

**D**ata

**N**eeds

**A**nalysis



## Scoping Study



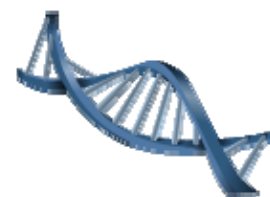
KY 138, Webster County  
Between KY 138 and the  
Railroad bridge

Item No. 2-228.00

Prepared by :

KYTC District 2 Planning

November 2012



**I. PRELIMINARY PROJECT INFORMATION**

<b>County:</b>	Webster	<b>Item No.:</b>	02-228.00		
<b>Route Number(s):</b>	KY 138	<b>Road Name:</b>	N/A		
<b>Program No.:</b>	87332	<b>UPN:</b>	FD04	117	138
<b>Federal Project No.:</b>		<b>Type of Work:</b>	Reconstruction		

**2012 Highway Plan Project Description:**

Reconstruct between KY 138 and RR Bridge at Slaughters to alleviate flooding.

<b>Beginning MP:</b>	10.449	<b>Ending MP:</b>	10.73	<b>Project Length:</b>	0.281
<b>Functional Class.:</b>	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural	<b>State Class.:</b>	<input type="checkbox"/> Primary <input checked="" type="checkbox"/> Secondary		
<b>MPO Area:</b>	Not Applicable	<b>Route is on:</b>	<input type="checkbox"/> NHS <input type="checkbox"/> NN <input type="checkbox"/> Ext Wt		
<b>In TIP:</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Truck Class.:</b>			
<b>ADT (current):</b>	900 (Year)	<b>2009 Terrain:</b>			
<b>Access Control:</b>	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial	<b>Spacing:</b>			
<b>Median Type:</b>	<input type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type):				
<b>Existing Bike Accommodations:</b>		<b>Ped:</b>	<input type="checkbox"/> Sidewalk		
<b>Posted Speed:</b>	<input checked="" type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify):				
<b>KYTC Guidelines Preliminarily Based on :</b>	40 MPH Proposed Design Speed				

**COMMON GEOMETRIC**

Roadway Data:	EXISTING	PRACTICES*		
No. of Lanes	2	2	<a href="#">Existing Rdwy. Plans available?</a>	
Lane Width	13/10	11	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Year of Plans: 1949
Shoulder Width	2'	5	<input checked="" type="checkbox"/>	<a href="#">Traffic Forecast Requested</a>
Max. Superelevation**	NA	NA	<input type="checkbox"/>	Date Requested: 10/23/2012
Minimum Radius**	NA	510	<input type="checkbox"/>	Mapping/Survey Requested
Maximum Grade		8%	<input type="checkbox"/>	Date Requested:
Minimum Sight Dist.		305	Type: <input type="checkbox"/>	
Sidewalk Width(urban)	NA	Min 4'		
Clear-zone***				
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

<b>Bridge No.*:</b>	117B00091N (Bridge #2)	<a href="#">Existing Geotech data available?</a>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Sufficiency Rating</b>	73.8		
<b>Total Length</b>	45.9		
<b>Width, curb to curb</b>	24.2 ft		
<b>Span Lengths</b>	14.1	<b>Detour Length(s):</b> 16.7 mi	
<b>Year Built</b>	1950		
<b>Posted Weight Limit</b>	open, no restriction		
<b>Structurally Deficient?</b>	N	*If more than two bridges are located on the project, include additions sheets.	
<b>Functionally Obsolete?</b>	Y		
<b>Existing Bridge Type</b>	concrete culvert		

**II. PROJECT PURPOSE AND NEED****A. Legislation**

Item # 02-228.00 in 2012 Highway Plan	<i><b>Funding</b></i>	<i><b>Phase</b></i>	<i><b>Year</b></i>	<i><b>Amount</b></i>
	SPP	D	2013	\$250,000
	SPP	R	2014	\$100,000
	SPP	U	2014	\$250,000
	SPP	C	2015	\$1,200,000

**B. Project Status**

This was a UPL project (02 117 D0138 2.00) that was indentified in 2006. This issue was identified by D2 staff.

