DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0008
Facility Carried: TRABUCO CANYON RD.
Location : 1.4 mi n/o Snta Margarit
City :
Inspection Date : 08/14/2015

Inspection Type

Routine	FC	Underwater	Special	Other
X				

Bridge Inspection Report

STRUCTURE NAME: TRABUCO CREEK

CONSTRUCTION INFORMATION

Year Built : 1980
Year Widened: N/A
Length (m) : 22.3

Skew (degrees): 33
No. of Joints : 0
No. of Hinges : 0

Structure Description: Simply supported 6-span PC/PS concrete deck slab units (7 each) with RC pier walls and RC open end seat abutments, all supported upon spread footings.

Span Configuration : (W) 6 @ 3.3 m (E) c/c

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20
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: Legal Type 3S2: Legal Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: (S) 0.1 m br, 7.1 m, 0.1 m br (N)
Total Width: 7.3 m Net Width: 7.1 m No. of Lanes: 2 Speed: 15 mph
Min. Vertical Clearance: Unimpaired Overlay Thickness: 4.0 Inches

Rail Code: 0000

Rail Type	Location	Length (ft)	Rail Modifications
Miscellaneous	Right/Left	138	

DESCRIPTION UNDER STRUCTURE

Channel Description: Natural cobbled earth trapezoidal with an RC invert through the site.

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
There channel was dry at the time of the inspection, so all substructure elements were visually inspected. Pedestrian access is from NW corner.

SUBSTRUCTURE
There are eroded concrete at the invert with exposed rebars and rusted, where in span 5

INSPECTION COMMENTARY

the eroded area is 17 ft X 8 ft at the middle, and in span 6 the eroded area is 2 ft X 1 ft in the south end.

SCOUR
The downstream grouted riprap is degraded, and there are holes about 10 ft in diameter by 5 ft deep in the rip rap and the bottom of rip rap is exposed about 1 ft in the spans as follows: in span 4 the holes is 13 ft X 5 ft; in span 5 the holes is 10 ft X 4 ft; and #6 the holes is 7 ft X 4 ft.

SAFE LOAD CAPACITY
A Load Rating Summary Sheet is included with this bridge inspection report. The current rating has been assigned in accordance with SM&I procedures.

ELEMENT INSPECTION RATINGS AND NOTES

Elem No.	Defect /Prot	Element Description	Env	Total Qty	Units	Qty in each Condition State St. 1	St. 2	St. 3	St. 4
39		Slab-PS Conc.	2	170	sq.m	166	0	4	0
	1080	Delamination/Spall/Patched Area	2	4		0	0	4	0
	510	Deck Wearing Surface-Asphalt	2	170	sq.m	156	14	0	0
	3220	Cracking-AC (WS)	2	14		0	14	0	0
(39-1080) There are 2 spalls at the south edge of the deck with corroded rebars. The spall size are 4' x 4" x 2"									
(39-510-3220) There are transverse 0.5" wide cracks over the bents									
210		Pier Wall-RC	2	45	m	38	0	7	0
	1080	Delamination/Spall/Patched Area	2	7		0	0	7	0
(210-1080) There are eroded concrete at the invert with exposed rebars and rusted, where in span 5 the eroded area is 17 ft X 8 ft at the middle, and in span 6 the eroded area is 2 ft X 1 ft in the south end.									
215		Abutment-RC	2	18	m	18	0	0	0
(215) There were no significant defects noted.									
312		Bearing-Enclosed	2	7	each	7	0	0	0
(312) There were no significant defects noted.									
333		Railing-Other	2	42	m	42	0	0	0
(333) There were no significant defects noted.									

WORK RECOMMENDATIONS

RecDate: 05/21/2009
Action : Sub-Patch spalls
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Repair the eroded concrete at the invert in spans 5 & 6 with exposed rebars of an area 5 m x 2.5 m in the middle of the span.

WORK RECOMMENDATIONS

RecDate: 05/01/2007
Action : Deck-Patch spalls
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Repair the 2 spalls 4 ft X 1 ft X 3" with exposed rebars at the south edge of the deck in spans #5 and #6.

Team Leader : Mikhael T. Zaarour

Report Author : Mikhael T. Zaarour

Inspected By : MT.Zaarour/KD.Henderson

Mikhael T. Zaarour (Registered Civil Engineer) 9/23/15 (Date)

CC:

STRUCTURE INVENTORY AND APPRAISAL REPORT

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

(1)	STATE NAME- CALIFORNIA	069
(8)	STRUCTURE NUMBER	55C0008
(5)	INVENTORY ROUTE(ON/UNDER)- ON	140000000
(2)	HIGHWAY AGENCY DISTRICT	12
(3)	COUNTY CODE 059 (4) PLACE CODE	00000
(6)	FEATURE INTERSECTED-	TRABUCO CREEK
(7)	FACILITY CARRIED-	TRABUCO CANYON RD.
(9)	LOCATION-	1.4 mi n/o Snta Margarita
(11)	MILEPOINT/KILOMETERPOINT	0
(12)	BASE HIGHWAY NETWORK- NOT ON NET	0
(13)	LRS INVENTORY ROUTE & SUBROUTE	
(16)	LATITUDE	33 DEG 39 MIN 33.72 SEC
(17)	LONGITUDE	117 DEG 35 MIN 11.76 SEC
(98)	BORDER BRIDGE STATE CODE % SHARE	%
(99)	BORDER BRIDGE STRUCTURE NUMBER	

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

(43)	STRUCTURE TYPE MAIN:MATERIAL- PRESTRESS CONC	
	TYPE- SLAB	CODE 501
(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- PRECAST CONC. PA	CODE 2
(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	1980
(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	3000
(30)	YEAR OF ADT 2009 (109) TRUCK ADT	1 %
(19)	BYPASS, DETOUR LENGTH	10 KM

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

(48)	LENGTH OF MAXIMUM SPAN	3.4 M
(49)	STRUCTURE LENGTH	22.3 M
(50)	CURB OR SIDEWALK: LEFT 0.0 M	RIGHT 0.0 M
(51)	BRIDGE ROADWAY WIDTH CURB TO CURB	7.1 M
(52)	DECK WIDTH OUT TO OUT	7.3 M
(32)	APPROACH ROADWAY WIDTH (W/SHOULDERS)	7.3 M
(33)	BRIDGE MEDIAN- NO MEDIAN	0
(34)	SKEW 33 DEG (35) STRUCTURE FLARED	NO
(10)	INVENTORY ROUTE MIN VERT CLEAR	99.99 M
(47)	INVENTORY ROUTE TOTAL HORIZ CLEAR	7.1 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 =	72.1
STATUS	
HEALTH INDEX	96.8
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 OR HS-20	5
(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	2
(69)	UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(71)	WATER ADEQUACY	4
(72)	APPROACH ROADWAY ALIGNMENT	4
(36)	TRAFFIC SAFETY FEATURES	0000
(113)	SCOUR CRITICAL BRIDGES	7

********** PROPOSED IMPROVEMENTS **********

(75)	TYPE OF WORK- DECK REHABILITATION	CODE 36
(76)	LENGTH OF STRUCTURE IMPROVEMENT	22.3 M
(94)	BRIDGE IMPROVEMENT COST	$163,000
(95)	ROADWAY IMPROVEMENT COST	$32,600
(96)	TOTAL PROJECT COST	$273,840
(97)	YEAR OF IMPROVEMENT COST ESTIMATE	2010
(114)	FUTURE ADT	8437
(115)	YEAR OF FUTURE ADT	2035

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

(90)	INSPECTION DATE 08/15 (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)