



**DEPARTMENT OF TRANSPORTATION**  
Structure Maintenance & Investigations

**Bridge Number** : 55C0534  
**Facility Carried**: MEADS AVENUE  
**Location** : 0.3 MI E/O ORANGE PARK B  
**City** :  
**Inspection Date** : 07/10/2019

**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:** HANDY CREEK

**CONSTRUCTION INFORMATION**

Year Built : 1985	Skew (degrees): 99
Year Modified: 1990	No. of Joints : 0
Length (m) : 8.5	No. of Hinges : 0

Structure Description: Single span CIP/RC deck slab with RC open end diaphragm abutments, all supported upon concrete piles.

Span Configuration : (W) 24.0 feet (E).

**SAFE 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: ASSIGNED (LFD)
Operating Rating: RF=1.67 =>54.1 metric tons	Calculation Method: ASSIGNED (LFD)
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: (N) 0.5 feet Timber Br, 7.2 feet sw, 0.5 feet MBGR, 28.8 feet, 0.5 feet MBGR (S).

Total Width: 11.9 m	Net Width: 8.8 m	No. of Lanes: 2	Speed: 25 mph
Min. Vertical Clearance: Unimpaired		Overlay Thickness: 0.0 inches	

Rail Code: 1000

**DESCRIPTION UNDER STRUCTURE**

Channel Description: Natural earth trapezoidal.

**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 around with binoculars and rain boots due to 1.5 to 2.0 feet deep of water stagnant at the time of inspection.

There is no need for a special equipment to inspect this structure except with rain boots.

**INSPECTION COMMENTARY****DECK AND ROADWAY**

AC Roadway is at both of approach and departure lanes.

There is a settlement at 5.0 inches at the southeast and southwest corners of the roadway.

There are random diagonal hairline cracks (0.04 inches wide) at all four corners above both abuments.

**SUBSTRUCTURE**

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

**ENCROACHMENTS**

There is a 12.0 inches (diameter) metal pipe along the westerly side.

**SAFE LOAD CAPACITY**

The load rating for this structure is calculated on 09/22/2015 by SMI Ratings Branch using BrR 6.8.0 AASHTO analysis, and the load rating summary sheet is archived on 09/22/2015.

<b><u>ELEMENT INSPECTION RATINGS AND COMMENTARY</u></b>									
<b>Elem No.</b>	<b>Defect /Prot</b>	<b>Element Description</b>	<b>Env</b>	<b>Total Qty</b>	<b>Units</b>	<b>Qty in each Condition State</b>			
						<b>St. 1</b>	<b>St. 2</b>	<b>St. 3</b>	<b>St. 4</b>
<b>38</b>		<b>Slab-RC</b>	2	101	sq.m	91	10	0	0
	<b>1130</b>	<b>Cracking (RC and Other)</b>	2	10		0	10	0	0
(38) Minor cracks. (38-1130) There are random diagonal hairline cracks (0.04 inches wide) at all four corners above both abuments.									
<b>215</b>		<b>Abutment-RC</b>	3	34	m	34	0	0	0
(215) There were no significant defects noted.									
<b>252</b>		<b>Pile-CIDH</b>	2	1	ea.	1	0	0	0
(252) The pile element is included to indicate the presence of piles on this structure. The piles were not exposed for visual inspection. No indication of pile distress was noted in any substructure element.									
<b>330</b>		<b>Railing-Metal</b>	2	17	m	17	0	0	0
(330) There were no significant defects noted.									

**WORK RECOMMENDATIONS**

RecDate: 07/10/2019

Action : Deck-Misc.

Work By: LOCAL AGENCY

Status : PROPOSED

EstCost:

StrTarget: 1 YEAR

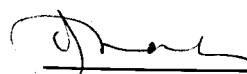
DistTarget:

EA:

Level the settlement at 5.0 inches at both southeast and southwest corners of roadway.

Team Leader : Nelson N. Vo  
Report Author : Nelson N. Vo  
Inspected By : NN.Vo/E.Mah



 8/22/2019  
Edwin Mah (Registered Civil Engineer) (Date)

**STRUCTURE INVENTORY AND APPRAISAL REPORT**

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

(1) STATE NAME- CALIFORNIA 069  
 (8) STRUCTURE NUMBER 55C0534  
 (5) INVENTORY ROUTE (ON/UNDER)- ON 140000000  
 (2) HIGHWAY AGENCY DISTRICT 12  
 (3) COUNTY CODE 059 (4) PLACE CODE 00000  
 (6) FEATURE INTERSECTED- HANDY CREEK  
 (7) FACILITY CARRIED- MEADS AVENUE  
 (9) LOCATION- 0.3 MI E/O ORANGE PARK BL  
 (11) MILEPOINT/KILOMETERPOINT 0  
 (12) BASE HIGHWAY NETWORK- NOT ON NET 0  
 (13) LRS INVENTORY ROUTE & SUBROUTE  
 (16) LATITUDE 33 DEG 48 MIN 26.85 SEC  
 (17) LONGITUDE 117 DEG 46 MIN 43.57 SEC  
 (98) BORDER BRIDGE STATE CODE % SHARE %  
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- CONCRETE  
 TYPE- SLAB CODE 101  
 (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 1985  
 (106) YEAR RECONSTRUCTED 1990  
 (42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5  
 UNDER- WATERWAY 5  
 (28) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00  
 (29) AVERAGE DAILY TRAFFIC 1000  
 (30) YEAR OF ADT 2019 (109) TRUCK ADT 1 %  
 (19) BYPASS, DETOUR LENGTH 2 KM

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

(48) LENGTH OF MAXIMUM SPAN 7.3 M  
 (49) STRUCTURE LENGTH 8.5 M  
 (50) CURB OR SIDEWALK: LEFT 0.0 M RIGHT 0.0 M  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 8.8 M  
 (52) DECK WIDTH OUT TO OUT 11.9 M  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 6.1 M  
 (33) BRIDGE MEDIAN- NO MEDIAN 0  
 (34) SKEW 99 DEG (35) STRUCTURE FLARED NO  
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 8.8 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

## \*\*\*\*\*

SUFFICIENCY RATING = 88.6  
 PAINT CONDITION INDEX = N/A

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

(112) NBIS BRIDGE LENGTH- YES Y  
 (104) HIGHWAY SYSTEM- NOT ON NHS 0  
 (26) FUNCTIONAL CLASS- COLLECTOR URBAN 17  
 (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 7  
 (59) SUPERSTRUCTURE 7  
 (60) SUBSTRUCTURE 7  
 (61) CHANNEL & CHANNEL PROTECTION 8  
 (62) CULVERTS N

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

(31) DESIGN LOAD- MS-18+MOD OR HS-20+MOD 6  
 (63) OPERATING RATING METHOD- ASSIGNED (LFD) A  
 (64) OPERATING RATING- 54.1  
 (65) INVENTORY RATING METHOD- ASSIGNED (LFD) A  
 (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 5  
 (72) APPROACH ROADWAY ALIGNMENT 5  
 (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 1304  
 (115) YEAR OF FUTURE ADT 2037

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

(90) INSPECTION DATE 07/19 (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)