

# Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 12939      Agency ID: 108B00041N      SR: 2      SD/FO: SD

**IDENTIFICATION**

State 1: 21 Kentucky      Struc Num 8: 108B00041N  
 Facility Carried 7: KY-2885      Location 9: 4.2 MI SW JCT KY 55

Rte. (On/Under) 5A: Route On Structure      Rte. Signing Prefix 5B: 3 State Hwy

Level of Service 5C: 1 Mainline      Rte. Number 5D: 02885

Directional Suffix 5E: 0 N/A (NBI)      % Responsibility: Unknown

SHD District 2: District 5      County Code 3: Spencer (108)

Place Code 4: FIPS 0000      Mile Post 11: 2.632 mi

Feature Intersected 6: SIMPSON CREEK

Latitude 16: 37d 59' 33"      Longitude 17: 085d 23' 18"

Border Bridge Code 98: Unknown (P)

Border Bridge Number 99:

**INSPECTION**

Frequency 91: 12 months      Inspection Date 90: 6/1/2005      Next Inspection: 06/01/2006

FC Frequency 92A: NA      FC Inspection Date 93A: NA      Next FC Inspection: NA

UW Frequency 92B: 12 months      UW Inspection Date 93B: 7/10/2013      Next UW Inspection: 7/10/2014

SI Frequency 92C: NA      SI Date 93C: 12/5/2013      Next SI: NA

Element Frequency: 12 months      Element Inspection Date: 01/01/1901      Next Elem. Insp. Due 01/01/1901

**CLASSIFICATION**

Defense Highway 100: 0 Not a STRAHNET hwy      Parallel Structure 101: No || bridge exists

Direction of Traffic 102: 2 2-way traffic      Temporary Structure 103: Not Applicable (P)

Highway System 104: 0 Not on NHS      NBIS Length 112: Long Enough

Toll Facility 20: 3 On free road      Functional Class 26: 09 Rural Local

Defense Hwy 110: 0 Not a STRAHNET hwy      Historical Significance 37: 5 Not eligible for NRHP

Owner 22: 01 State Highway Agency

Custodian 21: 01 State Highway Agency

**STRUCTURE TYPE AND MATERIALS**

Number of Approach Spans 46: 0      Number of Spans Main Unit 45: 1

Main Span Material/Design 43A/B:

5 Prestressed Concrete      05 Multiple Box Beam

Deck Type 107: 2 Concrete Precast Panel

Wearing Surface 108A: 1 Monolithic Concrete

Membrane 108B: 0 None

Deck Protection 108C: None

**CONDITION**

Deck 58: 6 Satisfactory      Super 59: 6 Satisfactory      Sub 60: 4 Poor

Culvert 62: N N/A (NBI)      Channel/Channel Protection 61: 7 Minor Damage

**LOAD RATING AND POSTING**

Inventory Rating Method 65: 1 LF Load Factor      Operating Rating Method 63: 1 LF Load Factor

Inventory Rating 66: HS1 7      Operating Rating 64: HS1 7

Design Load 31: 4 M 18 (H 20)      Posting 70: 0 > 39 0% below

Posting status 41: P Posted for load

**AGE AND SERVICE**

Year Built 27: 1970      Year Reconstructed 106: 0

Type of Service on 42A: 1 Highway

Type of Service under 42B: 5 Waterway

Lanes on 28A: 2      Lanes Under 28B: 0      Detour Length 19: 29.8 mi

ADT 29: 158      Truck ADT 109: %      Year of ADT 30: 2013

**APPRAISAL**

Bridge Rail 36A: 0 Substandard      Approach Rail 36C: 0 Substandard

Transition 36B: 0 Substandard      Approach Rail Ends 36D: 0 Substandard

Str. Evaluation 67: 3      Deck Geometry 68: 2 Intolerable - Replace

Underclearance, Vertical and Horizontal 69: N Not applicable (NBI)

Waterway Adequacy 71: 4 Tolerable      Approach Alignment 72: 3 Intolerable - Correct

