DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0550
Facility Carried: ALISO CREEK ROAD
Location : 100' W/O ALICIA PARKWAY
City :
Inspection Date : 03/30/2013

Bridge Inspection Report

Inspection Type
Routine [X] FC Underwater Special Other

STRUCTURE NAME: ALISO CREEK

CONSTRUCTION INFORMATION

Year Built : 1988
Year Widened: N/A
Length (m) : 51.8

Skew (degrees): 20
No. of Joints : 0
No. of Hinges : 0

Structure Description: Single span CIP/PS concrete box girder (16 cells) with RC open end diaphragm abutments, all supported upon concrete piles.

Span Configuration : (W) 50.0 m (E) c/c

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18+MOD OR HS-20+MOD
Inventory Rating: RF=1.00 =>32.4 metric tons Calculation Method: FIELD EVAL/ENG JUDGMENT
Operating Rating: RF=1.67 =>54.1 metric tons Calculation Method: FIELD EVAL/ENG JUDGMENT
Permit Rating : PPPPP
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: (N) 0.3 m br, 1.5 m sw, 34.5 m, 1.5 m sw, 0.3 m br (N)
Total Width: 38.0 m Net Width: 34.5 m No. of Lanes: 9 Speed: 50 mph
Min. Vertical Clearance: Unimpaired

Rail Code: 0000

Rail Type	Location	Length (ft)	Rail Modifications
Type 26	Right/Left	1085	

DESCRIPTION UNDER STRUCTURE

Channel Description: Natural earth, trapezoidal with RC slope protection through the site.

INSPECTION COMMENTARY

REVISIONS
Smart flag 358 (Deck Cracking) was added (State 3).
It seen the bridge was widened. Caltrans do not have the widened as-built plans.

Element 331: The quantities were modified as follows: from [St. 1 = 127, St. 2 = 1] to [St. 1 = 121, St. 2 = 6, St. 3 = 1].

CONDITION OF STRUCTURE

There are severe cracks on the deck and the concrete rails at the east and west ends because there is no joints at the ends.

RAILS
The concrete railing has fractured (0.1 m x 0.3 m) at the junction of the northeast wing wall.
North rail exhibits several vertical cracks 0.5 mm - 1.0 mm wide and 0.6 m apart within the westerly 10.0 m, some of these cracks extend to the sidewalk at NW corner.

DECK
The 5 mm thick at the north corner of Abutment 2 (leveling concrete) is broken into

INSPECTION COMMENTARY

pieces and peeled off.

The concrete deck exhibits:
* transverse and map cracks 1.0 mm to 5.0 mm wide, 2.0 m long and spaced 0.4 m apart at the east end of the westbound lanes; and
* few longitudinal cracks spaced 0.5 m apart, -/+ 1.5 mm wide and 2.0 m long at SE and SW corner.

SOFFIT
There are random minor transverse cracks 0.5 mm wide in the soffit with light white efflorescence in the closure pour area.

SUPERSTRUCTURE
There are 2 longitudinal cracks in the bottom of box girder 3.0 m long with white efflorescence at the flared section at SE and NE corners.
The soffit of the box girder exhibits four white spots 100 mm X 100 mm with heavy white efflorescence at the south box girder easterly half; and two white spots 100 mm X 100 mm with heavy white efflorescence at the north box girder westerly half, all these spots at the concrete adobes.

SUBSTRUCTURE
There is a vertical crack at the junction of the northwest wing wall and the abutment.
The northeast wing wall has two 4 m long minor vertical cracks.

SAFE LOAD CAPACITY

A Load Rating Summary Sheet is included with this bridge inspection report. The current rating has been assigned in accordance with SMI procedures.

WATER/CHANNEL DESCRIPTION
There is 200 mm deep water, all substructure elements were inspected.

