



DEPARTMENT OF TRANSPORTATION  
Structure Maintenance & Investigations

Bridge Number : 55C0344  
Facility Carried: ADAMS AVENUE  
Location : 0.5 MI E/O BROOKHURST ST  
City :  
Inspection Date : 12/09/2014

## Bridge Inspection Report

Inspection Type

Routine FC Underwater Special Other

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STRUCTURE NAME: SANTA ANA RIVER (ADAMS AVE)

### CONSTRUCTION INFORMATION

Year Built : 1977 Skew (degrees): 14  
Year Widened: N/A No. of Joints : 2  
Length (m) : 164.6 No. of Hinges : 0

Structure Description: Continuous 5-span CIP/PS concrete box girder (10 cells) with RC pier walls and RC open end seat abutments, all supported upon concrete piles.

Span Configuration : (W) 27.4 m, 3 @ 36.0 m, 27.4 m (E) c/c

### SAFE LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20  
Inventory Rating: RF=1.00 =>32.4 metric tons Calculation Method: LOAD FACTOR  
Operating Rating: RF=2.19 =>71.0 metric tons Calculation Method: LOAD FACTOR  
Permit Rating : P P P P P  
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

### DESCRIPTION ON STRUCTURE

Deck X-Section: (S) 0.1 m br, 1.2 m sw, 12.3 m, 1.2 m cu med, 3 @ 12.3 m s, 1.2 m sw, 0.1 m br (N)

Total Width: 28.7 m Net Width: 24.4 m No. of Lanes: 6 Speed: 45 mph  
Min. Vertical Clearance: Unimpaired

Rail Code: 1000

| Rail Type | Location   | Length (ft) | Rail Modifications |
|-----------|------------|-------------|--------------------|
| Type 11   | Right/Left | 1120        |                    |

### DESCRIPTION UNDER STRUCTURE

Channel Description: RC vertical walls with sandy earth bottoms.

### 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

Access into the channel is from the northwest quadrant. All elements were visually inspected.

#### REVISIONS

The bridge name was revised to include the road carried name.

**INSPECTION COMMENTARY**

Old name: SANTA ANA RIVER CHANNEL.

New name: SANTA ANA RIVER (ADAMS AVE).

**SAFE LOAD CAPACITY**

A load Rating Summary sheet was in BIRIS. The current load rating was based on calculations dated 11/30/1979.

**ELEMENT INSPECTION RATINGS AND COMMENTARY**

| Elem No.  | Defect /Prot | Defect | Element Description              | Env | Total Qty | Units | Qty in each State | Condition | State |       |
|---|--------------|--------|----------------------------------|-----|-----------|-------|-------------------|-----------|-------|-------|
|   |              |        |                                  |     |           |       | St. 1             | St. 2     | St. 3 | St. 4 |
| 16  |              |        | Top Flange-RC                    | 2   | 4683      | sq.m  | 4683              | 0         | 0     | 0     |
|   | 521          |        | Concrete Coat. (Meth/Paint/Seal) | 2   | 3985      | sq.m  | 3985              | 0         | 0     | 0     |
| (16)  |              |        |                                  |     |           |       |                   |           |       |       |
| There were no significant defects noted.  |              |        |                                  |     |           |       |                   |           |       |       |
| (16-521)  |              |        |                                  |     |           |       |                   |           |       |       |
| There were no significant defects noted.  |              |        |                                  |     |           |       |                   |           |       |       |
| 104   |              |        | Box Girder-PS Conc.              | 2   | 329       | m     | 329               | 0         | 0     | 0     |
| (104)   |              |        |                                  |     |           |       |                   |           |       |       |
| There were no significant defects noted.  |              |        |                                  |     |           |       |                   |           |       |       |
| 210   |              |        | Pier Wall-RC                     | 2   | 118       | m     | 118               | 0         | 0     | 0     |
| (210)   |              |        |                                  |     |           |       |                   |           |       |       |
| There were no significant defects noted.  |              |        |                                  |     |           |       |                   |           |       |       |
| 215   |              |        | Abutment-RC                      | 2   | 60        | m     | 60                | 0         | 0     | 0     |
| (215)   |              |        |                                  |     |           |       |                   |           |       |       |
| There were no significant defects noted.  |              |        |                                  |     |           |       |                   |           |       |       |
| 303   |              |        | Joint-Assembly w/ Seal           | 2   | 58        | m     | 58                | 0         | 0     | 0     |
| (303)   |              |        |                                  |     |           |       |                   |           |       |       |
| There were no significant defects noted.  |              |        |                                  |     |           |       |                   |           |       |       |
| 312   |              |        | Bearing-Enclosed                 | 2   | 2         | each  | 2                 | 0         | 0     | 0     |
| (312)   |              |        |                                  |     |           |       |                   |           |       |       |
| The bearing element is included to indicate the presence of bearings on this structure. The bearings were not exposed for visual inspection. No indication of bearing distress was noted in any substructure element. |              |        |                                  |     |           |       |                   |           |       |       |
| 333   |              |        | Railing-Other                    | 2   | 320       | m     | 320               | 0         | 0     | 0     |
| (333)   |              |        |                                  |     |           |       |                   |           |       |       |
| There were no significant defects noted.  |              |        |                                  |     |           |       |                   |           |       |       |

