

Bridge Inspection Report

**06748
US 64
over
White River**



Inspection Date:

Inspected By:

Inspection Type(s):

Inspector:

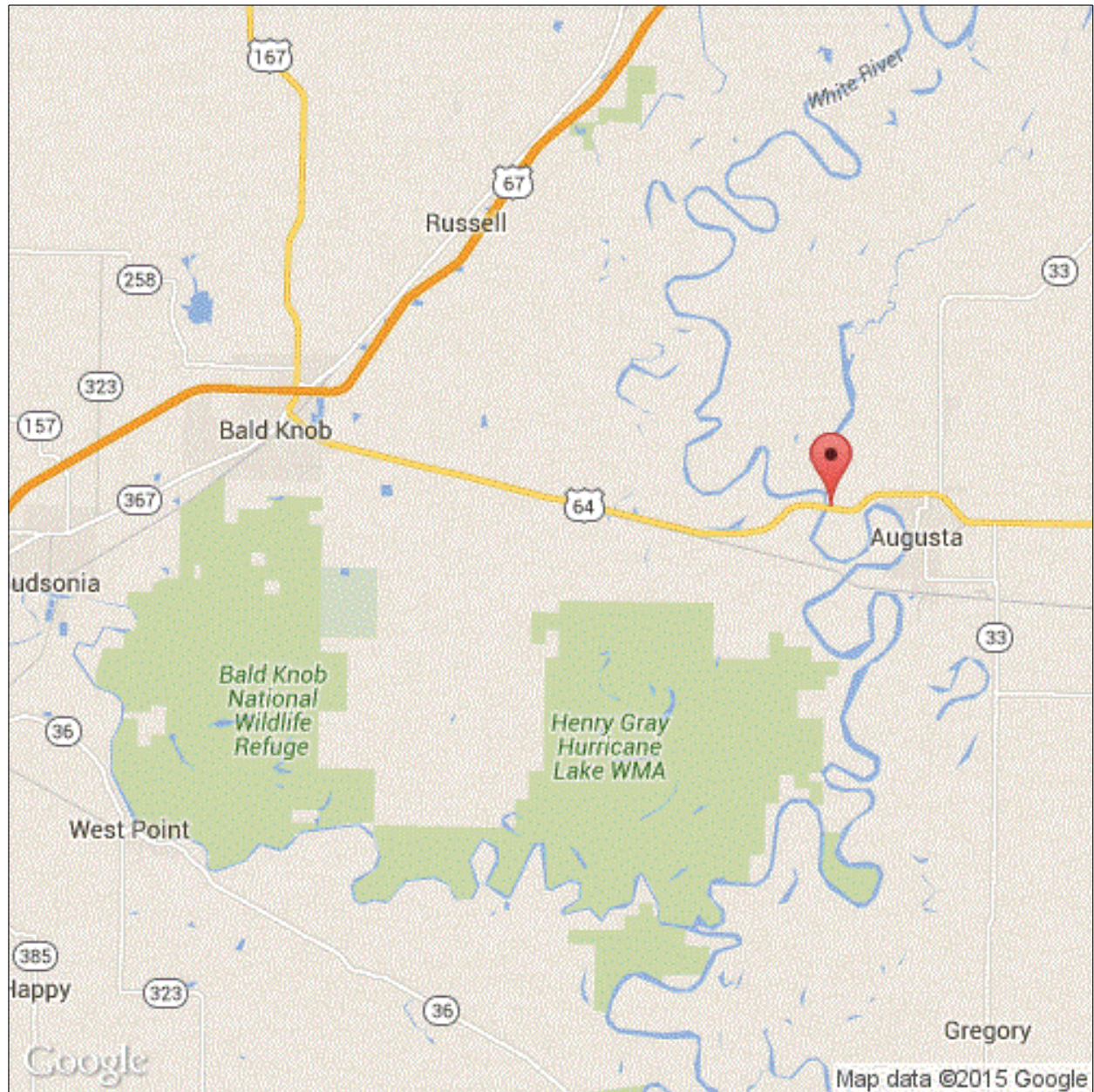
Structure Number: 06748

Inspection Date:

Facility Carried: US 64

Bridge Inspection Report

Location Map



Latitude: 35.29020

Longitude: -91.39896

Inspector:

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Executive Summary

The bridge was inspected using inspection vehicle Aspen 9025.

