KY 1931 Planning Study
Executive Summary

Jefferson County, Kentucky

KYTC Item No. 5-480.00

The Kentucky Transportation Cabinet (KYTC), in partnership with CDM Smith, undertook a planning study for KY 1931, known locally as St. Andrews Church Road and Manslick Road from US 31W (Dixie Highway) to I-264 (Watterson Expressway) in Louisville. The study area is illustrated on **Figure ES-2**, found at the end of this summary.

Purpose & Need

The purpose of the proposed KY 1931 project is to improve safety and local traffic operations along this route between Dixie Highway and I-264. The need is expressed through above average crash rates, substandard geometric features, and congested traffic operations.

Other project goals include accommodating bicyclists and pedestrians, improving emergency response time, minimizing impacts to the environment, and ensuring any improvement can handle traffic from other planned improvements.

Existing Conditions

KY 1931 is classified as an Urban Minor Arterial with posted speed limits of 35 to 45 mph in the study area. It is a two lane facility from Dixie Highway to Anna Lane, a three lane facility from Anna Lane to Lance Drive, and a four lane facility for the remainder of the study area. KY 1931 contains 10 to 12 foot lanes and 2 to 10 foot shoulders. The northern portion of the route occasionally features a 7 to 14 foot raised mountable median. The route provides access to residential neighborhoods, commercial development, several schools, churches, and cemeteries.

Hillcrest Cemetery is adjacent to Manslick Road and is opposite Parkwood Baptist Church.

One bus route operated by the Transit Authority of River City travels the corridor: Express Route 54.

Existing traffic volumes range from 11,100 to 18,200 vehicles per day, with the heavier volumes in the middle section between Palatka Road and Hazelwood Avenue. Existing volume-to-capacity ranges from 0.60 to 0.96, largely controlled by signalized intersections.

Level of Service (LOS), a qualitative measure of highway traffic conditions were calculated at major study intersections. Three intersections (Blanton Lane, Palatka Road, and Hazelwood Avenue) operate at an unacceptable LOS (E or F) during the AM or PM peak hour.

The segment of the corridor between Arnoldtown Road and Blanton Lane has the highest crash frequencies; in four years, 65 total reported crashes occurred. This equates to a Critical Rate Factor of 1.92, indicating crashes are happening more often than can be attributed to random occurrence. The entire corridor south of Hazelwood Avenue exhibit CRFs over 1.00. Several 0.10-mile long

spots along the route also exhibit above average crash rates.

St. Andrews Church Road at Cardinal Oaks Drive. While this section has a sidewalk on one side, the majority of the corridor does not accommodate pedestrians.

A review of existing plans and where necessary, field observations, identified a deficient horizontal curve, several deficient vertical curves that limit headlight sight distance, and several sections where the cross-section does not meet current standards.

Manslick Road at Holly Park Drive looking to the south at one of several deficient vertical curves.

Alternatives Considered

To improve safety and local traffic operations, the project team considered a selection of potential alternates:

- No Build Alternative;
- Short-term Spot Improvement options;
- The 2 Lane Alternative, which would reconstruct the route with wider lanes and shoulders;
- The 3 Lane Widening Alternative, which would reconstruct the route with wider lanes, shoulders, and add a two way left turn lane in the center;
- The 4 Lane Widening Alternative, which would reconstruct the route with one additional lane in each direction with wider lanes and shoulders;
- The 5 Lane Widening Alternative, which would reconstruct the route with one additional lane in each direction and a two way left turn lane in the center, with wider lanes and shoulders;

The project team developed conceptual designs, planning-level cost estimates, and a high level comparison of impacts.

Throughout the study, the project team met with local officials, stakeholders, and the public to discuss alternatives and understand local perspectives on improvement concepts. During these discussions, the 4 Lane and 5 Lane Widening Alternatives were eliminated from consideration as they did not meet the purpose and need. Generally, feedback received indicated strong public support for the proposed project:

- 53 of 55 surveys indicated the route should be improved.
- 38 of 55 surveys preferred the 3 Lane Widening Alternative.
- Segments 1, 2, and 3 (US 31W to Hazelwood Ave., see **Figure ES-2** for location) were seen as the highest priority need.

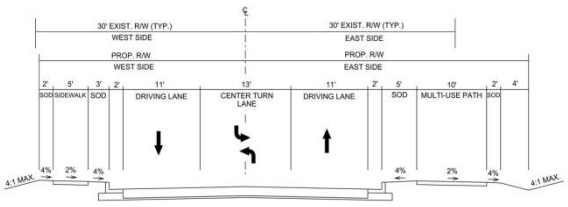
Recommendations

In light of technical analyses and local input, the project team recommends that the 3 Lane Widening Alternative advance for future project development phases. **Table ES-1** provides summary information about costs. If spot improvements are implemented in advance, as described below, this estimate would be reduced. **Figure ES-1** shows the proposed typical section for the 3 Lane Widening Alternative and **Figure ES-2** shows the recommended construction sections for the corridor.

