DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 25C0117
Facility Carried: CLAY ST
Location : 150 FEET NORTH OF MAIN S
City : PLACERVILLE
Inspection Date : 07/26/2016

Bridge Inspection Report

Inspection Type
Routine FC Underwater Special Other
[X]

STRUCTURE NAME: HANGTOWN CREEK

CONSTRUCTION INFORMATION

Year Built : 1940
Year Widened: N/A
Length (m) : 9.8

Skew (degrees): 99
No. of Joints : 0
No. of Hinges : 0

Structure Description: Two span RC filled spandrel arch with monolithic wingwalls on spread footings.

Span Configuration : 1 @ 22.00 ft, 1 @ 15.08 ft

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: UNKNOWN
Inventory Rating: RF=0.53 =>17.2 metric tons Calculation Method: FIELD EVAL/ENG JUDGMENT
Operating Rating: RF=0.88 =>28.5 metric tons Calculation Method: FIELD EVAL/ENG JUDGMENT
Permit Rating : 00000
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: 0.75 ft r, 17.08 ft, 0.75 ft r
Total Width: 5.8 m Net Width: 5.2 m No. of Lanes: 1 Speed: 25 mph
Min. Vertical Clearance: Unimpaired AC Thickness: 12.0 Inches

Rail Code: 0000

Rail Type	Location	Length (ft)	Rail Modifications
Misc. Concrete	Right/Left	72	

DESCRIPTION UNDER STRUCTURE

Channel Description: Rocky.

NOTICE

The bridge inspection condition assessment used for this inspection is based on the American Association of State Highway and Transportation Officials (AASHTO) Bridge Element Inspection Manual 2013 as defined in Moving Ahead for Progress in the 21st Century (MAP-21) federal law. The new element inspection methodology may result in changes to related condition and appraisal ratings on the bridge without significant physical changes at the bridge.

The element condition information contained in this report represents the current condition of the bridge based on the most recent routine and special inspections. Some of the notes presented below may be from an inspection that occurred prior to the date noted in this report. Refer to the Scope and Access section of this inspection report for a description of which portions of the bridge were inspected on this date.

INSPECTION COMMENTARY

SCOPE AND ACCESS

The maximum water depth was about 8 inches under Span 2. All elements were inspected.

REVISIONS

The rail coded (NBI 36) was changed from 0NNN to 0000 to reflect the as-built condition.

INSPECTION COMMENTARY

MISCELLANEOUS

Routine roadway, elevation and underside photos were taken during this inspection (see photos 1-3).

SAFE LOAD CAPACITY

A Load Rating Summary Sheet dated 12/07/2012 is on file for this structure. While this report does not include a check of that analysis, it does verify that the structural conditions observed during this inspection are consistent with those assumed in that analysis. The current rating has been assigned in accordance with SM&I procedures for concrete bridges without as-built plans.

OPERATIONAL SIGNS

There are NARROW BRIDGE signs posted at both approaches.

ELEMENT INSPECTION RATINGS AND COMMENTARY

Elem No.	Defect /Prot	Element Description	Env	Total Qty	Units	Qty in each Condition State St. 1	St. 2	St. 3	St. 4
144		**Arch-RC**	2	16	m	16	0	0	0
(144) There were no significant defects noted.									
210		**Pier Wall-RC**	2	7	m	7	0	0	0
(210) There were no significant defects noted.									
215		**Abutment-RC**	2	24	m	24	0	0	0
(215) The monolithic wingwall quantity has been included in the total abutment quantity. No significant defects were noted.									
256		**Slope Protection**	2	1	ea.	0	0	1	0
	6000	**Scour**	2	1		0	0	1	0
(256-6000) The slope protection at the left side of Abutment 3 is undermined for 12 inches high, 1.5 feet inward. Based on a field comparison to the 01/2011 bridge inspection photos, this condition has not changed.									
331		**Railing-RC**	2	20	m	15	0	5	0
	1080	**Delamination/Spall/Patched Area**	2	5		0	0	5	0
(331-1080) The right rail post near Abutment 1 has a full height spall with exposed rebar (see photo 4). There is a 24 inch long delamination on the top of the right rail at Abutment 3 (see photo 5). The top of the left concrete rail has spalled along 25% of the length (see photo 6).									