Inspector:

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Bridge Inspection Report

National Bridge Inventory

IDENTIFICATION						INSPECTIONS		
(1) STATE CODE	056 - Arkansas					(90) INSPECTION DATE	09/14/2015	
(8) STRUCTURE NUMBER	06748					(91) DESIGNATED INSPECTION FREQUENCY	24	
(5) INV. ROUTE (ON/UNDER)	1	2	1	64	0	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE	
(2) HIGHWAY AGENCY	01	(3) COUNTY CODE 147					A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	00000					B. UNDERWATER INSPECTION	N	
(6) FEATURES INTERSECTED	White River					C. OTHER SPECIAL	N	
(7) FACILITY CARRIED	US 64					CONDITION		
(9) LOCATION	1.1 M E of White Co Ln					(58) DECK	7	
(11) MILEPOINT 0.850	(12) BASE HIGHWAY NETWORK 1					(59) SUPERSTRUCTURE 7	(60) SUBSTRUCTURE 5	
(13A) LRS INVENTORY ROUTE	0000064120	(13B) SUBROUTE NUMBER 00					(61) CHANNEL & CHANNEL PROTECTION 7	(62) CULVERT N
(16) LATITUDE 35.29020	(17) LONGITUDE -91.39896					LOAD RATING AND POSTING		
(98A) BORDER BRIDGE CODE						(31) DESIGN LOAD	5	
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT					(63) METHOD USED TO DETERMINE OPERATING RATING	1	
STRUCTURE TYPE AND MATERIAL						(64) OPERATING RATING	49.1	
(43) STRUCTURE TYPE, MAIN						(65) METHOD USED TO DETERMINE INVENTORY RATING	1	
A) KIND OF MATERIAL/DESIGN: 4 - Steel continuous						(66) INVENTORY RATING	29.0	
B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder						(70) BRIDGE POSTING	5	
(44) STRUCTURE TYPE, APPROACH SPANS						(41) STRUCTURE OPEN/POSTED/CLOSED	A	
A) KIND OF MATERIAL/DESIGN: 6 - Prestressed concrete continuous						APPRAISAL		
B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder						(67) STRUCTURAL EVALUATION	5	
(45) NUMBER OF SPANS IN MAIN	3	(46) NUMBER OF APPROACH				26	(68) DECK GEOMETRY	6
(107) DECK STRUCTURE TYPE	1	(108A) WEARING SURFACE				1	(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(108B) DECK MEMBRANE	0	(108C) DECK PROTECTION				1	(71) WATERWAY ADEQUACY	8
AGE OF SERVICE						(72) APPROACH ROADWAY ALIGNMENT	8	
(27) YEAR BUILT	2002	(106) YEAR RECONSTRUCTED				0000	(36) TRAFFIC SAFETY FEATURE	
(42) TYPE OF SERVICE	ON 1	UNDER				5	36A) BRIDGE RAILINGS:	1
(28) LANES	ON 04	UNDER				00	36B) TRANSITIONS:	1
(29) AVERAGE DAILY TRAFFIC	5400	(19) BYPASS DETOUR LENGTH				66	36C) APPROACH GUARDRAIL:	1
(30) YEAR OF AVERAGE DAILY TRAFFIC	2014						36D) APPROACH GUARDRAIL ENDS:	1
(109) AVERAGE DAILY TRUCK TRAFFIC	1						(113) SCOUR CRITICAL BRIDGES	5
GEOMETRIC DATA						SUFFICIENCY RATING	0	STATUS 68.1
(48) LENGTH OF MAX SPAN (ft.)	312	(49) STRUCTURE LENGTH (ft.)				3155	CLASSIFICATION	
(50) CURB/SIDEWALK WIDTHS (ft.)	LEFT 0	RIGHT				0	(112) NBIS BRIDGE LENGTH	Y
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)						63.0	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	0
(52) DECK WIDTH, OUT-TO-OUT (ft.)						66.1	(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	06
(32) APPROACH ROADWAY WIDTH (ft.)						63.0	(100) STRAHNET HIGHWAY DESIGNATION	0
(33) BRIDGE MEDIAN	0	(34) SKEW (DEG.)				0	(101) PARALLEL STRUCTURE DESIGNATION	N
(35) STRUCTURE FLARED	0	(10) INV RTE, MIN VERT CLEAR (ft.)				99.99	(102) DIRECTION OF TRAFFIC	2
(47) TOTAL HORIZONTAL CLEARANCE (ft.)						63.0	(103) TEMP STRUCTURE	
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.)						99.90	(105) FEDERAL LANDS HIGHWAYS	0
(54) VERTICAL UNDER CLEARANCE (ft.)						N 0	(110) DESIGNATED NATIONAL NETWORK	0
(55) LATERAL UNDER CLEARANCE RIGHT (ft.)						N 99.9	(20) TOLL	3
(56) MIN LATERAL UNDER CLEARANCE (ft.)						0	(21) MAINTENANCE RESPONSIBILITY	01
PROPOSED IMPROVEMENTS						(22) OWNER	01	
(75A) TYPE OF WORK PROPOSED	(75B) WORK DONE BY					(37) HISTORICAL	4	
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.)						NAVIGATION DATA		
(94) BRIDGE IMPROVEMENT COST (\$)	0					(38) NAVIGATION CONTROL	1	
(95) ROADWAY IMPROVEMENT COST (\$)						(111) PIER OR ABUTMENT PROTECTION	5	
(96) TOTAL PROJECT COST						(39) NAV VERT CLEARANCE (ft.)	47	
(97) YEAR OF IMPROVEMENT COST ESTIMATE						(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0	
(114) FUTURE ADT 6386	(115) YEAR OF FUTURE ADT 2028					(40) NAV HORIZONTAL CLEARANCE (ft.)	300	

