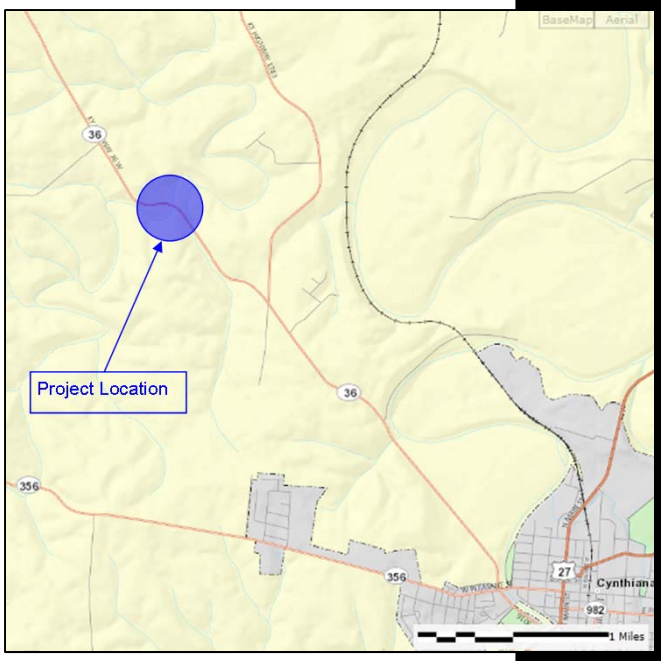
Data Needs Analysis



Scoping Study

Harrison County – KY 36
From MP 12.583 to 12.623
Item No. 6-8500.00

Prepared by the KYTC
Division of Planning and
KYTC District 6

November 2012

KENTUCKY TRANSPORTATION CABINET

I. PRELIMINARY PROJECT INFORMATION

County: Harrison | Item No.: 6-8500.00
Route Number(s): KY 36 | Road Name: Williamstown Road
Program No.: 8767501D | UPN: FD04 049 0036 012-013
Federal Project No.: | Type of Work: Bridge Replacement

2012 Highway Plan Project Description:

Reconstruct bridge over Mill Creek on KY-36 four miles west of Cynthiana.

Beginning MP: 12.583 | Ending MP: 12.623 | Project Length: 0.040 mile

Functional Class.: ☐ Urban ☑ Rural — Arterial
State Class.: ☐ Primary ☑ Secondary
Route is on: ☐ NHS ☑ NN ☐ Ext Wt
MPO Area: Not Applicable
Truck Class.: AA
In TIP: ☐ Yes ☐ No
% Trucks: 9.4
ADT (current): 3,170 2011
Terrain: Rolling
Access Control: ☐ None ☑ Permit ☐ Fully Controlled ☐ Partial Spacing:
Median Type: ☑ Undivided ☐ Divided (Type):
Existing Bike Accommodations: Shared Lane
Ped: ☐ Sidewalk
Posted Speed: ☐ 35 mph ☐ 45 mph ☑ 55 mph ☐ Other (Specify):
KYTC Guidelines Preliminarily Based on : 55 MPH Proposed Design Speed

Roadway Data:	EXISTING	COMMON GEOMETRIC PRACTICES*
No. of Lanes	2	2
Lane Width	10 ft	12 ft
Shoulder Width	2 ft	8 ft
Max. Superelevation**	Unknown	6%
Minimum Radius**	740 ft	1065 ft
Maximum Grade	Unknown	5%
Minimum Sight Dist.	Unknown	495
Sidewalk Width(urban)	N/A	N/A
Clear-zone***	12 ft	24-30 ft

Existing Rdwy. Plans available? ☐ Yes ☑ No
Year of Plans:
☐ Traffic Forecast Requested
Date Requested:
☑ Mapping/Survey Requested
Date Requested:
Type: Conventional

Project Notes/Design Exceptions?:

*Based on proposed Design Speed, **AASHTO's A Policy on Geometric Design of Highways and Streets, ***AASHTO's Roadside Design Guide

Bridge No.*:	049B0032N	(Bridge #2)
Sufficiency Rating	67.3	
Total Length	86 ft	
Width, curb to curb	19.7 ft	
Span Lengths	40 ft	
Year Built	1928	
Posted Weight Limit	N/A	
Structurally Deficient?	No	
Functionally Obsolete?	Yes	
Existing Bridge Type	Concrete T-Beam	

Existing Geotech data available? ☐ Yes ☑ No

Detour Length(s): 11 miles

*If more than two bridges are located on the project, include additions sheets.

II. PROJECT PURPOSE AND NEED

A. Legislation

This project is included in the 2012-2018 Highway Plan.

Funding	Phase	Year	Amount
SPP	D	2013	$550,000
SPP	R	2013	$250,000
SPP	U	2013	$100,000
SPP	C	2013	$3,000,000

B. Project Status

Work to date is limited to having a survey obtained. Design funds have been authorized.

