DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0628
Facility Carried: ANTONIO PARKWAY
Location : 0.2 MI. N/O ORTEGA HWY
City :
Inspection Date : 05/24/2017

Bridge Inspection Report

Inspection Type

Routine	FC	Underwater	Special	Other
X				

STRUCTURE NAME: SAN JUAN CREEK

CONSTRUCTION INFORMATION

Year Built : 1997
Year Modified: 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 with monolithic wingwalls, 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) 125.00 ft, 3 @ 174.00 ft, 125.00 ft (N)

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: (W) 1.00 ft br, 5.00 ft sw; 44.00 ft min; (4.000 ft - 14.00 ft) curbed med.; 44.00 ft; 5.00 ft sw; 1.00 ft br (E).

Total Width: 34.8 m Net Width: 26.8 m No. of Lanes: 6 Speed: 55 mph
Min. Vertical Clearance: Unimpaired Overlay Thickness: 0.0 inches

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 (at span 3).

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

This inspection was performed by walking on the sidewalks and under all spans of the superstructure. All elements were visually inspected, a full inspection is performed.

INSPECTION COMMENTARY

The water in the channel was 5 inches deep and 20 feet wide at spans 2 & 3 at time of inspection.

REVISIONS

The entire quantity of concrete abutments ELI #215 is modified from 48 m to 81 m because the wingwalls are monolithic with the abutments.

SUBSTRUCTURE

Debris 6 feet H X 10 feet W X 5 feet D is noticed in front of column 3 in Bent 2. (see the attached photo no. 6)

SAFE LOAD CAPACITY

A Load Rating Summary Sheet dated 03/30/3013 is on file for this structure. The current rating has been assigned in accordance with SM&I procedures.

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
16		**Top Flange-RC**	2	8230	sq.m	6705	1225	300	0
	1120	**Efflorescence/Rust Staining**	2	25		0	25	0	0
	1130	**Cracking (RC and Other)**	2	1500		0	1200	300	0
(16-1120) The overhangs have few transverse cracks with white efflorescence at Bents 3 & 4.									
(16-1130) The concrete deck exhibits mostly few short longitudinal cracks, +/- 2 feet long and 0.04-0.06 inches wide wide and spaced 1 foot apart above the bents in northbound lanes; few transverse cracks, 0.05 inches wide and 25 feet long above the bents. (see the attached photo no. 3)									
104		**Box Girder-PS Conc.**	2	472	m	467	5	0	0
	1110	**Cracking (PS Conc.)**	2	5		0	5	0	0
(104-1110) The soffit of the box girder have few longitudinal cracks with efflorescence at spans 1 through 5. (see the attached photo no. 5)									
205		**Column-RC**	2	12	each	12	0	0	0
(205) There were no significant defects noted.									
215		**Abutment-RC**	2	81	m	76	5	0	0
	1130	**Cracking (RC and Other)**	2	5		0	5	0	0
(215) There were no significant defects noted.									

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
			Monolithic wingwalls are included in the total quantity.							
			(215-1130) The north Abutmenet has ten vertical cracks, up to 0.05 inches wide. The south Abutmenet has six vertical cracks, up to 0.05 inches wide.							
220			**Pile Cap/Footing-RC**	2	56	m	56	0	0	0
			(220) There were no significant defects noted. The footing cap is exposed at both Abutments., 35 m at north Abutment and 21 m at the south Abutment.							
225			**Pile-Steel**	2	1	ea.	1	0	0	0
			(225) The pile element is included to indicate the presence of piles on this structure. The piles were not exposed for visual inspection. No indication of pile distress was noted in any substructure element.							
252			**Pile-CIDH**	2	1	ea.	1	0	0	0
			(252) The pile element is included to indicate the presence of piles on this structure. The piles were not exposed for visual inspection. No indication of pile distress was noted in any substructure element.							
303			**Joint-Assembly w/ Seal**	2	40	m	40	0	0	0
			(303) There were no significant defects noted.							
312			**Bearing-Enclosed**	2	2	each	2	0	0	0
			(312) There were no significant defects noted.							
321			**Approach Slab-RC**	2	520	sq.m	253	257	10	0
	1080		**Delamination/Spall/Patched Area**	2	17		0	17	0	0
	1130		**Cracking (RC and Other)**	2	250		0	240	10	0
			(321-1080) The approach slabs of northbound lanes 1 & 2 have a sound patched area 1.5 feet L X 25 feet W. (see the attached photo no. 2) The departure slab of southbound lane 1 has a sound patched area 1.5 feet L X 10 feet W.							
			(321-1130) The departure slab at southbound lane 2 has a longitudinal full length crack, up to 0.08 inches wide. (see the attached photo no. 7) The departure slabs of northbound lanes have map and longitudinal cracks, 0.05 inches wide and 12 inches apart. The approach slabs of southbound lanes have three longitudinal cracks, up to 0.05 inches wide.							