Inspector:

Structure Number: 06748

Inspection Date:

Facility Carried: US 64

Bridge Inspection Report

Element Inspection

Rollup

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	1- Ben.	208233	sq. ft.	187314	20919	0	0
1120 - Efflorescence/Rust Staining		10344		0	10344	0	0
1130 - Cracking (RC and Other)		10575		0	10575	0	0
107 - Steel Open Girder/Beam	1- Ben.	4824	ft.	4824	0	0	0
515 - Steel Protective Coating		113364	sq. ft.	0	113364	0	0
3430 - Oxide Film Degradation Color/Texture Adherence(Steel Protective Coatings)		113364		0	113364	0	0
109 - Prestressed Concrete Open Girder/Beam	1- Ben.	19496	ft.	19437	59	0	0
1080 - Delamination/Spall/Patched Area		3		0	3	0	0
1110 - Cracking (PSC)		56		0	56	0	0
205 - Reinforced Concrete Column	1- Ben.	84	each	84	0	0	0
210 - Reinforced Concrete Pier Wall	1- Ben.	60	ft.	52	0	6	2
1130 - Cracking (RC and Other)		8		0	0	6	2
215 - Reinforced Concrete Abutment	1- Ben.	188	ft.	176	12	0	0
1130 - Cracking (RC and Other)		12		0	12	0	0
234 - Reinforced Concrete Pier Cap	1- Ben.	1772	ft.	1771	1	0	0
1120 - Efflorescence/Rust Staining		1		0	1	0	0
1130 - Cracking (RC and Other)		0		0	0	0	0
300 - Strip Seal Expansion Joint	1- Ben.	441	ft.	441	0	0	0
303 - Assembly Joint with Seal	1- Ben.	132	ft.	0	132	0	0
2350 - Debris Impaction		132		0	132	0	0
310 - Elastomeric Bearing	1- Ben.	452	each	452	0	0	0
321 - Reinforced Concrete Approach Slab	1- Ben.	4752	sq. ft.	4712	40	0	0
331 - Reinforced Concrete Bridge Railing	1- Ben.	6308	ft.	6308	0	0	0

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Bridge Inspection Report

Element Inspection

Steel Plate Girder Unit

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	1- Ben.	53067	sq. ft.	52767	300	0	0
	The deck surface has numerous transverse and longitudinal cracks that have been sealed in the past. The epoxy sealer is beginning to fail in many areas.						
1130 - Cracking (RC and Other)		300			300		
107 - Steel Open Girder/Beam	1- Ben.	4824	ft.	4824			
	The steel superstructure is in good condition. The steel is dark brown and has a granular texture.						
515 - Steel Protective Coating		113364	sq. ft.	0	113364	0	0
3430 - Oxide Film Degradation Color/Texture Adherence(Steel Protective Coatings)		113364			113364		
205 - Reinforced Concrete Column	1- Ben.	6	each	6			
	Columns are in good condition.						
210 - Reinforced Concrete Pier Wall	1- Ben.	60	ft.	52	0	6	2
	Pier 1 between columns 2 & 3 are two large vertical cracks that reflect through the pier wall. The crack is up to 1/2" in width. Similar cracks occur between columns 1 & 2 and also at pier 2 between the columns with a width up to a 1/8". (Photo linked)						
1130 - Cracking (RC and Other)		8				6	2
234 - Reinforced Concrete Pier Cap	1- Ben.	126	ft.	126	0	0	0
	Pier 1 between column 2 & 3: large vertical crack (1/2" thick) in the sub cap. A crack similar between column 1 & 2. Pier 2 : similar cracks are occurring between the columns at this pier.						
1130 - Cracking (RC and Other)							
303 - Assembly Joint with Seal	1- Ben.	132	ft.	0	132	0	0
	The finger joint between span 11 and 12 is full of debris and is allowing sediment to accumulate onto the top of the cap and around the bearings. (photo linked)						
2350 - Debris Impaction		132			132		
310 - Elastomeric Bearing	1- Ben.	24	each	24			
	The bearings are in good condition.						
331 - Reinforced Concrete Bridge Railing	1- Ben.	1607	ft.	1607			

