



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0148
Facility Carried: WARNER AVENUE
Location : 0.1 MI W/O HARBOR BLVD
City :
Inspection Date : 06/08/2011

Bridge Inspection Report

Inspection Type

Routine	FC	Underwater	Special	Other
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STRUCTURE NAME: SANTA ANA RIVER CHANNEL

CONSTRUCTION INFORMATION

Year Built : 1961	Skew (degrees): 9
Year Widened: 1969	No. of Joints : 2
Length (m) : 77.4	No. of Hinges : 2

Structure Description: Continuous six span CIP/RC T-beam (9 each) and widened 3 girders N and 2 girders S with RC pier walls and RC open end diaphragm abutments, all supported upon concrete piles. Wi

Span Configuration : (W) 10.4 m, 4 @ 14.0 m, 10.4 m (E) c/c

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20	
Inventory Rating: 32.6 metric tonnes	Calculation Method: NO RATING ANALYSIS
Operating Rating: 55.3 metric tonnes	Calculation Method: NO RATING ANALYSIS
Permit Rating : PPPPP	
Posting Load : Type 3: <u>Legal</u>	Type 3S2: <u>Legal</u> Type 3-3: <u>Legal</u>

DESCRIPTION ON STRUCTURE

Deck X-Section: (S) 0.3 m br, 1.5 m sw, 13.4 m, 2.4 m med, 12.3 m, 1.5 m sw, 0.3 m br (N)	
Total Width: 31.6 m	Net Width: 24.5 m No. of Lanes: 6
Rail Description: Type 26	Rail Code : 1111
Min. Vertical Clearance: Unimpaired	

DESCRIPTION UNDER STRUCTURE

Channel Description: RC trapezoidal.

CONDITION TEXT

CONDITION OF STRUCTURE

The bridge is recently widened there are 3 'T' girders at northerly side and 2 'T' at the westerly side. The corrugated metal deck forms left in places.

There is polyester concrete on top of the old deck.

There are hairline soffit cracks with light brown efflorescence in the old bridge portion.

There are vertical cracks 2 hairline cracks in Pier 2, 4 hairline cracks in Pier 3 and 4, 5 hairline cracks in Pier 5, and 2 hairline cracks in Peir 6.

There was 100mm of water in the deepest section of the concrete channel; all elements were inspected.

RECOMMENDATIONS

The county should provide the recent As-built to SM&I office.

ELEMENT INSPECTION RATINGS

Elem No.	Element Description	Env	Total		Qty in each Condition State				
			Qty	Units	St. 1	St. 2	St. 3	St. 4	St. 5
12	Concrete Deck - Bare	2	2464	sq.m.	2464	0	0	0	0
110	Reinforced Conc Open Girder/Beam	2	1050	m.	1050	0	0	0	0
182	Other Type EQ Restrainer Cable	2	2	ea.	2	0	0	0	0
210	Reinforced Conc Pier Wall	2	155	m.	155	0	0	0	0
215	Reinforced Conc Abutment	2	64	m.	64	0	0	0	0
256	Slope Protection	2	2	ea.	2	0	0	0	0
302	Compression Joint Seal	2	56	m.	56	0	0	0	0
312	Enclosed/Concealed Bearing	2	2	ea.	2	0	0	0	0
331	Reinforced Conc Bridge Railing	2	160	m.	160	0	0	0	0
358	Deck Cracking	2	1	ea.	1	0	0	0	0
359	Soffit of Concrete Deck or Slab	2	1	ea.	0	1	0	0	0

WORK RECOMMENDATIONS - NONE

Inspected By : MT.Zaarour/A.Shenouda



Mikhael T. Zaarour (Registered Civil Engineer)



STRUCTURE INVENTORY AND APPRAISAL REPORT

***** IDENTIFICATION *****

(1) STATE NAME- CALIFORNIA 069
 (8) STRUCTURE NUMBER 55C0148
 (5) INVENTORY ROUTE(ON/UNDER)- ON 1400M0190
 (2) HIGHWAY AGENCY DISTRICT 12
 (3) COUNTY CODE 059 (4) PLACE CODE 00000
 (6) FEATURE INTERSECTED- SANTA ANA RIVER CHANNEL
 (7) FACILITY CARRIED- WARNER AVENUE
 (9) LOCATION- 0.1 MI W/O HARBOR BLVD
 (11) MILEPOINT/KILOMETERPOINT 0
 (12) BASE HIGHWAY NETWORK- PART OF NET 1
 (13) LRS INVENTORY ROUTE & SUBROUTE 000000M01900
 (16) LATITUDE 33 DEG 42 MIN 51.96 SEC
 (17) LONGITUDE 117 DEG 55 MIN 18.68 SEC
 (98) BORDER BRIDGE STATE CODE % SHARE %
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- CONCRETE CONT
 TYPE- TEE BEAM CODE 204
 (44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA
 TYPE- OTHER/NA CODE 000
 (45) NUMBER OF SPANS IN MAIN UNIT 6
 (46) NUMBER OF APPROACH SPANS 0
 (107) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:
 A) TYPE OF WEARING SURFACE- CONCRETE CODE 1
 B) TYPE OF MEMBRANE- NONE CODE 0
 C) TYPE OF DECK PROTECTION- NONE CODE 0

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

(27) YEAR BUILT 1961
 (106) YEAR RECONSTRUCTED 1969
 (42) TYPE OF SERVICE: ON- HIGHWAY 1
 UNDER- WATERWAY 5
 (28) LANES:ON STRUCTURE 06 UNDER STRUCTURE 00
 (29) AVERAGE DAILY TRAFFIC 25000
 (30) YEAR OF ADT 2008 (109) TRUCK ADT 1 %
 (19) BYPASS, DETOUR LENGTH 2 KM

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

(48) LENGTH OF MAXIMUM SPAN 14.0 M
 (49) STRUCTURE LENGTH 77.4 M
 (50) CURB OR SIDEWALK: LEFT 0.0 M RIGHT 1.5 M
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 24.5 M
 (52) DECK WIDTH OUT TO OUT 31.6 M
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 25.7 M
 (33) BRIDGE MEDIAN- CLOSED (NO BARRIER) 2
 (34) SKEW 9 DEG (35) STRUCTURE FLARED NO
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 13.4 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 = 91.5
 STATUS
 HEALTH INDEX 100.0
 PAINT CONDITION INDEX = N/A

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

(112) NBIS BRIDGE LENGTH- YES Y
 (104) HIGHWAY SYSTEM- NOT ON NHS 0
 (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 6
 (59) SUPERSTRUCTURE 7
 (60) SUBSTRUCTURE 7
 (61) CHANNEL & CHANNEL PROTECTION 8
 (62) CULVERTS N

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

(31) DESIGN LOAD- MS-18 OR HS-20 5
 (63) OPERATING RATING METHOD- NO RATING ANALYSIS 5
 (64) OPERATING RATING- 55.3
 (65) INVENTORY RATING METHOD- NO RATING ANALYSIS 5
 (66) INVENTORY RATING- 32.6
 (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 7
 (36) TRAFFIC SAFETY FEATURES 1111
 (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 57703
 (115) YEAR OF FUTURE ADT 2029

***** INSPECTIONS *****

(90) INSPECTION DATE 06/11 (91) FREQUENCY 48 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)