Alternatives Planning Study for KY 1006 (5th Street)

from KY 192 to US 25 (Main Street), City of London

Laurel County Item Number 11-8304.00



Final Report

LTERNATIVES LANNING STUDY ve Summary

Prepared for:

KENTUCKY TRANSPORTATION CABINET **DIVISION of PLANNING**

Prepared by:



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815 West Market Street Suite 300

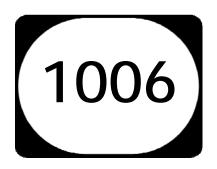
Louisville, Kentucky 40202

October 2008



EXECUTIVE SUMMARY ALTERNATIVES PLANNING STUDY

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EXECUTIVE SUMMARY

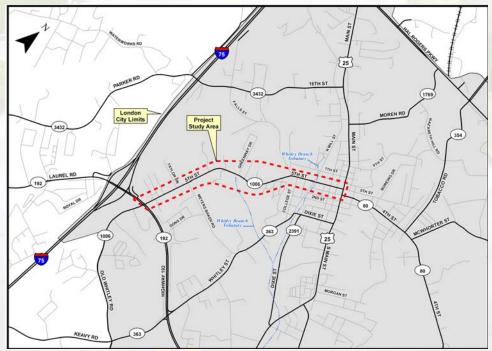
Study Background and Purpose

This report documents a transportation alternatives study examining feasible improvement opportunities for 5th Street (KY 1006) in the city of London, Kentucky, beginning near KY 192 and extending north to US 25 (Main Street). The Kentucky Enacted Six-Year Highway Plan FY 2007-2012 identified this study as Item No. 11-8304. This project candidate was prioritized highly in the 2001 *London-Laurel County Transportation Study* and has been identified as a high local priority in the KYTC Statewide Transportation Planning process. 5th Street was recently scored with an Adequacy Rating percentile of 55 on the KYTC Project Identification Form (PIF). This PIF identified horizontal alignment, access, capacity, and safety issues with a particular concern for sight distance restrictions near the former Sue Bennett College.

This current study examines existing and forecasted conditions on 5th Street with standard transportation metrics to determine whether there are current or projected future deficiencies and to evaluate the extent of any deficiencies that may be identified. Alternative improvement concepts were considered for six sub-segments of this highway facility. The alternative concepts were evaluated by a KYTC Project Team, local officials, and the public at large. The result of the study presented herein is a recommended set of highway improvements for future implementation.

Study Location and Limits

KY 1006 is a state-maintained highway located entirely within Laurel County that begins at the entrance to Levi Jackson Wilderness Road State Park, intersects with US 25, KY 2069, and KY 363 before its junction with KY 192, then terminates at US 25 (Main Street) in London. The 1.55-mile section of KY 1006 (5th Street) from KY 192 to Main Street is the subject of this study.



Conditions Analysis

Fifth Street, which is in the study area, is an undivided 2-lane highway functionally classified on the Kentucky highway system as an Urban Minor Arterial Street. Average daily traffic volumes (ADT) peak south of Mill Street at nearly 8,200 vehicles per day (vpd), but decline to approximately 5,500 vpd north of that point. Truck percentages are negligible (less than 2%). After significant increases in the late 1980s, traffic growth on 5th Street has been modest. Traffic volumes south of Mill Street have grown 30% since 1991, while those north of Mill Street have grown 6% in this same period—which represent an annual growth rates of less than 2% for the entire corridor. Future growth was projected at 1.5%, resulting in an estimate for the Year 2030 of 13,700 vpd south of Mill Street and an estimate of 8,800 vpd north of Mill Street. The intersections of 5th Street at KY 192 and US 25 are signalized. The only other traffic signal between these highways is at the 5th Street/Mill Street intersection.

Several geometric and other deficiencies were identified along 5th Street. While the road's average 11-foot lane width is adequate, there are several significant horizontal and vertical curvature deficiencies. Intersection geometrics at the junctions with Falls Street and with Mill Street are deficient. There is a sidewalk along either the north or south (or, at times, each) side of 5th Street throughout the entire length of the project corridor; however, some stretches of sidewalk are in disrepair.