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Inspection Date:

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Bridge Inspection Report

Element Inspection

Prestressed Concrete Girder Unit

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	1- Ben.	155166	sq. ft.	134547	20619	0	0
	The deck has numerous transverse cracks at 3 foot spacing that have been sealed in the past. Some of the seal is beginning to fail. Also, the overhang has numerous transverse cracks with efflorescence staining. (photos linked)						
1120 - Efflorescence/Rust Staining		10344			10344		
1130 - Cracking (RC and Other)		10275			10275		
109 - Prestressed Concrete Open Girder/Beam	1- Ben.	19496	ft.	19437	59	0	0
	Span 10, Girder 7: A minor spall at the top flange near mid span. No Prestressed strands exposed. Back side of Bent 11, Girder 9: Spall at the top flange of girder. No Prestressed strands exposed. Span 20, Girder 8: small spall to the bottom flange. No Prestressed strands exposed. Span 10, Girder 4: 30' of honeycomb near the bottom web of girder. 2' of honeycomb to the bottom flange. Girders are cracked where they are made continuous over bents. This condition is typical throughout the bride. Most all diaphragms have minor cracking and spalls at the piers.						
1080 - Delamination/Spall/Patched Area		3			3		
1110 - Cracking (PSC)		56			56		
205 - Reinforced Concrete Column	1- Ben.	78	each	78			
	No deficiencies observed.						
215 - Reinforced Concrete Abutment	1- Ben.	188	ft.	176	12	0	0
	Minor vertical cracks in the back wall of both abutments.						
1130 - Cracking (RC and Other)		12			12		
234 - Reinforced Concrete Pier Cap	1- Ben.	1646	ft.	1645	1	0	0
	Bent 16, under Girder 7: Vertical crack with efflorescence. Majority of the caps have very small shrinkage cracks at the steps. Bent 12 has large quantity of debris on top of cap. (Photo Linked.)						
1120 - Efflorescence/Rust Staining		1			1		
300 - Strip Seal Expansion Joint	1- Ben.	441	ft.	441			
	The strip seal joints are in good condition. Some debris is accumulating in the joint.						
310 - Elastomeric Bearing	1- Ben.	428	each	428			
	The bearings are in good condition.						
321 - Reinforced Concrete Approach Slab	1- Ben.	4752	sq. ft.	4712	40		
	Both approach slabs have multiple longitudinal and transverse cracks that have been sealed in the past and the seal is beginning to fail.						
331 - Reinforced Concrete Bridge Railing	1- Ben.	4701	ft.	4701			

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Bridge Inspection Report

Pictures



Inspector:

Structure Number: 06748

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/14/2015

Priority: B - Pressing; 6 month completion goal

Work Code:

Deficiency Description:

Pier 1 between columns 2 & 3 are two large vertical cracks that reflect through the pier wall. The crack is up to 1/2" in width. Similar cracks occur between columns 1 & 2 and also at pier 2 between the columns with a width up to a 1/8". (Photo linked)

Work Description:

HBM Crew to epoxy inject and seal cracks at low water to water line

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Pier 1 between column 2 & 3: large vertical crack (1/2" thick) in the sub cap. A crack similar between column 1 & 2.

Stage: Open



PHOTO 2 Description Back side Pier 1 sub cap: view looking from above at the large vertical cracks reflect through the pier.

