

FINAL REPORT

I-69 Strategic Planning Corridor Study

Overview of Existing Conditions

Julian M. Carroll Purchase Parkway and Interstate 24

Fulton to Eddyville, Kentucky

December 2011



Prepared By:



I-69: FULTON TO EDDYVILLE STRATEGIC CORRIDOR PLANNING STUDY EXECUTIVE SUMMARY

Kentucky Transportation Cabinet – Division of Planning
July 2011

The Kentucky Transportation Cabinet (KYTC) has undertaken a strategic corridor planning study for a portion of a proposed interstate route, Interstate 69 (I-69), which is proposed to travel from Tennessee through Kentucky and into Indiana. The project corridor extends along the Julian M. Carroll Purchase Parkway north from the Tennessee state border to the I-24 interchange, and then travel east along I-24 to west of the Wendell H. Ford (Western Kentucky) Parkway. The corridor passes through Fulton, Hickman, Graves, Marshall, Livingston and Lyon Counties.



STUDY PURPOSE

The primary purposes of the strategic corridor study is to review the existing conditions along the Purchase Parkway and I-24 to identify locations that do not meet current AASHTO and Federal Highway Administration (FHWA) highway design guidelines and related criteria. Evaluations include the degree to which these criteria are not met, their impact on safety and capacity, identification of options for making improvements to address identified deficiencies, and make recommendations regarding suitability of routing I-69 along the Purchase Parkway and I-24.

PROJECT BACKGROUND

The federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 identified the I-69 (Corridor 18) as a Priority Corridor. The results from a 1995 FHWA *Corridor 18 Feasibility Study* concluded that the future construction of I-69 from Canada to Mexico was economically feasible. The *Corridor 18 Special Issues Study* completed in 1997 identified a Representative Corridor which best served the purposes of Corridor 18 and yielded the most benefits relative to facility costs. The initial national goals of I-69 included the enhanced movement of goods, creating greater employment opportunities and improved system linkage. In Kentucky these national goals are consistent with the regional and local goals of providing improved mobility and serving local connectivity needs. Utilizing the existing Parkway system for I-69 also is consistent with the national and local goals.

STUDY ACTIVITIES

The study activities for the I-69 Strategic Corridor Planning Study included the following:

- Identify criteria and standards per AASHTO and the FHWA for designation as an interstate route;
- Collect data from the KYTC's Highway Information System, as-built plans, crash data, field observation and measurement, and other information provided by local Highway District office;
- Compare and analyze data collected with criteria and identify conditions and locations on the Purchase Parkway that do not meet interstate criteria and standards;

- Develop potential alternatives and costs associated with improving these areas with identified deficiencies to meet criteria and standards for designation as an interstate highway.

KEY FINDINGS

The Purchase Parkway operates similar to an interstate. With exception of one location on the Mayfield Bypass, it possess two travel lanes in each direction, a design speed of 70 mile-per-hour for rural conditions and 50 mile-per hour for urban conditions, and is a fully controlled access facility. However, some of the physical features do not meet the criteria of an interstate facility. Attached to the end of this summary are figures identifying deficiencies.

The following findings are based on available data and limited field reviews.

Operational Considerations and Safety

- Crash Analysis: For the crash analysis, a high crash segment was defined as having a critical crash rate factor greater than or equal to one. Crash segments with a critical crash rate factor between 0.9 and 0.99 are identified in the report.
- Crash Analysis – Purchase Parkway: When compared to other Kentucky parkways, there is one high crash segment in Graves County (MP 25.1 – MP 27.452) where the crash rate exceeds the statewide average for all parkways. There also is one segment in Graves and Marshall Counties (MP 27.452 – MP 41.035) with a critical crash rate factor between 0.9 and 0.99.
- Crash Analysis – I-24: When compared to other interstates within Kentucky, there is one high crash segment located near the Purchase Parkway interchange in Marshall County (MP 24.941- MP 26.558) where the crash rate exceeds the statewide average for all interstates.
- Crash Analysis – Purchase Parkway as an Interstate: When compared to Kentucky interstates, rather than state parkways, two additional high crash segments were identified along the Purchase Parkway located in Graves and Marshall Counties (MP 27.452 – MP 41.035 and MP 42.555 – MP 46.942).
- Crash Segment – Purchase Parkway as an Interstate: There also are three segments with a critical crash rate factor between 0.9 and 0.99. These segments are: MP 24.747 – MP 25.1, MP 41.035 – MP 42.555, and MP 46.942 – MP 51.398.
- Additional Findings Related to Crash Analysis: There were six crashes coded as *median cross-over* or *head-on* collisions for the Purchase Parkway and I-24 during the study period (2005-2009). Two crashes occurred on the Purchase Parkway and the remaining four happened on I-24. There were seven fatal crashes on the Purchase Parkway and six fatal crashes on I-24 during the study period (2005-2009).
- Current Traffic (2010): The current Purchase Parkway traffic volumes range from 7,060 vehicles per day (vpd) in Fulton County to 19,200 vpd near I-24 interchange in Marshall County. The current I-24 traffic volumes range from 21,900 vpd near the Purchase Parkway interchange to 28,200 vpd near Calvert City in Marshall County.
- Truck Percentages (2010): The existing truck percentages on the Purchase Parkway range from 24.9% at Mayfield, Kentucky in Graves County to 34.5% near Benton, Kentucky in Marshall County. On I-24, the truck percentage is 24.9%.
- Future Traffic (2040) without I-69: The projected annual growth rate along the Purchase Parkway and I-24 is 2%. This rate results in traffic volumes ranging from 12,800 vpd to 34,800 vpd on the Purchase Parkway and from 39,700 vpd to 51,100 vpd on I-24.
- Future Traffic (2040) with I-69: Assuming I-69 will travel along the Purchase Parkway and I-24, an annual growth rate of 2.5% was used to forecast 2040 traffic volumes. This rate results in traffic volumes ranging from 14,800 vpd to 40,300 vpd on the Purchase Parkway and from 45,900 vpd to 53,900 vpd on I-24.
- Truck Percentages (2040): Future truck volumes were not forecasted for this project. However, truck traffic is expected to increase if the national goals of I-69 are met.
- Level of Service (2010): All evaluated segments of I-24 and Purchase Parkway operate at LOS C or better in the current year.
- Level of Service (2040): All segments of I-24 and Purchase Parkway in the study area are expected to operate at LOS C or better in the future year 2040.

Mainline Geometry/Typical Section

- Design Speed: The Purchase Parkway meets or exceeds the minimum design speed guidelines for interstate highways in rural and urban areas.
- Lane Width: The lane width on the Purchase Parkway meets the minimum AASHTO guidelines for interstate design.
- Outside Shoulder Width: The Purchase Parkway meets minimum criteria for outside shoulder width based on the current truck DDHV.
- Inside Shoulder Width: The Purchase Parkway does not comply with the minimum design guidelines for inside paved shoulder widths. The section of Purchase Parkway at Mayfield, KY, also referred to as the Mayfield Bypass, has a raised median and no inside shoulder (MP 21.887 – MP 24.901). The remainder of the Purchase Parkway has a 3 foot paved inside shoulder, while the minimum criteria requires a 4 foot paved shoulder.
- Median Width: The Purchase Parkway meets the rural 36 foot AASHTO minimum median width in rural areas and the 10 foot AASHTO minimum median width in urban areas.
- Clear Zones: Based on the available data, it was not possible to fully evaluate the clear zone without detailed field study. The fill and cut slopes provided in the typical sections vary from 1V:2H to 1V:4H, the median ditch slope is 1V:4H, and the outside ditch slope is between 1V:3H and 1V:4H. Inference can be made regarding available clear zone from review of the as-built plans. However, it can be assumed that those sections not already with guardrail installed meet clear zone requirements.
- Sign Installations: A field review of roadside signs showed all signs within the apparent clear zone were crash worthy (break away).
- Guardrail Placement and Condition: As-built plans do not provide sufficient information to evaluate the placement of guardrail (length of need) along the I-69 corridor. However, a field review of the corridor showed that the guardrail end treatments on the Purchase Parkway meet current criteria and standards.
- Superelevation: From the review of as-built plans, horizontal curves along the Purchase Parkway appear to comply with the AASHTO criteria of 10% maximum superelevation.
- Horizontal Alignment: Horizontal curvature for the Purchase Parkway meets the minimum criteria of current design criteria and guidelines.
- Vertical Alignment: The majority of the vertical curves along the Purchase Parkway meet the current criteria and guidelines. Eight vertical curves do not meet the guideline for the minimum length of vertical curves.
- Stopping Sight Distance: The minimum stopping sight distance guideline is not met for three vertical curves: MP 14.965, MP 18.727, and MP 25.320

Bridges and Overpasses

- Lateral Clearance – Purchase Parkway: Of the 46 mainline bridges on the Purchase Parkway, 10 fail to meet the minimum lateral clearance requirement.
- Vertical Clearance – Purchase Parkway and I-24: Of the 35 overpass bridges on the Purchase Parkway, 4 do not meet the minimum 16 foot vertical clearance requirement. The five overpass bridges on I-24 meet the minimum vertical clearance regulation.
- Functional Adequacy: One bridge (MP 21.285) is identified as functionally obsolete.
- Sufficiency Rating: All Purchase Parkway mainline and overpass bridges have a sufficiency rating greater than 60.0.

Interchanges and Ramps (Purchase Parkway)

- Design Speed: Design speed for ramps were not provided on the as-built plans and were not evaluated.
- Lane Width: Ramp lane widths range from 15 feet to 18 feet, which is greater than the 15 foot minimum width per current criteria for lane width.
- Shoulder Width: A majority of the interchange ramps on the Purchase Parkway do not meet the AASHTO guidelines for shoulder width. 10 of the 13 interchanges have ramp shoulder widths that do not meet criteria.
- Horizontal Alignment: With the exception of one loop ramp (Exit 14), all horizontal curvature at interchanges meet minimum criteria and requirements. The loop ramp has a 130 foot radius which does not meet the minimum loop ramp radius of 134 feet for a 25 mph design speed.

- Vertical Alignment-Vertical Grade: The minimum vertical grade is met on all interchange ramps that were provided on the as-built plans.
- Vertical Alignment-Vertical Length of Curve: Three vertical curves on ramps did not meet the requirements for minimum length of curve that were calculated based on the ramp design speed. These ramps are located at the US 51 interchange (Exit 1) and KY 80 interchange (Exit 22).
- Vertical Alignment-Stopping Sight Distance: Two vertical curves on ramps did not meet the minimum stopping sight distance requirement that were calculated based on the ramp design speed. These ramps are located at the US 51 interchange (Exit 1) and KY 80 interchange (Exit 22).
- Superelevation: Based on review of as-built plans, existing ramps appear to satisfy the AASHTO criteria for 10% maximum superelevation.
- Speed-Change Lanes: Many of the existing ramps on the Purchase Parkway do not meet the minimum criteria for acceleration and deceleration lengths.
- Weaving Characteristics: The one location with an existing weaving situation between interchanges will operate at a LOS B with future I-69 traffic projections. The interchanges at Exits 14 and 43 are previous toll plaza interchanges. Exit 52 is a cloverleaf interchange with weaving within the interchanges.
- Interchange Spacing: On the Purchase Parkway, there are two locations where the minimum interchange spacing requirements are not met. Interchange spacing was measured from intersecting routes along the Purchase Parkway. The three interchanges (Exits 0, 1, 2) in Fulton are within three miles of each other. The two interchanges (Exit 41 and Exit 43) in Benton are within three miles of each other.
- Interchange Control of Access: The Purchase Parkway has four interchanges that do not meet the recommended criteria for control of access.
- Interchange Configuration: Currently, the Purchase Parkway has four service interchanges that do not meet the recommended interstate interchange configuration. They are located at Exit 0, Exit 14, Exit 21, and Exit 43. The interchange configuration at I-24 and the Purchase Parkway is not recommended for a systems interchange.

POTENTIAL IMPROVEMENT ALTERNATIVES

For this study, the range of alternatives under consideration is No Build, Necessary Upgrades and Spot Safety Improvements, and Fully Compliant Reconstruction. These alternatives represent incremental levels of infrastructure investment needed to implement I-69 along the Purchase Parkway from Tennessee to I-24.

- **No Build** – This alternate would leave a gap in the nationally proposed I-69 route. However, the Purchase Parkway would provide the connectivity for the I-69 traffic to travel from Tennessee to I-24.
- **Necessary Upgrades and Spot Safety Improvements** - Key safety and operational concerns would be addressed. Design exceptions or variances would be obtained for the existing conditions that do not meet current AASHTO or KYTC guidelines that are deemed appropriate by the KYTC and the FHWA.
- **Fully Compliant Reconstruction** – This alternate would involve improvements within existing right of way or with minimum right of way acquisition necessary for making the existing Purchase Parkway meet minimum AASHTO criteria for interstate routes.

The following table represents preliminary cost estimates for the potential improvement alternatives.

Alternative	Meet Current Standards	Impact on Environment	Cost (million)	Cost per Mile ¹ (million)
1. No Build	No	Least	\$0.00 ²	\$0.00
2. Necessary Upgrades / Spot Safety Improvements	Yes ³	Minimal	\$131.95	\$2.57
3. Fully Compliant Reconstruction	Yes	More Significant	\$218.94 ⁴	\$4.26

Table 8-5 Cost Comparison of Potential Alternatives

¹ Cost per mile based on 51.4 miles of Purchase Parkway.

² Cost for routine maintenance is not depicted in alternatives.

³ This alternative would include upgrading the design features along the Purchase Parkway that potentially represents the most significant safety and operational issues. This alternative requires design exceptions and variances where safety and operational conditions would not create undue risk to the motorist.

⁴ Cost estimate does not include cost associated with connecting to Segments of Independent Utility (SIU) 5 (I-24 at Western Kentucky Parkway) or SIU 7 (Exits 0,1,2 at Fulton, KY).

RECOMMENDATIONS

It is recommended that the Necessary Upgrades and Spot Safety Improvements alternative be chosen for initial advancement based on the following:

- The Purchase Parkway adequately meets AASHTO guidelines for most design elements of an interstate. Of the design element deficiencies, others may be accepted as design exception/variance with agreement by the KYTC and the FHWA.
- Based on the operational and crash analysis included in this study, addressing those repairs identified for Needed Upgrades and Spot Safety Improvements will appropriately address any crash history concerns identified. The entire length of the Purchase Parkway meets the level of service required and only a few locations exhibit potential safety problems.

If the intention is to utilize the Purchase Parkway for future I-69 designation, it is recommended to develop a strategy for future improvements based on operational characteristics, safety, routine maintenance and Federal Highway Administration guidance. The strategy of improvements will insure an efficient and coordinated implementation of future projects and designation of I-69. Additional data and analysis are recommended for project development:

- Operational Considerations – There may be roadway conditions not shown in crash data contributing to crash history. Additional analyses during preliminary engineering may provide additional insight which could refine the scope of needed improvements at a given location.
- Mainline Geometry and Typical Section – Analyses for mainline geometry and typical section were evaluated using as-built plans supplemented with field reviews of existing conditions. Actual design features may require further verification with non-detailed field reviews of the roadway cross-section during preliminary engineering for implementing improvement strategies.
- Interchanges and Ramps – Most of the interchange ramps are deficient and some design features were illegible on the as-built plans. Therefore, as interchanges are identified for improvement, geometric features (i.e. superelevation rate, horizontal and vertical alignments, design speed, etc.) should be further analyzed.

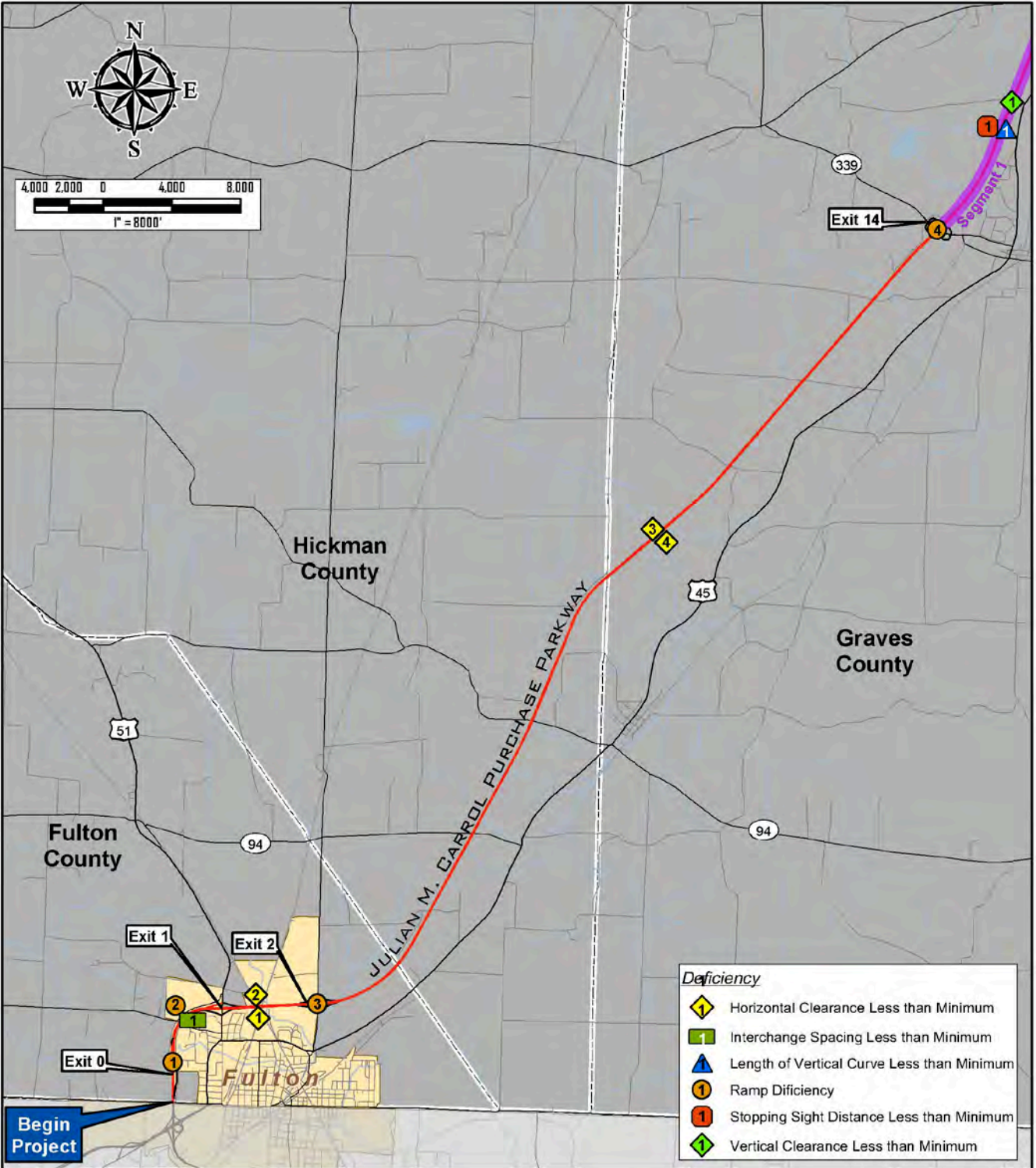
CONCLUSIONS

Based on the findings of this study, it can generally be concluded that the Purchase Parkway is currently providing motorists efficient and safe travel from US 51 in Tennessee to I-24 with operating conditions similar to an interstate. There would be minimal to no impact to the operating characteristics of the Purchase Parkway in the near future if it was designated as I-69 under the current conditions. The operation characteristics of the I-69 corridor would not be expected to be altered until more sections of I-69 are completed across the country especially in Tennessee and Indiana. As sections of I-69 are completed and thus provide continuity at a regional and national level, additional truck traffic volume will likely grow on the Purchase Parkway to the point that estimated truck traffic and congestion along the existing Purchase Parkway may eventually alter the operational characteristics.

Intuitively, there may be sections of interstate in Kentucky and around the United States that do not meet the current design standards. Some design features on these other interstates may be very similar to the existing design features on the Purchase Parkway. Based on the impact to other sections of Parkways that are designated as future interstate corridors and existing interstates with similar design feature deficiencies, designation of the Purchase Parkway as I-69 under the Parkway's existing conditions appears realistic.

There are two broad based potential improvement alternatives recommended for improving the Purchase Parkway to meet interstate standards. The Necessary Upgrades and Spot Safety Improvement alternative includes upgrading the Purchase Parkway to meet current interstate standards but with design exceptions/variances. The Fully Compliant Reconstruction alternative would upgrade the Purchase Parkway to meet interstate standards with no design exceptions or variances. Right of way acquisitions will be needed for interchange improvements.

In general, improvements related to bridge deficiencies, Mayfield Bypass median, interchange acceleration and deceleration lanes, and previous toll plaza interchange improvements are recommended. It is also recommended that initially, minimal improvements should be made to the Purchase Parkway and I-24 interchange and US 45 interchange in Mayfield. The minimal improvements should be designed to provide continuity and capacity for the forecasted traffic, while maintaining consideration for crash history and safety for the traveling public. Ultimately, as traffic operations change and traffic volumes increase, additional improvements to these interchanges may be needed to improve safety and meet current interstate criteria.



