

**Data**

**Needs**

**Analysis**



# Scoping Study

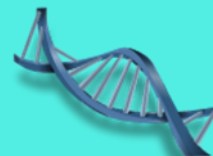
KY 57 (Mt.Carmel-Tollesboro Rd.)  
Lewis County

Reconstruction of KY 57 from  
MP 0.500 (near Lewis Co. Line) to  
MP 4.557 (KY 9, A-A Hwy)

Item No. 09-8807.00

Prepared by KYTC  
District 9

April 2018



## I. PRELIMINARY PROJECT INFORMATION

County:	Lewis	Item No.:	9-8807.00			
Route Number(s):*	KY 57	Road Name:	Mt. Carmel - Tollesboro			
Program No.:	939040	UPN:	FD52	0068	0057	000-005
Federal Project No.:	STP 5234 010	Type of Work:	Reconstruction			

2016 Highway Plan Project Description:

Reconstruct KY 57 from KY 9 to Fleming/Lewis County line

Beginning MP:	0.5	Ending MP:	4.557	Project Length:	4.057
In TIP:	<input type="checkbox"/> Yes <input type="checkbox"/> No <a href="#">Reconcile Project Information in Clearview</a>				
State Class.:	<input type="checkbox"/> Primary <input checked="" 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 Collector ▼		Truck Class.:	AAA ▼	% Trucks: 9.3-11.4
MPO Area:	Not Applicable ▼		Terrain:	Rolling ▼	
ADT (current):	1791 to 2488 (2016)				
Access Control:	<input type="checkbox"/> None <input checked="" 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 checked="" type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify): ▼				
KYTC Guidelines Preliminarily Based on :			55 MPH Proposed Design Speed		

## COMMON GEOMETRIC

Roadway Data:	EXISTING	PRACTICES**	
No. of Lanes	2	2	<a href="#">Existing Rdwy. Plans available?</a> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Year of Plans: 1933
Lane Width	10'-12'	12'	
Shoulder Width	0-3'	8'	<input type="checkbox"/> <a href="#">Traffic Forecast Requested</a> Date Requested: ▼
Max. Superelevation***	8.00%	8%	
Minimum Radius***	573.7'	965'	<input type="checkbox"/> Mapping/Survey Requested Date Requested: ▼
Maximum Grade	6%	6%	
Minimum Sight Dist.	340'	495'	Type: ▼
Sidewalk Width(urban)	N/A	N/A	
Clear-zone <sup>†</sup>	<24'	24'-30'	

Project Notes/Design Exceptions?

Bridge No.: <sup>‡</sup>	(Bridge #1)	(Bridge #2)	
Sufficiency Rating			<a href="#">Existing Geotech Data Available?</a> <input type="checkbox"/> Yes <input type="checkbox"/> No
Total Length			
Width, curb to curb			Detour Length(s): ▼
Span Lengths			
Year Built			
Posted Weight Limit			
Structurally Deficient?			
Functionally Obsolete?			
Existing Bridge Type			

\*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

As shown in the 2016 approved Highway Plan

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
STP	D	2017	\$2.1 million
STP	R	2018	\$5.2 million
STP	U	2019	\$3.4 million
STP	C	2021	\$20.0 million

Note: Item No. 9-8807.01 provides for an additional \$10.0 million (STP) for Construction in FY 2022

### B. Project Status

First scope verification meeting (KYTC/FHWA) held on 8/6/14, during which it was determined that the environmental document type would be a CE Level 3. To satisfy logical termini, FHWA requested that an environmental overview extending south to KY 344 be completed on adjoining bridge replacement project (9-8507) and included by reference. FHWA also requested that R/W funding be authorized for 9-8507.00 prior to initiating design for 9-8807. As of the date of this study, environmental overview/CE-2 complete and r/w funds authorized on 9-8507. A second scope verification meeting was held 2/28/18, during which the environmental document level was reaffirmed to be a CE Level 3 (9-8807.)

### C. System Linkage

KY 57 provides one of the few north-south connections in District 9. It serves as a rural major collector between KY 9 (AA Highway) at Tollesboro and KY 11 in Flemingsburg. Along with KY 11, KY 57 provides provides a direct connection between KY 9 (AA Highway) and I-64 in Mt. Sterling.

### D. Modal Interrelationships

Businesses along Northeastern Kentucky that ship via barge along the Ohio River use KY 9 (AA Highway) as their primary commercial trucking route. KY 57 and KY 11 provide a north-south connection from KY 9 to I-64. CSX railroad parallels the Ohio River as well. Northeastern businesses that ship via CSX would use KY 9, KY 57 and KY 11 to access I-64 as well.

