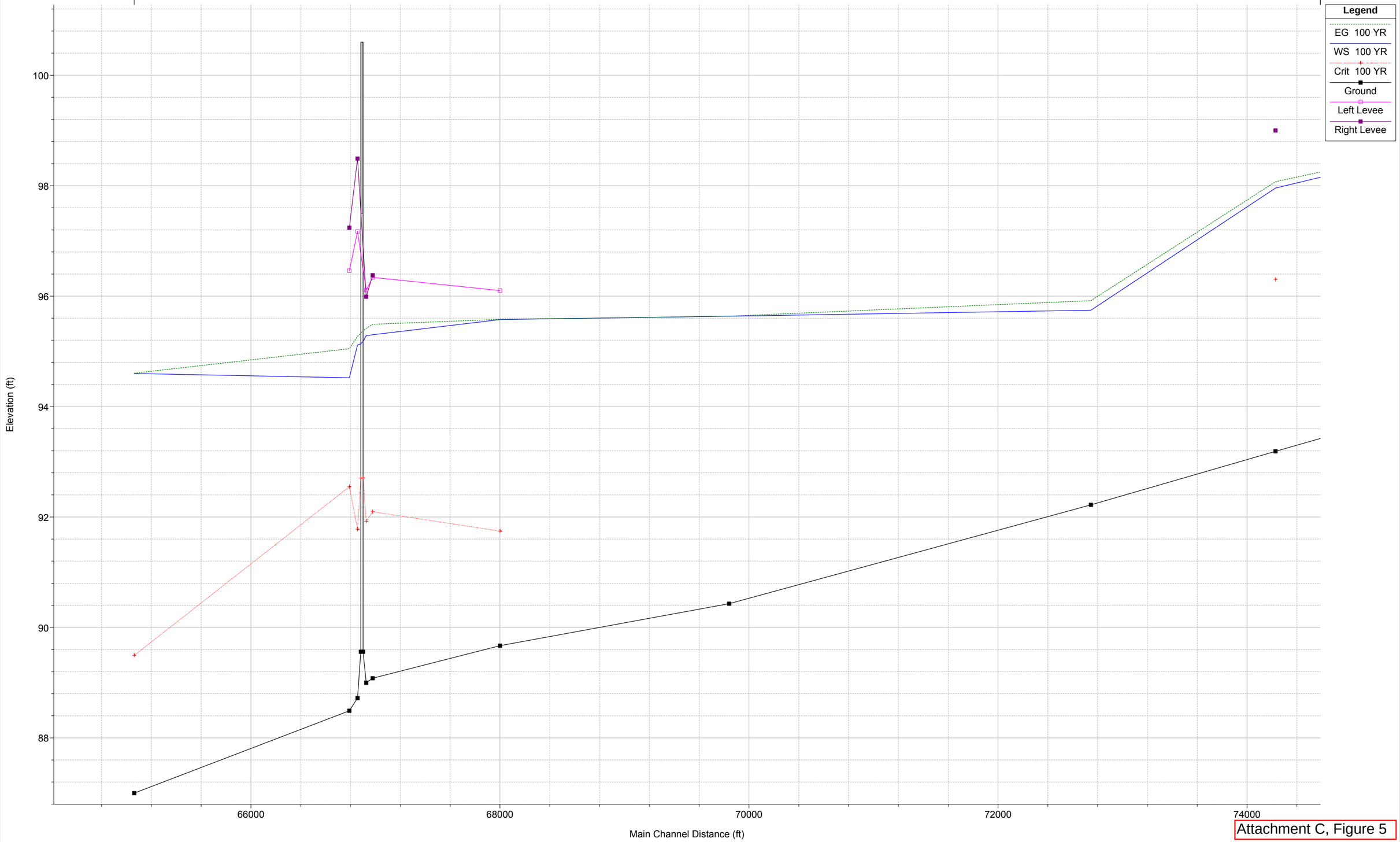
TABLE 10 – SUMMARY OF DISCHARGES (continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
DUCK CREEK (continued)					
Hollenbeck Road	37.0	365	665	840	995
Drais Road	34.0	420	745	915	1,460
Hewitt Road	32.0	505	885	1,070	2,585
Southern Pacific Railroad	30.0	595	1,000	1,215	2,935
Escalon-Bellota Road	29.2	295	1,000	1,215	1,675
FRENCH CAMP SLOUGH[1]					
Mouth (San Joaquin River)	474.2	2,380	4,270	4,780	10,170
Mouth of Walker Slough	474.2	2,380	4,270	4,375	10,170
El Dorado Street	414.0	2,080	2,380	3,970	6,905
Airport Way	394.8	2,080	2,735	3,565	3,890
Source	335.1	2,080	2,840	3,855	5,870
JAHANT SLOUGH					
Mokelumne River	16.0	329	686	858	1,430
State Highway 99	7.4	290	610	760	1,265
LITTLE BEAR CREEK					
Mouth (Little Mosher Creek)	1.04	*	*	222	*
LITTLEJOHNS CREEK[2]					
Terminus (bifurcation, North and South Littlejohns Creeks)	217.0	1,890	3,750	4,805	5,235
Escalon-Bellota Road	215.9	1,890	3,750	4,860	5,310
Duck Creek Diversion	213.0	1,890	3,750	6,335	8,620
Farmington Dam	200.0	[3]	[3]	[3]	[3]
LONE TREE CREEK[4]					
Terminus (South Fork South Littlejohns Creek)	87.8	455	645	690	825
State Highway 99	86.0	570	840	955	1,630
Austin Road	83.4	345	435	475	525
Jack Tone Road	37.5	270	285	405	485
Murphy Road	33.1	145	150	160	185
Carrolton Road	33.1	395	395	475	545
Atchison, Topeka & Santa Fe Railway	28.7	405	415	450	640
Brennan Road	22.5	695	740	970	2,090
Escalon-Bellota Road	18.9	620	915	1,200	1,680

[1]Flows for 10-, 2-, 1-, and 0.2-percent annual chance floods reflect overbank gains and losses. Source of slough is the confluence of the North and South Forks of South Littlejohns Creek
[2]Decrease in volume of 1- and 0.2-percent annual chance floods in a downstream direction results from overbank and channel routing losses.
[3]Outflow will vary according to local conditions affecting project operation.
[4]Anabranch Channel of South Littlejohns Creek.
*Data not computed

