TRUCK ROUTE ACCESS EVALUATION

Fulton County
Hickman Riverport Area
Site No. 16

Report No. KTC-98-35

"Freight Movement and Intermodal Access in Kentucky"
SPR 98-189

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Table of Contents

List of Tables

List of Figures

1.0 Introduction

There are two main objectives of the Freight Movement and Intermodal Access in Kentucky Study (SPR 98-189) that is being undertaken by the Kentucky Transportation Center for the Kentucky Transportation Cabinet (KYTC): 1) evaluation of the access for trucks between intermodal or other truck generating sites and the National Highway System (NHS); and 2) furthering the understanding of freight commodity flows throughout the state. This report summarizes the access evaluation for one cluster of facilities located in Fulton county in the Purchase Area Development District (ADD) and KYTC Highway District # 1. The location of the site in the town of Hickman is shown in Figure 1. Work on other specific sites as well as the freight commodity flow task are on-going and are documented elsewhere.

The sites to be evaluated were selected from two existing databases (a truck facility survey from 1994 and the intermodal facility inventory) based on ADD and KYTC Highway District planner recommendations, geographic location, distance to the national highway system, and the number of trucks accessing the site. Consideration was also made for the freight type handled and transportation modes used. This cluster of facilities comprises the Hickman riverport area on the Mississippi River. It includes Continental Grain Company Dock, Hickman-Fulton County Riverport Authority and the Bunge Corporation (Hickman Grain Elevator). The first two sites are shown in Figure 2. The third site is to the left of the picture edge (west). These sites were recommended for study by the KYTC Division of Transportation Planning on the recommendation of the Western Kentucky Development Corporation.

The site was visited July 7, 1998 for video taping and July 17, 1998 for data collection and field evaluation. A phone survey was conducted with facility managers early in the study before site work. Surveys were completed with the Hickman-Fulton Riverport Authority and the Continental Grain Company but repeated attempts to contact the Bunge Corporation failed. Survey responses can be found in Appendix A. Between the two facilities contacted 75 trucks per day (150 two way truck trips) access the riverport area. The managers indicated the commodities handled consisted of grains, steel, sand, fertilizer and coke. Truck traffic is relatively constant throughout the day and year, although one manager referred to backups during the "harvest season" between July and October. These backups are a result of delays in weighing and processing the trucks at the port facilities rather than a particular deficiency in road capacity or conditions. The largest truck accessing the area was indicated as a 45 foot semi tractor trailer. Given that 45 feet is not a common length of trucks, calculations in this report used a 48 foot length. The managers at Continental Grain indicated the common truck accessing their facility was smaller, only 34 to 36 feet in length.

Figure 1: Location of Routes

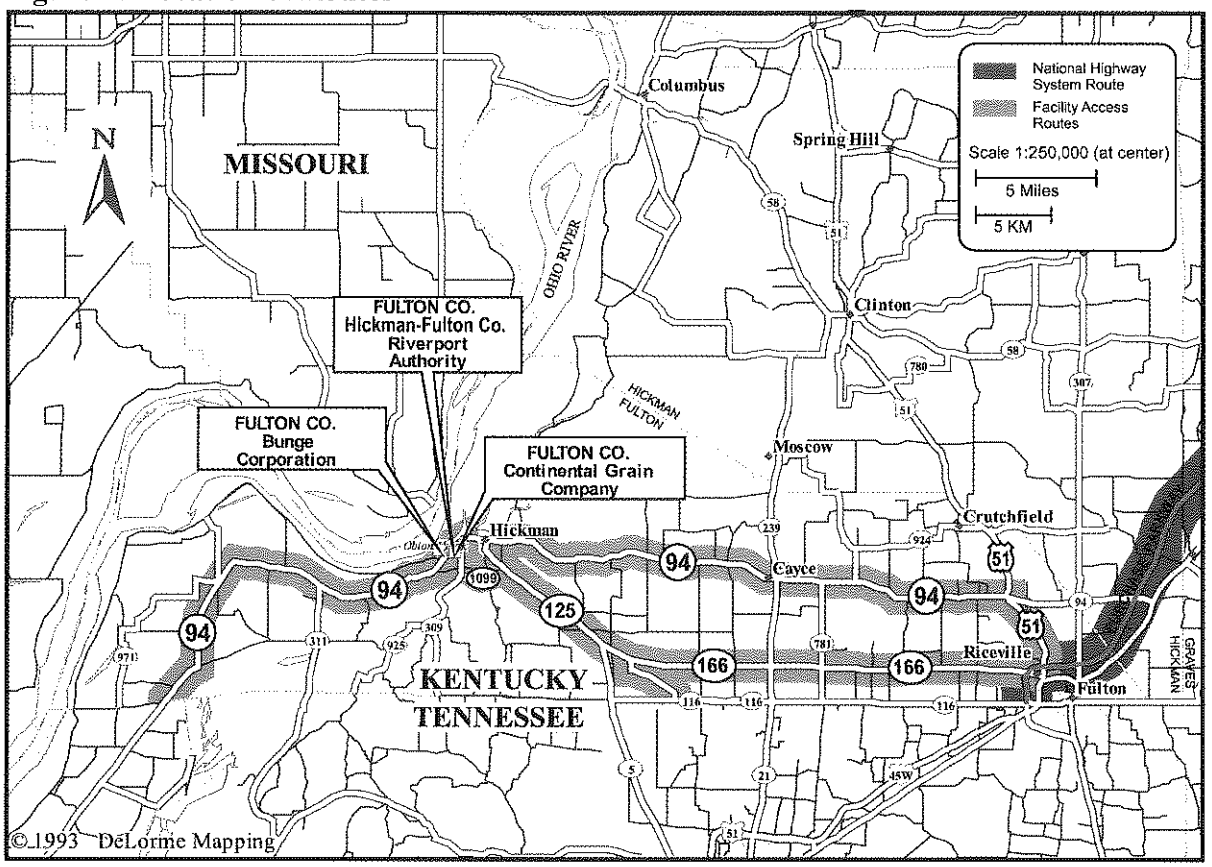
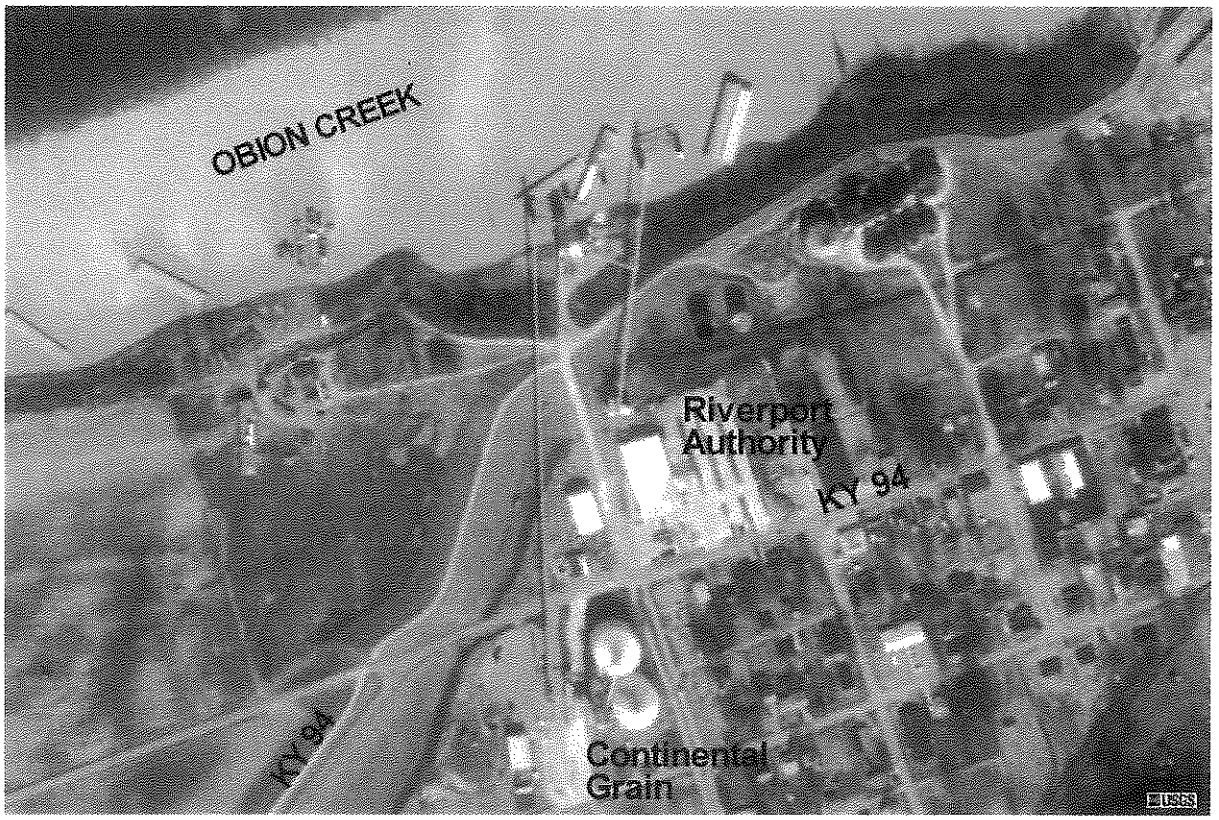


Figure 2: Aerial Photo of Hickman Riverport Area



2.0 Characteristics of the Routes

The managers in the facility surveys indicated several main trucks routes as shown in Figure 1. Clearer details of the truck routes are shown in Figures 3 through 5. The only National Highway System segment in Fulton county is the Purchase Parkway in the town of Fulton, 20 miles from the site. The Purchase Parkway in the town of Fulton shown in Figure 3. Trucks using both the KY 94 and the KY 166 route to access the riverports use the interchange of US 51 and the Purchase Parkway. KY 166 does not have an interchange. The KY 166 route connects with KY 125 between Fulton and Hickman. The phone surveys indicated that some trucks travel south to Tennessee on KY 125 so this route was also included. Similarly, the managers indicated some trucks travel south to Tennessee on KY 94 west along the Mississippi River as shown in Figure 4.