Begin Project

— Proposed I-69
 — Ramp

Crash Risk

■ Fatality Critical Rate Factor ≥ 0.70
 ■ High Crash Segment (CRF ≥ 1.0)
 ■ Crash Segment (CRF = 0.90-0.99)

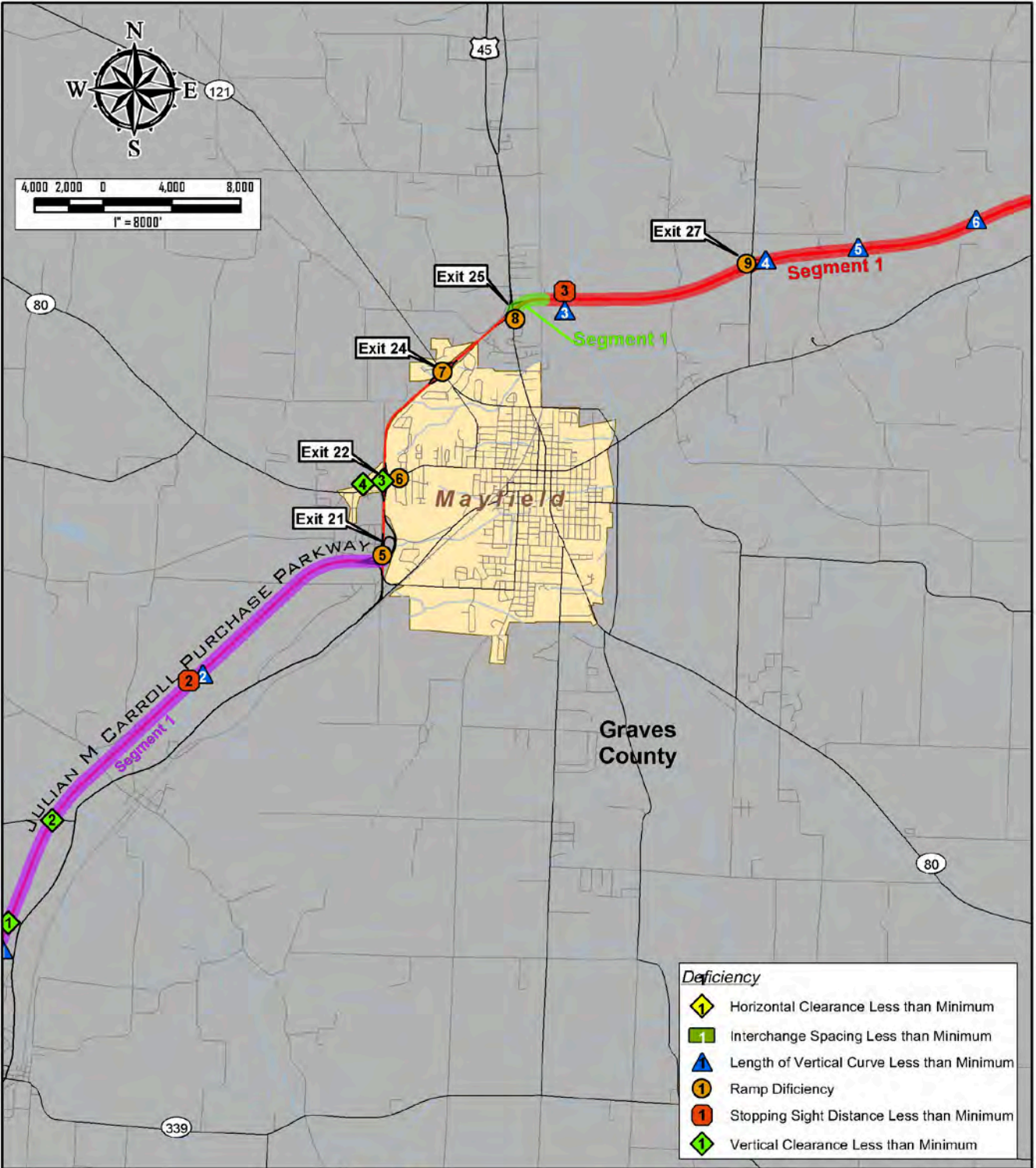
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Palmer ENGINEERING

Existing Deficiencies

**I-69 Corridor
 Fulton to Eddyville**

Fulton, Hickman, Graves,
 Marshall, Livingston, and
 Lyon Counties, Kentucky



Deficiency

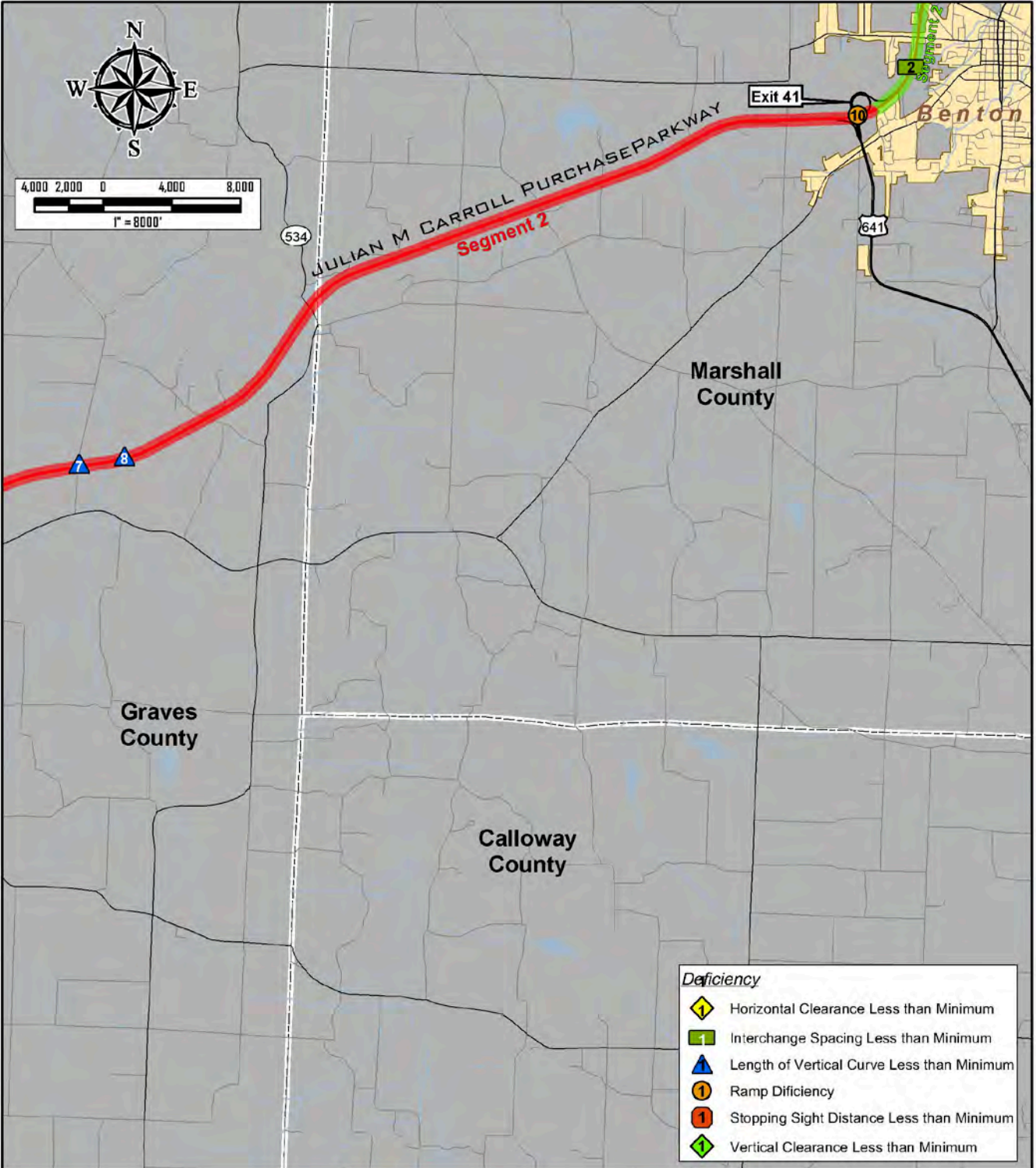
	Horizontal Clearance Less than Minimum
	Interchange Spacing Less than Minimum
	Length of Vertical Curve Less than Minimum
	Ramp Deficiency
	Stopping Sight Distance Less than Minimum
	Vertical Clearance Less than Minimum

Proposed I-69
 Ramp
Crash Risk
 Fatality Critical Rate Factor ≥ 0.70
 High Crash Segment (CRF ≥ 1.0)
 Crash Segment (CRF = 0.90-0.99)

Existing Deficiencies

**I-69 Corridor
Fulton to Eddyville**

Fulton, Hickman, Graves,
Marshall, Livingston, and
Lyon Counties, Kentucky



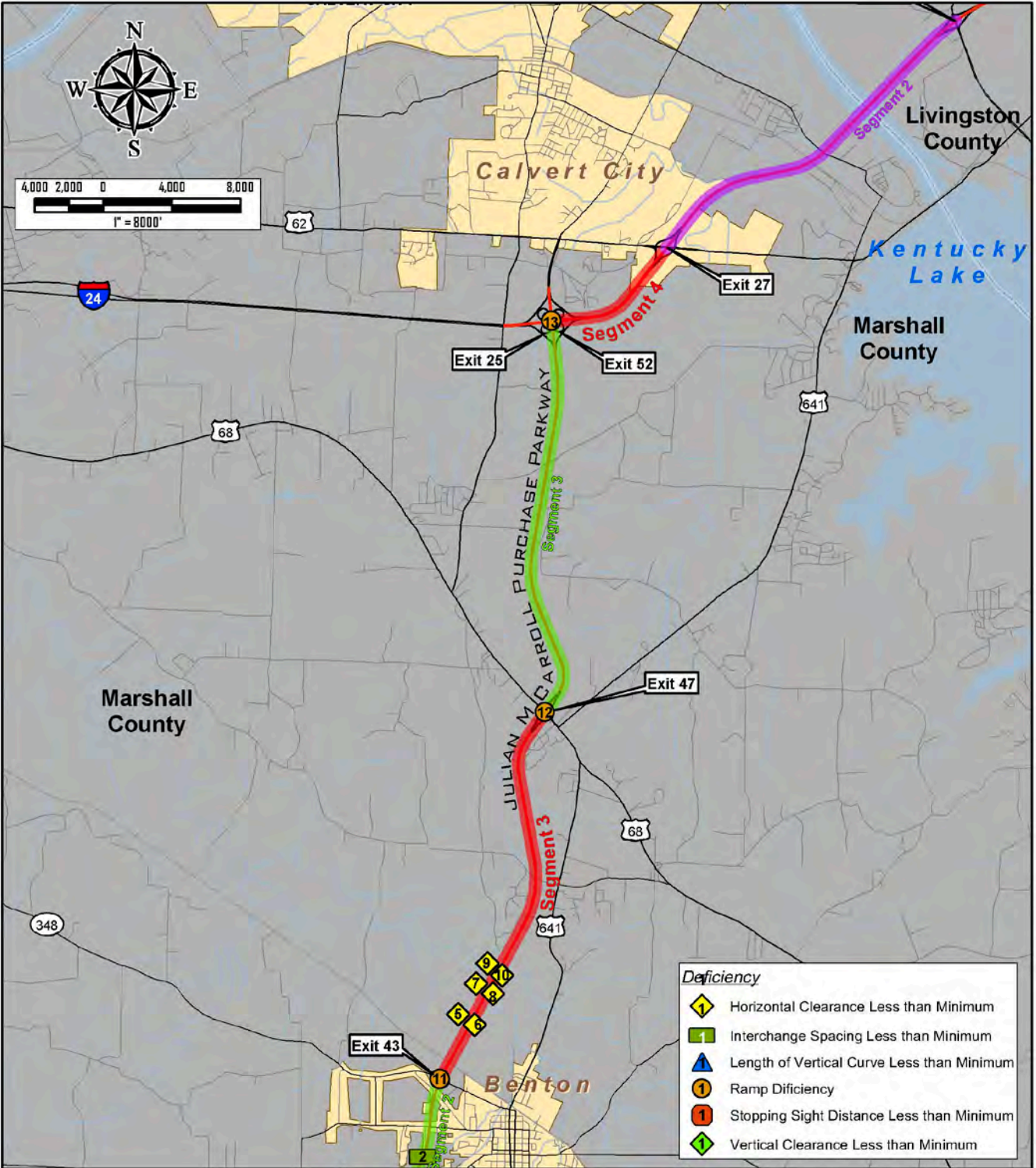
Deficiency	
	Horizontal Clearance Less than Minimum
	Interchange Spacing Less than Minimum
	Length of Vertical Curve Less than Minimum
	Ramp Deficiency
	Stopping Sight Distance Less than Minimum
	Vertical Clearance Less than Minimum

Proposed I-69
 Ramp
Crash Risk
 Fatality Critical Rate Factor ≥ 0.70
 High Crash Segment (CRF ≥ 1.0)
 Crash Segment (CRF = 0.90-0.99)

Existing Deficiencies

**I-69 Corridor
Fulton to Eddyville**

Fulton, Hickman, Graves,
Marshall, Livingston, and
Lyon Counties, Kentucky



Deficiency	
	Horizontal Clearance Less than Minimum
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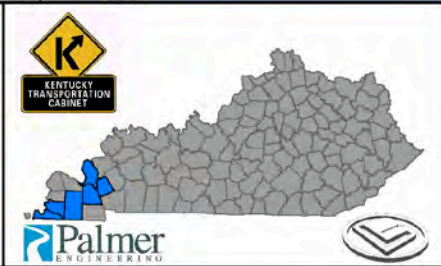
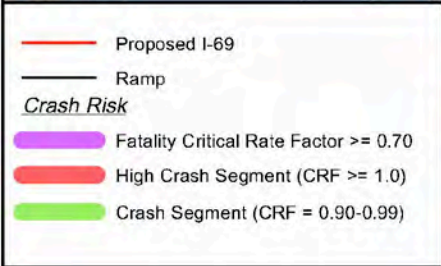
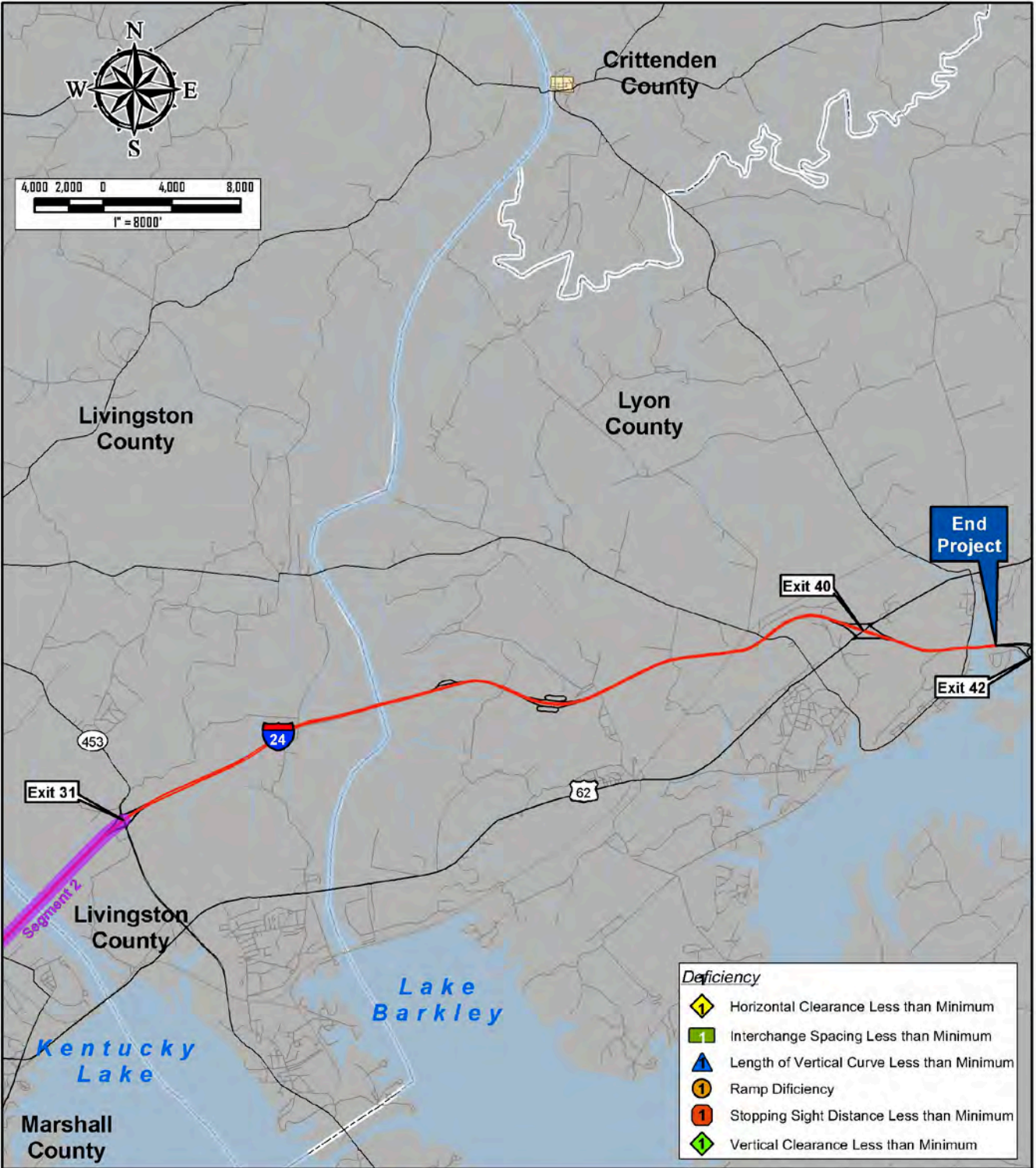
- Proposed I-69
 - Ramp
- Crash Risk**
- Fatality Critical Rate Factor ≥ 0.70
 - High Crash Segment (CRF ≥ 1.0)
 - Crash Segment (CRF = 0.90-0.99)



Existing Deficiencies

**I-69 Corridor
Fulton to Eddyville**























Fulton, Hickman, Graves,
Marshall, Livingston, and
Lyon Counties, Kentucky




























Existing Deficiencies

**I-69 Corridor
Fulton to Eddyville**

Fulton, Hickman, Graves,
Marshall, Livingston, and
Lyon Counties, Kentucky

Deficiency Type	Milepoint	Deficiency Description
Purchase Parkway - Fulton/Hickman County		
	Exit 0	Taper Length < Min; Rolled Curb
	MP 1.0	Interchange Spacing less than 3 mile minimum
	Exit 1	Taper Length < Min; Rolled Curb
	Exit 2	Taper Length < Min; Divergence Angle > Max; Rolled Curb
	1.781	Horizontal Clearance = 30' (Note bridge is over 200' long)
	1.781	Horizontal Clearance = 30' (Note bridge is over 200' long)
Purchase Parkway - Graves County		
	9.082	Horizontal Clearance = 30' (Note bridge is over 200' long)
	9.082	Horizontal Clearance = 30' (Note bridge is over 200' long)
	13.645 - 21.305	Fatality CRF = 0.75 (CRF \geq 0.70)
	Exit 14 MP 13.653	Taper Length < Min; Degree of Curve > Max; Ramp Entrance/Exit Deficient; Rolled Curb; Interchange control of access less than 300' minimum
	14.965	Length of Vertical Curve = 500' (696' calculated minimum)
	14.965	Stopping Sight Distance = 554' (730' minimum)
	15.302	Vertical clearance = 15.88' (16' minimum)
	16.526	Vertical clearance = 15.94' (16' minimum)
	18.727	Length of Vertical = 600' (624' calculated minimum)
	18.727	Stopping Sight Distance = 727' (730' minimum)
	Exit 21 MP 21.285	Taper Length < Min;; Divergence Angle > Max; Rolled Curb
	Exit 22 MP 22.267	Taper Length < Min; Interchange control of access less than 100' minimum
	22.267	Vertical clearance = 15.30' (16' minimum)
	22.267	Vertical clearance = 15.12' (16' minimum)
	Exit 24 MP 23.701	Taper Length < Min
	Exit 25 MP 24.726	Taper Length < Min; Rolled Curb

Deficiency Type	Milepoint	Deficiency Description
	24.747 - 25.100	Crash Segment CRF = 0.9 (CRF 0.90-0.99)
	25.100 - 27.452	High Crash Segment - CRF= 1.33 (CRF >=1.0)
	27.452 - 34.487	High Crash Segment - CRF = 1.05 (CRF >=1.0)
	25.32	Length of Vertical Curve = 536' (584' calculated minimum)
	25.32	Stopping Sight Distance = 721' (730' minimum)
	Exit 27 MP 27.461	Taper Length < Min; Ramp Entrance/Exit Deficient; Divergence Angle > Max; Rolled Curb; Interchange control of access less than 300' minimum
	27.517	Length of Vertical Curve = 536' (584' calculated minimum)
	28.625	Length of Vertical Curve = 400' (438' calculated minimum)
	29.970	Length of Vertical Curve = 400' (416' calculated minimum)
	31.144	Length of Vertical Curve = 400' (467' calculated minimum)
	31.646	Length of Vertical Curve = 600' (608' calculated minimum)
Purchase Parkway - Marshall County		
	34.487 - 41.035	High Crash Segment - CRF = 1.05 (CRF >=1.0)
	Exit 41 MP 40.809	Taper Length < Min; Divergence Angle > Max
	MP 41.682	Interchange spacing less than 3 mile minimum
	41.035 - 42.555	Crash Segment - CRF = 0.99 (CRF 0.90-0.99)
	42.555 - 46.942	High Crash Segment CRF =1.0 (CRF >=1.0)
	Exit 43 MP 42.555	Taper Length < Min; Degree of Curve > Max; Ramp Entrance/Exit Deficient; Rolled Curb
	43.277	Horizontal Clearance = 30' (Note bridge is over 200' long)
	43.277	Horizontal Clearance = 30' (Note bridge is over 200' long)
	43.614	Horizontal Clearance =30' (Note bridge is over 200' long)
	43.614	Horizontal Clearance =30' (Note bridge is over 200' long)
	43.872	Horizontal Clearance =30' (Note bridge is over 200' long)
	43.872	Horizontal Clearance = 30' (Note bridge is over 200' long)
	Exit 47 MP 46.942	Taper Length < Min; Rolled Curb; Interchange control of access less than 300' minimum
	46.942 - 51.398	Crash Segment - CRF = 0.91 (CRF 0.90-0.99)
	Exit 52 MP 51.398	Taper Length < Min; Degree of Curve > Max

Deficiency Type	Milpoint	Deficiency Description
Interstate 24 - Marshall County		
<u>4</u>	24.941 - 26.558	High Crash Segment - CRF =1.10 (CRF >=1.0)
<u>2</u>	26.558 - 29.352	Fatality CRF = 0.71 (CRF >=0.70)
Interstate 24 - Livingston/Lyon County		
<u>2</u>	29.352 - 30.742	Fatality CRF = 0.71 (CRF >=0.70)

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PROPOSED INTERSTATE 69 CORRIDOR
FROM FULTON TO EDDYVILLE, KENTUCKY

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- Appendix F – Highway Information System Summary of Parkway Data
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I. PROJECT INTRODUCTION

The Kentucky Transportation Cabinet (KYTC) has undertaken a strategic corridor planning study for a portion of a proposed interstate route, Interstate 69 (I-69), which is proposed to travel from Indiana through Kentucky and into Tennessee. As shown in **Figure 1-1** the project corridor travels the Purchase Parkway north from the Tennessee state border to the I-24 interchange, and then travels east along I-24 to west of the Wendell H. Ford (Western Kentucky) Parkway. The corridor travels through Fulton, Hickman, Graves, Marshall, Livingston and Lyon Counties.

Project Purpose and Need

The primary purposes of the strategic corridor study are to review the existing conditions along the Purchase Parkway and I-24 to identify locations that may not meet American Association of State Highway Transportation Officials (AASHTO) highway design guidelines, evaluate the degree to which these guidelines are not met, identify options for making improvements to address identified deficiencies, and make recommendations regarding suitability of routing I-69 along the Purchase Parkway and I-24.

This planning-level analysis utilized As-built construction plans provided by KYTC, the KYTC Highway Information System (HIS) database, and field reviews to collect roadway geometry and highway operations. National I-69 studies undertaken for the Federal Highway Administration (FHWA) were also reviewed for information on a national level.

This study addresses the need and justification of upgrades to the Purchase Parkway to achieve interstate highway design guidelines. The study includes an Environmental Overview and an Environmental Justice Review (**Appendix A**) to evaluate associated environmental factors, social/economic conditions of the project area. Comments and suggestions from a local/elected officials meeting are included in **Appendix B**. **Appendix C** includes minutes and material from a public meeting held November 15, 2005. A Geotechnical Overview of the Purchase Parkway was conducted to summarize the existing geotechnical conditions along the project corridor and is included in **Appendix D**.

