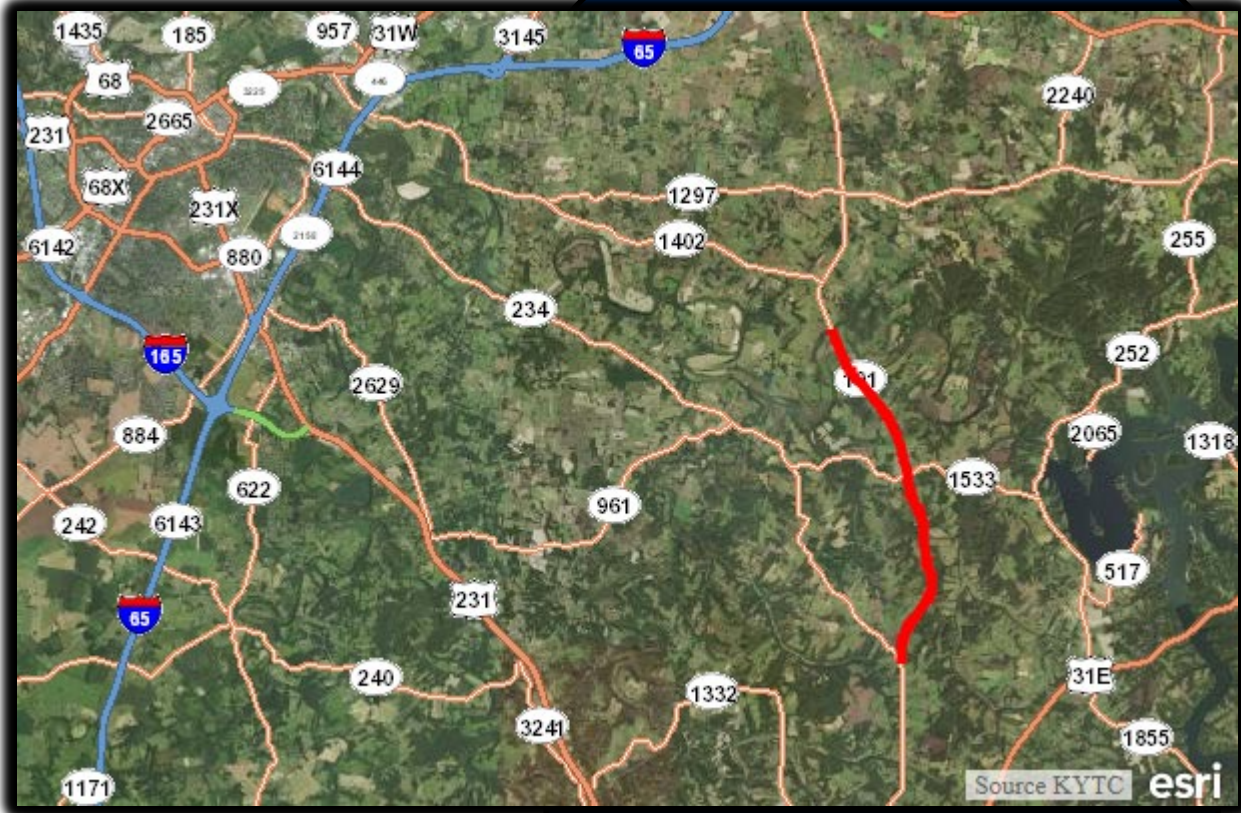


Data
Nneeds
Analysis



Scoping Study



KY-101
Smiths Grove Road
Allen County
Item No. 3-80207.00

Prepared by
KYTC District 3

August 2022



I. PRELIMINARY PROJECT INFORMATION

County:	Allen	Item No.:	3-80207.00			
Route Number(s)*:	KY-101	Road Name:	Smiths Grove Road			
Program No.:	N/A	UPN:	FD52	002	0101	005-014
Federal Project No.:	N/A	Type of Work:	Safety			

2022 Highway Plan Project Description:

Improve safety on KY 101 from KY 234 to the Warren County Line. (2020CCN)

Beginning MP:	5.861	Ending MP:	13.347	Project Length:	7.486
In TIP:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Use PDP/CHAF to Verify Project Data		
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: 16.424
MPO Area:	Not Applicable		Terrain:	Rolling	
ADT (current):	1052	2020			
Access Control:	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled		<input type="checkbox"/> Partial	Spacing: <input type="text"/>	
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
Lane Width	9'	12'	
Shoulder Width	3'	8'	Year of Plans: 1938
Max. Superelevation***	N/A	8%	<input type="checkbox"/> Traffic Forecast Requested
Minimum Radius***	N/A	960'	Date Requested:
Maximum Grade	N/A	4%	<input type="checkbox"/> Mapping/Survey Requested
Minimum Sight Dist.	N/A	495'	Date Requested:
Sidewalk Width(urban)	N/A	N/A	Type: <input type="text"/>
Clear-zone [†]	N/A	26'-32'	
Project Notes/Design Exceptions?			N/A

Bridge No.: [‡]	(Bridge #1)	(Bridge #2)	
Sufficiency Rating			Existing Geotech Data Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Total Length			
Width, curb to curb			
Span Lengths			
Year Built			
Posted Weight Limit			Detour Length(s): N/A
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

The following funding is listed in KY's FY22-FY28 Enacted Highway Plan.

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
STP	D	2024	\$810,000
STP	R	2025	\$1,040,000
STP	U	2026	\$1,860,000
STP	C	2027	\$7,440,000

B. Project Status

The design funds will be available for this project in FY 2024.

C. System Linkage

KY-101 is federally functionally classified as a Rural Major Collector that primarily connects northeastern Allen County to the cities of Scottsville and Bowling Green.

