U.S. Department of Transportation Federal Highway Administration- California Division- Title 23 Damage Assessment Form (DAF)	DAF No. [ ] - NAP - 0 1 7 - 0
	Sheet # 1 of 4 — Federal Project # EO ER - [ ] ( )
	Disaster No. CA 1 4 - 2 — PR ER - [ ] ( )

Applicant	County	Incident Date (mm/dd/yyyy)	Inspection
CITY OF NAPA	NAPA Congressional districts 01	08/24/2014	09/12/2014

Location of Damage: Per Site [✓] or [ ] Per Mile

Name of Road/Bridge: TRANCAS STREET BRIDGE OVER NAPA RIVER

PM Begin: 1.3 MI E OF SR 29 — PM Length: 342.00 (in feet)

PM End:

Federal-aid Highway? Y for yes, if no, ineligible for ER funds: Y

Map No: 5K13

Functional Classification Type: OTHER PRINCIPAL ARTERIAL

Route #: N/A

Road/Bridge Data: Bridge No 21C-0003 — Type: RC T BEAM

	Width	Type: PCC	AC	Gravel
Traveled Way:	65'	[✓]	[ ]	[ ]
Shoulder:	0	[✓]	[ ]	[ ]

Forest Hwy? Y/N: N — Interstate? Y/N: N

Existing ADT: 11,000

Description of Damage: DAMAGE TO CONCRETE SHEAR KEYS PER CT STRUCTURES MAINTENANCE INSPECTION

COST ESTIMATE

	Type of Repair	Description of Work	Cost Summary	
Emergency Opening (EO)	EO- AGENCY FORCES CT Work Order #(s): EA(s):		PE	
			CE	
			Construction	
	EO- CONTRACT EO EA(s):		PE	
			CE	
			Construction	
	NOTE: Environmental documentation for EO is required. It is generally started after work has begun.		R/W	
		Subtotal Emergency Opening		$0
Permanent Restoration (PR)	PR- CONSTRUCTION FA requires an approved PIF [✓] Contract [ ] FA PR EAs	Contract Work- Epoxy injection into cracks at concrete shear keys. Construction includes contingency.	PE	11,250
			CE	6,000
			Construction	45,000
	NOTE:PRIOR AUTHORIZATION (APPROVED E-76) IS REQUIRED TO PROCEED WITH PERMANENT RESTORATION R/W & CONSTRUCTION		R/W	0
	NOTE: Environmental clearance for permanent restoration is conducted through normal Federal-aid procedures	**Subtotal Permanent Restoration**		$62,250

Eligible		Signature	Date		
[✓] Yes	[ ] No	Local Agency (if applicable):	10/21/14	PE Total	$11,250
[✓] Yes	[ ] No	Caltrans:	12/1/14	CE Total	$6,000
[ ] Yes	[ ] No	FHWA:		R/W Total	$0
				Construction Total	$45,000
			TOTAL ESTIMATE		**$62,250**

Agency sig. Name (print): MARK P. ANDRILLA — FHWA Sig. Name (print):

CT signature Name (print): — DAF Prepared by (print): MARK P. ANDRILLA

Original: Caltrans District **Copies**: FHWA, Division of Local Assistance(local roads), Federal Resources (state hwy), HQ Major Damage Engineer (state hwy)
*Write "N/A" in FHWA signature block if the project has no Federal ER funding or Federal ER funding delegated to the State.
FHWA Signature: REQUIRED for all Federal Funded State projects. REQUIRED for any Local Agency projects with 1) any BETTERMENT, 2) more than 2 ROW takes or 3) when paving is more than 50% of the Total Estimated Cost. **Reminder: This DAF must be accompanied by photos of the damage.**

U.S. Department of Transportation Federal Highway Administration- California Division- Title 23 Damage Assessment Form (DAF)	NAP 0 1 7 0 Sheet # 2 of 4 Applicant CITY OF NAPA Agency EO Calc ☐ EO contract ☐ PR Calc ☑

Quantity*	Unit*	Labor, Materials, and Equipment	Unit Price	Cost
1	LS	MOBILIZATION	5,000.00	5,000.00
1	LS	WATER POLLUTION CONTROL	1,000.00	1,000.00
1	LS	CONTROL OF MATERIALS	1,000.00	1,000.00
1	LS	CONTROL OF WORK	1,000.00	1,000.00
1	LS	EPOXY INJECTION	32,900.00	32,900.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
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				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
			Total	40,900.00

*Lump Sum will generally only be accepted for non biddable items, such as Mobilization.

