I-66 CORRIDOR STUDY
WESTERN KENTUCKY TO MISSOURI
BALLARD / MCCRACKEN COUNTY - ITEM # 1-23.00

APPENDIX 4 – TRAFFIC FORECASTING

Prepared for

Kentucky Transportation Cabinet (KYTC) – Division of Planning

Kentucky Transportation Cabinet (KYTC) – District 1

Missouri Department of Transportation (MoDOT)

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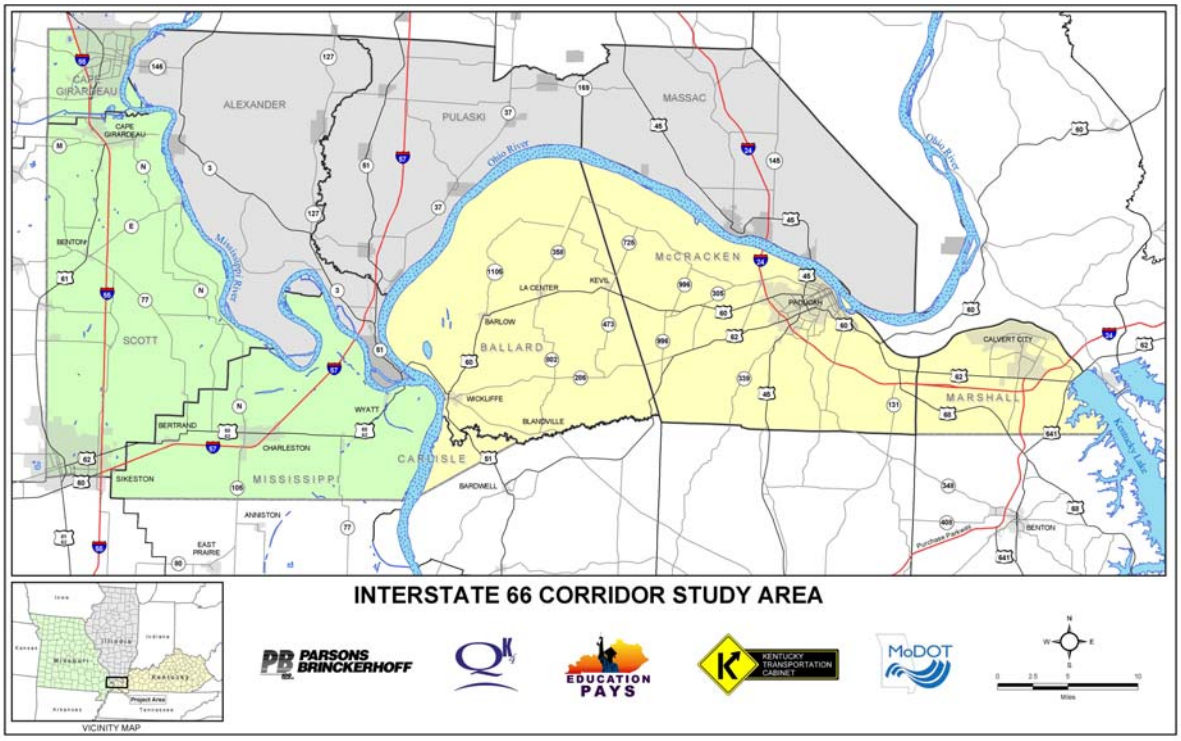
1.0 INTRODUCTION

1.1 Study Purpose and Study Area

The Kentucky Transportation Cabinet (KYTC), Missouri Department of Transportation (MoDOT), and Federal Highway Administration (FHWA) initiated the I-66 Western Kentucky Corridor Planning Study to assess the need, feasibility, and possible corridors for a new limited access highway between Western Kentucky and Southeastern Missouri. The study area includes portions of McCracken, Ballard, and Carlisle Counties in Kentucky and Scott, Mississippi, and Cape Girardeau Counties in Missouri. A section of Southern Illinois is also included. The study area is shown in Figure 1.

Figure 1: Study Area



1.2 Project Goals

A set of primary project goals were defined for this study. They were used as the basic criteria for evaluating each of the potential alternative corridors as well as the No-Build alternative. The goals include:

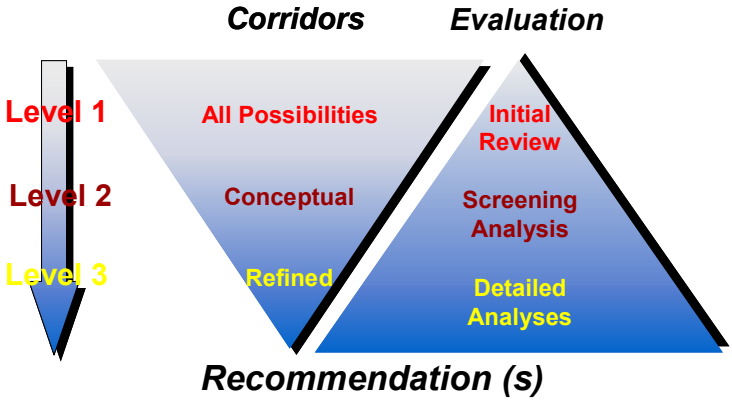
1. *Support Completion of I-66 Across Southern Kentucky, Providing System Continuity from West Virginia to Missouri*
2. ***Reduce Traffic Congestion***
3. ***Improve Accessibility and Connectivity***
4. ***Enhance Roadway Safety***
5. *Support Economic Development and Community Growth*
6. *Capitalize on Existing and Planned Investments*
7. *Improve Community Character / Quality of Life*

Traffic forecasting and related analyses are essential to assessing Goals 2 through 4 above. They play an important role in considering the other goals as well.

1.3 Corridor Analysis Procedures

The corridor analysis was a three-tiered evaluation process as shown in Figure 2. Level 1 screening was qualitative and recommended 14 of the original 22 corridors for further evaluation in Level 2. Many of the remaining 14 corridors were similar; therefore, they were combined into a total of seven corridors for the Level 2 screening. During the Level 2 screening, the seven corridors were evaluated using a combination of qualitative and quantitative methods. The Level 2 quantitative evaluation focused on: transportation operations (traffic), documented support for/against an alternative, environmental and community impacts, and capital costs. Based on the Level 2 analyses, five alternatives (including the No-Build) were advanced to Level 3.

Figure 2: Corridor Analysis Procedure



1.4 Traffic Forecasting and Analysis Goals

The traffic forecasting and traffic operations analyses efforts were conducted in support of the Level 2 and Level 3 evaluations discussed above. They provided important inputs to estimate the use of the proposed new highways and to compare the alternatives to each other. The specific goals of these efforts, and therefore the focus of this report, are given below.

Traffic Forecasting and Analysis Goals:

1. Estimate 2030 daily traffic volumes for proposed new highways and key existing highways in the study area;
2. Evaluate traffic patterns in the study area;
3. Estimate and compare travel distances and travel times;
4. Consider systemwide operations measures such as vehicle miles of travel and vehicle hours of travel;
5. Evaluate levels of service on proposed new interstate highways; and
6. Explore possible traffic impacts to the existing interstate system.

1.5 Report Organization

The remainder of the report is divided into four sections as follows:

2.0 Methodology
3.0 No-Build Traffic Forecasts
4.0 Level 2 – Build Traffic Forecasts
5.0 Level 3 – Build Traffic Forecasts

2.0 METHODOLOGY

The methodology for this study is divided into two elements: 1) traffic forecasting methods and 2) traffic operations analysis methods.

2.1 Traffic Forecasting Methodology

The recently updated version of the Kentucky Statewide Traffic Model (KYSTM) was selected as the model platform for developing the future forecasts. Specifically, the three model versions used included:

- KYSTM Update Version 2 (Recalibrated to I-66 Corridor)
- KYSTM Update Version 2 (I-66 Existing + Committed Model Network)
- KYSTM Update Version 2 (I-66 Project Network)

The base model was then modified as necessary to reasonably consider the proposed 2030 No-Build and Build Scenarios. This mainly consisted of changes to the model network and assumed zonal factors as discussed below. As this was a long-range corridor planning study, future forecasts were only developed for 2030. This provided an adequate and appropriate horizon year for comparing the proposed alternatives.

2.1.1 Model Validity Check

While no formal calibration was included as part of this traffic forecast process, the baseline model numbers for the 1999 KYSTM Update Version 2 (Recalibrated to I-66 Corridor) were compared to recent volume estimates at eight screenline locations in the study area. The purpose of the comparison was to evaluate whether the model could be expected to predict the I-66 Corridor and general study area traffic flows reasonably well at a corridor planning level. Figure 3 shows the screenline locations and Table 1 presents a summary of the volume comparisons. A detailed comparison showing the volumes for each link crossing the screenlines is provided as Exhibit A.

For all of the screen lines, the 1999 KYSTM predicted volumes within 15% of the count values.[1] Overall, the total volume estimate for all screenlines is within 1% of the count total. When the absolute values of the differences are used, the forecasts are within 6% of the count total. For specific links, the differences are larger, with some of the greatest variability showing up on Missouri and Illinois.

Overall, however, it is expected that the model provides a sufficiently accurate tool for use in this planning level corridor study. It will facilitate comparisons between competing alternatives and will provide reasonable order of magnitude traffic estimates for a proposed new I-66 highway through the study area.

[1] While the model predicts 1999 average daily volumes and the daily volume estimates were for 2001 through 2003, it was decided that the unadjusted data comparison provided a reasonable basis for assessing the general validity of the model in the region.

Figure 3: Model Volume Comparison Screenlines

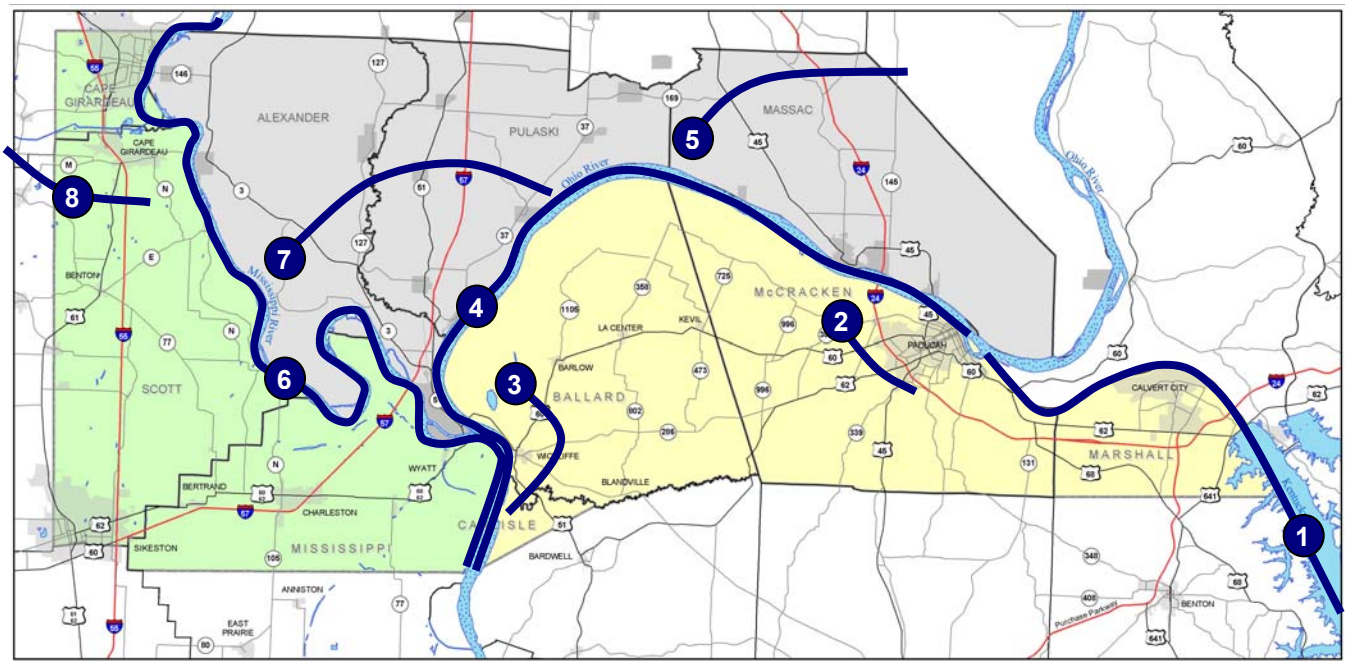


Table 1: Model Volume Comparison Summary

Screenline	Recent Counts*	1999 KYSTM Model Volumes**	Difference from Counts	Percent Difference from Counts
1- Tennesee River	48,350	46,860	-1,490	-3%
2 - West of Paducah	13,240	12,860	-380	-3%
3 - East of Wickliffe	11,090	12,740	1,650	15%
4 - Ohio River	37,860	37,280	-580	-2%
5 - North of Paducah	22,350	21,470	-880	-4%
6 - Mississippi River	24,840	26,130	1,290	5%
7 - North of Cairo	18,200	16,380	-1,820	-10%
8 - North of Sikeston	28,652	32,400	3,748	13%