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
331			Railing-RC	2	473	m	448	25	0	0
	1130		Cracking (RC and Other)	2	25		0	25	0	0

(331-1130)
The concrete barriers have several vertical cracks, up to 0.05 inches wide.

WORK RECOMMENDATIONS

RecDate: 05/24/2017
Action : Deck-Methacrylate
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Clean and seal the concrete deck cracks, approach and departure slabs cracks by coating the bridge deck with methacrylate.

Team Leader : Ashraf Shenouda

Report Author : Ashraf Shenouda

Inspected By : A.Shenouda/KD.Henderson

11/17/17

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 20.86 SEC
(17) LONGITUDE 117 DEG 37 MIN 11.36 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

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SUFFICIENCY RATING = 94.3
STATUS
HEALTH INDEX 93.5
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 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 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 05/17 (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)

SAN JUAN CREEK

0.2 MI. N/O ORTEGA HWY 05/24/2017 [AAAJ] 55C0628

101 - PHOTO-Routine-Elevation View

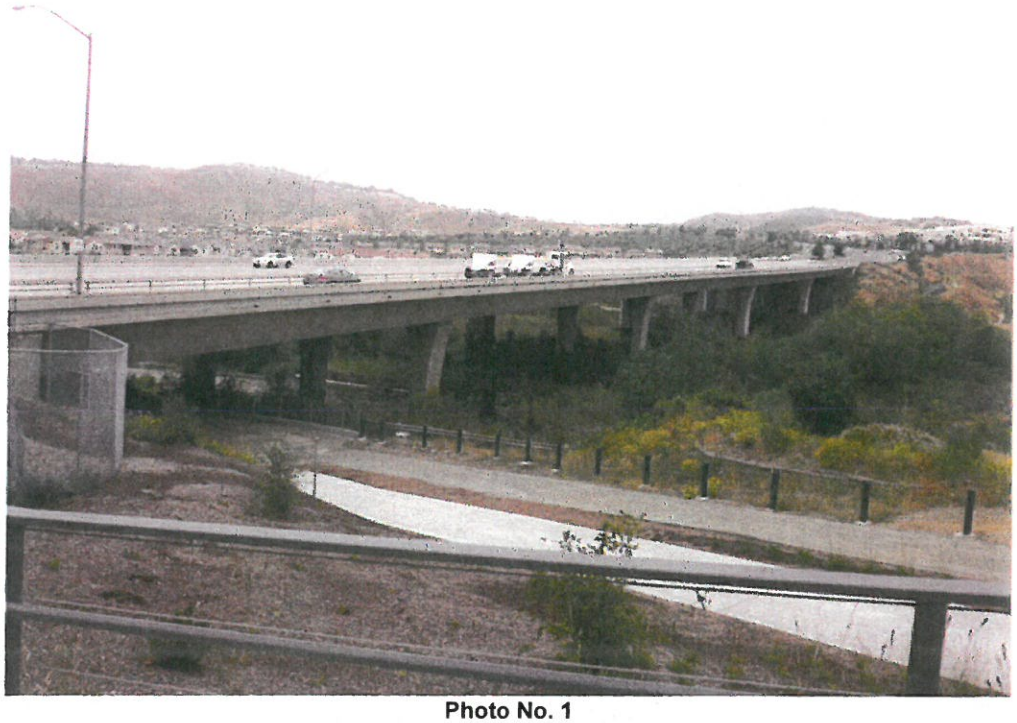

Photo No. 1

Elevation View looking North-West

105 - PHOTO-Deck-Misc.