A. Background of I-69 Corridor

The federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 identified the I-69 (Corridor 18) as a Priority Corridor. The results from a 1995 Federal Highway Administration *Corridor 18 Feasibility Study* concluded that the future construction of I-69 from Canada to Mexico was economically feasible. The I-69 corridor begins at Port Huron, Michigan, and the Canadian border; passes through Michigan, Indiana, Kentucky, Tennessee, Mississippi, Arkansas, Louisiana, and Texas; and terminates at the Lower Rio Grande Valley and Mexican border.

The *Corridor 18 Special Issues Study* completed in 1997 identified a Representative Corridor which best serves the purposes of Corridor 18 and yields the most benefits relative to facility costs. This study also identified Segments of Independent Utility (SIU) that would allow completion of the I-69 corridor in segments that could function independently on a reasonable basis. In Kentucky, the Representative SIU segments were defined as follows:

- SIU 4
 - I-64/I-164 north of Evansville to the Edward T. Breathitt (Pennyrile) Parkway at Henderson, Kentucky;
- SIU 5
 - The Edward T. Breathitt (Pennyrile) Parkway from Henderson, Kentucky to the interchange with Wendell H. Ford (Western Kentucky) Parkway;
 - The Ford Parkway to the interchange with I-24;
- SIU 6
 - I-24 at Ford Parkway to the interchange with the Julian M. Carroll (Purchase) Parkway;
 - The Purchase Parkway to the Tennessee state line.



Figure 1-1 Study Area, Fulton to Eddyville, KY

The initial national goals for this project included enhancing the movement of goods, creating greater employment opportunities, and improving system linkage. Because of these goals one of the primary justifications for the I-69 route is increased freight transport along the corridor between Canada and Mexico. The I-69 corridor has been designated by Congress as a “North America trade route”.

In Kentucky these national goals are consistent with the regional and local goals of providing improved mobility and serving local connectivity needs. Utilizing the existing Parkway system for I-69 meets the national and local goals.

SIU 4 in Kentucky crosses the Ohio River at Henderson connecting SIU 5 in Kentucky and SIU 3 in Indiana.

A strategic corridor planning study for SIU 5 has been completed and KYTC is currently developing strategies for implementation. With completion of this study, recommendations for needed improvements in SIU 6 will be developed and presented.

B. Highway Segments – SIU 6

The segments of SIU 6 include the Purchase Parkway and I-24. Since I-24 is currently in the interstate system, analysis for this study is of a cursory nature. Thus I-24 was only evaluated in bridge vertical clearances, traffic operations, and crash history. A more thorough evaluation of the Purchase Parkway was conducted and compared to the current interstate standards.

A more descriptive summary of the I-69 corridor along the Purchase Parkway and I-24 follows:

The Purchase Parkway begins at the city of Fulton at the Tennessee state line (MP 0.0) and runs north through the cities of Mayfield and Benton before intersecting with I-24 (MP 51.398) near Calvert City.

The segment of I-24 within the I-69 corridor runs from the interchange with the Purchase Parkway (MP 24.941) to just west of the interchange with the Wendell H. Ford Parkway (MP 41.25).

The following chart summary illustrates the I-69 corridor by county.

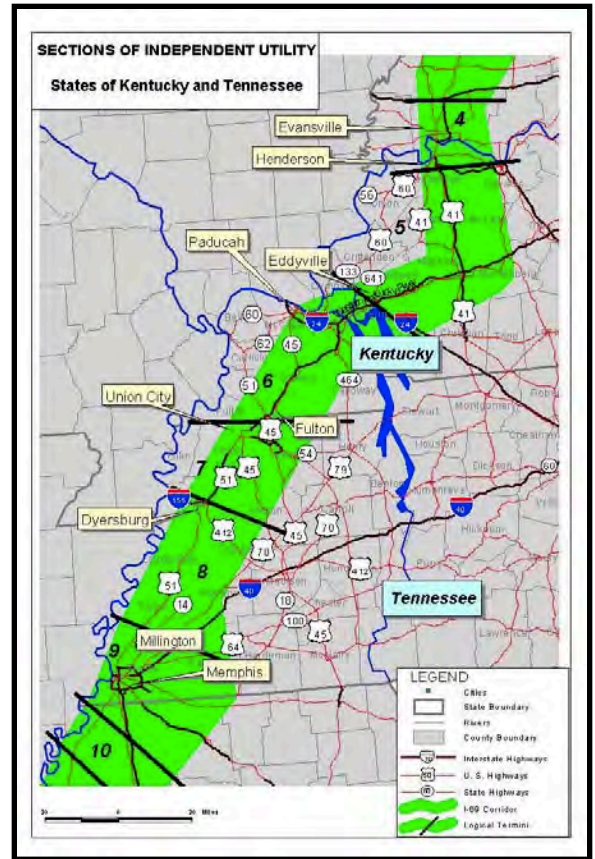


Figure 1-2 Interstate 69 Representative Corridor Sections of Independent Utility

ROUTE	COUNTY	BEGIN MP	END MP	TOTAL MILEAGE
PURCHASE PARKWAY	Fulton	0	3.43	3.43
	Hickman	3.43	8.35	4.92
	Graves	8.35	34.49	26.14
	Marshall	34.49	51.40	16.91
Total				51.40
I-24	Marshall	24.94	29.35	4.41
	Livingston	29.35	33.88	4.53
	Lyon	33.88	41.25	7.37
Total				16.31
TOTAL PROJECT				67.71

Table 1-1 I-69 Corridor Mileage

C. Analysis Considerations

The Purchase Parkway was evaluated based on the current KYTC and FHWA design standards and guidelines. Applicable references are listed below:

- “A Policy on Geometric Design of Highways and Streets, 4th Edition” (American Association of State Highway Officials, Current Edition)
- “AASHTO Roadside Design Guide” (American Association of State Highway Officials, Current Edition)
- “Highway Capacity Manual” (Transportation Research Board, Current Edition)
- “Manual of Uniform Traffic Control Devices, Millennium Edition” (Institute of Transportation Engineers, Current Edition)
- “A Policy on Design Standards Interstate System” (American Association of State Highway Officials, Current Edition).
- Kentucky Transportation Cabinet Highway Design Manual (KYTC, Current Edition)

The existing conditions of the Purchase Parkway were established by utilizing as-built plans provided by KYTC, the HIS database, and CRASH database. This information was analyzed based on the reference list above to determine the extent to which it meets the current design guidelines. The analysis also includes determining whether the Purchase Parkway currently satisfies the safety and operational concerns that might be expected from converting the parkway into an interstate highway. The rural and urban sections of the Purchase Parkway were compared to interstate criteria. The rural sections of the Purchase Parkway traverses from Kentucky-Tennessee state line (MP 0.0) to MP 21.3 south of Exit 21 (US 45) and from north of Exit 25 (US 45) at MP 25.1 to the I-24 interchange (MP 51.4). The section of the Purchase Parkway that traverses through the city of Mayfield is commonly known as the Mayfield Bypass and was compared to the urban interstate criteria.

The following report is structured based on key factors in determining applicable design guideline compliance of the Purchase Parkway. A summary of these key factors are described below.

- **Chapter 2: Early Coordination and Public Involvement**
- **Chapter 3: Operational Considerations** - An analysis of operational factors including crash history, traffic volumes, and operational levels of service for existing and future traffic conditions.
- **Chapter 4: Mainline Geometry and Typical Section** – A discussion and evaluation of the existing corridor on the following topics: Mainline geometric issues, design speed,

median widths, clear zones, horizontal and vertical alignments, superelevation rates, and sight distances.

- **Chapter 5: Bridges and Overpasses** - An evaluation of the existing bridges and overpasses based on lateral and vertical clearance.
- **Chapter 6: Interchanges and Ramps** – A summary of interchange and ramp conditions and a comparison of those conditions with AASHTO guidelines for design speed, typical sections, alignment geometry, speed-change lanes, and weaving situations.
- **Chapter 7: Key Findings of Existing Conditions Overview** – An overview of the identified deficiencies in the project corridor.
- **Chapter 8: Potential Improvement Alternatives and Development Costs** – An overview of a range of alternatives under consideration for development of the I-69 corridor.
- **Chapter 9: Recommendations** – Recommendations based on the Strategic Corridor Planning Study and future analysis necessary to provide direction for design decisions for the corridor.

D. Design Exceptions and Variances

The FHWA has identified thirteen design features that are important to the operational and safety performance of a highway. These controlling design features compiled are commonly known as the *13 controlling criteria*. A formal written design exception is required when any of the 13 criteria are not met on the National Highway System (NHS). The Interstate System is part of the NHS. The *13 controlling criteria* are listed below. These design features are evaluated in this report and are evaluated for compliance. Design features that deviate from common practice but are not included in the *13 controlling criteria* will be termed design variance. There are two categories for design variances. A design variance is a design feature that (1) varies from the current AASHTO criteria but not part of the *13 controlling criteria* or (2) a design feature that varies from common practice but not part of the *13 controlling criteria*.

1. Design speed
2. Lane width
3. Shoulder width
4. Bridge width
5. Horizontal alignment
6. Superelevation
7. Vertical alignment
8. Grade
9. Stopping sight distance
10. Cross slope
11. Vertical clearance
12. Lateral offset to obstruction
13. Structural capacity

II. EARLY COORDINATION AND PUBLIC INVOLVEMENT

As part of this study, a local officials and public involvement meeting was conducted in an effort to gain public input on issues, concerns, and to provide the public with information about this study and the potential I-69 corridor. These meetings took place at the Purchase Area Development District Office in Mayfield, Kentucky, on November 15, 2010.

At these meetings, preliminary information was collected and compiled for public display. A handout and questionnaire were given to the meeting attendees and six displays were presented. The information provided included the purpose and need for the project. Other information collected, compiled, analyzed, and presented in display format included the current traffic operations, existing conditions, and a crash history of the Parkway and I-24. In efforts to educate the public on the existing conditions, a powerpoint presentation was presented on previous studies along with the scope of work for this study. In the presentation and displays, key geometric features were identified as needing improvements in order to meet interstate standards and assign the corridor as I-69. Impacts to the traffic operations due to increased I-69 traffic volumes were also presented.

The questionnaire provided collected information regarding specific safety issues, traveler use, and suggested interchange improvements on the Parkway and I-24.

A question and answer session was held following the meetings where Kentucky Transportation Cabinet and design consultants were available to answer questions regarding the project.

A detailed summary of these meetings and questionnaire responses is provided in **Appendix B** and **C** of this report.

III. OPERATIONAL CONSIDERATIONS

The current and future operations of the Purchase Parkway, functioning as both a parkway and an interstate, should be evaluated for the proposed designation as I-69. The evaluation of the operational considerations includes a crash history and traffic analysis of the Purchase Parkway.

A. Crash History and Analysis

The objective of the crash history analysis was to identify locations of high crash rates and crash patterns on the Purchase Parkway and I-24. Further investigation of these high crash rate locations was conducted to establish causation or whether they occurred randomly.

1. Crash Analysis Methodology and Data Source

The Kentucky Transportation Center's *Analysis of Traffic Crash Data in Kentucky (2005-2009)* was referenced for methodology, formulas, and factors to calculate crash rates for the Purchase Parkway and I-24. Segments of the project for the analyses were established based on changes in Annual Daily Traffic (ADT), roadway features and roadway classification. The crash rate was calculated within each segment based on length, ADT, type of roadway (parkway/interstate), functional classification (rural/urban), and crashes that occurred in the segment during the crash history period. Crash data for the analyses was collected from the Collision Report Analysis for Safer Highways (CRASH) database from January 1, 2005 to December 21, 2009 within the project limits of the Purchase Parkway and I-24.



2. Types and Locations of Crashes

In order to calculate the crash rate, utilizing the referenced documentation, the parkway was divided into segments based on roadway geometry, roadway classification, and traffic volumes. The required inputs are functional classification (rural/urban), median type (divided/undivided), and changes in ADT volume.

The graph below shows the total number and type of crashes during the analysis time frame for the Purchase Parkway and I-24. For this analysis, crashes were classified as fatal, injury, or property-damage-only type. Of the total crashes on the Purchase Parkway, there were 7 fatal (1%), 136 injury (23%), and 449 property-damage-only (76%) crashes.

Number of Crashes by Type (January 2005 – December 2009)



Source: Collision Report Analysis for Safer Highways (CRASH) database

3. Analysis as a Parkway Facility

The crash history data from the Purchase Parkway was analyzed as a parkway facility and as an interstate facility. The following discussion relates to the analysis of the Purchase Parkway as a parkway facility. The analysis of the Purchase Parkway functioning as an interstate is discussed in the following section.

For the analysis of segments, a high crash segment was defined as having a critical crash rate factor greater than or equal to 1.0. A fatality crash rate factor was calculated for the segments to identify segments with a history of fatal crashes. Segments with a fatal crash rate greater than 0.7 were identified in the analysis.

The Purchase Parkway was divided into 14 segments for the analyses. Crash rates were calculated for each segment. The statewide average crash rate for all parkways is 60 crashes per one-hundred million vehicle miles (acc/hmvm) for rural areas and 104 acc/hmvm in urban areas. Based on the calculation and data, the crash rates range from 6.8 to 199.26 acc/hmvm.

Reviewing **Table 3-1**, there is a high crash segment on the Purchase Parkway in Graves County (MP25.100 – MP 27.452) and a crash rate segment in Graves and Marshall Counties (MP 27.452 – MP 41.035) with a critical crash rate factor between 0.9 and 0.99.

Using the Kentucky Transportation Center's *Analysis of Traffic Crash Data in Kentucky (2005-2009)* methodology, an additional critical "spot" analysis was conducted on the high crash segment between MP 25.100 and MP 27.452 from 2005 to 2009. The methodology defines a critical "spot" as a 0.3 mile length of roadway with more than the critical number of crashes defined by roadway type and area type. This segment has three critical "spots" that meet the eight crashes for a rural parkway. Two of these spots overlap. These spots are as follows:

- 9 Crashes - MP 25.189 – MP 25.422
- 10 Crashes - MP 26.200 – MP 26.423
- 9 Crashes - MP 26.300 – MP 26.579

COUNTY	BEGIN MP	END MP	LENGTH (miles)	ADT	Lanes	Divided Undivided	Rural Urban	Avg Crash Rate	Critical Crash Rate	Avg Fatality Rate	Critical Fatality Rate	Crashes				HMVM	Rates per HMVM				Critical Crash Rate Factor	Critical Fatality Rate Factor
												Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total		
Fulton	0.000	0.360	0.36	8,500	4	Divided	Rural	60	153.39	0.7	18.77	0	0	5	5	0.06	0.00	0.00	89.53	89.53	0.58	0.00
Fulton	0.360	1.424	1.064	7,570	4	Divided	Rural	60	115.45	0.7	9.72	0	0	1	1	0.15	0.00	0.00	6.80	6.80	0.06	0.00
Fulton	1.424	2.478	1.054	7,060	4	Divided	Rural	60	117.83	0.7	10.23	0	1	3	4	0.14	0.00	0.33	22.09	29.45	0.25	0.00
Fulton/ Hickman/ Graves/	2.478	13.645	11.167	7,290	4	Divided	Rural	60	76.71	0.7	2.80	1	19	43	63	1.49	0.67	0.44	28.94	42.40	0.55	0.24
Graves	13.645	21.305	7.66	8,590	4	Divided	Rural	60	78.63	0.7	3.08	3	11	50	64	1.20	2.50	0.22	41.64	53.30	0.68	0.81
Graves	21.305	22.239	0.934	14,300	4	Divided	Urban	104	159.26	0.6	6.69	0	4	16	20	0.24	0.00	0.25	65.64	82.05	0.52	0.00
Graves	22.239	23.701	1.462	13,100	4	Divided	Urban	104	149.87	0.6	5.41	0	6	15	21	0.35	0.00	0.40	42.92	60.08	0.40	0.00
Graves	23.701	24.747	1.046	12,000	4	Divided	Urban	104	161.07	0.6	6.95	0	0	6	6	0.23	0.00	0.00	26.19	26.19	0.16	0.00
Graves	24.747	25.100	0.353	7,790	4	Divided	Urban	104	231.23	0.6	19.47	0	2	8	10	0.05	0.00	0.25	159.41	199.26	0.86	0.00
Graves	25.100	27.452	2.352	7,790	4	Divided	Rural	60	96.00	0.7	5.92	1	8	29	38	0.33	2.99	0.28	86.73	113.64	1.18	0.50
Graves/ Marshall	27.452	41.035	13.583	7,320	4	Divided	Rural	60	75.09	0.7	2.58	1	34	91	126	1.81	0.55	0.37	50.15	69.44	0.92	0.21
Marshall	41.035	42.555	1.52	16,700	4	Divided	Rural	60	90.40	0.7	4.95	1	11	25	37	0.46	2.16	0.44	53.97	79.87	0.88	0.44
Marshall	42.555	46.942	4.387	18,800	4	Divided	Rural	60	76.60	0.7	2.79	0	21	81	102	1.51	0.00	0.26	53.81	67.77	0.88	0.00
Marshall	46.942	51.398	4.456	19,200	4	Divided	Rural	60	76.29	0.7	2.75	0	19	76	95	1.56	0.00	0.25	48.67	60.84	0.80	0.00

Table 3-1 Purchase Parkway Crash Analysis as a Parkway Facility

Source: Collision Report Analysis for Safer Highways (CRASH) database, and the Kentucky Transportation Center's Analysis of Traffic Accident Data in Kentucky (2005-2009)

■	Crash Rate Segment (CRF = 0.9-0.99)
■	High Crash Rate Segment (CRF >= 1.0)
■	Concerned Fatal Crash Segment

Legend
 Abbreviations shown are defined as follows: MP – Milepoint; ADT – Average Daily Traffic (vehicles per day); PDO – Property Damage Only; HMVM – Hundred Million Vehicle Miles (vehicle miles per year divided by 100,000,000)

Crash Analysis Methodology
 The Kentucky Transportation Center Analysis of Traffic Accident Data in Kentucky (2005-2009) was referenced for crash analysis methodology, formulas, and factors to calculate crash rates.

4. Analysis as an Interstate Facility

In Kentucky, the average crash rate for an interstate facility is lower than a parkway facility. The statewide average crash rate for an interstate facility for urban areas is 97 acc/hmvm and 52 acc/hmvm for rural areas. The lower average crash rate for an interstate facility versus a parkway facility indicates that per vehicle-mile of travel there are fewer crashes.

Table 3-2 illustrates that there are three crash rate segments on the Purchase Parkway with a critical crash rate factor between 0.9 and 0.99. One of these segments in Graves County is between MP 24.747 and 25.100. This segment is located between the US 45 interchange and the end of the typical urban section. The other two crash segments in Marshall County are located at MP 41.035 – MP 42.555 and MP 46.942 – MP 51.398. The first segment is located between US 641 and KY 348 interchanges in Benton, KY. The second segment is located north of the US 68 Interchange and south of the I-24 Interchange on the Purchase Parkway.

There are four segments that are defined as high crash rate segments. They are located in the following mile post ranges for the Purchase Parkway: MP 25.1 - MP 27.452, MP 27.452 - MP 41.035, and MP 42.555 - MP 46.942. On I-24 there is one segment in Marshall County west of the Purchase Parkway (MP 24.941 – MP 26.558) that is a high crash rate segment.

Of the high crash rate segments identified in the analysis as an interstate facility, the MP 24.941 – MP 26.558 segment on I-24 had a critical

'spot'. For a rural interstate section, a critical 'spot' is defined to have had 18 crashes occur within a 0.3 mile segment of roadway. Nineteen crashes occurred between MP 29.41 and MP 25.200. This 'spot' coincides with the Purchase Parkway Interchange.



Figures 3-1 through **3-5** and **Table 3-2** illustrate the Purchase Parkway crash analysis as an interstate facility.