* Count data was obtained from Kentucky, Missouri, and Illinois web sites and if for 2001-2003.
** The 2002 version of the 1999 KYSTM (calibrated for the I-66 corridor) was used for the comparison

2.1.2 No-Build Scenario

The 2030 No-Build Scenario forecasts were based on the 2030 KYSTM Update Version 2 (I-66 Existing + Committed Model Network), which included two major new highways: Corridor 18 (I-69) and Corridor 5 (I-73/I-74) as presented in the *Traffic Model Coordination for the I-66 (Southern Kentucky) Corridor – Final Report* prepared by Wilbur Smith Associates in 2002. The model network was also upgraded for this current study to include key existing and committed projects in the study area (i.e. those with at least one phase in the KYTC Six Year Plan). The projects that were added included improvements to US 60 from near Kevil to LaCenter as well as the Paducah Outer Loop project. Data characteristics for a small number of facilities were also updated to match current conditions (such as numbers of lanes or speed classifications). The model was then re-run with these network modifications to provide the 2030 No-Build forecasts. The results remained similar to the unadjusted Existing + Committed model output.

2.1.3 Level 2 Build Scenarios

There were two sets of build forecasts completed for this project. The first set was completed for the Level 2 Screening. It was general in nature and was intended to give order of magnitude traffic volume comparisons between alternative corridors. As some of the corridors followed similar alignments, certain model runs were used to estimate traffic volumes for multiple corridors. The build alternatives considered in the Level 2 analysis are summarized in Table 2 and illustrated in Figure 4. The Level 2 modeling scenarios included:

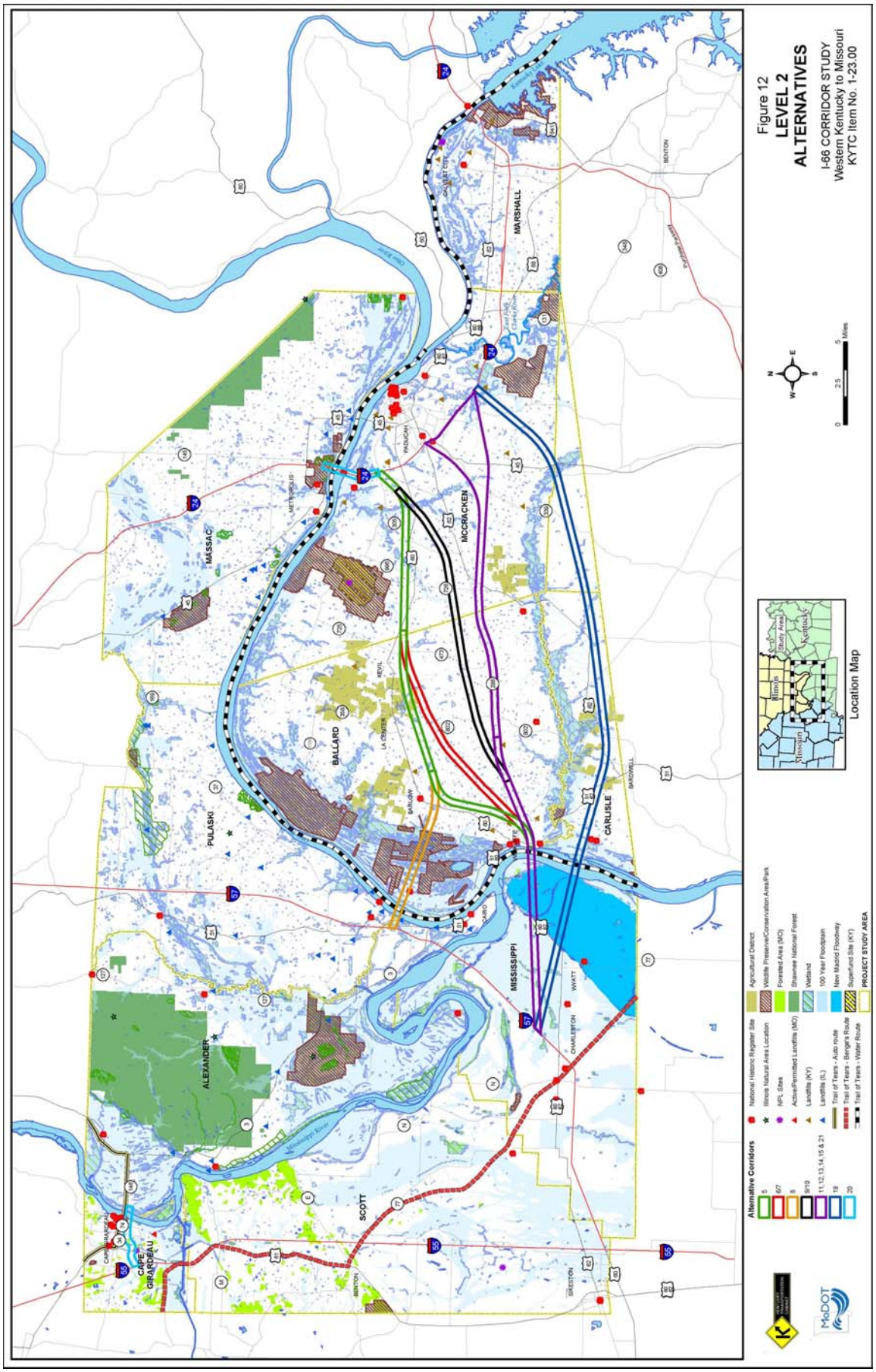
- Scenario 1 - No-Build (existing and committed projects only)
- Scenario 2 - Alternatives 5
- Scenario 3 - Alternatives 6 and 7
- Scenario 4 - Alternative 8
- Scenario 5 - Alternative 8A
- Scenario 6 - Alternative 8B
- Scenario 7 - Alternatives 9 and 10
- Scenario 8 - Alternatives 11-15 & 21
- Scenario 9 - Alternative 19
- Scenario 10 - Alternative 20 (with generic assumptions for model coding)

At the conclusion of the Level 2 evaluation, a subset of the build alternatives was selected for further analysis in Level 3. The model runs were then refined to produce a second set of more detailed volumes for a smaller number of alternatives.

Table 2: Level 2 Alternatives

Alt.	Route Description
0	No-Build Scenario. Assumes only existing and committed projects are constructed.
5	Begins at I-24 near Paducah. Follows the US 60 corridor to Wickliffe. Crosses the Mississippi River south of Wickliffe. Connects to US 60 east of Charleston. Follows I-57 to Sikeston.
6, 7	Similar to Alt. 5, except it follows a new alignment from US 60 near Kevil to south of Wickliffe.
8	Begins at I-24 south of Paducah. Follows the US 62/KY 286 corridor to east of Wickliffe. Runs northwest on a new alignment to cross the Ohio River and connect to I-57 north of Cairo.
8A	*Does not include a new interstate.* Widen US 60 to 4-lanes from Kevil to Wickliffe. Bypass Kevil, LaCenter, and Barlow. Includes new highway and bridge over the Ohio River north of Wickliffe, connecting with I-57 north of Cairo. (Alt. 8 alignment)
8B	*Does not include a new interstate.* Widen US 60 to 4-lanes from Kevil to Wickliffe. Bypass Kevil, LaCenter, and Barlow. Includes new highway and bridge over the Mississippi River south of Wickliffe connecting to US 60 in Missouri.
9, 10	Begins at I-24 near Paducah. Follows a new route southwest to Wickliffe (parallel to US 62/KY 286). Crosses the Mississippi River south of Wickliffe to connect with to I-57 near Charleston.
11-15, 21	Begins at I-24 south of Paducah. Follows a new route (parallel to KY 286) to south of Wickliffe. Crosses the Mississippi River south of Wickliffe. Connects with I-57 near Charleston.
19	Begins at I-24 near KY 1954 or KY 450. Follow a new route southwest to cross KY 45 near the McCracken County line. Run west on a new route to south of Wickliffe. Cross the Mississippi River south of Mayfield Creek. Connect to I-57 near Charleston.
20	Re-sign the existing I-24 as I-24 and I-66 in KY. Begin new corridor in Southern IL (Massac Co.). Run west on a new route across Southern IL to connect with I-55 near Cape Girardeau, MO.

Figure 4: Level 2 Alternatives



2.1.4 Level 3 Build Scenarios

In Level 3, the build alternatives remaining for further evaluation were 8, 8B, 11-15/21, and 20. The other alternatives were set aside in Level 2. Subsequently, Alternative 8 was also removed from consideration due to significant environmental impacts and is not addressed further in this report. Therefore the remaining model scenarios for Level 3 included:

- Scenario 1 - No-Build (existing and committed projects only)
- Scenario 2 - Alternatives 11-15 and 21
- Scenario 3 - Alternative 8B
- Scenario 4 - Alternative 20 (with generic assumptions for model coding)

2.1.5 Build Scenario Model Development

2.1.5.1 Model Networks

The 2030 KYSTM Update Version 2 (I-66 Project Network) was used as the basis for all of the Build Scenario model runs (including the new bridge only alternatives). This provided a consistent and comparable model network outside of the study area. New 2030 build networks were created for each of the proposed Build Scenarios. The network modifications included:

1. Adding new links for proposed new highways and bridges
2. Adding connection points (denoting interchange locations)
3. Adding access highways as necessary
4. Adding other existing highways that may have a bearing on traffic circulation and flows relative to the new highways in the study area
5. Modifying numbers of lanes for build options that improve existing highways.
6. Deleting the old I-66 highway links in the study area.

For all of the alternatives except 20, specific corridors were proposed in the planning study. These corridor proposals were more than adequate for defining the model network. To model Alternative 20 (in Illinois) the project team decided to assume a direct east-west corridor from Cape Girardeau to I-24 with only minor shifts to avoid population centers.

2.1.5.2 Zone System

The zone system was not changed as part of the modeling effort. It was agreed that the zone system, while aggregate in nature was sufficient for this planning level study.

2.1.5.3 Trip Tables and Zonal Factor Adjustments

The trip tables from the 2030 KYSTM Update Version 2 (I-66 Build) were used for all of the Build Scenario model runs (including the new bridge only alternatives). Similar to the network discussion, this provided a consistent and comparable basis for examining all of the build scenarios.

The build trip tables were however modified to better reflect the location of the corridor being examined. This was done by examining and adjusting the original I-66 model

zonal factors. According to documentation for the KYSTM (I-66 Corridor), the zonal factors were used

> *"to account for the redistribution or population, employment, and trips as a result of the construction of I-66. Furthermore, an important premise of the economic analysis was that traffic on a major new roadway within the I-66 Corridor would increase population and employment within the corridor. This new traffic-induced increase in population and employment will, in turn, generate more traffic on the new roadway." (Traffic Model Coordination for the I-66 (Southern Kentucky) Corridor, Wilbur Smith Associates, May 2002.)*

Therefore, new zonal factors were developed for the different corridors to account for traffic shifts resulting from the reallocation of future economic activity to each corridor. Similar corridors were assumed to have similar economic impacts and therefore similar zonal factors. Zones located close to a particular corridor were given zonal factors greater than one. As the distance between the corridor and the zones increased, the zonal factors were decreased approximately linearly, until at a certain point they became less than one. The zonal factors were also adjusted, such that the cumulative effect resulted in little change to the total number of trips generated within the study area.

