

## EXECUTIVE SUMMARY

### KY 49 Planning Study, between KY 84 near Lebanon and KY 52 in Loretto Marion County, KYTC Item No. 4-8707.00



The Kentucky Transportation Cabinet (KYTC) has undertaken a planning study to consider the improvement of KY 49 from KY 84 near Lebanon to KY 52 in Loretto.

The purpose of this study is to:

- Identify known issues, concerns, and constraints, including safety, traffic, social, environmental, and geotechnical considerations.
- Develop preliminary “purpose and need” and goals for the proposed project.
- Listen to and share information with local officials, government agencies, other interested parties, and the public.
- Develop and evaluate improvement concepts for KY 49 based on project purpose and need, including short-term “spot” improvements along the existing route.
- Make project recommendations.

**Project Purpose and Need:** The primary purpose of this project is to improve safety by addressing geometric deficiencies along KY 49 from KY 84 near Lebanon to KY 52 in Loretto.

**KY 49 Characteristics:** The study route:

- is 8.8 miles in length;
- has two narrow lanes and minimal shoulder;
- has eight 0.1-mile “spots” and one 0.5-mile “segment” with high crash rates;
- has a number of horizontal and vertical curves that do not meet current design standards;
- is predominately rural in character, with the Loretto end serving West Marion Elementary School and local businesses. Scattered homes are located along the corridor; and
- is adjacent to water resources and other environmental features.



**Study Process:** The project included:

- Field examination;
- Analysis of crash, traffic, geometric, environmental, and geotechnical data;
- Two meetings with local officials and stakeholders;
- One meeting with the public; and
- Three meetings of the Project Team to review analysis and input throughout the project.

After the initial meetings, potential improvement options were developed. Alternates were analyzed based on purpose and need, potential impacts, cost, and public input.

**Recommendation:** The planning study resulted in a recommendation to advance multiple widening options to the design phase. The recommendation is to widen largely along the existing alignment and correct substandard geometric features, but off-alignment options are also recommended for consideration in some areas. The alternates recommended for consideration in the design phase are shown in **Figure ES.1**, divided into constructible sections. The two middle sections were identified as the most important from a safety standpoint; they involved the most crash activity and include the most areas that do not meet current design standards. They were also identified as priorities from a local perspective (local officials/stakeholders and public).

**The project team recommends the following construction sections as high priorities:**

KY 49 from Toad Mattingly Road to KY 327 (2.76 miles), estimated \$13.7 million total cost

KY 49 from KY 327 to KY 2740 (3.21 miles), estimated \$12.2 million total cost

Short-term solutions may be considered if funding is not available for the recommended alternate. Of seven potential short-term spot improvement projects identified, the following two are recommended as high priorities.

**High Priority Spot Improvements:**

KY 49 from Cowherd Lane to Sam Browning Road, estimated \$4.0 million total cost

KY 49 near KY 52 (St. Francis Highway), estimated \$6.7 million total cost

**Key - Recommended Improvement Alternates**  
**No-Build Alternate** – Continues existing highway maintenance but no other improvements  
**Blue Alternate – Spot Improvements Only** - These relatively low cost improvements address areas where geometrics do not meet current design standards or where other issues have been identified.  
**Red + Blue Alternate** - Widen existing route + Complete all spot improvements.  
**Green Alternate** – Widen existing route + Complete spot improvements + Construct new alignment as shown in green.  
**Yellow Alternate** – Widen existing route + Complete spot improvements + Construct new alignment as shown in yellow.  
**Pink Alternate** – Widen existing route + Complete spot improvements + Construct new alignment as shown in pink.  
**Orange Alternate** – Widen existing route + Complete spot improvements + Construct new alignment as shown in orange.

**Priority Spot Improvement Projects**

Spot	MP	Length	Project Description	Design Cost	R/W Cost	Utility Cost	Construction Cost	Total Cost
D	20.9 - 21.83	0.93	Realignment near Cowherd Lane	\$400,000	\$1,000,000	\$525,000	\$2,050,000	\$3,975,000
E	23.35 - 24.98	1.63	Realignment near St. Francis Highway (KY 52)	\$500,000	\$1,500,000	\$1,100,000	\$3,600,000	\$6,700,000

**Construction Sections with Logical Termini**

Section	MP	Length	Project Description	Design Cost	R/W Cost	Utility Cost	Construction Cost	Total Cost
I	18.698 - 20.067	1.369	Minor Widening and Spot Improvements from KY 84 to Toad Mattingly Road	\$450,000	\$1,500,000	\$755,000	\$3,320,000	\$6,025,000
II (Priority)	20.067 - 22.829	2.762	Minor Widening and Spot Improvements from Toad Mattingly Road to KY 327 (Priority Section)	\$950,000	\$1,400,000	\$1,400,000	\$9,900,000	\$13,650,000
III (Priority)	22.829 - 26.042	3.213	Minor Widening and Spot Improvements from KY 327 to KY 2740 (Priority Section)	\$850,000	\$2,070,000	\$1,640,000	\$7,650,000	\$12,210,000
IV	26.042 - 27.54	1.498	Minor Widening and Spot Improvements from KY 2740 to KY 52	\$500,000	\$2,400,000	\$966,000	\$4,600,000	\$8,466,000

**Basemap Key**

- Corporate Boundary
- County Boundary
- Regional Roads
- US
- KY
- CR
- Mile Marker

**Recommended Improvement Alternates**

- Widen Existing
- Blue Alternate
- Green Alternate
- Yellow Alternate
- Pink Alternate
- Orange Alternate



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Figure ES.1: Recommended Improvement Alternates

12/18/2013