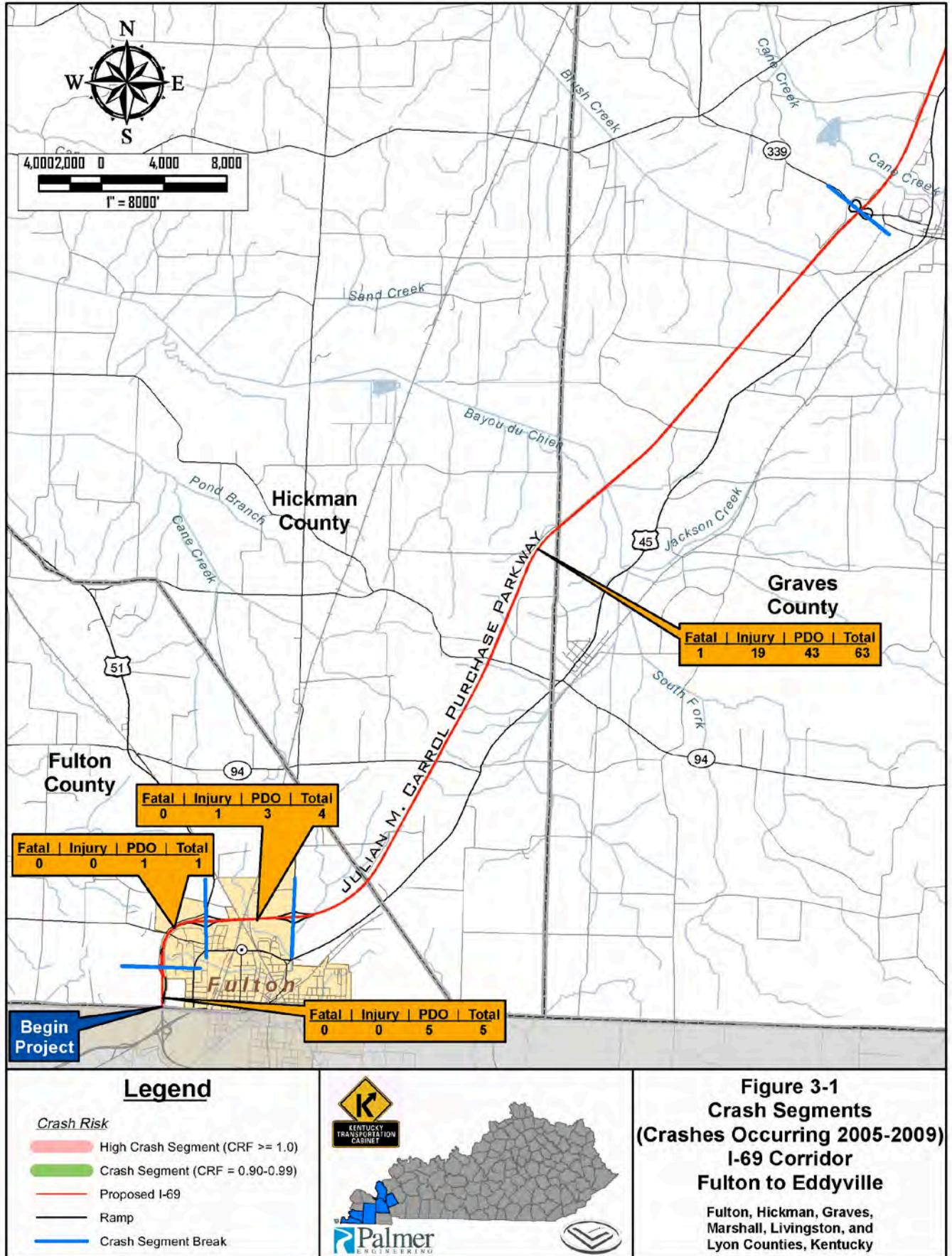
ROUTE	COUNTY	BEGIN MP	END MP	LENGTH (miles)	ADT	Lanes	Divided Undivided	Rural Urban	Avg Crash Rate	Critical Crash Rate	Avg Fatality Rate	Critical Fatality Rate	Crashes				HMVM	Rates per HMVM				Critical Crash Rate Factor	Critical Fatality Rate Factor
													Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total		
PURCHASE	Fulton	0.000	0.360	0.36	8,500	4	Divided	Rural	52	139.56	0.8	19.50	0	0	5	5	0.06	0.00	0.00	89.53	89.53	0.64	0.00
	Fulton	0.360	1.424	1.064	7,570	4	Divided	Rural	52	103.85	0.8	10.21	0	0	1	1	0.15	0.00	0.00	6.80	6.80	0.07	0.00
	Fulton	1.424	2.478	1.054	7,060	4	Divided	Rural	52	106.09	0.8	10.73	0	1	3	4	0.14	0.00	0.33	22.09	29.45	0.28	0.00
	Fulton/Hickman/Graves	2.478	13.645	11.167	7,290	4	Divided	Rural	52	67.58	0.8	3.03	1	19	43	63	1.49	0.67	0.44	28.94	42.40	0.63	0.22
	Graves	13.645	21.305	7.66	8,590	4	Divided	Rural	52	69.37	0.8	3.32	3	11	50	64	1.20	2.50	0.22	41.64	53.30	0.77	0.75
	Graves	21.305	22.239	0.934	14,300	4	Divided	Urban	97	150.44	0.5	6.24	0	4	16	20	0.24	0.00	0.25	65.64	82.05	0.55	0.00
	Graves	22.239	23.701	1.462	13,100	4	Divided	Urban	97	141.34	0.5	5.01	0	6	15	21	0.35	0.00	0.40	42.92	60.08	0.43	0.00
	Graves	23.701	24.747	1.046	12,000	4	Divided	Urban	97	152.19	0.5	6.49	0	0	6	6	0.23	0.00	0.00	26.19	26.19	0.17	0.00
	Graves	24.747	25.100	0.353	7,790	4	Divided	Urban	97	220.21	0.5	18.59	0	2	8	10	0.05	0.00	0.25	159.41	199.26	0.90	0.00
	Graves	25.100	27.452	2.352	7,790	4	Divided	Rural	52	85.62	0.8	6.28	1	8	29	38	0.33	2.99	0.28	86.73	113.64	1.33	0.48
	Graves/Marshall	27.452	41.035	13.583	7,320	4	Divided	Rural	52	66.07	0.8	2.79	1	34	91	126	1.81	0.55	0.37	50.15	69.44	1.05	0.20
	Marshall	41.035	42.555	1.52	16,700	4	Divided	Rural	52	80.37	0.8	5.26	1	11	25	37	0.46	2.16	0.44	53.97	79.87	0.99	0.41
	Marshall	42.555	46.942	4.387	18,800	4	Divided	Rural	52	67.47	0.8	3.01	0	21	81	102	1.51	0.00	0.26	53.81	67.77	1.00	0.00
Marshall	46.942	51.398	4.456	19,200	4	Divided	Rural	52	67.19	0.8	2.96	0	19	76	95	1.56	0.00	0.25	48.67	60.84	0.91	0.00	
I-24	Marshall	24.941	26.558	1.617	21,900	4	Divided	Rural	52	75.88	0.8	4.44	0	14	40	54	0.65	0.00	0.35	61.89	83.56	1.10	0.00
	Marshall/Livingston	26.558	30.742	4.184	28,200	4	Divided	Rural	52	64.89	0.8	2.60	4	24	59	87	2.15	1.86	0.41	27.40	40.40	0.62	0.71
	Livingston/Lyon	30.742	39.553	8.811	25,700	4	Divided	Rural	52	61.26	0.8	2.05	1	24	119	144	4.13	0.24	0.20	28.80	34.85	0.57	0.12
	Lyon	39.553	41.647	2.094	25,500	4	Divided	Rural	52	71.33	0.8	3.65	1	6	37	44	0.97	1.03	0.16	37.97	45.15	0.63	0.28

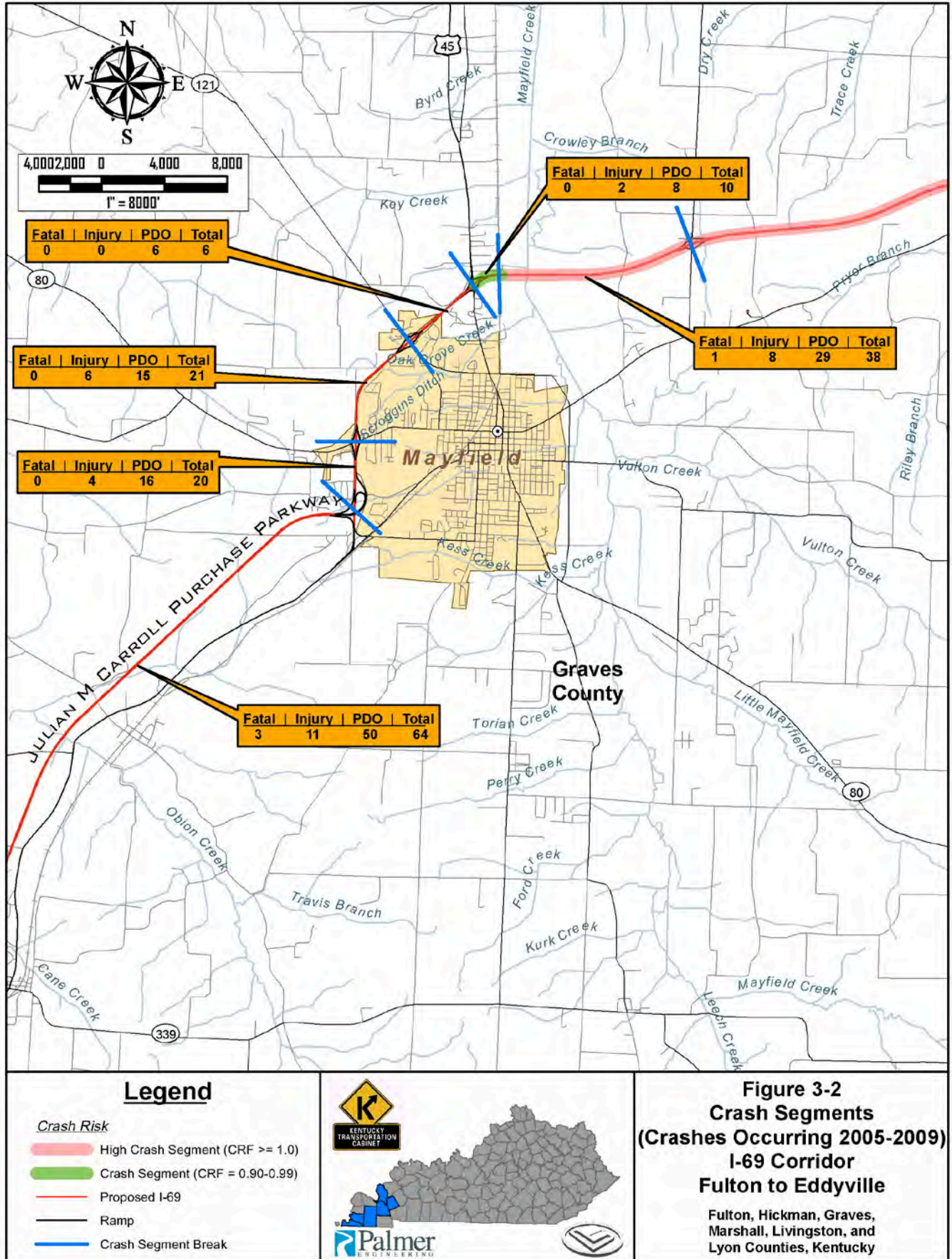
Table 3-2 Crash Analysis as an Interstate Facility

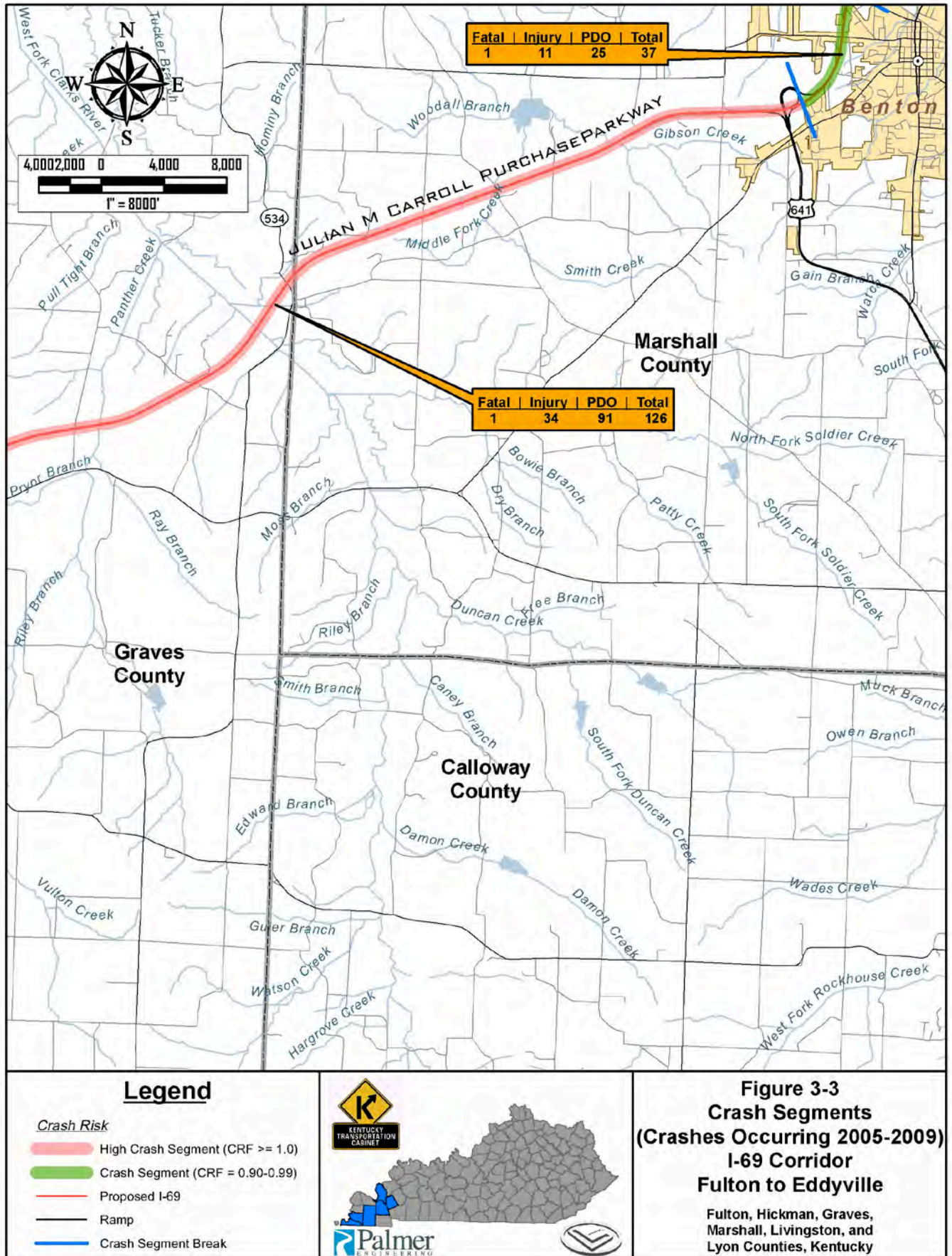
■ **Crash Rate Segment (CRF = 0.9-0.99)**
■ **High Crash Rate Segment (CRF => 1.0)**
■ **Concerned Fatal Crash Segment**

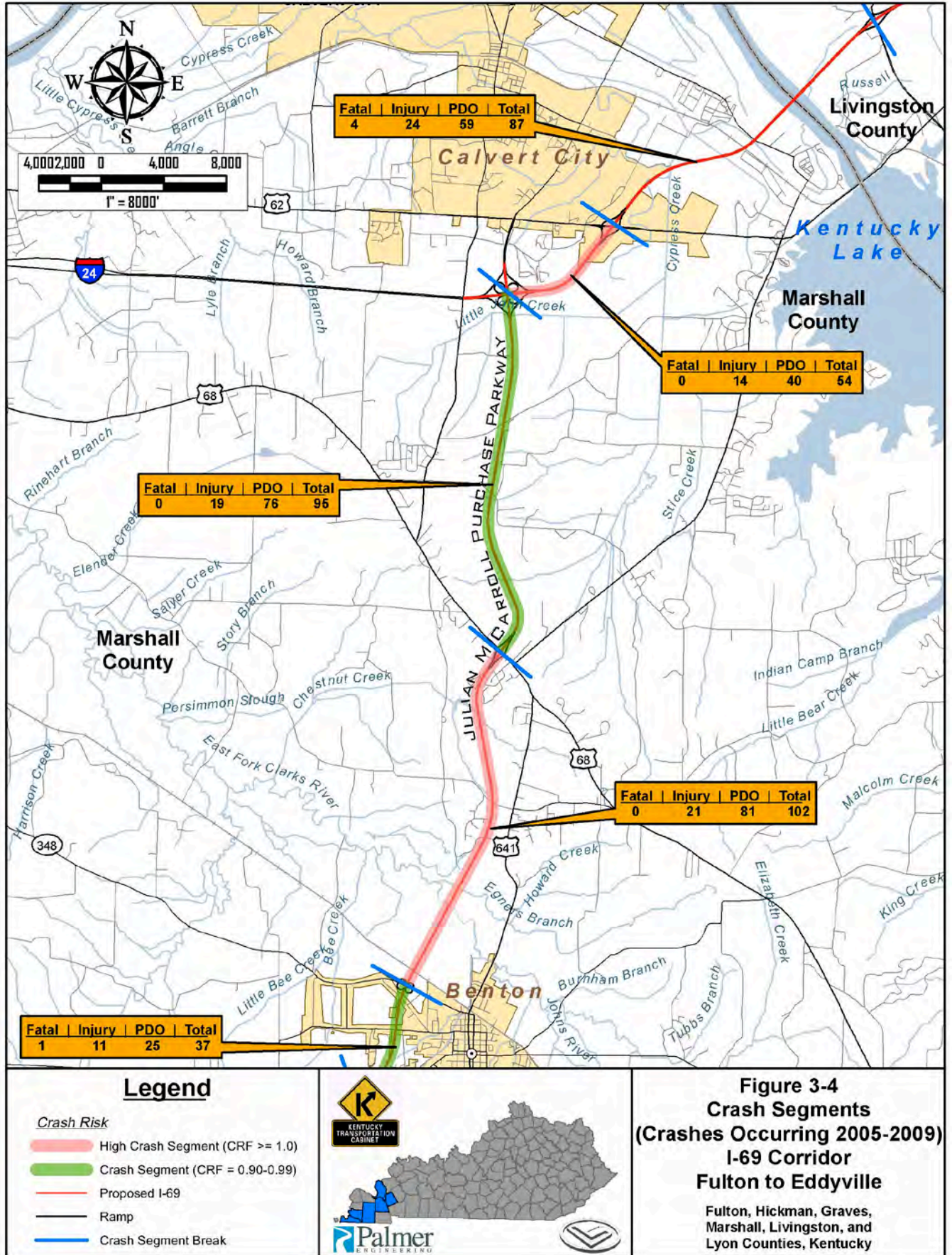
Legend
 Abbreviations shown are defined as follows: MP – Milepoint; ADT – Average Daily Traffic (vehicles per day); PDO – Property Damage Only; HMVM – Hundred Million Vehicle Miles (vehicle miles per year divided by 100,000,000)

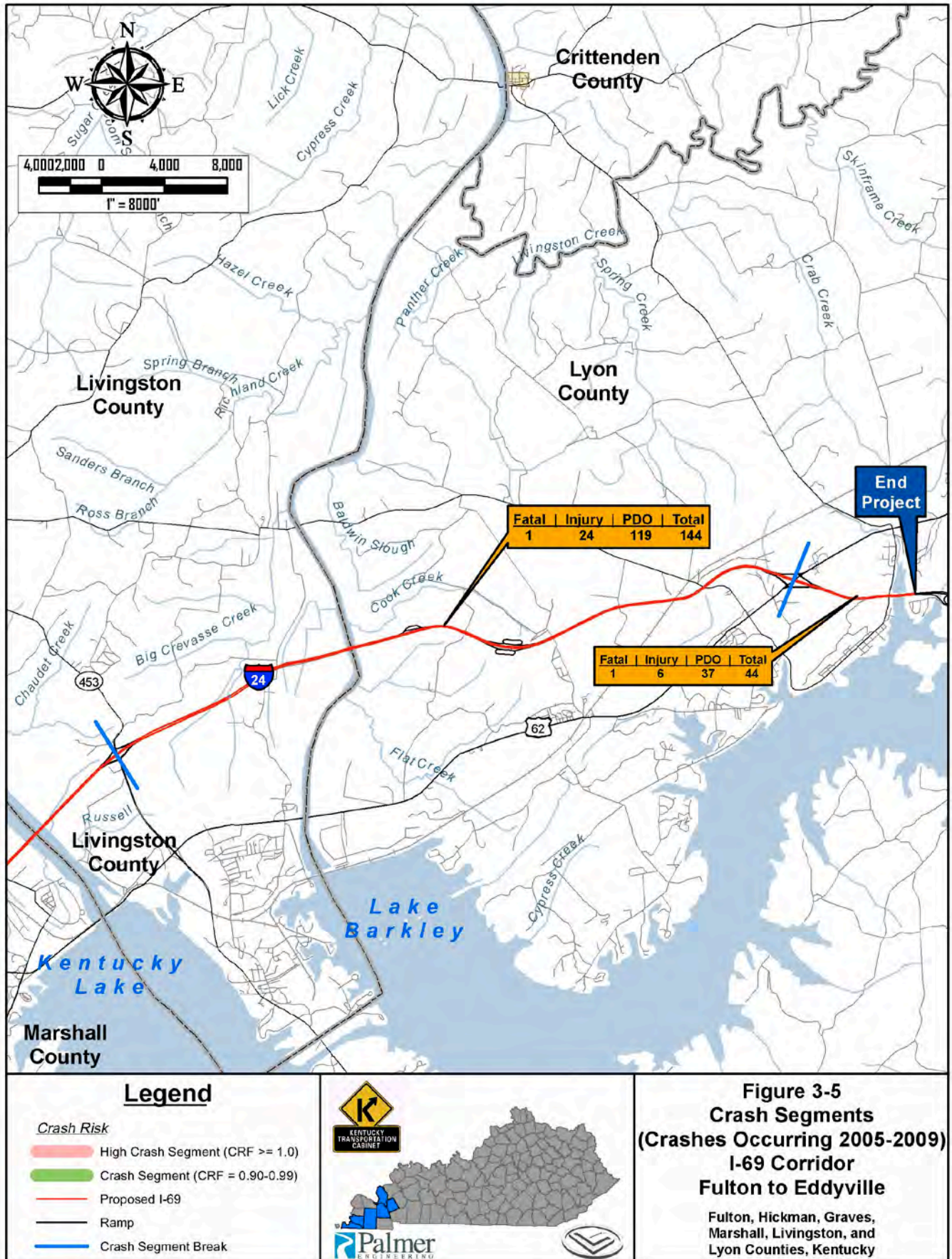
Crash Analysis Methodology
 The Kentucky Transportation Center Analysis of Traffic Accident Data in Kentucky (2005-2009) was referenced for crash analysis methodology, formulas, and factors to calculate crash rates.











5. Crash Causation Factors

Determining the crash causation factors for the high crash areas will help identify potential problem areas. To identify the cause of the crash for crash rate segments, crashes for each segment were grouped into major crash types which are summarized below:

High Crash Rate Segments-Critical Crash Rate Factor ≥ 1.0

Along the Purchase Parkway in Graves County, between MP 25.1 and MP 27.452, crash causation factors included the following:

- 50% (19 crashes) of crashes were coded *Ran Off Roadway*. This percentage is much higher than the 29% of *Ran Off Roadway* crashes that occurred along the project corridor. This segment of the Purchase Parkway has one horizontal curve and it meets the minimum horizontal curve guideline. There is one vertical curve within this segment that does not meet the current minimum stopping sight distance. The road conditions for 15 of the 19 crashes were wet or icy.

Along the Purchase Parkway in Graves and Marshall County, between MP 27.452 and MP 41.035, crash causation factors included the following:

- 43% (54 crashes) of crashes were coded *Ran Off Roadway*. This percentage is much higher than the 29% of *Ran Off Roadway* crashes that occurred along the project corridor. 34 of the 54 crashes occurred with wet/icy/slushy road conditions. This segment includes Exit 27 – KY 131.
- *Collisions with Animal* represented 24% of all crashes (30 of 126 crashes), which is greater than the 19% of all crashes on the project of the same type.

Along the Purchase Parkway in Marshall County, between MP 42.555 and MP 46.942, crash causation factors included the following:

- 43 of the 102 (42%) crashes on this segment were *Collision with Fixed Object*. This percentage is much greater than the 26% of collisions for the project corridor of the same type.

Along I-24 in Graves and Marshall County, between MP 24.941 and MP 26.558, crash causation factors included the following:

- *Collision with Fixed Object* accounted for 14 of the total 54 (26%) crashes on this segment.
- 9% of the crashes on the segment were *Rear-End* collisions and 16% of collisions were coded *Sideswipe*. These percentages are comparable to the same type collisions for the project corridor, 15% and 14% respectfully.

Crash Rate Segments – Critical Crash Rate Factor = 0.9-0.99

Along the Purchase Parkway in Graves County, between MP 24.747 and MP 25.1, crash causation factors included the following:

- *Collision with Fixed Object* accounted for 3 of the total 10 (30%) crashes on this segment, which is higher than the project corridor average.
- 30% of crashes (3 of 10) on this segment were *Other Type* collisions which is higher than the project corridor average.

Along the Purchase Parkway in Marshall County, between MP 41.035 and MP 42.555, crash causation factors included the following:

- *Sideswipe* collisions accounted for 16% (6 crashes) of all crashes in this segment, which is twice the 7% of all crashes of the same type for the project corridor. Only one of these *Sideswipe* crashes was coded to involve an interchange ramp.
- 38% of crashes (14 of 37) on this segment were *Ran Off Roadway* collisions which is higher than the project corridor average.