The original I-66 model generally applied zonal factors only within Kentucky, leaving those outside the state at one. In part this may have been due to a lack of economic impact data for areas outside Kentucky. For this current study zonal factors outside the state were left alone. This was deemed reasonable due to the modest length of new interstate construction outside of Kentucky (just enough to reach I-57) and the relatively low population and employment density along the corridors. The alternative with the longest highway corridor outside of Kentucky is Alternative 20. However, the exact location of this corridor was not defined in the alternatives analysis (only a general corridor for modeling purposes) and again the density of economic activity and zones was low. Therefore, the zonal factors in Illinois were left alone for this alternative as well.

While the zonal factors were adjusted to better reflect the local economic impact of the I-66 corridor, the sum of the trips originating and terminating in the study area were maintained as a constant in the readjustment. Thus the adjustment did not increase the total number of trips over what was projected by the I-66 statewide model forecasts, which already took into account an increase in economic activity due to the highway through the state.

2.1.5.4 Model Assignments

The revised trip tables were used to complete assignment runs for both trucks and cars for each of the build scenarios. The output from these runs were then examined to determine if they were reasonable and to assess whether any further network refinement was needed. The final resulting data was then used to compare and evaluate the alternatives. It was also used to examine where traffic was going to and from, how traffic was being reallocated with the presence of I-66, and what the estimated operating conditions were on the new facilities.

3.0 NO-BUILD TRAFFIC FORECAST

To provide a baseline for the future No-Build Scenario (2030 E+C model) as well as the future Build Scenarios, the existing daily traffic volumes at six key screenlines are shown in Table 3. (The screenline locations are shown in Figure 12 in Chapter 5.0.) The existing traffic patterns are also shown on Exhibit B at the back of this forecasting report. Overall, the major traffic flows through the study area are on I-24 in the east and I-55 and I-57 in the west. Smaller volumes are found on the arterials in the central portion of the study area. It is important to note that the volumes shown on Exhibit B differ from the screenline analysis volumes included in this report. The Exhibit B volumes were collected in 2002. The screenline volumes were taken from state websites in early 2004 and are therefore more recent volume estimates.

Based on the recent count data shown in Table 3, the amount of traffic entering the study area from the east is approximately 48,000 vehicles per day (vpd). The flow over the Ohio River (all three Ohio River bridges) is nearly 38,000 vpd and the flow over the Mississippi River is 25,000 vpd. An examination of individual bridges indicates that approximately 5,500 vpd cross the Ohio River at Cairo on US 51; 4,000 vpd cross the Mississippi River south of Cairo on US 60; and 9,800 vpd cross the Mississippi on I-57.

The 2030 Existing Plus Committed (E+C) Scenario volumes shown in Table 3 show significant growth over the existing traffic volumes at nearly all locations examined. (New highways assumed to be in place in the 2030 E+C Scenario are discussed at the end of this section.) The total traffic entering the study area from the east over the Tennessee River more than doubled from 48,000 to 104,000 vpd. Most of this increase is on I-24. (Approximately half of the I-24 traffic is flowing northeast / southwest on I-24 and the Purchase Parkway, which is assumed to be I-69 in the 2030 E+C Scenario.)

The total screen line flow over the Ohio River (between Kentucky and Illinois) also increased considerably from 38,000 to 65,000 vehicles per day. The volume over the Ohio River by Cairo doubled to 11,000 vpd. Exhibit C (at the back of this forecasting report) shows a flow map for the E+C Scenario.

Table 3: Existing and 2030 E+C Volumes

Screenline	Highway	Recent Counts	E+C
1	US 60	9880	15000
Tennesee River	I-24	29500	66000
	US 62	6340	16000
	US 68	2630	7000
		48350	**104000**
2	US 60	27800	43000
W. of I-24	US 62	8780	19000
	US 45	28500	43000
	I-66	0	0
		65080	**105000**
3	US 60	6690	11000
Near the County Line	KY 286	2990	6000
	US 62	3560	4000
	I-66	0	0
		13240	**21000**
4	US 60	4820	10000
East of Wickliffe	KY 286	2340	2000
	KY 121	1500	2000
	US 51	2430	6000
	I-66	0	0
		11090	**20000**
5	US 45	5530	5000
Miss./Ohio River	I-24 (I-66)	26850	49000
	US 51 (Cairo Bridge)	5480	11000
	New Bridge / I-66	0	0
		37860	**65000**
6	US 60	3990	4000
Mississippi River	I-57	9750	17000
	MO 74 (I-66)	11100	15000
	New Bridge / I-66	0	0
		24840	**36000**

A comparison of Exhibits B and C (at the back of this forecasting report) shows that traffic on I-24 between US 60 and US 62 is projected to increase by over 50% to approximately 66,000 vpd. South of US 45, the increase on I-24 is even more substantial, with a projected volume of 75,000 vpd. These E+C volumes are large enough to require additional lanes on I-24 through the Paducah area. The heaviest traveled section requires 8 lanes to maintain LOS C or better in 2030. The volume increases on US 60, US 62, and US 45 west of I-24 are also considerable.

As outlined in Section 2.1.2, the 2030 E+C Scenario forecasts were based on the 2030 KYSTM Update Version 2 (I-66 Existing + Committed Model Network), which included two major new highways: Corridor 18 (I-69) and Corridor 5 (I-73/I-74) as presented in the *Traffic Model Coordination for the I-66 (Southern Kentucky) Corridor – Final Report* prepared by Wilbur Smith Associates in 2002. The model network was further upgraded for this current study to include key existing and committed projects in the study area (i.e. those with at least one phase in the KYTC Six Year Plan). Two projects were determined to be significant enough that they could affect travel flow patterns. The first was widening US 60 to four lanes from near Kevil to LaCenter and the second was the Paducah Outer Loop project. (Data characteristics for a small number of facilities were also updated to match current conditions, such as numbers of lanes or speed classifications.) The model was then re-run with these network modifications to provide the 2030 E+C Scenario forecasts. The results remained similar to the unadjusted Existing + Committed model output.

(Note that the 2030 No-Build volumes used in the Level 2 Screening differ slightly from the volumes used for Level 3 due to model improvements. The values presented in this section are the Level 3 values.)

4.0 LEVEL 2 - BUILD TRAFFIC FORECASTS

The Level 2 forecasts were conducted to give an early indication regarding the order of magnitude of traffic volumes for each alternative and to give a reasonable basis for comparing the alternatives. Therefore, the focus of the Level 2 work was on how much traffic, including the percent truck traffic, would be attracted to each of the proposed alternative corridors. The travel time savings between Paducah and Sikeston and between Paducah and Cape Girardeau were also estimated for each of the alternative corridors. The results of the Level 2 travel time analysis are summarized in Table 4 and the estimated I-66 average daily traffic volumes and levels of service are presented on Figures 5 through 11 on the following pages. (Note that figures were not prepared for Alternatives 8A and 8B.) The Level 2 traffic operations matrix is also provided as Exhibit D for reference.

Table 4: Estimated Travel Time by Alternatives

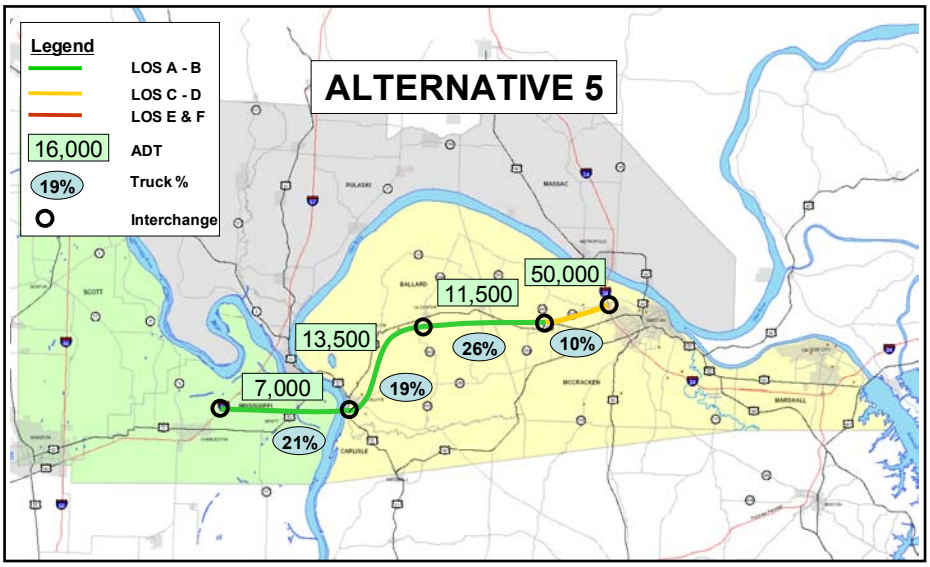
	Estimated Travel Time by Alternative (Minutes)									
	E+C	Alt. 5	Alt. 6-7	Alt. 8	Alt. 8A	Alt. 8B	Alt. 9-10	Alt. 11-15,21	Alt. 19	Alt. 20
Paducah to Sikeston	76	63	62	66	74	74	61	58	60	74
Savings Compared to E+C		13	14	10	2	2	15	18	16	2
Paducah to Cape Girardeau	98	89	89	83	91	98	87	84	88	67
Savings Compared to E+C		9	9	15	7	0	11	14	10	31

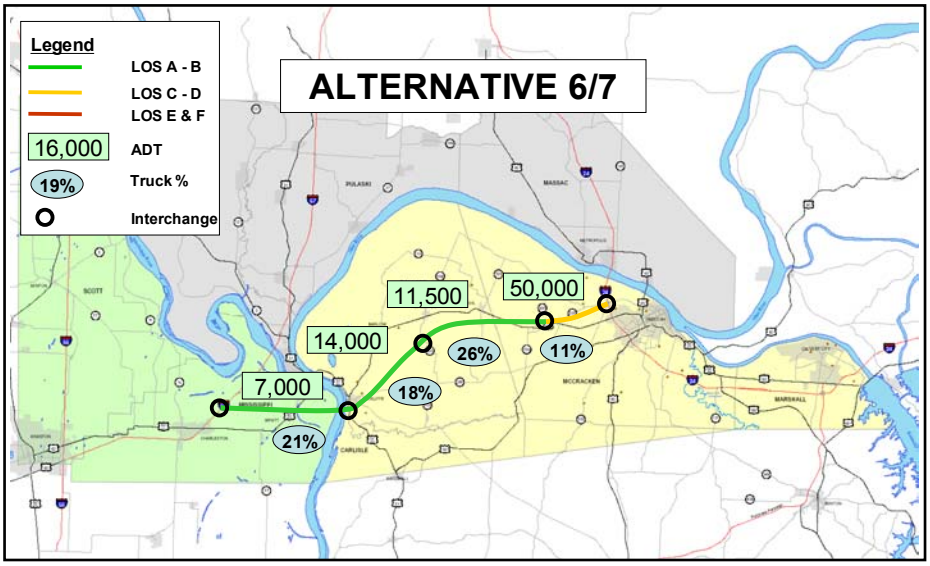
The volume of traffic projected to use the new I-66 highway was highest near Paducah and lowest at the western terminus. The high volumes shown adjacent to I-24 are aggregate numbers that include some local traffic that may actually use parallel facilities. Levels of service on I-66 were not deemed to be a critical issue. However, the largest volumes would be expected near I-24 and traffic volumes and levels of service on I-24 were identified as an issue worth more study in Level 3.