**WORK RECOMMENDATIONS** - NONE

Team Leader : Mikhael T. Zaarour  
Report Author : Mikhael T. Zaarour  
Inspected By : MT.Zaarour/KD.Henderson

Mikhael T. Zaarour 12/15/14  
Mikhael T. Zaarour (Registered Civil Engineer) (Date)



**STRUCTURE INVENTORY AND APPRAISAL REPORT**

## \*\*\*\*\* IDENTIFICATION \*\*\*\*\*

(1) STATE NAME- CALIFORNIA 069  
 (8) STRUCTURE NUMBER 55C0344  
 (5) INVENTORY ROUTE(ON/UNDER)- ON 140000000  
 (2) HIGHWAY AGENCY DISTRICT 12  
 (3) COUNTY CODE 059 (4) PLACE CODE 00000  
 (6) FEATURE INTERSECTED- SANTA ANA RIVER CHANNEL  
 (7) FACILITY CARRIED- ADAMS AVENUE  
 (9) LOCATION- 0.5 MI E/O BROOKHURST ST  
 (11) MILEPOINT/KILOMETERPOINT 0  
 (12) BASE HIGHWAY NETWORK- PART OF NET 1  
 (13) LRS INVENTORY ROUTE & SUBROUTE 0000000000000  
 (16) LATITUDE 33 DEG 40 MIN 20.8 SEC  
 (17) LONGITUDE 117 DEG 56 MIN 42.8 SEC  
 (98) BORDER BRIDGE STATE CODE % SHARE %  
 (99) BORDER BRIDGE STRUCTURE NUMBER

## \*\*\*\*\* STRUCTURE TYPE AND MATERIAL \*\*\*\*\*

(43) STRUCTURE TYPE MAIN:MATERIAL- PRSTR CONC CONT  
 TYPE- BOX BEAM OR GIRDER - MULTI CODE 605  
 (44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA  
 TYPE- OTHER/NA CODE 000  
 (45) NUMBER OF SPANS IN MAIN UNIT 5  
 (46) NUMBER OF APPROACH SPANS 0  
 (107) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1  
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:  
 A) TYPE OF WEARING SURFACE- NONE CODE 0  
 B) TYPE OF MEMBRANE- NONE CODE 0  
 C) TYPE OF DECK PROTECTION- NONE CODE 0

