

2.0 EXISTING CONDITIONS

As previously stated, the segment of KY 9 under study is functionally classified as a Rural Principal Arterial, linking the City of Maysville, Kentucky and western Mason County to Campbell County and destinations in the Northern Kentucky/Cincinnati area. There are currently no planned or committed projects in the study area that would have an impact on the corridor. However the economic feasibility study for an I-74 corridor could have an impact on the nature or level of future improvements to KY 9. I-74 has been proposed as a two to four lane roadway extending from the Markland Dam in Gallatin County to the Ohio River near Maysville. Mason, Bracken, and Pendleton Counties could be directly impacted by the corridor. The current Six-Year Highway Plan does not include any additional phases for this project beyond a planning-level study.

2.1 Roadway Characteristics

Table 1 summarizes the existing roadway characteristics as detailed in the KYTC Highway Information System (HIS) database. The study portion of KY 9 is a rolling, two-lane facility with 12-foot lanes, having various segments with truck-climbing lanes. Immediately north of the study corridor terminus in Campbell County, KY 9 becomes a divided, four-lane highway that connects to I-275 in Northern Kentucky. The majority of the facility has 10 to 12 foot paved shoulders. The entire route is on the National Highway System (NHS) and the National Truck Network (NTN). KY 9 serves a great deal of commercial vehicle traffic, with some portions of the roadway having up to 17% trucks. The study portion of KY 9 traverses areas of farmland and light residential development. Commercial land uses are present at both ends of the study corridor, with a small commercial development near the northern terminus at California (Campbell County) and various developments immediately west of Maysville.

2.2 Crash Analysis

One of the primary goals of any highway improvement process is to provide a safe and efficient roadway. The Kentucky Transportation Center (KTC) at the University of Kentucky conducted a study entitled *The KY 9 Safety Study* that investigated recent crash history (1995-1999) along the entire KY 9 route from Ashland to Alexandria, Kentucky. The study's findings indicate that the crash rate on KY 9 is not appreciably higher than the statewide average for rural two-lane roads. A summary of the crash history along KY 9, broken down by county, is shown in **Table 2**. There were a total of 239 crashes reported in the four-year study period. Fatal crash rates in Mason County were higher than the statewide average for rural two-lane roads, with the crash rates for the remaining three counties (Campbell, Pendleton and Bracken) being lower. Angle crashes at intersections, on the other hand, represent a higher percentage of fatal crashes than the statewide average.

Because the data indicates a higher number of intersection crashes, each intersection along the project route was investigated to determine if geometric or signage improvements were required. This field review included those intersections identified in the KTC Study report as experiencing a high number of crashes. Those intersections are identified in **Table 3**. From these site visits, recommendations for improvements were made. Recommendations that arose from this analysis are located in **Section 6.3: Alternate Two - Safety/Operational Improvements**.

Table 1: Roadway Characteristics

Type of Roadway	Functional Classification	Rural Principal Arterial
	State System Class	State Primary
	Type Road	Undivided Highway
	Scenic Byway System	No
	National Highway System	Yes
	National Truck Network	Yes
	Defense Highway	Yes
	Truck Weight Class	AAA
	Extended Weight System	Yes
Geometrics	Average Right-of-Way Width (Feet)	75 - 175
	Lane Width (Feet)	12
	Driving Lanes	2, 2+1
	Shoulder Width (Feet)	10 - 12
	Percent Passing Sight Distance	50-100
	Number of Bridges	2
	Type of Terrain	Rolling
Volumes	Year 2000 Traffic Volume (Vehicles per Day)	6,140 – 15,900
Speeds	Speed Limit (Miles per Hour)	55
Pavement	Surface Type	High Flexible
	Last Year Surfaced	1989 - 1990

Table 2: Annual Crash Rates by County

County	Rate (per 100 MVM)			Statewide Rate*			Percent Difference		
	Total	Injury	Fatal	Total	Injury	Fatal	Total	Injury	Fatal
Campbell**	150	40	2.51	252	89	3.1	-40.5	-55.1	-19.0
Pendleton	86	33	0.00	252	89	3.1	-65.9	-62.9	-100.0
Bracken	45	17	2.37	252	89	3.1	-82.1	-80.9	-23.5
Mason**	118	34	3.30	252	89	3.1	-53.2	-61.8	+6.5

* Statewide rate (per 100 Million Vehicle Miles, or MVM) is for two lane roads.

** These rates are for all of KY 9 in Campbell and Mason counties, not just the study area.

Table 3: Intersections Having the Highest Number of Crashes between 1995 and 1999

County	Intersection	Number of Crashes
Pendleton	New Hope	2
Bracken	KY 875	4
	KY 19	8
Mason	Slack Pike	3
	KY 10	4
	KY 435	7

2.3 Traffic Volume and Level of Service

In order to evaluate traffic volumes and level of service, KY 9 was divided into 10 segments within the corridor. **Table 4** describes each of these segments and also lists the 2025 traffic volume forecasts for KY 9 as estimated by HNTB based on an annual growth rate of 3.1%. The table also includes 2000 traffic volumes, as counted or estimated by the KYTC Division of Planning. The 2000 estimates are included to provide a baseline for the determination of 2000-2025 annual growth rates.