Figure 3: Eastern Extent of Routes

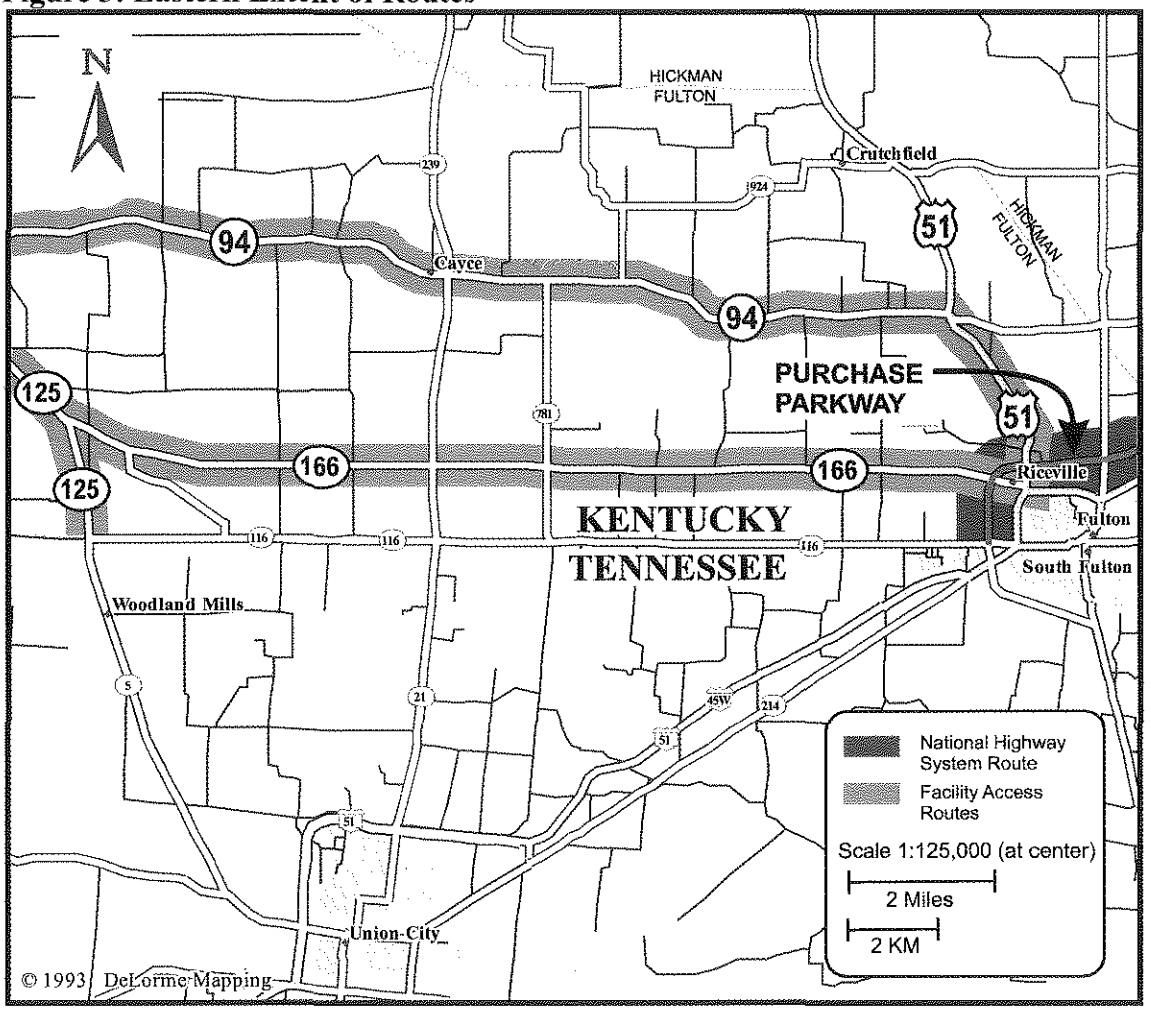
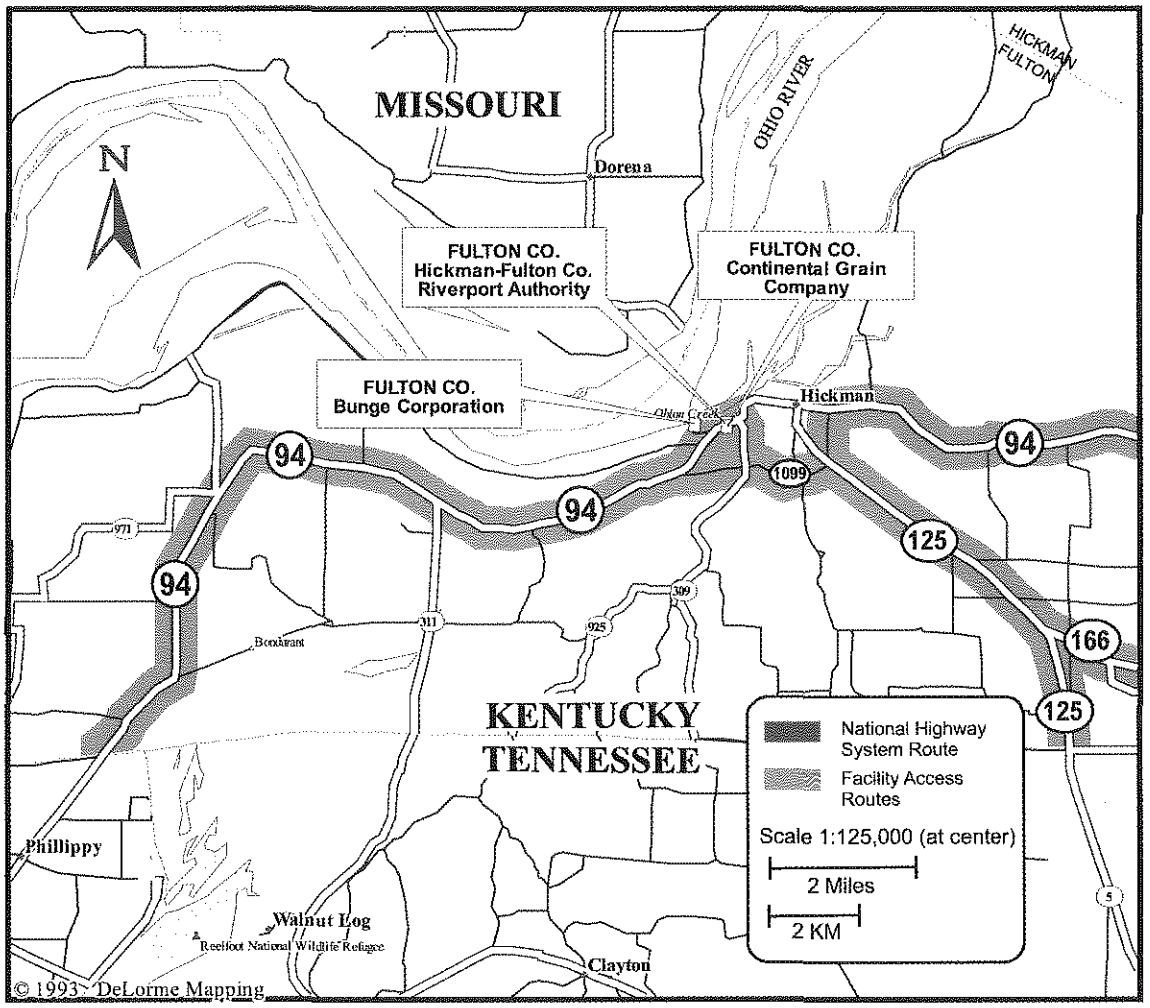


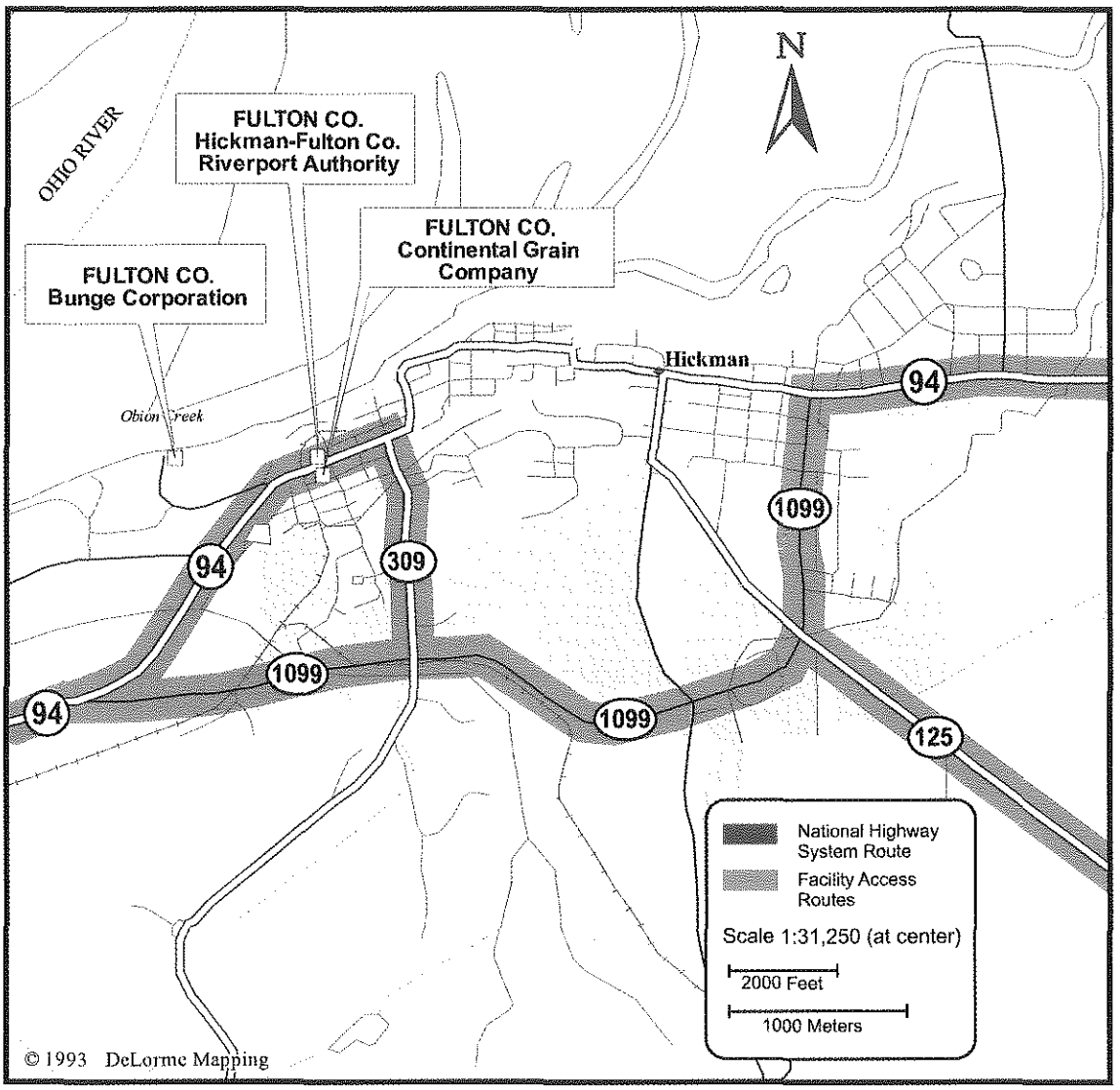
Figure 4: Western Extent of Routes



The details of truck routes within the town of Hickman are shown in Figure 5. The section of KY 94 that runs through the main downtown of Hickman is not usable by trucks. Several sharp corners and the proximity and nature of land use makes truck travel inappropriate. Therefore, trucks arriving in Hickman on KY 94 or KY 125 may use some combination of KY 1099 and/or KY 309 to arrive at the riverport. The busiest route observed during the field visit was KY 125 to KY 1099 and finally KY 309.

