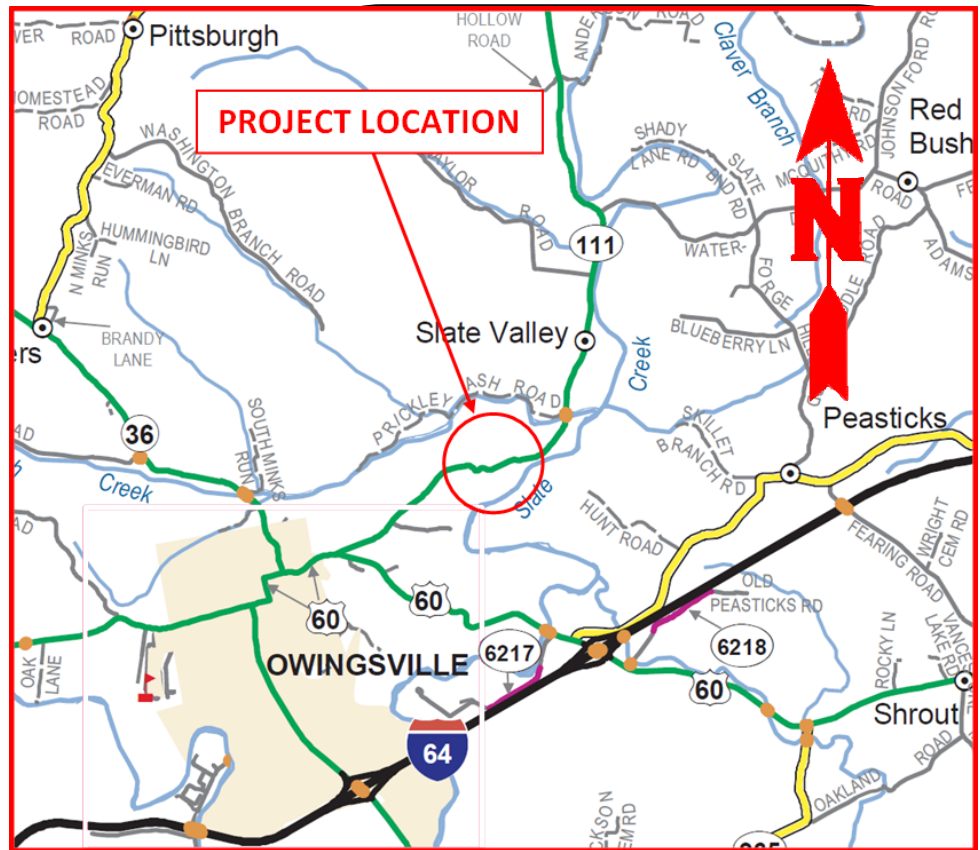


Data Needs Analysis

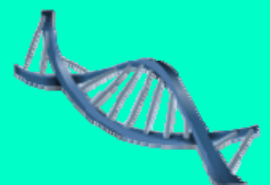


Scoping Study

KY 111
Bath County
Reconstruction of KY-111
approx. 1.0 mile northeast jct.
Us-60 at Owingsville in the
vicinity of the "S-curve"
Item No. 09-0193.00

Prepared by KYTC
District 9 Design Staff

November 2014



I. PRELIMINARY PROJECT INFORMATION

County:	Bath	Item No.:	09-0193.00
Route Number(s):*	KY 111	Road Name:	Owingsville-Flemingsburg Road
Program No.:	8157701D	UPN:	FD04 006 0111 001-002
Federal Project No.:		Type of Work:	Reconstruction/Realignment

2014 Highway Plan Project Description:

RECONSTRUCTION OF KY-111 APPROX. 1.0 MILE NORTHEAST JCT. US-60 AT OWINGSVILLE IN THE VICINITY OF THE "S-CURVE"