Along the Purchase Parkway in Marshall County, between MP 46.942 and MP 51.398, crash causation factors included the following:

- *Collision with Animal* accounted for 21% (20 of 95) of all crashes on this segment.

- Collision with Fixed Object, Ran Off Roadway, and All Other Types collisions were comparable to the average percentage of such collisions on the project corridor.

Concerned Fatal Crash Rate Segment Summary

Along the Purchase Parkway in Graves County, between MP 13.645 and MP 21.305, crash causation factors include the following:

- At MP 18.953, a fatal collision occurred that involved one vehicle. It had the following coding information: Directional Analysis=OTHER ROADWAY OR MID-BLOCK COLLISION, Weather=SNOWING, Roadway Character=STRAIGHT & LEVEL, Light Condition=DAYLIGHT. This collision occurred within 0.3 miles of a deficient vertical curve.
- At MP 20.573, a fatal collision occurred that involved one vehicle. It had the following coding information: Directional Analysis=OTHER COLLISIONS ON SHOULDER, Weather=CLOUDY/DRY, Roadway Character=CURVE & GRADE, Light Condition=DARK – HWY NOT LIGHTED.
- At MP 21.295, a fatal collision occurred that involved one vehicle. It had the following coding information: Directional Analysis=OVERTURNED IN ROADWAY, Weather=CLEAR/DRY, Roadway Character=CURVE & GRADE, Light Condition=DAWN. This collision occurred in the US 45 interchange in Graves County.

Along I-24 in Marshall and Livingston Counties, between MP 26.558 and MP 30.742, crash causation factors included the following:

- At MP 26.952, a fatal head on collision occurred. It had the following coding information: Directional Analysis=HEAD-ON COLLISION, Weather=CLEAR/DRY, Roadway Character=STRAIGHT & LEVEL, Light Condition=DAYLIGHT. This collision occurred at the US 62 interchange.
- At MP 28.048, a fatal collision occurred that involved one vehicle. It had the following coding information: Directional Analysis=COLLISION WITH A PEDESTRIAN, Weather=CLEAR/DRY, Roadway Character=STRAIGHT & LEVEL, Light Condition=DARK-HWY NOT LIGHTED.
- At MP 30.022, a fatal head-on collision occurred. It had the following coding information: Directional Analysis=VEHICLE GOING IN WRONG DIRECTION, Weather=CLOUDY/DRY, Roadway Character=STRAIGHT & GRADEL, Light Condition=DARK-HWY NOT LIGHTED.
- At MP 30.699, a fatal head-on collision occurred. It had the following coding information: Directional Analysis=VEHICLE GOING IN WRONG DIRECTION, Weather=CLEAR/DRY, Roadway Character=STRAIGHT & HILLCREST, Light Condition=DAYLIGHT. This collision occurred at the KY 453 interchange.

Table 3-3 Crash Types for Crash Segments

High Crash Rate Segments-Critical Crash Rate Factor >=1.0
Purchase Parkway - Graves County - MP 25.1 – MP 27.452

Crash Type	Crashes in Segment	% in Segment	Crashes on Parkway/Interstate	% on Parkway/Interstate
Collision with Animal	4	10.53%	111	18.75%
Collision with Fixed Object	8	21.05%	152	25.68%
Ran Off Roadway	19	50.00%	170	28.72%
All Other Types	7	18.42%	159	26.86%


 Segments with % crashes higher than average for Parkway/Interstate

Table 3-3 Crash Types for Crash Segments (continued)

Purchase Parkway - Graves/Marshall Counties - MP 27.452 – MP 41.035

Crash Type	Crashes in Segment	% in Segment	Crashes on Parkway/Interstate	% on Parkway/Interstate
Collision with Animal	30	23.81%	111	18.75%
Collision with Fixed Object	22	17.46%	152	25.68%
Ran Off Roadway	54	42.86%	170	28.72%
All Other Types	20	15.87%	159	26.86%

Purchase Parkway - Marshall County - MP 42.555 – MP 46.942

Crash Type	Crashes in Segment	% in Segment	Crashes on Parkway/Interstate	% on Parkway/Interstate
Collision with Animal	16	15.69%	111	18.75%
Collision with Fixed Object	43	42.16%	152	25.68%
Ran Off Roadway	15	14.71%	170	28.72%
All Other Types	28	27.45%	159	26.86%

I-24 - Marshall County - MP 24.941 – MP 26.558

Crash Type	Crashes in Segment	% in Segment	Crashes on Parkway/Interstate	% on Parkway/Interstate
Rear-End	9	16.67%	48	14.59%
Collision with Fixed Object	14	25.93%	63	19.15%
Sideswipe	9	16.67%	45	13.68%
All Other Types	22	40.74%	173	52.58%

Crash Rate Segments – Critical Crash Rate Factor = 0.9-0.99

Purchase Parkway - Graves County - MP 24.747 – MP 25.100

Crash Type	Crashes in Segment	% in Segment	Crashes on Parkway/Interstate	% on Parkway/Interstate
Collision with Animal	2	20.00%	111	18.75%
Collision with Fixed Object	3	30.00%	152	25.68%
Ran Off Roadway	2	20.00%	170	28.72%
All Other Types	3	30.00%	159	26.86%


 Segments with % crashes higher than average for Parkway/Interstate

Table 3-3 Crash Types for Crash Segments (continued)

Purchase Parkway - Marshall County - MP 41.035 – MP 42.555

Crash Type	Crashes in Segment	% in Segment	Crashes on Parkway/Interstate	% on Parkway/Interstate
Sideswipe	6	16.22%	44	7.43%
Collision with Fixed Object	5	13.51%	152	25.68%
Ran Off Roadway	14	37.84%	170	28.72%
All Other Types	12	32.43%	226	38.18%

Purchase Parkway - Marshall County - MP 46.942 – MP 51.398

Crash Type	Crashes in Segment	% in Segment	Crashes on Parkway/Interstate	% on Parkway/Interstate
Collision with Animal	20	21.05%	111	18.75%
Collision with Fixed Object	24	25.26%	152	25.68%
Ran Off Roadway	20	21.05%	170	28.72%
All Other Types	31	32.63%	159	26.86%

Table 3-4 Concerned Fatal Crash Segments


Concerned Fatal Crash Rate Segments

Purchase Parkway – Graves County – MP 13.645 – MP 21.305

Crash Type	Crashes in Segment	% in Segment	Crashes on Parkway/Interstate	% on Parkway/Interstate
Collision with Animal	17	26.56%	111	18.75%
Collision with Fixed Object	12	18.75%	152	25.68%
Ran Off Roadway	17	26.56%	170	28.72%
All Other Types	18	28.13%	159	26.86%

I-24 – Marshall/Livingston Counties – MP 26.558 – MP 30.742

Crash Type	Crashes in Segment	% in Segment	Crashes on Parkway/Interstate	% on Parkway/Interstate
Rear-End	22	25.29%	48	14.59%
Collision with Fixed Object	18	20.69%	63	19.15%
Sideswipe	10	11.49%	45	13.68%
All Other Types	37	42.53%	173	52.58%

 Segments with % crashes higher than average for Parkway/Interstate

6. Other Crash Considerations

In efforts to identify potential problem areas on Purchase Parkway, cross-over or head-on collisions and collisions near interchanges were further evaluated.

Cross-Over and Head-On Crashes

A trend of cross-over or head-on collisions on the parkway could indicate potential problems with median width and type, directional separation, or interchange signage. Between 2005 and 2009, there were six crashes coded *median cross-over* or *head-on collision*. These crashes are shown in **Table 3-5**. Cross-over and head-on crashes account for 0.3% of crashes on the Purchase Parkway and 1.2% of crashes on I-24.

COUNTY	MP	CRASH TYPE	INTERCHANGE WITH IN 1 MILE
Purchase Parkway			
Marshall	44.6	Median cross-over	No
Marshall	50.9	Head-on	I-24 (MP 51.4)
Interstate 24			
Marshall	27.0	Head-on	US 62 (MP26.6)
Marshall	28.7	Median cross-over	No
Livingston	31.1	Head-on	KY 453 (MP 30.7)
Lyon	36.0	Head-on	No

Table 3-5 Cross-Over and Head-on Crashes

Crashes at Interchanges

As part of this analysis, crashes occurring within 0.1 mile of either direction of an interchange were summarized by crash type. The interchange crash types are summarized as follows:

Purchase Parkway

- There were 272 crashes with in 0.1 mile of the interchanges on the Purchase Parkway
- 53% (146 of 272) were coded as ramp related crashes, including rear-end and other multiple-vehicle collisions.
- 15% (42 of 272) were collisions with a fixed object

I-24

- There were 219 crashes within 0.1 mile of the interchanges on I-24.
- 44% (97 of 219) were coded as ramp related crashes, including rear-end and other multiple-vehicle collisions.
- 10% (21 of 219) were collisions with a fixed object

Table 6-2 Interchange Crash Data provides a more detailed summary of crash types at interchanges along the Purchase Parkway and I-24

B. Traffic Volumes and Operational Level of Service

A traffic analysis was conducted on the Purchase Parkway to identify any traffic congestion problems related to increased traffic on the parkway from interstate traffic projections. Current and future traffic projections were conducted based on the parkway with and without I-69.

1. Current Traffic Volumes (2010)

The 2010 traffic volumes for this project are based on data from the KYTC HIS database and traffic classification counts conducted by KYTC in 2010. Truck percentage and directional design hourly volumes were calculated based on the classification counts in 2010.

The current traffic (2010) for the Purchase Parkway ranges from 7,060 vehicles per day (vpd) in Fulton, Kentucky, to 19,200 vpd near the I-24 interchange. On I-24, the traffic volumes range from 21,900 vpd near the Purchase Parkway interchange in Marshall County to 28,200 vpd near Calvert City, Kentucky, in Marshall County. The existing truck percentages on the Purchase Parkway range from 24.9% at Mayfield, Kentucky, in Graves County to 34.5% near Benton, Kentucky, in

Marshall County. On I-24, the truck percentage is 24.9%. Average Daily Traffic and corresponding truck percentages are provided below in **Table 3-6**.

COUNTY	BEGIN MP	END MP	LENGTH (miles)	Rural/Urban	% Trucks	2010 ADT	LOS
Purchase Parkway							
Fulton	0.000	0.360	0.36	Rural	31.5%	8,500	A
Fulton	0.360	1.424	1.064	Rural	31.5%	7,570	A
Fulton	1.424	2.478	1.054	Rural	31.5%	7,060	A
Fulton	2.478	3.434	0.956	Rural	31.5%	7,290	A
Hickman	3.434	8.352	4.918	Rural	31.5%	7,290	A
Graves	8.352	13.645	5.293	Rural	31.5%	7,290	A
Graves	13.645	21.305	7.66	Rural	31.5%	8,590	A
Graves	21.305	22.239	0.934	Urban	24.9%	14,300	A
Graves	22.239	23.701	1.462	Urban	24.9%	13,100	A
Graves	23.701	24.747	1.046	Urban	24.9%	12,000	A
Graves	24.747	25.100	0.353	Urban	34.5%	7,790	A
Graves	25.100	27.452	2.352	Rural	34.5%	7,790	A
Graves	27.452	34.487	7.035	Rural	34.5%	7,320	A
Marshall	34.487	41.035	6.548	Rural	34.5%	7,320	A
Marshall	41.035	42.555	1.52	Rural	32.9%	16,700	A
Marshall	42.555	46.942	4.387	Rural	32.9%	18,800	A
Marshall	46.942	51.398	4.456	Rural	32.9%	19,200	A
Interstate 24							
Marshall	24.941	26.558	1.617	Rural	24.9%	21,900	A
Marshall	26.558	29.352	2.794	Rural	24.9%	28,200	B
Livingston	29.352	30.742	1.39	Rural	24.9%	28,200	B
Livingston	30.742	33.880	3.138	Rural	24.9%	25,700	B
Lyon	33.880	39.553	5.673	Rural	24.9%	25,700	B
Lyon	39.553	41.647	2.094	Rural	24.9%	25,500	B

Table 3-6 Current Traffic Characteristic (2010)

Also included as part of this study is the Directional Design Hourly Volume (DDHV) in the context of minimum outside shoulders discussed in **Chapter IV**. The following table summarizes the DDHV data for the Purchase Parkway and I-24 based on classification counts conducted by KYTC in 2010 (**Appendix E**).

COUNTY	Rural/ Urban	DDHV	% Trucks at Peak Hour	DDHV	% Trucks at Peak Hour
Purchase Parkway					
		Northbound		Southbound	
Fulton	Rural	341	24%	360	24%
Hickman	Rural	293	24%	309	24%
Graves	Rural	345	24%	364	24%
Graves	Urban	574	21%	605	22%
Marshall	Rural	771	28%	813	29%
Interstate 24					
		Eastbound		Westbound	
Marshall	Rural	1132	15%	1194	17%
Livingston	Rural	1132	15%	1194	17%
Lyon	Rural	1032	16%	1088	19%

Table 3-7 Existing (2010) Directional Design Hourly Volumes (DDHV)

2. Future Traffic Volumes (2040) without I-69

The future traffic volumes (2040) were calculated using growth rates based on available previous studies. The future traffic volumes are shown in **Table 3-8**. The annual growth rate used for the Purchase Parkway and I-24 without I-69 is 2.0%. This growth rate resulted in a range from 12,800 vpd to 34,800 vpd on the Purchase Parkway and from 39,700 vpd to 51,100 vpd on I-24.

COUNTY	BEGIN MP	END MP	LENGTH (miles)	Rural/ Urban	% Trucks	2040 ADT	LOS
Purchase Parkway							
Fulton	0.000	0.360	0.36	Rural	31.5%	15,397	A
Fulton	0.360	1.424	1.064	Rural	31.5%	13,712	A
Fulton	1.424	2.478	1.054	Rural	31.5%	12,788	A
Fulton	2.478	3.434	0.956	Rural	31.5%	13,205	A
Hickman	3.434	8.352	4.918	Rural	31.5%	13,205	A
Graves	8.352	13.645	5.293	Rural	31.5%	13,205	A
Graves	13.645	21.305	7.66	Rural	31.5%	15,560	A
Graves	21.305	22.239	0.934	Urban	24.9%	25,902	B
Graves	22.239	23.701	1.462	Urban	24.9%	23,729	B
Graves	23.701	24.747	1.046	Urban	24.9%	21,736	A
Graves	24.747	25.100	0.353	Urban	34.5%	14,111	A
Graves	25.100	27.452	2.352	Rural	34.5%	14,111	A
Graves	27.452	34.487	7.035	Rural	34.5%	13,259	A
Marshall	34.487	41.035	6.548	Rural	34.5%	13,259	A
Marshall	41.035	42.555	1.52	Rural	32.9%	30,250	B
Marshall	42.555	46.942	4.387	Rural	32.9%	34,054	B
Marshall	46.942	51.398	4.456	Rural	32.9%	34,778	B
Interstate 24							
Marshall	24.941	26.558	1.617	Rural	24.9%	39,669	B
Marshall	26.558	29.352	2.794	Rural	24.9%	51,080	C
Livingston	29.352	30.742	1.39	Rural	24.9%	51,080	C
Livingston	30.742	33.880	3.138	Rural	24.9%	46,552	C
Lyon	33.880	39.553	5.673	Rural	24.9%	46,552	C
Lyon	39.553	41.647	2.094	Rural	24.9%	46,190	C

Table 3-8 Future Traffic Volumes without I-69

3. Future Traffic Volumes (2040) with I-69

The future traffic volumes (2040) with I-69 are shown in following table and figure. The annual growth rate used was 2.5%, which is consistent with previous studies. This growth rate resulted in

traffic volumes ranging from 14,800 vpd to 40,300 vpd on the Purchase Parkway and from 45,900 vpd to 53,900 vpd on I-24.

COUNTY	BEGIN MP	END MP	LENGTH (miles)	Rural/Urban	% Trucks	2040 ADT	LOS
Purchase Parkway							
Fulton	0.000	0.360	0.36	Rural	31.5%	17,829	A
Fulton	0.360	1.424	1.064	Rural	31.5%	15,879	A
Fulton	1.424	2.478	1.054	Rural	31.5%	14,809	A
Fulton	2.478	3.434	0.956	Rural	31.5%	15,291	A
Hickman	3.434	8.352	4.918	Rural	31.5%	15,291	A
Graves	8.352	13.645	5.293	Rural	31.5%	15,291	A
Graves	13.645	21.305	7.66	Rural	31.5%	18,018	A
Graves	21.305	22.239	0.934	Urban	24.9%	29,995	B
Graves	22.239	23.701	1.462	Urban	24.9%	27,478	B
Graves	23.701	24.747	1.046	Urban	24.9%	25,171	B
Graves	24.747	25.100	0.353	Urban	34.5%	16,340	A
Graves	25.100	27.452	2.352	Rural	34.5%	16,340	A
Graves	27.452	34.487	7.035	Rural	34.5%	15,354	A
Marshall	34.487	41.035	6.548	Rural	34.5%	15,354	A
Marshall	41.035	42.555	1.52	Rural	32.9%	35,029	B
Marshall	42.555	46.942	4.387	Rural	32.9%	39,434	C
Marshall	46.942	51.398	4.456	Rural	32.9%	40,273	C
Interstate 24							
Marshall	24.941	26.558	1.617	Rural	24.9%	45,937	C
Marshall	26.558	29.352	2.794	Rural	24.9%	59,151	C
Livingston	29.352	30.742	1.39	Rural	24.9%	59,151	C
Livingston	30.742	33.880	3.138	Rural	24.9%	53,907	C
Lyon	33.880	39.553	5.673	Rural	24.9%	53,907	C
Lyon	39.553	41.647	2.094	Rural	24.9%	53,488	C

Table 3-9 Future Traffic Volumes with I-69

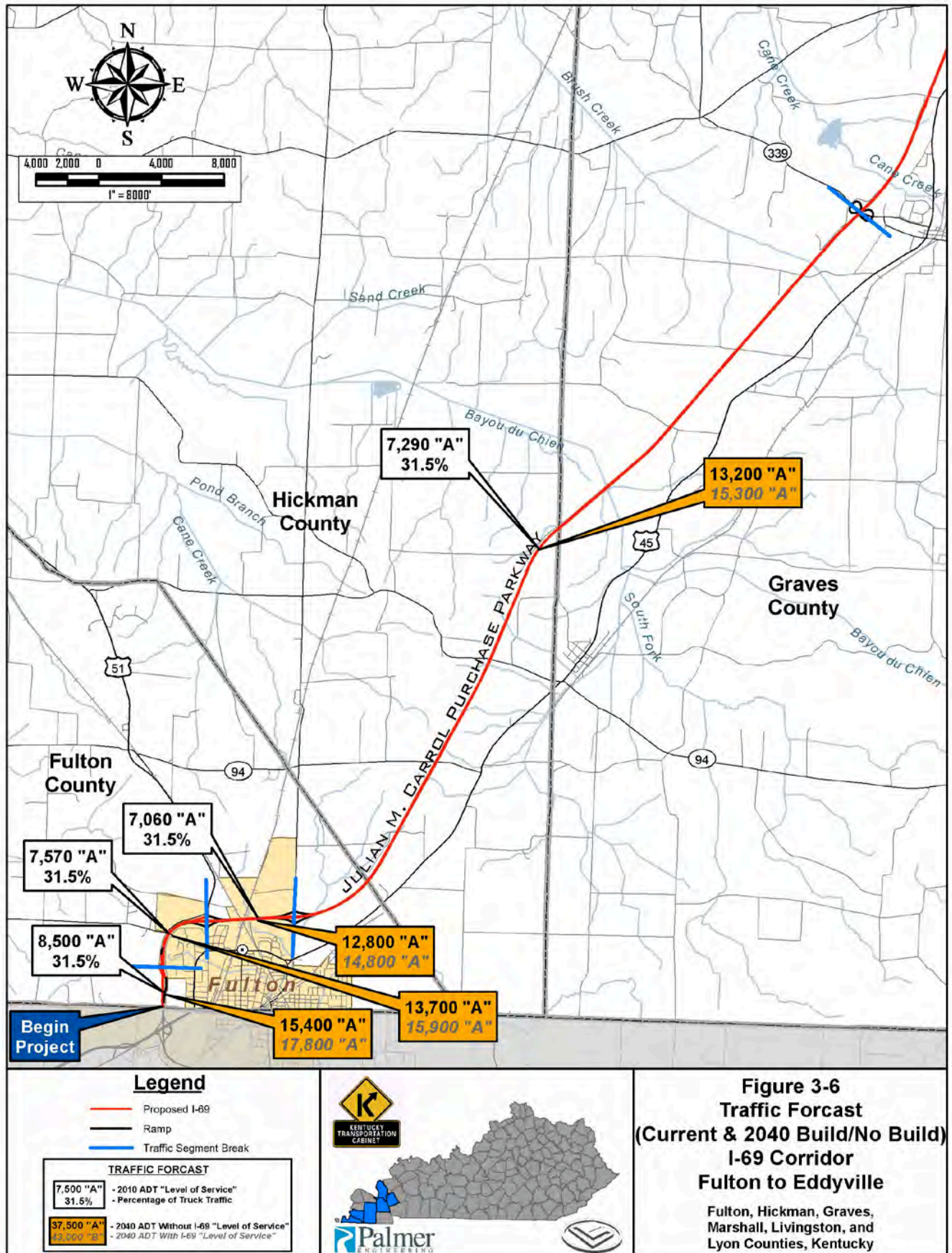
4. Level of Service

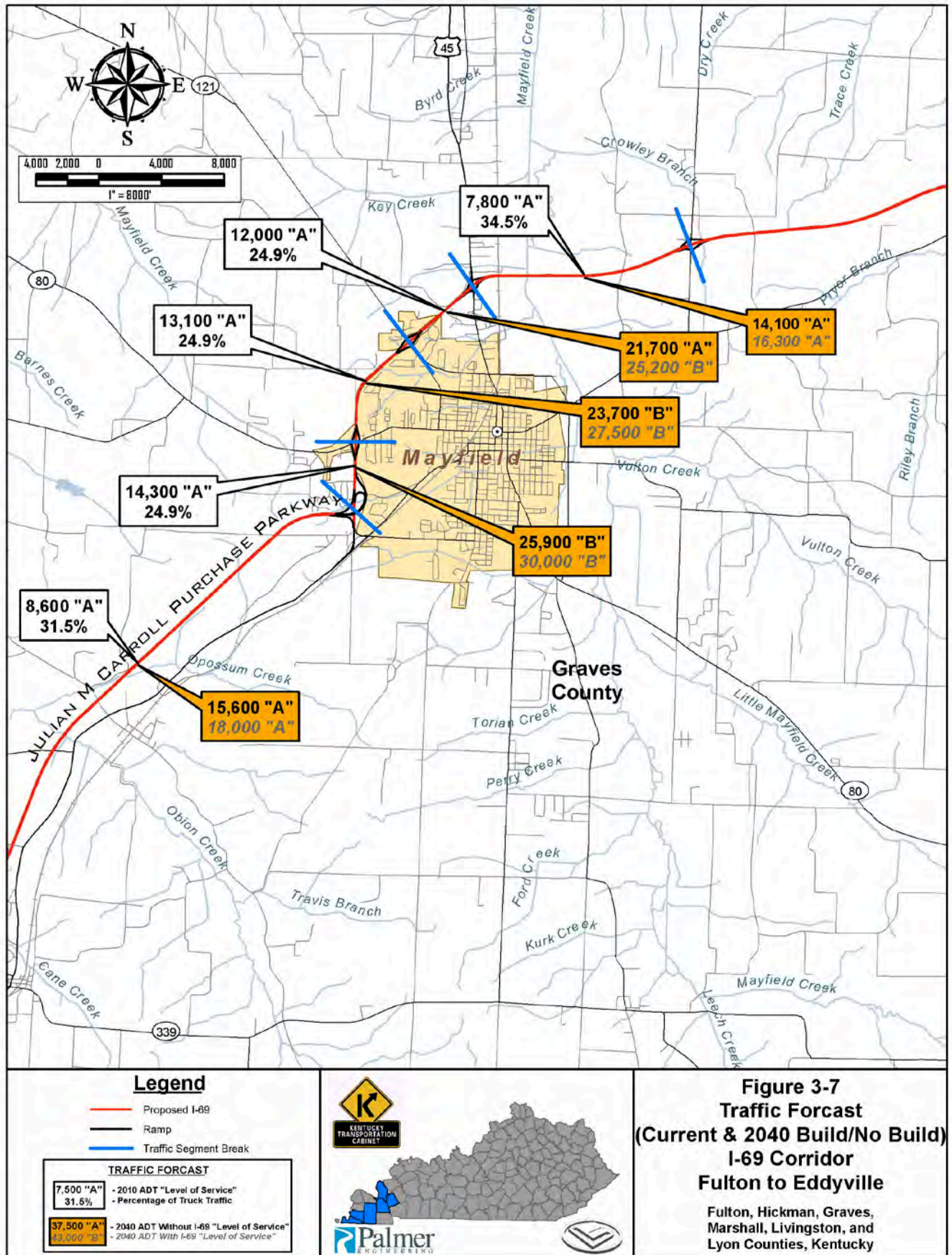
Level of service (LOS), as defined by the *Highway Capacity Manual 2000*, is a quality measure describing operational conditions within a traffic stream, based on services measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience. There are six LOS and are designated by the letters A through F. LOS A represents the best operating conditions and service and LOS F represents the worst.