All sections of the route under study were paved two lane, two way roads. The routes do not travel through built up areas other than in the towns of Hickman and Fulton. The terrain is relatively flat with very few significant horizontal curves. However, several intersections with limited geometric conditions were found. There are no traffic signals on the route. The surveys indicated traffic back-ups in the area during the harvest season. Intersection concerns along the Hickman bypass (KY 1099) were also mentioned during phone surveys.

Figure 5: Detail Map in Hickman at Riverports



3.0 Route Data Collection and Evaluation

The route features that are to be evaluated in this study are shown in Table 1 along with a brief description of the evaluation method. While some of these features require only subjective evaluation by the engineer during site inspection, others required quantitative measurement in order to label the particular point or section as "preferred", "adequate" or "less than adequate" for truck access. The guidelines for labeling a point or section into one of these three descriptive categories are provided in both the interim and final report for this project. In several cases measurements were only taken where subjective evaluation indicated a problem might exist in order to save limited project resources.

Table 1: Route Features and Method of Evaluation

Feature	Methodology	Team Consensus based on Committee Meeting and Draft Report Feedback	Feature Type
Offtracking	Lane Width with formula based on wheel and axle spacing	Evaluate where observation of trucks indicates possible offtracking - use HIS data and collect in field	Point
Max. Safe Speed on a Curve	Ball Bank Indicator Reading	Evaluate complete route due to ease of data collection	Point
Grade	Speed Reduction Tables with Percent Grade and Direct Observation	Evaluate where observation of trucks indicates speed reduction occurs using HIS data and collect in field as needed	Continuous
Lane Width	HIS data and field measurement	Review complete route due to ease of data collection	Continuous
Clear Zone	Observation	Subjective evaluation	Subjective
Shoulders	HIS data and field measurement	Evaluate where HIS data is available and estimate based on observation elsewhere	Continuous
Pavement Condition	Observation	Subjective evaluation	Subjective
Truck Stopping Sight Distance	Field measurements	Measure only when observation indicates possible problem	Point
Turning Radii	Field measurements and observations of trucks	Measure only when observation indicates possible problem	Point
Accident History	Accident data files and KTC High Truck Accident Report	Do for entire route	Subjective
Intersection LOS	Traffic counts	Only where problems are indicated by facility managers	Point
Route LOS	Traffic counts and travel time studies	Only where problems are indicated by managers	Continuous
RR Crossings	Field Observation	Evaluate all level crossings	Point
Bridges	KYTC Sufficiency Rating	Evaluate all bridges	Point

3.1 Traffic Operations and Level of Service

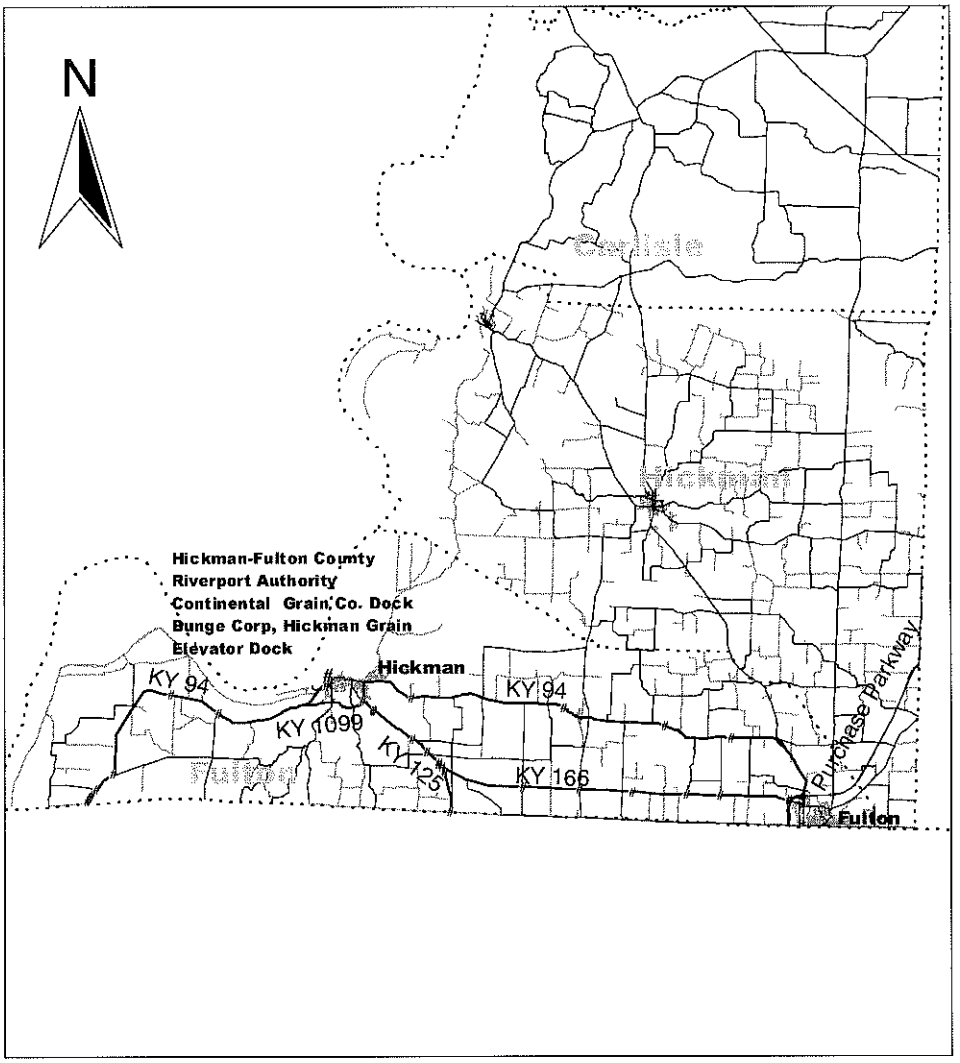
The survey of this site indicated that operational problems were only experienced during the harvest season or were mainly due to geometric restrictions. Therefore, traffic level of service evaluations were not conducted.

3.2 Accident History

In 1997 the Kentucky Transportation Center studied all state-maintained roads throughout Kentucky and determined average truck accident rates for different types of road sections. A critical accident rate was then calculated using the average accident rate for a specific highway type along with an assumed numerical distribution, level of statistical significance and exposure (vehicles miles traveled). No sections along this route had truck accident rates higher than the critical rate for the particular highway type.

Figure 6 shows the locations of accidents during the years 1995, 1996 and 1997. This map should be viewed with caution as only 45 of the 165 accidents during the three years had a milepoint reported in the state-accident database and could therefore be plotted here. A high number of accidents occurred in South Fulton on US 51 and KY 166 where overall traffic levels are higher than along other portions of these more rural routes (this intersection is listed for reconstruction in the Long Range Highway Plan). A large number of accidents occurred just north of the Tennessee border on KY 94. This section is discussed in section 3.5 and contains an intersection of two roads and a railway crossing on a sharp horizontal curve. Many accidents occurred near the intersection of KY 166 and KY 125. This non-ideal "Y" shaped intersection is described in section 3.4 which contains a drawing of the configuration. Overall, there was not a significant number of truck accidents as indicated in Tables 2 through 5. The tallies of accidents are presented for each route segment for the 1995 through 1997 three year period. Note that KY 309 did not have any accidents reported on it. Trucks represent between 8 and 11 % of the ADTs along these segments. Considering the magnitude of total accident numbers and the truck traffic percent, it would seem only KY 94 and US 51 between Hickman and the town of Fulton may require further investigation related to truck accidents and safety. The site visit revealed no apparent differences between this route segment and the others that would lead to higher accident levels. Furthermore, no sight distance or other safety hazards were noted.

Figure 6: Location of Accidents (1995-1997)



LEGEND

#	Facilities
*	Accidents
———	Freight Access Route
. . . . .	County Boundary
———	State Highway System
———	Other Roads

Scale - 1:310000

5 0 5 10 Miles

7 0 7 14 Kilometers

Table 2: Accident Types along KY 94 Fulton County Truck Route (west of Hickman)

	Non-Truck Accidents	*Truck Accidents*	*Percent Truck Accidents*
Total	40	5	11.1
Fatal Accidents	1	1	50.0
Injury	20	3	13.0
Intersection	4	0	0.0

Table 3: Accident Types along KY 94 and US 51 Fulton County Truck Route (east of Hickman)

	Non-Truck Accidents	*Truck Accidents*	*Percent Truck Accidents*
Total	24	6	20.0
Fatal Accidents	0	0	0.0
Injury	11	1	8.3
Intersection	6	0	0.0

Table 4: Accident Types along KY 166 and KY 125 Fulton County Truck Route

	Non-Truck Accidents	*Truck Accidents*	*Percent Truck Accidents*
Total	76	5	6.2
Fatal Accidents	2	0	0.0
Injury	31	2	6.1
Intersection	18	2	10.0

Table 5: Accident Types along KY 1099 Fulton County Truck Route

	Non-Truck Accidents	*Truck Accidents*	*Percent Truck Accidents*
Total	7	2	22.2
Fatal Accidents	0	0	0.0
Injury	2	1	33.3
Intersection	3	1	25.0

3.3 Cross Section Features

Figures 7 through 10 illustrate the sections of the routes having different widths of lanes and shoulders. Except for very short sections of KY 94 and KY 125 the majority of these routes have "less than adequate" 10 foot lanes. The shoulders (except at intersections and along one improved section of KY 94) ranged from 2 to 4 feet of either gravel or turf to 1 to 2 feet of paved shoulder with gravel. These types of narrow shoulders, regardless of surface type, are considered "less than adequate" in this study as they do not allow for emergency stopping of large trucks.