Beginning MP:	1.000	Ending MP:	1.500	Project Length:	0.5
In TIP:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Reconcile Project Information in Clearview			
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.:	AA ▼	% Trucks:	8.496%
MPO Area:	Not Applicable ▼	Terrain:	Rolling ▼		
ADT (current):	1191 2012				
Access Control:	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial	Spacing:	4 ▼		
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	Existing Rdwy. Plans available? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Year of Plans:
Lane Width	Varies (9.5-11.0)	11'	
Shoulder Width	0'-2' (Varies)	5'	<input type="checkbox"/> Traffic Forecast Requested Date Requested:
Max. Superelevation***	8.00%	8.00%	
Minimum Radius***	75.9'	965'	<input checked="" type="checkbox"/> Mapping/Survey Requested Date Requested: Available
Maximum Grade	11%	7%	
Minimum Sight Dist.	Minimal	495'	Type: Conventional ▼
Sidewalk Width(urban)			
Clear-zone [†]	Minimal	30' Minimum	

Project Notes/Design Exceptions?

Bridge No.: [‡]	(Bridge #1)	(Bridge #2)	
Sufficiency Rating			Existing Geotech Data Available? <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

This project was added by the General Assembly into the 2014 Highway Plan with the funding levels shown to the right.

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
SPP	D	2007	\$600,000
SPP	R	2014	\$1,580,000
SPP	U	2014	\$1,040,000
SPP	C	2014	\$5,520,000

B. Project Status

Design funds were authorized in 2007 as Item No. 09-8402.00. The project was surveyed by state forces in 2007/2008. The project will be advertised to consultants.

C. System Linkage

KY 111 is classified as a Rural Major Collector and provides a direct link between the towns of Owingsville and Flemingsburg while passing through the communities of Slate Valley and Wyoming in Bath County and Grange City, Hillsboro, and Poplar Plains in Fleming County. KY 111 also provides primary access for many citizens of northeastern Bath County to the city of Owingsville, US 60, and Interstate 64.

D. Modal Interrelationships

There are no apparent intermodal interactions with pedestrians, railroads, ferries, river ports, or bicycle routes along KY 111. Access along KY 111 for commercial vehicles is limited because of the current geometric deficiencies.

E. Social Demands & Economic Development

The Gateway Area Development District Regional Concept Plan lists KY 111 as a priority need to improve driver safety and operational efficiency. The geometry of the current "S-curve" in the roadway is difficult to maneuver, even in a passenger vehicle. The situation becomes significantly more difficult when longer vehicles are taken into account, such as school buses and trucks. Access to the areas served by KY 111 to the northeast of Owingsville is currently hampered by these curves. Realignment of the roadway to remove these curves will increase access for commercial vehicles as well as make school bus travel safer.

II. PROJECT PURPOSE AND NEED (cont.)**F. Transportation Demand**

The last traffic count on KY 111 was 1191 VPD with 6.264% single-unit trucks, 2.232% combination trucks, and 8.496% trucks overall. Traffic counts have not changed significantly in the past 20 years.

G. Capacity

The number of lanes is adequate for current traffic volumes.

H. Safety

There have been 8 collisions in the project limits since 2000. There have been no fatalities and 4 roadway departure collisions resulting in injury. The Critical Rate factor for all collisions at the north end of the project limits is 0.4220.

I. Roadway Deficiencies

KY 111 has a total roadway width of approximately 19.5' through the tangent sections and a slight width increase to approximately 22' in the "S-curve". The three adjacent curves that form the "S-curve" all have radii less than 200', with the smallest being only 75.9' in radius, which severely limits sight distance and maneuverability. No vehicle larger than a single unit passenger vehicle can pass through the curves while staying in a single lane, which increases the chance for collision with oncoming traffic.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

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

STIP Pg. #: TIP Pg. #:

As this is a state-funded project, it will not be listed in the STIP.

