



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0176
Facility Carried: KITTERMAN DRIVE
Location : 0.1 MI. S/O SLVRDO CYN R
City :
Inspection Date : 07/11/2011

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: SILVERADO CANYON CREEK

CONSTRUCTION INFORMATION

Year Built : 1970	Skew (degrees): 0
Year Widened: 1983	No. of Joints : 0
Length (m) : 9.1	No. of Hinges : 0

Structure Description: Simply supported single span treated timber stringers (8 each) with a timber deck, all supported by masonry rock abutments.

Span Configuration : (S) 1 @ 8.8 m (N) c/c

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20	
Inventory Rating: 19.9 metric tonnes	Calculation Method: ALLOWABLE STRESS
Operating Rating: 29 metric tonnes	Calculation Method: ALLOWABLE STRESS
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: (W) 0.2 m br, 3.8 m, 0.2 m br (E)		
Total Width: 4.3 m	Net Width: 3.8 m	No. of Lanes: 1
Rail Description: Timber		Rail Code : 0000
Min. Vertical Clearance: Unimpaired		

DESCRIPTION UNDER STRUCTURE

Channel Description: Natural earth trapezoidal with a cobbled bottom, grouted rock slopes through the site.

CONDITION TEXT

CONDITION OF STRUCTURE

There is a longitudinal horizontal split in the westerly face of the west exterior girder.

There was 2 meters deep stagnate water; all element were outside the water and visually inspected.

SCOUR

The southerly grouted rock slope has been undermined for its full length, up to 1 m vertically at its downstream terminus. The northerly grouted rock slope has been undermined at its downstream half, up to 0.5 m vertically at its downstream terminus.

ELEMENT INSPECTION RATINGS

Elem No.	Element Description	Env	Total		Qty in each Condition State				
			Qty	Units	St. 1	St. 2	St. 3	St. 4	St. 5
32	Timber Deck - w/ AC Overlay	2	40	sq.m.	40	0	0	0	
111	Timber Open Girder/Beam	2	70	m.	61	9	0	0	0
215	Reinforced Conc Abutment	2	8	m.	8	0	0	0	0
256	Slope Protection	2	2	ea.	0	2	0		
332	Timber Bridge Railing	2	18	m.	18	0	0	0	0
361	Scour	2	1	ea.	0	1	0	0	0

WORK RECOMMENDATIONS

RecDate: 02/14/2005

Action : Sub-Scour Mitigate

Work By: LOCAL AGENCY

Status : PROPOSED

EstCost:

StrTarget: 6 MONTHS

DistTarget:

EA:

The County of Orange should monitor the erosion beneath the grouted rock slopes during and after major storms until scour mitigation measures are installed at the structure.

RecDate: 02/14/2005

Action : Sub-Scour Mitigate

Work By: LOCAL AGENCY

Status : PROPOSED

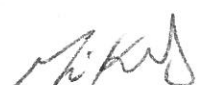
EstCost:

StrTarget: 2 YEARS

DistTarget:

EA:

The County of Orange should perform a hydraulic analysis of the structure, and install scour mitigation measures at the bridge.

Inspected By : MT.Zaarour/A.Shenouda

Mikhael T. Zaarour (Registered Civil Engineer)


STRUCTURE INVENTORY AND APPRAISAL REPORT

***** IDENTIFICATION *****

(1) STATE NAME- CALIFORNIA 069
 (8) STRUCTURE NUMBER 55C0176
 (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- KITTERMAN DRIVE
 (9) LOCATION- 0.1 MI. S/O SLVRDO CYN RD
 (11) MILEPOINT/KILOMETERPOINT 0
 (12) BASE HIGHWAY NETWORK- NOT ON NET 0
 (13) LRS INVENTORY ROUTE & SUBROUTE
 (16) LATITUDE 33 DEG 44 MIN 48.22 SEC
 (17) LONGITUDE 117 DEG 38 MIN 15.5 SEC
 (98) BORDER BRIDGE STATE CODE % SHARE %
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- WOOD OR TIMBER
 TYPE- STRINGER/MULTI-BEAM OR GDR CODE 702
 (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- TIMBER CODE 8
 (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 1983
 (42) TYPE OF SERVICE: ON- HIGHWAY 1
 UNDER- WATERWAY 5
 (28) LANES:ON STRUCTURE 01 UNDER STRUCTURE 00
 (29) AVERAGE DAILY TRAFFIC 200
 (30) YEAR OF ADT 2009 (109) TRUCK ADT 1 %
 (19) BYPASS, DETOUR LENGTH 2 KM

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

(48) LENGTH OF MAXIMUM SPAN 9.1 M
 (49) STRUCTURE LENGTH 9.1 M
 (50) CURB OR SIDEWALK: LEFT 0.0 M RIGHT 0.0 M
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 3.8 M
 (52) DECK WIDTH OUT TO OUT 4.3 M
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 3.8 M
 (33) BRIDGE MEDIAN- NO MEDIAN 0
 (34) SKEW 0 DEG (35) STRUCTURE FLARED NO
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 3.8 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 *****

SUFFICIENCY RATING = 62.6
 STATUS FUNCTIONALLY OBSOLETE
 HEALTH INDEX 96.7
 PAINT CONDITION INDEX = N/A

***** CLASSIFICATION *****

	CODE
(112) NBIS BRIDGE LENGTH- YES	Y
(104) HIGHWAY SYSTEM- NOT ON NHS	0
(26) FUNCTIONAL CLASS- MAJOR COLLECTOR RURAL	07
(100) DEFENSE HIGHWAY- NOT STRAHNET	0
(101) PARALLEL STRUCTURE- NONE EXISTS	N
(102) DIRECTION OF TRAFFIC- 1 LANE, 2 WAY	3
(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	6
(60) SUBSTRUCTURE	6
(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- ALLOWABLE STRESS	2
(64) OPERATING RATING-	29
(65) INVENTORY RATING METHOD- ALLOWABLE STRESS	2
(66) INVENTORY RATING-	19.9
(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	5
(68) DECK GEOMETRY	2
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(71) WATER ADEQUACY	9
(72) APPROACH ROADWAY ALIGNMENT	6
(36) TRAFFIC SAFETY FEATURES	0000
(113) SCOUR CRITICAL BRIDGES	8

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

	CODE
(75) TYPE OF WORK-	
(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	206
(115) YEAR OF FUTURE ADT	2029

***** INSPECTIONS *****

(90) INSPECTION DATE 07/11	(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)