Justifications/comments: Non-typical Scope, PE/CE Cost, Engineering estimates etc.

DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 21C0003
Facility Carried: TRANCAS ST
Location : 1.3 MI E SR 29
City : NAPA
Inspection Date : 09/12/2014

Bridge Inspection Report

Inspection Type
Routine FC Underwater Special Other
[X] Earthquake

STRUCTURE NAME: NAPA RIVER

CONSTRUCTION INFORMATION

Year Built : 1960
Year Widened: N/A
Length (m) : 104.2

Skew (degrees): 0
No. of Joints : 2
No. of Hinges : 0

Structure Description: Continuous RC T-Beam (Spans 1 thru 3) and continuous RC slab (Span 4 on left side and Spans 4 thru 7 on right side) structure with RC abutments, RC pier walls (Piers 2, 3, and 4) and RC pile bents (Bents 5, 6, and 7 on right side only) all founded on RC piles.

Span Configuration :2 @ 22.9 m, 1 @ 23.1 m, 1 @ 8.8 m, 3 @ 8.5 m,

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20
Inventory Rating: RF=0.77 =>24.9 metric tons Calculation Method: LOAD FACTOR
Operating Rating: RF=1.29 =>41.8 metric tons Calculation Method: LOAD FACTOR
Permit Rating : PPPPP
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: 0.1 m r, 19.5 m, 0.1 m r
Total Width: 19.7 m Net Width: 19.5 m No. of Lanes: 4 Speed: 45 mph
Min. Vertical Clearance: Unimpaired

Rail Code: 1000

Rail Type	Location	Length (ft)	Rail Modifications
MBBR	Right/Left	680	

DESCRIPTION UNDER STRUCTURE

Channel Description: Silty-sand channel with no protection.

INSPECTION COMMENTARY

SCOPE AND ACCESS

At approximately 03:20 AM Sunday, August 24, 2014, a magnitude 6.0 earthquake struck near American Canyon, CA. Post earthquake inspections of all locally owned bridges in Napa County was subsequently requested by the county through the California Office of Emergency Services. On September 11, 2014, Structure Maintenance and Investigations was assigned Mission Task T1225 for Caltrans Engineers to inspect Napa County Bridges.

Water was flowing in Span 3 at a depth greater than 6 feet. Piers 2 and 3 were in approximately 2 feet of water. All other supports were dry. All structural elements were visually inspected.

NUMBERING CONVENTION

The support identification and numbering convention used on the as-built plans is reversed from the statewide convention employed by the Caltrans, Structure Maintenance and Investigations. The easterly support is designated as Abutment 1.

INSPECTION COMMENTARY

Because previous inspection reports use the identification and numbering convention as they appear on the as-built plans, this report will continue to use that convention to maintain consistency between inspection reports.

DAMAGE

Cracks were observed in the following concrete shear keys at Abutment 1: Shear Key in Bay 1, Shear Key in Bay 6, and the Shear Key in Bay 7. The largest cracks measuring up to 1/8 of an inch wide, are in Bays 6 and 7. The crack in the Bay 1 Shear Key is less than 1/64th of an inch wide.

The cracks begin in the face of the diaphragm, approximately 12 inches above the interface with the shear key, and continue toward the bottom surface of the diaphragm where it intersects with the shear key. The cracks then extend downward into the shear key at a 45 degree angle until meeting the back surface of the shear key. The cracks continue at a 45 degree angle and extend up to 18 inches in length in the back surface of the shear key. See photos 1 thru 11.

The shear keys are intact and remain functional.