C. System Linkage

KY 36 is a main route from I-75 to the city of Cynthiana.

D. Modal Interrelationships

Truck volumes on this portion of KY 36 is about 9% and this is the primary route providing access between I-75 north and commercial and industrial sites in the Cynthiana area. This road serves a significant amount of freight traffic.

E. Social Demands & Economic Development

KY 36 provides essential access to Cynthiana and surrounding areas. A good connection to the interstate system is important for continued economic development in the area.

F. Transportation Demand

This portion of KY 36 serves approximately 3,200 vehicles per day.

II. PROJECT PURPOSE AND NEED (cont.)

G. Capacity

The existing cross-section consists of two lanes, providing adequate capacity to handle current traffic volumes.

H. Safety

During the period from 10/1/2009 to 9/30/2012, a total of 16 crashes were recorded, resulting in a critical rate factor of 1.77. This indicates a probable safety issue at this location. Of the 16 crashes, 3 resulted in injuries and 1 resulted in a fatality. The vast majority of crashes occurred on wet pavement; only one crash occurred on dry pavement. Fourteen of the crashes were single-vehicle collisions; the other 2 were side-swipe collisions. Nine of the crashes occurred on the S-curves.

I. Roadway Deficiencies

The bridge over Mill Creek is located in an S-curve which has a lower design speed than the posted limit and adjacent sections of KY 36. The curves are posted with an advisory speed of 25 MPH, while the posted speed limit is 55 MPH. The bridge is functionally obsolete as it is more narrow than the approaching roadway and it does not have any shoulders. Shoulders along KY 36 are minimal.

Draft Purpose and Need Statement:

Purpose: The purpose of the project is to improve safety on KY 36 in the vicinity of the bridge over Mill Creek.

Need: This section of KY 36 around the bridge over Mill Creek contains a sharp S-curve and has a high crash rate. The bridge is functionally obsolete due to narrow lanes & no shoulders. The majority of the crashes have occurred on wet pavement and within the limits of the s-curves.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

Project is in: ☑ Attainment area ☐ Nonattainment or Maintenance Area ☐ PM 2.5 County

STIP Pg.#: N/A TIP Pg.#: N/A

B. Archeology/Historic Resources

☐ Known Archeological or Historic Resources are present

No known archeological or historic resources are present.

C. Threatened and Endangered Species

Habitat for running buffalo clover, mussels, and Indiana bat may be present.

D. Hazardous Materials

☐ Potentially Contaminated Sites are present ☑ Potential Bridge or Structure Demolition

Bridge demolition required.

E. Permitting

Check all that may apply: ☐ Waters of the US ☐ MS4 area ☑ Floodplain Impacts ☐ Navigable Waters of the US Impacts

Are 401/404 Permits likely to be required? ☑ Yes ☐ No Impacts to: ☐ Wetlands ☑ Stream/Lake/Pond

☑ ACE LON ☑ ACE NW ☐ ACE IP ☐ DOW IWQC ☐ Special Use Waters

F. Noise

Are existing or planned noise sensitive receptors adjacent to the proposed project? ☐ Yes ☑ No

Is this considered a "Type I Project" according to the KYTC Noise Analysis and Abatement Policy? ☐ Yes ☑ No

Alternate I could be considered a Type I Project. Alternate II would not be considered a Type II Project.

G. Socioeconomic

Check all that may apply: ☐ Low Income/Minority Populations affected ☐ Relocations ☐ Local Land Use Plan available

Alternate I would involve relocations. Alternate II would not involve any relocations.

H. Section 4(f) or 6(f) Resources

The following are present on the project: ☐ Section 4(f) Resources ☐ Section 6(f) Resources