WORK RECOMMENDATIONS

WORK RECOMMENDATIONS

RecDate: 01/13/2011
Action : Railing-Repair
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Remove unsound concrete from the bridge rails, clean rebar, and patch the spalls.

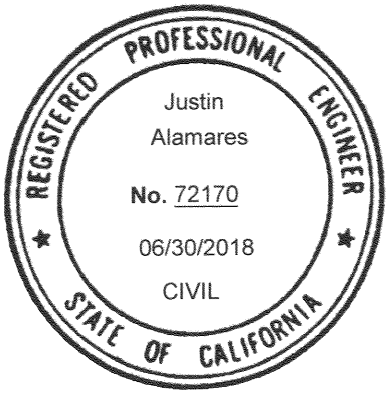
Team Leader : Justin Alamares

Report Author : Justin Alamares

Inspected By : J.Alamares/LD.Nash

10/21/16

Justin Alamares (Registered Civil Engineer) (Date)



STRUCTURE INVENTORY AND APPRAISAL REPORT

********** IDENTIFICATION **********

(1) STATE NAME- CALIFORNIA 069
(8) STRUCTURE NUMBER **25C0117**
(5) INVENTORY ROUTE(ON/UNDER)- ON 150000000
(2) HIGHWAY AGENCY DISTRICT 03
(3) COUNTY CODE 017 (4) PLACE CODE 57540
(6) FEATURE INTERSECTED- HANGTOWN CREEK
(7) FACILITY CARRIED- CLAY ST
(9) LOCATION- 150 FEET NORTH OF MAIN ST
(11) MILEPOINT/KILOMETERPOINT 0
(12) BASE HIGHWAY NETWORK- NOT ON NET 0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 38 DEG 43 MIN 45.64 SEC
(17) LONGITUDE 120 DEG 47 MIN 47.13 SEC
(98) BORDER BRIDGE STATE CODE % SHARE %
(99) BORDER BRIDGE STRUCTURE NUMBER

******** STRUCTURE TYPE AND MATERIAL *********

(43) STRUCTURE TYPE MAIN:MATERIAL- CONCRETE
TYPE- ARCH - DECK CODE 111
(44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA
TYPE- OTHER/NA CODE 000
(45) NUMBER OF SPANS IN MAIN UNIT 2
(46) NUMBER OF APPROACH SPANS 0
(107) DECK STRUCTURE TYPE- NOT APPLICABLE CODE N
(108) WEARING SURFACE / PROTECTIVE SYSTEM:
A) TYPE OF WEARING SURFACE- NOT APPLICABLE CODE N
B) TYPE OF MEMBRANE- NOT APPLICABLE CODE N
C) TYPE OF DECK PROTECTION- NOT APPLICABLE CODE N

********** AGE AND SERVICE **********

(27) YEAR BUILT 1940
(106) YEAR RECONSTRUCTED 0000
(42) TYPE OF SERVICE: ON- HIGHWAY 1
UNDER- WATERWAY 5
(28) LANES:ON STRUCTURE 01 UNDER STRUCTURE 00
(29) AVERAGE DAILY TRAFFIC 2100
(30) YEAR OF ADT 2008 (109) TRUCK ADT 10 %
(19) BYPASS, DETOUR LENGTH 2 KM