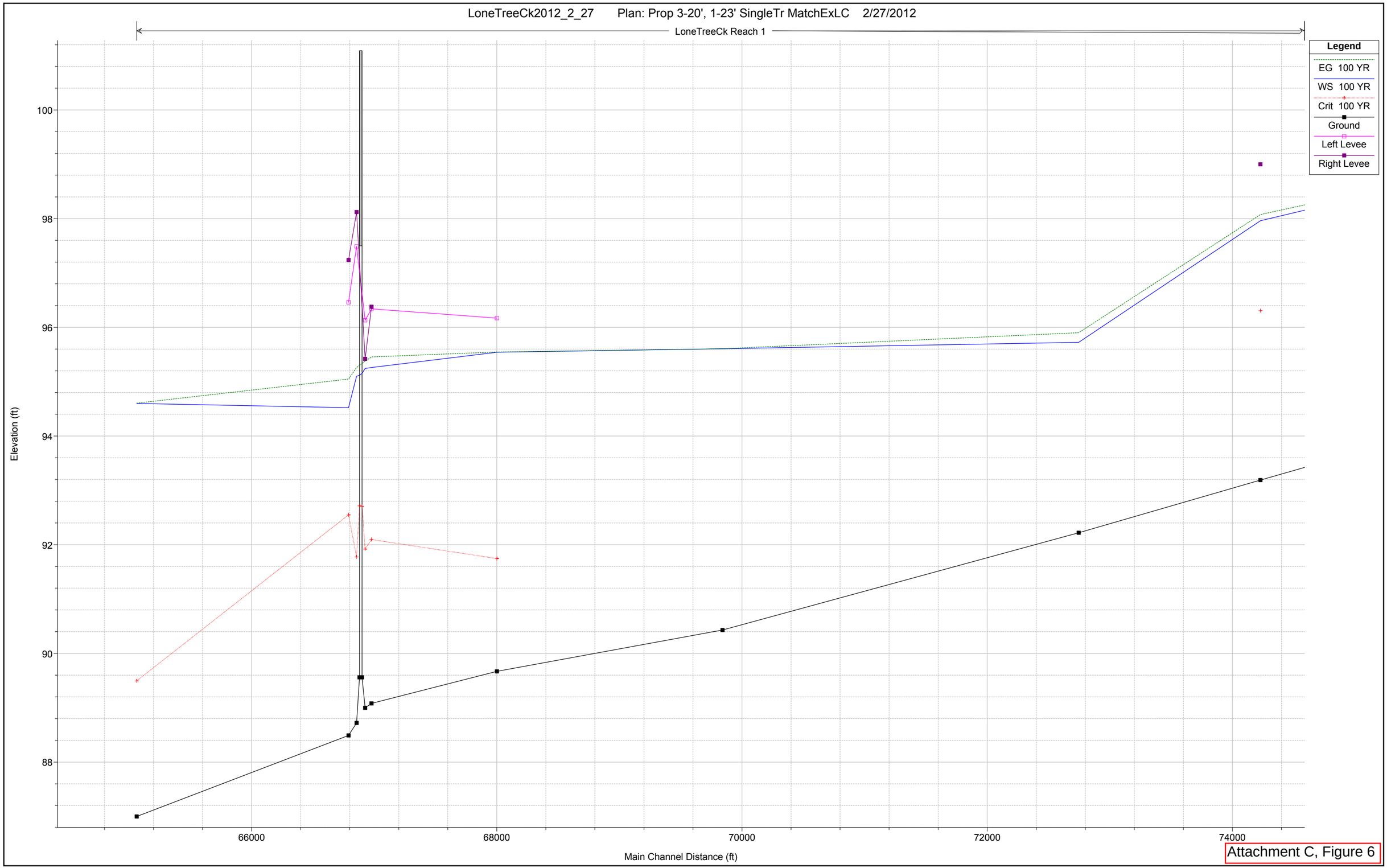
LoneTreeCk2012_2_27 Plan: Existing Conditions 2/27/2012

LoneTreeCk Reach 1



Attachment C, Figure 5

LoneTreeCk2012_2_27 Plan: Prop 3-20', 1-23' SingleTr MatchExLC 2/27/2012



Attachment C, Figure 6

Attachment D, Figure 1

FAX

To:

Company :

Fax Number : **19165740682**

Phone Number :

From : Manteca Service Center

Fax Number : **209-472-6472**

Phone Number **209-954-4361**

Time Sent : **Thursday, Jun 28, 2012 08:46AM**

Pages : **4**

Description : PROTEST

Replacement of Burlington Northern & Santa Fe Railroad bridge 1104.6 over Lone Tree Creek.

Attachment D, Figure 1

SUBJECT: PROTEST

June 25, 2012

From: David C & Carrie C Dorosh
15291 Sexton Rd
Escalon, California 95320
Phone: 209-550-1695

To Whom It May Concern:

We are writing this letter regarding the proposed project from Burlington Northern and Santa Fe Railroad bridge 1104.6 over Lone Tree Creek.

We are concerned about the drainage pipes alongside our property.. The last time the railroad did work adjacent to our property they plugged up the drainage pipes and we have been unable to get them to correct the problem. We have had issues with flooding on our property around 1998. The drainage pipes were not plugged up then so the flood water did not get into our house.

We would like to make sure that the existing problem is corrected and that there are no further problems created due to this or any other project the railroad works on.

Thank You,

Carrie Dorosh

David Dorosh

Attachment D, Figure 1

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. 151
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-0685 FAX: (916) 574-0682

JUN 8 - 2012

Dorosh, David C & Carrie C
15291 S. Sexton Road
Escalon, California 95320

This letter is to inform you that the Central Valley Flood Protection Board has received an application concerning works to be performed at a property adjacent to yours. The Board has received an application from Burlington Northern & Santa Fe Railway for a project as described below.

Description: Replacement of Burlington Northern & Santa Fe Railroad bridge 1104.6 over Lone Tree Creek.

Location: The project is located at the Burlington Northern & Santa Fe Railroad bridge crossing of Lone Tree Creek in Escalon California.
Section 25, T1S, R8E, MDB&M
(San Joaquin County Flood Control and Water Conservation District, Lone Tree Creek, San Joaquin County)

If you have any comments on the project that relate to flood control issues, please forward them to the Central Valley Flood Protection Board at 3310 El Camino Avenue, Room 151, Sacramento, California, 95821, within twenty days from the date of this letter.

If you wish to protest this application, you must notify the Board in writing, with the word PROTEST in the subject line, within twenty days from the date of this letter. Protests must include:

(1) The name, address, and telephone number of the protestant;
(2) A clear statement of the protestant's objections; and
(3) An explanation of how the protestant will be adversely affected by the proposed project.

Protests must be based solely upon flood control concerns or, where the Board is acting as lead agency under CEQA, environmental concerns.

Since January 1, 2008, the Board has been required to hold an evidentiary hearing for any matter that requires the issuance of a permit. If you do not protest this application within twenty days from the date of this letter, you will have waived your right to

Attachment D, Figure 1

participate in the hearing as a protestant including the right to present and rebut evidence, although you may still comment as a member of the public. If there are no protestants to this application, the Board may place the item on its consent calendar and act based on the staff report and any evidence that was submitted to Board staff.

Please refer to application number 18768 BD when communicating with this office. For further information, contact Ashley Cousin of my staff at (916) 574-2380.

Sincerely,

for: Mitra Emami, Chief
Floodway Protection Section
Central Valley Flood Protection Board

Attachment D, Figure 1

Fax Call Report

HP CM8050 Color MFP with Edgeline Technology
Page 1

Fax Header Information

DWR-CVFPB
1 916 574 0682
2012 Jun 28 07:48 AM

Job	Date/Time	Type	Identification	Duration	Pages	Result
436	2012 Jun 28 07:46 AM	Receive	PREMIER CCU	1:39	4	Success

Attachment D, Figure 2

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. 151
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-2380 FAX: (916) 574-0682

July 2, 2012

Mr. Howard Perry
Burlington Northern Santa Fe Railroad
4515 Kansas Avenue
Kansas City, Kansas 66106

Subject: Receipt of Project Protest for Permit No. 18768; Replacement of Burlington Northern Santa Fe (BNSF) Railroad Bridge 1104.6 over Lone Tree Creek

Dear Mr. Perry:

The Central Valley Flood Protection Board (CVFPB) has received a protest letter regarding the subject project. Per our Title 23 regulations, we are required to mail a copy of the protest to the applicant within 10 days of receipt. Please find the attached copy of the received protest letter, along with a Google Earth image of the proposed BNSF bridge 1104.6 project and the nearby Dorosh property for your reference.

The protest letter mentions drainage pipes alongside the Dorosh property that past BNSF railroad activity has adversely affected. CVFPB staff spoke with Mr. Dorosh regarding the drainage pipes which affect his property that are in the vicinity of the proposed 1104.6 bridge improvements. He indicated BNSF railroad had maintained this drainage in the past; however this has not been the case recently.

Because of these drainage concerns, the CVFPB is requiring BNSF Railroad to submit a more detailed drainage plan of the rip rap placement area under the bridge, and for 20 feet on each side of the bridge. For our review, and as part of the permitting process, the plan should show the existing drainage pipes in the area and how BNSF is going to maintain this drainage in the future.

Please include in this additional and more detailed drainage plan, the two existing manholes with a 24-inch diameter corrugated metal pipe, as shown on the site plan for this bridge replacement. Also include the drainage pipes near the bridge, as shown in Photographs Nos. 1 and 7, which were submitted with this permit application. We also recommend that you contact the Dorosh's to fully understand their flooding concerns and address them appropriately in this more detailed drainage plan.