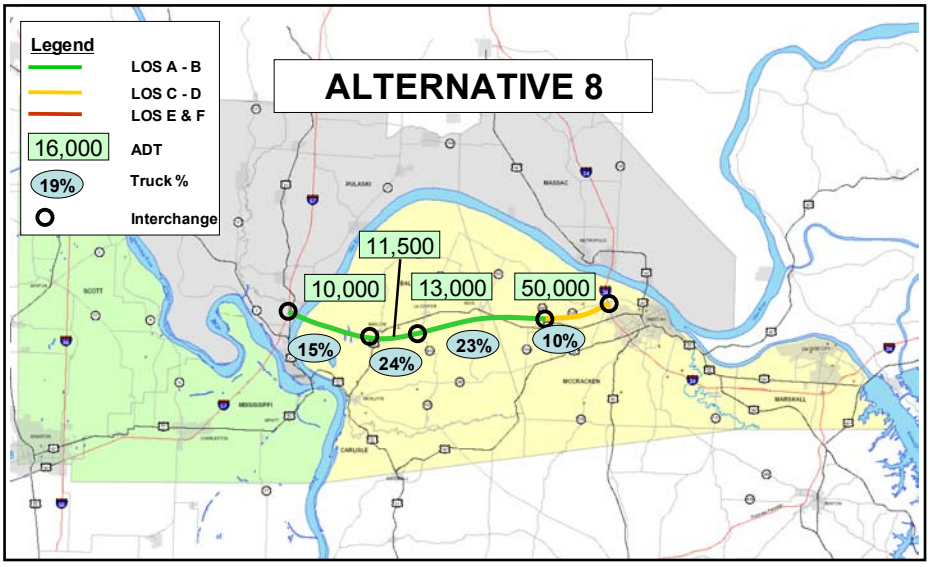
The volume of traffic crossing the Mississippi River for Alternatives 5-7, 9-15, 19, and 21 was 7,000 to 8,000 vehicles per day with approximately 20% trucks. The Ohio River crossing (Alternative 8) showed a volume of approximately 10,000 vehicles per day. This increased volume is in part due to a general northwest/southeast travel pattern through the region. This issue was explored in more detail in the Level 3 analysis.

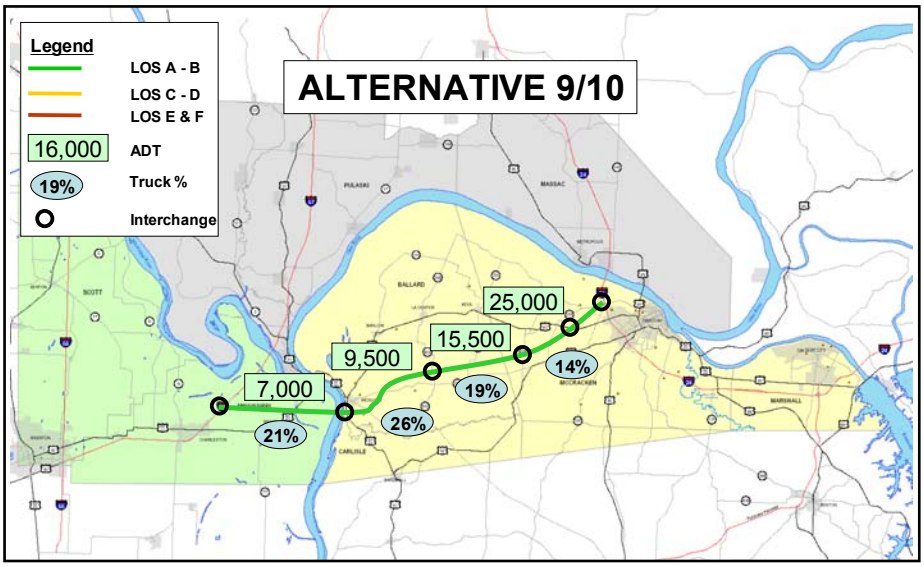
Based on the Level 2 evaluation (see the full Level 2 report for details) Alternatives 5-7, 8A, 9-10, and 19 were set aside from further consideration. Alternative 8 was also set aside at the conclusion of Level 2, but was put back in during the Level 3 process. The remaining alternatives were studied in Level 3.

Figures 5 through 11: Level 2 Volume Estimates





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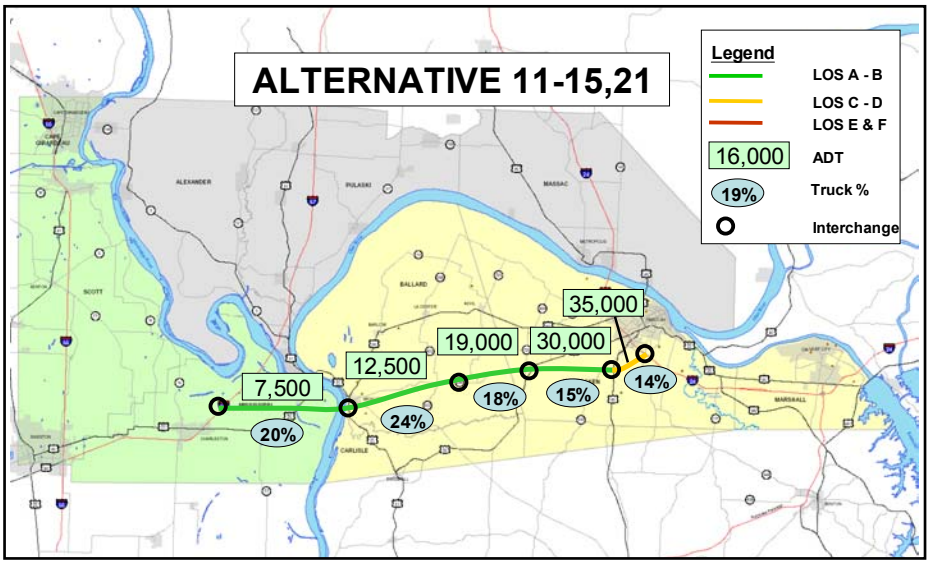
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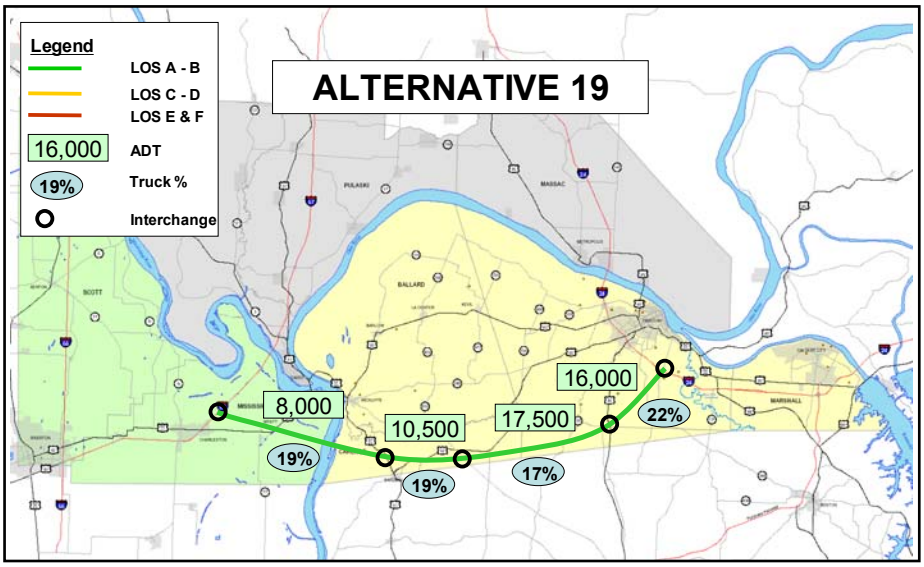
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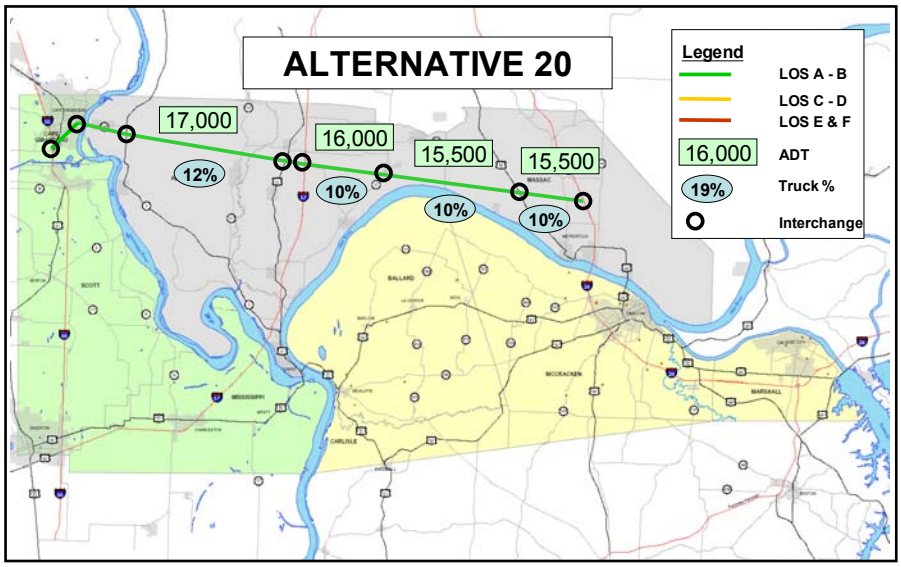
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5.0 LEVEL 3 BUILD TRAFFIC FORECASTS

The forecasts prepared for Level 2 were refined to produce the Level 3 forecasts. During the process, additional information was gained relative to travel patterns, estimated volumes, system travel measures, and other critical traffic indicators. For reference, the final alternatives considered in Level 3 were:

1. **Alternative 0** – (No Build) – Only existing and committed projects in KYTC Six Year Plan and MoDOT improvement program.
2. **Alternative 8** – Essentially Corridor 11 in/along existing KY 286, US 60 or US 62 corridors to a point east of Wickliffe, proceeding northwest on new route across the Ohio River on a new bridge to I-57 in Illinois. *[Alternative 8 was re-examined in Level 3 after being designated in Level 1 for no further analysis. However, resource agency discussions (KY Nature Preserves Commission and KY Dept. of Fish and Wildlife) revealed that it was fatally flawed from an environmental standpoint. Therefore, limited additional traffic analysis is included for this alternative.]*
3. **Alternative 8B** – US 60 improvements from Paducah to Wickliffe with a new Mississippi River crossing.
4. **Alternative 11/12/13/14/15 & 2**1 – New interstate corridor parallel to US 62 and KY 286 with a new Mississippi River crossing
5. **Alternative 20** – Unspecified corridor connecting I-24 north of Paducah to I-55 near Cape Girardeau, Missouri with no new river crossing either over the Mississippi or Ohio rivers.

5.1.1 Average Daily Traffic Volumes

The principal result of the Level 3 modeling effort was a set of daily traffic estimates for the alternative corridors. A summary of these volumes is presented in Table 5, which provides volumes at the six key screenline locations shown in Figure 12. The volumes are also shown in Exhibits E through G. There are slight differences between the Draft Level 3 matrix and these final volumes, but the volumes match the final project matrix.

