DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0181
Facility Carried: SILVERADO CNYN RD.
Location : 3.1 MI E/O SANTIAGO ROAD
City :
Inspection Date : 07/11/2019

Bridge Inspection Report

Inspection Type

Routine	FC	Underwater	Special	Other
[X]	[ ]	[ ]	[ ]	[ ]

STRUCTURE NAME: SILVERADO CANYON CREEK

CONSTRUCTION INFORMATION

Year Built : 1970
Year Modified: N/A
Length (m) : 14
Skew (degrees): 59
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) 20.00 feet (E).

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) 2.00 feet min PCC deck, 1.00 foot br, 27.00 feet, 1.00 foot br, 2.00 feet min deck (N).

Total Width: 8.2 m Net Width: 7.3 m No. of Lanes: 2 Speed: 25 mph
Min. Vertical Clearance: Unimpaired Overlay Thickness: 3.0 inches

Rail Code: 0000

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
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 with rain boots due to 4.0 inches deep of water at the time of inspection.

There is no need for a special equipment to inspect this structure except rain boots if it is in raining season.

INSPECTION COMMENTARY

DECK AND ROADWAY
The bridge slab is covered by 3.0 inches thick of AC Overlay and it is in good condition.

There are three longitudinal hairline soffit cracks at (0.05 inches wide, 8.0 feet long) with efflorescence.

The southerly rail has two missing timber posts #3 and #7 (counting from west), and the metal beam is bent between posts #6 and #8 (see the attached photo no. 2).

Post #8 (counting from west) was decayed and has section loss at the southerly rail.

The northerly rail, posts #3, #4, #6 and #7 (counting from west) are decayed from to the top (see the attached photo no. 1).

Eastbound, the MBGR was minor hit by vehicular impacts at the southwest corner.

SUBSTRUCTURE
There is a 4.0 inches deep of water that is running along the easterly abutment wall; and it maybe a cause of 6.0 inches footing exposure at this location.

There are minor random vertical hairline cracks at (0.04 inches wide, 10.0 feet long) on both abutment walls.

SAFE LOAD CAPACITY
A Load Rating Summary Sheet dated 04/30/2018 is on file for this structure. As-built plans are not available for this bridge. The load rating was assigned in accordance with Section 5.10 of the SM&I Inspection Procedure Manual and Article 6.1.4 of the AASHTO Manual for Bridge Evaluation (2018, Third Edition).

ELEMENT INSPECTION RATINGS AND COMMENTARY

Elem No.	Defect /Prot	Element Description	Env	Total Qty	Units	Qty in each Condition State St. 1	St. 2	St. 3	St. 4
38		**Slab-RC**	2	434	sq.m	394	30	10	0
	1120	**Efflorescence/Rust Staining**	2	20		0	15	5	0
	1130	**Cracking (RC and Other)**	2	20		0	15	5	0
	510	**Deck Wearing Surface-Asphalt**	2	102	sq.m	102	0	0	0

(38)
Minor soffit cracks with brown, white efflorescence.

(38-1120)
There are three longitudinal hairline soffit cracks at (0.05 inches wide, 8.0 feet long) with efflorescence.

(38-1130)
There are three longitudinal hairline soffit cracks at (0.05 inches wide, 8.0 feet long) with efflorescence.

(38-510)
There were no significant defects noted.

215		**Abutment-RC**	3	60	m	52	8	0	0

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
	1130		Cracking (RC and Other)	3	8		0	8	0	0

(215)
There were no significant defects noted.

(215-1130)
There are random vertical cracks (0.05 inches wide) on both of abutment walls.

220			Pile Cap/Footing-RC	2	12	m	11	1	0	0
	6000		Scour	2	1		0	1	0	0

(220)
Minor footing exposure.

(220-6000)
There is a 4.0 inches deep of water that is running along the easterly abutment wall; and it maybe a cause of 6.0 inches footing exposure at this location.

333			Railing-Other	2	38	m	31	2	4	1
	1020		Connection	2	1		0	0	0	1
	1220		Deterioration (Other)	2	6		0	2	4	0

(333)
Vehicular impacts.

(333-1020)
The southerly rail has two missing timber posts #3 and #7 (counting from west), and the metal beam is bent between posts #6 and #8 (see the attached photo no. 2).

(333-1220)
Post #8 (counting from west) was decayed and has section loss at the southerly rail.

The northerly rail, posts #3, #4, #6 and #7 (counting from west) are decayed from to the top (see the attached photo no. 1).

WORK RECOMMENDATIONS

RecDate: 12/15/2017
Action : Railing-Repair
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 1 YEAR
DistTarget:
EA:

Replace the missing two missing timber posts #3 and #7 (counting from west) at the south rail.

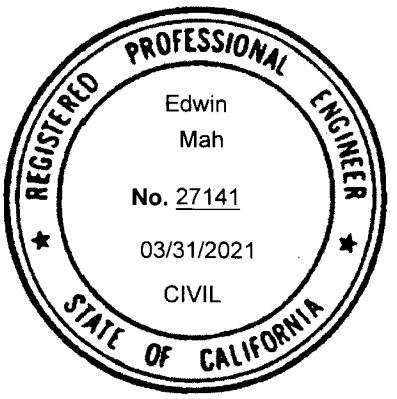
Team Leader : Nelson N. Vo

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 **55C0181**
(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- 3.1 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 49.79 SEC
(17) LONGITUDE 117 DEG 37 MIN 23.53 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 2019 (109) TRUCK ADT 1 %
(19) BYPASS, DETOUR LENGTH 199 KM

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

(48) LENGTH OF MAXIMUM SPAN 6.1 M
(49) STRUCTURE LENGTH 14.0 M
(50) CURB OR SIDEWALK: LEFT 0.0 M RIGHT 0.0 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 7.3 M
(52) DECK WIDTH OUT TO OUT 8.2 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 8.2 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 59 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 7.3 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 = 52.5

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 4
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 8
(72) APPROACH ROADWAY ALIGNMENT 8
(36) TRAFFIC SAFETY FEATURES 0000
(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 4204
(115) YEAR OF FUTURE ADT 2037

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

(90) INSPECTION DATE 07/19 (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)