********** GEOMETRIC DATA **********

(48) LENGTH OF MAXIMUM SPAN 6.7 M
(49) STRUCTURE LENGTH 9.8 M
(50) CURB OR SIDEWALK: LEFT 0.0 M RIGHT 0.0 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 5.2 M
(52) DECK WIDTH OUT TO OUT 5.8 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 7.3 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 99 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 5.2 M
(53) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M
(54) MIN VERT UNDERCLEAR REF- NOT H/RR 0.00 M
(55) MIN LAT UNDERCLEAR RT REF- NOT H/RR 0.0 M
(56) MIN LAT UNDERCLEAR LT 0.0 M

********** NAVIGATION DATA **********

(38) NAVIGATION CONTROL- NO CONTROL CODE 0
(111) PIER PROTECTION- CODE
(39) NAVIGATION VERTICAL CLEARANCE 0.0 M
(116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M
(40) NAVIGATION HORIZONTAL CLEARANCE 0.0 M

****

SUFFICIENCY RATING = 62.6
STATUS
HEALTH INDEX 98.1
PAINT CONDITION INDEX = N/A

********** CLASSIFICATION ********** CODE

(112) NBIS BRIDGE LENGTH- YES Y
(104) HIGHWAY SYSTEM- NOT ON NHS 0
(26) FUNCTIONAL CLASS- MINOR ARTERIAL URBAN 16
(100) DEFENSE HIGHWAY- NOT STRAHNET 0
(101) PARALLEL STRUCTURE- NONE EXISTS N
(102) DIRECTION OF TRAFFIC- 1 LANE, 2 WAY 3
(103) TEMPORARY STRUCTURE-
(105) FED.LANDS HWY- NOT APPLICABLE 0
(110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0
(20) TOLL- ON FREE ROAD 3
(21) MAINTAIN- CITY OR MUNICIPAL HIGHWAY AGENCY 04
(22) OWNER- CITY OR MUNICIPAL HIGHWAY AGENCY 04
(37) HISTORICAL SIGNIFICANCE- NOT ELIGIBLE 5

********** CONDITION ********** CODE

(58) DECK N
(59) SUPERSTRUCTURE 7
(60) SUBSTRUCTURE 7
(61) CHANNEL & CHANNEL PROTECTION 6
(62) CULVERTS N

********** LOAD RATING AND POSTING ********** CODE

(31) DESIGN LOAD- UNKNOWN 0
(63) OPERATING RATING METHOD- FIELD EVAL/ENG JUD 0
(64) OPERATING RATING- 28.5
(65) INVENTORY RATING METHOD- FIELD EVAL/ENG JUD 0
(66) INVENTORY RATING- 17.2
(70) BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS 5
(41) STRUCTURE OPEN, POSTED OR CLOSED- A
DESCRIPTION- OPEN, NO RESTRICTION

********** APPRAISAL ********** CODE

(67) STRUCTURAL EVALUATION 4
(68) DECK GEOMETRY 2
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 8
(72) APPROACH ROADWAY ALIGNMENT 6
(36) TRAFFIC SAFETY FEATURES 0000
(113) SCOUR CRITICAL BRIDGES 8

********** PROPOSED IMPROVEMENTS **********

(75) TYPE OF WORK- MISC STRUCTURAL WORK CODE 38
(76) LENGTH OF STRUCTURE IMPROVEMENT 9.8 M
(94) BRIDGE IMPROVEMENT COST $52,000
(95) ROADWAY IMPROVEMENT COST $10,400
(96) TOTAL PROJECT COST $87,360
(97) YEAR OF IMPROVEMENT COST ESTIMATE 2010
(114) FUTURE ADT 3692
(115) YEAR OF FUTURE ADT 2034

********** INSPECTIONS **********

(90) INSPECTION DATE 07/16 (91) FREQUENCY 24 MO
(92) CRITICAL FEATURE INSPECTION: (93) CFI DATE
A) FRACTURE CRIT DETAIL- NO MO A)
B) UNDERWATER INSP- NO MO B)
C) OTHER SPECIAL INSP- NO MO C)

HANGTOWN CREEK

150 FEET NORTH OF MAIN ST

07/26/2016 [AAAK]