Please also be advised that because of this protest letter we have received, this permit application will now be scheduled to be heard and acted upon in an evidentiary hearing, rather than on the consent calendar agenda, at a regularly scheduled Board meeting. We therefore recommend that a BNSF representative attend this meeting and be able to speak on behalf of BNSF at such a meeting, if needed. CVFPB staff will schedule a Board meeting date once the

Attachment D, Figure 2

above requested additional information is received, reviewed, and satisfies the drainage concerns raised by the protester.

The CVFPB will also need final plan drawings for this permit application instead of plans that are noted "Preliminary – Not For Construction" submitted for our review prior to scheduling a Board meeting date.

If you have any questions or concerns regarding this matter, please contact Mr. Jon Tice at (916) 574-0279, or by e-mail at: jtice@water.ca.gov.

Sincerely,

David R. Williams, R.C.E.
Chief, Flood System Improvement Section

Attachments:
1. Faxed letter dated June 25, 2012
2. Google Earth photo
3. Photos 1 and 7
4. Site Plan

cc: Amanda Limburg, P.E.
TranSystems Corp.
505 14th Street, Suite 1000
Oakland, California 94612

David C. and Carrie C. Dorosh
15291 Secton Road
Escalon, California 95320

Mitra Emami, CVFPB
Jon Tice, CVFPB

Attachment D, Figure 2

FAX

To:

Company :

Fax Number : **19165740682**

Phone Number :

From : Manteca Service Center

Fax Number : **209-472-6472**

Phone Number **209-954-4361**

Time Sent : **Thursday, Jun 28, 2012 08:46AM**

Pages : **4**

Description : PROTEST

Replacement of Burlington Northern & Santa Fe Railroad bridge 1104.6 over Lone Tree Creek.

Attachment D, Figure 2

SUBJECT: PROTEST

June 25, 2012

From: David C & Carrie C Dorosh
15291 Sexton Rd
Escalon, California 95320
Phone: 209-550-1695

To Whom It May Concern:

We are writing this letter regarding the proposed project from Burlington Northern and Santa Fe Railroad bridge 1104.6 over Lone Tree Creek.

We are concerned about the drainage pipes alongside our property.. The last time the railroad did work adjacent to our property they plugged up the drainage pipes and we have been unable to get them to correct the problem. We have had issues with flooding on our property around 1998. The drainage pipes were not plugged up then so the flood water did not get into our house.

We would like to make sure that the existing problem is corrected and that there are no further problems created due to this or any other project the railroad works on.

Thank You,

Carrie Dorosh

David Dorosh

Attachment D, Figure 2

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. 151
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-0685 FAX: (916) 574-0682

JUN 8 - 2012

Dorosh, David C & Carrie C
15291 S. Sexton Road
Escalon, California 95320

This letter is to inform you that the Central Valley Flood Protection Board has received an application concerning works to be performed at a property adjacent to yours. The Board has received an application from Burlington Northern & Santa Fe Railway for a project as described below.

Description: Replacement of Burlington Northern & Santa Fe Railroad bridge 1104.6 over Lone Tree Creek.

Location: The project is located at the Burlington Northern & Santa Fe Railroad bridge crossing of Lone Tree Creek in Escalon California.
Section 25, T1S, R8E, MDB&M
(San Joaquin County Flood Control and Water Conservation District, Lone Tree Creek, San Joaquin County)

If you have any comments on the project that relate to flood control issues, please forward them to the Central Valley Flood Protection Board at 3310 El Camino Avenue, Room 151, Sacramento, California, 95821, within twenty days from the date of this letter.

If you wish to protest this application, you must notify the Board in writing, with the word PROTEST in the subject line, within twenty days from the date of this letter. Protests must include:

(1) The name, address, and telephone number of the protestant;
(2) A clear statement of the protestant's objections; and
(3) An explanation of how the protestant will be adversely affected by the proposed project.

Protests must be based solely upon flood control concerns or, where the Board is acting as lead agency under CEQA, environmental concerns.

Since January 1, 2008, the Board has been required to hold an evidentiary hearing for any matter that requires the issuance of a permit. If you do not protest this application within twenty days from the date of this letter, you will have waived your right to

Attachment D, Figure 2

participate in the hearing as a protestant including the right to present and rebut evidence, although you may still comment as a member of the public. If there are no protestants to this application, the Board may place the item on its consent calendar and act based on the staff report and any evidence that was submitted to Board staff.

Please refer to application number 18768 BD when communicating with this office. For further information, contact Ashley Cousin of my staff at (916) 574-2380.

Sincerely,

for: Mitra Emami, Chief
Floodway Protection Section
Central Valley Flood Protection Board

Attachment D, Figure 2

Fax Call Report

HP CM8050 Color MFP with Edgeline Technology
Page 1

Fax Header Information

DWR-CVFPB
1 916 574 0682
2012 Jun 28 07:48 AM

Job	Date/Time	Type	Identification	Duration	Pages	Result
436	2012 Jun 28 07:46 AM	Receive	PREMIER CCU	1:39	4	Success

Google Earth image of BNSF Bridge 1104.6 and the Dorosh's home at 15291 S. Sexton Road, Escalon, CA, 95320.

Attachment D, Figure 2

Photo 1. Looking northeast downstream at bridge crossing of Lone Tree Creek.

Photo 2. Looking southwest upstream at bridge crossing of Lone Tree Creek.

Photo 7. Looking northeast at PEM habitat of Wetland A-3 within stream bed of Lone Tree Creek.

Photo 8. Looking northwest at Data Plot WET-A-4 within Wetland A on southwest corner of bridge.

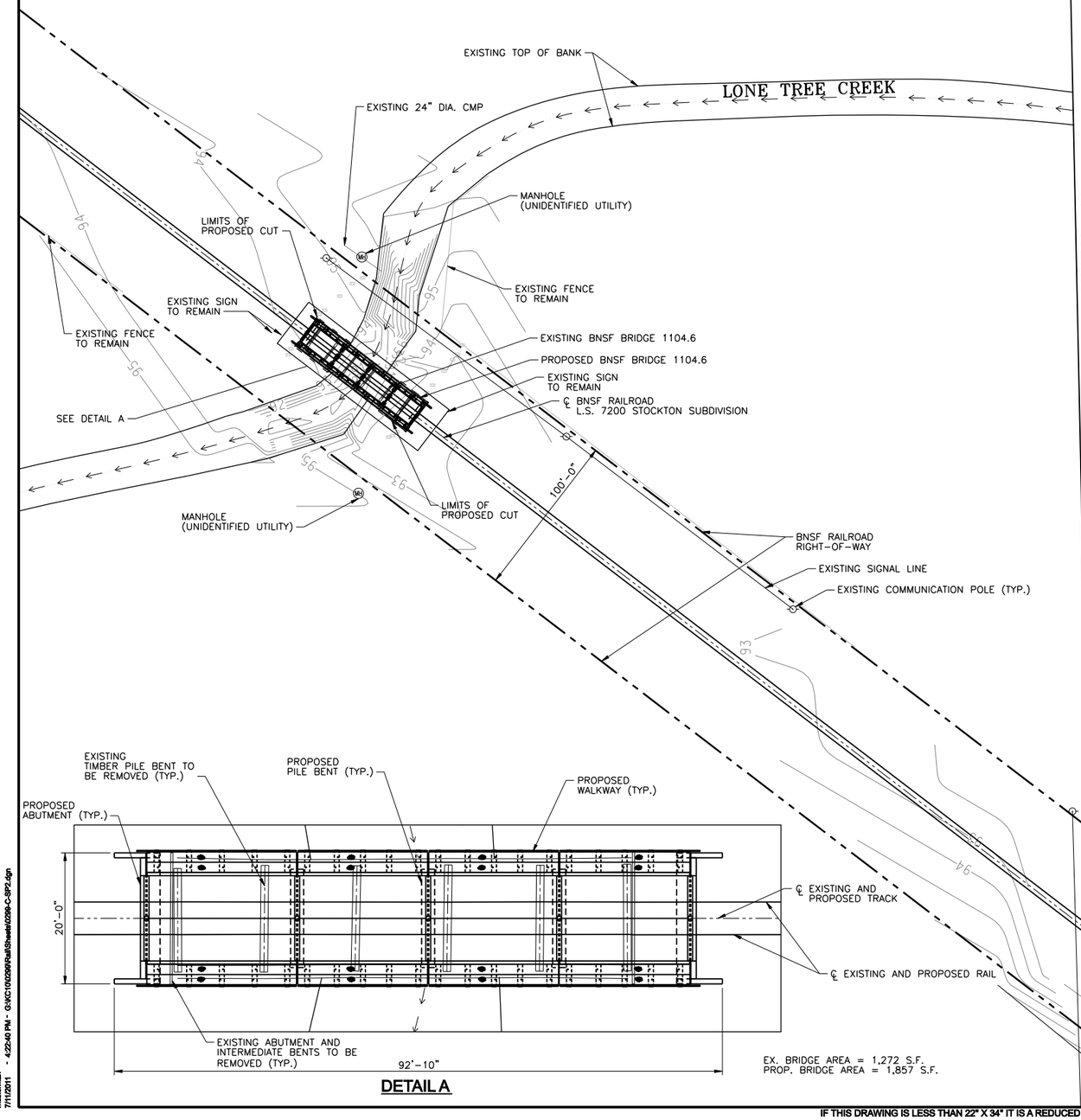
NOTES:

1. NO EXISTING OR PROPOSED WATER WELLS OCCUR WITHIN 150 FEET OF THE PROPOSED DEVELOPMENT.
2. NO EXISTING OR PROPOSED SEWAGE SYSTEMS OCCUR WITHIN 150 FEET OF THE PROPERTY.
3. NO STORM DRAINAGE FACILITIES ARE PROPOSED. THE SITE DRAINS NATURALLY.
4. NO EXISTING OR PROPOSED LANDSCAPING OCCURS WITH 150' OF THE PROPOSED DEVELOPMENT. NO 6" DIA. OR GREATER TREES WILL BE REMOVED.
5. EXISTING SIGNS AND FENCES ARE CALLED OUT.
6. NO STORAGE OR TRASH ENCLOSURES OCCUR WITHIN 150 FEET OF THE PROPERTY.
7. SEE ATTACHED PRELIMINARY PLAN FOR DETAILED PLAN AND ELEVATION.

LEGEND

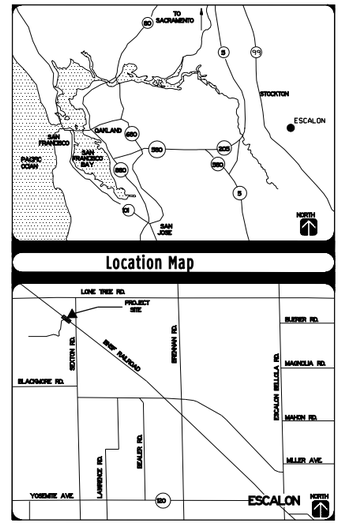
EXISTING MAJOR CONTOUR ——— 95 ———
EXISTING MINOR CONTOUR ——— 92 ———
PROPOSED MINOR CONTOUR ——— 92 ———
EXISTING FLOWLINE → → → –

NOTE:
LESS THAN 1 ACRE OF LAND DISTURBANCE WILL OCCUR, THEREFORE A CONSTRUCTION GENERAL PERMIT IS NOT REQUIRED.

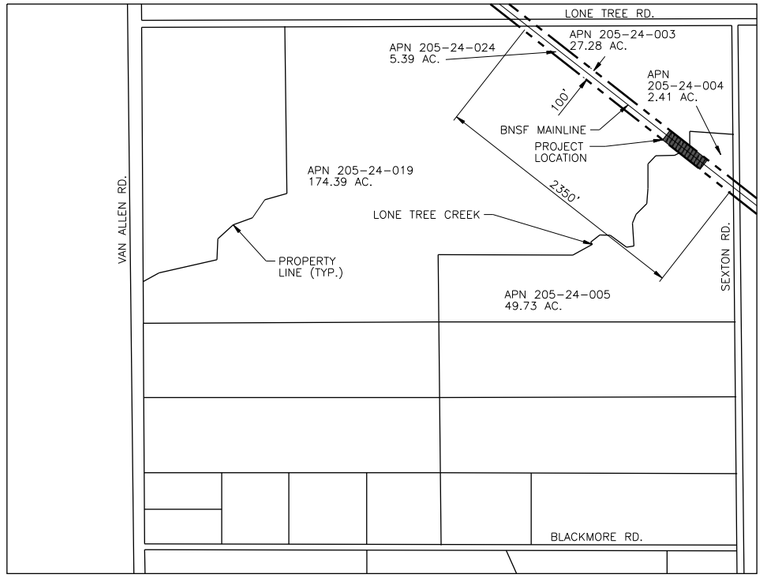


PRIVATE DRIVE

SEXTON RD.



Vicinity Map



PARCEL MAP

DETAIL A

EX. BRIDGE AREA = 1,272 S.F.
PROP. BRIDGE AREA = 1,857 S.F.

N

40 0 40 80
SCALE IN FEET

PRELIMINARY

Attachment D, Figure 2

Tran Systems
505 14TH STREET
SUITE 1000
OAKLAND, CA 94612
PHONE: 510-835-2781
FAX: 510-835-5839

CONSULTANTS:

BNSF BRIDGE REPLACEMENT
1104.6 L.S. 7200

BNSF RAILWAY

REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ NO:	101100299
SCALE:	1"= 40'
DATE:	7/11/2011
DESIGNED BY:	CJM
DRAWN BY:	CJM
CHECKED BY:	LJT

SHEET TITLE:

SITE PLAN

SHEET NO.