**C. System Linkage**

This route is a Rural Collector. This project should not change the Functional Classification.

**D. Modal Interrelationships**

This project will not have any impact on Intermodal relationships

**E. Social Demands & Economic Development**

This project will not have any impact on Social Demands & Economic Development

**F. Transportation Demand**

This project should not have any impact on Transportation demand.

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

### G. Capacity

This project should not impact capacity. It is to raise the road to avoid flooding.

### H. Safety

The flooding in this area causes safety concerns of hydroplaning or road closure. The CRF for a section of KY 138 that includes this area is 0.497, however there was no accident history was found between 1/1/2009 and 12/31/2011.

### I. Roadway Deficiencies

The roadway is low and gets under water during heavy rains.

### Draft Purpose and Need Statement:

Need: This section of KY 138 tends to flood during heavy rains.

Purpose: To alleviate flooding by reconstructing this section of KY 138.

**III. PRELIMINARY ENVIRONMENTAL OVERVIEW****A. Air Quality**Project is in: ☒ Attainment area ☐ Nonattainment or Maintenance Area ☐ PM 2.5 County

STIP Pg. #: NA

TIP Pg. #: NA

**B. Archeology/Historic Resources**☐ Known Archeological or Historic Resources are present

None are Known. Agricultural fields are predominant

**C. Threatened and Endangered Species**

No habitat present

**D. Hazardous Materials**☐ Potentially Contaminated Sites are present ☒ Potential Bridge or Structure Demolition

Bridge/Culvert is concrete. No Hazardous materials in structure

**E. Permitting**Check all that may apply: ☐ Waters of the US ☐ MS4 area ☐ Floodplain Impacts ☐ Navigable Waters of the US ImpactsAre 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

None are known

**F. Noise**Are existing or planned noise sensitive receptors adjacent to the proposed project? ☐ Yes ☒ NoIs this considered a "Type I Project" according to the [KYTC Noise Analysis and Abatement Policy?](#) ☐ Yes ☒ No

NA

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

No relocations. Predominantly Agricultural fields.

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

None Known

Anticipated Environmental Document:

None (Completely State funded)



#### IV. PROJECT SCOPING

The project description in the Highway plan is to reconstruct between KY 138 and the RR bridge at Slaughters. There is actually no RR bridge. There is a Culvert at the RR. The problem flooding problem appears to be between the intersection with KY 120/KY 138 and the Culvert.

Current Estimate	
Phase	Estimate
Planning	0
Design	250,000
R/W	75,000
Utilites	400,000
Const	1,200,000
<b>Total</b>	<b>1,925,000</b>

The project will be along existing alignment.

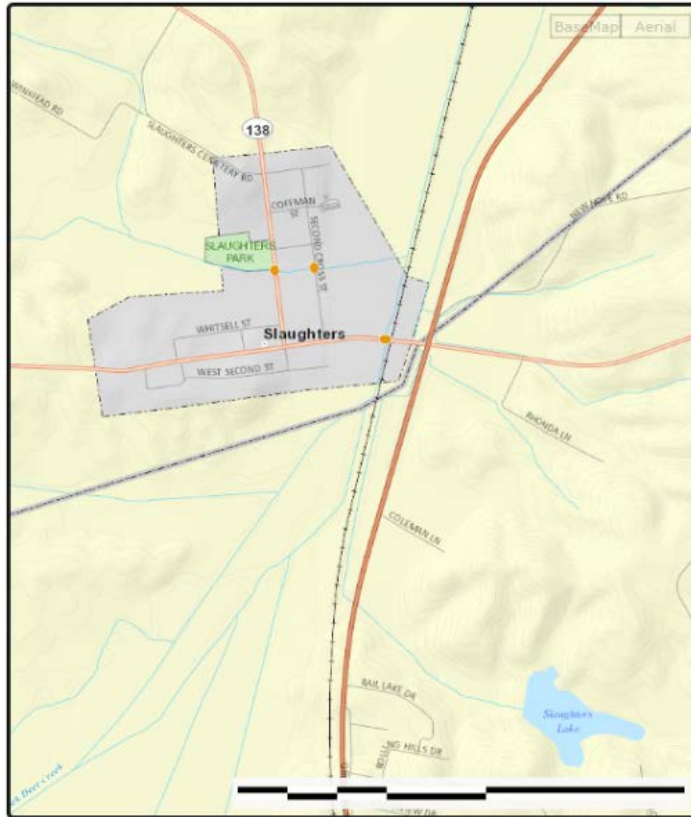
The original estimates were completed for the UPL and were based on similar projects.