ELEMENT INSPECTION RATINGS

Elem No.	Element Description	Env	Total Qty	Units	Qty in each Condition State St. 1	St. 2	St. 3	St. 4	St. 5
12	Concrete Deck - Bare	2	1970	sq.m.	1970	0	0	0	0
104	P/S Conc Closed Web/Box Girder	2	104	m.	104	0	0	0	0
215	Reinforced Conc Abutment	2	85	m.	85	0	0	0	0
256	Slope Protection	2	2	ea.	2	0	0	0	0
331	Reinforced Conc Bridge Railing	2	128	m.	121	6	1	0	
358	Deck Cracking	2	1	ea.	0	0	1	0	0

WORK RECOMMENDATIONS

RecDate: 03/30/2013
Action : Deck-Methacrylate
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Seal with epoxy the severe cracks (up to 5 mm wide) at the east end of the WB lanes.

Team Leader : Ashraf Shenouda

Report Author : Ashraf Shenouda

Inspected By : A.Shenouda/KD.Henderson

Ashraf Shenouda (Registered Civil Engineer) (Date)

REGISTERED PROFESSIONAL ENGINEER
Ashraf
Shenouda
No. 64332
06/30/2013
CIVIL
STATE OF CALIFORNIA

STRUCTURE INVENTORY AND APPRAISAL REPORT

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

(1) STATE NAME- CALIFORNIA 069
(8) STRUCTURE NUMBER **55C0550**
(5) INVENTORY ROUTE(ON/UNDER)- ON 140000000
(2) HIGHWAY AGENCY DISTRICT 12
(3) COUNTY CODE 059 (4) PLACE CODE 00000
(6) FEATURE INTERSECTED- ALISO CREEK
(7) FACILITY CARRIED- ALISO CREEK ROAD
(9) LOCATION- 100' W/O ALICIA PARKWAY
(11) MILEPOINT/KILOMETERPOINT 0
(12) BASE HIGHWAY NETWORK- PART OF NET 1
(13) LRS INVENTORY ROUTE & SUBROUTE 000000M27400
(16) LATITUDE 33 DEG 33 MIN 20.07 SEC
(17) LONGITUDE 117 DEG 43 MIN 06.36 SEC
(98) BORDER BRIDGE STATE CODE % SHARE %
(99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- PRESTRESS CONC
TYPE- BOX BEAM OR GIRDER - MULTI CODE 505
(44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA
TYPE- OTHER/NA CODE 000
(45) NUMBER OF SPANS IN MAIN UNIT 1
(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 1988
(106) YEAR RECONSTRUCTED 0000
(42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5
UNDER- WATERWAY 5
(28) LANES:ON STRUCTURE 09 UNDER STRUCTURE 00
(29) AVERAGE DAILY TRAFFIC 25915
(30) YEAR OF ADT 2011 (109) TRUCK ADT 1 %
(19) BYPASS, DETOUR LENGTH 3 KM

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

(48) LENGTH OF MAXIMUM SPAN 50.0 M
(49) STRUCTURE LENGTH 51.8 M
(50) CURB OR SIDEWALK: LEFT 1.5 M RIGHT 1.5 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 34.5 M
(52) DECK WIDTH OUT TO OUT 38.0 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 34.5 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 20 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 34.5 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

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SUFFICIENCY RATING = 91.3
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 - NOT ON NET 0
(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 5
(59) SUPERSTRUCTURE 8
(60) SUBSTRUCTURE 7
(61) CHANNEL & CHANNEL PROTECTION 9
(62) CULVERTS N

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

(31) DESIGN LOAD- MS-18+MOD OR HS-20+MOD 6
(63) OPERATING RATING METHOD- FIELD EVAL/ENG JUD 0
(64) OPERATING RATING- 54.1
(65) INVENTORY RATING METHOD- FIELD EVAL/ENG JUI 0
(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 7
(68) DECK GEOMETRY 5
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 9
(72) APPROACH ROADWAY ALIGNMENT 8
(36) TRAFFIC SAFETY FEATURES 0000
(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 46252
(115) YEAR OF FUTURE ADT 2035

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

(90) INSPECTION DATE 03/13 (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)