SHEET 1 OF 1

mcklerman
7/11/2011 - 4:22:40 PM - G:\KC\101002\99\Rail\Sheets\0299-C-SPZ.dgn

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING

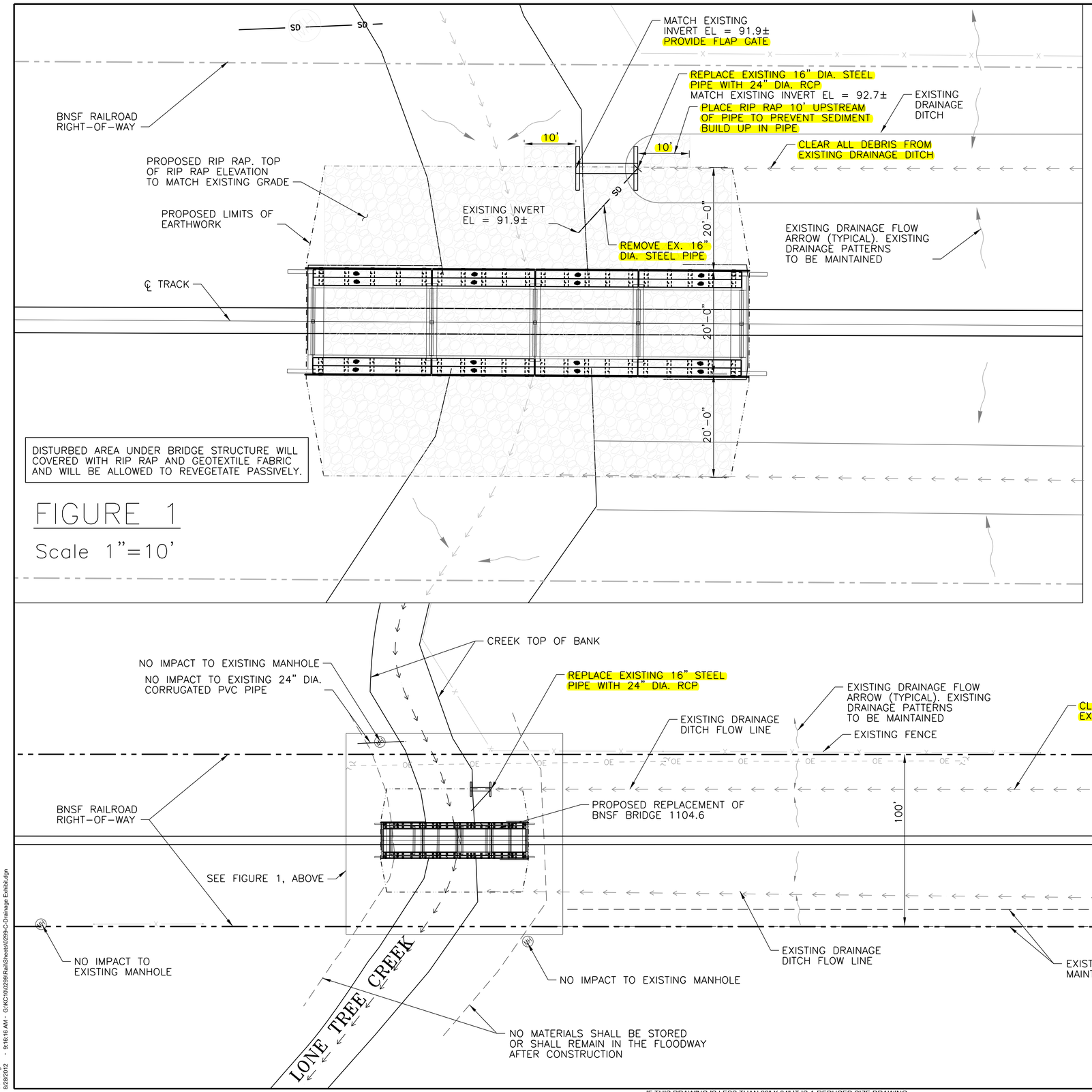


FIGURE 1

Scale 1"=10'

SUMMARY OF ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT
24" DIA. RCP PIPE	12	L.F.
CULVERT HEADWALLS (CALTRANS D89)	2	EA
FLAP GATE	1	EA

NOTES:

GENERAL: ALL MATERIALS AND WORKMANSHIP SHALL BE AS PER THE CURRENT A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING: CHAPTER 1, PART 4 CULVERTS AND CHAPTER 8, PART 10. THE BNSF STANDARD CONSTRUCTION SPECIFICATIONS SUPPLEMENT THE ABOVE A.R.E.M.A. MANUAL AND SHALL GOVERN.

REINFORCED CONCRETE PIPE (RCP): RCP WILL BE FURNISHED ACCORDING TO SECTION 05100 OF THE CURRENT BNSF RAILWAY COMPANY STANDARD CONSTRUCTION SPECIFICATIONS. PIPE MATERIAL, INSTALLATION, BACKFILL AND EMBANKMENT SHALL BE IN ACCORDANCE WITH SECTION 05100 OF THE BNSF STANDARD CONSTRUCTION SPECIFICATIONS.

WELL-COMPACTED BEDDING: PROVIDE WELL COMPACTED BEDDING AS REQUIRED TO ESTABLISH GRADE OF THE CULVERT. BEDDING SHALL CONSIST OF A MINIMUM 18" OF PIPE BEDDING, EXCEPT WHERE COMPETENT ROCK IS ENCOUNTERED AT A LESSER DEPTH. WHEN ROCK IS ENCOUNTERED, THE BEDDING DEPTH MAY BE REDUCED TO A MINIMUM OF 6" OF PIPE BEDDING TO PROVIDE FOR UNIFORM FOUNDATION AT ROCK. OVER EXCAVATE 1.5 FEET EACH SIDE OF CULVERT.

LEGEND:

EXISTING STORM DRAIN PIPE ——— SD ———

EXISTING FLOWLINE → → → → –

PROPOSED RIP RAP

EXISTING FLOW DIRECTION

N

30 0 30 60
SCALE IN FEET

TranSystems
505 14TH STREET
SUITE 1000
OAKLAND, CA 94612
PHONE: 510-835-2761
FAX: 510-3835-9839

CONSULTANTS:

BNSF BRIDGE REPLACEMENT
1104.6 L.S. 7200

BNSF RAILWAY

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	101100299
SCALE:	1" = 30'
DATE:	8/28/2012
DESIGNED BY:	AML
DRAWN BY:	AML
CHECKED BY:	TAH

SHEET TITLE:

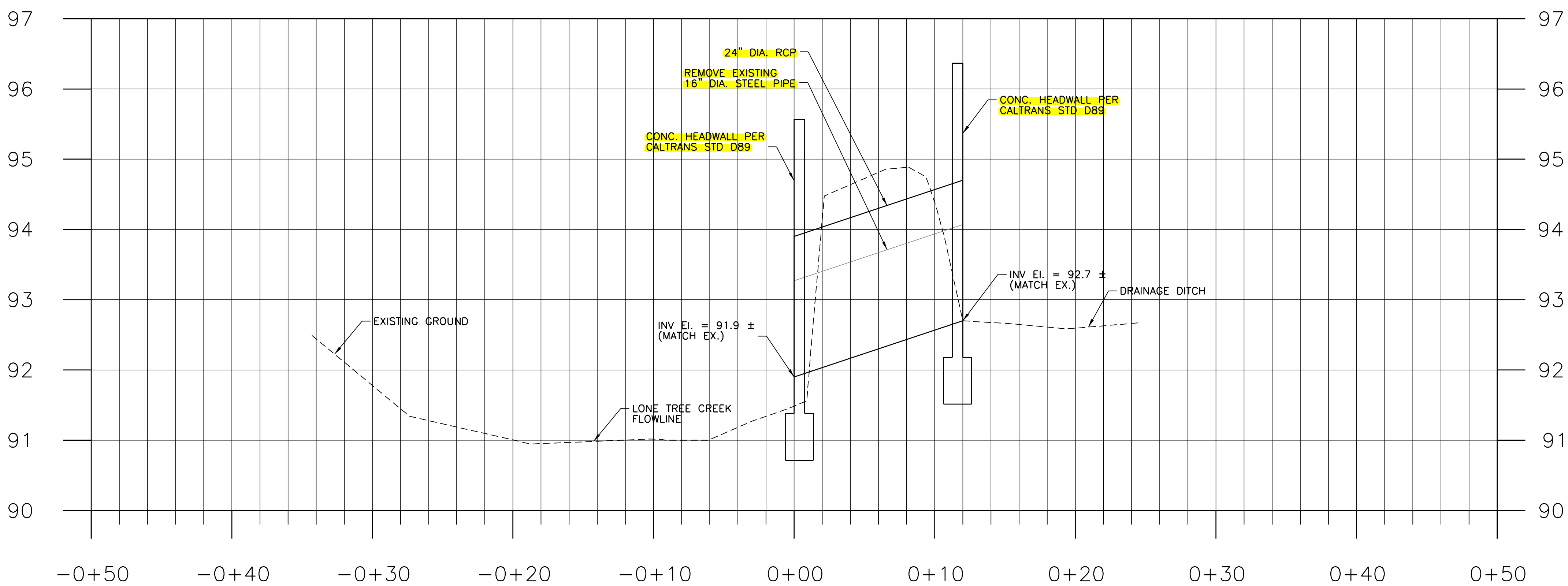
DRAINAGE PLAN

SHEET NO.

Attachment D, Figure 3

SHEET 1 OF 2

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING



24" DIA. RCP PROFILE

SCALE VERT: 1" = 1' (0 1 2 3 FEET)

SCALE HORIZ: 1" = 5' (0 5 10 15 FEET)

TranSystems
505 14TH STREET
SUITE 1000
OAKLAND, CA 94612
PHONE: 510-835-2761
FAX: 510-3835-9839

CONSULTANTS:

BNSF BRIDGE REPLACEMENT
1104.6 L.S. 7200

BNSF RAILWAY

REVISIONS: MARK | DATE | DESCRIPTION

PROJ NO: P101100299
SCALE: AS NOTED
DATE: 8/28/2012
DESIGNED BY: AML
DRAWN BY: AML
CHECKED BY: TAH

SHEET TITLE:

PIPE PROFILE

SHEET NO.