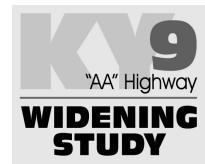
Table 4: Traffic Volume Forecasts

KY 9 Segments (Mileposts)	2000 ¹	2025 ²
Segment A: West Ivor Road to Campbell/Pendleton County Line (0.691 - 0.000)	8,420	18,100
Segment B: Campbell/Pendleton County Line to Pendleton/Bracken County Line (4.339 - 0.000)	7,630	16,400
Segment C: Pendleton/Bracken County Line to KY 1109 (19.857 - 13.585)	8,800	18,900
Segment D: KY 1109 to KY 1159 (13.585 - 10.259)	8,010	17,200
Segment E: KY 1159 to Augusta-Berlin Road (10.259 - 9.449)	7,360	15,800
Segment F: Augusta-Berlin Road to KY 19 (9.449 - 5.546)	8,490	18,200
Segment G: KY 19 to Bracken/Mason County Line (5.546 - 0.000)	5,720	12,300
Segment H: Bracken/Mason County Line to Walton Pike Road (17.402 - 17.154)	5,720	12,300
Segment I: Walton Pike Road to KY 435 (17.154 - 14.926)	5,870	12,600
Segment J: KY 435 to KY 10 (14.926 - 13.987)	6,700	14,400

1. Source: KY Transportation Cabinet Highway Information System (HIS) Database
2. Source: HNTB Corporation

KY 9 Widening Study

Item No. 9-165.00



The existing (Year 2000) and forecasted 2025 traffic volumes are shown graphically in **Figure 2**. In Campbell County, the daily volume forecast is 18,100 vehicles per day. The forecast for the Pendleton County segment is 16,400. The highest 2025 traffic volume (18,900 vehicles per day) expected for KY 9 is on the segment from the Pendleton/Bracken County line to KY 1109 in Bracken County. For the other segments in Bracken County, the 2025 daily volume forecasts range from 12,300 to 18,200 vehicles per day. For Mason County, the forecasts range from 12,300 to 14,400.

Using the 2025 traffic forecasts and the 2000 traffic volumes, existing and future Level of Service (LOS) was calculated. Level of Service is an alphabetic description of the traffic flow for a roadway segment. Similar to school letter grades, calculated values range from LOS A with completely free flowing traffic to LOS F with severely congested traffic. From the results, which are summarized in **Table 5**, it is apparent that the roadway is currently approaching capacity. Segments A-D, corresponding to the study portion between the project terminus in Campbell County and KY 1159 in Bracken County, and Segment F (Augusta-Berlin Road to KY 19 in Bracken County), currently operate at LOS E, suggesting that the segments experience periods of heavy congestion. The remainder of the study corridor operates at LOS D with moderate congestion. With respect to future capacity, only segments G, H and I have a 2025 LOS value better than F. All other segments result in a LOS F. These results show the current highway will not be able to support 2025 Design Year traffic, evidenced by the LOS F (indicating severe congestion) on over 72% of the corridor.



FIGURE 2 - EXISTING AND 2025 TRAFFIC VOLUMES

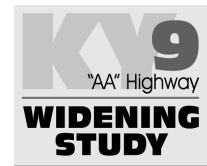


Table 5: Level of Service (LOS) Analysis

Year	Segment									
	A	B	C	D	E	F	G	H	I	J
2000	E	E	E	E	D	E	D	D	D	D
2025	F	F	F	F	F	F	E	E	E	F

3.0 KENTUCKY TRANSPORTATION CABINET, PUBLIC AND AGENCY INPUT

3.1 Project Team Meetings

Five (5) Project Team Meetings were held during the course of the study. The purpose of the first meeting was to discuss the project and gain information about known issues and concerns. At the second team meeting, the results of the first public information meeting and potential alternatives were discussed. The second and third team meetings dealt basically with preparations for the second round of public meetings. The third team meeting also included a presentation of the refined alternates. The fourth team meeting was used to review public comments and develop a final recommendation. The fifth and final Team meeting was held to discuss the final recommendation and to prioritize possible construction sections. Meeting minutes for each of the team meetings are included in **Appendix A**.