B. Archeology/Historic Resources

☐ Known Archeological or Historic Resources are present

Since this project is state-funded through all phases, Section 4(f) would not apply. Because the project appears to be state-funded with no US Army Corps of Engineers permits required, then Section 106 also would not apply. However, if it is determined that jurisdictional waters of the US would be impacted, then Section 106 (archaeology and historic resources) would be surveyed within the jurisdictional boundaries of the impacted streams. There are no properties within the expected project limits that are listed on the National Register of Historic Places (NRHP). However, the barn and home (possibly farmstead) near the end of the project would appear to be eligible for the NRHP. It is unknown if archaeology sites are present, but could be present given the proximity to nearby Slate Creek and the appearance that the farmed areas are relatively undisturbed.

C. Threatened and Endangered Species

Since this project is state-funded with no US Army Corps of Engineers permits appearing to be required at this time, then Section 7 would not apply. However, if it is determined that jurisdictional waters of the US would be impacted, then threatened and endangered species assessments would be conducted within those areas. Bath County has 6 species of freshwater mussels (fanshell, Northern riffleshell, pink mucket, sheepsnose, clubshell, and snuffbox), 1 plant species (running buffalo clover), and 3 bat species (Indiana, Virginia big-eared, and Northern long-eared) listed as federally threatened or endangered. In the expected project area, there do not appear to be streams that would be capable of providing suitable habitat for any of the listed freshwater mussel species. If impacts to Slate Creek should become necessary, then a mussel survey would likely be required. A habitat assessment might be required for running buffalo clover, although at this time habitat does not appear to be likely for that species. If trees will be impacted within jurisdictional limits, then it is expected that the IBPCMOA could be used to address impacts to the Indiana bat habitat.

D. Hazardous Materials

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

There are no sites within the expected project area that appear to be potentially contaminated or would have had a former use as a gas station, garage or UST site. Additionally, there will be no bridges demolished as part of the project. If it is determined that residential relocations are necessary for construction of the project, then they will be inspected and abated of asbestos containing materials prior to demolition.

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

The expected improvements do not appear to impact a stream or wetland. Therefore, a USACE or KDOW permit will not be required. If a wetland is discovered or if it turns out later in design that a stream will be impacted, then it is likely that the impacts could be covered with a USACE LON or NW. The only blueline stream in the area is Slate Creek, which is expected to be outside the area of the proposed improvements and not directly impacted. Slate Creek is listed as a Special Use Water. Several sinkholes are located within the project area. Impacts to these sinkholes could require the use of the KYTC Karst Policy.

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

KYTC does not normally consider noise analysis on state-funded projects.

G. Socioeconomic

Check all that may apply:

☐ Low Income/Minority Populations affected ☒ Relocations ☐ Local Land Use Plan available

There is one home near the beginning of the project that could be affected by the proposed construction. Since the project is state-funded through all phases, Executive Order 12898 (EJ) will not apply.

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

The following are present on the project:

☐ Section 4(f) Resources ☐ Section 6(f) Resources

Section 4(f) does not apply to this project since it is state-funded. Additionally, there are no parks within the project limits that have received Land and Water Conservation Funds. Therefore, Section 6(f) appears to be unlikely on the project.

Anticipated Environmental Document:

None (Completely State funded)