Inspector:

Structure Number: 06748

Inspection Date:

Facility Carried: US 64

Bridge Inspection Report

Maintenance Needs

Date Reported: 09/14/2015

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

ABUTMENTS

Abutments: 7 vertical efflorescent cracks at both abutments.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Date Reported: 09/14/2015

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

CHANNEL

Channel bank is eroding and moving laterally 300' – 400' upstream from bridge.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Date Reported: 09/14/2015

Priority: D - Routine

Work Code:

Deficiency Description:

NAVIGATION LIGHTS

Span 14: Conduit is loose from the mounting bracket at the centerline of the bridge.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Inspector:

Structure Number: 06748

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/14/2015

Priority: D - Routine

Work Code:

Deficiency Description:

R/C CAPS:

Minor shrinkage cracks.

Bent 12 and 13: Heavy amounts of dirt and debris on seat.

Added on 09/03/2013, TJB

Bent 12, Lt. ahead: Small spall on end of cap.

Bent 27: Between columns 2 & 3 minor spall bottom back side.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Bent 12: top of cap has a large amount of debris that has accumulated on it and around the bearings. This is the only joint on this bridge where this deficiency occurs.

Stage: Monitor



PHOTO 2 Description Bent 12 cap (side view): debris accumulating on top of cap and against the bearings.

Inspector:

Structure Number: 06748

Inspection Date:

Facility Carried: US 64

Bridge Inspection Report

Maintenance Needs

Date Reported: 09/14/2015

Priority: D - Routine

Work Code:

Deficiency Description:

FINGER JOINTS:

Debris in all the joints.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Bent 12: top of cap has a large amount of debris that has accumulated on it and around the bearings. This is the only joint on this bridge where this deficiency occurs.

Stage: Monitor



PHOTO 2 Description Bent 12 cap (side view): debris accumulating on top of cap and against the bearings.

Inspector:

Structure Number: 06748

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

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Priority: D - Routine

Work Code:

Deficiency Description:

APPROACH SLAB:

Both approach slabs are cracked. Cracks have been sealed in the past. Epoxy is starting to fail. Asphalt is cracked at both approaches.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1	Description	West approach slab has multiple sealed cracks. The epoxy is beginning to fail. Similar condition at the East approach.
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Priority: D - Routine

Work Code:

Deficiency Description:

R/ C COLUMNS:

Minor shrinkage cracks.

Piers 1 & 2: Efflorescence cracks in sub-caps.

Bent 15, Col. 3: Graffiti on the column.

Bent 16, Col. 3: Graffiti on the column.

Added on 09/03/2013, TJB

Bent 11, Col. 3: small spall on ahead side.

Bent 12, Col. 2: small spall on back side.

Bent 19, Col. 3: small spall on back side.

Pier 1: Col. 2 & 3: Graffiti on the column.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Date Reported: 09/14/2015

Priority: D - Routine

Work Code:

Deficiency Description:

JOINT SEAL MATERIAL:

Debris in all the joints.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Inspector:

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Inspection Date:

Facility Carried: US 64

Bridge Inspection Report

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Date Reported: 09/14/2015

Priority: D - Routine

Work Code:

Deficiency Description:

PRE-STRESSED CONCRETE GIRDERS:

Girders are cracking where made continuous over bents, typical condition through out bridge.

Most diaphragms have minor cracking and spalls at piers.

Span 10, Girder 7, Midspan: Minor spall at the top flange.

Span 10, Girder 4, Midspan: 30' of honeycomb of bottom web of girder, 2' on bottom flange.

Bent 11, Back. Girder 9: Spall at the top flange of girder.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 9, backside of bent 10 where the prestressed units are made continuous, Spalls and delaminations are beginning to form around the girders. This is typical through out the bridge.

Stage: Monitor



PHOTO 2 Description Bent 19 right side: spall and crack where prestressed girders are made continuous. Typical condition.

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Facility Carried: US 64

Bridge Inspection Report

Maintenance Needs

Stage: Monitor



PHOTO 3 Description Rt. side bent 26: spall that is exposing reinforcing strands where the concrete girders are made continuous. Spalling and cracking in this area was typical throughout the prestressed units. This location was the worst case.

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Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/14/2015

Priority: D - Routine

Work Code:

Deficiency Description:

DECK SURFACE:

Deck cracks have been sealed in the past. Epoxy is starting to fail.

Minor amounts of debris in the gutter line.

Transverse efflorescent cracks in the Lt. and Rt. overhangs.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 3: the deck has numerous transverse cracks at 3 foot spacing that have been sealed in the past. Some of the seal is beginning to fail.

Stage: Monitor



PHOTO 2 Description Overhang above bent 2: transverse cracks with efflorescence staining. Typical condition of the overhangs in the prestressed concrete girder units.