Figure 12: Level 3 Traffic Forecast Screenlines

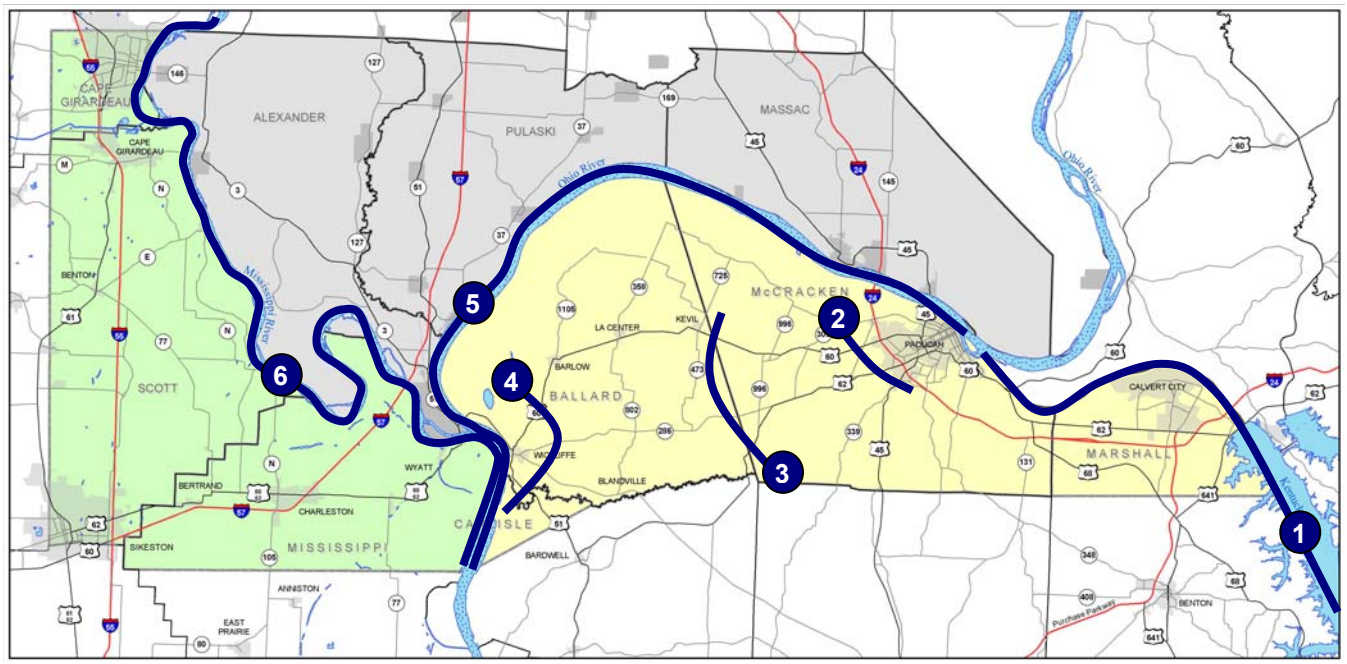


Table 5: Level 3 2030 Screenline Volume Comparisons

Screenline	Highway	Recent Counts	E+C	Alt. 8B	Alt. 11	Alt. 20
1	US 60	9880	15000	16000	16000	16000
Tennesee River	I-24	29500	66000	82000	84000	83000
	US 62	6340	16000	6000	6000	6000
	US 68	2630	7000	6000	6000	6000
		48350	**104000**	**110000**	**112000**	**111000**
2	US 60	27800	43000	41000	40000	45000
W. of I-24	US 62	8780	19000	25000	9000	21000
	US 45	28500	43000	48000	36000	48000
	I-66	0	0	0	33000	0
		65080	**105000**	**114000**	**118000**	**114000**
3	US 60	6690	11000	6000	6000	10000
Near the County Line	KY 286	2990	6000	10000	2000	6000
	US 62	3560	4000	4000	3000	4000
	I-66	0	0	0	15000	0
		13240	**21000**	**20000**	**26000**	**20000**
4	US 60	4820	10000	5000	4000	9000
East of Wickliffe	KY 286	2340	2000	7000	2000	2000
	KY 121	1500	2000	2000	1000	1000
	US 51	2430	6000	6000	7000	5000
	I-66	0	0	0	11000	0
		11090	**20000**	**20000**	**25000**	**17000**
5	US 45	5530	5000	5000	5000	4000
Miss./Ohio River	I-24 (I-66)	26850	49000	54000	51000	56000
	US 51 (Cairo Bridge)	5480	11000	3000	6000	8000
	New Bridge / I-66	0	0	7000	9000	0
		37860	**65000**	**69000**	**71000**	**68000**
6	US 60	3990	4000	2000	2000	6000
Mississippi River	I-57	9750	17000	17000	17000	16000
	MO 74 (I-66)	11100	15000	14000	14000	27000
	New Bridge / I-66	0	0	7000	9000	0
		24840	**36000**	**40000**	**42000**	**49000**

Note: All of the Build Scenarios include I-66 in the central and eastern portions of Kentucky.

Overall, screenline volumes in the build scenarios are generally higher than in the E+C Scenario due to the added traffic due to the I-66 Corridor and the statewide land use changes assumed to accompany that highway. All of the Build Scenarios have approximately 144,000 additional trips system wide compared to the E+C Scenario. Within the study area, this means higher volumes at most, but not all screenlines, depending on the alternative.

Total traffic entering the study area from the east (screenline 1) is expected to increase approximately 6-8,000 over the E+C scenario. The largest increase is for Alternative 11. This alternative draws slightly more new northeast-southwest traffic through the study area compared to the other alternatives. Alternative 11 also has the highest volumes at screenlines 2 through 4 because it runs west across the study area. It also has the highest count at screenline 5 the Mississippi / Ohio River line (Kentucky border) because it attracts northeast-southwest traffic that uses both the I-24 and I-66 bridges. Alternative 20 has the highest volume crossing the Mississippi River due to the added I-66 traffic crossing at Cape Girardeau. A brief discussion of the volumes for each alternative is given below.

Alternative 8B

Alternative 8B has average daily traffic (ADT) volumes that are higher than the E+C Scenario at the river screenlines and in the vicinity of I-24 (Screenlines 1, 2, 5, and 6). This is due to the added development assumed to occur along I-24, as well as I-66 traffic from Eastern Kentucky using I-24 through the area. It is important to note for Alternative 8B, I-66 is still assumed to be in place in Eastern Kentucky, along with the associated land use growth. I-66 is not present in Western Kentucky, therefore the land use growth was shifted to the I-24 corridor. In the E+C Scenario, no portion of I-66 is assumed to be constructed and consequently there is no I-66 related land use growth.

For Alternative 8B, traffic volumes are lower or the same across Screenlines 3 and 4 (McCracken / Ballard County Line and near Wickliffe). This is likely due to macro scale traffic pattern shifts due to the presence of I-66 in Eastern and Central Kentucky. The new I-66 in these areas provides better access to other interstates, allowing some longer distance traffic that might have crossed near Wickliffe to choose new routes and bypass far Western Kentucky. However, overall volumes across Screenline 5, Mississippi / Ohio Rivers, increases by 4,000 ADT because of the land use growth assumptions inherent in the I-66 Build model scenarios and because of I-66 / I-24 through traffic. Alternative 8B also causes the volumes on US 60 and KY 286 to “flip” with traffic attracted to KY 286 because it is the more direct route to the new Wickliffe bypass and the bridge south of Wickliffe.

Alternative 8

Alternative 8 was brought back to Level 3 for further study, but then it was set aside again due to environmental resource constraints.

Alternatives 11-15, 21

Alternative 11 carries approximately 33,000 vehicles west of I-24. This volume declines to 11,000 east of Wickliffe, and then to 9,000 as it passes over the Mississippi River.

Alternative 20

Alternative 20 leaves traffic on I-24 through Kentucky. This results in additional traffic growth on I-24 in the study area. The peak volume is approximately 84,000 vehicles just south of Paducah, an increase around 8,000 (or 11%) over the projected 2030 E+C volume. In Illinois, the volume on I-66 between I-24 and Cape Girardeau is around 16,000 vpd. The volume over the Mississippi River (when combined with other background traffic) reaches approximately 27,000. Alternative 20 also removes traffic from US 51 and the bridge at Cairo.

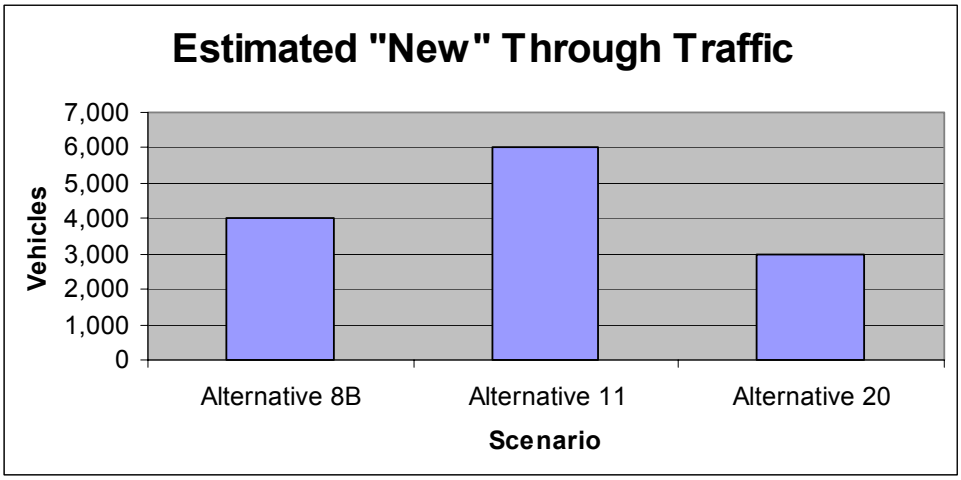
5.1.2 New Through Traffic Estimates

Based on the screenline analysis for the Kentucky Border (Mississippi River / Ohio River) estimates were prepared for how much new through traffic is added to the Western Kentucky highway system for each alternative. A summary of this evaluation is shown in Table 6 and Figure 13. The analysis indicates that the I-66 Build alternatives draw approximately 3,000 to 6,000 additional trips across Kentucky's western border, with Alternative 11 drawing the largest amount. Some of this traffic for Alternative 11 may actually cross both the I-24 Bridge as well as the new I-66 Mississippi River Bridge, flowing northeast-southwest across the region.

Table 6: New Through Traffic Summary

2030 Scenarios	Traffic Crossing Mississippi and Ohio Rivers (screenline count)	Estimated New Through Traffic Due to Improvments
No-Build (E+C)	65,000	NA
Alternative 8B	69,000	4,000
Alternative 11	71,000	6,000
Alternative 20	68,000	3,000

Figure 13: New Through Traffic Summary



5.1.3 Level 3 Travel Time Analysis

The travel times between Paducah and Sikeston and between Paducah and Cape Girardeau were examined for each of the Level 3 alternatives. The results of this analysis are shown in Table 7 and Figures 14 and 15. The No-Build travel times are approximately 77 and 94 minutes respectively.

Table 7: Travel Time Summary

	East of Paducah to Sikeston			East of Paducah to Cape Girardeau		
2030 Scenarios	**Travel Time (minutes)**	**Travel Time Savings (minutes)**	**Percent Travel Time Savings**	**Travel Time (minutes)**	**Travel Time Savings (minutes)**	**Percent Travel Time Savings**
No-Build (E+C)	76.5	NA		93.6	NA	
Alternative 11	57.9	18.6	24%	84	9.6	10%
Alternative 20	76.1	0.4	1%	68.1	25.5	27%
Alternative 8B	72.7	3.8	5%	94.8	NA*	NA*

* The penalty applied to the existing bridge increased the modeled travel time to Cape Girardeau in this scenario.

Figure 14: Travel Time Savings

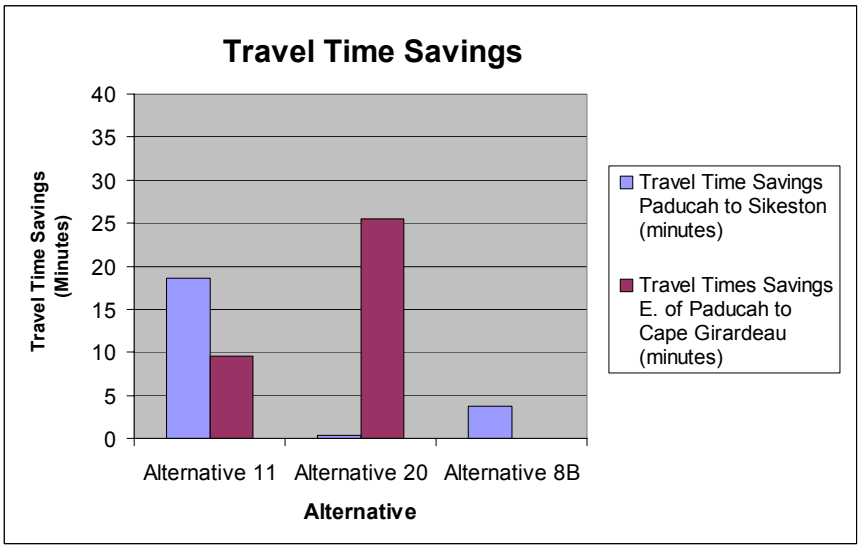
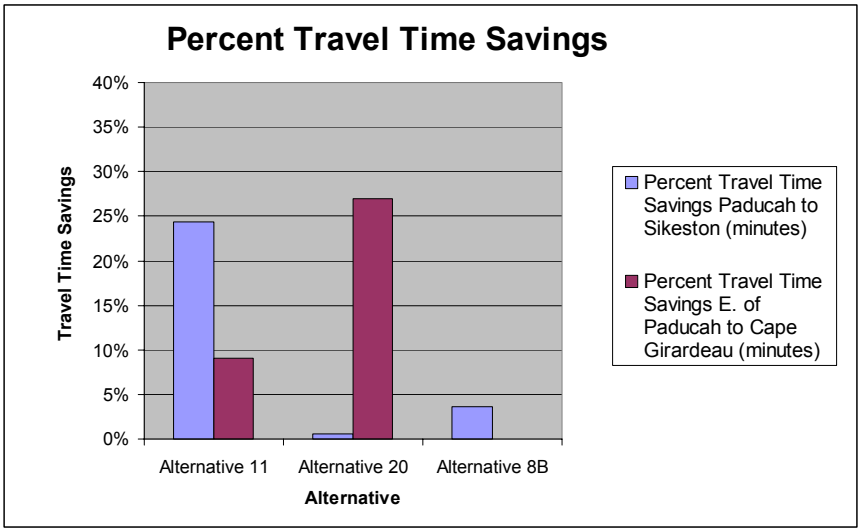


Figure 15: Percent Travel Time Savings



Alternative 11 provides a travel time savings of over 18 minutes (25%) for the Paducah to Sikeston trip. It provides a smaller savings of about 10 minutes for the Paducah for Cape Girardeau trip. Alternative 20 provides an over 25 minute savings for the Paducah to Cape Girardeau trip, a reduction of over 25%. However, it provides a negligible benefit for the Paducah to Sikeston trip. Alternative 8B provides no reduction to the Paducah – Cape Girardeau trip and a small 4 minute savings for the trip to or from Sikeston.