RECOMMENDATIONS

Repair the cracks in the following shear keys by injecting them with epoxy:

Shear Key, Bay 1
Shear Key, Bay 6
Shear Key, Bay 7

Team Leader : Rohit Nand

Report Author : Rohit Nand

Inspected By : R.Nand/JE.Edwards

9/22/14

Jason E. Edwards (Registered Civil Engineer) (Date)

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NAPA RIVER

1.3 MI E SR 29 | 09/12/2014 [AAAL] | 21C0003

107 - PHOTO-Super-Damage/Deteroration

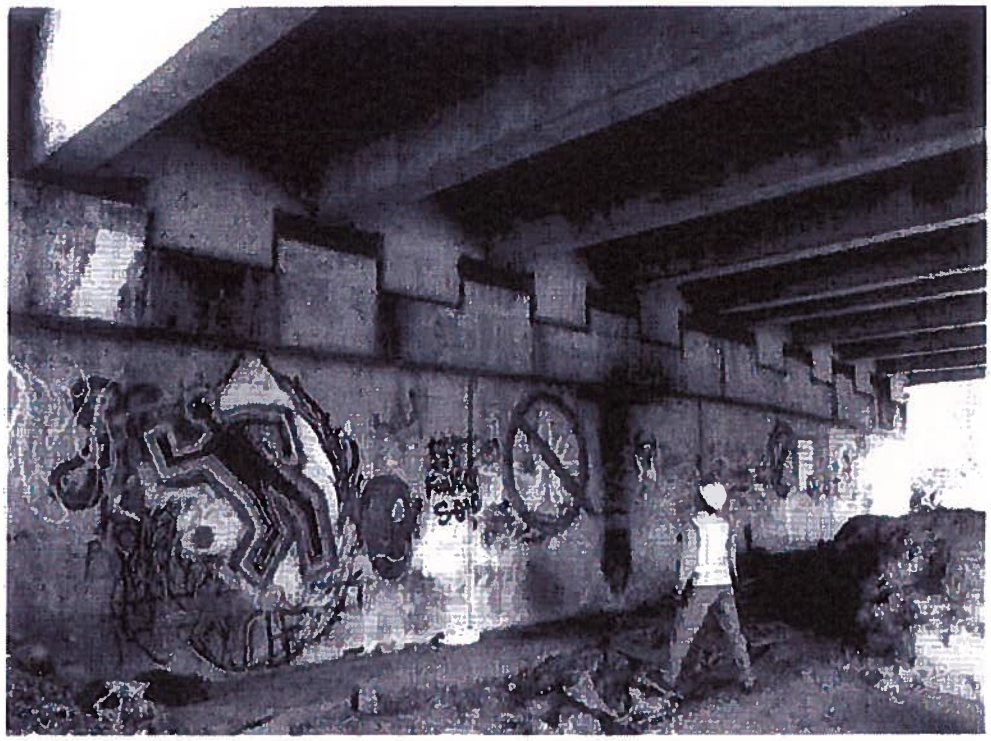

Photo No. 1

View of Abutment 1.

107 - PHOTO-Super-Damage/Deteroration

Photo No. 2

Close-up of crack in the Diaphragm and shear key in Bay 1.

NAPA RIVER

107 - PHOTO-Super-Damage/Deteroration

Photo No. 3

Cracks visible in the Diaphragms and shear keys in Bays 6 and 7.

107 - PHOTO-Super-Damage/Deteroration

Photo No. 4

Crack visible in the Diaphragm and shear key in Bay 6.

107 - PHOTO-Super-Damage/Deteroration

Photo No. 5

Close-up of crack in the Diaphragm and shear key in Bay 6.