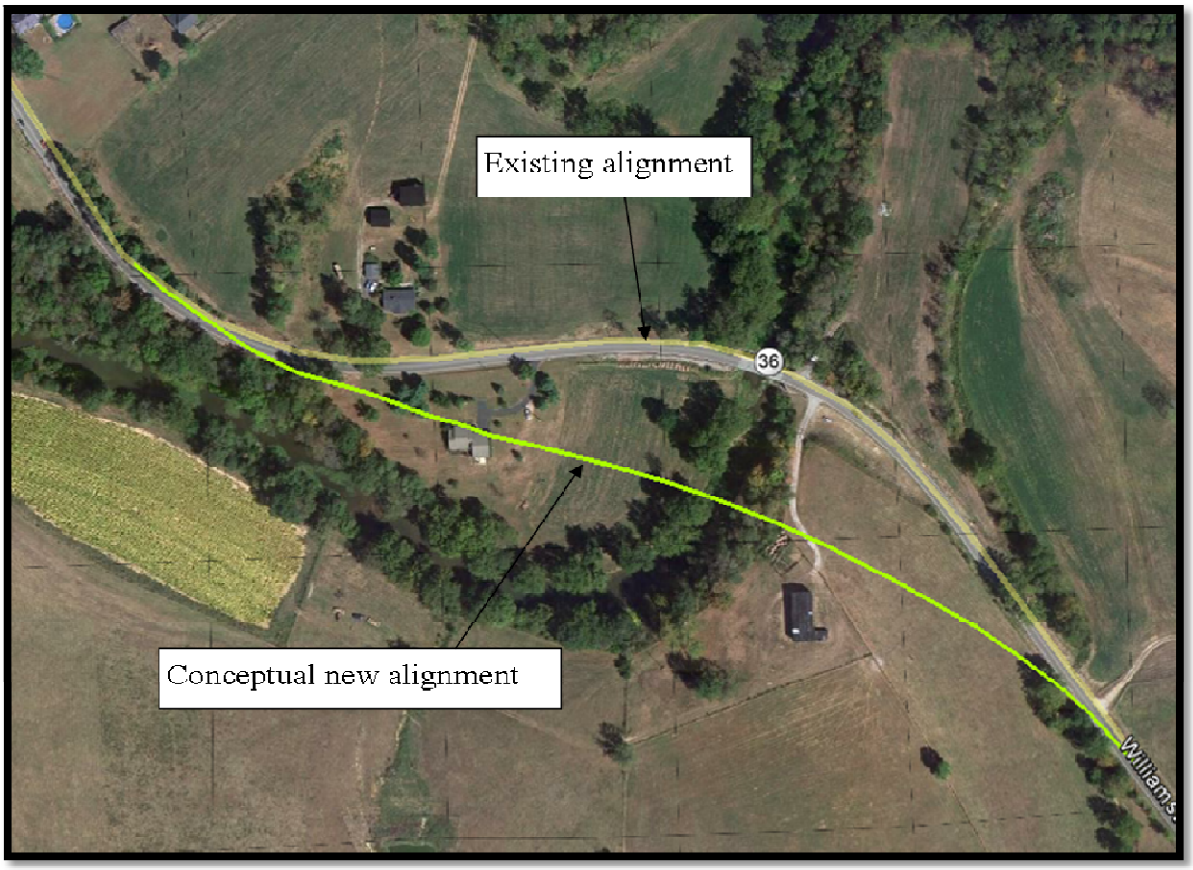
No known are present on this project.

Anticipated Environmental Document: None (Completely State funded)

IV. PROJECT SCOPING

Alternate I

Since the bridge is not structurally deficient, and the main issue is the alignment of the S-curve on which the bridge is located. An alternative to replace the bridge in the existing location was not considered. Instead, a conceptual alternative was developed based on a 55 mph design speed, which includes realigning KY 36 southwest of the existing alignment. This alternative will likely require one residential/business relocation of an operating farm. A barn would also need to be acquired.



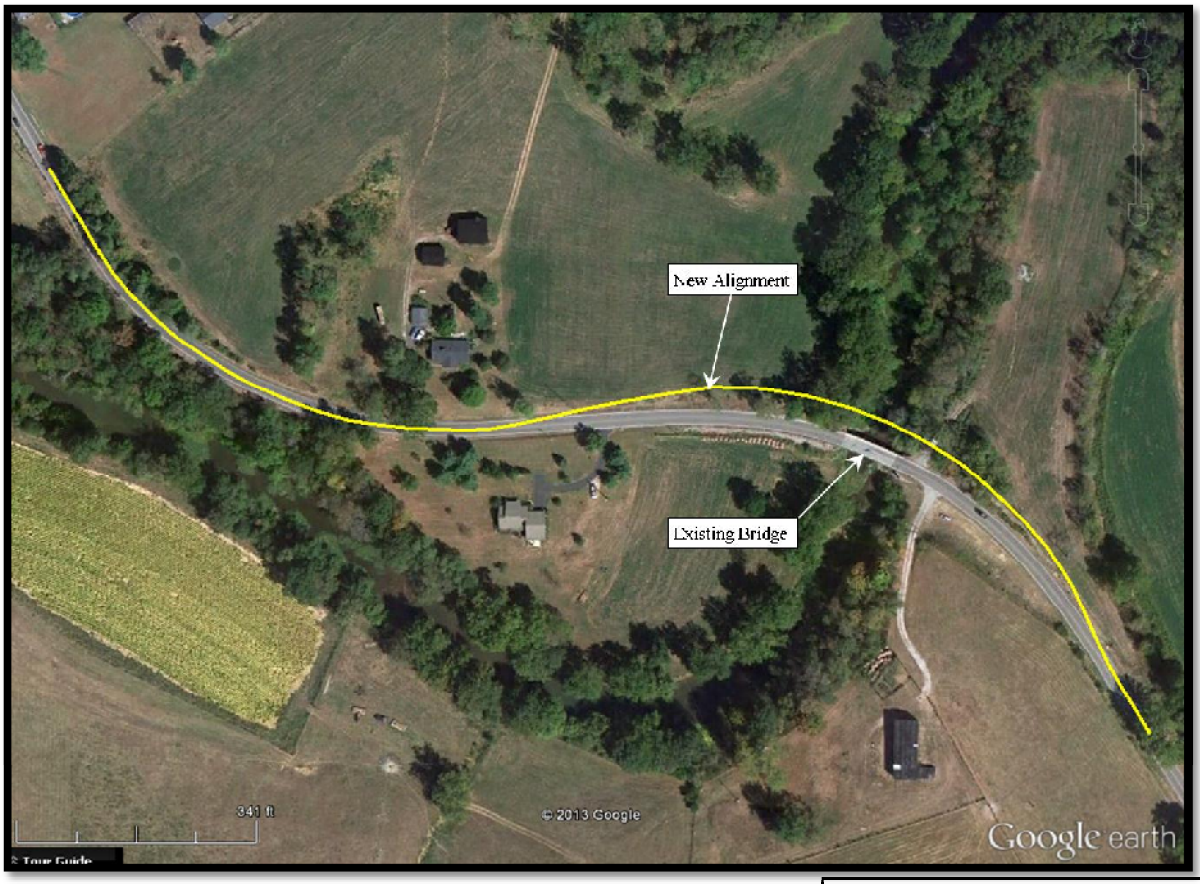
Reconstruct 1,800 feet of approaches on new alignment: $3.5 million
Construct new multispan bridge (200 ft x 40 ft): $1.0 million