Scour Critical 113: 8 Stable Above Footing

**GEOMETRIC DATA**

Length Max Span 48: 21.5 ft      Structure Length 49: 24.0 ft

Curb/Sdwk Width L 50A: 0.5 ft      Curb/Sidewalk Width R 50B: 0.5 ft

Width Curb to Curb 51: 17.1 ft      Width Out to Out 52: 18.1 ft

Approach Roadway Width 32: 14.0 ft      Median 33: 0 No median (w/ shoulders)

Deck Area: 434. sq. ft

Skew 34: 0.00°      Structure Flared 35: 0 No flare

Vertical Clearance 10: 99.99 ft      Horiz. Clearance 47: 17.08 ft

Minimum Vertical Clearance Over Bridge 53: 100.0 ft

Minimum Vertical Underclearance Reference 54A: N Feature not hwy or RR

Minimum Vertical Underclearance 54B: 0.0 ft

Minimum Lateral Underclearance Reference R 55A: N Feature not hwy or RR

Minimum Lateral Underclearance R 55: 0.0 ft

Minimum Lateral Underclearance L 56: 0.0 ft

**PROPOSED IMPROVEMENTS**

Bridge Cost 94: \$ 50,000      Type of Work 75: 34 Widened w/ Deck Repl

Roadway Cost 95: \$ 5,000      Length of Improvement 76: 2.3 ft

Total Cost 96: \$ 54,000      Future ADT 114: 158

Year of Cost Estimate 97: 1999      Year of Future ADT 115: 2033

**NAVIGATION DATA**

Navigation Control 38: 0 Permit Not Required

Vertical Clearance 39: 0.0 ft      Horizontal Clearance 40: 0.0 ft

Pier Protection 111: Not Applicable (P)      L/R Bridge Vertical Clearance 116:

**ELEMENT CONDITION STATE DATA**

**BRIDGE NOTES**

-THE BRIDGE IS REQUIRED TO BE POSTED AT 3 TONS.  
 -Posting memo for 3 tons gross due to serious scour. ALI 11/27/13

## Structure Inventory and Appraisal Sheet (English Units)

### PAST INSPECTION

Inspection Date: 12/05/2013 Type: 7 Special (0 -60 months)  
Inspector: RMEREDI Pontis User Key: RMEREDI - Royce

#### Scope:

NBI:  Other:  Element:   
Underwater:  Fracture Critical:

### INSPECTION NOTES

Bridge is posted for 3 tons at both approaches. This special inspection was done to verify that 3 ton posting signs were installed at the structure. Item 41 was changed to "P Posted for Load", Date Field Posted (on KYTC-Bridge Tab) was populated and pictures of posting signs were uploaded to the Media Tab, General folder. A draft Underwater report, detailing the scour at the north abutment, has been turned in by Collins but a Pontis report has not been completed. Crack gauges were also installed by Mark Swieterman, Bridge Maintenance Scour Engineer, in early December. These gauges will be monitored by Mark Swieterman.

### PAST INSPECTION

Inspection Date: 07/10/2013 Type: 6 UnWater (60 months)  
Inspector: JJOHNSON Pontis User Key: JJOHNSON - Jost

#### Scope:

NBI:  Other:  Element:   
Underwater:  Fracture Critical:

### INSPECTION NOTES

#### SUBSTRUCTURE CONDITIONS:

Abutment 1: Concrete surfaces exhibited light scaling from the waterline to the channel bottom. Vertical cracking and spalling was noted in areas of previous repair. See Figure 4 in Appendix A for detailed inspection notes.

Abutment 2: Concrete surfaces exhibited light scaling from the waterline to the channel bottom. The footing along the south face was undermined and shear cracks were noted on both wingwalls. Construction joints were separated on both wingwalls. Spalling was noted in areas of previous repair. See Figure 5 in Appendix A for detailed inspection notes.

#### RECOMMENDATIONS:

Replace structure.

Perform load rating analysis and impose load restrictions on this structure based on results.

