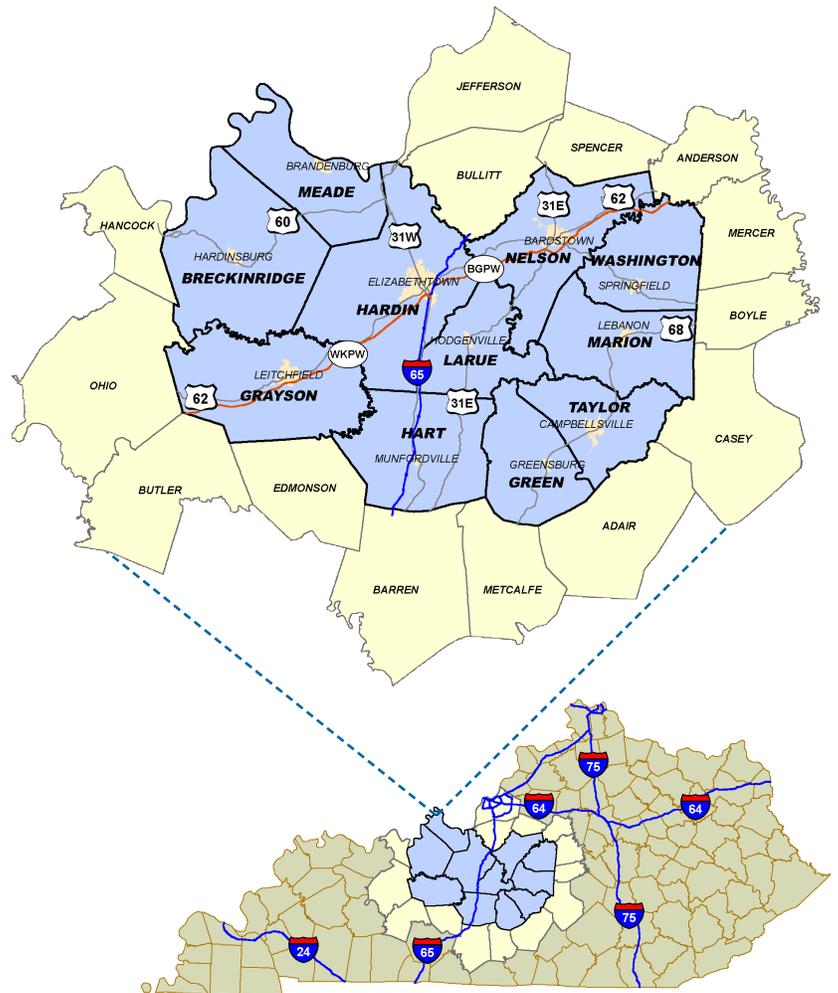


District 4

Accessibility and Connectivity Study

Executive Summary

March 2021



Executive Summary

The Kentucky Transportation Cabinet (KYTC) initiated a pilot study to analyze accessibility and connectivity between and among the county seats for the 11 counties in District 4. Maintenance data as recorded in the KYTC Operations Management System (OMS) also was included in study analyses.

As part of the accessibility and connectivity study, meetings were held with local officials in each of the 11 counties within District 4 and focused on the local perspective of the officials to identify changes in population and jobs within each county. These two parameters – population and employment – were primary data considerations for the Kentucky Statewide Travel Demand Model (KYSTM). The updated model was used to project housing and non-retail employment opportunities as a result of improvements in the district, including improvement to seven regionally impactful corridors within District 4, as shown Table ES-1 and Figure ES-1.

