DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0182
Facility Carried: SILVERADO CNYN RD.
Location : 3.6 MI. E/O SANTIAGO ROA
City :
Inspection Date : 12/20/2015
Inspection Type
Routine FC Underwater Special Other
X

Bridge Inspection Report

STRUCTURE NAME: SILVERADO CANYON CREEK

CONSTRUCTION INFORMATION

Year Built : 1970
Year Widened: N/A
Length (m) : 13.1
Skew (degrees): 53
No. of Joints : 0
No. of Hinges : 0

Structure Description: Single span CIP/RC rigid frame slab, all supported upon spread footings.

Span Configuration : (W) 1 @ 6.7 m (E) clear, normal

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: UNKNOWN
Inventory Rating: RF=0.75 =>24.3 metric tons Calculation Method: FIELD EVAL/ENG JUDGMENT
Operating Rating: RF=1.25 =>40.5 metric tons Calculation Method: FIELD EVAL/ENG JUDGMENT
Permit Rating : PPPPP
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: (S) 0.3 m min deck, 0.3 m br, 6.0 m, 0.3 m br, 0.3 m min deck (N)
Total Width: 6.7 m Net Width: 6.1 m No. of Lanes: 2 Speed: 25 mph
Min. Vertical Clearance: Unimpaired Overlay Thickness: 3.0 Inches

Rail Code: 1000

Rail Type	Location	Length (ft)	Rail Modifications
Miscellaneous	Right/Left	124	

DESCRIPTION UNDER STRUCTURE

Channel Description: Natural earth trapezoidal 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

The water in the channel is 8" deep, so all visible substructure elements were visually inspected.

MISCELLANEOUS

INSPECTION COMMENTARY

Caltrans currently does not have a set of AS-Built plans for this structure. The county should provide As-Built Plans.

SUBSTRUCTURE

The west abutment exhibits a void 18" X 15" X 10" behind the abutment at south end at 2 ft above the ground level.

SAFE LOAD CAPACITY

A Load Rating Summary Sheet dated 2/10/2014 is on file for this structure. The current rating has been assigned in accordance with SMI procedures for concrete bridges without plans.

ELEMENT INSPECTION RATINGS AND NOTES

Elem No.	Defect /Prot	Defect	Element Description	Env	Total Qty	Units	Qty in each Condition State St. 1	St. 2	St. 3	St. 4
38			Slab-RC	2	302	sq.m	287	5	10	0
	1130		Cracking (RC and Other)	2	15		0	5	10	0
	510		Deck Wearing Surface-Asphalt	2	80	sq.m	55	25	0	0
		3220	Cracking-AC (WS)	2	25		0	25	0	0

(38-1130)
The soffit exhibits two full length longitudinal cracks, 1.5 mm wide with light brown efflorescence; and a crack 8 ft long and 1.5 mm wide white efflorescence.

(38-510-3220)
AC overlay exhibits random cracks, 3 mm wide and up to 4 ft long.

215			Abutment-RC	3	46	m	41	5	0	0
	1130		Cracking (RC and Other)	3	5		0	5	0	0

(215-1130)
There are five vertical cracks, up to 1.0 mm wide in the east abutment wall.

The west abutment exhibits four vertical cracks, up to 1.5 mm wide.

333			Railing-Other	2	38	m	29	4	3	2
	1020		Connection	2	6		0	1	3	2
	1220		Deterioration (Other)	2	3		0	3	0	0

(333-1020)
The north rail exhibits:
* timber post #4 (counting from west) is missing;
* post #8 is missing a nut; and
* post #10 is missing bolt and nut.

(333-1220)
Few timber posts are lightly decayed.

WORK RECOMMENDATIONS

WORK RECOMMENDATIONS

RecDate: 12/20/2015 Action : Sub-Scour Mitigate Work By: LOCAL AGENCY Status : PROPOSED	EstCost: StrTarget: 2 YEARS DistTarget: EA:		Fill the west abutment's void 18" X 15" X 10" behind the abutment at south end at 2 ft above the ground level.
RecDate: 12/14/2013 Action : Railing-Repair Work By: LOCAL AGENCY Status : PROPOSED	EstCost: StrTarget: 2 YEARS DistTarget: EA:		Replace the missing timber post #4 (counting from west); Post #8 is missing a nut; and post #10 is missing bolt and nut at the north rail.

Team Leader : Ashraf Shenouda

Report Author : Ashraf Shenouda

Inspected By : A.Shenouda/KD.Henderson

3/11/2016

Ashraf Shenouda (Registered Civil Engineer) (Date)

STRUCTURE INVENTORY AND APPRAISAL REPORT

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

(1) STATE NAME- CALIFORNIA 069
(8) STRUCTURE NUMBER **55C0182**
(5) INVENTORY ROUTE(ON/UNDER)- ON 140000000
(2) HIGHWAY AGENCY DISTRICT 12
(3) COUNTY CODE 059 (4) PLACE CODE 00000
(6) FEATURE INTERSECTED- SILVERADO CANYON CREEK
(7) FACILITY CARRIED- SILVERADO CNYN RD.
(9) LOCATION- 3.6 MI. E/O SANTIAGO ROAD
(11) MILEPOINT/KILOMETERPOINT 0
(12) BASE HIGHWAY NETWORK- NOT ON NET 0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 33 DEG 44 MIN 48.23 SEC
(17) LONGITUDE 117 DEG 37 MIN 08.39 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- BITUMINOUS CODE 6
B) TYPE OF MEMBRANE- NONE CODE 0
C) TYPE OF DECK PROTECTION- NONE CODE 0

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

(27) YEAR BUILT 1970
(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 2000
(30) YEAR OF ADT 2009 (109) TRUCK ADT 1 %
(19) BYPASS, DETOUR LENGTH 199 KM

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

(48) LENGTH OF MAXIMUM SPAN 6.7 M
(49) STRUCTURE LENGTH 13.1 M
(50) CURB OR SIDEWALK: LEFT 0.0 M RIGHT 0.0 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 6.1 M
(52) DECK WIDTH OUT TO OUT 6.7 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 6.1 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 53 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 6.1 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 = 51.5
STATUS
HEALTH INDEX 96.5
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- UNKNOWN 0
(63) OPERATING RATING METHOD- FIELD EVAL/ENG JUD 0
(64) OPERATING RATING- 40.5
(65) INVENTORY RATING METHOD- FIELD EVAL/ENG JUD 0
(66) INVENTORY RATING- 24.3
(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 6
(68) DECK GEOMETRY 2
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 9
(72) APPROACH ROADWAY ALIGNMENT 6
(36) TRAFFIC SAFETY FEATURES 1000
(113) SCOUR CRITICAL BRIDGES 8

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

(75) TYPE OF WORK- MISC STRUCTURAL WORK CODE 38
(76) LENGTH OF STRUCTURE IMPROVEMENT 13.1 M
(94) BRIDGE IMPROVEMENT COST $88,000
(95) ROADWAY IMPROVEMENT COST $17,600
(96) TOTAL PROJECT COST $147,840
(97) YEAR OF IMPROVEMENT COST ESTIMATE 2010
(114) FUTURE ADT 4204
(115) YEAR OF FUTURE ADT 2035

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

(90) INSPECTION DATE 12/15 (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)