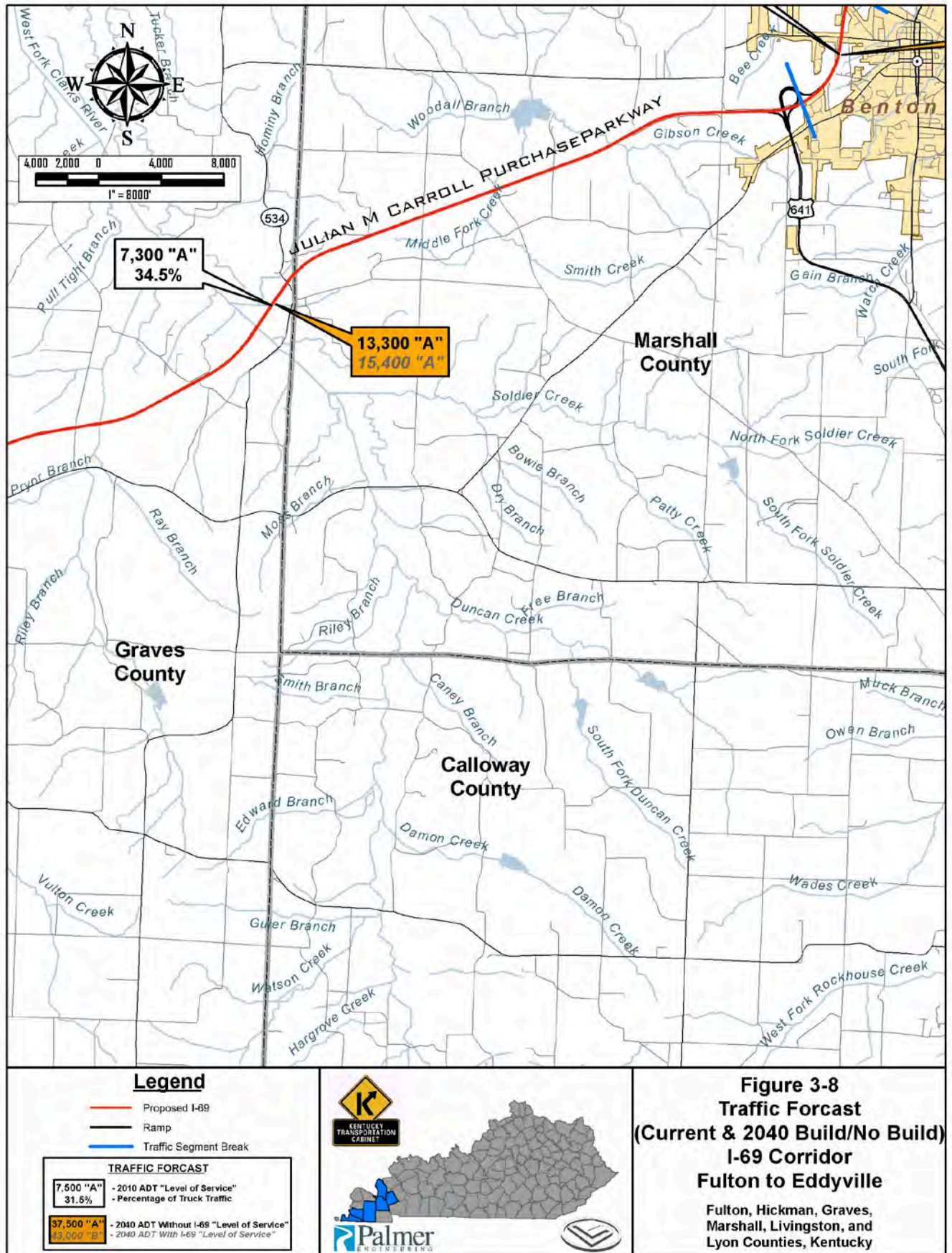
It is preferred to design a rural interstate to a LOS B, but a LOS C is acceptable. For an urban interstate, it is preferred to design to a LOS C, but a LOS D is acceptable. The *Highway Capacity Manual 2000 Edition* and Highway Capacity Software were used to calculate the LOS for the project area. The LOS was calculated based on the mainline geometry and traffic operations for the Purchase Parkway and I-24. This LOS does not represent the LOS for interchanges in the project corridor.

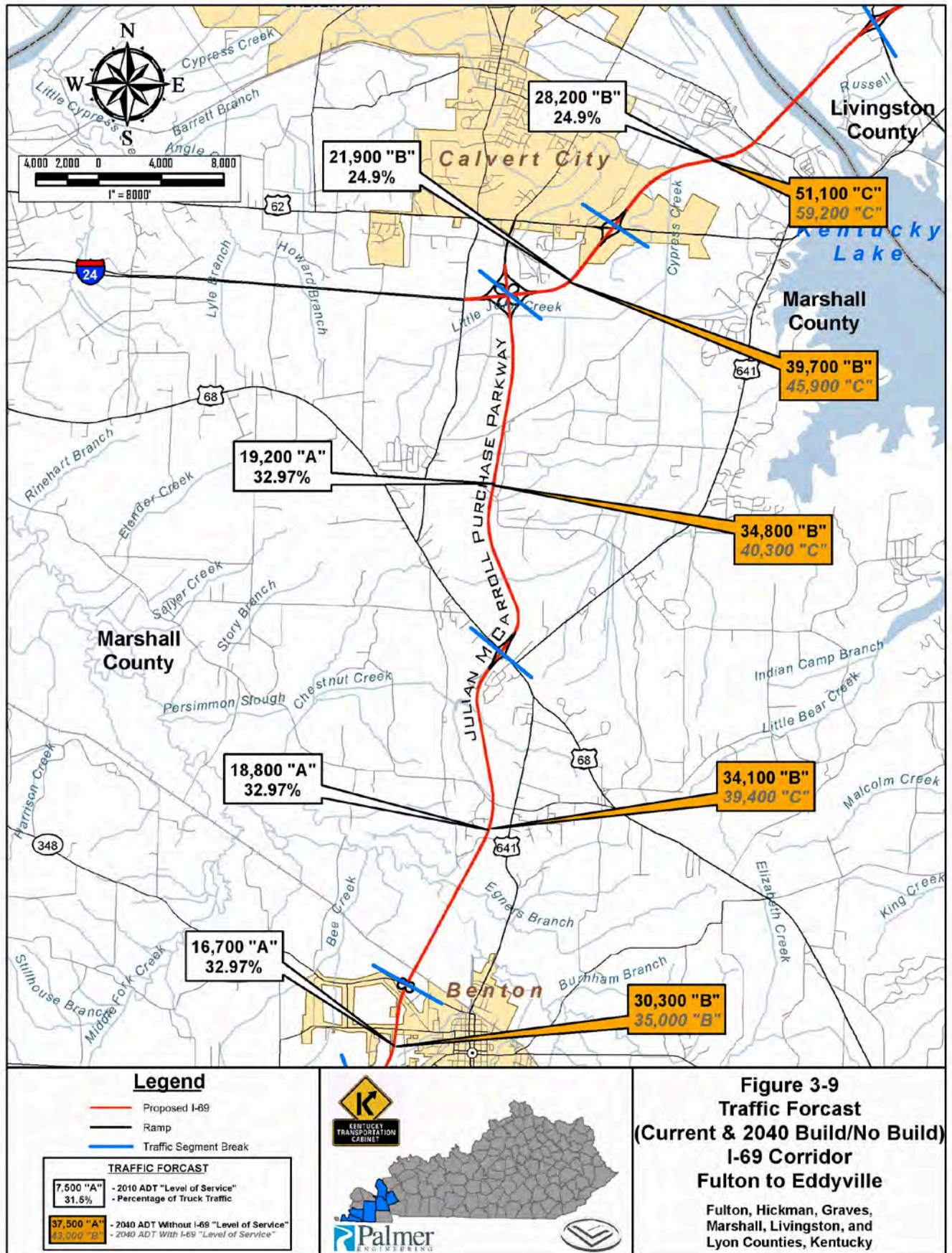
Referring to **Tables 3-8** and **3-9**, the Purchase Parkway and I-24 will operate at a LOS C or better with or without the estimated additional I-69 projected traffic. There is an increase from LOS B to LOS C with the increased projected I-69 traffic in Marshall County (MP 42.555 – 51.398) on the Purchase Parkway and on I-24 in Marshall County (MP 24.941 – MP 26.558).

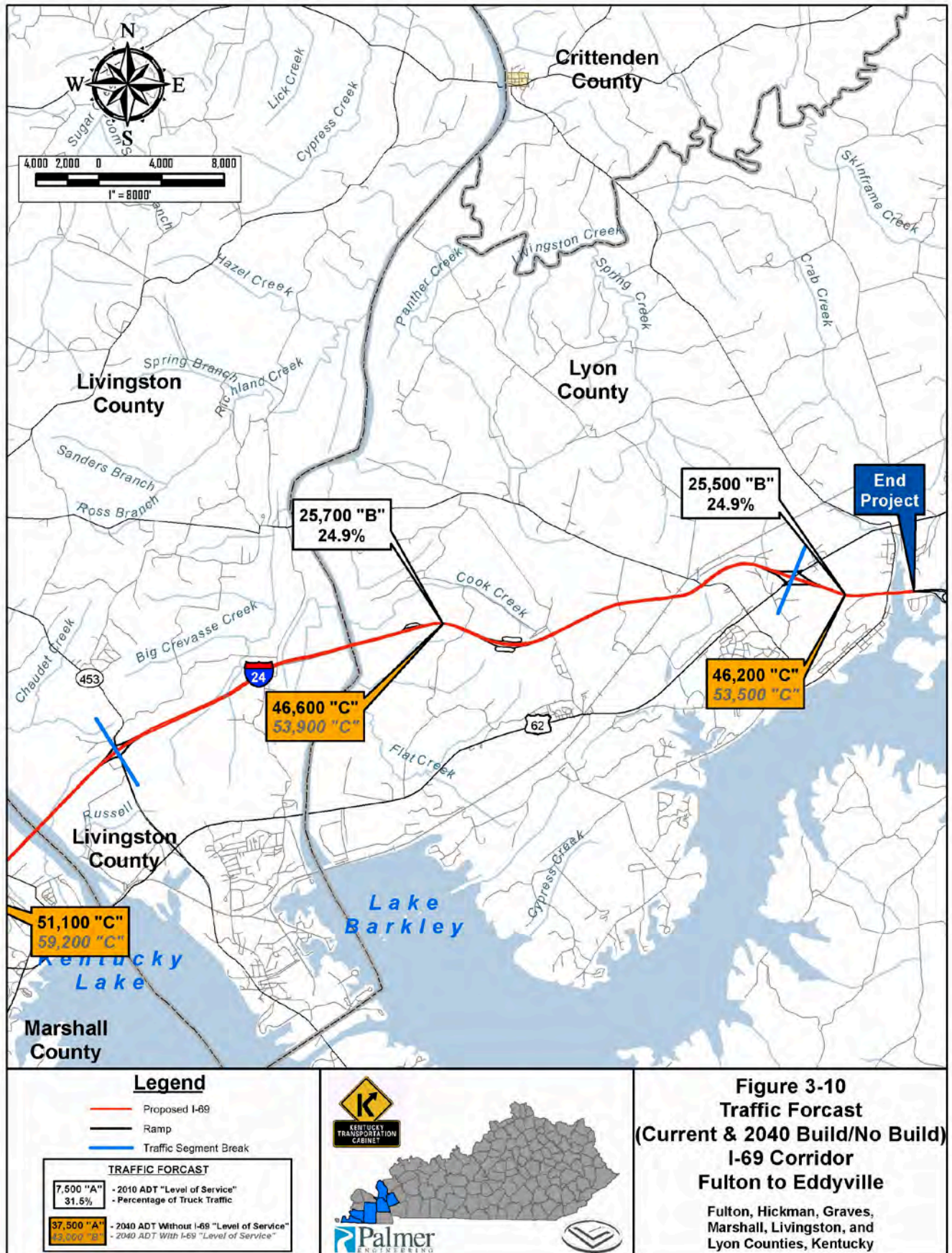
Figure 3-6 through **Figure 3-10** illustrates the current and future traffic projections with and without I-69 on the Purchase Parkway and I-24.











5. I-24 and Purchase Parkway Interchange Ramp Volumes

ADT traffic volumes were evaluated at the I-24 and Purchase Parkway interchange. The most current ramp traffic volumes were collected in 2007. The future traffic volumes (2040) without I-69 were calculated using a 2% annual growth rate. The future traffic volumes (2040) with I-69 were calculated using a 2.5% annual growth rate. The design hourly volumes (DHV) shown in **Figure 3-11** was calculated using 15% of the ADT. The northbound Purchase Parkway to eastbound I-24 movement has the largest ramp volume in the interchange with a projected 2040 DHV of 911 vehicles without I-69 and 1,054 vehicles with I-69. The second largest ramp volume is the westbound I-24 to southbound Purchase Parkway movement with a projected 2040 DHV of 820 vehicles without I-69 and 950 vehicles with I-69.

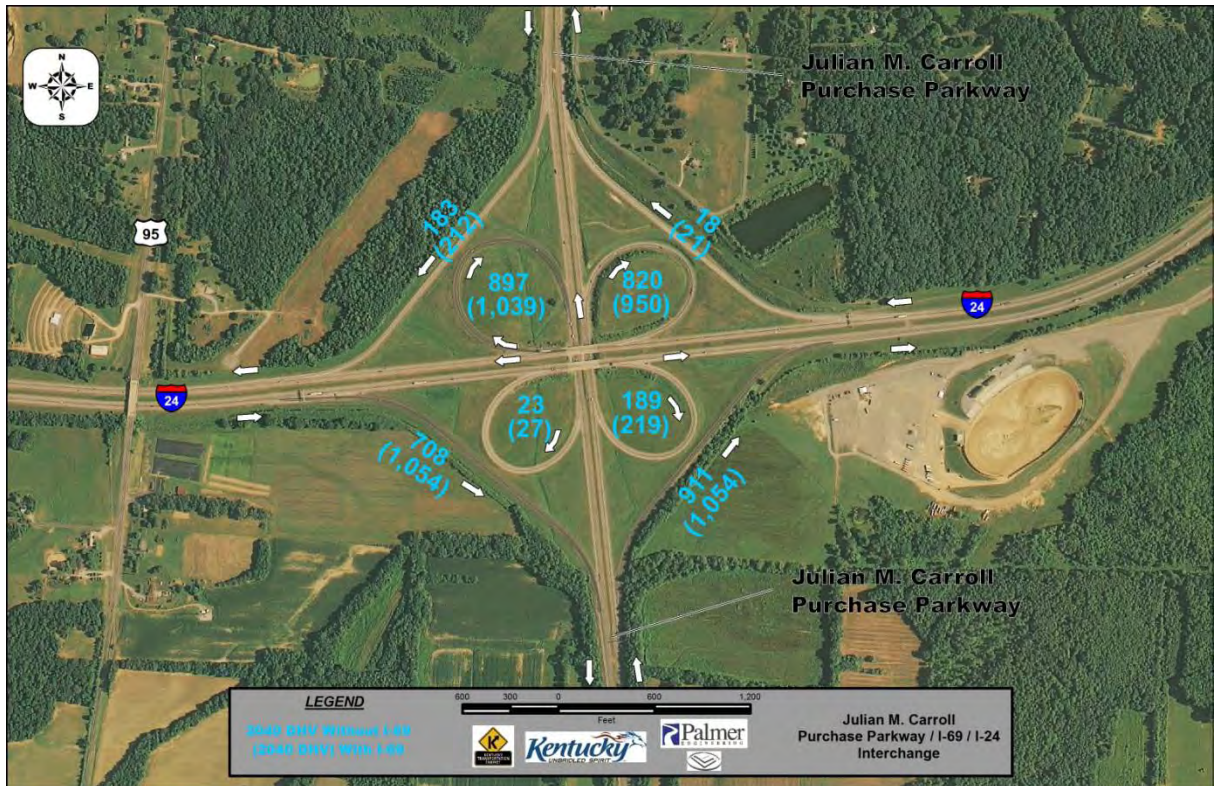


Figure 3-11 I-24 and Purchase Parkway Interchange Ramp Volumes

IV. MAINLINE GEOMETRY/TYPICAL SECTION

A Policy of Geometric Design of Highways and Streets, 5th Edition, 2004, published by the AASHTO provides design guidelines for streets and highways. This manual is commonly referred to as The Green Book. For guidelines related to roadside clearance, obstructions, and barriers, the *Roadside Design Guide, Current Edition*, written by AASHTO was referenced. More specific guidance on interstate standards is provided in AASHTO's *A Policy on Design Standards Interstate System, Current Edition*.

The intent of the AASHTO Green Book is to provide guidance for the design of highways and streets. The book references a recommended range of values for critical dimensions based on established practices and recent research. The Green Book provides minimum values for critical dimensions of roadway design.

In order for the Purchase Parkway to be designated as I-69, the existing geometric conditions need to be compared to current interstate guidelines set forth by AASHTO. To identify these deficiencies and necessary design modifications, design information on the Purchase Parkway was collected from the Kentucky Transportation Cabinet's HIS, *As-Built Plans* for the Parkway, and site visits and compared to the current AASHTO guidelines for interstate highway facilities. A summary of this information is provided in **Appendix F**.

This chapter reviews the existing design speed, median width and type, clear zone, horizontal and vertical alignments, superelevation rates, and sight distance and compares them to the AASHTO guidelines. Although this chapter is based on comparing the existing geometric conditions of the Purchase Parkway to the minimum AASHTO guidelines set forth in the Green Book and other references mentioned, the Green Book permits and encourages sufficient design flexibility based on the project needs.

A. Design Speed

The design speed of a facility dictates many of the geometric design parameters. The design speed selected is meant to satisfy a level of public expectation for safety and LOS.

The AASHTO minimum mainline design speed for a rural interstate is 70 mph and 50 mph for an urban interstate. According to the As-Built plans, this minimum requirement is met for the Purchase Parkway. The following sections and chapters that review existing mainline geometric conditions of the Purchase Parkway is based on these design speeds.

B. Typical Roadway Sections

The Purchase Parkway has two typical roadway cross-sections. The Mayfield Bypass section of the Purchase Parkway was designed to lesser standards than the Purchase Parkway and is considered to be held to urban design standards due to its location within the city of Mayfield. These typical sections generally represent the existing conditions along the Parkway; however, any improvements made over the life of the Parkway may have resulted in changes to information that may not be represented in this study. The typical sections of the Purchase Parkway are shown in **Figure 4-1**.

1. Lane Widths

The minimum lane width of a freeway facility is 12 feet. The existing lane widths of the Purchase Parkway mainline is 12 feet, therefore meeting the minimum AASHTO guidelines for interstate design.