Table ES-1: Regionally Impactful Corridors

District 4 Regionally Impactful Corridors							
Corridor	Route	D4 Counties Directly Served	Begin	End	Approximate Length	Anticipated Improvement Type	Cost Estimate
1	US 150	Nelson Washington	Bardstown (BG Parkway)	Springfield (US 150x)	18 miles	2+1 Initial; 4-lane divided ultimate	\$54,607,000
2	KY 245	Nelson	Bardstown (US 31E)	Clermont (I-65)	12 miles	2+1	\$10,470,000
3	KY 3005	Hardin	US 31W	WK PKWY	2 miles	Extension of Ring Road from US 31W to WK PKWY	\$6,067,444
4	KY 210	LaRue Green Taylor	Campbellsville (US 68)	Hodgenville (Lincoln Parkway)	29 miles	Widening – 2+1	\$25,302,500
5	US 68	Green	Edmonton (Cumberland Parkway)	Greensburg (US 68 MP 12.0, western intersection of KY 61 and US 68)	12 miles	Spot improvements – Minor widening for increased shoulder widths, spot improvements, and adding truck climbing lane at Russell Creek Hill.	\$5,350,000
6	Heartland Parkway	Marion Taylor Washington	Taylor/Adair County Line south of Campbellsville (KY 55)	Springfield	40 miles	Widening – 2+1	\$34,900,000
7	KY 61	Green LaRue	Adair/Green County Line south of Greensburg	US 31E	35 miles	Spot improvements – Minor widening for increased shoulder widths, spot improvements for poor roadway geometry.	\$15,604,155