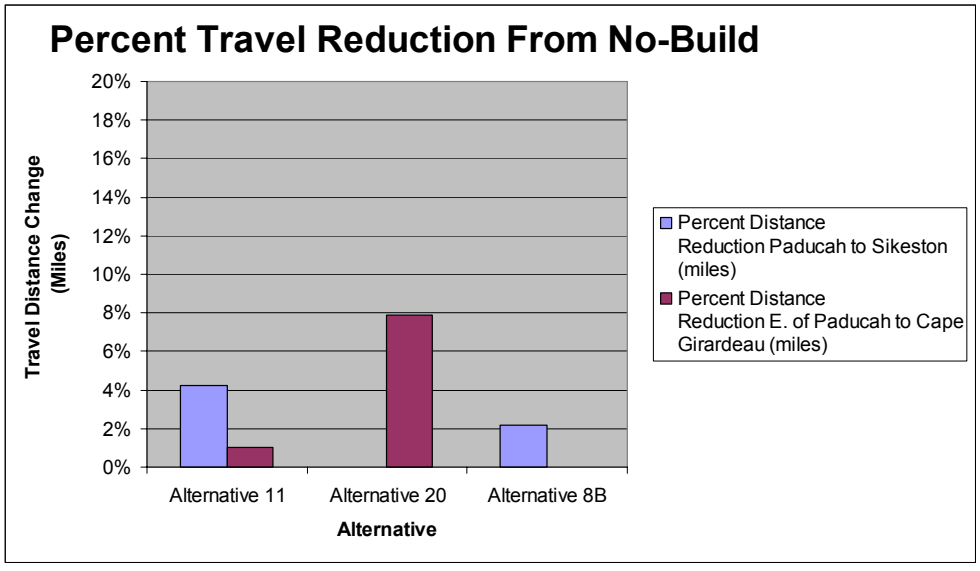
5.1.4 Travel Distance Analysis

A similar analysis was prepared for travel distances. The results were similar, but with smaller percentage reductions as shown in Table 8 and Figure 16. The larger travel time reductions indicate that the alternatives are shifting traffic to higher speed facilities. As was expected, Alternative 11 provides a greater reduction to Sikeston and a lesser reduction to Cape Girardeau. Alternative 20 provides a larger reduction to Cape Girardeau and no reduction to Sikeston. Alternative 8B provides a small reduction to Sikeston only.

Table 8: Travel Distance Reduction Summary

	East of Paducah to Sikeston			East of Paducah to Cape Girardeau		
2030 Scenarios	**Travel Distance (miles)**	**Travel Distance Change (miles)**	**Percent Distance Reduction**	**Travel Distance (miles)**	**Travel Distance Change (miles)**	**Percent Distance Reduction**
No-Build (E+C)	68.6	NA		78.7	NA	
Alternative 11	65.7	2.9	4%	77.9	0.8	1%
Alternative 20	68.6	0	0%	72.5	6.2	8%
Alternative 8B	67.1	1.5	2%	78.7	0	0%

Figure 16: Percent Travel Distance Reduction



5.1.5 System Travel Measures

Two system measures were examined as part of this study: vehicle miles of travel (VMT) and vehicle hours of travel (VHT). The build alternatives were compared to the No-Build (E+C) alternative, but they were also compared to Alternative 8B because this is a form of limited build with most other elements (such as the number of trips and the model network outside the study area) held constant.

For VMT, the build alternatives add approximately four million VMT over the No-Build Scenario. This is due to the I-66 corridor and associated growth across the entire model network. However, when Alternatives 11 and 20 are compared to Alternative 8B, Alternative 20 reduces the VMT, while Alternative 11 increases it slightly as shown in Table 9. This appears to indicate that Alternative 20 is providing more direct links for more travelers. These findings are consistent with the travel time reduction and traffic volume data presented previously.

Table 9: 2030 Vehicle Miles of Travel Summary

2030 Scenarios	Total Assigned Trips	Total Vehicle Miles Traveled (VMT)	Change in VMT from E+C Scenario	Change in VMT from US 60 Scenario	Average VMT per Trip
No-Build	27,532,650	938,502,600	NA	NA	34.09
Alternative 8B	27,677,030	942,535,300	4,032,700	NA	34.06
Alternative 11	27,676,640	942,558,200	4,055,600	22,900	34.06
Alternative 20	27,677,030	942,407,600	3,905,000	-127,700	34.05

Regarding VHT, the build alternatives add between 24,000 and 40,000 VHT to the 2030 No-Build (E+C) Scenario. When compared to the Alternative 8B "limited build" option, Alternative 20 decreases system wide VHT by 15,000 and Alternative 11 decreases VHT by 4,000 as shown in Table 10. Again, these numbers appear reasonable given the volumes and time savings discussed previously.

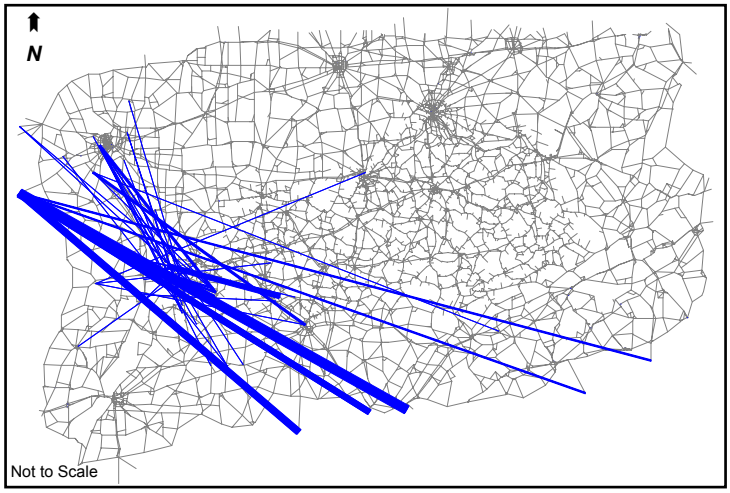
Table 10: Vehicle Hours of Travel Summary

2030 Scenarios	Total Assigned Trips	Total Vehicle Hours Traveled (VHT)	Change in VHT from E+C Scenario	Change in VHT from US 60 Scenario	Averare VHT per Trip	Ave Trip Speed (mph)
No-Build	27,532,650	18,723,100	NA	NA	0.68	50.1
Alternative 8B	27,677,030	18,762,500	39,400	NA	0.678	50.2
Alternative 11	27,676,640	18,758,300	35,200	-4,200	0.678	50.2
Alternative 20	27,677,030	18,747,400	24,300	-15,100	0.677	50.3

5.1.6 Travel Patterns

One item of interest was to examine who is using the existing Cairo Bridge (US 51). A select link analysis was performed on the bridge to create a set of desire lines for travelers on this bridge as illustrated in Figure 17. It showed that many of the current users of the bridge are traveling northwest/southeast through the study area. The largest number travel between St. Louis and points west and Tennessee and points south as shown in the figure. These trips are looking for the fastest route between these points. A relatively small amount of the traffic is flowing directly east-west or northeast-southwest through the study area. (It is important to note that this is without the I-66 corridor in place.)

Figure 17: Existing Desire Lines for Cairo Bridge



When a new bridge is placed across the Mississippi River south of Wickliffe as part of the I-66 Corridor, it carries the east-west I-66 flow (large band across Figure 18). It also attracts modest east-west and northeast-southwest flows. Much of the southeast-northwest flowing traffic remains on the old bridge (as shown in Figure 19) which lies along the path to St. Louis and points west (via I-57, Route 3, and I-55). It is useful to note that while Figures 17-19 are not to a specific scale, the line weights are roughly comparable between the figures (i.e. they are approximately to the same scale).

Figure 18: Desire Lines for New I-66 Bridge

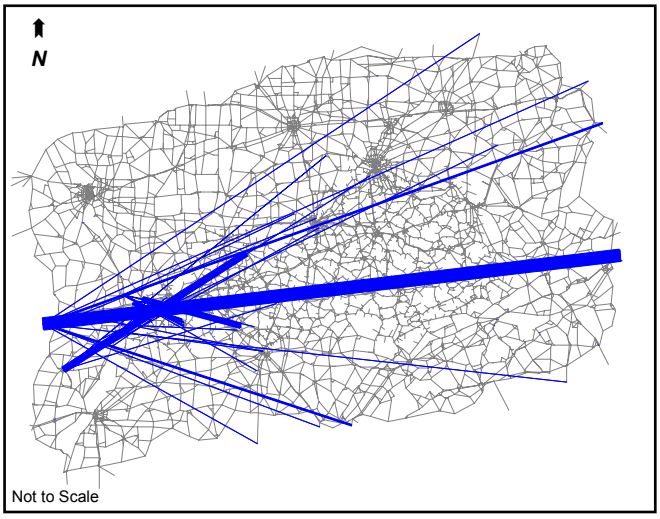
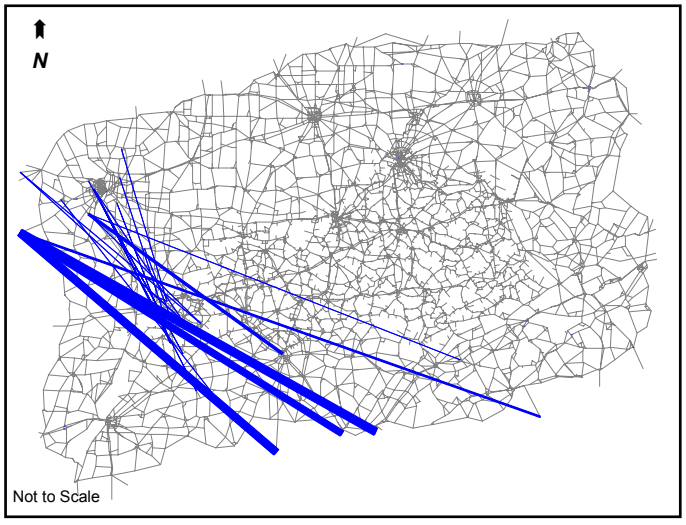


Figure 19: Desire Lines for Cairo Bridge With I-66 in Place



Given these desire lines and the model's propensity to leave a large portion of the traffic on the old bridge, an adjustment became necessary to shift some traffic to the new bridge. This was deemed both necessary and appropriate given the poor geometrics and safety features of the old bridge. Local perception is that the bridge is unsafe, especially at night and in poor weather due to the narrow lanes and no shoulders. It is expected that most trucks, older drivers, and unfamiliar through travelers would use the new bridge. With the appropriate adjustments in place, the volumes on the two bridges appeared reasonable.

Given the model parameters, some through traffic continued to use the old bridge because it provided the shortest travel times for certain southeast – northwest travel flows. The southern bridge location, combined with the longer route through Sikeston increased travel times such that travel on the existing bridge (at lower speeds) was still shorter for these trips.

