

Data

Needs

Analysis



Scoping Study

KY 32 (Morehead Road)
Fleming County

Safety Improvements and pavement rehabilitation on KY 32 from MP 12.8 to MP 17.5

Item No. 09-8903.00

Prepared by KYTC
District 9

January 2018



I. PRELIMINARY PROJECT INFORMATION

County:	Fleming	Item No.:	9-8903.00
Route Number(s):*	KY 32	Road Name:	Morehead Road
Program No.:	93382-0	UPN:	FD04 035 0032 012-018
Federal Project No.:	N/A	Type of Work:	Safety Improvements/Rehab.

2016 **Highway Plan Project Description:**

Safety improvements and pavement rehab East of Flemingsburg Bypass to KY 156

Beginning MP:	12.8	Ending MP:	17.5	Project Length:	4.7
In TIP:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Reconcile Project Information in Clearview			
State Class.:	<input checked="" 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 Arterial	Truck Class.:	AAA	% Trucks:	9.5
MPO Area:	Not Applicable	Terrain:	Rolling		
ADT (current):	5000-6400				
Access Control:	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input checked="" 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	Existing Rdwy. Plans available?
Lane Width	11' to 12'	12'	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Shoulder Width	5' earth	8'	Year of Plans: 1980 & 1984
Max. Superelevation***	10.00%	8%	<input type="checkbox"/> Traffic Forecast Requested
Minimum Radius***	1432.4'	960'	Date Requested:
Maximum Grade	7.3%	7%	<input type="checkbox"/> Mapping/Survey Requested
Minimum Sight Dist.	unknown	495'	Date Requested:
Sidewalk Width(urban)	N/A	N/A	Type:
Clear-zone [†]	3:1 ditch slope	26'-32'	

Project Notes/Design Exceptions? KY 32 & KY 32 Bypass Extension plans available online

Bridge No.:#	035B00011N	(Bridge #2)	
Sufficiency Rating	98.4		Existing Geotech Data Available?
Total Length	30'		<input type="checkbox"/> Yes <input type="checkbox"/> No
Width, curb to curb	17.7'		
Span Lengths	2 at 12'		
Year Built	1932		
Posted Weight Limit	none		Detour Length(s): 8 miles
Structurally Deficient?	Not SD		
Functionally Obsolete?	Not FO		
Existing Bridge Type	Concrete culvert		

*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>
SPP	D	2018	\$750,000
SPP	R	2019	\$1.5 M
SPP	U	2020	\$1.5 M
SPP	C	2021	\$10.75 M

B. Project Status

SHIFT score before boost: 49.9; SHIFT score after boost: 79.9; Overall district ranking after boost: 17. Although project funding was never requested by the district, the project was authorized for design on 8-1-17 using "Pause 50" state funds. An environmental document (anticipated to be CE level 1, to be completed with in-house resources) will be completed so that the project will remain eligible for federal funding, should it become available.

C. System Linkage

KY 32 provides a major east-west connection in districts 6, 7, 9 and 12. It connects cities and roads from Georgetown (I75, US 25, US 62, US 460) to Cynthiana (US 62 & US 27) to Carlisle (US 68, KY 36) to Flemingsburg (US 68, KY 11 & KY 57) to Morehead (I64, US 60, KY 377 & KY 519) to Sandyhook (KY 7) and ending in Louisa (US 23).

D. Modal Interrelationships

This section of KY 32 provides the only viable truck route between Flemingsburg and Morehead. Regional industry in the Morehead/Flemingsburg area have access to I64, CSX railroad and the Ohio River.

E. Social Demands & Economic Development

Safety improvements and pavement rehabilitation along this section of KY 32 will do exactly what the project suggests; provide a safer connection between Morehead and Flemingsburg while potentially decreasing travel times and potentially leading to residential and commercial development along the route. Current land use is mostly farming mixed with residential development and some commercial/industrial development. Topography is gently rolling and conducive to future development.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

ADT's along KY 32 have shown a small increase over the last 30 years, but shown a slight decrease over the last 10 years, falling approximately 1.5% per year. Traffic diversity and speed differentials have risen greatly due to the Amish (horse & buggy) community integrating with the commuter and commercial vehicles.