107 - PHOTO-Super-Damage/Deteroration

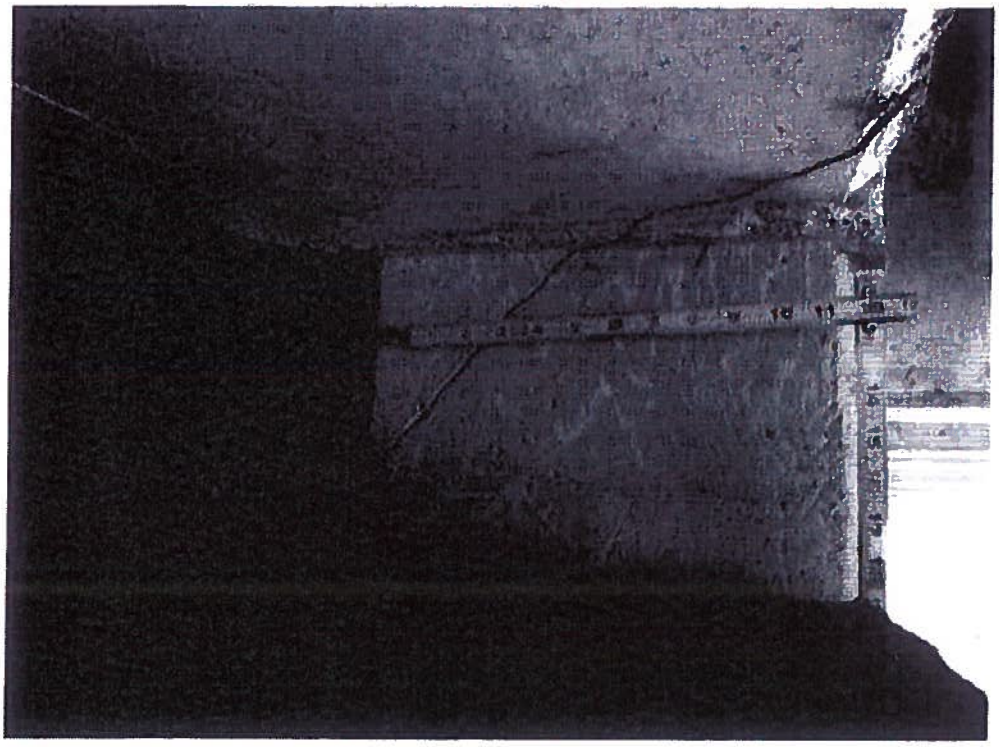

Photo No. 6

View of the crack extending from the diaphragm into the shear key in Bay 6 (side view).

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107 - PHOTO-Super-Damage/Deteroration

Photo No. 7

View of the back side of the shear key. The crack continues into the back face at 45 deg.

107 - PHOTO-Super-Damage/Deteroration

Photo No. 8

Crack visible in the Diaphragm and shear key in Bay 7.