Table ES-1: 3 Lane Widening Alternative Planning Level Cost Estimates

Project Phase	Cost (Millions)
Design	$4.3
Right-of-Way	$10.2
Utilities	$8.6
Construction	$25.8
Total	$48.9

Figure ES-1: 3 Lane Widening Typical Section



The 3 Lane Widening Alternative is recommended for the following reasons:

- Satisfies the project purpose by improving safety and local traffic operations by adding a center turn lane, fixing geometric deficiencies, and adding additional turn lanes.
- Accommodates bicyclists and pedestrians with a multi-use path.
- Improves emergency response time.
- Is sufficient to accommodate traffic for the proposed I-264/KY 1931 interchange.
- Minimizes cost.
- Improves drainage.

To provide low-cost, short-term improvements while funding is secured for the long term recommendation, spot improvement recommendations were developed. The spot improvements were developed to complement the recommended long-term improvement. The high priority spot improvements are noted below and shown in **Figure ES-2**:

- **Spot Improvement A**: Add turn lanes at KY 1931/Arnoldtown Road (estimated total cost = $1.0 million)
- **Spot Improvement B**: Add turn lanes at KY 1931/Blanton Lane (estimated total cost = $8.3 million)
- **Spot Improvement D**: Add turn lanes at Trunell Elementary School and Doss High School (estimated total cost = $1.9 million)
- **Spot Improvement H**: Realign/Widen KY 1931 from Iroquois Parkway to Stephan Lane (estimated total cost = $4.6 million)
- **Spot Improvement I**: Realign De Mel Avenue (estimated total cost = $1.9 million)
- **Spot Improvement J**: Intersection improvements at KY 1931/Hazelwood Avenue (estimated total cost = $3.7 million)

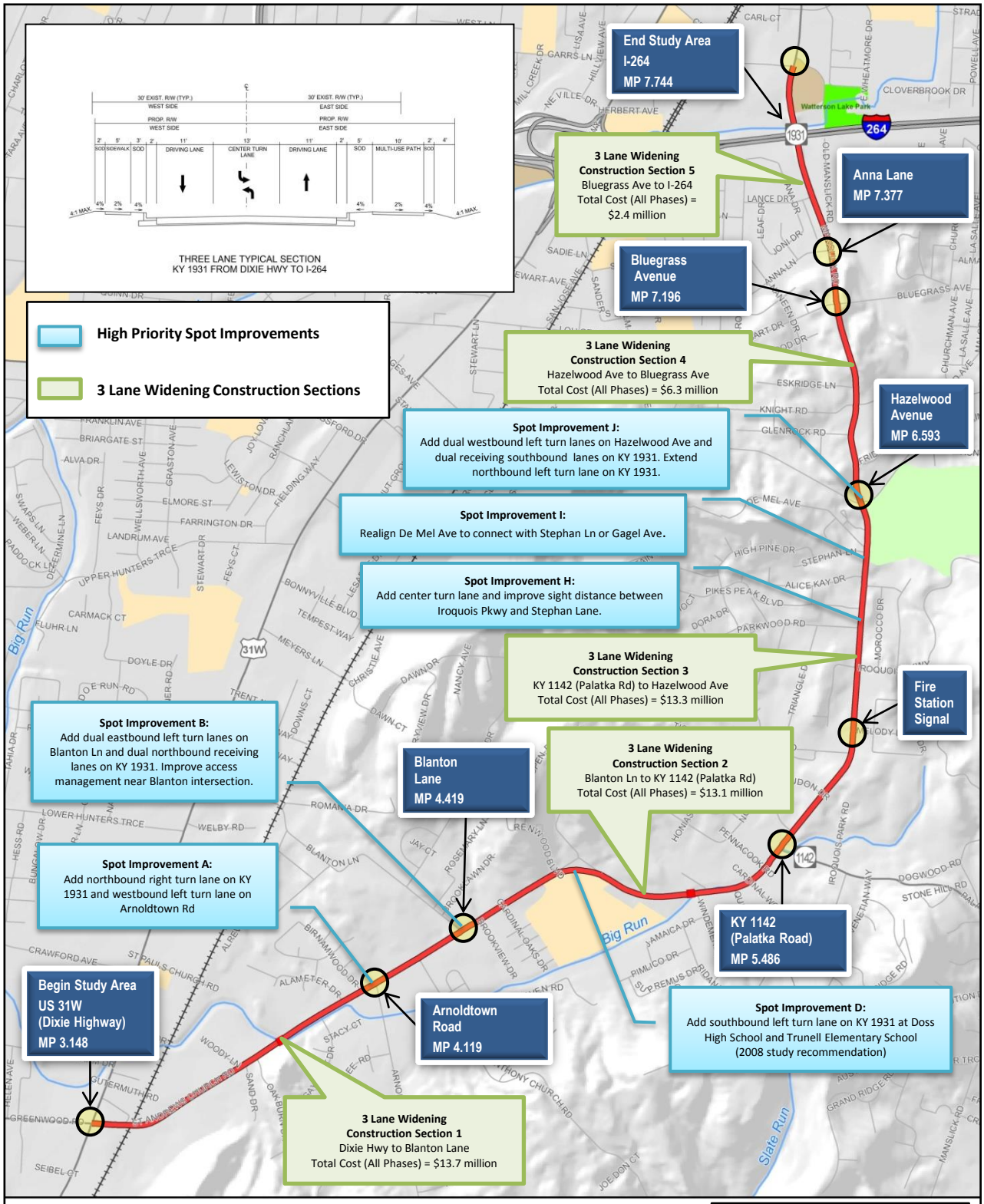


Figure ES-2: Improvement Recommendations
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