Project Issues and Goals

The goals for this project include:

- **❖** Improve safety on 5th Street
- Improve traffic flow on 5th Street
- Accommodate historic preservation
- Implement context sensitive design solutions
- Provide "Americans with Disabilities" (ADA) design accommodations
- Enhance economic development

Alternatives Development and Evaluation

There are discrete transportation issues that vary by location along the 5th Street corridor. Thus, the corridor was segmented into six analysis sections plus two locations of emphasis within one of those segments. Analysis sections and alternative improvements considered for each follow:

- 1. KY 192 to Meyers-Baker Road (0.35 mile):
 - a. Three Lanes with Center Two-Way Left Turn Lane
 - b. Five Lanes with Center Two-Way Left Turn Lane
- 2. Meyers-Baker Road to Bennett Hill (0.70 mile):
 - a. Three Lanes with Center Two-Way Left Turn Lane
 - b. Five Lanes with Center Two-Way Left Turn Lane
- 2.1. Forest Lane/Stivers Lane (milepost [MP] 5.99): Spot Improvements
- 2.2. Entrances to First Baptist Church (MP 6.15 to 6.30): Spot Improvements
- 3. Bennett Hill (0.15 mile):
 - a. Relocate Falls Street to south side of Community Christian Church
 - b. Lower Hill / Improve Vertical Alignment
 - c. Relocate 5th Street to the west in the vicinity of Falls Street
- 4. Bennett Hill to Mill Street (0.10 mile):
 - a. 3 Lanes with Center Two-Way Left Turn Lane
 - b. 5 Lanes with Center Two-Way Left Turn Lane
- 5. Mill Street Intersection:
 - a. Add Left-Turn Lane on Northbound 5th Street, plus construct a slight realignment of Mill Street on the west side of 5th Street to line up with the east side
 - b. Add Left-Turn Lanes on Northbound 5th Street and on Westbound Mill Street by widening Mill toward the north
 - c. Add Left-Turn Lanes on Northbound 5th Street and Westbound Mill by shifting both legs of Mill Street to the south
 - d. Construct Roundabout
- 6. Mill Street to US 25 (Main Street) (0.25 mile):
 - a. Streetscape Improvements
 - b. Do Nothing

Recommendations

The following project improvements are recommended in each of three time periods:

1. AS SOON AS POSSIBLE—

- Section 2: Spot Improvement 2.1, first phase—Cut back hill at Forest Lane/Stivers Lane. Cost estimate: \$1.50 million.
- Section 5: Alternative Concept C—Reconstruct northbound 5th Street at Mill Street to realign Mill Street and to add left-turn lanes on northbound 5th and westbound Mill Streets. Cost estimate: \$800,000.
- Section 3: Alternative Concept B—Reconstruct 5th/ Falls Streets intersection by lowering the grade of the existing alignment; <u>or</u> Section 3: Alternative Concept C—Reconstruct 5th Street by shifting its alignment slightly to the west. Cost estimate: \$1.03 million <u>or</u> \$1.41 million, respectively.

If both of the above options become problematical, consider **Section 3: Alternative Concept A**—Relocating Falls Street to the south side of the Community Christian Church.

Cost estimate: \$1.50 million.

2. PRIOR TO CONSTRUCTION OF "CORRIDOR BORDER" 1—

Section 1: Alternative Concept B—From KY 192 to Meyers-Baker Road, widen 5th Street to 5 lanes with center two-way left-turn lane and construct sidewalks as shown on the typical section (Figure 6). Cost estimate: \$4.24 million.

3. AFTER CONSTRUCTION OF "CORRIDOR BORDER"—

Section 2: Alternative Concept A—From Meyers-Baker Road to YMCA Entrance, widen 5th Street to 3 lanes with center two-way left-turn lane and construct sidewalks as shown on the typical section (Figure 5). Cost estimate: \$4.99 million.

The total estimated cost of the recommended improvements ranges from approximately \$13.44 million to 13.91 million. Exhibit 1 in Appendix A shows the locations of the improvement options. Appendix B contains photographs of existing conditions and features along 5th Street through the study area.

¹ The Corridor Border (KYTC Item No. 11-139.01) is a proposed new route paralleling the east side of I-75. It will begin with a new intersection on 5th Street across from Myers-Baker Road and continue north to US 25. It is currently in the design phase. The project is programmed for partial funding in the KYTC 2008 Highway Plan.

Address Comments to:

Or you may contact by phone or e-mail:

Mr. Keith Damron, P.E. Director, Division of Planning 200 Mero Street, 5th Street Station: W5-05-01 Kentucky Transportation Cabinet Frankfort, KY 40622 Ms. Boday Borres, P.E. Project Manager Division of Planning Kentucky Transportation Cabinet (502) 564-7183 ext 3275 boday.borres@ky.gov

Mr. David Martin, P.E. SPAC Team Leader Division of Planning Kentucky Transportation Cabinet (502) 564-7183 ext 3274 charles.martin@ky.gov