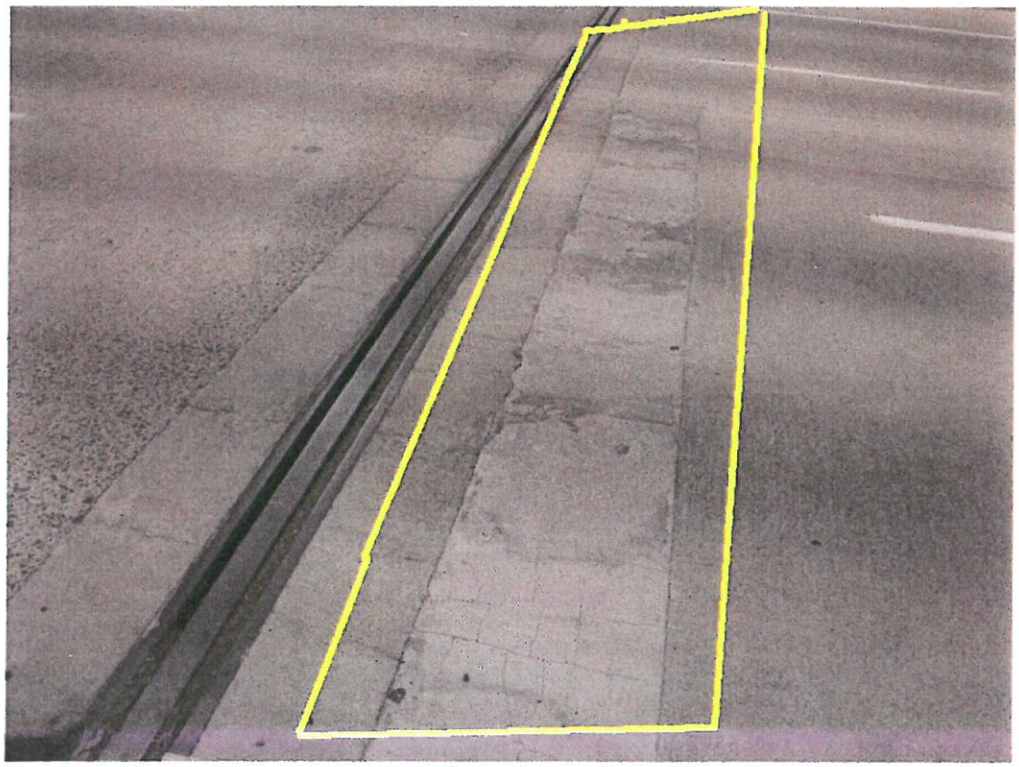

Photo No. 2

Approach slabs at south end of NB lanes 1 and 2 has sound patched area 1.5' ftX 25 ft.

SAN JUAN CREEK

0.2 MI. N/O ORTEGA HWY 05/24/2017 [AAAJ] 55C0628

105 - PHOTO-Deck-Misc.