Current Estimate	
Phase	Estimate
Planning	$0
Design	$500,000
R/W	$500,000
Utilities	$100,000
Const	$4,500,000
Total	$5,600,000

IV. PROJECT SCOPING (cont.)

Alternate II

Alternate II proposes reconstructing the bridge and curves along a new alignment to address the documented safety issues at this location. The design is based on a 45 mph design speed. The proposed alignment locates the bridge on the north side of the existing structure. This assists with potential slope impacts on the south side of the west curve. It also minimizes R/W impacts.



The total construction cost estimate is $1,000,000
Reconstruct bridge (150'x40'): $600,000
Construct new approaches on either side of bridge (800'x40'): $400,000
Total length of project is about 2,000 feet.

Current Estimate

Phase	Estimate
Planning	$0
Design	$150,000
R/W	$250,000
Utilities	$100,000
Const	$1,000,000
Total	$1,500,000

V. Summary

Alternate II is the recommended alternative which involves reconstructing the bridge and curve along a new alignment to address documented safety issues at this location. Alternate I far exceeded program funding amounts. Given that Alternate II is based on a 45 mph design speed, consider the use of high friction surface on the curve approaches. Nearly all the crashes recorded occurred on wet surfaces. The western curve is near a 45 mph design speed so additional safety measures are recommended such as widening shoulders and applying high friction surface.