D. Modal Interrelationships

Because of the large percentage of truck traffic along KY-101, their mobility should be considered. There isn't a fixed route transit service outside of the city of Scottsville in Allen County, but KY-101 is a bus route for area schools. Bicycle and pedestrian facilities are also not present on this route, and there is not a demand for them in this area.

E. Social Demands & Economic Development

This highway provides the primary connection for residents of northeastern Allen County to the services - business, school, healthcare, government, and recreational activity - of Scottsville and Bowling Green.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

The last actual traffic count for KY-101 in Allen County between MP 5.861 and MP 13.347 (2020) was 1,052 AADT. These counts have remained fairly consistent over the past two decades. This is a AAA route and is vital for the transportation of freight, even though safety concerns from locals have discouraged that (I-65 near Smiths Grove is signed for truck traffic to not get off in Smiths Grove, but instead continue to Bowling Green and take US-231 to Scottsville). To clarify, a truck-trailer combo that is 65 feet or shorter and no wider than 8 feet is legal on any state route. Their concerns are for larger truck-trailer combos which are illegal on this road since it's not on the Truck Network.

G. Capacity

This corridor does not experience noteworthy congestion issues.

H. Safety

In the last five years (2017-2021), there have been 80 reported crashes (3 of which were fatal) on KY-101 from MP 5.861 to MP 13.347 in Allen County. The majority were single vehicle collisions, but several sideswipe and angle collisions also happened. The Critical Rate Factor for this corridor is 2.288, indicating that crashes may be occurring at a higher rate than on a similar type of corridor in Kentucky.

I. Roadway Deficiencies

This section of KY-101 is very narrow (9' lanes with 1' paved shoulder and 2' stabilized shoulder), especially when considering the amount of truck traffic. There are also multiple skewed intersections along this corridor.

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]

As this is a federally-funded project, it will need to be listed in the STIP.

B. Archeology/Historic Resources

Known Archeological or Historic Resources are present

Section 106 will apply and SHPO clearances for archeology and historic will be required.

C. Threatened and Endangered Species

The Gray and Indiana Bat are endangered species, and the Northern Long-eared Bat is threatened. There are several clams and mussels endangered. Anticipate that seasonal tree cutting restrictions will be required to minimize potential adverse effects to Indiana Bats.

D. Hazardous Materials

Potentially Contaminated Sites are present Potential Bridge or Structure Demolition

There are no known hazardous materials located within the corridor.

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

A KYTC BMP Plan and KYR10 permit will be applied if disturbance is greater than 1 acre.

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 [KYTC Noise Analysis and Abatement Policy?](#) Yes No

A Traffic Noise Impact Analysis must be performed in accordance with the KYTC Noise Policy.

G. Socioeconomic

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

There are residential homes, a fire department, a business, and farmlands along the corridor.

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

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

There are none present.

[Anticipated Environmental Document:](#)

CE Level 1



IV. PROJECT NEED, PURPOSE & SCOPE

A. Need:

KY-101 is a rural major collector route that connects the rural communities along the corridor to the cities of Scottsville and Bowling Green. It is also a AAA truck route that is used for the transportation of freight. This section currently experiences 16.424% truck traffic. Locals have expressed concerns about over-dimensioned trucks on this route due to the narrow road width.

B. Purpose:

The purpose of this project is to improve safety along this section of KY-101.

C. Scope:

The estimated improvements to this corridor are various low cost safety improvements similar to what would be used in a Highway Safety Improvement Program (HSIP) project. Since going off alignment isn't expected, impacts to right-of-way (60' existing) should be minimal; but utility impacts are possible.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:	Current Estimate	
The following estimate is based on low cost safety improvements (HSIP style) on KY-101 from KY-234 to the Warren County Line.	<u>Phase</u>	<u>Estimate</u>
	Planning	
	Design	\$810,000
	R/W	\$1,040,000
	Utilities	\$1,860,000
	Const	\$7,440,000
	Total	\$11,150,000

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Company - Tennessee Valley Authority
 Contact - Williams Mills, Transmission Service Manager
 Address - 6045 Russellville Rd, Bowling Green, KY 42101
 Phone No. - 270-846-7049

Company - North Central Telephone Cooperative Inc.
 Contact - Troy Davis, Engineer
 Address - 872 Hwy 52 E Byp PO Box 70, Lafayette, TN 37083
 Phone No. - 615-666-2151

Company - Windstream Communications
 Contact - Rondale Langley, Construction Engineer
 Address - 111 South Main St, Elizabethtown, KY 42701
 Phone No. - 270-765-1817

Company - Tri-County Electric Membership Coop. Corp.
 Contact - Steve Linville, Engineer
 Address - 405 College St, PO Box 40, Lafayette, TN 37083
 Phone No. - 615-666-2111

Company - Allen County Water District
 Contact - Garry Wade, District Manager
 Address - 330 New Gallatin Rd PO58, Scottsville, KY 42164
 Phone No. - 270-622-3040

Company - Tennessee Gas Pipeline
 Contact - Justin Dorman, Senior Right of Way Agent
 Address - 750 O Hick Blvd, B2-S190, Brentwood, TN 37027
 Phone No. - 270-852-1161

VII. TABLES AND EXHIBITS



Photo 1: Beginning of the project at the KY-234 intersection facing north toward Warren County



Photo 2: Toward the middle of the project area facing north toward Warren County

VII. TABLES AND EXHIBITS (cont.)



Photo 3: Toward the middle of the project area facing south toward Scottsville



Photo 4: End of the project at the Warren County Line facing south toward Scottsville