## \*\*\*\*\* AGE AND SERVICE \*\*\*\*\*

(27) YEAR BUILT 1977  
 (106) YEAR RECONSTRUCTED 0000  
 (42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5  
 UNDER- WATERWAY 5  
 (28) LANES:ON STRUCTURE 06 UNDER STRUCTURE 00  
 (29) AVERAGE DAILY TRAFFIC 39000  
 (30) YEAR OF ADT 2010 (109) TRUCK ADT 2 %  
 (19) BYPASS, DETOUR LENGTH 3 KM

## \*\*\*\*\* GEOMETRIC DATA \*\*\*\*\*

(48) LENGTH OF MAXIMUM SPAN 36.0 M  
 (49) STRUCTURE LENGTH 164.6 M  
 (50) CURB OR SIDEWALK: LEFT 1.2 M RIGHT 1.2 M  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 24.4 M  
 (52) DECK WIDTH OUT TO OUT 28.7 M  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 24.4 M  
 (33) BRIDGE MEDIAN- CLOSED (NO BARRIER) 2  
 (34) SKEW 14 DEG (35) STRUCTURE FLARED NO  
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 12.2 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- NOT APPLICABLE CODE N  
 (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 \*\*\*\*\*

SUFFICIENCY RATING = 91.5  
 STATUS  
 HEALTH INDEX 100.0  
 PAINT CONDITION INDEX = N/A

## \*\*\*\*\* CLASSIFICATION \*\*\*\*\* CODE

(112) NBIS BRIDGE LENGTH- YES Y  
 (104) HIGHWAY SYSTEM- ROUTE ON NHS 1  
 (26) FUNCTIONAL CLASS- OTHER PRIN ART URBAN 14  
 (100) DEFENSE HIGHWAY- NOT STRAHNET 0  
 (101) PARALLEL STRUCTURE- NONE EXISTS N  
 (102) DIRECTION OF TRAFFIC- 2 WAY 2  
 (103) TEMPORARY STRUCTURE-  
 (105) FED.LANDS HWY- NOT APPLICABLE 0  
 (110) DESIGNATED NATIONAL NETWORK - PART OF NET 1  
 (20) TOLL- ON FREE ROAD 3  
 (21) MAINTAIN- COUNTY HIGHWAY AGENCY 02  
 (22) OWNER- COUNTY HIGHWAY AGENCY 02  
 (37) HISTORICAL SIGNIFICANCE- NOT ELIGIBLE 5

## \*\*\*\*\* CONDITION \*\*\*\*\* CODE

(58) DECK 8  
 (59) SUPERSTRUCTURE 8  
 (60) SUBSTRUCTURE 8  
 (61) CHANNEL & CHANNEL PROTECTION 9  
 (62) CULVERTS N

## \*\*\*\*\* LOAD RATING AND POSTING \*\*\*\*\* CODE

(31) DESIGN LOAD- MS-18 OR HS-20 5  
 (63) OPERATING RATING METHOD- LOAD FACTOR 1  
 (64) OPERATING RATING- 71.0  
 (65) INVENTORY RATING METHOD- LOAD FACTOR 1  
 (66) INVENTORY RATING- 32.4  
 (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 8  
 (68) DECK GEOMETRY 5  
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N  
 (71) WATER ADEQUACY 9  
 (72) APPROACH ROADWAY ALIGNMENT 8  
 (36) TRAFFIC SAFETY FEATURES 1000  
 (113) SCOUR CRITICAL BRIDGES 8

## \*\*\*\*\* PROPOSED IMPROVEMENTS \*\*\*\*\*

(75) TYPE OF WORK- CODE  
 (76) LENGTH OF STRUCTURE IMPROVEMENT M  
 (94) BRIDGE IMPROVEMENT COST  
 (95) ROADWAY IMPROVEMENT COST  
 (96) TOTAL PROJECT COST  
 (97) YEAR OF IMPROVEMENT COST ESTIMATE  
 (114) FUTURE ADT 88615  
 (115) YEAR OF FUTURE ADT 2031

## \*\*\*\*\* INSPECTIONS \*\*\*\*\*

(90) INSPECTION DATE 12/14 (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)