VI. Tables and Exhibits

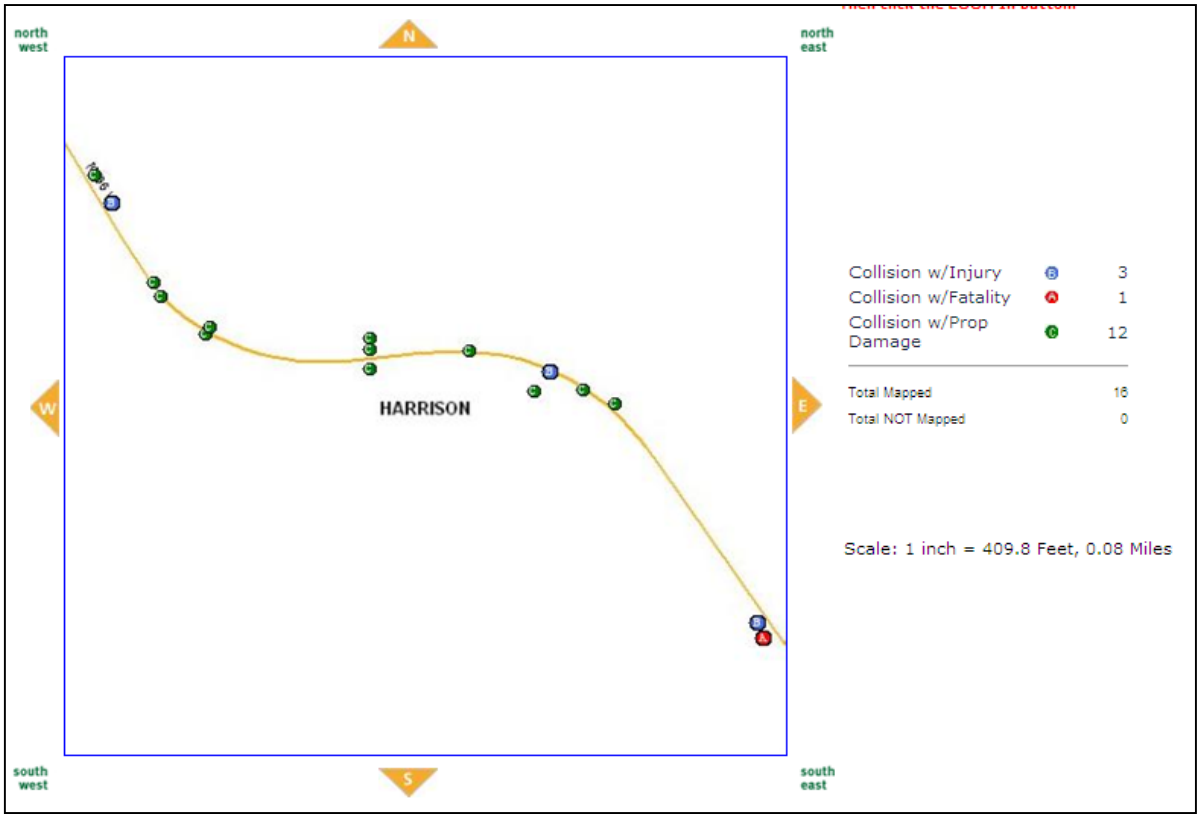
South of bridge, facing North

North of bridge, facing South

South of bridge, facing South

VI. Tables and Exhibits (cont.)

Crash Map:



Crash Table:

MASTER FILE NUMBER	MILEPOINT DERIVED	COLLISION DATE	ROADWAY CONDITION	MANNER OF COLLISION	LIGHT CONDITION
70786323	12.327	11/18/2009	WET	SINGLE VEHICLE	DARK-HWY NOT LIGHTED
70862501	12.309	6/12/2010	WET	SINGLE VEHICLE	DARK-HWY NOT LIGHTED
70867297	12.475	6/14/2010	WET	SIDESWIPE-OPPOSITE DIRECTION	DAYLIGHT
70943987	12.731	12/16/2010	SNOW/SLUSH	SINGLE VEHICLE	DARK-HWY NOT LIGHTED
70956288	12.483	1/4/2010	DRY	SINGLE VEHICLE	DARK-HWY NOT LIGHTED
70976163	12.471	3/11/2011	ICE	SINGLE VEHICLE	DAWN
71001090	12.591	5/14/2011	WET	SINGLE VEHICLE	DAYLIGHT
71037784	12.574	8/13/2011	WET	SIDESWIPE-OPPOSITE DIRECTION	DARK-HWY NOT LIGHTED
71048951	12.513	9/7/2011	WET	SINGLE VEHICLE	DAYLIGHT
71077063	12.376	11/9/2011	WET	SINGLE VEHICLE	DAYLIGHT
71114863	12.385	10/26/2011	WET	SINGLE VEHICLE	DARK-HWY NOT LIGHTED
71159859	12.553	6/1/2012	WET	SINGLE VEHICLE	DARK-HWY NOT LIGHTED
71185168	12.739	7/30/2012	DRY	SINGLE VEHICLE	DAYLIGHT
71197770	12.416	9/5/2012	WET	SINGLE VEHICLE	DARK-HWY LIGHTED/OFF
71201483	12.413	9/8/2012	WET	SINGLE VEHICLE	DAYLIGHT
71210209	12.554	9/27/2012	WET	SINGLE VEHICLE	DAYLIGHT

Auth No. / Date 87675 04-Mar-2013 **Project No. 06 8500.00** **Parent No.** 06 8500.00

County Name HARRISON

BMP / EMP 12.583 / 12.623

Route KY-36-

Desc RECONSTRUCT BRIDGE OVER MILL CREEK ON KY-36 FOUR MILES WEST OF CYNTHIANA. (08CCN): (049B00032N)(12CCR)

Type Of Work BRIDGE REHAB(P) **No. Lanes** **Length** **Measurement Type** E

Road Eng. **Bridge Eng.**

Proj Mgr (vacant) **Bridge No.** B00032 **Suff. Rating**

Letting Status / Date *****

Final Plans **Contractor Notice**

Environmental	Name	Date	Type	Sched. Comp.	Actual Comp.	Expire Date
Assigned:				01-Jun-2011		
Requested:	Environmental Analysis	03-Dec-2010	OVERVIEW			

Concerns

EMARS PROGRAM CODE

Phase Code	D	R	U	C
Stage	AUTHORIZED	ESTIMATED	ESTIMATED	ESTIMATED
Fund Code	SPP	SPP	SPP	SPP
Escalated Cost	0	250,000	100,000	3,000,000
Fiscal Year		2013	2013	2013

8767501D

Auth Amt. 200,000

Auth Date 04-Mar-2013

Current Cost

Date Of Current Cost

Year of Proj Auth Date

Program Code FD04

Remaining Balance 200,000.00

Right Of Way Parcel Information

Total Parcels: **Completion Date**

Appraisals	**of**		
Relocated	**of**		
Deeds Signed			
Suits Filed			
Right Of Entry			
Parcels Cleared			