These are the numbers reflected in the Highway plan. The current estimate above was based on a closer look at Utilities and Right of Way that caused changes to the estimate.





#### IV. PROJECT SCOPING (cont.)

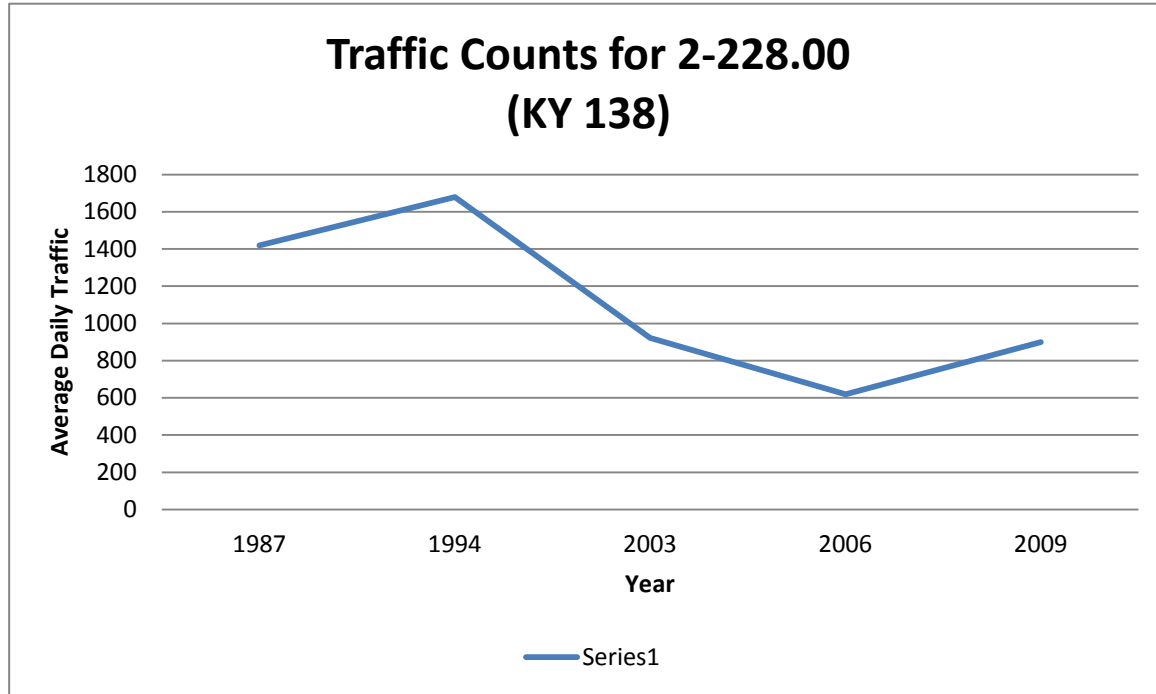


**Project Location Map**

#### V. Summary

The Project is to raise the roadway. The roadway floods during heavy rains. This should be done on existing alignment. The costs in the Highway plan should be adequate for right of way, design and construction to complete the project. However, additional Utility funds will be required. Although there is not a history of crashes at the project location, the water over the road poses potential safety risks such as hydroplaning and motorists getting stuck.

VI. Tables and Exhibits



**Exhibit 1: Traffic Count Data**



**VI. Tables and Exhibits (cont.)**



**Exhibit 2: Utility Map**