25C0117

100 - PHOTO-Routine-Roadway View

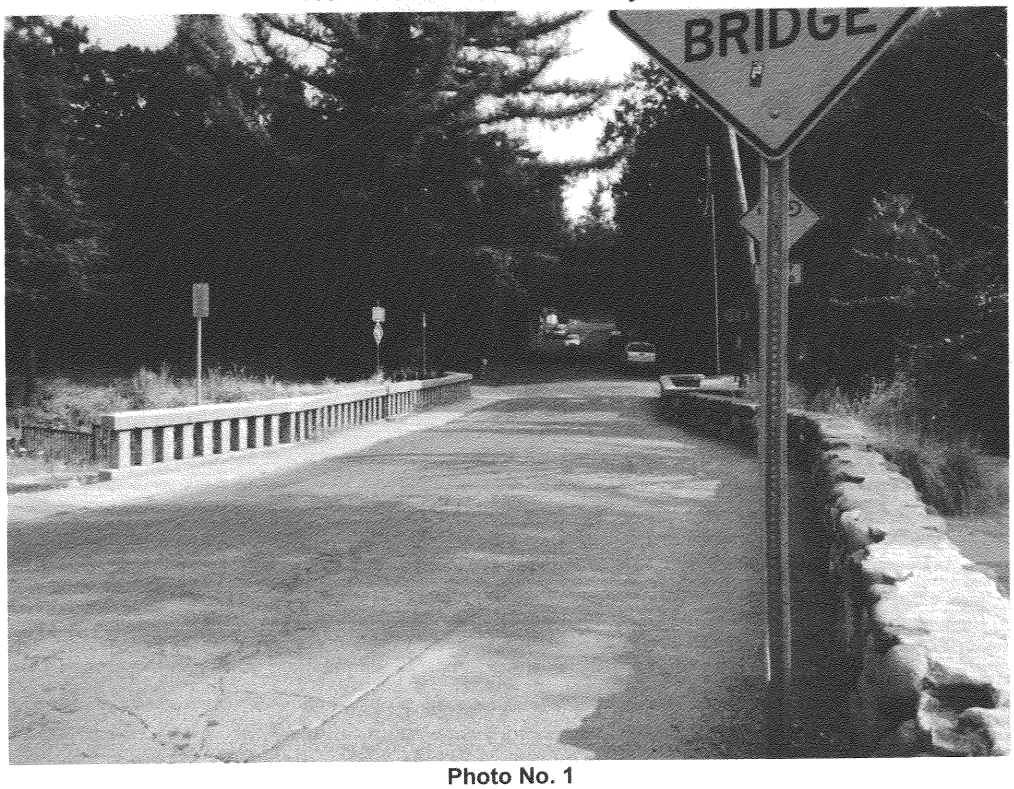


Photo No. 1

Routine roadway looking north

101 - PHOTO-Routine-Elevation View

Photo No. 2

Routine elevation view (left side)