Utility Information

Completion Date

Negotiated Starts	**of**	
Agreement	**of**	
Relocated	**of**	

Milestone	Remarks	Status	Date	Scheduled
PRELIMINARY LINE AND GRADE		UNKNOWN	01-Jul-2009	
DRAINAGE INSPECTION		UNKNOWN	01-Jul-2009	
JOINT INSPECTION		UNKNOWN	01-Jul-2009	
GEOTEC ENGINEERING - ROADWAY		UNKNOWN	01-Jul-2009	
GEOTEC ENGINEERING - BRIDGES		UNKNOWN	01-Jul-2009	
BRIDGE AND STRUCTURE PLANS TO CENTRAL OFFICE		UNKNOWN	01-Jul-2009	
ADVANCE SITUATION TO CENTRAL OFFICE		UNKNOWN	01-Jul-2009	
RIGHT OF WAY PLANS TO CENTRAL OFFICE		UNKNOWN	01-Jul-2009	
ROAD PLANS TO CENTRAL OFFICE		UNKNOWN	01-Jul-2009	
TRAFFIC PLANS - SIGNING		UNKNOWN	01-Jul-2009	
TRAFFIC PLANS - LIGHTING		UNKNOWN	01-Jul-2009	
TRAFFIC PLANS - SIGNALS		UNKNOWN	01-Jul-2009	
TRAFFIC PLANS - TRAFFIC CONTROL		UNKNOWN	01-Jul-2009	

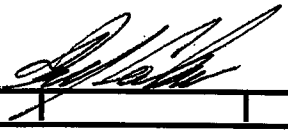
049B00032N

KYTC Bridge Inspection Report

Summary:
Inspection Date: 10/29/2010
Inspector: GCOCHRAN (23)
Primary Type: Standard (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	N
Underwater:	N
Other Special:	N

Inspector Signature: 

District Review Date: 11/30/2010
District Reviewer: BSEITER (55)

IDENTIFICATION

Bridge ID (8):	049B00032N MAP BRIDGE	**District Number:**	6
Route Carried (7):	KY-36	**County (3):**	97 Harrison
Mile Point:	12.60	**Feature Intersected (6):**	MILL CREEK
Location (9):	.6 MI NW OF JCT KY 1743	**Road Name:**	KY HIGHWAY 36 W
Structure Description:	86 Foot - 2 Span Concrete Tee Beam		

NBI CONDITION

Deck (58):	5
Superstructure (59):	6
Substructure (60):	5
Culverts (62):	N
Channel/Protection (61):	6

SCHEDULE TAB

Schedule:	Required (Y/N)	Last Date		Frequency	Next Date
NBI (90):		10/29/2010	**(91):**	24 mos	10/29/2012
Fracture Critical (92A):	N	**(93A):** 1/1/1901	**(92A):**	mos	1/1/1901
Underwater (92B):	N	**(93B):** 1/1/1901	**(92B):**	mos	1/1/1901
Other Special (92C):	N	**(93C):** 1/1/1901	**(92C):**	mos	1/1/1901
Elemental:	NA			24 mos	10/29/2012

Load Rating and Posting

Truck Type	Typ I	Typ II	Typ III	Typ IV	Gross
Recomm. Posting:	36	37	41	59	
Field Posting:	-1	-1	-1	-1	-1

Posting Status (41): A Open, no restriction
Signs Posted: Cardinal: N Non-Cardinal: N

WATERWAY

Scour Critical (113):	8
Observed 113 Rating:	5
Waterway Adeq. (71):	7

DECK/WEARING SURFACE

Deck Type (107):	1 Concrete-Cast-In-Place						
Wearing Surface/Protective System (108):	**Type:** 4	**Membrane:** 0	**Protection:** 0				
Traffic Safety Features (36):	**Bridge Rail:** 0	**Transition:** 0	**Appr. Rail:** 1	**Rail Ends:** 1			
Overlay:	Y						
Overlay Type:	PCC						
Overlay Thickness:	2.01						

Vertical Clearances

Minimum Vertical Overclearance (53):	99.99
Minimum Vertical Underclearance (54):	0.00
Maximum Vertical Clearance (10):	99.99
Minimum Vertical Clearance:	

Sufficiency Ratings

SR: 67.30 **SD/FO:** 2 Functionally Obsolete

Element Condition State Data

Elm/Env	Description	Units	Total Qty.	Qty. CS1	Qty. CS2	Qty. CS3	Qty. CS4	Qty. CS5
110/1	R/Conc Open Girder	LF	344.00	312.00	32.00	0.00	0.00	0.00
12/1	Bare Concrete Deck	SF	1,946.18	0.00	1,946.18	0.00	0.00	0.00
205/1	R/Conc Column	EA	2.00	1.00	1.00	0.00	0.00	0.00