Perform structural repair to Abutment 2 with a replacement bridge, see be constructed

## Structure Inventory and Appraisal Sheet (English Units)

### PAST INSPECTION

Inspection Date: 02/22/2013

Type: 2 Standard (24 months)

Inspector: WPHILLIPS

Pontis User Key: WPHILLIPS - will j

#### Scope:

NBI:  Other:  Element:   
Underwater:  Fracture Critical:

### INSPECTION NOTES

Bridge is located over a creek fairly close to the Salt River. Previous inspections note that water is 5 to 6 feet deep at the abutments and 1988 inspection notes that there was some undermining of the north abutment. Due to weather conditions and water depth, no probing or underwater inspection during this inspection. Consultant underwater inspection or re-inspection this summer during low-flow conditions is recommended. A special inspection was uploaded to confirm bridge posting so Item #41 was changed, from 2A2 to 2P2, on 03/27/2014 by Susanne Winter to appease the FHWA error check.

### PAST INSPECTION

Inspection Date: 02/10/2011

Type: 2 Standard (24 months)

Inspector: TGKING

Pontis User Key: TGKING - Terry Ki

#### Scope:

NBI:  Other:  Element:   
Underwater:  Fracture Critical:

### INSPECTION NOTES

Bridge is located over a creek fairly close to the Salt River. Previous inspections note that water is 5 to 6 feet deep at the abutments and 1988 inspection notes that there was some undermining of the north abutment. Due to weather conditions and water depth, no probing or underwater inspection during this inspection. Consultant underwater inspection or re-inspection this summer during low-flow conditions is recommended.

## Structure Inventory and Appraisal Sheet (English Units)

### PAST INSPECTION

Inspection Date: 05/20/2009

Type: 2 Standard (24 months)

Inspector: DDUDGEON

Pontis User Key: DDUDGEON - Dai

#### Scope:

NBI:

Other:

Element:

Underwater:

Fracture Critical:

### INSPECTION NOTES

### PAST INSPECTION

Inspection Date: 01/15/2008

Type: 2 Standard (24 months)

Inspector: DDUDGEON

Pontis User Key: DDUDGEON - Dai

#### Scope:

NBI:

Other:

Element:

Underwater:

Fracture Critical:

### INSPECTION NOTES

## Structure Inventory and Appraisal Sheet (English Units)

**PAST INSPECTION**

Inspection Date: 06/01/2005                      Type: 1 SIA (Initial Inventory)  
 Inspector: SSMITH                                      Pontis User Key: SSMITH - Stepher

Scope:  
 NBI:                       Other:                       Element:   
 Underwater:                       Fracture Critical:

**INSPECTION NOTES**

**INSPECTOR WORK CANDIDATES**

Work Candidate ID	Action	Object	Agency Status	Agency Priority	Assigned to a Project	Rec. Date
A-KYTC-18E6C75B-00000010	Other	Bridge	unknown	Medium	No	2/22/2013
A-KYTC-18E6C75B-0000000C	Ovly Deck	Bare Concrete Deck	unknown	Medium	No	2/22/2013
A-KYTC-18E6C75B-00000014	Min Repair	Transitions	unknown	Medium	No	2/22/2013
A-KYTC-18E6C75B-0000000E	Rehab Elem	Long. Shear Keys	unknown	Medium	No	2/22/2013

**108B00041N Inspection 02-22-2013**



**Approach - Looking Ahead Station**



**Approach - Looking Back Station**

**108B00041N Inspection 02-22-2013**



**Transverse Cracking in Approach Slab - Typical**



**Guardrail Damage at Northeast Quadrant**

**108B00041N Inspection 02-22-2013**



**Elevation - Looking West**



**Elevation - Looking East**



**108B00041N Inspection 02-22-2013**



**Deterioration of Joints between Beams - Looking South**



**East Curb Spalled with Exposed Reinforcing Steel**

**108B00041N Inspection 02-22-2013**



**Abutment 1 Spall and Cracking on East Side**



**Abutment 2 Elevation - Minor Vertical Cracking, Spalls along Construction Joint and Staining from Leaking Joints**

**108B00041N Inspection 02-22-2013**



**Guardrail Post not Embedded - Erosion and loss of Fill at Northwest Quadrant**



**Lateral Tension Rod - Rust with Section Loss (Typical)**