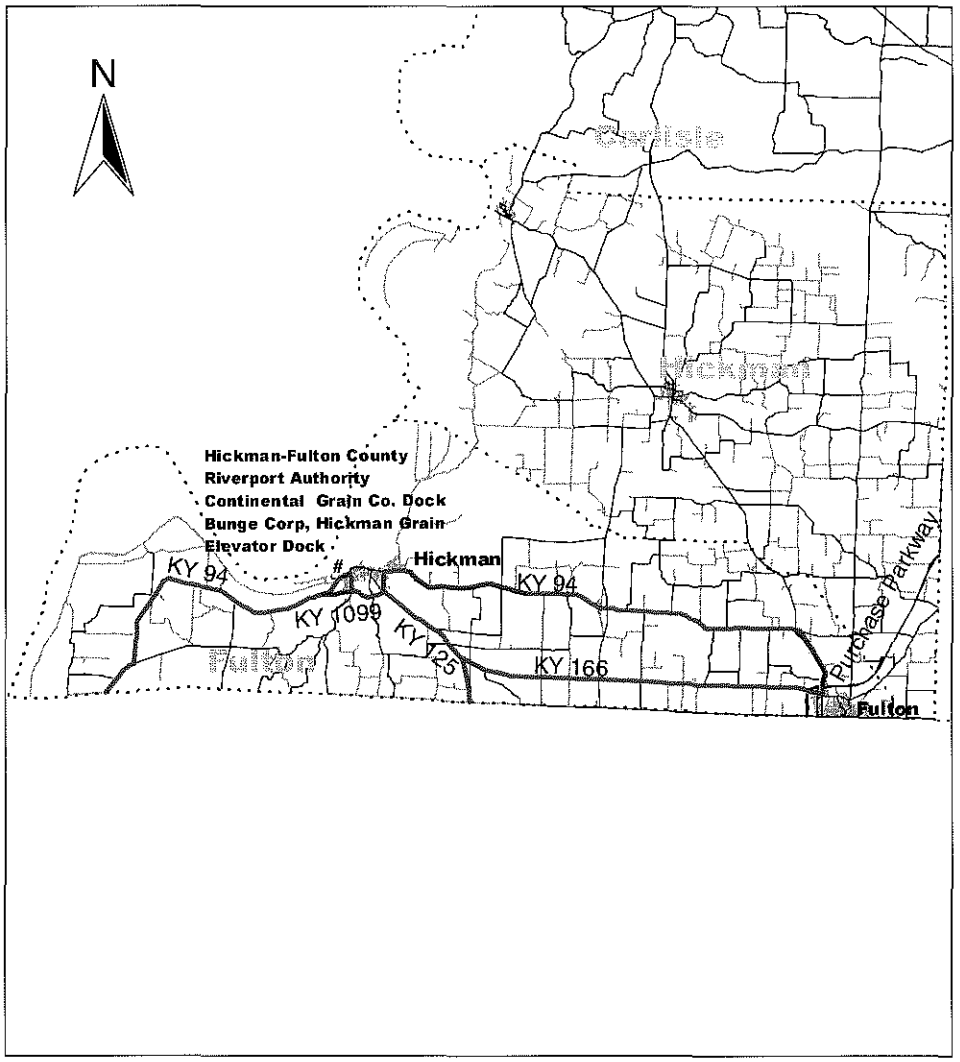
Very few clear zone issues existed along any sections of these routes. Some trees and ditches were noted close to the road along the portion of KY 94 east of Hickman. Some residences were close to the travel lanes along the eastern portion of KY 94 and along KY 309 in Hickman. The pavement was good along all routes. West of Hickman several signs warned of possible high water suggesting this route may be prone to flooding.

3.4 Curvature Features

Grades are considered problematic if they cause trucks to slow down excessively. No significant grades were considered less than "preferred" on these routes. One grade leading away from the riverports westbound at milepoint 11.7 on KY 94 is very steep but short (approximately 8%). As trucks leave the terminals, they may not have the speed to easily climb this grade (but most trucks appeared to travel the other direction).

Locations where offtracking may occur were estimated using wheel base lengths, horizontal curvature information from the HIS database and lane widths measured in the field. No curve widening was noted in the field. Locations of potential offtracking problems (19 in total) are shown in Figures 11 and 12, while details are listed in Appendix B. Only 7 of the curves on these routes (all on KY 94) also failed the ball bank reading guidelines when traveled at the speed limit or the posted advisory speed for these curves. These locations are shown in Figure 13.

Figure 7: Lane Widths



LEGEND

#	Facility
	Lane Width - 9 Feet
	Lane Width - 10 Feet
	Lane Width - 11 Feet
	Lane Width - 15 - 24 Feet
	County Boundary
	State Highway System
	Other Roads

Scale - 1:310000

3 0 3 6 9 Miles

4 0 4 8 12 Kilometers

Figure 8: Lane Widths in Town of Hickman

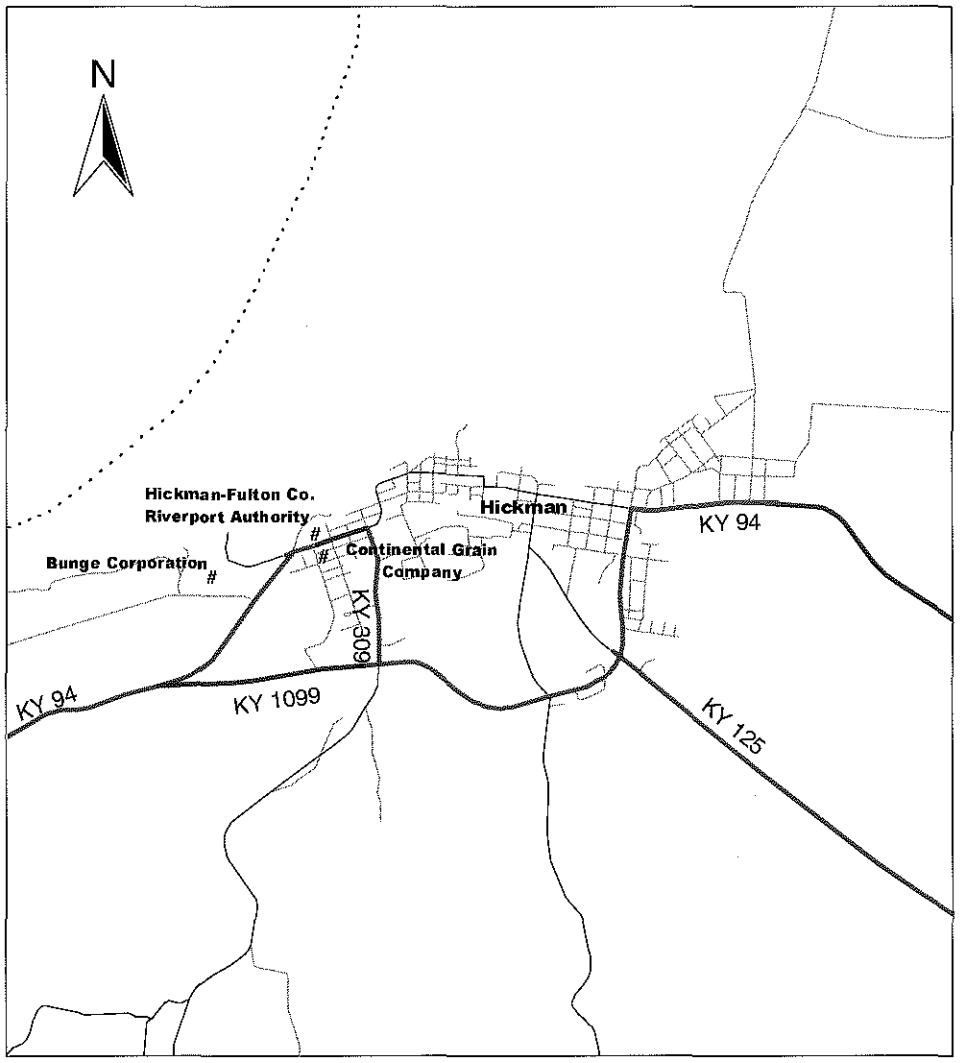
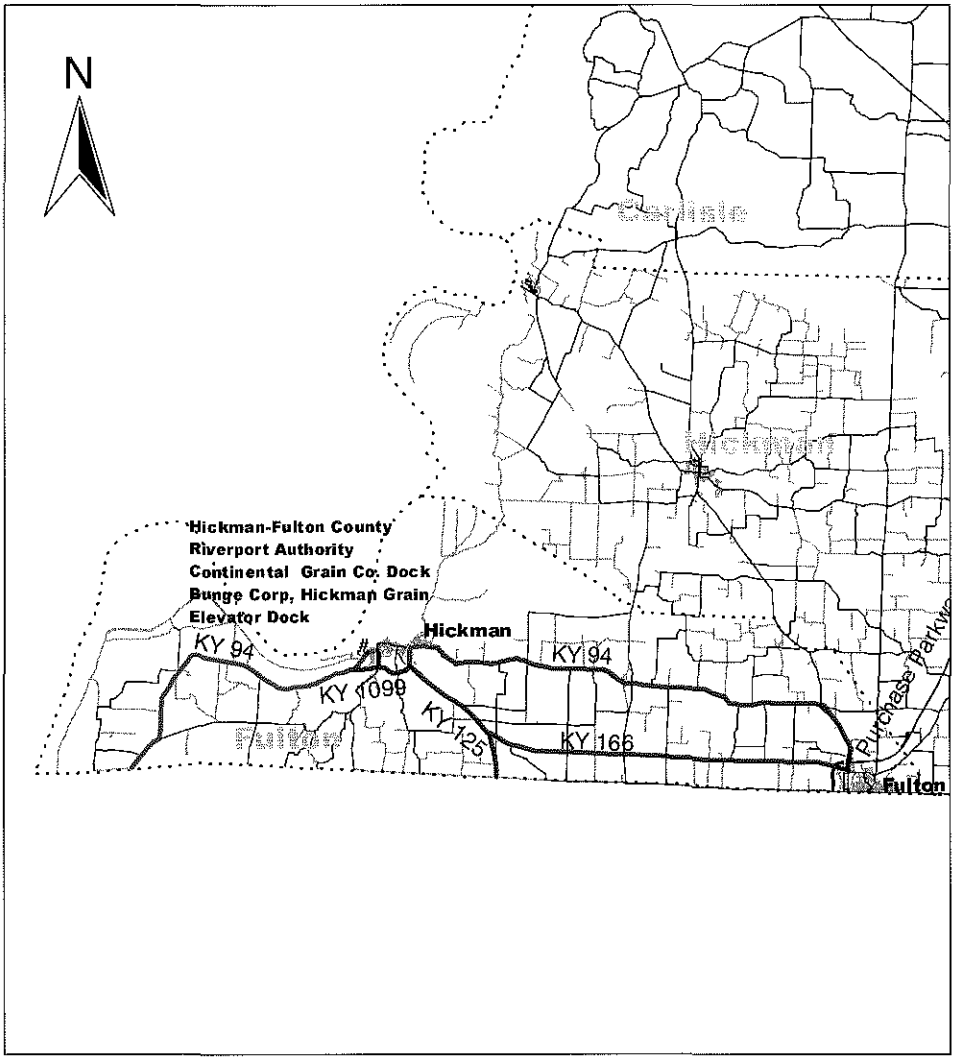