G. Capacity

This section of KY 32 operates well below capacity with a LOS near B. Safety improvements and pavement rehabilitation may contribute to slightly increased volumes, but not enough to warrant additional lanes.

H. Safety

Between January 1, 2012 and January 1, 2017, KSP's crash data shows 50 total crashes. Twenty-nine (29) were property damage only, nineteen (19) were injury crashes, and two (2) were fatalities. Looking at the crashes on a map, one area, approximate MP 14.92, the intersection of Asbury Road, shows a cluster of crashes. Many of these crashes were rear end collisions indicating that left turning vehicles were stopped due to oncoming traffic and were struck in the rear end.

I. Roadway Deficiencies

Beginning with the typical section, lane width is satisfactory at 12'. The 5' earth shoulders could be improved by paving and possible widening. The 4' @ 3:1 slope ditches do not provide recoverable slopes and could be improved by widening and flattening. Horizontal curvature throughout the project exceeds minimum standards for 55 mph design speed; however, superelevation rates exceed maximum recommendations. At least one vertical grade exceeds maximum standards while vertical sight distance (stopping sight distance) appears deficient at several locations. Clear zone appears inadequate throughout the project. Additional turn lanes may be warranted at several locations.

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]

The project is not listed in the STIP because it is state funded through all phases.

B. Archeology/Historic Resources

Known Archeological or Historic Resources are present

There are no properties within the project limits that are listed on the National Register of Historic Places (NRHP). However, there are several parcels that could be considered potentially eligible for the NRHP. Additionally, there is potential for both historic and prehistoric archaeology sites. Historic architectural and archaeological resources will be identified during the project development phase in conjunction with Section 106 consultation. If federal funds are used for future phases of the project, then Section 4(f) will also apply to any listed or eligible properties.

C. Threatened and Endangered Species

The DEA Comprehensive Threatened/Endangered Species List identifies 3 bat, 6 mussel, and 2 plant species as possibly occurring in Fleming County. Streams within the project area do not appear to be capable of supporting freshwater mussel species so a survey is unlikely. It is expected that a survey for the plant species will be required and that an assumed presence biological assessment will be completed for the listed bat species.

D. Hazardous Materials

Potentially Contaminated Sites are present Potential Bridge or Structure Demolition

A few former gas stations/garages were located along the project making Haz/Mat a possibility.

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

There are no major stream crossings within the existing KY 32 corridor. Several smaller streams do exist along KY 32 and could be impacted depending on the extent of widening. 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.

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

There are a few areas within the project limits that have vertical deficiencies. If these are corrected as part of the project, and the vertical alignment is altered substantially, then the project could be Type 1 which will require that a noise study be conducted. It is not expected that the horizontal alignment will be substantially altered or that additional lanes (other than turn lanes) will be added.

G. Socioeconomic

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

A higher percentage of minorities and low income populations were reported in the census block containing the project area when compared to total Fleming County and Kentucky numbers. If relocations are required and federal funds are used for the project, an EJ analysis will be conducted to determine if there is a disproportionate and adverse impact to EJ populations.

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 no publicly owned parks, recreation areas or wildlife refuges within the project limits. Several structures appear to be potentially eligible for the NRHP.

Anticipated Environmental Document:

CE Level 1

IV. PROJECT SCOPING, NEEDS & PURPOSE

A. Scoping & Need:

Although the shoulder width and type, ditch width and slope, and vertical sight distance (stopping sight distance) are deficient, the horizontal alignment is very good. All deficiencies should be evaluated, but low cost, minimal right of way improvements may provide an acceptable level of safety improvement while keeping the project within scope and budget.

B. Draft Project Purpose:

Improve safety and mobility on KY 32 (Morehead Road) between KY 32X (Mockingbird Hill) and KY 156 (Mt. Hope Road).