### E. Social Demands & Economic Development

Reconstruction of KY 57 will provide a much safer route for commuters, school busses and commercial vehicles. Along with improved safety, reconstruction of KY 57 will facilitate better connectivity and decreased travel times potentially leading to residential and commercial development along the route. Current land use is primarily farming with rolling to flat topography. Such terrain is conducive to future development.

## **II. PROJECT PURPOSE AND NEED (cont.)**

### **F. Transportation Demand**

ADT's along KY 57 have seen a small increase over the past 30 years, averaging approximately 1.5% per year. Traffic diversity and speed differentials have risen greatly due to the Amish horse and buggy population integrating with the commuter and commercial vehicles.

### **G. Capacity**

KY 57 operates below capacity with a v/c of 0.08. Reconstruction of KY 57 may promote increased future volumes, but should not warrant additional through lanes.

### **H. Safety**

Between 2006 and 2016, there have been 45 reported crashes along this section of KY 57. Four were serious injury, 3 non-serious injury, 5 possible injury and 33 property damage only. The critical rate factor is between 0.3 and 0.6. Many of the crashes were "run off the road" and collision with a fixed object such as an embankment, rock cut or ditch. Several were "sideswipe". Almost all were during clear, dry conditions. These crashes are indicative of narrow lanes, narrow shoulders, edge of pavement drop-offs and inadequate clear zones.

### **I. Roadway Deficiencies**

This section of KY 57 is characterized by deficient vertical curves creating limited sight distance, blind intersections and few passing opportunities. A few deficient horizontal curves are present. Narrow lanes and shoulders combined with edge of pavement drop-offs and inadequate clear zones create little opportunity for recovery when vehicles run off the road. Large speed differentials combined with substandard vertical curves are a recipe for severe crashes with an increased potential for serious injuries.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW	
<b>A. Air Quality</b>	
Project is in: <input checked="" type="checkbox"/> Attainment area <input type="checkbox"/> Nonattainment or Maintenance Area <input type="checkbox"/> PM 2.5 County	
STIP Pg.#:    FY17-FY20, Sct. A-5, Pg 49 of 72	TIP Pg.#: <span style="background-color: #f0f0f0; padding: 2px 10px;"> </span>
<b>B. Archeology/Historic Resources</b>	
<input type="checkbox"/> Known Archeological or Historic Resources are present	
Several structures and/or properties throughout the existing KY 57 corridor appear to be potentially eligible for the National Register of Historic Places (NRHP). There are no properties in the corridor that are currently listed on the NRHP. It is likely that unknown archaeology sites are present within the corridor.	
<b>C. Threatened and Endangered Species</b>	
10 freshwater mussels, 3 bats, and a plant species are federally listed as threatened or endangered in Lewis County.	
<b>D. Hazardous Materials</b>	
<input checked="" type="checkbox"/> Potentially Contaminated Sites are present <input type="checkbox"/> Potential Bridge or Structure Demolition	
Several sites appear to have been old gas stations or garages.	
<b>E. Permitting</b>	
Check all that may apply: <input type="checkbox"/> Waters of the US <input type="checkbox"/> MS4 area <input type="checkbox"/> Floodplain Impacts <input type="checkbox"/> Navigable Waters of the US Impacts	
Are 401/404 Permits likely to be required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Impacts to: <input checked="" type="checkbox"/> Wetlands <input checked="" type="checkbox"/> Stream/Lake/Pond	
<input type="checkbox"/> ACE LON <input type="checkbox"/> ACE NW <input type="checkbox"/> ACE IP <input type="checkbox"/> DOW IWQC <input type="checkbox"/> Special Use Waters	
There are no major stream crossings within the existing KY 57 corridor. Several smaller streams do exist along KY 57 and could be impacted depending on alignment placement. Additionally, wetlands could be present along the corridor. The level of USACE permit needed for the job will be dependent upon how much stream and wetlands are impacted. It is anticipated that either a ACE LON or ACE Nationwide permit will apply.	
<b>F. Noise</b>	
Are existing or planned noise sensitive receptors adjacent to the proposed project? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Is this considered a "Type I Project" according to the <a href="#">KYTC Noise Analysis and Abatement Policy?</a> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Many residential receptors are located along existing KY 57, especially closer to Tollesboro. This could be a Type 1 project depending on alignment placement.	
<b>G. Socioeconomic</b>	
Check all that may apply: <input checked="" type="checkbox"/> Low Income/Minority Populations <input checked="" type="checkbox"/> Relocations <input type="checkbox"/> Local Land Use Plan available	
There is potential to have low income and minority populations living within the expected limits of the project. It is expected that an Environmental Justice analysis will be performed later in the project development phase in order to fully assess impacts that the project might have on these populations.	
<b>H. Section 4(f) or 6(f) Resources</b>	
The following are present on the project: <input checked="" type="checkbox"/> Section 4(f) Resources <input type="checkbox"/> Section 6(f) Resources	
Several structures and/or properties throughout the existing KY 57 corridor appear to be potentially eligible for the National Register of Historic Places. There are no parks, known wildlife refuges, or public recreation areas within the limits of the KY 57 corridor. One property is identified in the Tollesboro area as having received Land and Water Conservation Funds. It does not appear to be within the immediate vicinity of the existing KY 57 corridor.	
<div style="display: flex; justify-content: space-between; align-items: center;"> <div>Anticipated Environmental Document:</div> <div>CE Level 3</div> <div style="text-align: right;">▼</div> </div>	