Figure 9: Shoulder Widths



LEGEND

#	Facility
	Shoulder Width - 1 - 2 Feet
	Shoulder Width - 3 Feet
	Shoulder Width - 4 Feet
	Shoulder Width - 10 Feet
.....	County Boundary
	State Highway System
	Other Roads

Scale - 1:310000

3 0 3 6 9 Miles

4 0 4 8 12 Kilometers

Figure 10: Shoulder Widths in the Town of Hickman

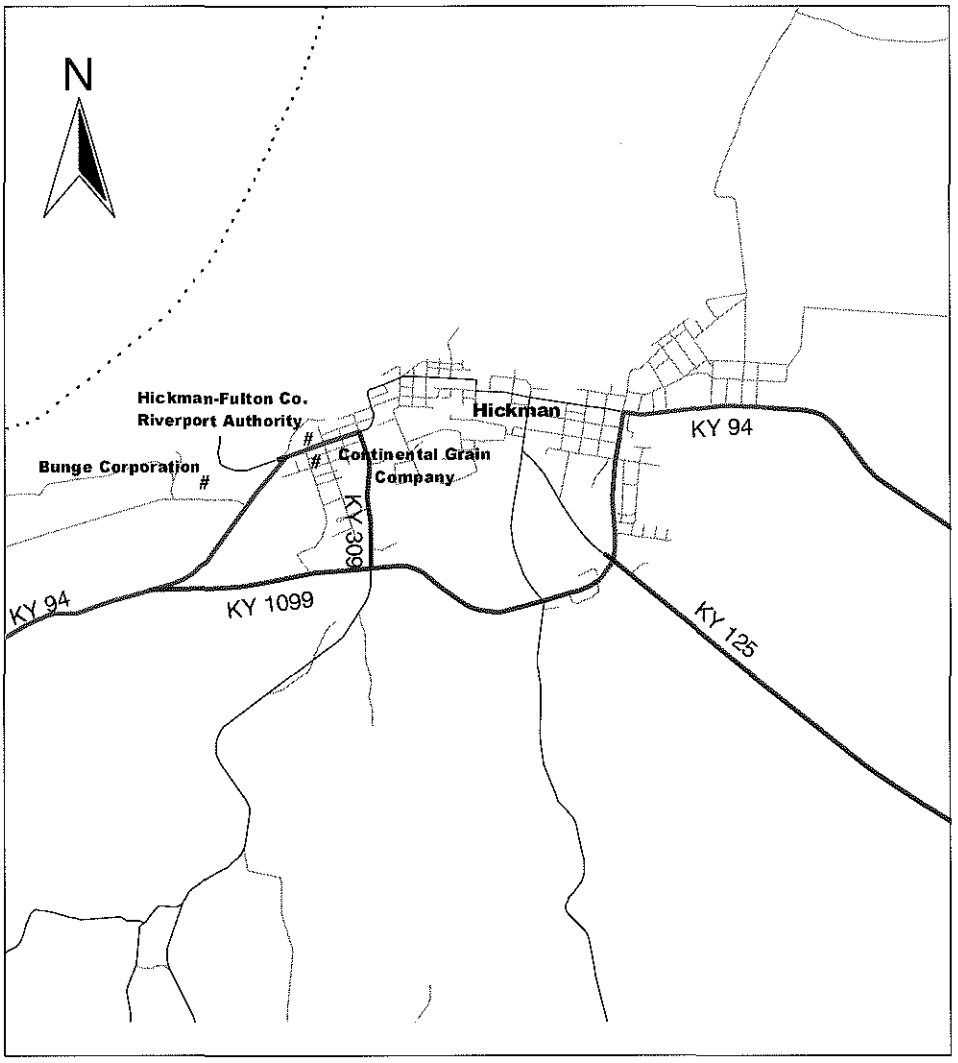


Figure 11: Horizontal Curves with Potential Offtracking Problems

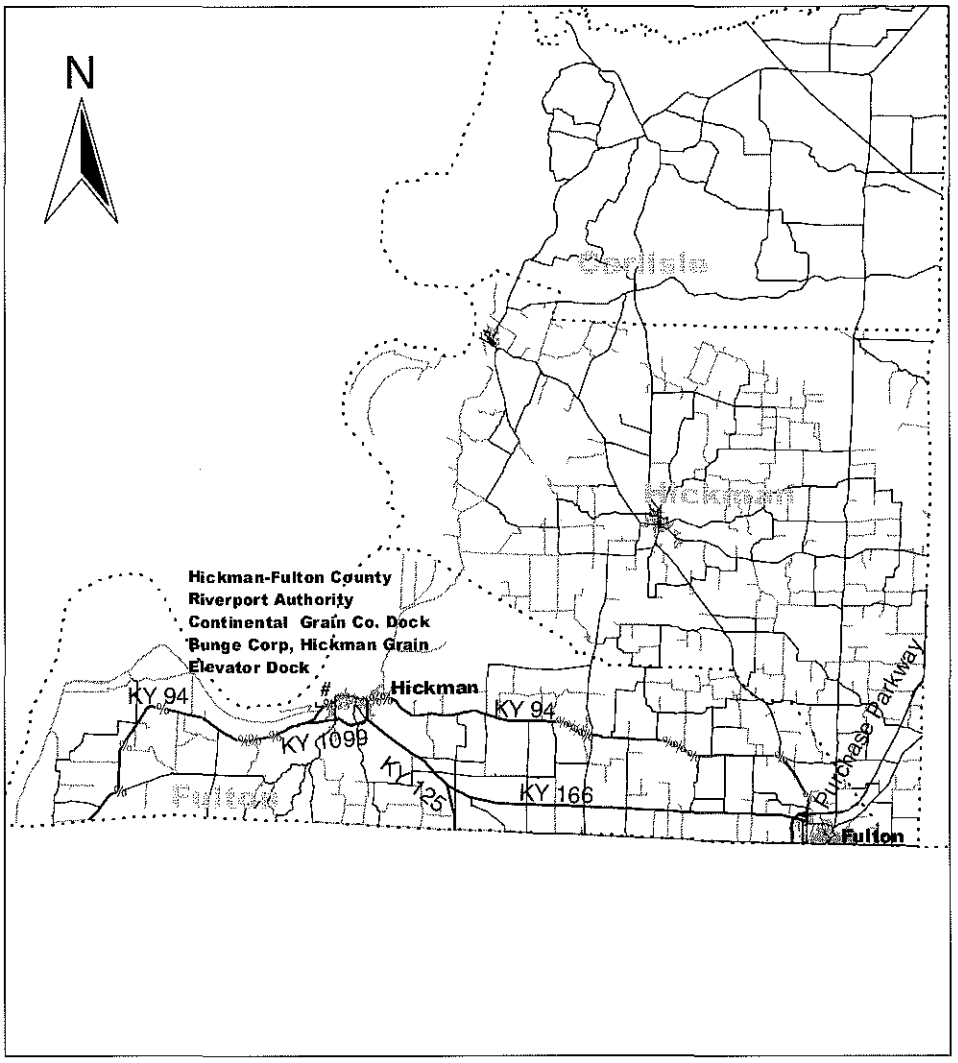


Figure 12: Potential Offtracking Problems in Town of Hickman

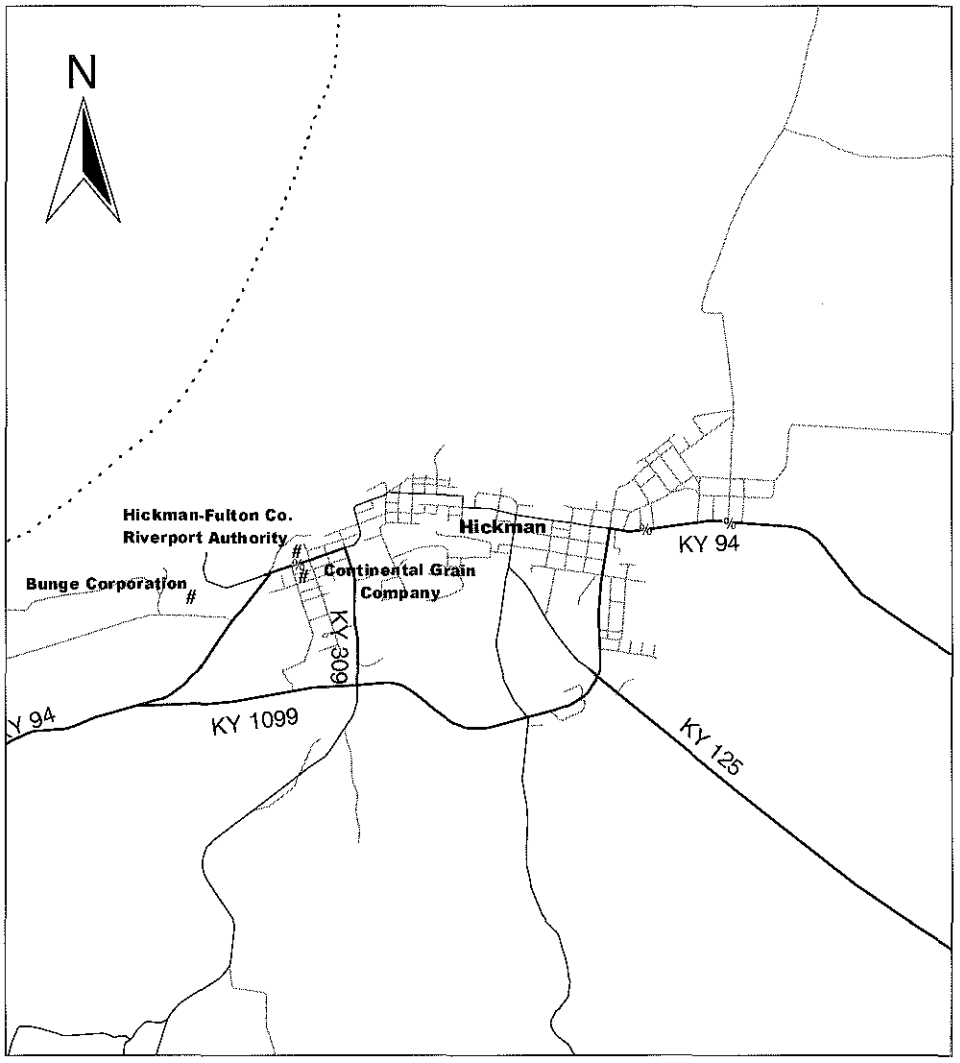
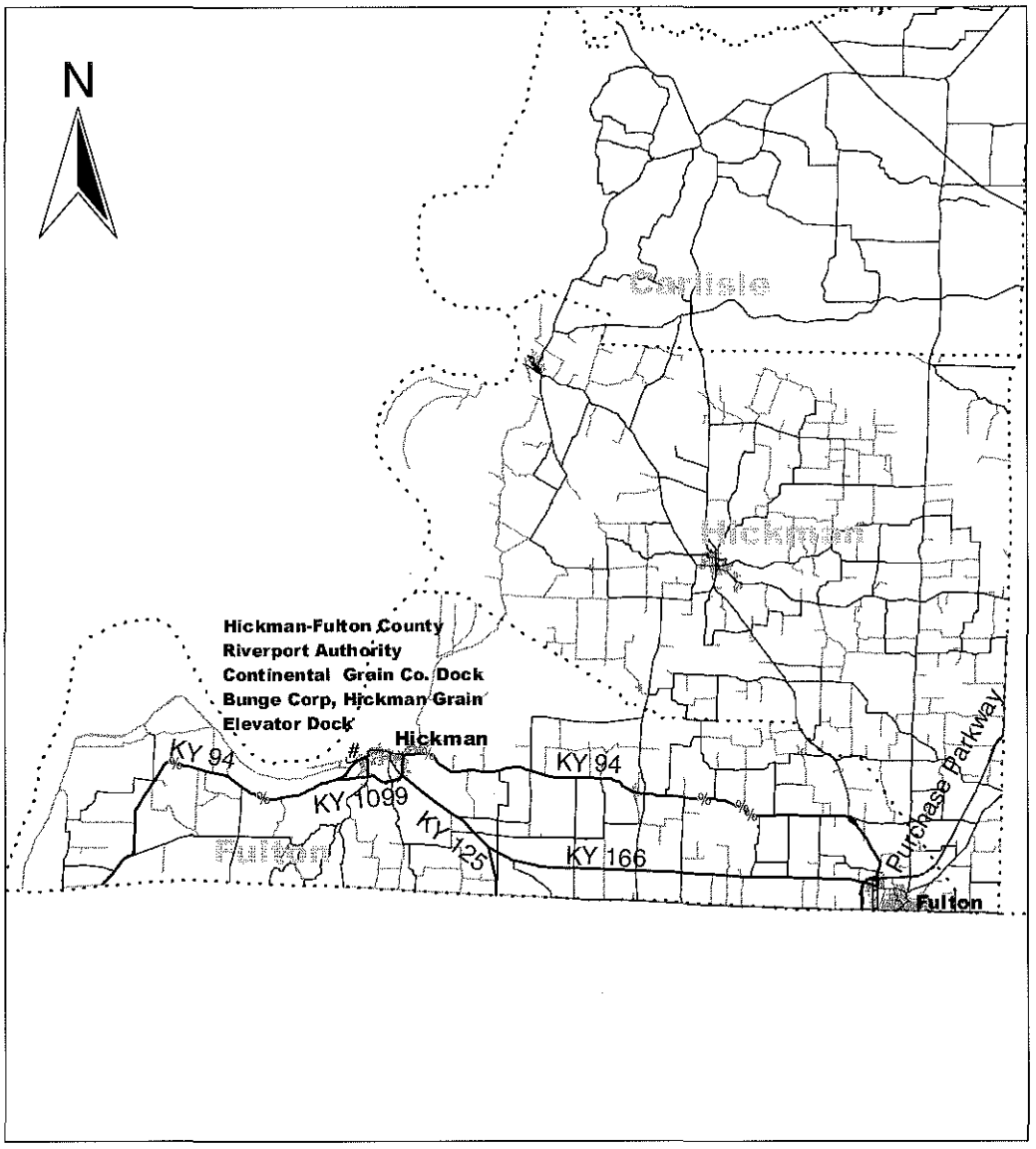


Figure 13: Horizontal Curves with "less than adequate" or "adequate" Ball Bank Indicator Angles



The right turning radii at two intersections within the town of Hickman are "less than adequate" for the trucks traveling these routes. A sketch of the intersection of KY 125 and KY 1099 is shown in Figure 14, while the intersection of KY 1099 and KY 309 is shown in Figure 15. Trucks were observed offtracking into opposing traffic lanes while making both left and right turns at these intersections. Figure 16 illustrates the tire marks on the road at the intersection of KY 309 and KY 1099 where trucks make right turns from KY 1099 (on the right in the picture) onto KY 309 as well as make left turns from KY 309 to KY 1099. The tire marks clearly indicate trucks moving out of their travel lanes.

However, despite the very small radii indicated on Figures 11 and 12 very little opportunity to widen the paved area is possible at these intersections. Deep ditches are found on all four corners at KY 309 and KY 1099. The headwalls of a very narrow bridge over a creek start only 20 feet south of the edge of the KY 1099 travel lanes. At the intersection of KY 125 and KY 1099 the same creek crosses under the intersection on an angle as shown in Figure 14. All four corners of this intersection have commercial land uses and parking lots which abut the intersection. There are many utility poles and signs also at the corner. Both of these intersections are rated "less than adequate" according to this study methodology.