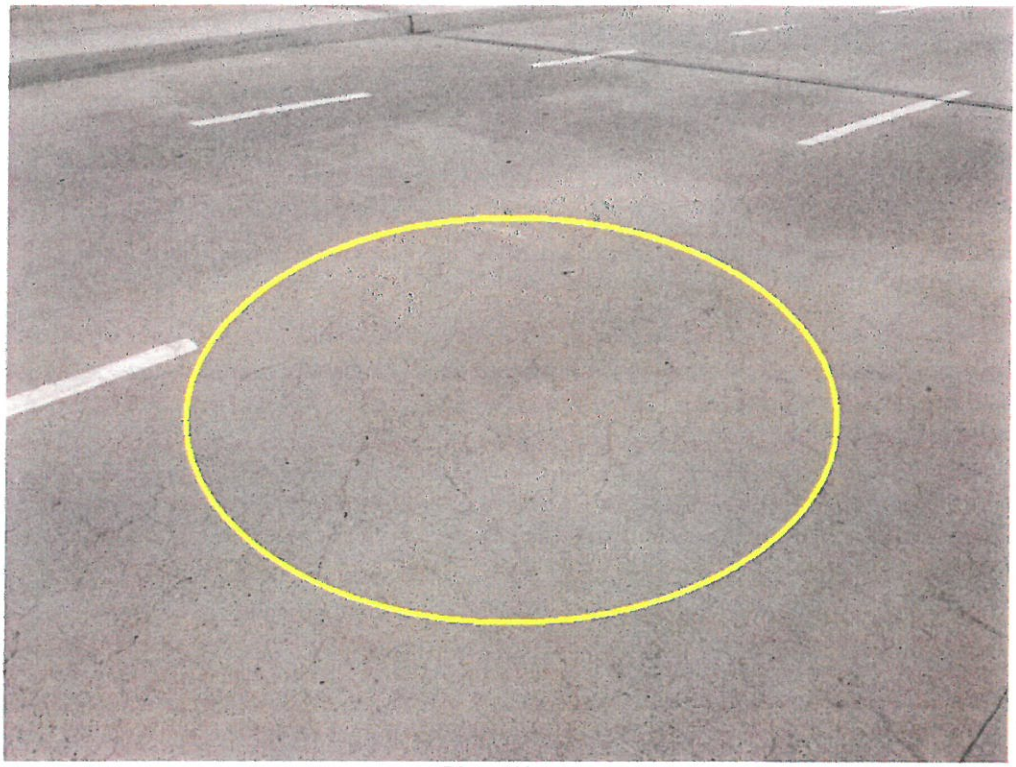

Photo No. 3
map cracks at the deck

115 - PHOTO-Sub-Unusual Conditions

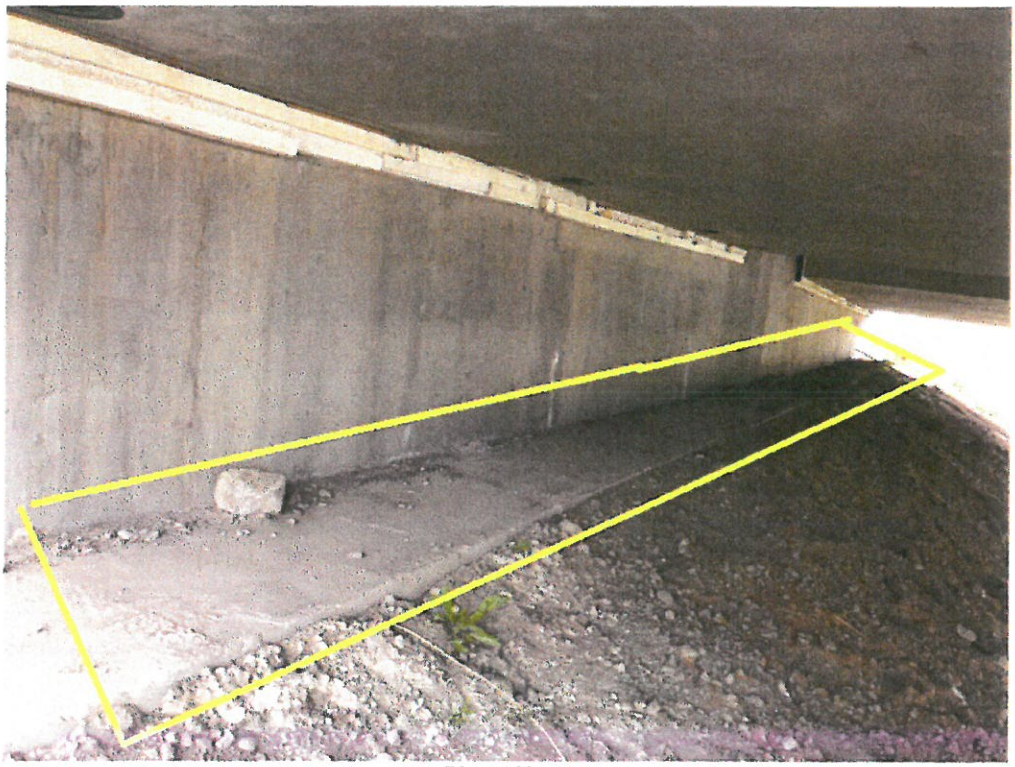

Photo No. 4
Exposed footing at south and north Abutments.