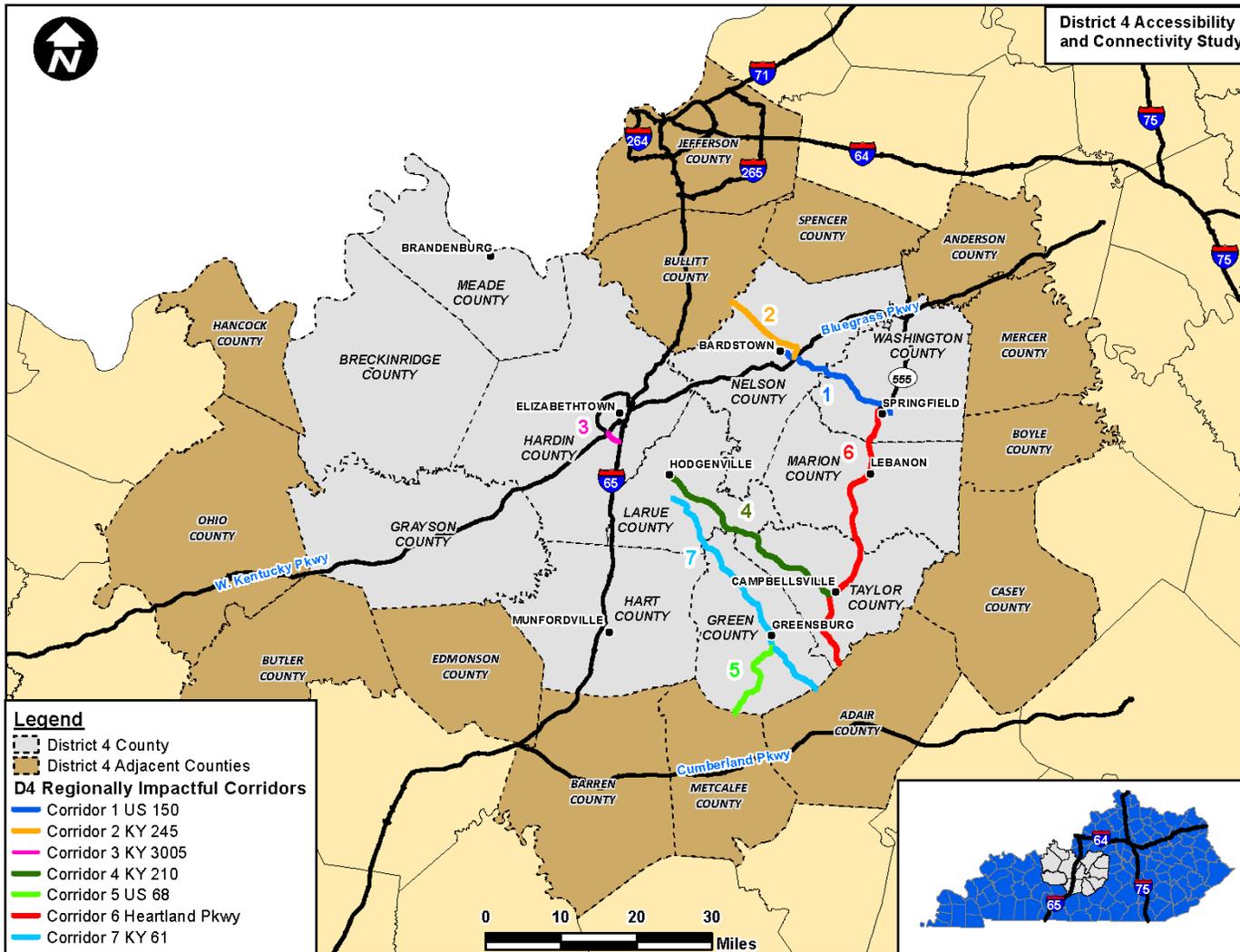


Figure ES-1: Map of Regionally Impactful Corridors

As part of the accessibility and connectivity study, meetings were held with local officials in each of the 11 counties within District 4 and focused on the local perspective of the officials to identify changes in population and jobs within each county. These two parameters – population and employment – were primary data considerations for the Kentucky Statewide Travel Demand Model (KYSTM).

Meetings with local officials (county judge executives, magistrates, city superintendents, etc.) were helpful to confirm or refine perspectives regarding transportation improvement needs for each county. However, these meetings did not yield significant data for updating the KYSTM to the extent anticipated. These meetings with local officials did prove useful to ensure updates to the KYSTM were consistent with observed patterns for population and employment growth/decline in their respective counties. The task of gathering this data may have been improved, had transportation professionals at the Area Development Districts and the Hardin/Meade Metropolitan Planning Organization been included in these discussions.

An analysis of the OMS data was developed to determine the extent to which this data corresponds with and could be used to identify persistent maintenance issues on major corridors. The focus of the study was accessibility and connectivity between county seats. However, maintenance data from the OMS was used to supplement the information gathered from meetings with county local officials concerning population growth, job growth, and the accessibility and connectivity between the District 4 counties and the surrounding region.

The OMS database was determined to be a possible source of data for identifying potential pavement resurfacing and rehabilitation needs and for identifying spot improvement needs relating to drainage, slide corrections, etc. Results from this study were inconclusive regarding whether this data can directly inform KYTC planning efforts. It was noted that while the OMS data and related analyses did yield potential resurfacing, rehabilitation, drainage, and slide correction projects, these were not the type of projects that were typical KYTC Six-Year Plan projects that would create the need for a planning study.

Based on the results of this pilot study, the project team offers the following comments and recommendations:

1. While the meetings with local officials to identify their accessibility and connectivity concerns did confirm District Planning staffs' perspectives on high-maintenance locations, it also was noted that inclusion of meetings with local economic development staffs and prominent industry representatives may have been useful.
2. To increase the potential usefulness of OMS data for future analyses, maintenance items should be input with specific milepoints to the greatest extent possible.
3. A methodology for calculating high-cost segments in District 4 was developed and could be used in future studies. This methodology, described below, involves engineering judgment to identify high-cost segments and yielded representative data for this study. During meetings

with Project Development and Preservation section staff, the project team was able to confirm specific problem conditions at the majority of high-cost maintenance segments.

This methodology identifies areas with high maintenance costs in District 4. The maintenance activity data was organized by county in Microsoft Excel and the length of each segment was calculated according to the milepoints identified in the OMS database.

Segments were then refined by identifying contiguous and consistent high-cost repairs; therefore, the segments were of varying length. The total cost for the segment, the cost per mile within the segment, and the percentage that segment's cost represents of the total corridor cost, were then calculated. Segment data was then imported into ArcGIS and further refined if warranted (e.g., segments may have been combined or separated based on visual relationship).

Future studies such as this one may prove useful to KYTC transportation planning, particularly if meetings occur with the above-mentioned transportation professionals and include OMS data that is consistently identified by specific milepoints.