Two intersections outside of Hickman were found to have limiting "Y" configurations as shown in Figure 17. Figure 18 illustrates the intersection of KY 94 and KY 1099 just west of the riverports. Figure 19 illustrates the intersection of KY 125 and KY 166 between Hickman and Fulton just north of the Tennessee border. Turning radii for the current dominant truck travel routes are not problematic. For example, westbound trucks on KY 1099 do not turn right onto KY 94. Likewise, northbound trucks on KY 125 do not turn right on KY 166. However, changes in truck travel patterns or addition of new facilities in the area might require improvements to these intersections. Furthermore, if the intersection of KY 1099 and KY 94 were different trucks might be able to use this route as an alternative to traveling through the residential neighborhood along KY 309 (mentioned in phone surveys). Owing to the travel patterns of trucks accessing the facilities under study, neither of these intersections is rated less than "preferred".

The other two significant intersections in Hickman along these truck routes (KY 1099 and KY 94, KY 94 and KY 309) do not have significant pavement widening to accommodate turns; however, the lane widths are wide enough that trucks do not have to offtrack into opposing lanes to make turns. During the site visits trucks were observed offtracking to make these turns but this does not seem necessary. When vehicles were present, trucks were able to stay within their lanes.

WP pictures HERE***

Figure 16: Intersection of KY 309 and KY 1099

Figure 17: Intersection of KY 94 and KY 1099

***WP picture here

3.5 Railroad Crossings

There were four at-grade railway crossings along these routes as shown in Figure 20. The rail crossings on KY 1099 have no warning signs, lights or gates. There is poor sight distance in one direction at each crossing. The rail lines appear unused so are not rated "less than adequate" in the tallies provided in section 4. This assessment is further confirmed by the tracks being paved over on KY 94 at the riverports (shown in Figure 20). All three of these crossings have good smooth pavement surfaces. The rail crossing immediately north of the Tennessee border on KY 94 occurs on a sharp corner as shown in Figure 21. Although there is sufficient sight distance, the crossing could be confusing or awkward. The surface is very rough and might pose problems for trucks. Although this rail line may not be used by trains the configuration and surface quality indicates it be assigned a "less than adequate" rating.

3.6 Bridges

The locations of the bridges along this route are shown in Figure 22. Bridge sufficiency ratings were available from the KYTC Division of Planning as shown in Table 6. The far right column of Table 6 indicates how these sufficiency ratings translate into the adequacy indicators used in this project.