Other travel patterns of importance include the decrease in traffic over the Cairo and new Wickliffe bridges in the Alternative 8B Scenario (traffic from Kentucky to the west decreases from 11,000 in the E+C to 10,000 with 8B. This is due to the assumed completion of I-66 through the eastern and central portions of Kentucky, which affects the macro travel patterns across the state. Vehicles that previously would have crossed the river near Wickliffe use I-66 to access I-64 and other interstate facilities and no longer travel through western Kentucky.

Traffic Forecasting Methodology Report
Exhibits

Exhibit A

Detailed Model Volume Comparison

Screenline	Highway	Recent Counts*	1999 KYSTM Model Volumes**	Difference from Counts	% Difference from Counts
1	US 60	9880	9050	-830	-8%
Tennesee River	I-24	29500	25910	-3590	-12%
	US 62	6340	8360	2020	32%
	US 68	2630	3540	910	35%
		48350	**46860**	**-1490**	**-3%**
2	US 60	6690	6790	100	1%
West of Paducah	KY 286	2990	3310	320	11%
	US 62	3560	2760	-800	-22%
		13240	**12860**	**-380**	**-3%**
3	US 60	4820	6210	1390	29%
East of Wickliffe	KY 286	2340	1580	-760	-32%
	KY 121	1500	1280	-220	-15%
	US 51	2430	3670	1240	51%
		11090	**12740**	**1650**	**15%**
4	US 45	5530	3900	-1630	-29%
Ohio River	I-24	26850	26340	-510	-2%
	US 51	5480	7040	1560	28%
		37860	**37280**	**-580**	**-2%**
5	US 45	4700	1680	-3020	-64%
North of Paducah	I-24	15600	18870	3270	21%
	IL 145	2050	920	-1130	-55%
		22350	**21470**	**-880**	**-4%**
6	US 60	3990	2280	-1710	-43%
Mississippi River	I-57	9750	14290	4540	47%
	MO 74	11100	9560	-1540	-14%
		24840	**26130**	**1290**	**5%**
7	IL 3	4150	6020	1870	45%
North of Cairo	US 51	1450	820	-630	-43%
	I-57	9900	9230	-670	-7%
	IL 37	2700	310	-2390	-89%
		18200	**16380**	**-1820**	**-10%**
8	MO 25	4131	3170	-961	-23%
North of Sikeston	MO 77	3147	0	-3147	-100%
	US 61	2374	11670	9296	392%
	I-55	19000	17560	-1440	-8%
		28652	**32400**	**3748**	**13%**

* Count data was obtained from Kentucky, Missouri, and Illinois web sites and if for 2001-2003.

** The 2002 version of the 1999 KYSTM (calibrated for the I-66 corridor) was used for the comparison

Exhibit B

CAPE GIRARDEAU
ADT-31,800 Trucks-27.6%
ADT-10,900 Trucks-11.7%
ADT-5,530 Trucks-16.3%
ADT-41,600 Trucks-27.6%
ADT-2,660 Trucks-7.1%
ADT-19,000 Trucks-27.6%
ADT-3,980 Trucks-7.5%
ADT-1,150 Trucks-9.6%
ADT-9,800 Trucks-36.7%
ADT-1,600 Trucks-18.8%
ADT-2,180 Trucks-10.8%
ADT-9,730 Trucks-6.5%
ADT-15,700 Trucks-31.2%
ADT-2,600 Trucks-12.5%
ADT-2,490 Trucks-11.3%
ADT-5,900 Trucks-5.1%
ADT-28,500 Trucks-20.7%
ADT-29,040 Trucks-20.7%
ADT-8,510 Trucks-36.0%
ADT-25,400 Trucks-2.6%
ADT-17,900 Trucks-4.1%
ADT-16,000 Trucks-18.9%
ADT-42,000 Trucks-21.4%
ADT-13,600 Trucks-18.9%
ADT-19,900 Trucks-6.1%
ADT-19,900 Trucks-4.1%
ADT-42,000 Trucks-22.2%
ADT-8,800 Trucks-7.6%
ADT-10,700 Trucks-18.9%
ADT-9,000 Trucks-4.5%
ADT-32,500 Trucks-22.9%
ADT-15,140 Trucks-5.12%
ADT-7,280 Trucks-18.9%
ADT-6,780 Trucks-18.9%
ADT-26,900 Trucks-33.6%
ADT-6,700 Trucks-18.9%
ADT-6,280 Trucks-18.9%
ADT-27,900 Trucks-33.6%
ADT-26,900 Trucks-21.8%
ADT-26,900 Trucks-21.8%
ADT-7,000 Trucks-4.5%
ADT-6,000 Trucks-5.1%
ADT-5,340 Trucks-5.9%
ADT-10,700 Trucks-32.4%
ADT-5,500 Trucks-12.7%
ADT-5,980 Trucks-12.6%
ADT-6,200 Trucks-23.4%
ADT-6,800 Trucks-20.6%
ADT-4,600 Trucks-14.9%
ADT-2,800 Trucks-11.4%
ADT-5,760 Trucks-11.3%
ADT-6,710 Trucks-10.7%
ADT-10,940 Trucks-7.7-11.9%
ADT-3,440 Trucks-13.0%
ADT-2,540 Trucks-13.0%
ADT-2,700 Trucks-13.0%
ADT-3,125 Trucks-7.6%
ADT-3,400 Trucks-7.6%
ADT-3,090 Trucks-20.6%
ADT-4,190 Trucks-20.6%
ADT-10,400 Trucks-27.6%
ADT-5,840 Trucks-8.3%
ADT-5,330 Trucks-8.3%
ADT-19,600 Trucks-8.3%
ADT-20,500 Trucks-27.6%
ADT-15,500 Trucks-27.6%
ADT-8,209 Trucks-27.6%
ADT-16,400 Trucks-27.6%
ADT-9,870 Trucks-7.1%
ADT-18,200 Trucks-8.3%
ADT-4,300 Trucks-7.1%
ADT-8,980 Trucks-15.7%
ADT-19,100 Trucks-27.6%

CAPE GIRARDEAU
ALEXANDER
SCOTT
PULASKI
MASSAC
BALLARD
MCCRACKEN
MARSHALL
MISSISSIPPI
CARLISLE
METROPOLIS
PADUCAH
CALVERT CITY
LA CENTER
KEVIL
BARLOW
CAIRO
WICKLIFFE
WYATT
CHARLESTON
SIKESTON
BENTON
BARDWELL
ARLINGTON
EAST PRAIRIE

Mississippi River
Ohio River
Kentucky Lake
Purchase Parkway

KENTUCKY TRANSPORTATION CABINET
EDUCATION PAYS
MoDOT

PROJECT STUDY AREA

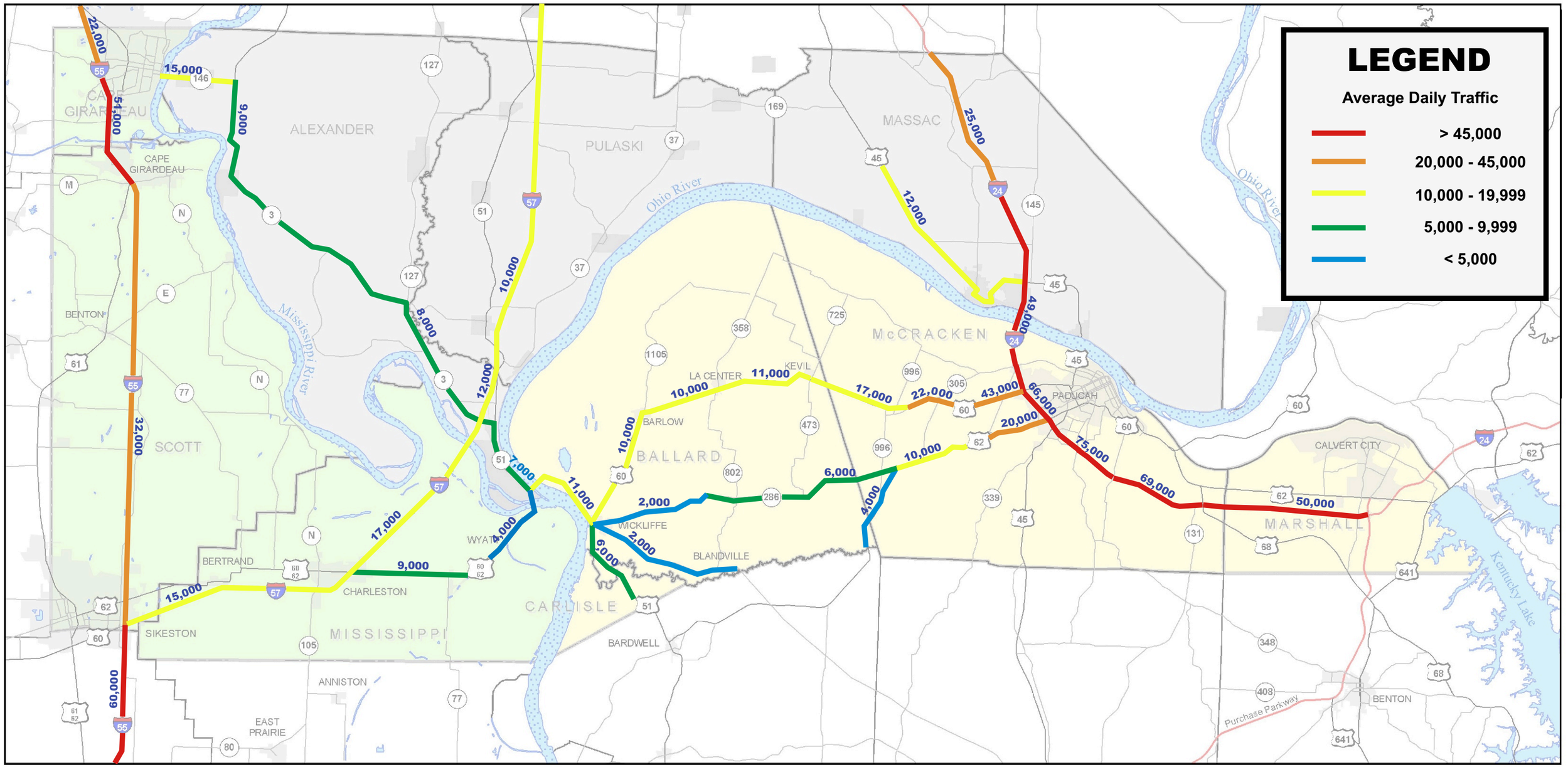
LOCATION MAP
Illinois
Missouri
Kentucky
Study Area