SAN JUAN CREEK

0.2 MI. N/O ORTEGA HWY 05/24/2017 [AAAJ] 55C0628

107 - PHOTO-Super-Damage/Deteroration

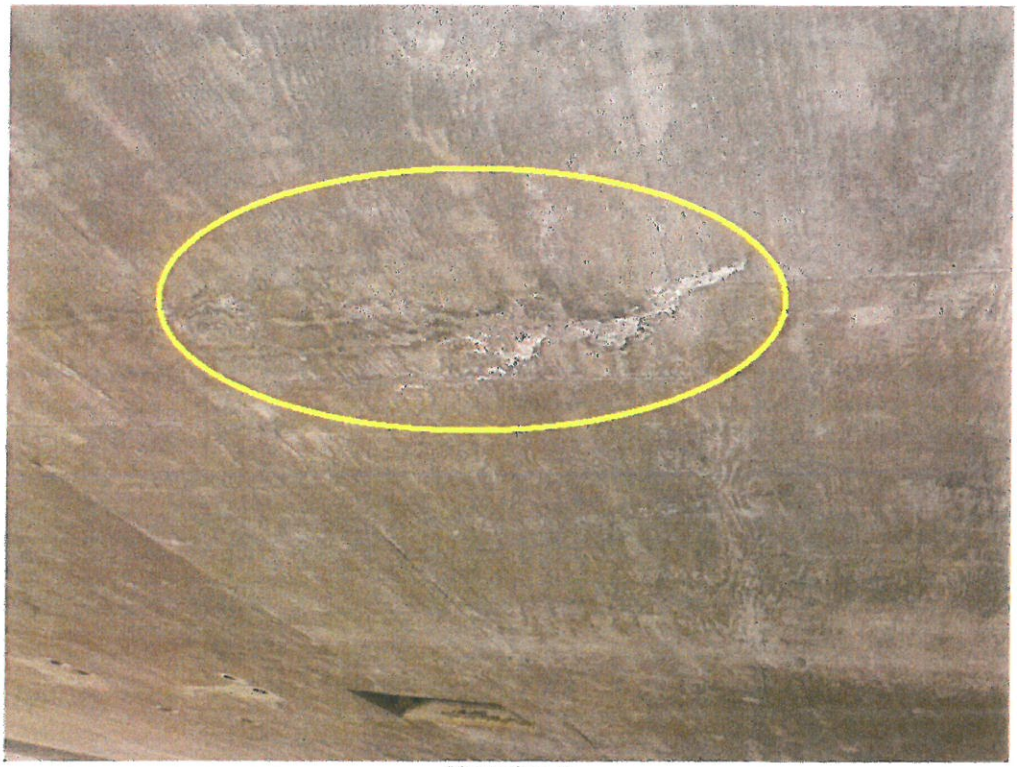

Photo No. 5

The soffit of the box girder has several cracks with white efflorescence.