**IV. PROJECT SCOPING, NEEDS & PURPOSE****A. Scoping & Need:**

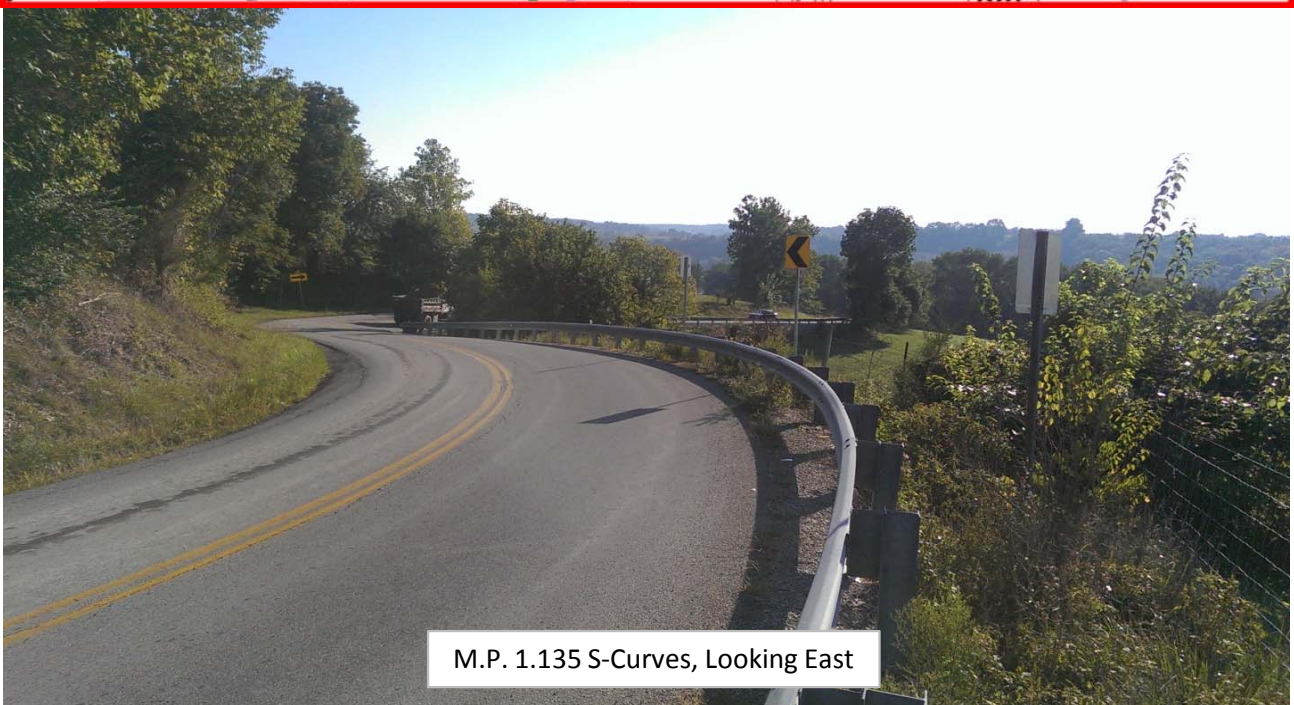
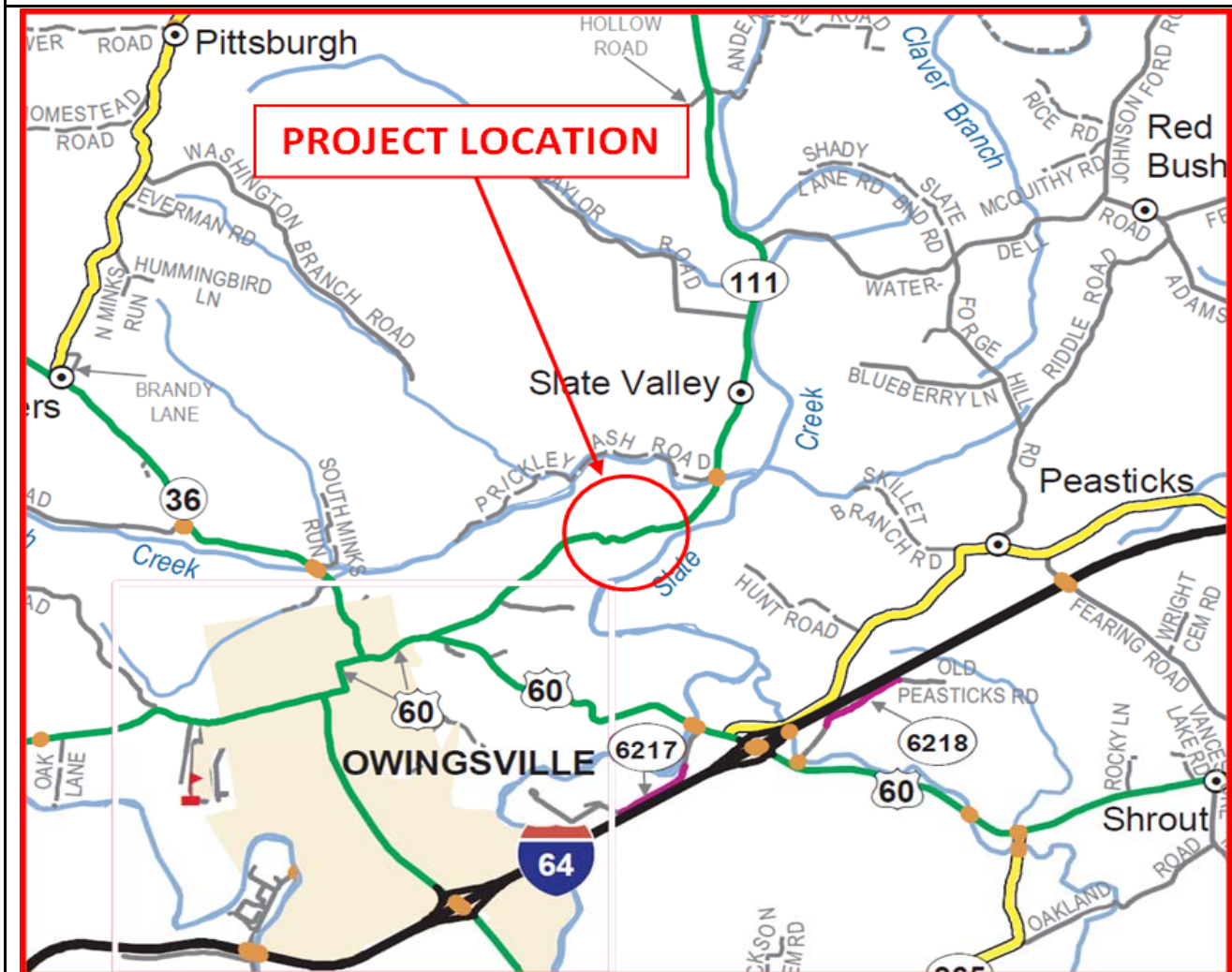
This project is necessary due to the extremely poor roadway geometry, the virtually non-existent sight distance, and the inadequate pavement width. These three factors combine to make the "S-curve" an unsafe location for the travelling public while severely limiting access to for larger vehicles. The current situation of the roadway will require moving away from the existing alignment due to both the terrain and for maintenance of traffic, for a length of approximately 0.5 miles.