049B00032N

KYTC Bridge Inspection Report

Summary:
Inspection Date: 10/29/2010
Inspector: GCOCHRAN (23)
Primary Type: Standard (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	N
Underwater:	N
Other Special:	N

Element Condition State Data

Elm/Env	Description	Units	Total Qty.	Qty. CS1	Qty. CS2	Qty. CS3	Qty. CS4	Qty. CS5
210/1	R/Conc Pier Wall	LF	14.46	12.46	2.00	0.00	0.00	0.00
215/1	R/Conc Abutment	LF	100.00	77.00	18.00	5.00	0.00	0.00
234/1	R/Conc Cap	LF	23.00	7.00	14.00	2.00	0.00	0.00
301/1	Pourable Joint Seal	LF	23.47	0.00	0.00	23.47	0.00	0.00
334/1	Metal Rail Coated	LF	172.00	99.00	73.00	0.00	0.00	0.00
359/1	Soffit Smart Flag	EA	1.00	0.00	1.00	0.00	0.00	0.00
361/1	Scour Smart Flag	EA	1.00	0.00	1.00	0.00	0.00	0.00
503/1	RC Curb	LF	172.00	125.00	47.00	0.00	0.00	0.00

Element Condition State Data

Str Unit	Elm/Env	Description	Description
1	110/1	R/Conc Open Girder	Beams- Beam elements throughout structure are of Tee Beam design. A moderate amount of concrete deterioration with random cracking throughout fascia concrete, dark staining and efflorescence was all found typical throughout end location of beams. (Statement from past inspection report in 2008: Heavy deterioration was found in both ends of beam #4, both spans #1 and #2 at the pier location, due to failure of transverse joint, curbs and deck, which is allowing major runoff from deck area of super elevation. Beam ends have exposed rusting reinforcing steel and deterioration as well as loss of bearing in these areas is being accelerated.) Deterioration noted in ends of beam element #4 at the pier cap location has been recently patch repaired by the KYTC Bridge Crew, with area still encased in timber form work during time of inspection. Noted area of deterioration could not be viewed for inspection. Dark staining with minor deterioration was found in exterior fascias of outside beams #1 and #4 at all drain outlet scupper locations. Note that beam ends at union with diaphragm elements along the forward abutment location were found to have dark staining throughout fascias, due to seepage from deck surface failures above. All tee beam elements throughout structure were found to have hairline vertical flexure cracking at random spacing's. (See Photos)
1	12/1	Bare Concrete Deck	NOTE THAT THE KYTC BRIDGE CREW WAS PERFORMING RANDOM REPAIRS ON STRUCTURE DURING DAY OF INSPECTION THROUGHOUT THE SOUTH MOST SIDE OF BRIDGE (DECK REPAIRS, CURB REPAIRS, PIER CAP REFACEMENT, PIER COLUMN REFACEMENT, ETC.). Deck- Delamination, deterioration and random cracking was found typical throughout deck surface area. Large pothole/deck failure area located in deck at the forward end of span #2 in the last inspection report has been covered (overlaid) with asphalt material and can no longer be seen/viewed for inspection. As new asphalt was lied on both approach roadway transitions asphalt material was extended onto deck surface of structure to cover poor area in deck (extended approximately 5.0 feet onto deck and is approximately 2.0 inches in depth) KYTC Bridge Crew stated that poor area in the eastbound lane of travel was patch repaired a few days before time of inspection. Note that a large area of delamination with map cracking was found at or near center of deck at joint location, which remains in need of be repaired. KYTC Bridge Crew has patched noted area in the eastbound lane of travel. (Statement from past inspection report in 2008: Due to super elevation of structure, heavy drainage (runoff) flows along right side of structure. Total failure of transverse joint material as well as drainage, curb sections of each span and edge of deck at the pier/joint area was found to have severe concrete deterioration with exposed rusting reinforcing steel, which is in both curbs as well as deck. This has caused a large full depth hole in deck, which is just on right side of the white line. Repairs need to be preformed as soon as possible; as deterioration and size of hole is accelerated and will soon be in line with wheel track of traffic flow, which could become a safety hazard.) Note that deteriorated area with full depth hole was patched repaired by KYTC Bridge Crew same day as inspection. (See Photos)
1	205/1	R/Conc Column	Pier Columns- Random areas of concrete deterioration was found typical throughout pier column elements, due to heavy leakage from expansion joint seal failures above. Note that the KYTC Bridge Crew was performing random fascia repairs to pier columns during time of inspection. (See Photos)

049B00032N

KYTC Bridge Inspection Report

Summary:
Inspection Date: 10/29/2010
Inspector: GCOCHRAN (23)
Primary Type: Standard (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	N
Underwater:	N
Other Special:	N