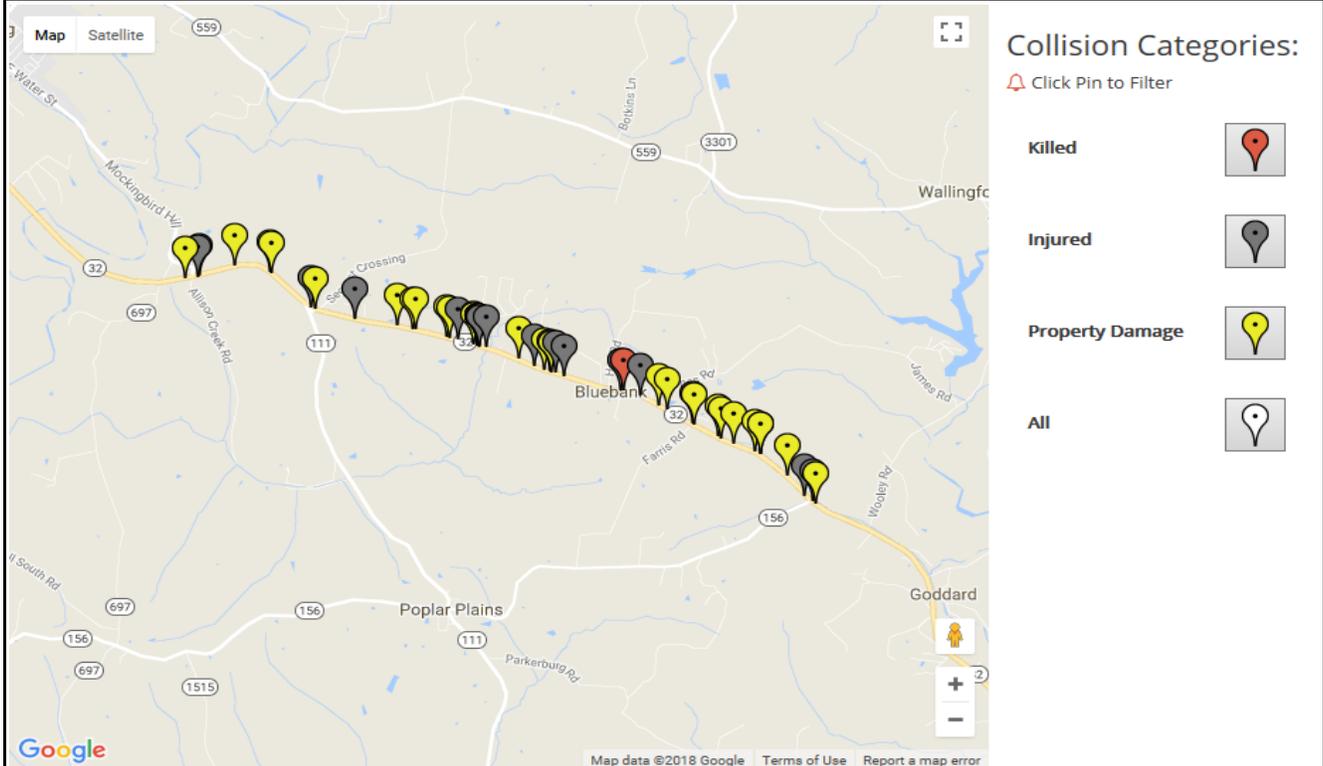
V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:	Current Estimate	
Estimates were made assuming the existing 5' earth shoulders would be trenched and paved. Minor vertical sight distance corrections would be evaluated and potentially implemented. Turn lanes would be evaluated and considered where warranted. Everything would be paved.	<u>Phase</u>	<u>Estimate</u>
	Planning	
	Design	\$750,000
	R/W	\$1.5 M
	Utilities	\$1.5 M
	Const	\$10.75 M
	Total	\$14.5 M

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Company Name -	Fleming County Water Association
Contact -	Kevin Cornette
Address -	2772 Morehead Road, Flemingsburg, KY 41041
Phone No. -	606 845-3981
Company Name -	Fleming-Mason Energy Co-OP, Inc.
Contact -	Brandon Hunt
Address -	1449 Elizaville Road, Flemingsburg, KY 41041
Phone No. -	800 464 3144
Company Name -	Windstream
Contact -	Chris Barker
Address -	1715 East Broadway St., Campbellsville, KY 42718
Phone No. -	606 784-4140
Company Name -	Spectrum
Contact -	Elbert Lamb
Address -	1617 Foxhaven Drive, Richmond, KY 40475
Phone No. -	859 624-6974
Company Name -	
Contact -	
Address -	
Phone No. -	
Company Name -	
Contact -	
Address -	
Phone No. -	

VII. TABLES AND EXHIBITS



Crashes on KY 32 between MP 12.8 and MP 17.5