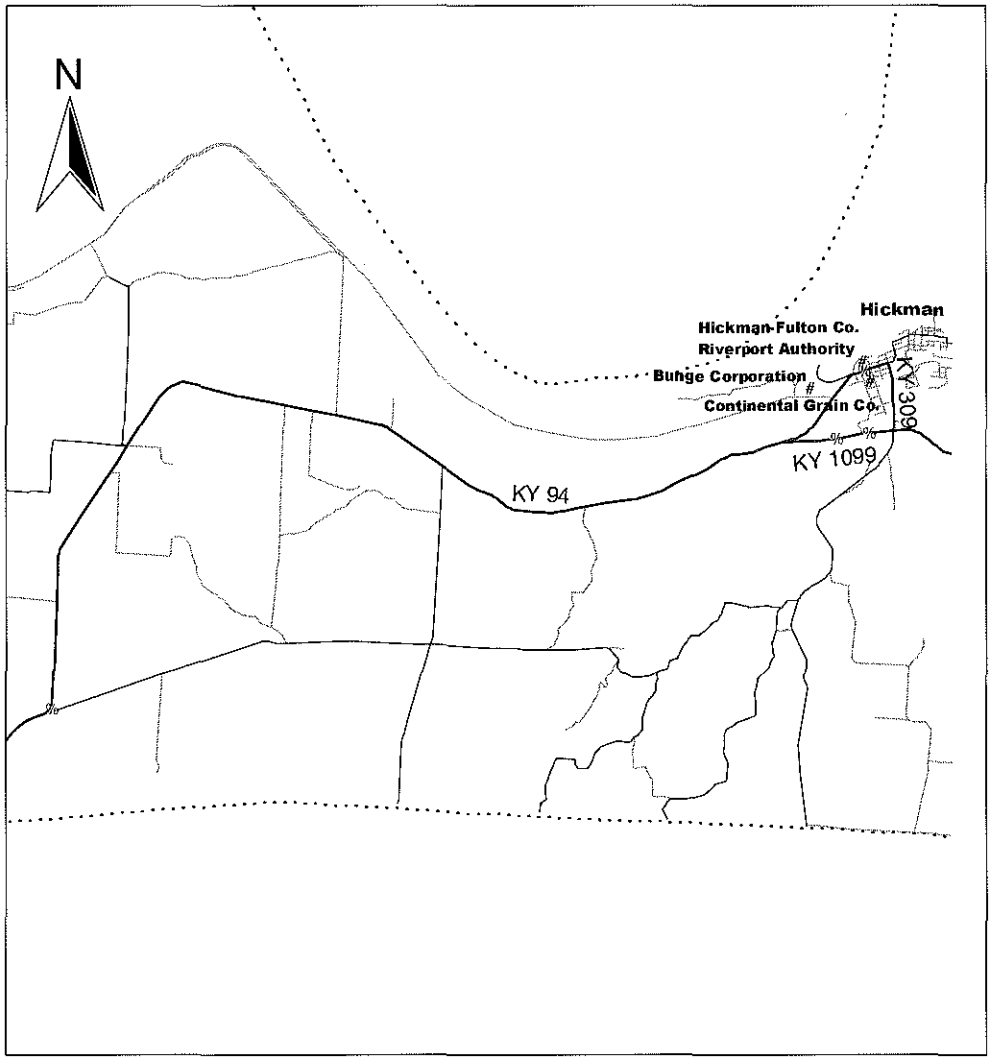
Table 6: Bridge Sufficiency Ratings

Route	Milepoint	Bridge #	Rating	Truck Access Rating
KY 125	3.423	B00028	75.6	"Adequate"
KY 125	3.476	B00027	76.7	"Adequate"
KY 125	5.358	B00026	77.0	"Adequate"
KY 166	7.989	B00025	79.2	"Adequate"
KY 166	9.033	B00022	60.2	"Adequate"
KY 166	10.659	B00021	79.2	"Adequate"
KY 166	1.569	B00024	79.8	"Adequate"
KY 166	2.094	B00023	51.8	"Less than Adequate"
KY 94	25.609	B00006	81.3	"Preferred"
KY 94	24.042	B00007	87.3	"Preferred"
KY 94	24.216	B00008	87.6	"Preferred"
KY 94	25.520	B00004	72.4	"Adequate"
KY 94	17.215	B00083	98.9	"Preferred"
KY 94	17.853	B00082	93.7	"Preferred"
KY 94	17.874	B00081	95.8	"Preferred"
KY 94	23.514	B00005	81.3	"Preferred"
KY 94	11.331	B00031	83.5	"Preferred"
KY 94	0.854	B00032	72.7	"Adequate"
KY 1099	0.742	B00035	88.0	"Preferred"
KY 1099	2.265	B00036	95.8	"Preferred"

3.7 Sight Distance

No sight distance problems were found during field visits.

Figure 20: Railway Crossings



LEGEND

#	Facility
%	Railroad Crossings
———	Freight Access Route
.....	County Boundary
———	State Highway System
———	Other Roads

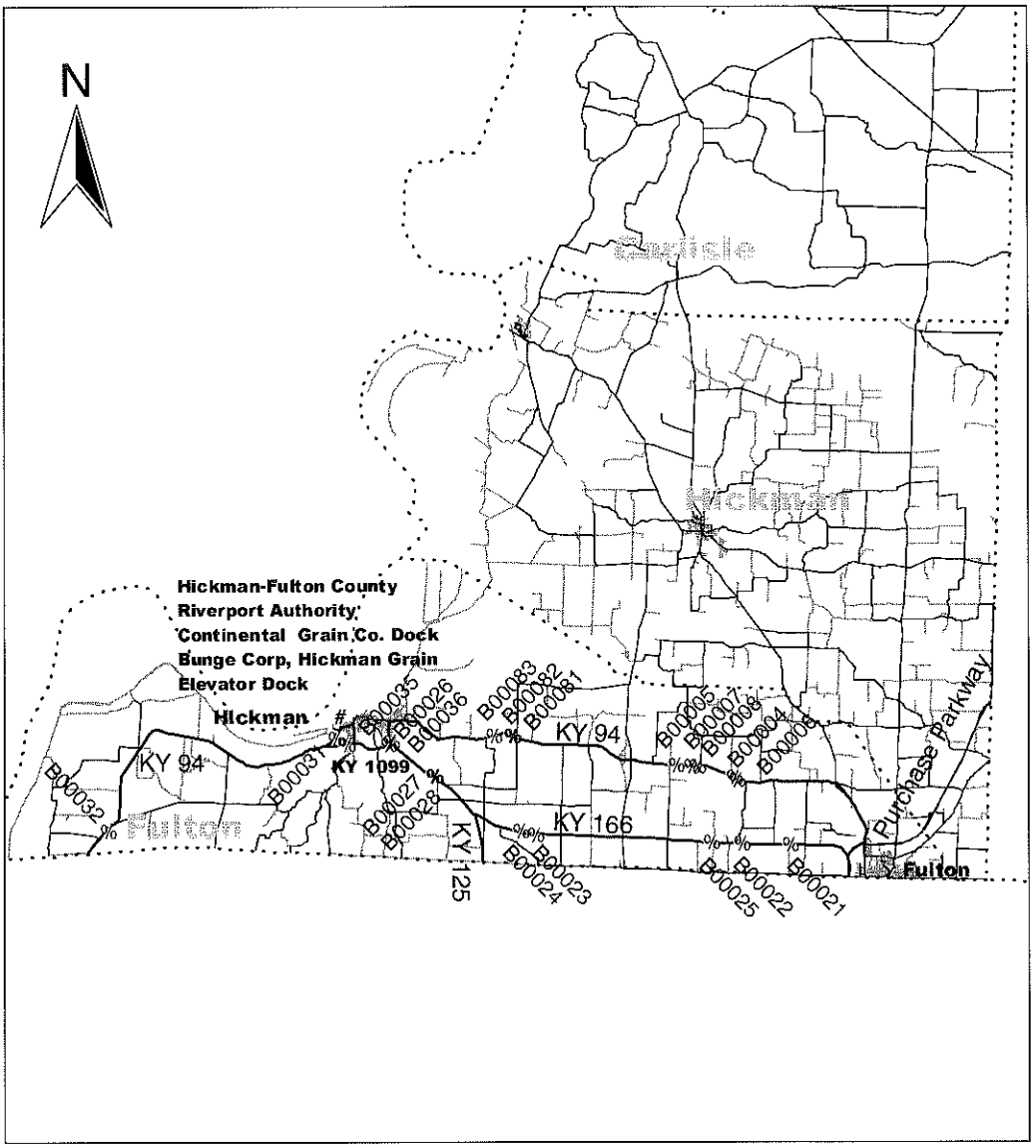
Scale - 1:80000

0.8 0 0.8 1.6 2.4 Miles

1000 0 1000 2000 3000 Meters

Figure 21: from WP

Figure 22: Bridge Locations



LEGEND

#	Facility
% B00009	Bridges - Bridge Number
———	Freight Access Route
.....	County Boundary
———	State Highway System
———	Other Roads

Scale - 1:310000

3 0 3 6 9 Miles

4 0 4 8 12 Kilometers

4.0 Composite Route Evaluation and Recommendations

4.1 Problem Truck Miles and Truck Points

In order to compare different routes to consider relative urgency of needed route improvements, the features rated "preferred", "adequate" and "less than adequate" along a route are to be normalized for the number of miles, number of points and number of trucks using the route section. For these routes, 7 features that were evaluated quantitatively have sections or points that are considered only "adequate" or "less than adequate". A section or point that is considered "less than adequate" is weighted two times that of an "adequate" point or section. Less than "preferred" sections are weighted by length as well as the number of trucks passing that point. Table 7 contains the total problem truck miles and total problem points for this route. The rating of this route relative to others evaluated will be reported in the final report. Truck volumes were estimated from 1998 KYTC Division of Transportation Planning traffic classification counts as well as the information provided by managers during the phone surveys. All truck volumes are two way totals. For other routes under study and discussed in other reports only right turning radii were problematic and one-way truck volumes were used for this calculation. However, in this case even turning radii points are based on two way volumes as trucks making both left and right turns had problems.

4.2 Maintenance Improvement Locations

Several features noted during the site work could be addressed during routine maintenance programs by either the state or county and therefore could improve truck access without requiring major construction or expense. In this case suggestions are related to the two intersections with turning radii problems. First, although the turning radii that could be gained from simple curve widening would be minimal, local engineers should consider inspecting the intersections of KY 1099 with both KY 309 and KY 125 to see if marginal turning radii improvements could be accomplished without major road construction. Second, given the limited radii at these two intersections consideration of warning signs should be made. Cars and trucks were observed at these intersections making accommodations for each other. However, people not familiar with the area might not expect the limitations found at these intersections. Finally, the intersection of KY 1099 and KY 125 has the potential for pedestrian traffic. Consideration of sidewalk extensions should be made.