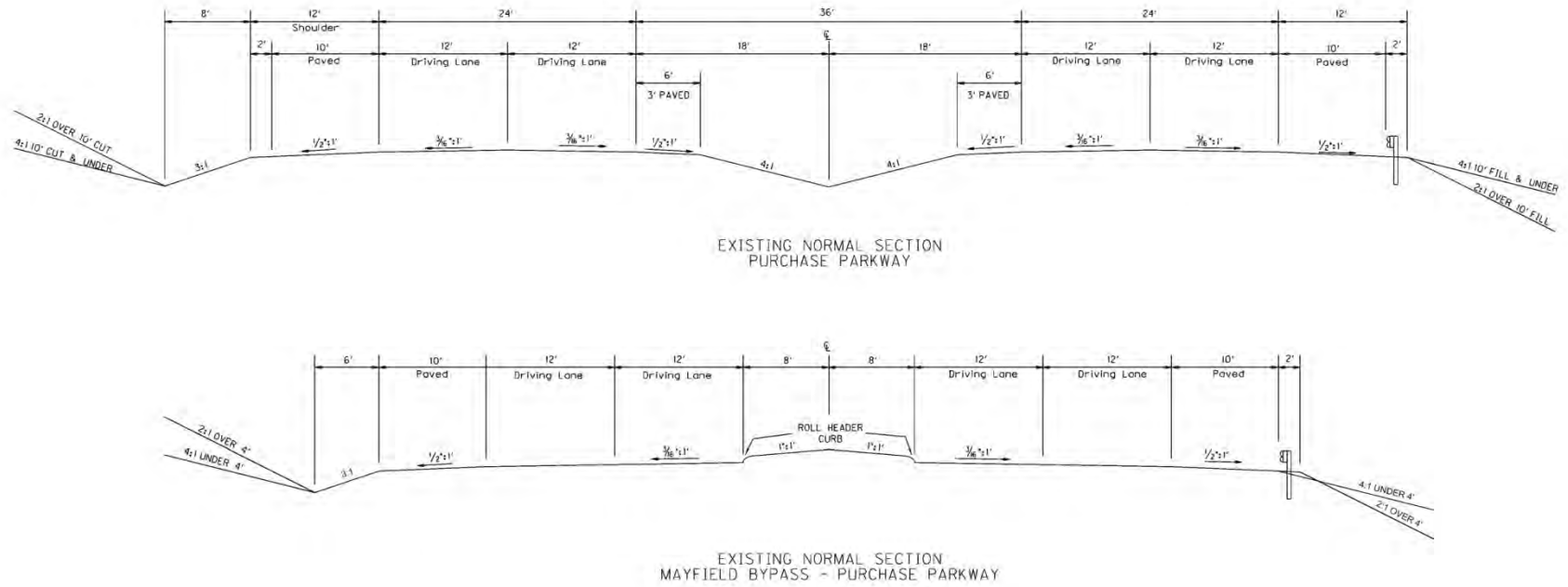


Figure 4-1 Existing Purchase Parkway Typical Section

Note: Typical Sections are based upon As-Built Plans provided by the Kentucky Transportation Cabinet

2. Shoulder Widths

The minimum AASHTO guidelines for interstate shoulders are 10 foot paved outside shoulder and 4 foot paved inside shoulder for each direction of travel. According to the As-built plans, the inside shoulder width on the Purchase Parkway is 6 foot wide, of which 3 feet is paved. The Mayfield Bypass does not have an inside shoulder. The AASHTO guideline for an inside shoulder is 4 feet paved. Therefore, the entire length of the Purchase Parkway does not comply with the AASHTO design guidelines for the inside shoulder width on freeways. Based on the existing (2010) directional design hourly volumes (**Table 3-7**), the Purchase Parkway outside paved shoulder width meets the minimum criteria.

A more detail summary of the locations of inside and outside widths is presented in **Table 4-1**.

PURCHASE PARKWAY	COUNTY	BEGIN MP	END MP	LENGTH (miles)	Shoulder Width (ft)	Paved Shoulder Width (ft)	AASHTO MINIMUM
OUTSIDE SHOULDERS	Fulton	0	3.43	3.43	12	10	10 ft paved (Truck DDHV ≤ 250 vph)
	Hickman	3.43	8.35	4.92	12	10	
	Graves	8.35	21.89	13.54	12	10	
	Graves	21.89	24.90	3.01	10	10	
	Graves	25.1	34.49	9.39	12	10	
	Marshall	34.49	51.40	16.91	12	10	
INSIDE SHOULDERS	Fulton	0	3.43	3.43	6	3	4 ft paved
	Hickman	3.43	8.35	4.92	6	3	
	Graves	8.35	21.9	13.55	6	3	
	Graves	21.89	24.90	3.01	0	0	
	Graves	24.90	34.49	9.59	6	3	
	Marshall	34.49	51.40	16.91	6	3	

Table 4-1 Summary of Inside and Outside Shoulder Widths

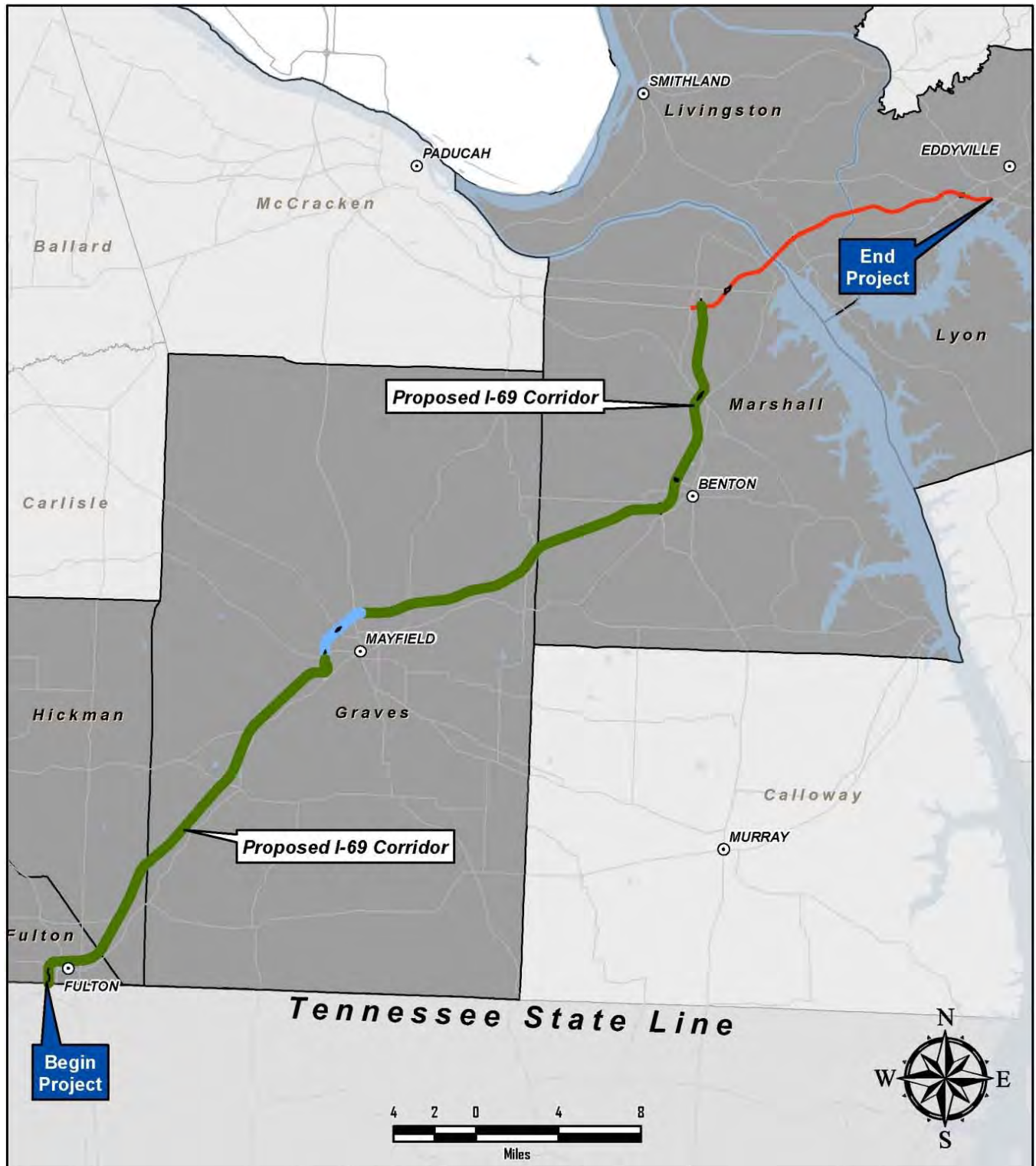
3. Median Width and Type

The purpose of a median separation is to provide driver comfort and safety. The width of a median is measured from the inside edge of the travel lane in one direction to the inside edge of the travel lane in the other direction. The median width also includes the shoulder width. The Purchase Parkway has a 36 foot depressed median, except for the Mayfield Bypass (MP 21.9-MP 24.9). This section has a 16 foot raised mountable median.

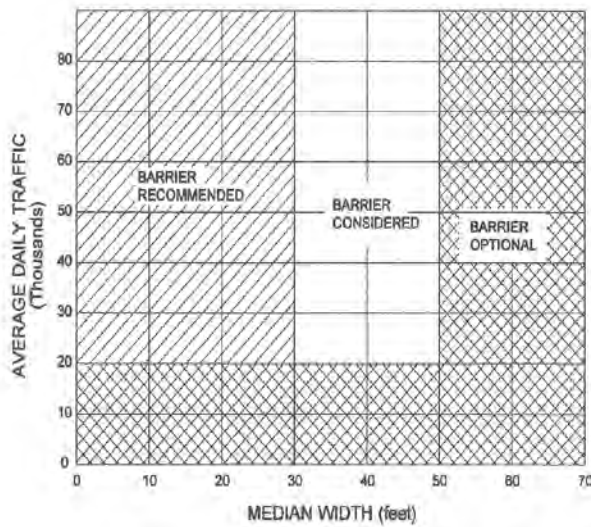


Mayfield Bypass median and inside paved shoulder width does not meet current interstate standard

Guidelines contained within the AASHTO Green Book recommends a minimum 50 foot median for a rural interstate. Within the AASHTO *Policy on Design Standards, Interstate System* a minimum 36 foot median for a rural interstate is required. According to the Green Book, the minimum guidelines for an urban interstate are based on the number of lanes and number of large trucks. A ten foot median is recommended for a four lane urban interstate. This would allow for 4 foot inside shoulders and a 2 foot concrete median. For urban interstates with more than two lanes in each direction, the minimum median width is 22 feet for truck volumes less than 250 vph and 26 feet for truck volumes greater than 250 vph.



<p>Legend</p> <p><i>Outside Shoulder, Inside Shoulder</i></p> <ul style="list-style-type: none"> — Outside: 10' (10' Paved), No Inside Shoulder — Outside: 12' (10' Paved), Inside: 6' (3' Paved) — Existing I-24 — Ramp 	<p>Palmer ENGINEERING</p>	<p>Figure 4-2 Shoulder Types</p> <p>I-69 Corridor Fulton to Eddyville Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties, Kentucky</p>
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Suggested guidelines for median barriers on high-speed roadways

The AASHTO's Roadside Design Guide is referenced to determine the warrants for barrier installation in the median. The guide provides a warrants chart based on average daily traffic, median width, and crash history. The chart to the left (Figure 6.1 in the *Roadside Design Guide*) is the warrant chart for the suggested guidelines for the installation of a median barrier on a high speed facility taken from Chapter 6 of the *Roadside Design Guide*. Chapter 6 has a detailed discussion of the installation of median barrier and curbs. Besides serving drainage purposes, curbs are not recommended on high speed facilities.

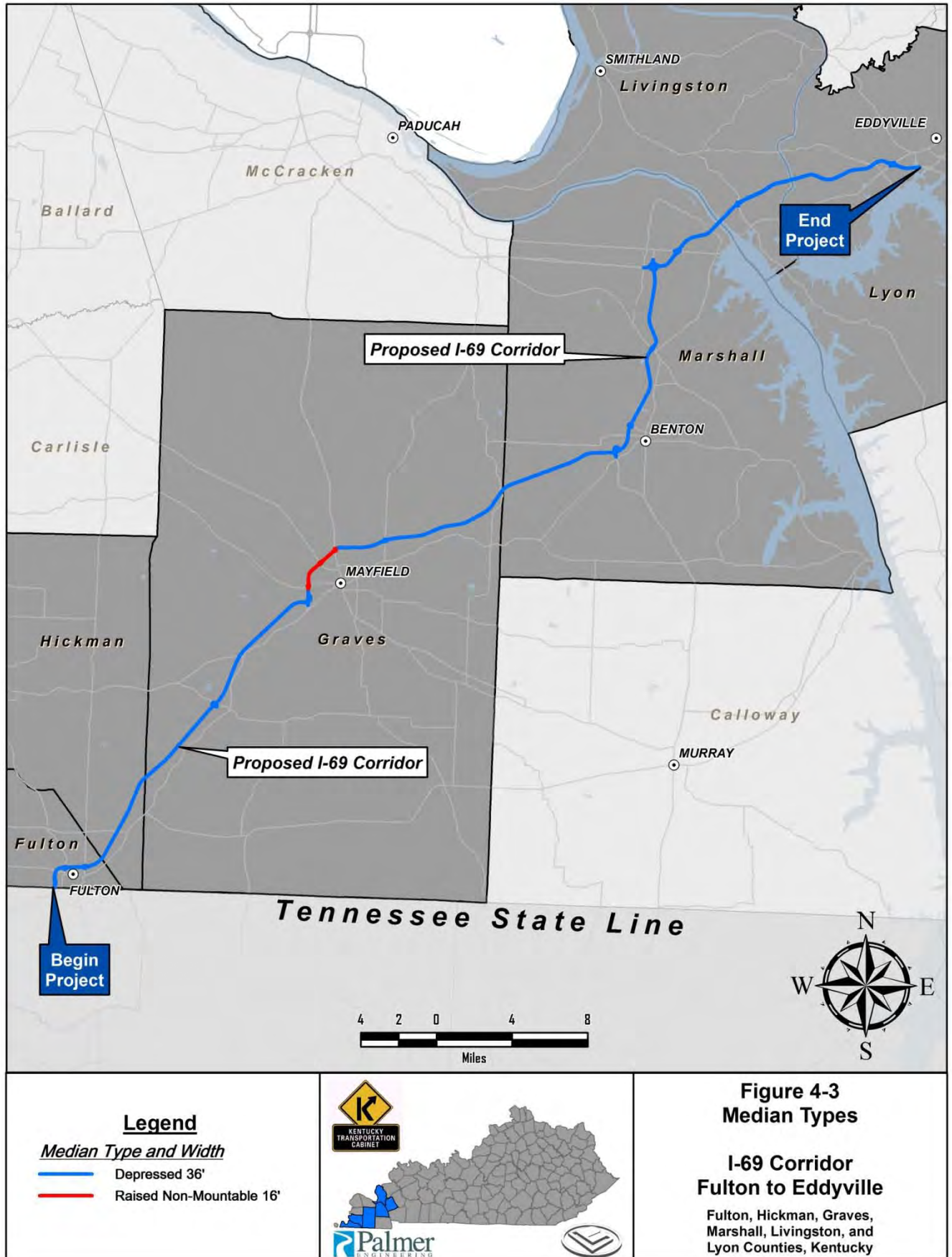
The median type and widths are provided below in **Table 4-2**. The location of these median attributes is shown in **Figure 4-3**.

The crash history review in Chapter III indicates that there is not a history of cross-over collisions on the Purchase Parkway. The current traffic (2010) volumes for the Purchase Parkway ranges from 7,060 vpd to 19,200 vpd. The future traffic (2040) volumes ranges from 12,800 vpd to 34,800 vpd without I-69 designation.

PURCHASE PARKWAY	COUNTY	BEGIN MP	END MP	LENGTH (miles)	MDIAN TYPE	MEDIAN WIDTH (ft)	AASHTO MINIMUM MEDIAN WIDTH
Rural	Fulton	0.00	3.43	3.43	Depressed	36	RURAL Depressed 36 ft
Rural	Hickman	3.43	8.35	4.92	Depressed	36	
Rural	Graves	8.35	20.50	12.15	Depressed	36	
Urban	Graves	20.50	21.89	1.39	Depressed	36	URBAN 10ft
Urban	Graves	21.89	24.90	3.01	Raised Non Mountable	16	
Urban	Graves	24.90	25.10	0.20	Depressed	36	
Rural	Graves	25.10	34.49	9.39	Depressed	36	
Rural	Marshall	34.49	51.40	16.91	Depressed	36	

Table 4-2 Summary of Median Types and Widths along Purchase Parkway

Based on the references, minimum guidelines and ADT, the Purchase Parkway median is in compliance.



4. Clear Zones

The clear zone of a roadway is the area outside the edge of the travel lane, including the shoulder, that is free of obstructions and used for vehicle recovery. Guidelines for clear zone widths for roadways based on design speed, traffic volumes, fill/cut slopes, ditch slopes, and distance from fixed obstructions such as bridge piers, sign supports, culvert headwalls, trees, rock outcrops, and drainage channels are provided in the *Roadside Design Guide*.

A foreslope of 1V:4H or flatter is considered recoverable and a foreslopes between 1V:3H and 1V:4H is considered traversable, but non-recoverable. As described in the guide, the recommendation for a clear zone range is 30 to 46 feet for recoverable fill slopes (1V:4H or flatter) on a roadway with a design speed of 70 mph and Average Daily Traffic (ADT) greater than 6,000 vehicles. Foreslopes steeper than 1V:4H, obstructions should not be present in the vicinity of the toes of these slopes.

For a roadway in a cut section, the clear zone for backslope of 1V:3H or flatter varies from 22 feet to 30 feet.

In the review of the as-built plans, the fill and cut slopes vary from 1V:2H to 1V:4H, see typical provided in **Figure 4-1**. These side slopes depend on the height of fill or depth of cut required. Based on information available in as-built plans, it is not possible to readily summarize the clear zone distances for the Purchase Parkway.



Clear zones may require guardrail placement or extensions to meet current standards.

5. Guardrail Placement and Condition

Guardrail is a longitudinal barrier to shield motorists from natural or man-made obstacles located on either side a traveled way. The guardrail protects a vehicle potentially leaving the roadway by absorbing the vehicle's energy, protecting it from roadside hazards. Chapter 5 of the *Roadside Design Guide* addresses the application and situation of guardrail placement. The information available on the as-built plans does not provide sufficient information to determine if the guardrail placement on the Purchase Parkway meets the current standard. A field review of the existing guardrail end treatment was conducted on the Purchase Parkway mainline and interchange ramps. This review showed that the end treatments on parkway meet current KYTC standards.

C. Horizontal Alignment

This section includes the review of existing superelevation and horizontal curvature for the Purchase Parkway and compares them to the current minimum standards.

1. Superelevation Rate

Superelevation (road banking) is the physical tilting of the roadway to help counteract the centripetal forces developed as a vehicle goes around a curve. Superelevation and friction keep a vehicle from sliding off the roadway while traveling through a curve. Superelevation is calculated based on design speed and horizontal curvature of the roadway. According to the AASHTO Policy on Geometric Design of Highways and Streets, current edition (commonly referred to as the Green Book), the maximum superelevation rate is controlled by climate conditions, terrain conditions, type of area, and frequency of slow-moving vehicles that may be affected by high superelevation rates. A specific maximum superelevation is not recommended for an Interstate facility by AASHTO. It is left to the user agencies to make specific policy decisions concerning allowable rates of superelevation. The KYTC policy references the Green Book for freeway geometric design. The Green Book provides superelevation rate tables for 4%, 6%, 8%, 10%, and 12% maximum superelevations. From review of as-builts plans and field inspection, it appears that the Purchase

Parkway was constructed on the basis of a 10% maximum superelevation. The superelevations for the Purchase Parkway are compiled in **Appendix F**.

2. Degree of Horizontal Curvature

The guidelines for horizontal curvature design were designated by degree of curvature during the design of the Purchase Parkway. The existing parkway was designed to a maximum 3° 00' curve, which equates to minimum radius of approximately 1910 feet. The current AASHTO guidance for minimum curvature references curve radius rather than degree of curvature. The current minimum horizontal curvature radius for a design speed of 70 mph for a rural interstate is 1810 feet, which equates to approximately 3°10' of curvature. The minimum radius for an urban interstate with a 50 mph design speed is 758 feet or approximately 7° 33' of curvature.



Horizontal curvature along the Purchase Parkway meets Interstate design guidelines

The smallest radius of curve is 1146 feet located on the Mayfield Bypass at MP 21.585 and MP 21.793, which equals a design speed of 59 mph with a 8% superelevation. Although this radius is the smallest, it meets the current minimum radius of 758 feet for an urban interstate with a design speed of 50 mph. The horizontal curves that are closest to exceeding the minimum radius for a rural interstate are located in Fulton County at MP 1.022 and Marshall County at MP 47.42. This curve has a radius of 1910 feet which still meets the minimum criteria. A compilation of horizontal curves is located in **Appendix F**.

D. Vertical Alignment

The vertical alignment of a roadway depends on the existing terrain. The changes in vertical terrain result in the introduction of vertical curves into the roadway design. A vertical curve is classified as sag or crest. A sag vertical curve is used when traversing through a valley, and a crest vertical curve is introduced when traveling over a hill. The design of these curves is critical to stopping sight distance. Stopping sight distance is measured by how far a driver can see while traveling in typical vehicle and still maintain the ability to stop within that distance. Design speed, length of vehicle light beam distance, and approach and departing grades determine the length of crest and sag vertical curves.

1. Vertical Grade

The Purchase Parkway is considered to have a rolling terrain. AASHTO guidelines designate a maximum 4% vertical grade for a rural section with a rolling terrain and 5% for an urban section. According to the as-built plans, the Purchase Parkway meets this maximum criteria for both urban and rural sections. The largest vertical grade is at the vertical curves located at MP 21.075 (3.84%), MP 21.245 (3.84%, -3.87%), and MP 21.463 (-3.87%) on the Mayfield Bypass. The review of the as-built plans for the Purchase Parkway showed all sections met the maximum vertical grade.

2. Vertical Length of Curve

The minimum length of curve was calculated based on the vertical grades of the approaching alignment, recommended rate of vertical curvature for a design speed. There are eight vertical curves that do not meet the recommended vertical length of curve based on this calculation. These eight vertical curve deficiencies are located in rural areas in Graves County at:

- MP 14.965 – Actual 500 feet, calculated minimum 696 feet;
- MP 18.727 – Actual 600 feet, calculated minimum 624 feet;
- MP 25.320 – Actual 536 feet, calculated minimum 584 feet;
- MP 27.517 – Actual 500 feet, calculated minimum 543 feet;
- MP 28.625 – Actual 400 feet, calculated minimum 438 feet;
- MP 29.970 – Actual 400 feet, calculated minimum 416 feet;
- MP 31.144 – Actual 400 feet, calculated minimum 467 feet;
- MP 31.646 – Actual 600 feet, calculated minimum 608 feet.

3. Stopping Sight Distance

Stopping sight distance was reviewed for all vertical curves on the Purchase Parkway. Stopping sight distance is calculated based on design speed and sight distance. The minimum stopping sight distance for a 70 mph design is 730 feet and 425 feet for a 50 mph design speed. There are three vertical curves that have less than the minimum stopping sight distance. They are located in rural areas in Graves County at:

- MP 14.965 – Calculated Stopping Sight Distance 554 feet;
- MP 18.727 – Calculated Stopping Sight Distance 727 feet;
- MP 25.320 – Calculated Stopping Sight Distance 721 feet.

V. BRIDGES AND OVERPASSES

The Purchase Parkway has eighty-five bridge structures; a detailed table of data for these structures is included in **Appendix F**. A mainline bridge is a structure that carries the parkway through traffic. An overpass bridge is a structure that carries traffic over the mainline roadway. The following table illustrates the breakdown of mainline and overpass bridges and culverts on the Purchase Parkway. Only overpass bridge structures on I-24 were evaluated for this study since it is already an interstate. There are five overpass bridge structures on I-24 within the project study area.

TYPE	NUMBER OF STRUCTURES
MAINLINE BRIDGES	46
OVERPASSES	35
CULVERTS	6
TOTAL	87

Table 5-1 Summary of Structure Types for Purchase Parkway

The concerns for mainline bridge structures on the Parkway and overpass bridge structures passing above the Parkway and I-24 are the lateral widths and vertical height clearance. In addition to geometric design, functional and structural condition of these bridges is a concern. Given the increased traffic, especially truck traffic, the functional and structural capacity of these structures is a safety concern. The following discussions include lateral and vertical clearance issues, condition, and safety appurtenances to identify structures in the project area that are deficient under current design guidelines.