115 - PHOTO-Sub-Unusual Conditions

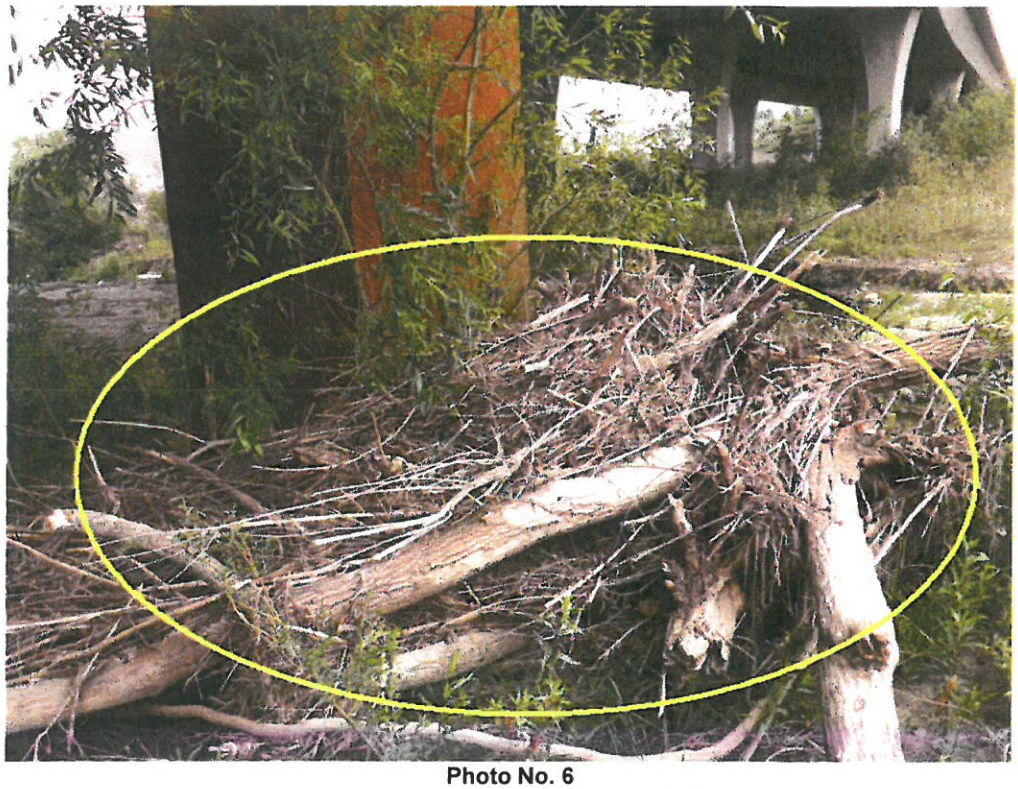

Photo No. 6

Debris in front of column 3 Bent 2.

SAN JUAN CREEK

0.2 MI. N/O ORTEGA HWY | 05/24/2017 [AAAJ] | 55C0628

105 - PHOTO-Deck-Misc.

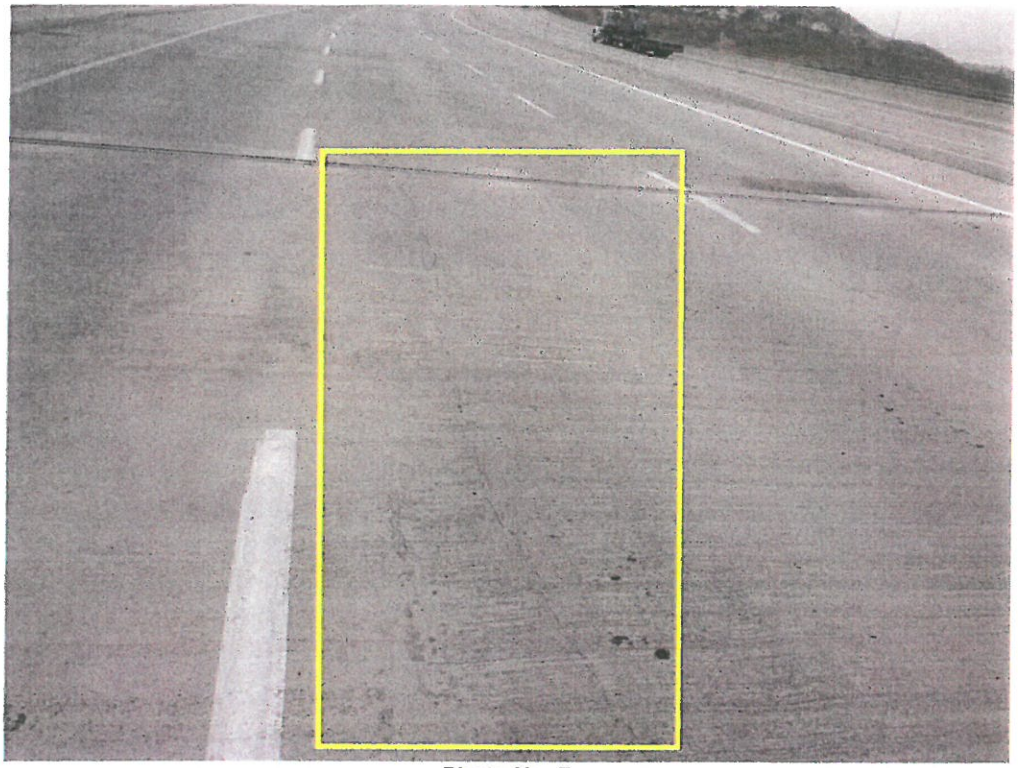

Photo No. 7

A longitudinal crack 0.08 inches wide at departure slab of SB lane 2.