Table 7: Summary of Problem Truck Miles and Problem Truck Points for Entire Route

Feature	Road	Location	Points*	Length (miles)	Trucks (/day)	Truck Points	Truck Miles
Offtracking**						**1922**	
Safe Speed	KY 94	MP 25.7	2		75	150	
	KY 94	MP 25.3	2		75	150	
	KY 94	MP 24	2		75	150	
	KY 94	MP 14.4	1		75	75	
	KY 94	MP 8.1	2		20	40	
	KY 94	MP 4.7	2		20	40	
Total						**605**	
Lane Width	KY 94	MP 0 – 11.8	2	11.8	20		472
	KY 94	MP 13.6 - 14.3	2	0.7	75		105
	KY 94	MP 14.3 - 19.1	1	4.8	75		360
	KY 94	MP 19.1 - 29.1	2	20	75		3000
	US 51	MP 0.2 - 2.5	1	2.3	187		430.1
	KY 166	MP 0 - 13.1	2	13.1	131		3432.2
	KY 125	MP 0- 1.7	2	1.7	26		88.4
	KY 125	MP 1.7 - 5.39	2	3.7	157		1161.8
	KY 309	MP 4.2 - 4.9	2	0.7	150		210
	KY 1099	MP 0 - 1	2	1	75		150
	KY 1099	MP 1 - 3	1	2	150		300
Total							**9709.5**
Shoulders	KY 94	MP 0 – 11.8	2	11.8	20		472
	KY 94	MP 11.8 - 12.15	2	0.3	150		90
	KY 94	MP 13.6 - 14.3	2	0.7	75		105
	KY 94	MP 19.1 - 29.1	2	20	75		3000
	US 51	MP 0.2 - 2.5	2	2.3	187		860.2
	KY 166	MP 0 - 13.1	2	13.1	131		3432.2
	KY 125	MP 0- 1.7	2	1.7	26		88.4
	KY 125	MP 1.7 - 5.39	2	3.7	157		1161.8
	KY 309	MP 4.2 - 4.9	2	0.7	150		210
	KY 1099	MP 0 - 1	2	1	75		150
	KY 1099	MP 1 - 3	2	2	150		600
Total							**10169.6**

Table 7: Summary of Problem Truck Miles and Problem Truck Points for Entire Route (continued)

Feature	Road	Location	Points*	Length (miles)	Trucks (/day)	Truck Points	Truck Miles
	KY 125	B00027	1		157	157	
	KY 125	B00026	1		157	157	
	KY 166	B00025	1		131	131	
	KY 166	B00022	1		131	131	
	KY 166	B00021	1		131	131	
	KY 166	B00024	1		131	131	
	KY 166	B00023	2		131	262	
	KY 94	B00004	1		75	75	
	KY 94	B00032	1		20	20	
Total						**1352**	
Railway Crossings	KY 94	MP 1.43	2		20	40	
Turning Radii	KY 1099	KY 309	2		150	300	
	KY 1099	KY 125	2		150	300	
Total						**600**	
*1 point for "adequate" features and 2 points for "less than adequate" features (0 points for "preferred" features not shown)							
** See Appendix B for individual information and locations							

4.3 Overall Route Rating

In order to account for both the subjectively and objectively evaluated route features along truck routes throughout the state, UK engineers who studied the route and its features either during a site visit or by viewing a video of trucks using the routes will score the overall access on a scale of 1 through 10. The interpretation for these ratings is shown in Table 5. The routes in Fulton county were given an overall rating of 2 indicating that major construction would be required to improve these routes. All routes are given this rating because although many long basic segments of the routes are "adequate" for trucks, the routes all require travel through the same "less than adequate" intersections in Hickman (KY 1099 and KY 125, KY 1099 and KY 309) where major reconstruction is needed to widen travel lanes and provide improved turning radii.

Table 8: Interpretation of the Overall Route Rating

Overall Route Rating	Qualitative Interpretation of Rating
1	Trucks should not be using this route
2	Major construction is required to improve this route
3-5	Minor improvements are required on this route
6-8	Minor improvements could improve this route
9	Minor problems exist that do not seriously impede truck access
10	Trucks are served with reasonable access

4.4 Conclusions and Recommendations

In conclusion, the following problems were identified along the truck access routes to the Hickman Riverport Area:

- Minor offtracking and horizontal curve safe speed problems;
- Significant lengths of highway with less than "preferred" lane widths and shoulders;
- Two problematic intersections (KY 1099 with KY 309 and KY 125) with turning radii problems for both left and right turning trucks;
- One problematic railway crossing on KY94 west of Hickman;
- Traffic backups at the riverport between July and October due to delays in processing trucks; and
- Minor truck accident problems.

Possible minor improvements, and even complete reconstruction, should be considered for the two intersections on the Hickman By-pass (KY 1099). Routing traffic such that KY 309 is avoided might be possible if improvements west of Hickman, particularly the KY 94 and KY 1099 intersection, were implemented.

Appendices

APPENDIX A: PHONE SURVEYS

PHONE SURVEY RESULTS

Facility ID	*Facility Name*	*Location / City*	*County*	*ADD*
16	HICKMAN-FULTON CO. RIVERPORT AUTHORITY DOCK	HICKMAN	FULTON	PURCHASE

Contact Name	*Title*	*Phone*	*Fax*
HAL GREER	PORT DIRECTOR	502-236-2563	502-236-2222

1. **Is the location of your facility on the map correct?** 904 MARR ST. (MAILING ADDRESS)

2. **Our information shows about** 40 **trucks per day access your facility. Is that correct?** *If not, fill in correct volume.* YES

3. **Is the truck traffic to and from your facility seasonal or mostly constant?** CONSTANT

4. ***(If truck traffic is seasonal)*** **Is the _____ trucks/day for the peak season?**

5. **What is the most common size truck operating at your facility?** 45' SEMITRAILER
6. **What is the largest truck operating at your facility?** HOPPER BOTTOM

7. **What type of freight or commodity is shipped, and is incoming and outgoing freight different?** *(one may be an empty truck)* IN - GRAIN, STEEL COILS
   OUT - GRAIN, FERTILIZER, STEEL COILS, ROCK SAND, PERTOLUEM COKE, STEEL PIPE, CATHODE BLOCKS

8. **Does the truck traffic peak at specific times of the day? (e.g., out in the morning and return in the afternoon)** STEADY ALL DAY

9. **What traffic congestion and delay problems along the routes are you aware of, or feel need improvement?**

Location (route segment, intersection, etc.)	*Time and Day of Week*
ACCESS TO PORT IS THRU RESIDENTIAL AREA - BACK UP (DURING HARVEST SEASON) BACKUP ON WASHINGTON ST. TO KY 309 TO NEAR KY 94 BYPASS COMPLAINTS FROM RESIDENTS DURING HARVEST SEASON. NEED NEW ACCESS TO PORT FROM KY 94 BYPASS.	

10. **Where do trucks at your facility go to and come from? (This may be an interstate, cities, general direction-N,S,E,W)** STEEL PIPE TO S.E. U.S., ELECTRODE TO OZARK, AK, COKE TO CARBON PLANT, FERTILIZER TO W. TENN. AND W. KY.
11. **Do you have any other problems or concerns along the route you would like us to consider?** KY 1094 INTERSECTION TOO SMALL TO ACCOMODATE TRAFFIC CONGESTION DURING LUNCH, MORNING/ AFTERNOON WORK TRAVEL
12. **Would you like a copy of the final report (roadway/route evaluation ???)** YES

NOTES/COMMENTS:

PHONE SURVEY RESULTS

Facility ID	*Facility Name*	*Location / City*	*County*	*ADD*
16	CONTINENTAL GRAIN CO. DOCK	HICKMAN	FULTON	PURCHASE

Contact Name	*Title*	*Phone*	*Fax*
MIKE HANAWAY		502-236-9000	502-236-3773

1. **Is the location of your facility on the map correct?** YES

2. **Our information shows about** 35 **trucks per day access your facility. Is that correct?** ***If not, fill in correct volume.*** YES

3. **Is the truck traffic to and from your facility seasonal or mostly constant?**
CONSTANT
4. ***(If truck traffic is seasonal)*** **Is the _____ trucks/day for the peak season?**

5. **What is the most common size truck operating at your facility?** 34'-36' SEMITRAILER
6. **What is the largest truck operating at your facility?** 40' SEMITRAILER

7. **What type of freight or commodity is shipped, and is incoming and outgoing freight different?** ***(one may be an empty truck)*** WHEAT, CORN, BARLEY, BEANS
IN - WHEAT, CORN, BARLEY, BEANS
OUT - BY BARGE
8. **Does the truck traffic peak at specific times of the day? (e.g., out in the morning and return in the afternoon)** IN - WHEAT BEANS - AFTERNOON, CORN - ALL DAY

9. **What traffic congestion and delay problems along the routes are you aware of, or feel need improvement?**
Location (route segment, intersection, etc.) *Time and Day of Week*

10. **Where do trucks at your facility go to and come from? (This may be an interstate, cities, general direction-N,S,E,W)**

KY 125 SB TO KY 166 EB TO PURCHASE PKWY
KY 125 SB TO TN 5
KY 94 EB TO US 51 SB TO PURCHASE PKWY
KY 94 WB TO TN 78

11. **Do you have any other problems or concerns along the route you would like us to consider?**
NONE, INTERSECTION OF KY 125 AND HICKMAN BYPASS HAS MODERATE CONGESTION OCCASIONALLY, BUT MANAGEABLE
12. **Would you like a copy of the final report (roadway/route evaluation ???)** YES

NOTES/COMMENTS:

APPENDIX B: HORIZONTAL CURVES WITH POTENTIAL OFFTRACKING PROBLEMS

Route	Location MP	Problem Points	Truck Volume (per day)	Total Points
US 51	0.7	1	187	187
KY 94	1.4	2	20	40
KY 94	2.9	1	20	20
KY 94	4.9	2	20	40
KY 94	8.3	1	20	20
KY 94	8.7	1	20	20
KY 94	9.5	1	20	20
KY 94	11.9	2	150	300
KY 94	13.8	2	75	150
KY 94	14.2	2	75	150
KY 94	20.8	1	75	75
KY 94	21.2	1	75	75
KY 94	21.4	1	75	75
KY 94	21.8	2	75	150
KY 94	24.8	1	75	75
KY 94	25.2	2	75	150
KY 94	25.5	2	75	150
KY 94	25.8	2	75	150
KY 94	29	1	75	75