B. Draft Project Purpose:

The purpose of this project is to reconstruct KY 111 as necessary to provide corrected roadway geometry, adequate sight distance, appropriate roadway width, and to provide better access and increased safety for the traveling public of Bath County.

V. PROJECT ESTIMATE & METHODOLOGY		
Estimate Methodology:	Current Estimate	
The current estimate is based upon relocation of the roadway to the north of its current location with the western terminus at approximate milepoint 1.0 and the eastern terminus falling between approximate milepoints 1.4 and 1.7.	Phase	Estimate
	Planning	
	Design	\$600,000
	R/W	\$1,580,000
	Utilities	\$1,040,000
	Const	\$5,520,000
	Total	\$8,740,000
VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION		
Company Name -	Bath County Water District	
Contact -	Sherry Green	
Address -		
Phone No. -	606-683-6363	
Company Name -	Delta Gas Inc.	
Contact -	Mike Downs	
Address -		
Phone No. -	606-674-2213	
Company Name -	Windstream Communications	
Contact -	Chris Barker	
Address -		
Phone No. -	606-784-4140	
Company Name -	Kentucky Utilities	
Contact -	George Argo	
Address -		
Phone No. -	859-588-0035	
Company Name -	Time Warner Cable	
Contact -	Elbert Lamb	
Address -		
Phone No. -	859-624-6974	
Company Name -		
Contact -		
Address -		
Phone No. -		

VII. TABLES AND EXHIBITS



M.P. 1.135 S-Curves, Looking East

VII. TABLES AND EXHIBITS (cont.)