HANGTOWN CREEK

150 FEET NORTH OF MAIN ST 07/26/2016 [AAAK] 25C0117

135 - PHOTO-Routine-Underside View

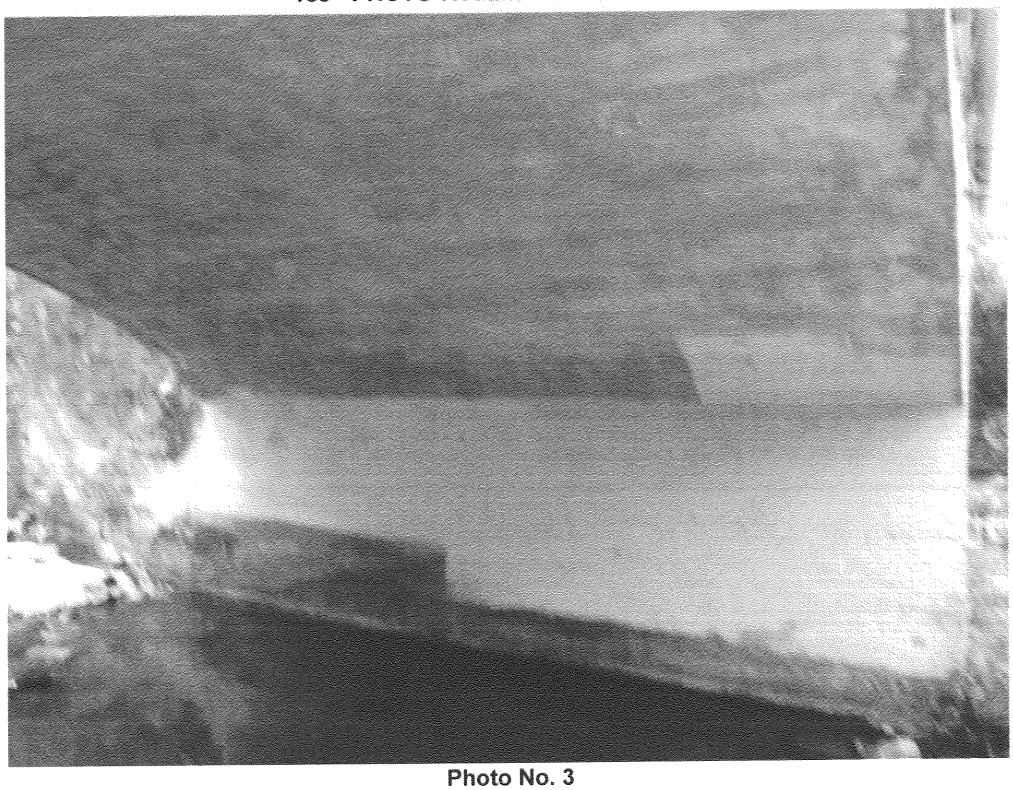


Photo No. 3

Routine underside (Span 2)

