DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0103
Facility Carried: HAMILTON-VICTORIA
Location : 0.15 MI E/O BROOKHURST S
City :
Inspection Date : 05/05/2010

Bridge Inspection Report

Inspection Type

Routine	FC	Underwater	Special	Other
X				

STRUCTURE NAME: SANTA ANA RIVER

CONSTRUCTION INFORMATION

Year Built : 1979
Year Widened: 1992
Length (m) : 136.6

Skew (degrees): 16
No. of Joints : 3
No. of Hinges : 1

Structure Description: Continuous 7 span CIP/RC box girder (9 cells) with RC piers and RC open end diaphragm abutments, all supported upon concrete piles.

Span Configuration : (W) 24.4 m, 3 @ 28.8 m, 24.8 m, 28.6 m, 28.2 m (E)

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18+MOD OR HS-20+MOD
Inventory Rating: 32.4 metric tonnes Calculation Method: NO RATING ANALYSIS
Operating Rating: 54.1 metric tonnes Calculation Method: NO RATING ANALYSIS
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, 23.8 m, 1.5 m sw, 0.3 m br (S)

Total Width: 24.4 m Net Width: 23.8 m No. of Lanes: 4
Rail Description: (S) Type 11 in spans 1-5, (s) spans 6-7 and (N) Type 26 conc. Rail Code : 1000

Min. Vertical Clearance: Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description: Santa Ana River: Sandy bottom with grouted rock slopes through the site.
Greenville-Banning: Sandy bottom with RC vertical walls.

CONDITION TEXT

CONDITION OF STRUCTURE

There are transverse cracks in the deck over the supports moderate in size (0.5-1 mm) and density (less than 300 mm), mostly in eastbound lanes of old structure.

There is damaged section of the south railing metal tube (6 meters long) located 12m from west end.

There is a spall (150 mm x 75 mm x 50 mm) with exposed rebar at the south curb 30 from west end.

There was 200 mm water in the deeper section of the channel; all elements were inspected.

ELEMENT INSPECTION RATINGS

F#Elem	Element Description	Env	Total Qty	Units	Qty in each Condition State St. 1	St. 2	St. 3	St. 4	St. 5
101 12	Concrete Deck - Bare	2	3030	sq.m.	3030	0	0	0	0
101 105	Reinforced Concrete Closed Webs/Box Girder	2	390	m.	390	0	0	0	0
101 210	Reinforced Conc Pier Wall	2	180	m.	180	0	0	0	0
101 215	Reinforced Conc Abutment	2	60	m.	60	0	0	0	0
101 227	Reinforced Conc Submerged Pile	2	1	ea.	1	0	0	0	0
101 302	Compression Joint Seal	2	87	m.	87	0	0	0	0
101 331	Reinforced Conc Bridge Railing	2	200	m.	200	0	0	0	0
101 335	Other Bridge Railing	2	100	m.	94	6	0	0	0
101 358	Deck Cracking	2	1	ea.	0	0	1	0	0

WORK RECOMMENDATIONS

RecDate: 05/05/2010
Action : Railing-Repair
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Repair the spall (150 mm x 75 mm x 50 mm) with exposed rebar at the south curb 30 from west end.

RecDate: 06/11/2007
Action : Deck-Methacrylate
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Seal the deck transverse cracks by methacrylate in eastbound lanes of old structure. Most crack are over the supports and are moderate in size (0.5-1mm) and density (less than 300mm).

RecDate: 01/30/2003
Action : Railing-Repair
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Replace the damaged 6.1 m of damaged 152 mm structural tube railing in the southerly railing, approximately 12.2 m from its westerly terminus. Remove the fractured concrete at two of the anchor posts, and patch with epoxy bonded cement mortar.

Inspected By : A.Shenouda/MT.Zaarour

Registered Civil Engineer

STRUCTURE INVENTORY AND APPRAISAL REPORT

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

(1) STATE NAME- CALIFORNIA 069
(8) STRUCTURE NUMBER 55C0103
(5) INVENTORY ROUTE(ON/UNDER)- ON 1400M0360
(2) HIGHWAY AGENCY DISTRICT 12
(3) COUNTY CODE 059 (4) PLACE CODE 00000
(6) FEATURE INTERSECTED- SANTA ANA RIVER
(7) FACILITY CARRIED- HAMILTON-VICTORIA
(9) LOCATION- 0.15 MI E/O BROOKHURST ST
(11) MILEPOINT/KILOMETERPOINT 0
(12) BASE HIGHWAY NETWORK- NOT ON NET 0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 33 DEG 39 MIN 03 SEC
(17) LONGITUDE 117 DEG 57 MIN 07 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 7
(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 1979
(106) YEAR RECONSTRUCTED 1992
(42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5
UNDER- WATERWAY 5
(28) LANES:ON STRUCTURE 04 UNDER STRUCTURE 00
(29) AVERAGE DAILY TRAFFIC 24000
(30) YEAR OF ADT 2000 (109) TRUCK ADT 1 %
(19) BYPASS, DETOUR LENGTH 5 KM

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

(48) LENGTH OF MAXIMUM SPAN 28.8 M
(49) STRUCTURE LENGTH 136.6 M
(50) CURB OR SIDEWALK: LEFT 1.5 M RIGHT 1.5 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 23.8 M
(52) DECK WIDTH OUT TO OUT 24.4 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 20.4 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 16 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 23.8 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- 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- 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 7
(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- NO RATING ANALYSIS 5
(64) OPERATING RATING- 54.1
(65) INVENTORY RATING METHOD- NO RATING ANALYSIS 5
(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 9
(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 49459
(115) YEAR OF FUTURE ADT 2029

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

(90) INSPECTION DATE 05/10 (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)