#### IV. PROJECT SCOPING, NEEDS & PURPOSE

##### A. Scoping & Need:

KY 57 is a rural major collector between the A-A Highway (KY 9) in Tollesboro and KY 11 in Flemingsburg. KY 11 continues south to I-64 in Mt. Sterling. Improvements are on-going along the corridor between I-64 in Mt. Sterling and Flemingsburg, and from Flemingsburg to the Fleming/Lewis County line. This segment of KY 57 from the Fleming/Lewis County line to the A-A Highway in Tollesboro is a continuation of the corridor improvements. KY 57 from MP 0.500 to MP 4.557 is the final segment of this corridor and remains a narrow two-lane roadway with narrow or no shoulders, few passing opportunities, many vertical deficiencies, and some horizontal deficiencies. Widening along the existing alignment with some deviation to facilitate maintenance of traffic would seem to be most appropriate to accommodate current and future traffic demands. Wide, paved shoulders will provide refuge for stalled vehicles as well as a place for Amish buggies to travel. A hybrid two-lane typical section (shoulders with curb and gutter) may be considered to minimize right of way and relocations.

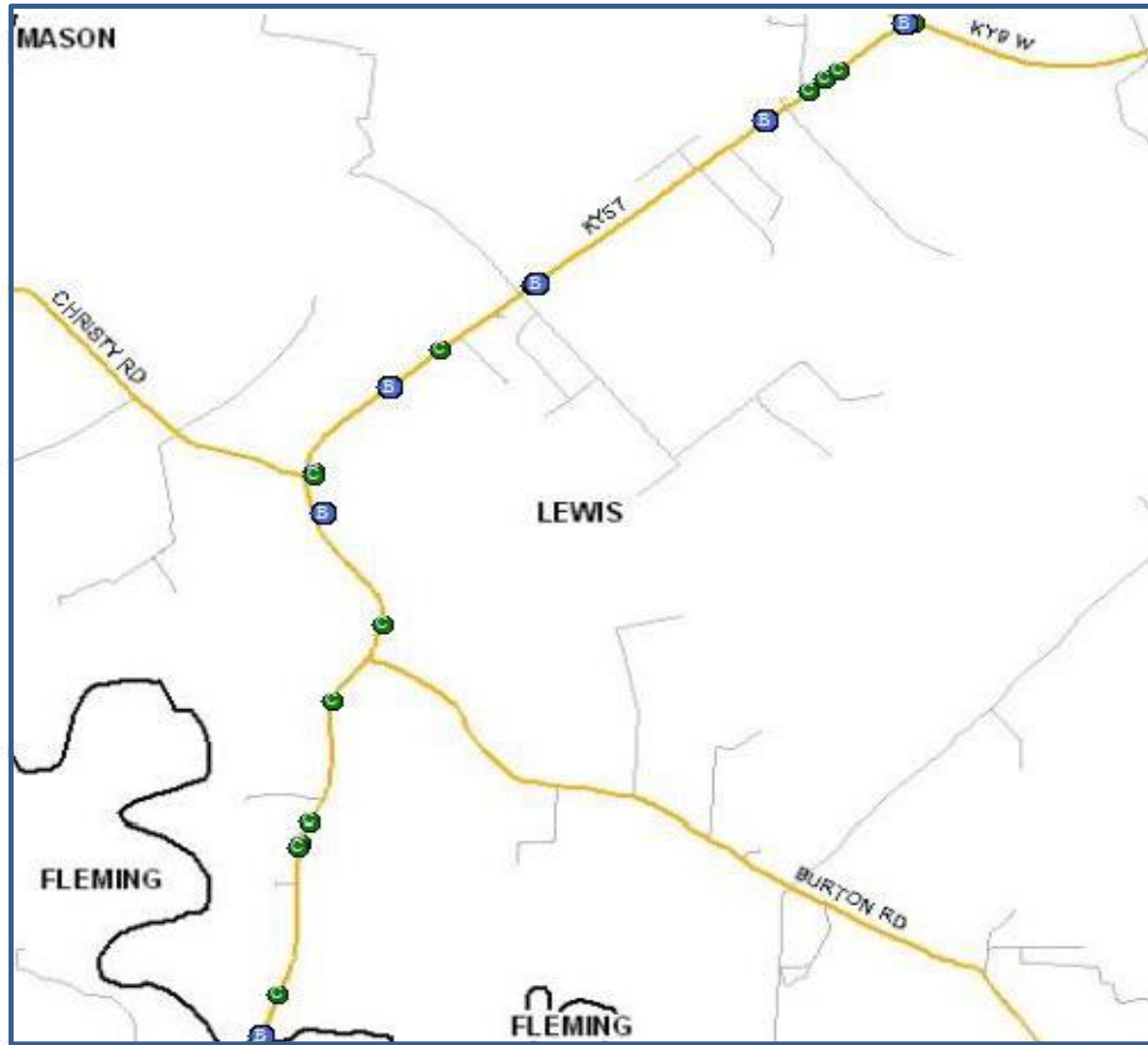
##### B. Draft Project Purpose:

The purpose of this project is to improve safety, mobility, access and connectivity along KY 57 from Flemingsburg to Tollesboro to accommodate current and future traffic demands of commuters, school buses, and commercial vehicles while also accommodating Amish buggies, and to provide continuity with the improvements already in place along the corridor.

V. PROJECT ESTIMATE & METHODOLOGY	
Estimate Methodology:	Current Estimate
Current highway plan estimates were based upon using consultant services for design, consultant services for utility coordination and combined in-house/consultant services for right of way. Construction estimates were based on reconstructing KY 57 along or near the existing route using current geometric standards with a 55mph design speed.	<u>Phase</u> <u>Estimate</u>
	Planning                      N/A
	Design                      \$2.1M
	R/W                      \$5.2M
	Utilities                      \$3.4M
	Const                      \$30.0M
	<b>Total</b> <b>\$40.7M</b>
VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION	
Company Name -	Fleming-Mason RECC
Contact -	Brandon Hunt
Address -	1449 Elizaville Road, Flemingsburg, KY 41041
Phone No. -	800 464 3144
Company Name -	Fleming County Water Association
Contact -	Kevin Cornette
Address -	2772 Morehead Road, Flemingsburg, 41041
Phone No. -	606 845-3981
Company Name -	Windstream Communications
Contact -	Larry Potter
Address -	Flemingsburg, KY
Phone No. -	606 845-0820 (office) 606 748-9830 (cell)
Company Name -	Time Warner Cable
Contact -	Elbert Lamb
Address -	1615 Foxhaven Drive, Richmond, KY 40475
Phone No. -	859 624-6974 or 626-4816
Company Name -	Electric Plant Board of the City of Vanceburg
Contact -	
Address -	191 Front Street, PO Box 489, Vanceburg, KY 41179
Phone No. -	606 796-2641 or 606 932-4488
Company Name -	Western Lewis Water & Gas
Contact -	Rick Hilterbrandt
Address -	8044 KY 3160, Maysville, KY 41056
Phone No. -	606 742-0014

## VII. TABLES AND EXHIBITS

**Criteria:** Collision Date is between 1/1/2012 and 12/31/2016 **And** County Name is one of:  
LEWIS **And** Roadway Number is ky0057 **And** Milepoint Derived is between 0 and 4.557



Collision w/Injury		6
Collision w/Fatality		0
Collision w/Prop Damage		17
Total Mapped		23
Total NOT Mapped		0

Scale: 1 inch = 3742.2 Feet, 0.71 Miles

**Crash Map - KY 57, Lewis County, MP 0.500 to MP 4.557**  
January 1, 2012, to December 31, 2016



**VII. TABLES AND EXHIBITS (cont.)**



MP 0.5 - Begin Project



MP 0.2



MP 1.1



MP 1.6



MP 2.7



MP 3.3



MP 4.4 near intersection with KY 9

**KY 57 Photographs  
MP 0.500 to MP 4.557**