



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0628
Facility Carried: ANTONIO PARKWAY
Location : 0.2 MI. N/O ORTEGA HWY
City :
Inspection Date : 02/10/2013
Inspection Type
Routine FC Underwater Special Other
☒

Bridge Inspection Report

STRUCTURE NAME: SAN JUAN CREEK

CONSTRUCTION INFORMATION

Year Built : 1997
Year Widened: 2013
Length (m) : 236.5
Skew (degrees): 22
No. of Joints : 2
No. of Hinges : 0

Structure Description: Continuous five span CIP/PS concrete box girder (five cells) with RC two column bents and with RC closed end seat abutments, all supported upon driven steel H-piles, and upon CIDH concrete piles.
Widen: Box girder from the west side, one one column bent.

Span Configuration : (S) 38.1 m, 3 @ 53.0 m, 38.1 m (N) c/c

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20
Inventory Rating: RF=1.00 =>32.4 metric tons
Operating Rating: RF=1.67 =>54.1 metric tons
Permit Rating : PPPPP
Posting Load : Type 3: Legal
Calculation Method: FIELD EVAL/ENG JUDGMENT
Calculation Method: FIELD EVAL/ENG JUDGMENT
Type 3S2: Legal
Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: (W) 0.3 m br, 1.5 m sw; 13.4 m min; (1.2 m - 4.3 m) curbed med.; 13.4 m; 1.4 m sw; 0.4 m br (E).

Total Width: 34.8 m Net Width: 26.8 m No. of Lanes: 6 Speed: 55 mph
Min. Vertical Clearance: Unimpaired

Rail Code: 1110

Rail Type	Location	Length (ft)	Rail Modifications
Type 26	Right/Left	1672	

DESCRIPTION UNDER STRUCTURE

Channel Description: Wide natural earth trapezoidal channel with heavy vegetation, brush, and trees within the creek.

INSPECTION COMMENTARY

REVISIONS

The bridge is currently widening from the west side only. New sidewalk was built next to the east concrete rail. Therefore the rail description was changed from Type 25 to Type 26.

The rail code was modified from 1110 to 0110.

The bridge was widened and some of the elements were changes accordingly as follows:

* Deck area was changed from 4896 m2 to 8142 m2.

Element #12 was changed from 4,896 sq. m to 6,490 sq. m.

NBI #47 (Total Horizontal Clearance under) was modified from 19.7 m to 13.4 m.

NBI #50A (Sidewalk Left) was modified from 0 m to 1.5 m.

NBI #50B (Sidewalk Right) was modified from 0 m to 1.4 m.

NBI #51 (Bridge Roadway Width) was modified from 19.7 m to 13.4 m.

NBI #52 (Deck Width out to out) was modified from 20.7 m to 34.5.

* No. of lanes was changed from 4 to 6. (The final lane stripping hasn't been marked so

INSPECTION COMMENTARY

ABME should verify the number of lanes next inspection).

* No. of approach slabs (Element #321) was changed from 8 to 13.

* No. of columns was changed from 8 to 12.

* Element 104 (P/S Box Girder): the entire quantity was changed from 236 m to 472 m. A quantity of 5 m was moved to state 2.

* Smart flag 358 (deck cracking) was added (State 2).

CONDITION OF STRUCTURE

CONCRETE DECK

The concrete deck exhibits mostly few short longitudinal cracks +/- 0.7 m long and 1.5 mm wide and spaced 0.3 m apart above the bents due to negative moments in northbound lane #2.

OVERHANGS

The easterly overhang exhibits few transverse cracks with white efflorescence at the bents.

SUPERSTRUCTURE

BOX GIRDER

The soffit of the box girder exhibits:

* in span 1: a longitudinal crack 3.0 m long at the easterly edge edge at 10 m from bent 2.

* in span 3: a longitudinal crack 0.8 m long at centerline of the easterly box girder (original box girder) at 10 m from bent #4.

* in span 4: a diagonal crack 0.8 m long just north of the east column on bent #4 with white efflorescence.

There are several longitudinal cracks at the southerly back wall at NB lanes.

SUBSTRUCTURE

COLUMNS

Easterly and columns #2 at bents #2, #3 and #4 exhibit 1-2 vertical cracks < 0.5 mm wide and 6.0 m high at most faces around.

Easterly column of bent #3 exhibit 4 spalls +/- 100 mm X 100 mm X 30 mm may be during the channel bed degradation.

SAFE LOAD CAPACITY

A Load Rating Summary Sheet is included with this bridge inspection report. The current rating has been assigned in accordance with SMI procedures.

CHANNEL/WATERWAY INVESTIGATION

There is 50 mm deep water through span #3; and 0.2 m at span #2.

