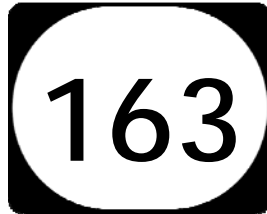


EXECUTIVE SUMMARY
ALTERNATIVES PLANNING STUDY
Final Report



Kentucky 163 South
from near the proposed Tompkinsville Bypass to the Tennessee state line
Monroe County, Kentucky
Item No.: 03-8310.00

Prepared for:
KENTUCKY TRANSPORTATION CABINET
DIVISION of PLANNING

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June 2008

EXECUTIVE SUMMARY

The KY 163 South *Alternatives Planning Study* was prepared to assist the Kentucky Transportation Cabinet (KYTC) in defining the scope and extent of improvements best suited to meet the current and future needs of this facility, which is located between the proposed Tompkinsville Bypass and the Kentucky-Tennessee state line in Monroe County, a distance of about 7 miles.

Tompkinsville, located just north of the study area, is the county's economic activity center. Improved connectivity would play an important role in the region's future economic growth and development.

Planning Process. A project team approach was used, consisting of representatives from the KYTC Central Office and District 3, the Barren River Area Development District, and Qk4. Public involvement activities included project team meetings, resource agency coordination, meetings with local officials and stakeholders, and public information meetings.

Existing Conditions. KY 163 typically has two narrow driving lanes, narrow-to-no shoulders, and winds through a hilly and wooded area with restricted sight distances, providing few opportunities to pass slower vehicles. Heavy freight truck and recreational vehicle traffic are common.

It is a major north-south connector in Monroe County and for the area in general. It is commonly used as a short-cut between the interstates and major highways in Kentucky and Tennessee. Existing traffic volumes are between 1,470 and 3,190 vehicles per day (vpd), and are projected to increase to 2,400 to 5,100 vpd by 2030.

Although the crash data identified no high crash locations, area residents and local officials insisted safety is the top concern. They noted that many crashes occur and that the database is under-reporting the actual number because drivers choose not to document the crash.

Most crashes occur during daylight hours on dry roads, with a majority involving a single vehicle (*i.e.*, fixed object, driver loses control, runs off road, and other), followed by head-on crashes (*i.e.*, crossing the centerline or passing improperly). Both of these contributing factors can be heavily influenced by roadway geometrics such as sharp curves, steep hills, limited visibility, and limited passing opportunities. An analysis of the "as-built" plans shows that most of the road only meets the geometric standards for a 35-MPH design speed, although the posted speed limit is 55-MPH.

The public identified several high crash locations based on their experiences and local knowledge. Most of these locations, after a detailed engineering analysis, were found to coincide with locations that had the worst combinations of horizontal and vertical deficiencies. This analysis validated the public-identified high crash locations in the absence of a high number of recorded crashes.

Corridor Issues and Goals. Corridor issues and concerns were identified through discussions with KYTC officials, local officials, and stakeholders; site visits; traffic records; and public information meetings. Safety overshadowed all other issues, prompted mainly by the substandard conditions of KY 163. Other corridor issues included: minimizing/avoiding impacts to communities and historic properties, promoting economic development, providing passing opportunities, and considering environmental impacts.

The project team — following a careful consideration of corridor issues — developed the following project goals:

- Improving safety
- Correcting geometric deficiencies
- Improving regional connectivity and accessibility
- Improving passing opportunities
- Avoiding adverse community and right-of-way impacts
- Encouraging economic growth

Alternatives Analysis. Improvement options in the following categories were evaluated:

- Do Nothing – involves only routine roadway maintenance. This option was not recommended because it would not address the project goals. However, the Do Nothing option will be considered for baseline comparisons throughout the decision-making process.
- Maintenance / Operations Projects – involves relatively low-cost, but effective, improvements that can be quickly implemented through maintenance type activities (e.g., traffic control devices at critical locations, lighting, pavement striping, removal of vegetation and other visual obstructions, and modifying street corner radii).
- Spot Improvements – are relatively short-distance improvements that address immediate and short-term needs, and generally involve roadway reconstruction to correct horizontal and vertical deficiencies.
- Combinations of Spot Improvements – result from the combination of two or more sequential Spot Improvements to form a more comprehensive improvement alternative.
- New Corridor Options – involve the construction of new roadways that deviate significantly from the existing alignment. These options include bypassing the existing alignment from the proposed Tompkinsville Bypass to the Tennessee state line.

To determine the most effective improvements to KY 163, the project team discussed a new corridor versus numerous spot improvements. Due to the public support of a new corridor, the project team carefully considered the feasibility of that option. However after detailed discussion and analysis, **a new corridor was found to be unjustified based upon projected traffic volumes, cost effectiveness, and the top goal of improving safety on KY 163.** Consequently, the project team decided to recommend individual spot improvements, focusing on the most critical locations (*i.e.*, those with high crash rates, sharp curves, steep hills, restricted visibility, and limited passing opportunities).

Prioritized from highest to lowest, the project team recommended the following alternatives be carried forward as shown in Table ES -1 below:

Table ES 1 Recommended KY 163 Reconstruction Projects

Priority	Alternative	Description	Mile Post	Length (miles)	Est. Cost* (million dollars)
1	Spot 2 (S2)	Realignment of KY 163 to the east at Marshall Curve, south of the proposed Tompkinsville Bypass	6.15 – 7.05	0.9	Design: \$0.2 R/W: \$0.7 Utility: \$0.3 Construction: \$3.0 Total: \$4.2
2	Spot 1 (S1)	Curve Correction North of the proposed Tompkinsville Bypass	7.4 – 8.0	0.6	Design: \$0.2 R/W: \$0.4 Utility: \$0.2 Construction: \$2.0 Total: \$2.8
3	Combined Spot 1 East (CS1E)	Combination of Spots 5W and 6; Hestand Area Bypass and Curve Correction at Ned Jackson Rd.	2.0 – 4.1	1.8*	Design: \$0.6 R/W: \$1.3 Utility: \$0.7 Construction: \$5.9 Total: \$8.5
4	Combined Spot 2 (CS2)	Combination of Spots 7,8, and 9; Curve Corrections from TN State Line to the Denton Murphy Rd. area	0.0 – 1.9	1.9	Design: \$0.6 R/W: \$1.4 Utility: \$0.7 Construction: \$6.3 Total: \$9.0
5	Spot 3 (S3)	Redesign and rebuild the intersection at KY 3144 and KY 163	6.15	0	Design: \$0.1 R/W: \$0.1 Utility: \$0.1 Construction: \$1.1 Total: \$1.4

* Mileage length refers to actual miles including new bypass, not indicative of mile posts on existing corridor.

The recommended construction projects are also shown on Figure ES -1 below.