NAPA RIVER

107 - PHOTO-Super-Damage/Deteroration

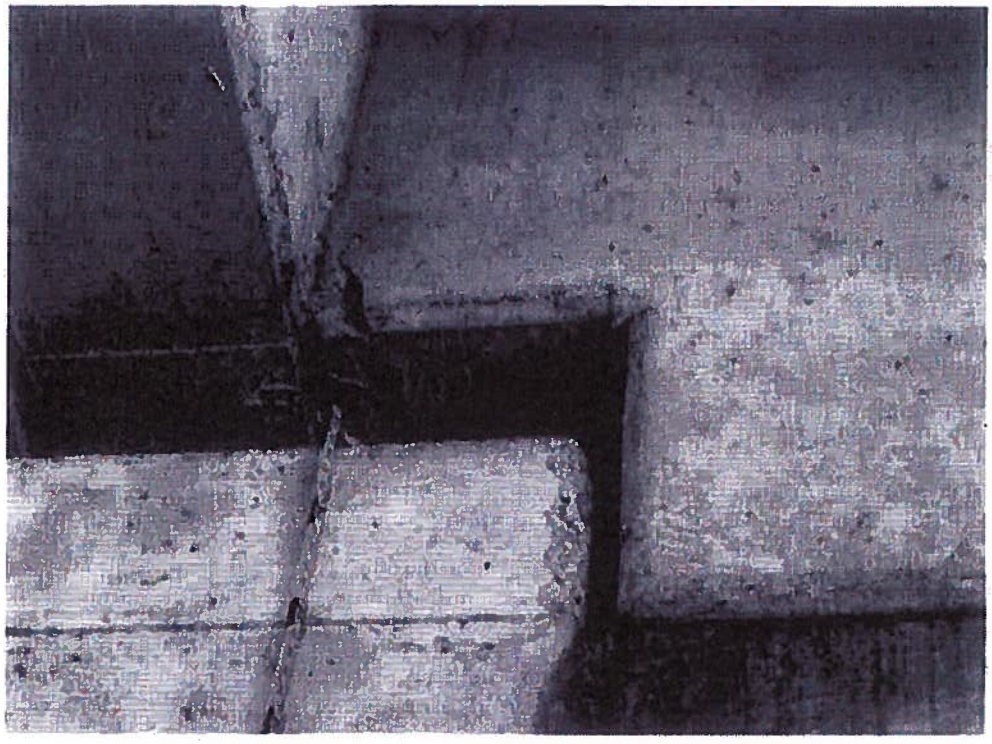

Photo No. 9

Close-up view of crack in the Diaphragm and shear key in Bay 7.

107 - PHOTO-Super-Damage/Deteroration

Photo No. 10

View of the crack extending from the diaphragm into the shear key in Bay 7 (side view).

NAPA RIVER

1.3 MI E SR 29 | 09/12/2014 [AAAL] | 21C0003

107 - PHOTO-Super-Damage/Deteroration

Photo No. 11

View of the back side of the shear key. The crack continues into the back face at 45 deg.

EXHIBIT 3-O SAMPLE LOCAL FEDERAL-AID PROJECT FINANCE LETTER

DEPARTMENT OF TRANSPORTATION
DIVISION OF ACCOUNTING
LOCAL PROGRAM ACCOUNTING BRANCH

ATTN: LOCAL PROGRAM ACCOUNTING

Date: 9/26/2014
Agency: CITY OF NAPA
Fed Project No.:
Project ID.: XXX-NAP-017-0
PPNO.:
Bridge No : 21C-0003

Work on State Highway (Y or N): N **If yes, provide following:**
Administered by State or Local? _____
Project Manager Name: _____
Accounting Program Code(s): _____
Coop or Contribution Agrmnt No.: _____

		"P" or "L"*	TOTAL COST OF WORK	FEDERAL PARTICIPAT. COST	FEDERAL FUND TYPE (1)	FEDERAL FUND TYPE (2)	STATE MATCH FUNDS	LOCAL MATCH FUNDS	OTHER FUNDS
PRELIMINARY ENGINEERING									
Agency Preliminary Engineering		P	$11,250	$11,250	$9,960			$1,290	
State Furnished Preliminary Engineering									
Overhead at _____ %									
RIGHT OF WAY (R/W)									
Purchase Costs									
Relocation Assistance /Utility									
CONSTRUCTION									
Contract Items	$40,900								
Utilities									
Supplemental Work									
Contingencies	$4,100								
Trainees									
Agency/State Furn. Mat.									
Contract Total:	$45,000	P	$45,000	$45,000	$39,839			$5,161	
CONSTRUCTION ENGINEERING									
Agency Construction Engineering			$6,000	$6,000	$5,312			$688	
State Furnished Construction Engineering									
Overhead at _____ %									
State Furnished Materials Testing									
Overhead at _____ %, Subjob _____									
Striping by Agency									
Force Account Work by Agency									
TOTALS:		P	$62,250	$62,250	$55,111			$7,139	

* "P" = Pro Rata, "L" = Lump Sum

Federal Participation: _____
Federal Appn. Code(s): _____
Federal Reimbursement Rate(s) for Progress Invoice:

PHASE	FED (1)	FED (2)
PE	88.53	
R/W	88.53	
CON	88.53	
CE	88.53	

Distribution: (1) Original + 4 copies-Caltrans DLAE
(2) Copy-Local Agency Project File

Certification

I certify that this Finance Letter accurately reflects the current cost estimate for all phases of the project obligated but not fully expended.

Signature :
Title : SENIOR CIVIL ENGINEER
Project location : TRANCAS ST 1.3 MI E OF SR29
Remarks :

For questions regarding finance letter, contact:
Printed Name: MARK P. ANDRILLA
Telephone No.: 707 257 9423