SHEET 2 OF 2

Attachment D, Figure 3

allimburg 8/28/2012 - 9:08:08 AM - G:\KC100299\Rail\Sheets\0299-C-Drainage Exhibit-2.dgn

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING

Attachment D, Figure 4

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. 151
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-2380 FAX: (916) 574-0682

Sent Via U.S. Certified Mail Return Receipt Requested

August 31, 2012

Mr. David C. and Ms. Carrie C. Dorosh
15291 Sexton Road
Escalon, California 95230

Subject: Response to Project Protest for Permit No. 18768: Replacement of Burlington Northern Santa Fe (BNSF) Railroad Bridge 1104.6 over Lone Tree Creek

Dear Mr. and Ms. Dorosh:

Thank you for meeting a member of the Central Valley Flood Protection Board (CVFPB) staff and a representative of BNSF Railroad on August 17, 2012 to discuss your protest to this proposed project. Your input as a local adjacent property owner greatly helped the permit applicant (BNSF) understand the local drainage issues you pointed out in your June 25, 2012 protest letter to the CVFPB.

CVFPB staff has received a response from BNSF which, in our opinion, addresses the drainage concerns brought forward in your protest letter, along with the condition of the existing 16-inch steel drainage pipe at the railroad bridge replacement site, and subsequently additional drainage concerns discussed over the phone with you after our site meeting.

The attached detailed drainage plan from BNSF proposes to replace the existing 16-inch steel drainage pipe with a new 24-inch reinforced concrete pipe that includes headwalls and a flap gate on the downstream end, along with rip-rap placed within 10 feet of both ends of the pipe to help prevent vegetation growth and erosion. The drainage plan also notes the cleaning of the drainage ditch north of the railroad tracks of debris to prevent future clogging of the new 24-inch pipe. CVFPB staff will be recommending this detailed drainage plan become part of the construction plans for the replacement of this railroad bridge over Lone Tree Creek, and also be a part of the applicant's encroachment permit.

If you feel the action taken by the applicant, BNSF Railroad and the CVFPB has adequately addressed your drainage concern protest, the CVFPB would appreciate receiving a letter from you stating that your drainage concerns have been adequately addressed by the permit applicant, BNSF Railroad, and that you are withdrawing your July 25, 2012 protest letter because of these actions taken to address your drainage issues.

This permit application is scheduled to be considered for approval at the September 28, 2012 Board meeting in Sacramento. If you have any questions regarding this matter, please contact Mr. Jon Tice at (916) 574-0279, or by e-mail at jtice@water.ca.gov. Thank you.

Sincerely,

David R. Williams, R.C.E.
Chief, Levee Improvement Section

Attachments: Detailed Drainage Plan from BNSF Railroad

cc: Mr. Howard Perry
Burlington Northern Santa Fe Railroad
4515 Kansas Avenue
Kansas City, Kansas 66106

Ms. Amanda Limberg, P.E.
TranSystems
505 14th Street, Suite 100
Oakland, California 94612

Mr. Michael Wright, CVFPB
Mr. Jon Tice, CVFPB

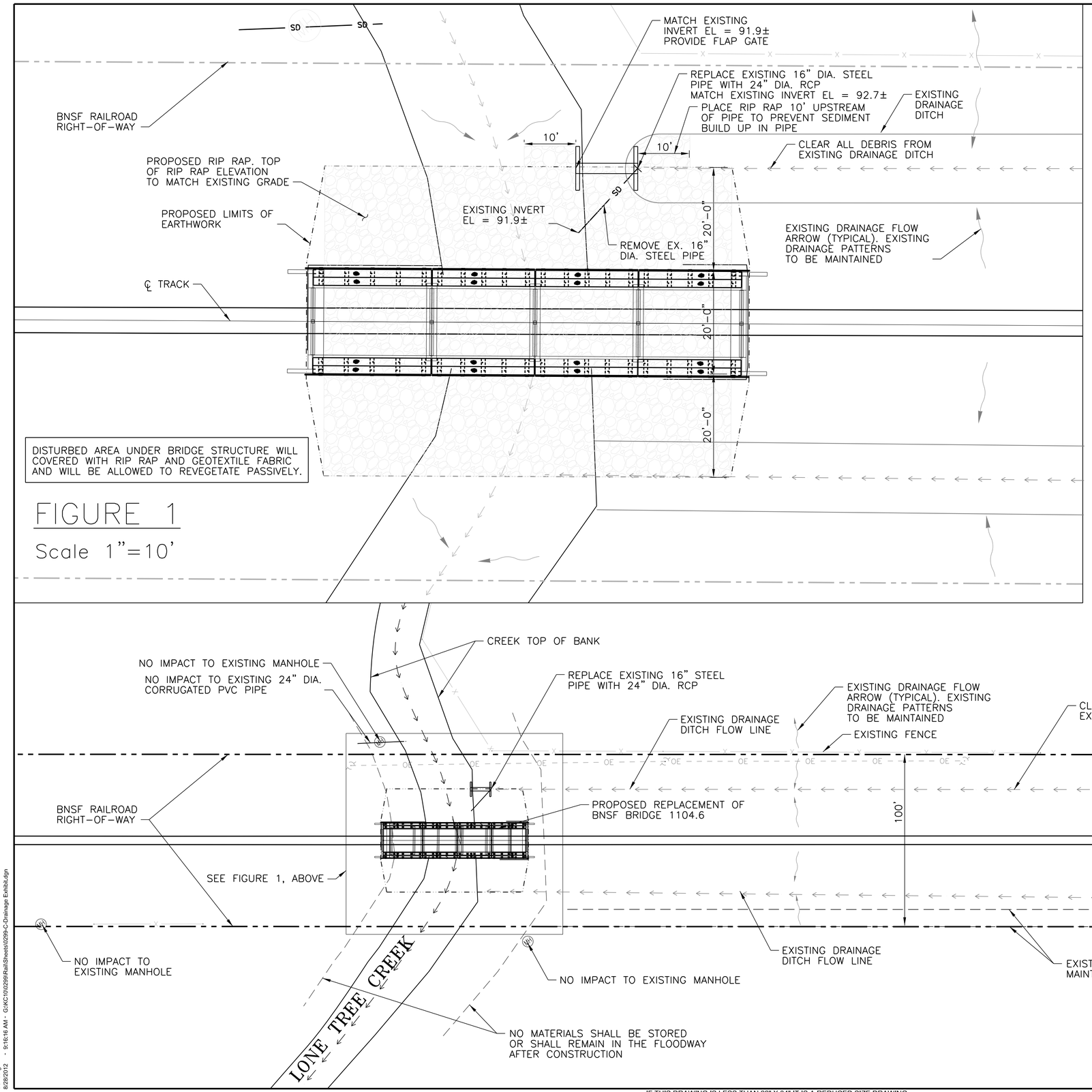


FIGURE 1

Scale 1"=10'

SUMMARY OF ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT
24" DIA. RCP PIPE	12	L.F.
CULVERT HEADWALLS (CALTRANS D89)	2	EA
FLAP GATE	1	EA

NOTES:

GENERAL: ALL MATERIALS AND WORKMANSHIP SHALL BE AS PER THE CURRENT A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING: CHAPTER 1, PART 4 CULVERTS AND CHAPTER 8, PART 10. THE BNSF STANDARD CONSTRUCTION SPECIFICATIONS SUPPLEMENT THE ABOVE A.R.E.M.A. MANUAL AND SHALL GOVERN.