3.2 Local Official and Stakeholder Input

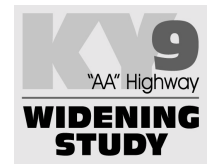
At two sets of meetings with stakeholders and local officials, the attendees were encouraged to complete a comment form and return it to the study team for consideration in the development of alternates. Twenty-one (21) comment forms from these meetings were received, and are included in **Appendix B**. Individuals and officials representing the following agencies and companies provided comments:

- Bracken County Schools
- Bray Trucking Inc.
- Castellini Companies
- City of Maysville
- Pendleton County Planning Commission
- City of Falmouth
- University of Kentucky Cooperative Extension/Tourism Interest
- Mason County
- Bracken County EMS
- KY State Senator Ed Miller
- Maysville / Mason County Emergency Management
- Pendleton County Sheriff / Emergency Management
- Eastern Campbell County Volunteer Fire Department
- Maysville Industrial Development
- Kentucky State Representative Mike Denham

The attendees were asked to identify the perceived problems and offer possible solutions. Recommendations included: providing better enforcement to minimize dangerous driving (including

KY 9 Widening Study

Item No. 9-165.00



speeding); adding turn lanes, acceleration lanes and "stop ahead" signs to increase safety at intersections; relocating guardrail to improve sight distance; providing a limited access facility with ramps to increase intersection safety; adding signs and lengthening slow/truck climbing lanes to improve merging; relocating stop signs further back on side roads; improving driveway markings; installing a divider along the highway; improving lighting at intersections; providing advance warning of intersections with flashing lights; and adding more/longer passing lanes.

The attendees were also asked to identify locations where they had specific concerns. The following locations were mentioned:

- KY 1996 intersection
- Slack Pike/Gas Station area
- KY 19 intersection (several responses)
- Dutch Road area
- KY 1449 intersection
- KY 1237 Rootsville intersection
- KY 735 (needs signing to warn of fire trucks entering the road)
- All passing lanes

Other comments included the problems with fog (particularly relative to school bus traffic), concerns over increasing truck traffic, and the need to educate drivers on proper merging and existing laws.

3.3 Public Involvement

Two public information meetings were conducted as part of the public involvement process. The meetings were hosted by the KYTC-Division of Planning, District 6 (Covington), District 9 (Flemingsburg) and HNTB Corporation.

The intent of these meetings was to accomplish the following:

- To let the community know about the study
- To identify and address community concerns and issues
- To identify sensitive areas that should be avoided
- To explore alternatives and discuss impacts
- To create a project that benefits the community and gains its support

The first public involvement meeting, involving a formal presentation of the study, was held in the Bracken County High School on July 12, 2001. Approximately 70 people were in attendance, excluding Cabinet and Consultant personnel. Attendees were asked to assist in the confirmation of existing conditions and to express any concerns that they had relative to potential improvements or the need for improvements to KY 9.

An informal "tent meeting" format was adopted for the second public meeting, held over two days on September 25, 2001 and September 26, 2001. One day was spent at a gasoline station on each end of the corridor, allowing the public to stop by and browse the information informally as they re-fueled their

vehicles or visited the convenience store. The tent meetings were well attended by local officials and residents, totaling over 250 people for the two days. Additionally, over 400 informational handouts were distributed. On each day, the attendants participated in the study development process by discussing options with the Project Team and by submitting a comment form provided to them at the locations. Their efforts included confirmation of existing conditions presented at the first public meeting and participation in the development of several enhancement options. These enhancement options range from simple, low-cost improvements such as improved signage and lighting, to improving sight distance, to more elaborate schemes that call for the reconstruction of the facility to modern design standards that will accommodate future traffic volumes. A summary of the public meetings is included in **Appendix C**.

3.4 Resource Agency Coordination

The Division of Planning sent letters to several agencies asking for input and comments on the KY 9 Widening Study in order to address their concerns early in the project development process. Thirteen (13) agencies responded and their responses are included in **Appendix D**. The agencies responding to this request, and their general comments, are as follows:

- U.S. Department of Commerce – no comments or concerns.
- U.S. Department of Energy – no specific comments.
- U.S. Department of Housing and Urban Development (HUD) – no apparent impact on HUD-funded programs.
- Kentucky Cabinet of Economic Development – project will positively impact several available industrial sites and buildings.
- Federal Aviation Administration – there are no public use airports in the vicinity of the project.
- Kentucky Department of Fish and Wildlife Resources – potential negative impacts to aquatic resources in the study corridor can occur; recommendations included suggestions on how to minimize impacts during construction and returning habitats to original condition upon completion of construction.
- Kentucky State Police – concerns about advance warning for construction and road closures, maintenance of traffic during construction.
- Kentucky Cabinet for Workforce Development – project does not affect Cabinet or its agencies.
- Kentucky Transportation Cabinet, Division of Construction – no comments at this time.
- Kentucky Transportation Cabinet, Division of Multimodal Programs – intersections with designated bicycle routes should maintain route connectivity.
- U.S. Department of the Interior – discussions of permitting issues with the U.S. Army Corps of Engineers (regulatory wetland requirements) and efforts to minimize impacts to blue-line streams and potential endangered species habitats.
- Appalachian Regional Commission – project should not have any adverse effect on the Appalachian Development Highway System.
- Kentucky Transportation Cabinet, Division of Environmental Analysis - provided some comments regarding elements that should be considered in future project phases, if any.