Element Condition State Data

Str Unit	Elm/Env	Description	Description
1	210/1	R/Conc Pier Wall	Pier Wall- Dark staining was found typical throughout pier wall, along with random hairline cracking. Local scouring conditions continue to remove bedrock layer material from channel bed in area of pier footing. Note that scour has formed a hole around the pier footing location, which has totally exposed footing at this time. Area of most exposure is location on upstream side of pier (right side). Footing was probed during time of this inspection, but no undermining was detected at this time. Footing along the right most exterior end was found to be exposed up to approximately 8.0 inches from channel bottom.
1	215/1	R/Conc Abutment	Abutments- Both the rear and forward abutment breastwall's were found to have dark damp staining typical throughout fascias, due to moderate seepage from approach roadway transition joints above. Both abutments as well as all four wingwall's were found to have heavy concrete deterioration in random locations throughout. Worst areas throughout these elements appear to be in abutment breastwall's at or near union with wingwall's. Right side location of rear abutment #1 was found to have a heavy deteriorated area with dark damp staining, spalling and exposed rusting reinforcing steel, which has moderate section loss. All four wingwall elements have moderate deterioration throughout topside sections with random cracking, staining and efflorescence. (See Photos)
1	234/1	R/Conc Cap	Pier Cap- Moderate to heavy concrete deterioration was found typical throughout total length of pier cap, due to expansion joint seal failures above. Exterior ends of pier cap both up and downstream were found to be the worst areas for deterioration throughout cap; as conditions have and continue to cause concrete to crumble away exposing rusting reinforcing steel. Note that during day of inspection the KYTC Bridge Crew was performing refacement repairs on pier cap, right exterior end. Expansion joint seal repairs/replacement is needed as deterioration throughout structural elements are accelerated. (See Photos)
1	301/1	Pourable Joint Seal	Expansion Joint- Total and complete 100% failure was found typical throughout transverse joint over pier #2, which has and continues to accelerate deterioration throughout structural elements below (deck ends, diaphragms, beam ends, pier caps, pier columns, etc.). Total replacement of expansion joint seal is needed.
1	334/1	Metal Rail Coated	Bridge Railing- Note that all vertical metal support post elements throughout bridge railing system is not anchored to structure by standard design. Each post support was found to have only two anchor bolts, which are side by side. If bridge railing throughout this structure is impacted by traffic flow it may not perform as designed. Standard railing anchorage should be placed throughout system as soon as possible. Misalignment and minor damage was found typical throughout total length of railing system along left side of structure, due to anchor bolts allowing movement/displacement of bridge railing under collision impact.
1	359/1	Soffit Smart Flag	Soffit- Note that dark damp staining, seepage, rust staining, deterioration, map cracking and efflorescence was found in random locations throughout deck bottom (soffit), due to failure/poor conditions throughout topside of deck element. (See Photos)
1	361/1	Scour Smart Flag	Scour- Local scouring conditions continue to remove bedrock layer material from channel bed in area of pier footing. Note that scour has formed a hole around the pier footing location, which has totally exposed footing at this time. Area of most exposure is location on upstream side of pier (right side). Footing was probed during time of this inspection, but no undermining was detected at this time. Footing along the right most exterior end was found to be exposed up to approximately 8.0 inches from channel bottom.
1	503/1	RC Curb	Curbs- Note that during past rehab construction concrete curb were saw cut to extend width of traveled roadway on deck area. Saw cutting left curbs to have a sharp edge and a moderate amount of chipping, which over time has accelerated deterioration throughout. (Statement from past inspection on 2008: Due to super elevation throughout structure lower side curb (right side) was found to be deteriorated the most at this time. Due to heavy drainage (runoff) on this side of structure and total failure of transverse joint material, curb sections of each span as well as edge of deck at the pier/joint area was found to have severe concrete deterioration with exposed rusting reinforcing steel, which is in both curbs as well as deck.) Note that deteriorated area in the right side curb element has been recently patch repaired by KYTC Bridge Crew, which was covered with timber form work during time of inspection. (See Photos)

BRIDGE.Notes

Work Candidates

049B00032N

KYTC Bridge Inspection Report

Summary:

Inspection Date: 10/29/2010
Inspector: GCOCHRAN (23)
Primary Type: Standard (24 Months)

Types of Inspections Performed:

National Bridge Inventory:	Y
Element:	Y
Fracture Critical:	N
Underwater:	N
Other Special:	N

Work Candidates

Inspector Candidates:

Candidate ID:	Status	Priority	Assigned	Action	Elem	Date Recommended
049-B00032N-1	Approved	High	Unassigned	41	301	10/29/2010
049-B00032N-1	Approved	Low	Unassigned	60	0	11/7/2008
049-B00032N-2	Approved	High	Unassigned	31	334	10/29/2010
049-B00032N-2	Approved	Medium	Unassigned	41	215	11/7/2008
049-B00032N-4	Approved	High	Unassigned	31	12	11/7/2008
049-B00032N-6	Approved	Medium	Unassigned	31	361	11/7/2008