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LEGEND:

EXISTING STORM DRAIN PIPE ——— SD ———

EXISTING FLOWLINE → → → → –

PROPOSED RIP RAP

EXISTING FLOW DIRECTION

N

TranSystems
505 14TH STREET
SUITE 1000
OAKLAND, CA 94612
PHONE: 510-835-2761
FAX: 510-3835-5839

CONSULTANTS:

BNSF BRIDGE REPLACEMENT
1104.6 L.S. 7200

BNSF RAILWAY

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	101100299
SCALE:	1" = 30'
DATE:	8/28/2012
DESIGNED BY:	AML
DRAWN BY:	AML
CHECKED BY:	TAH

SHEET TITLE:

DRAINAGE PLAN

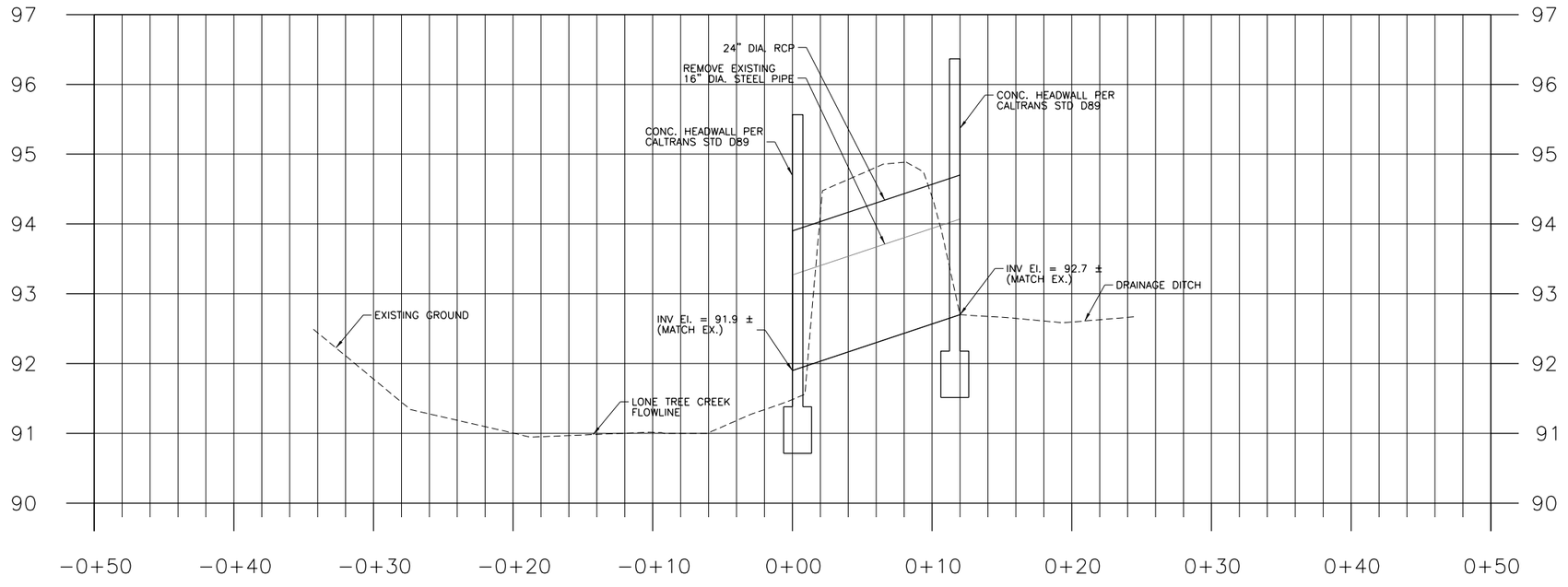
SHEET NO.

Attachment D, Figure 4

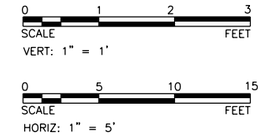
SHEET 1 OF 2

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING

alimburg
8/28/2012 - 9:16:16 AM - G:\KC\101100299\Rail\Sheets\0299-C-Drainage Exhibit.dgn



24" DIA. RCP PROFILE



Attachment D, Figure 4

TranSystems
505 14TH STREET
SUITE 1000
OAKLAND, CA 94612
PHONE: 510-835-2761
FAX: 510-835-5839

CONSULTANTS:

BNSF BRIDGE REPLACEMENT
1104.6 L.S. 7200

BNSF RAILWAY

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	P101100299
SCALE:	AS NOTED
DATE:	8/28/2012
DESIGNED BY:	AML
DRAWN BY:	AML
CHECKED BY:	TAH

SHEET TITLE:

PIPE PROFILE

SHEET NO.

SHEET 2 OF 2

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING

Attachment D, Figure 5

Tice, Jon

From: Carrie Dorosh [cdorosh@premierccu.com]
Sent: Friday, September 07, 2012 2:12 PM
To: Tice, Jon
Subject: PROJECT PROTEST FOR PERMIT NO. 18768: REPLACEMENT OF BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD BRIDGE 1104.6 OVER LONE TREE CREEK
Attachments: DOC120907.pdf

To whom it may concern:

Attached is a response to the actions taken by CVFPB and BNSF Railroad regarding our drainage concerns.

Thank You

Carrie Corosh

Attachment D, Figure 5

September 7, 2012

Central Valley Flood Protection Board

3310 El Camino Ave, Rm 151

Sacramento, Ca 95821

Subject: Project Protest for Permit No. 18768: Replacement of Burlington Northern Santa Fe (BNSF) Railroad Bridge 1104.6 over Lone Tree Creek

To whom it may concern:

Thank you for addressing our concerns. We feel BNSF Railroad's plans for the pipe installment and clean up will adequately address our drainage concerns. We are withdrawing our July 25,2012 protest letter because of these actions taken to address our drainage issues. We look forward to the construction of this project.

Thank You,

Carrie Dorosh

David Dorosh

Attachment E

DRAFT

STATE OF CALIFORNIA
THE RESOURCES AGENCY

THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18768 BD

This Permit is issued to:

Burlington Northern & Santa Fe Railway
4515 Kansas Avenue
Kansas City, Kansas 66106

Replacement of Burlington Northern & Santa Fe Railroad bridge 1104.6 over Lone Tree Creek. The project is located at the Burlington Northern & Santa Fe Railroad bridge crossing of Lone Tree Creek in Escalon California. (Section 25, T1S, R8E, MDB&M, San Joaquin County Flood Control and Water Conservation District, Lone Tree 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. 18768 BD

THIRTEEN: No work authorized by this permit shall be performed until the Department of Water Resources has received, reviewed, and approved in writing, a complete set of final submitted plans, drawings, and specifications for the project. The Central Valley Flood Protection Board shall have up to 30 days after receipt of plans, drawings, and specifications for the review process. The Central Valley Flood Protection Board and/or the Department of Water Resources may extend this review period up to 15 days by written notification.

FOURTEEN: All addendums or other changes made to the submitted documents by the permittee after issuance of this permit are subject to submittal and review for approval by the Central Valley Flood Protection Board prior to incorporation into the permitted project. Upon review and approval of any new submitted documents the permit shall be revised, if needed, prior to construction related to the proposed changes. The Central Valley Flood Protection Board shall have up to 90 days after receipt of any documents, plans, drawings, and specifications for the review process. The Central Valley Flood Protection Board and/or the Department of Water Resources may extend this review period by written notification.

FIFTEEN: 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.

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 Central Valley Flood Protection Board, Department of Water Resources, and San Joaquin County shall not be held liable for damages to the permitted encroachment(s) resulting from releases of water from reservoirs, flood fight, operation, maintenance, inspection, or emergency repair.

EIGHTEEN: The mitigation measures approved by the CEQA lead agency and the permittee are found in its Mitigation and Monitoring Reporting Program (MMRP) adopted by the CEQA lead agency. The permittee shall implement all such mitigation measures.

NINETEEN: A temporary bench mark, set to a known datum, shall be placed at the project site prior to the beginning of construction and shall be maintained through the construction of the project.

TWENTY: 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-ONE: No excavation shall be made or remain in the channel section during the flood season from November 1st to April 15th.

TWENTY-TWO: Temporary staging, formwork, stockpiled material, equipment, and temporary buildings shall not remain in the floodway during the flood season from November 1st to April 15th.

