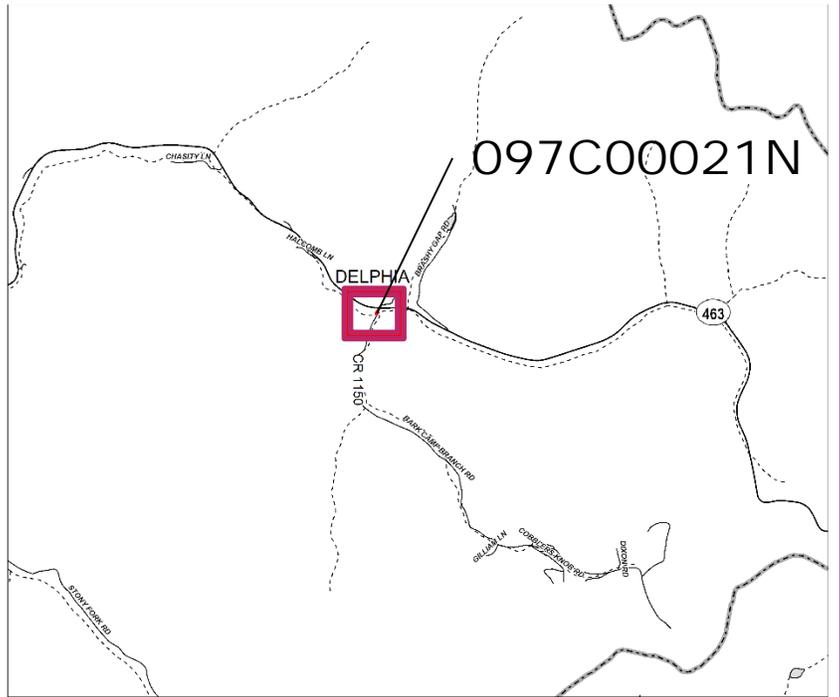


Data

Needs

Analysis



Scoping Study



CR 1150, Perry County
Bridge Replacement
Item No. 10-8915.00

Prepared by
KYTC District 10

June 2016



I. PRELIMINARY PROJECT INFORMATION

County:	Perry	Item No.:	10-8915
Route Number(s)*:	CR 1150	Road Name:	Bark Camp Branch Road
Program No.:		UPN:	97 1150 000-001
Federal Project No.:		Type of Work:	Bridge replacement

2016 **Highway Plan Project Description:**

REPLACE BRIDGE OVER LEATHERWOOD CREEK. SR=35

Beginning MP:	0	Ending MP:	0.1	Project Length:	0.1
In TIP:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Reconcile Project Information in Clearview			
State Class.:	<input type="checkbox"/> Primary <input type="checkbox"/> Secondary	Route is on:	<input type="checkbox"/> NHS <input type="checkbox"/> NN <input type="checkbox"/> Ext Wt		
Functional Class.:	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural <input type="checkbox"/> Local	Truck Class.:	A	% Trucks:	NA
MPO Area:	Not Applicable	Terrain:	Mountainous		
ADT (current):	est. 300				
Access Control:	<input checked="" type="checkbox"/> None <input type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial	Spacing:			
Median Type:	<input checked="" type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type):				
Existing Bike Accommodations:	Shared Lane	Ped:	<input type="checkbox"/> Sidewalk		
Posted Speed:	<input type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify):				
KYTC Guidelines Preliminarily Based on :	35 MPH Proposed Design Speed				

COMMON GEOMETRIC

Roadway Data:	EXISTING	PRACTICES**	
No. of Lanes	2	2	Existing Rdwy. Plans available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Lane Width	11	11	
Shoulder Width	0-2	5	Year of Plans: _____
Max. Superelevation***	NA	4%	<input type="checkbox"/> Traffic Forecast Requested
Minimum Radius***	NA	420	Date Requested: _____
Maximum Grade		NA	<input type="checkbox"/> Mapping/Survey Requested
Minimum Sight Dist.	NA	250	Date Requested: _____
Sidewalk Width(urban)		NA	Type: _____
Clear-zone [†]		18	
Project Notes/Design Exceptions?	Proposed Design Speed should be adequate.		

Bridge No.†:	097C00021N	(Bridge #2)	
Sufficiency Rating	35		Existing Geotech Data Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Total Length	40		
Width, curb to curb	15.4		Detour Length(s): _____
Span Lengths	38		
Year Built	1958		
Posted Weight Limit	11 TONS		
Structurally Deficient?	Y		
Functionally Obsolete?	Y		
Existing Bridge Type	Simple Span Concrete Deck w/ Steel Girders		

*If more than one road is included in the project, include additional sheets.
 **Based on proposed Design Speed
 ***AASHTO's A Policy on Geometric Design of Highways and Streets
 †AASHTO's Roadside Design Guide
 ‡If more than two bridges are located on the project, include additional sheets.

II. PROJECT PURPOSE AND NEED

A. Legislation

This is a new Project added by the General Assembly into the 2016 Biennial Highway Plan. The Utility and Construction phases are in the 2018-2022 Highway Plan.