119 - PHOTO-Rail-Damage/Deterioration

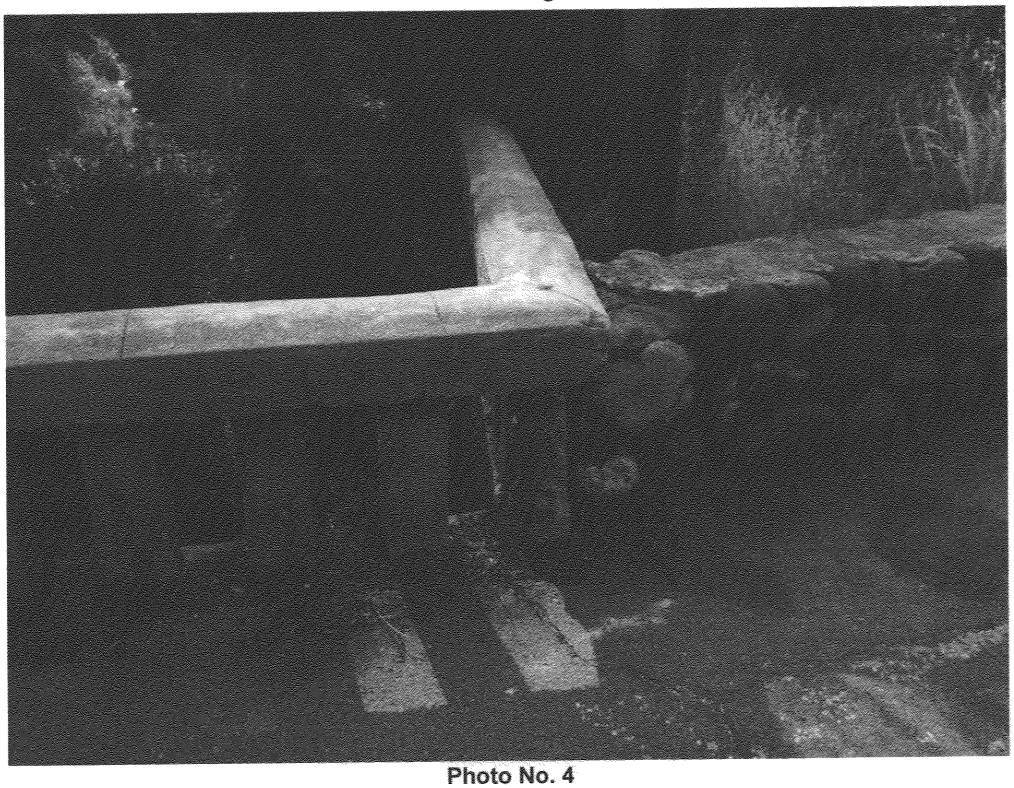


Photo No. 4

Spalled right rail post (at Abutment 1).

HANGTOWN CREEK

150 FEET NORTH OF MAIN ST | 07/26/2016 [AAAK] | 25C0117

119 - PHOTO-Rail-Damage/Deterioration

Photo No. 5

Delamination on right rail (near Abutment 3)

119 - PHOTO-Rail-Damage/Deterioration

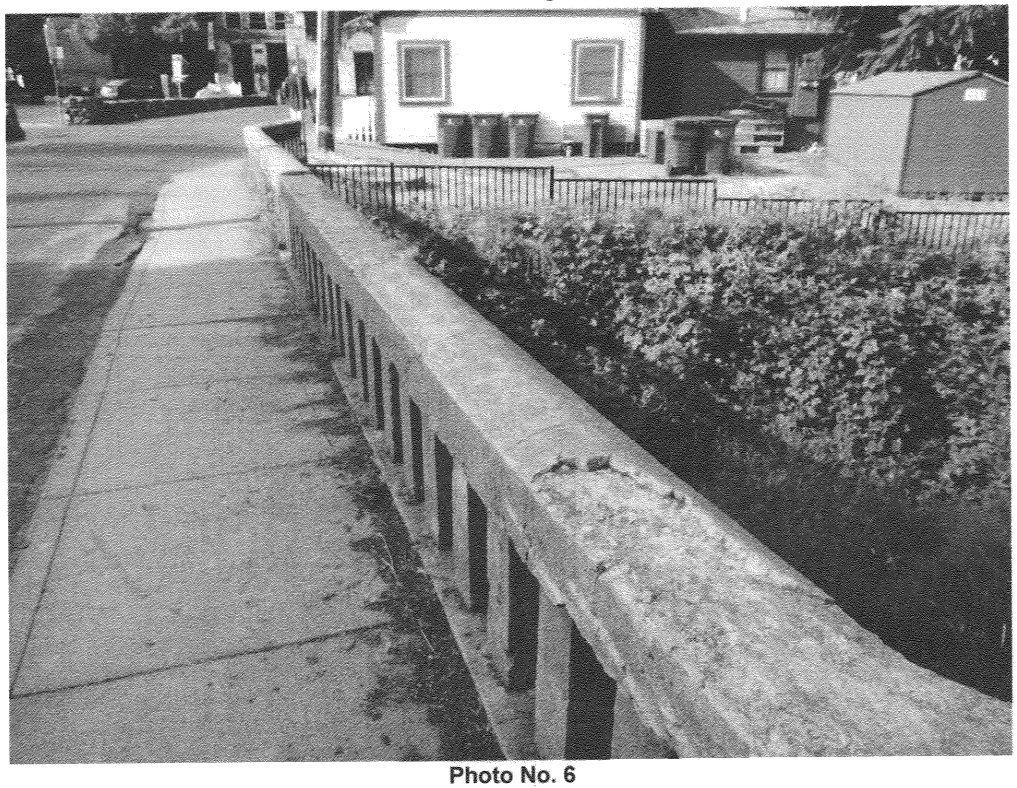


Photo No. 6

Spalling at top of left rail (near Abutment 3)