DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0049
Facility Carried: SANTIAGO CANYON RD
Location : 0.3 MI S/O MODJESKA RD
City :
Inspection Date : 05/06/2019

Bridge Inspection Report

Inspection Type

Routine	FC	Underwater	Special	Other
X				

STRUCTURE NAME: SANTIAGO CREEK

CONSTRUCTION INFORMATION

Year Built : 1967
Year Modified: N/A
Length (m) : 60
Skew (degrees): 18
No. of Joints : 1
No. of Hinges : 0

Structure Description: Continuous three span CIP/RC T-beam (5 each) with RC single column bents and RC open end seat abutments, all supported upon spread footings.

Span Configuration : (S) 59.0 feet, 81.4 feet, 59.0 feet (N).

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20
Inventory Rating: RF= 0.92 Calculation Method: (LRFR) LD & RES FACT RATING
Operating Rating: RF= 1.19 Calculation Method: (LRFR) LD & RES FACT RATING
Permit Rating : PPPPP
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: (W) 1.6 feet br, 29.5 feet, 1.6 feet br (E)
Total Width: 10.1 m Net Width: 9.0 m No. of Lanes: 2 Speed: 55 mph
Min. Vertical Clearance: Unimpaired Overlay Thickness: 0.0 inches
Rail Code: 1111

DESCRIPTION UNDER STRUCTURE

Channel Description: Natural earth trapezoida with a cobbled bottom.

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
A complete routine inspection was performed by walking on and around the bridge to inspect all visible elements of the bridge structure. Bridge deck was inspected by walking on shoulder. Soffit and all substructure were inspected by walking underneath the bridge.

The water is about 5.0 inches deep, 5.0 feet wide in the middle of span #2 at the time of inspection.

There is no need for a special equipment to inspect this structure.

INSPECTION COMMENTARY

DECK AND ROADWAY
There are longitudinal, transverse and map deck cracks (from 0.04 to 0.06 inches wide, 6.0 to 20.0 inches in spacing) but the deck has been treated with Methacrylate.

There are random transverse and longitudinal soffit cracks at 0.04 inches wide, 2.0 to 3.0 feet long with white efflorescence.

There are water stain spots on the abutment wall #4, northerly abutment.

Type A seal is cracked; it has loss sections at both of abutment joint locations.

SUPERSTRUCTURE
There is no notable distress observed at the time of inspection.

SUBSTRUCTURE
The structure was retrofitted at both abutment locations.

SAFE LOAD CAPACITY
A Load Rating Summary Sheet is achieved on 11/30/2017 for this structure. The current rating has been assigned in accordance with SM & I procedures for this structure. Based on the field conditions and load history, the structure is adequate to carry legal loads.

ELEMENT INSPECTION RATINGS AND COMMENTARY

Elem No.	Defect /Prot	Defect	Element Description	Env	Total Qty	Units	Qty in each Condition State St. 1	St. 2	St. 3	St. 4
16			**Top Flange-RC**	2	600	sq.m	500	20	80	0
	1120		**Efflorescence/Rust Staining**	2	20		0	20	0	0
	1130		**Cracking (RC and Other)**	2	80		0	0	80	0
	521		**Concrete Coat.(Meth/Paint/Seal)**	2	560	sq.m	560	0	0	0

(16)
There are longitudinal, transverse and map deck cracks (from 0.04 to 0.06 inches wide, 6.0 to 20.0 inches in spacing) but the deck has been treated with Methacrylate.

(16-1120)
There are random transverse and longitudinal soffit cracks at 0.04 inches wide, 2.0 to 3.0 feet long with white efflorescence.

(16-1130)
There are longitudinal, transverse and map deck cracks (from 0.04 to 0.06 inches wide, 6.0 to 20.0 inches in spacing) but the deck has been treated with Methacrylate.

(16-521)
There were no significant defects noted.

110			**Girder/Beam-RC**	2	300	m	300	0	0	0

(110)
There were no significant defects noted.

205			**Column-RC**	2	2	each	2	0	0	0

(205)
There were no significant defects noted.

215			**Abutment-RC**	2	34	m	34	0	0	0

(215)
There were no significant defects noted.

ELEMENT INSPECTION RATINGS AND COMMENTARY

Elem No.	Defect /Prot	Defect	Element Description	Env	Total Qty	Units	Qty in each Condition State St. 1	St. 2	St. 3	St. 4
The structure was retrofitted at both abutment locations.										
234			**Pier Cap-RC**	2	18	m	18	0	0	0
(234)										
There were no significant defects noted.										
301			**Joint-Pourable Seal**	2	12	m	0	0	12	0
	2310		**Leakage (Joints)**	2	6		0	0	6	0
	2330		**Seal Damage (Joints)**	2	6		0	0	6	0
(301)										
Leaking, cracking and lost sections at abutment joint locations.										
(301-2310)										
There are water stain spots on the abutment wall #4, northerly abutment.										
(301-2330)										
Type A seal is cracked; it has loss sections at both of abutment joint locations.										
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.										
331			**Railing-RC**	2	120	m	120	0	0	0
(331)										
There were no significant defects noted.										

WORK RECOMMENDATIONS

RecDate: 05/13/2011
Action : Joints-Replace
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Replace the entire Type A seal at both abutment joint locations.

Team Leader : Edwin Mah

Report Author : Nelson N. Vo

Inspected By : NN.Vo/E.Mah

8/22/2019

Edwin Mah (Registered Civil Engineer) (Date)

CC:

STRUCTURE INVENTORY AND APPRAISAL REPORT

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

(1) STATE NAME- CALIFORNIA 069
(8) STRUCTURE NUMBER **55C0049**
(5) INVENTORY ROUTE(ON/UNDER)- ON 140000000
(2) HIGHWAY AGENCY DISTRICT 12
(3) COUNTY CODE 059 (4) PLACE CODE 00000
(6) FEATURE INTERSECTED- SANTIAGO CREEK
(7) FACILITY CARRIED- SANTIAGO CANYON RD
(9) LOCATION- 0.3 MI S/O MODJESKA RD
(11) MILEPOINT/KILOMETERPOINT 0
(12) BASE HIGHWAY NETWORK- PART OF NET 1
(13) LRS INVENTORY ROUTE & SUBROUTE 000000000000
(16) LATITUDE 33 DEG 42 MIN 44.92 SEC
(17) LONGITUDE 117 DEG 38 MIN 42.4 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 3
(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 1967
(106) YEAR RECONSTRUCTED 0000
(42) TYPE OF SERVICE: ON- HIGHWAY 1
UNDER- WATERWAY 5
(28) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00
(29) AVERAGE DAILY TRAFFIC 8000
(30) YEAR OF ADT 2019 (109) TRUCK ADT 3 %
(19) BYPASS, DETOUR LENGTH 2 KM

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

(48) LENGTH OF MAXIMUM SPAN 23.8 M
(49) STRUCTURE LENGTH 60.0 M
(50) CURB OR SIDEWALK: LEFT 0.0 M RIGHT 0.0 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 9.0 M
(52) DECK WIDTH OUT TO OUT 10.1 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 12.5 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 18 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 9.0 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 = 77.6

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 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- (LRFR) LD & RES FA 8
(64) OPERATING RATING- RF= 1.19
(65) INVENTORY RATING METHOD- (LRFR) LD & RES FA 8
(66) INVENTORY RATING- RF= 0.92
(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 2
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 9
(72) APPROACH ROADWAY ALIGNMENT 8
(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 12365
(115) YEAR OF FUTURE ADT 2037

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

(90) INSPECTION DATE 05/19 (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)