TWENTY-THREE: Prior to commencement of excavation, the permittee shall create a photo record, including associated descriptions, of the channel conditions. The photo record shall be certified (signed and stamped) by a licensed land surveyor or professional engineer registered in the State of California and submitted to the Central Valley Flood Protection Board within 30 days of beginning the project.

TWENTY-FOUR: A civil engineer registered in the State of California representing the permittee shall provide periodic reports and records to the Department of Water Resources that are acceptable to the Central Valley Flood Protection Board which certifies that all work accomplished by contract to the permittee was thoroughly inspected and performed in accordance with submitted drawings, specifications, and permit conditions.

TWENTY-FIVE: Fill material shall be placed only within the area indicated on the approved plans.

TWENTY-SIX: Fill material placed within 2 feet of a structure shall be compacted with appropriate hand-operated compaction equipment.

TWENTY-SEVEN: The proposed bridge site general project work area shall be restored to at least the condition that existed prior to commencement of work.

TWENTY-EIGHT: The soffit of the new bridge shall be a minimum of 2 feet above the flood plane elevation of 95.50 feet, NGVD88.

TWENTY-NINE: The method and schedule of removing the existing BNSF Lone Tree Creek Bridge 1104.6 shall be approved by the Central Valley Flood Protection Board prior to start of work.

THIRTY: Piers, bents, and abutments being dismantled shall be removed to at least 1 foot below the natural ground line and at least 3 feet below the bottom of the low-water channel.

THIRTY-ONE: Drainage from the new bridge shall not be discharged onto the streambanks.

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

THIRTY-THREE: If the bridge is damaged to the extent that it may impair the channel or floodway capacity, it shall be repaired or removed prior to the next flood season.

THIRTY-FOUR: The permittee shall assume all responsibility for the protection, relocation, or removal of the permitted project works if required by the Central Valley Flood Protection Board.

THIRTY-FIVE: In the event that bank erosion and/or channel erosion injurious to the adopted plan of flood control occurs at or adjacent to the permitted encroachment(s), the permittee shall repair the eroded area and propose measures, to be approved by the Central Valley Flood Protection Board, to prevent further erosion.

THIRTY-SIX: 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-SEVEN: Any vegetative material, living or dead, that interferes with the successful execution, functioning, maintenance, or operation of the regulated stream must be removed by the permittee at permittee's expense upon request by the Central Valley Flood Protection Board, Department of Water Resources, or local maintaining agency. If the permittee does not remove such vegetation or trees upon request, the Central Valley Flood Protection Board reserves the right to remove such at the permittee's expense.

THIRTY-EIGHT: The permitted encroachment(s) shall not interfere with operation and maintenance of the regulated stream. 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.

THIRTY-NINE: 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: 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-ONE: Upon completion of the project, the permittee shall submit copies of compaction test results, all permit related inspection reports, construction documentation and a complete set of as-constructed drawings to: Department of Water Resources, Flood Project Inspection Section, P.O. Box 219000, Sacramento, California 95821-9000.

FORTY-TWO: Within 120 days of completion of the project, the permittee shall submit to the Central Valley Flood Protection Board a certification report, stamped and signed by a professional engineer registered in the State of California, certifying the work was performed and inspected in accordance with the Central Valley Flood Protection Board permit conditions and submitted drawings and specifications.

FORTY-THREE: The letter from the Department of the Army (U.S. Army Corps of Engineers, Sacramento District) dated June 19, 2012 is attached to this permit as Exhibit A in reference to this project.

FORTY-FOUR: The permittee shall comply with all conditions set forth in the letter from San Joaquin County Flood Control and Water Conservation District dated April 11, 2012, which is attached to this permit as Exhibit B and is incorporated by reference.

FORTY-FIVE: This permit shall run with the land and shall be recorded with the San Joaquin County Recorder's Office. The applicant is required to record this permit and send the Central Valley Flood Protection Board Chief Engineer this recorded document upon completion of the work.

Attachment E

Exhibit A

DEPARTMENT OF THE ARMY
U.S. Army Engineer District, Sacramento
Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

REPLY TO
ATTENTION OF

Flood Protection and Navigation Section (18768)

JUN 19 2012

Mr. Jay Punia, Executive Officer
Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, California 95821

Dear Mr. Punia:

We have reviewed a permit application by the Burlington Northern & Santa Fe Railway (application number 18768). This project includes replacing the railroad bridge (1104.6) crossing Lone Tree Creek in Escalon, CA. The project is located southwest of the intersection of Lone Tree Road and Sexton Road, at 37.8245°N 121.0361°W NAD83, San Joaquin County, California.

The District Engineer has no comments or recommendations regarding flood control because the proposed work does not affect a federally constructed project.

A file (2009-1030) has been opened because a Section 10 and/or Section 404 permit may be required. Please advise the applicant to contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Division, 1325 J Street, Room 1350, Sacramento, California 95814, telephone (916) 557-5250.

A copy of this letter is being furnished to Mr. Don Rasmussen, Chief, Flood Project Integrity and Inspection Branch, 3310 El Camino Avenue, Suite LL30, Sacramento, CA 95821.

Sincerely,

for Meegan G. Nagy, P.E.
Chief, Flood Protection and Navigation Section

Attachment E

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

Exhibit B

April 11, 2012

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

Attention: Floodway Protection Section

SUBJECT: CENTRAL VALLEY FLOOD PROTECTION BOARD PERMIT APPLICATION FOR THE TRANSYSTEMS CORPORATION TO CONSTRUCT A REPLACEMENT BRIDGE OVER LONE TREE CREEK DOWNSTREAM OF SEXTON ROAD, ASSESSOR'S PARCEL NO. 205-240-24

Gentlemen:

Reference is made to the Central Valley Flood Protection Board (Board) Permit Application of the TranSystems Corporation to construct a replacement of Burlington Northern and Santa Fe Railroad Bridge No. 1104.6 over Lone Tree Creek. The new replacement bridge will be a single-track bridge on the existing alignment. This project involves removal of the existing wood bridge and the construction of a new 4-20 prestressed concrete slab spans on H-pile bents for a total bridge length of 80 feet.

The project is located on Temple Creek approximately 460 feet downstream, west of Sexton Road, in San Joaquin County, Section 25, Township 1 South, Range 8 East, Mount Diablo Base and Meridian, San Joaquin County Assessor's Parcel No. 205-240-24.

The San Joaquin County Flood Control and Water Conservation District (District) has reviewed the Board's Permit Application of TranSystems/Burlington Northern Santa Fe Railroad (Permittee), and endorses the project subject to the following conditions:

1. The District shall not be responsible for 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 sole cost and expense.

4. The Permittee shall be liable for any damage to Lone Tree Creek that may occur as a result of this project.

5. The project shall be constructed in accordance with the plans dated February 2012, submitted with the application dated April 2, 2012. Any revisions to the project will require submittal of the revised plans to the District for review and approval.

Attachment E

Exhibit B

6. No work shall be allowed in Lone Tree Creek's channel between November 1st and April 15th without prior approval of the Central Valley Flood Protection 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 Permittee shall riprap the area under the bridge and a minimum of 20 feet upstream and 20 feet downstream of the bridge. Furthermore, the Permittee shall be responsible for the maintenance of the embankment within the riprap area.

9. The piles shall be constructed parallel to the direction of flow.

10. Stockpiled materials, coffer dams, and construction equipment shall be removed from the floodway prior to November 1st.

11. The new bridge soffit members shall not be lower than those of the existing bridge.

12. Drainage from the bridge shall not be discharged onto Lone Tree Creek banks.

13. Upon completion of the project, the TranSystem/Burlington Northern Santa Fe Railroad shall submit a hard copy and an electronic copy in AutoCAD and pdf format of the as-built drawings to:

    San Joaquin County Flood Control and Water Conservation District
    1810 East Hazelton Avenue
    Stockton, California 95205

Should there be any questions regarding these comments, please contact me at (209) 953-7617.

Sincerely,

JOHN I. MAGUIRE
Engineering Services Manager

JM:SS:to
FM-12D018-T1