0 2.5 5 10 Miles

Figure 3 Sheet 1 of 1

AVERAGE DAILY TRAFFIC AND TRUCK PERCENTAGES

I-66 CORRIDOR STUDY
Western Kentucky to Missouri
KYTC Item No. 1-23.00



VICINITY MAP

2030 EXISTING AND COMMITTED PROJECTS SCENARIO

PB PARSONS BRINCKERHOFF

QK4

EDUCATION PAYS

KENTUCKY TRANSPORTATION CABINET

MoDOT

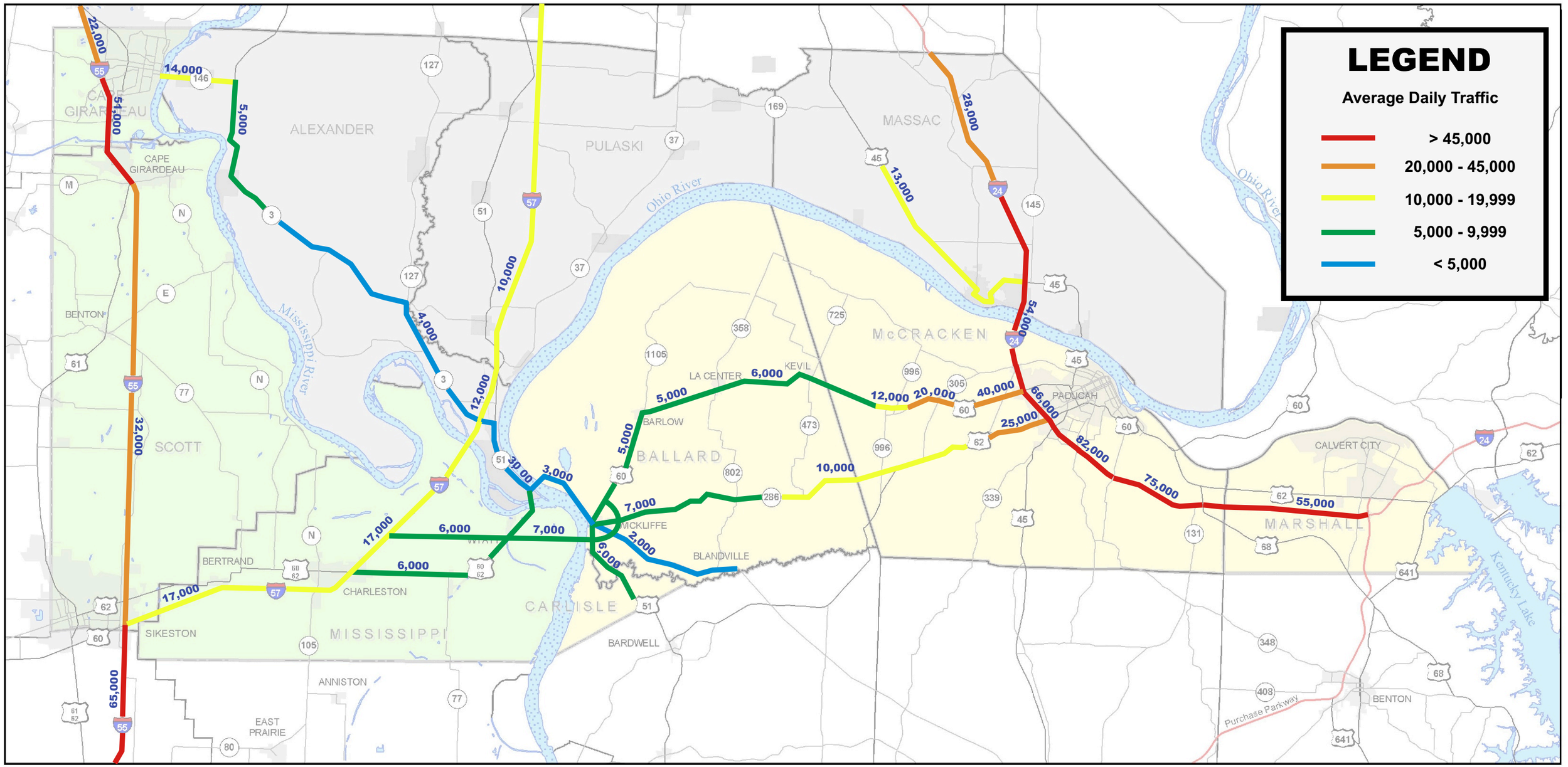
N W E S

0 2.5 5 10

Miles

Exhibit D

Alt. / Corridor No.	Description	Traffic Operations*											
		Screen Line #1: Paducah			Screen Line #2: W. McCracken Co.			Screen Line #3: Ballard County			Screen Line #4: Mississippi River (Ohio River for 8 & 8A)		
		Average Daily Traffic	Average Daily Truck Traffic (%)	Level of Service	Average Daily Traffic	Average Daily Truck Traffic (%)	Level of Service	Average Daily Traffic	Average Daily Truck Traffic (%)	Level of Service	Average Daily Traffic	Average Daily Truck Traffic (%)	Level of Service
0	No Build or Do Nothing (serves as basis for comparison to other alternatives) - Includes projects currently programmed in the KYTC's Six Year Plan	45,000 (US 60)	3,500 (7%)	E (4 lanes)	11,000 (US 60)	1,500 (14%)	A (4 lanes)	10,000 (US 60)	1,000 (10%)	E (2 lanes)	11,500 (Bridge Over Ohio River)	2,000 (17%)	E (2 lanes)
5	From I-24 at Paducah generally follow the existing US 60 corridor to Wickliffe over the Miss. River on new bridge through lowland/floodway in Missouri connecting to US 60 in Missouri east of Charleston to I-57	50,000	5,000 (10%)	D	11,500	3,000 (26%)	A	13,500	2,500 (19%)	A	7,000	1,500 (21%)	A
6 / 7	From existing US 60 east of Kevil go southwest on a new alignment towards Wickliffe over the Miss. River on a new bridge through lowland/floodway in Missouri connecting to US 60 in Missouri east of Charleston to I-57	50,000	5,500 (11%)	D	11,500	3,000 (26%)	A	14,000	2,500 (18%)	A	7,000	1500 (21%)	A
8	From I-24 at Paducah in/along existing KY 286, US 60 or US 62 corridors to a point east of Wickliffe, proceed north west on new route across the Ohio River on a new bridge to I-57 in Illinois	50,000	5,000 (10%)	D	13,000	3,000 (23%)	A	11,500	2,500 (24%)	A	10,000 (Bridge Over Ohio River)	1,500 (15%)	A
8A	US 60 planned highway improvements per KYTC 6 Year Plan and Long Range Plan from Paducah to Wickliffe. Includes new connector road and new bridge over the Ohio River connecting US 60 to I-57 in Illinois.	51,500 (US 60)	4,000 (8%)	F (4 lanes)	14,000 (US 60)	2,000 (14%)	B (4 lanes)	12,500 (US 60)	1,500 (12%)	A (4 lanes)	7,000 (Bridge Over Ohio River)	500 (7%)	A (4 lanes)
8B	US 60 planned highway improvements per KYTC 6 Year Plan and Long Range Plan from Paducah to Wickliffe. Includes new connector road and new bridge over the Mississippi River south of Wickliffe US 60 to I-57 in Missouri.	44,500 (US 60)	3,500 (8%)	E (4 lanes)	7,000 (US 60)	1,500 (21%)	A (4 lanes)	6,000 (US 60)	500 (8%)	A (4 lanes)	5,500	500 (9%)	A (4 lanes)
9 / 10	From I-24 near Paducah, follow new route south westerly to Wickliffe (parallel to US 62/KY 286) across the Mississippi River on a new bridge to I-57	25,000	3,500 (14%)	B	15,500	3,000 (19%)	A	9,500	2,500 (26%)	A	7,000	1,500 (21%)	A
11 / 12 / 13 / 14 / 15 / 21	From I-24 south of Paducah follow new route southwest parallel to KY 286 to point south of Wickliffe over Mississippi River on new bridge to US 60 / US 62 to I-57	35,000	5,000 (14%)	C	19,000 - 30,000	3,500-4,500 (15-18%)	A-B	12,500	3,000 (24%)	A	7,500	1,500 (20%)	A
19	From I-24 near existing US 60 bridge across Tennessee River proceed south west to new route south of KY 339 westerly along new route south of study area across the Mississippi River on a new bridge to US 60 / US 62 to Sikeston	16,000	3,500 (22%)	A	17,500	3,000 (17%)	A	10,500	2,000 (19%)	A	8,000	1,500 (19%)	A
20	Rebadge existing interstate I-24 as I-66 in KY and build connector in southern Illinois and rebadge I-55 or I-57 as I-66 in Missouri	15,500	1,500 (10%)	A	15,500	1,500 (10%)	A	16,000	1,500 (10%)	A	17,000	2,000 (12%)	A



VICINITY MAP

ALT. 8B - 2030 US 60 AND NEW BRIDGE SCENARIO

PB PARSONS BRINCKERHOFF

QK4

EDUCATION PAYS

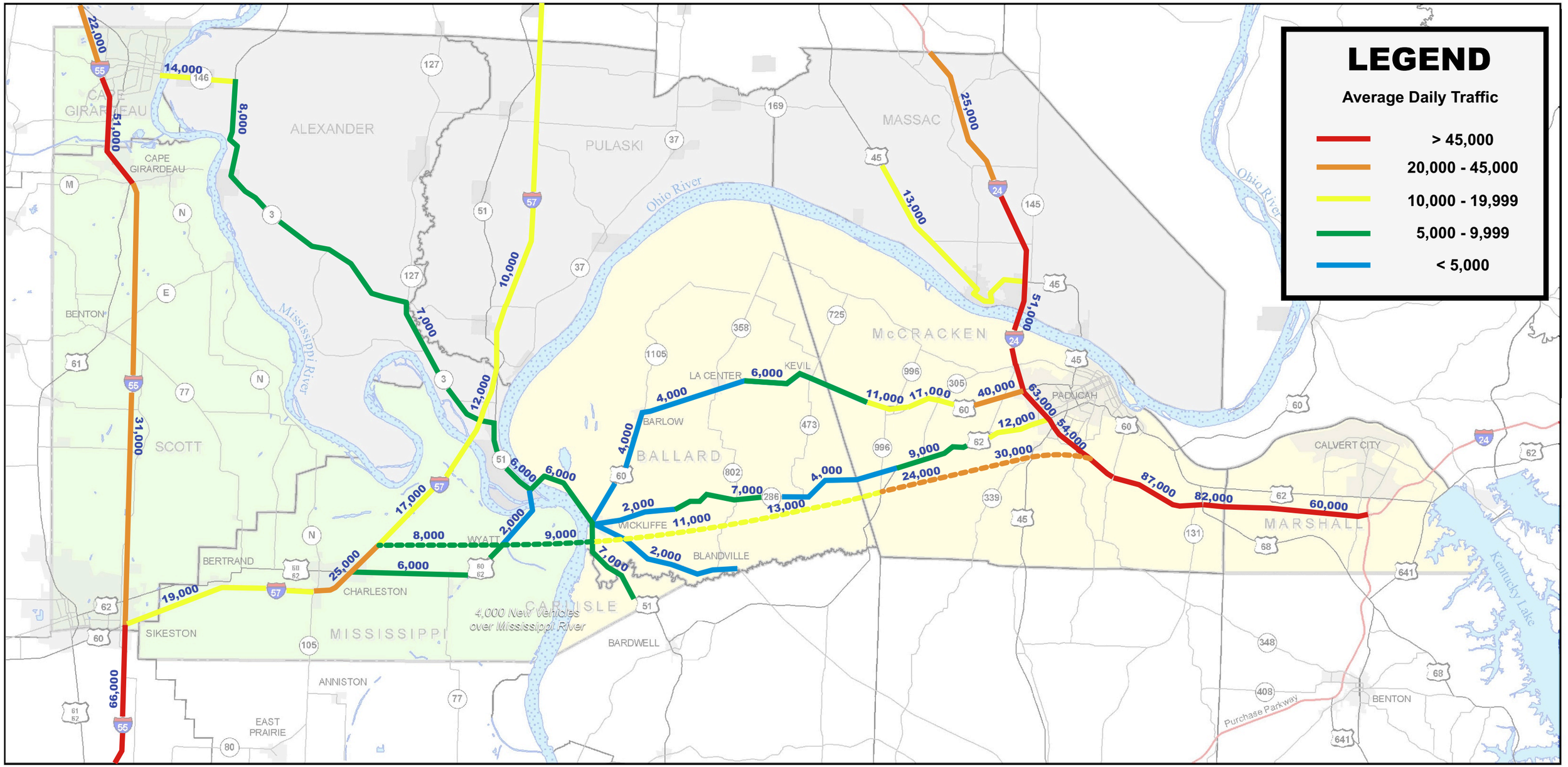
KENTUCKY TRANSPORTATION CABINET

MoDOT

N W E S

0 2.5 5 10

Miles



VICINITY MAP

2030 ALTERNATIVE 11 SCENARIO

PARSONS BRINCKERHOFF

QK4

EDUCATION PAYS

KENTUCKY TRANSPORTATION CABINET

MoDOT

N W E S

0 2.5 5 10

Miles

LEGEND

Average Daily Traffic

- > 45,000
- 20,000 - 45,000
- 10,000 - 19,999
- 5,000 - 9,999
- < 5,000

2030 ALTERNATIVE 20 SCENARIO

VICINITY MAP

PB PARSONS BRINCKERHOFF

QK4

EDUCATION PAYS

KENTUCKY TRANSPORTATION CABINET

MoDOT

N W E S

0 2.5 5 10

Miles