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
12	Concrete Deck - Bare	2	6490	sq.m.	6490	0	0	0	0
104	P/S Conc Closed Web/Box Girder	2	472	m.	467	5	0	0	
205	Reinforced Conc Column or Pile Extension	2	12	ea.	12	0	0	0	0
215	Reinforced Conc Abutment	2	40	m.	40	0	0	0	0
220	Reinforced Conc Submerged Pile	2	1	ea.	1	0	0	0	0

Elem		Total			Qty in each Condition State				
No.	Element Description	Env	Qty	Units	St. 1	St. 2	St. 3	St. 4	St. 5
Cap/Footing									
225	Unpainted Steel Submerged Pile	2	1	ea.	1	0	0	0	0
252	Cast-In-Drilled Hole Concrete Pile	2	1	ea.	1	0	0	0	0
303	Assembly Joint Seal - Modular Type	2	40	m.	39	1	0		
312	Enclosed/Concealed Bearing	2	2	ea.	2	0	0	0	0
321	Reinforced Conc Approach Slab w/ or w/o AC Ovly	2	8	ea.	8	0	0	0	0
331	Reinforced Conc Bridge Railing	2	510	m.	510	0	0	0	0
358	Deck Cracking	2	1	ea.	0	1	0	0	0

WORK RECOMMENDATIONS - NONE

Team Leader : Ashraf Shenouda
 Report Author : Ashraf Shenouda
 Inspected By : A. Shenouda/KD. Henderson


 Ashraf Shenouda (Registered Civil Engineer) (Date)



STRUCTURE INVENTORY AND APPRAISAL REPORT

***** IDENTIFICATION *****

(1) STATE NAME- CALIFORNIA 069
 (8) STRUCTURE NUMBER 55C0628
 (5) INVENTORY ROUTE (ON/UNDER)- ON 14000000
 (2) HIGHWAY AGENCY DISTRICT 12
 (3) COUNTY CODE 059 (4) PLACE CODE 00000
 (6) FEATURE INTERSECTED- SAN JUAN CREEK
 (7) FACILITY CARRIED- ANTONIO PARKWAY
 (9) LOCATION- 0.2 MI. N/O ORTEGA HWY
 (11) MILEPOINT/KILOMETERPOINT 0
 (12) BASE HIGHWAY NETWORK- PART OF NET 1
 (13) LRS INVENTORY ROUTE & SUBROUTE 000000000000
 (16) LATITUDE 33 DEG 31 MIN 25 SEC
 (17) LONGITUDE 117 DEG 37 MIN 10.42 SEC
 (98) BORDER BRIDGE STATE CODE % SHARE %
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- CONCRETE CONT
 TYPE- BOX BEAM OR GIRDER - MULTI CODE 205
 (44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA
 TYPE- OTHER/NA CODE 000
 (45) NUMBER OF SPANS IN MAIN UNIT 5
 (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 1997
 (106) YEAR RECONSTRUCTED 2013
 (42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5
 UNDER- WATERWAY 5
 (28) LANES:ON STRUCTURE 06 UNDER STRUCTURE 00
 (29) AVERAGE DAILY TRAFFIC 12135
 (30) YEAR OF ADT 2011 (109) TRUCK ADT 1 %
 (19) BYPASS, DETOUR LENGTH 10 KM

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

(48) LENGTH OF MAXIMUM SPAN 53.0 M
 (49) STRUCTURE LENGTH 236.5 M
 (50) CURB OR SIDEWALK: LEFT 1.5 M RIGHT 1.4 M
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 26.8 M
 (52) DECK WIDTH OUT TO OUT 34.8 M
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 26.8 M
 (33) BRIDGE MEDIAN- CLOSED NON-MOUNTABLE 3
 (34) SKEW 22 DEG (35) STRUCTURE FLARED NO
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 13.4 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 = 94.3
 STATUS
 HEALTH INDEX 99.8
 PAINT CONDITION INDEX = N/A

***** CLASSIFICATION ***** CODE

(112) NBIS BRIDGE LENGTH- YES Y
 (104) HIGHWAY SYSTEM- ROUTE ON NHS 1
 (26) FUNCTIONAL CLASS- OTHER PRIN ART URBAN 14
 (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 6
 (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- FIELD EVAL/ENG JUD 0
 (64) OPERATING RATING- 54.1
 (65) INVENTORY RATING METHOD- FIELD EVAL/ENG JUL 0
 (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 7
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
 (71) WATER ADEQUACY 8
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 1110
 (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 21164
 (115) YEAR OF FUTURE ADT 2035

***** INSPECTIONS *****

(90) INSPECTION DATE 02/13 (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)