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
BRO	D	2017	\$258,000
BRO	R	2018	\$103,000
BRO	U	2019	\$78,000
BRO	C	2020	\$583,000

B. Project Status

Design Funds are being requested but have not been authorized at this time. There are no other Projects in the Vicinity at this time.

C. System Linkage

CR 1150 is a local road that serves residents of the Delphia community. This route connects to KY 463 where travelers can go North to Hazard and access KY 15 or South to Cumberland and access US 119.

D. Modal Interrelationships

There are currently no Modal connections along this roadway. This area has served the coal industry for many years however.

E. Social Demands & Economic Development

There are currently no new plans for further commercial or industrial type development in this area. It is anticipated that this route will continue to function as a local residential route.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

The current estimated ADT is 300. The usage demand for this road is expected to stay the same for the foreseeable future.

G. Capacity

There are no known capacity issues at this time nor are any expected in the near future.

H. Safety

A review of Collision Data since 2010 shows no collisions have occurred at this area. A collision location map can be shown in the exhibit section below.

I. Roadway Deficiencies

CR 1150 is a local roadway with little to no shoulders. It has numerous substandard horizontal and vertical curves. The bridge is a steel beam/ concrete deck structurally deficient structure. The main issue with the bridge is the center beam. This beam displays significant deterioration and is not functioning as it should.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

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

STIP Pg.#: [Redacted]

TIP Pg.#: [Redacted]

NA

B. Archeology/Historic Resources

Known Archeological or Historic Resources are present

NA

C. Threatened and Endangered Species

Listed:

Indiana Bat, Gray Bat, Northern Long Eared Bat, Kentucky Arrow Darter

D. Hazardous Materials

Potentially Contaminated Sites are present Potential Bridge or Structure Demolition

Existing Structure will be removed.

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

G. Socioeconomic

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

NA

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

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

NA

Anticipated Environmental Document:

CE Level 1 

IV. PROJECT SCOPING, NEEDS & PURPOSE

A. Scoping & Need:

The following Needs have been identified by the Project Team for this project: 1. This bridge replacement is needed to ensure a continued linkage for residents of this community to the rest of the Highway System. 2. Continuation of System Wide deficient bridge replacements.

As part of the Scoping process, the Project Team Discussed five different Alternatives: 1. No Build 2. Replace in same location. 3. Replace Upstream 4. Replace Downstream and 5. Use existing Abutments and only replace Superstructure and Deck. Below are our conclusions.

1. Option Does Not address needs identified.
2. Meets Needs. Diversion will be needed to keep access to Bark Camp Road open.
3. Meets Needs. Existing structure could be used as access during construction. This would create a curve at the bridge end to connect to Bark Camp and probably require purchase of the abandoned home in the southeast corner of project. There is also a stream that would potentially be relocated in same area.
4. Meets Needs. Existing structure could be used as access during construction. This alignment would require the purchase of the nearby residence in the northeast corner of project causing a higher Right of Way cost than has been approved.
5. Meets Needs. Visual inspection shows no issues with integrity of existing abutments. This option would reduce overall cost and time of Construction. After further review it appears as though the Southern abutment is not exactly aligned with the stream bed and has the potential for future damage to occur to it.

The Project Team has identified the following issues/concerns that must be considered during the design process:

- Proximity to the Residence in the Northeast corner of the bridge.
- Residents of Bark Camp have no other entry/exit point.
- Diversion will be complicated due to stream intersection on East Side.

The Project Team Recommends moving Alternate 2 to the Design process. It is recommended that a 16' wide deck be used which is adequate for low volume roadways. This Alternate with the diversion location is seen in the exhibits below.

B. Draft Project Purpose:

Purpose: The purpose of this project is to replace a Structurally deficient bridge in order to allow continued connectivity for residents of the Bark Camp Creek Road to the rest of the Highway System.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:	Current Estimate	
The Construction estimate is based on the square foot method calculation. Design funding may require additional funds as the process continues.	<u>Phase</u>	<u>Estimate</u>
	Planning	
	Design	\$ 258,000.00
	R/W	\$ 103,000.00
	Utilities	\$ 25,000.00
	Const	\$ 300,000.00
	Total	\$ 686,000.00

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Company Name -	Hazard Utilities
Contact -	Bobby Holland
Address -	700 Main Street, Hazard, KY 41701
Phone No. -	606-438-6534
Company Name -	Windstream
Contact -	Gene Dunn
Address -	130 West New Circle Road, Lexington, KY 40505
Phone No. -	859-357-6216
Company Name -	Kentucky Power
Contact -	Greg Sparkman
Address -	1400 East Main Street, Hazard KY 41701
Phone No. -	606-436-1332
Company Name -	
Contact -	
Address -	
Phone No. -	
Company Name -	
Contact -	
Address -	
Phone No. -	
Company Name -	
Contact -	
Address -	
Phone No. -	

VII. TABLES AND EXHIBITS



VII. TABLES AND EXHIBITS (cont.)



VII. TABLES AND EXHIBITS (cont.)