A. Lateral Clearances of Bridges

Lateral clearance is defined as the width of a mainline bridge, measured from curb to curb. The lateral clearances of the Parkway’s mainline bridges were evaluated to determine if they were too narrow to meet current design guidelines.

According to the latest AASHTO guidelines, *A Policy on Design Standards Interstate System* (American Association of State Highway Officials, 2005), the width of a mainline bridge, less than 200 feet in length, shall equal the full paved width of the approach roadway. The full paved width of the approach roadway includes the two 12 foot travel lanes, 4 foot inside paved shoulder and 10 foot outside paved shoulder for a total of 38 feet. AASHTO guidelines allow bridges over 200 feet in length be evaluated individually and that the minimum distance between the travel lane and barrier shall be at least 3.5 feet for these bridges. Therefore, a bridge over 200 feet can have a minimum clearance of 31 feet (2-12 foot lanes and 3.5 foot inside and outside shoulders). Further guidance is given on evaluating long bridges, over 200 feet in length. From page 506 the Green Book:



The mainline bridges that do not meet minimum lateral clearance are greater than 200 ft long.

“On bridges longer than 60 m [200 ft], some economy in substructure costs may be gained by building a single structure rather than twin parallel structures. In such cases, the approach shoulder widths are provided and a median barrier is extended across the bridge.”

Further discussion of lateral clearance on long bridges is found on page 760 of the same reference:

“On long bridges, particularly on long-span structures where cost per square meter [yard] is greater than the cost on short-span structures, widths that are less than ideal may be acceptable; however, economy alone should not be the governing factor in determining structure widths. The analysis of traffic characteristics, safety features, emergency contingencies, and benefit/cost ratios should be fully considered before the desirable structure width is compromised.”

The following paragraph taken from *A Policy on Design Standard Interstate System, 2005* addresses existing bridges to remain in place when a route is to be incorporated in the interstate system:

“Mainline bridges on the interstate system and bridges on routes to be incorporated into the system may remain in place if, as a minimum, they meet the following: a) the bridge cross section consists of 3.6 m (12 ft) lanes, 3.0 m (10 ft) shoulder on the right and 1.1 m (3.5 ft) shoulder on the left; b) for long bridges, the offset to the face of parapet or bridge rail on both the left and right is 1.1 m (3.5 ft) measured from the edge of the nearest traveled lane; c) bridge railing shall meet or be upgraded to current standards.”

The following table (**Table 5-2**) summarizes the length and horizontal width of the Purchase Parkway mainline bridges. The horizontal clearance is measured from curb to curb.

All bridges less than 200 feet in length meet the minimum horizontal clearance criteria. All of the bridges that do not meet the minimum horizontal clearance, of which there are 10, are over 200 feet in length.

In addition to the lateral clearance, mainline bridge side railings/barriers are a concern for bridges on the interstate system. Since the construction of the bridges on the Purchase Parkway, side railings/barriers design guidelines have been modified to improve crash worthiness. Mainline bridges on the Purchase Parkway are constructed with a vertical barrier railing with aluminum handrail and a 10 inch high curb, or brush block, which does not meet current specifications. Retrofitting options are available to update the bridge railing to meet current crash worthy criteria.



Figures 5-1 through **5-5** show the locations of the bridges that do not meet the minimum lateral clearance. The bridge lateral clearance was not collected for I-24 structures.

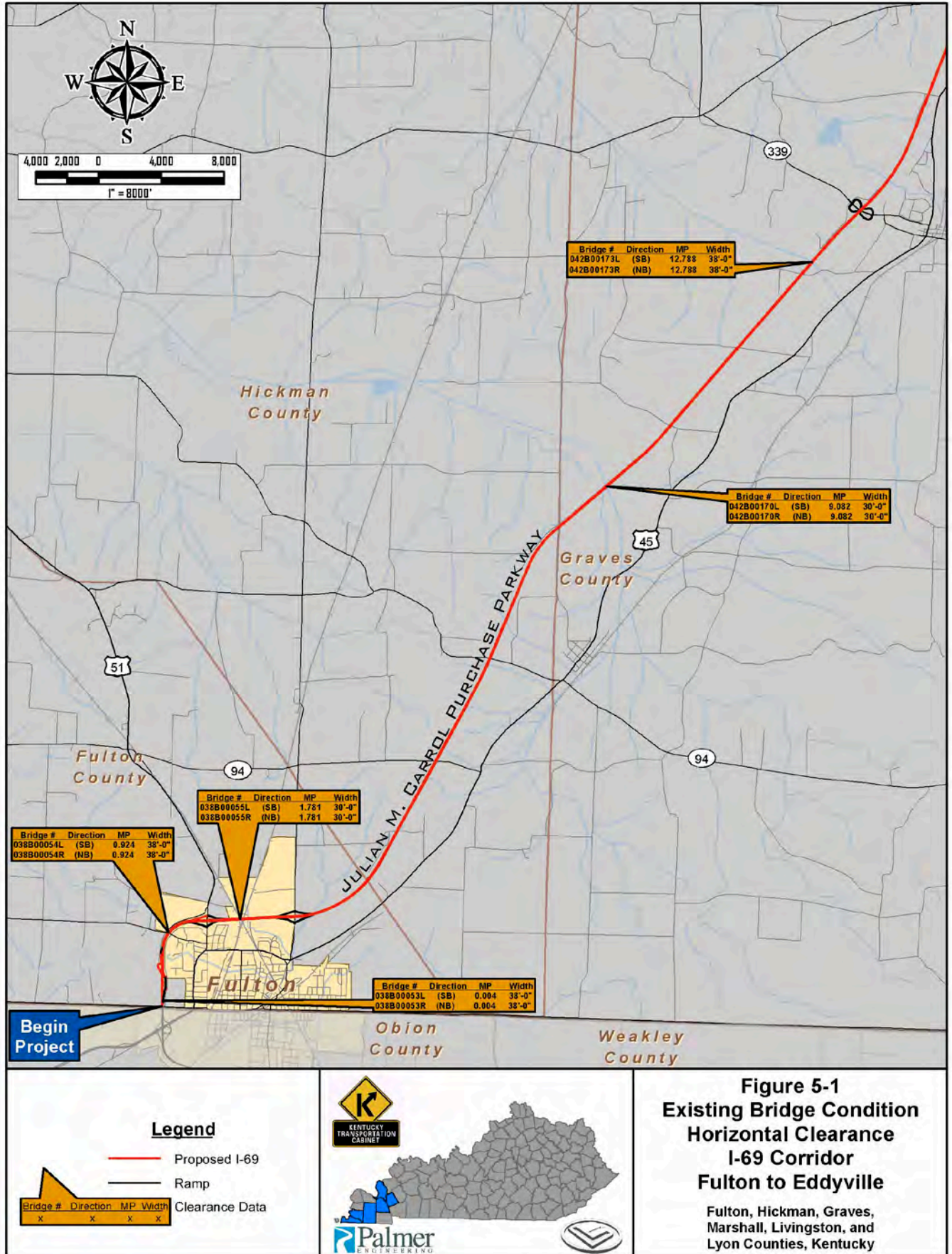
All of the Purchase Parkway mainline bridges have side railings/barriers that do not meet current standards.

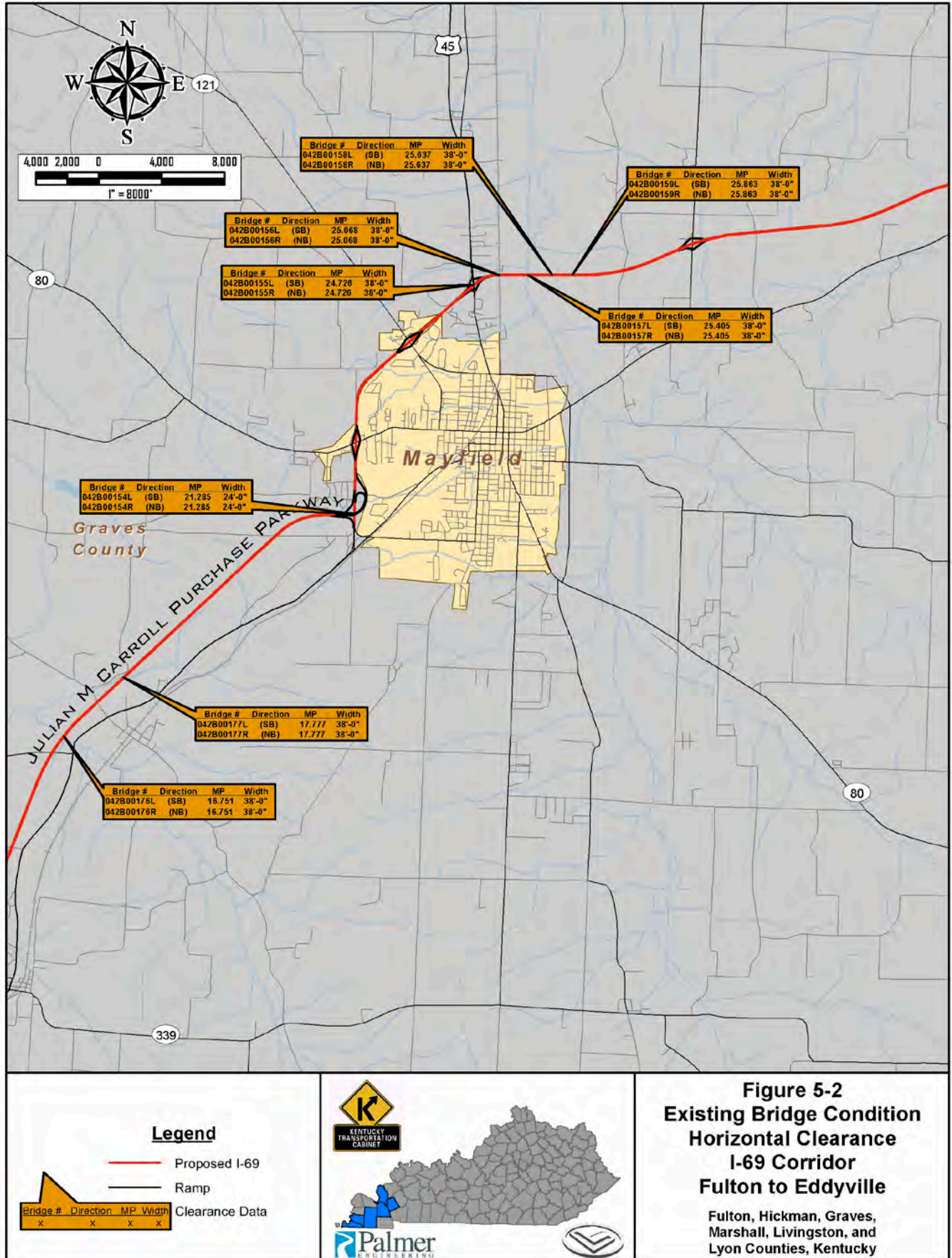
COUNTY	BRIDGE NO.	MP	FEATURES INTERSECTED	LENGTH (ft)	WIDTH (GUTTER TO GUTTER)(ft)
Fulton	B00053L	0.004	KY 116 (W. State Line St)	153	38
Fulton	B00053R	0.004	KY 116 (W. State Line St)	153	38
Fulton	B00054L	0.924	KY 166 (Middle Rd)	142	38
Fulton	B00054R	0.924	KY 166 (Middle Rd)	142	38
Fulton	B00055L	1.781	Illinois Central RR	539	30
Fulton	B00055R	1.781	Illinois Central RR	485	30
Graves	B00170L	9.082	Bayou Du Chien Creek	310	30
Graves	B00170R	9.082	Bayou Du Chien Creek	310	30
Graves	B00173L	12.788	Bush Creek	127	38
Graves	B00173R	12.788	Bush Creek	127	38
Graves	B00176L	16.751	Obion Creek	208	38
Graves	B00176R	16.751	Obion Creek	208	38
Graves	B00177L	17.777	Opossum Creek	211	38
Graves	B00177R	17.777	Opossum Creek	211	38
Graves	B00154L	21.285	US 45 (Mayfield Bypass)	208	24
Graves	B00154R	21.285	US 45 (Mayfield Bypass)	201	24
Graves	B00155L	24.726	US 45 (Paducah Rd)	238	38
Graves	B00155R	24.726	US 45 (Paducah Rd)	238	38
Graves	B00156L	25.068	Illinois Central RR	172	38
Graves	B00156R	25.068	Illinois Central RR	172	38
Graves	B00157L	25.405	Mayfield Creek	208	38
Graves	B00157R	25.405	Mayfield Creek	208	38
Graves	B00158L	25.637	Mayfield Creek Overflow No. 1	97	38
Graves	B00158R	25.637	Mayfield Creek Overflow No. 1	97	38
Graves	B00159L	25.863	Mayfield Creek Overflow No. 2	97	38
Graves	B00159R	25.863	Mayfield Creek Overflow No. 2	97	38
Graves	B00162L	31.402	Panther Creek	189	38
Graves	B00162R	31.402	Panther Creek	189	38
Graves	B00163L	31.573	Panther Creek Overflow	97	38
Graves	B00163R	31.573	Panther Creek Overflow	97	38
Graves	B00165L	33.524	West Fork Clarks River Overflow 1	97	38
Graves	B00165R	33.524	West Fork Clarks River Overflow 1	97	38
Graves	B00166L	33.686	West Fork Clarks River	208	38
Graves	B00166R	33.686	West Fork Clarks River	208	38
Graves	B00167L	34.012	West Fork Clarks River Overflow 2	108	38
Graves	B00167R	34.012	West Fork Clarks River Overflow 2	108	38
Graves	B00168L	34.330	KY 564 (Wayne Freeman Rd)	132	38
Graves	B00168R	34.330	KY 564 (Wayne Freeman Rd)	132	38
Marshall	B00074L	42.748	NC & St. Louis RR	158	38
Marshall	B00074R	42.748	NC & St. Louis RR	158	38
Marshall	B00075L	43.277	Clarks River Relief No. 1	291	30
Marshall	B00075R	43.277	Clarks River Relief No. 1	291	30
Marshall	B00076L	43.614	East Fork Clarks River	519	30
Marshall	B00076R	43.614	East Fork Clarks River	519	30
Marshall	B00064L	43.872	Clarks River Relief No. 2	387	30
Marshall	B00064R	43.872	Clarks River Relief No. 2	387	30

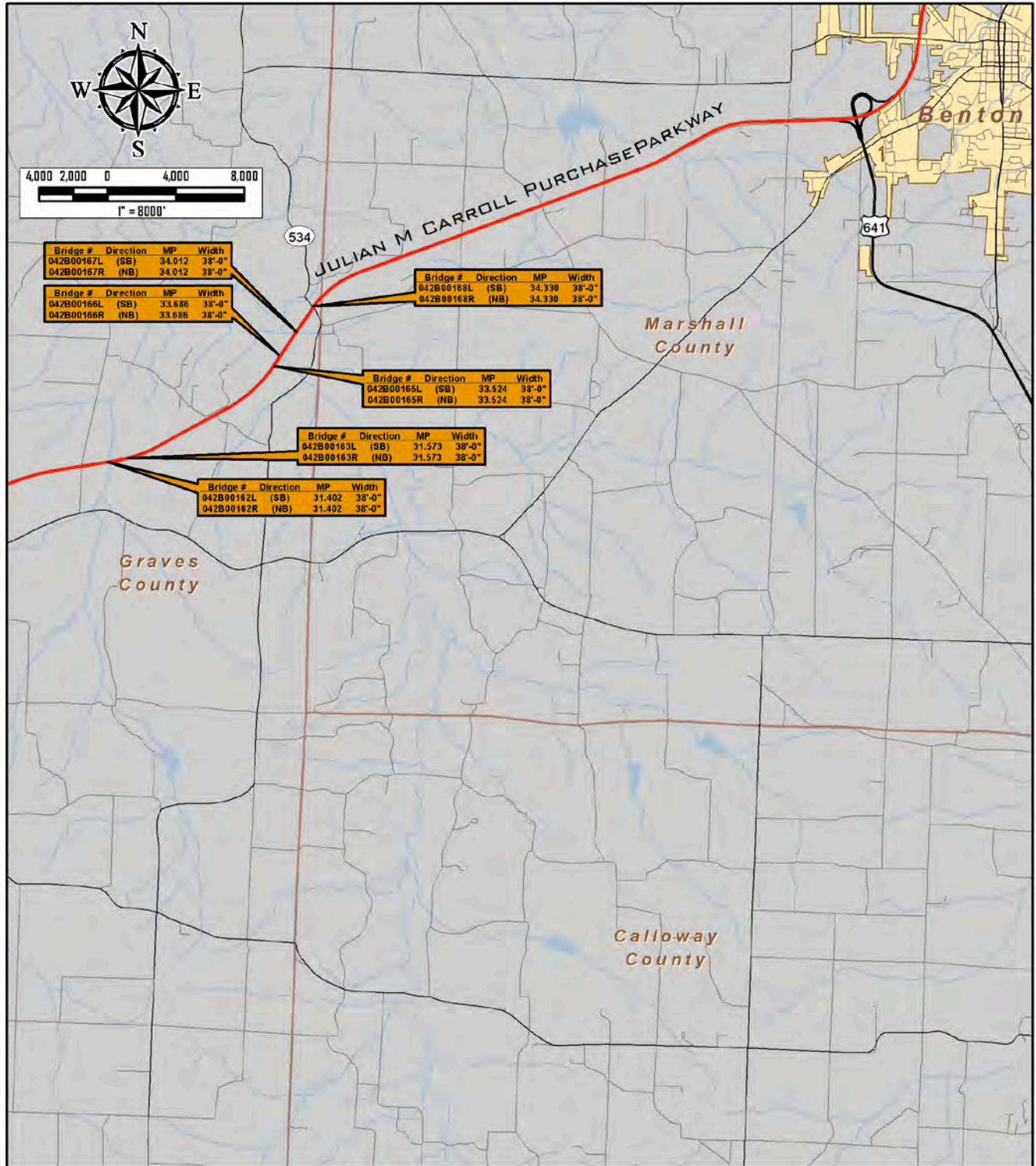
Bridge over 200' long with horizontal clearance less than 38'

One lane bridge - Mayfield Bypass Trumpet

Table 5- 2 Summary of Substandard Lateral Clearances







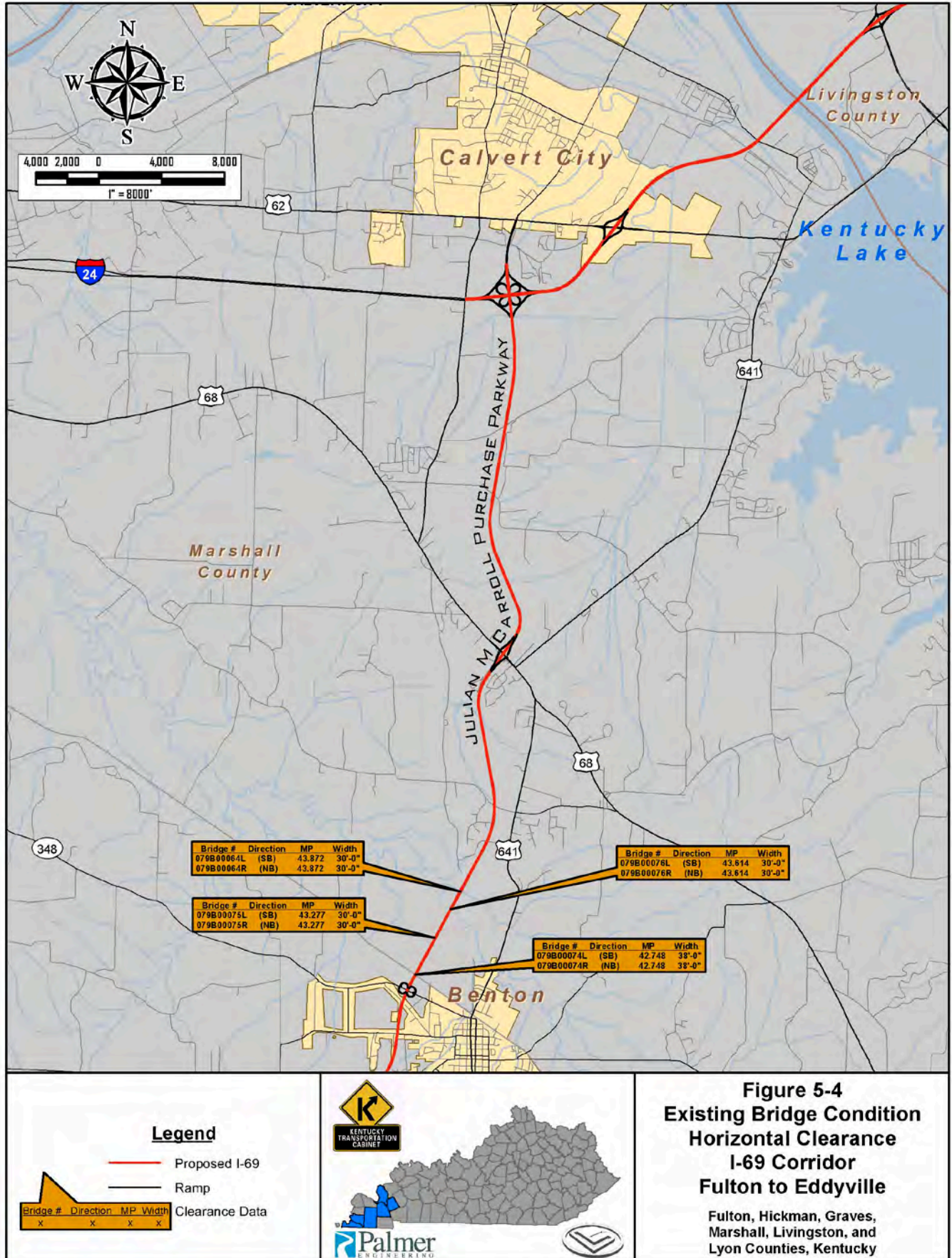
Legend

- Proposed I-69
- Ramp
- Bridge # Direction MP Width Clearance Data

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Figure 5-3
Existing Bridge Condition
Horizontal Clearance
I-69 Corridor
Fulton to Eddyville

Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties, Kentucky



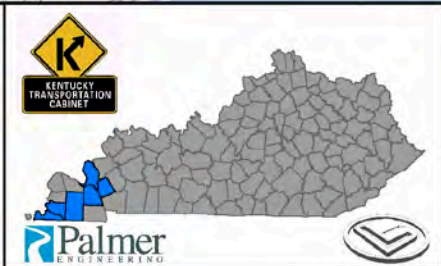
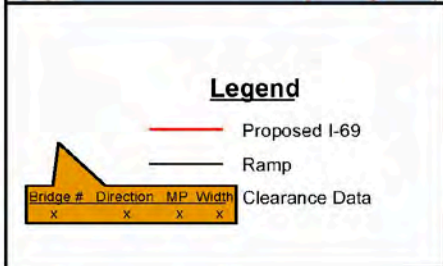
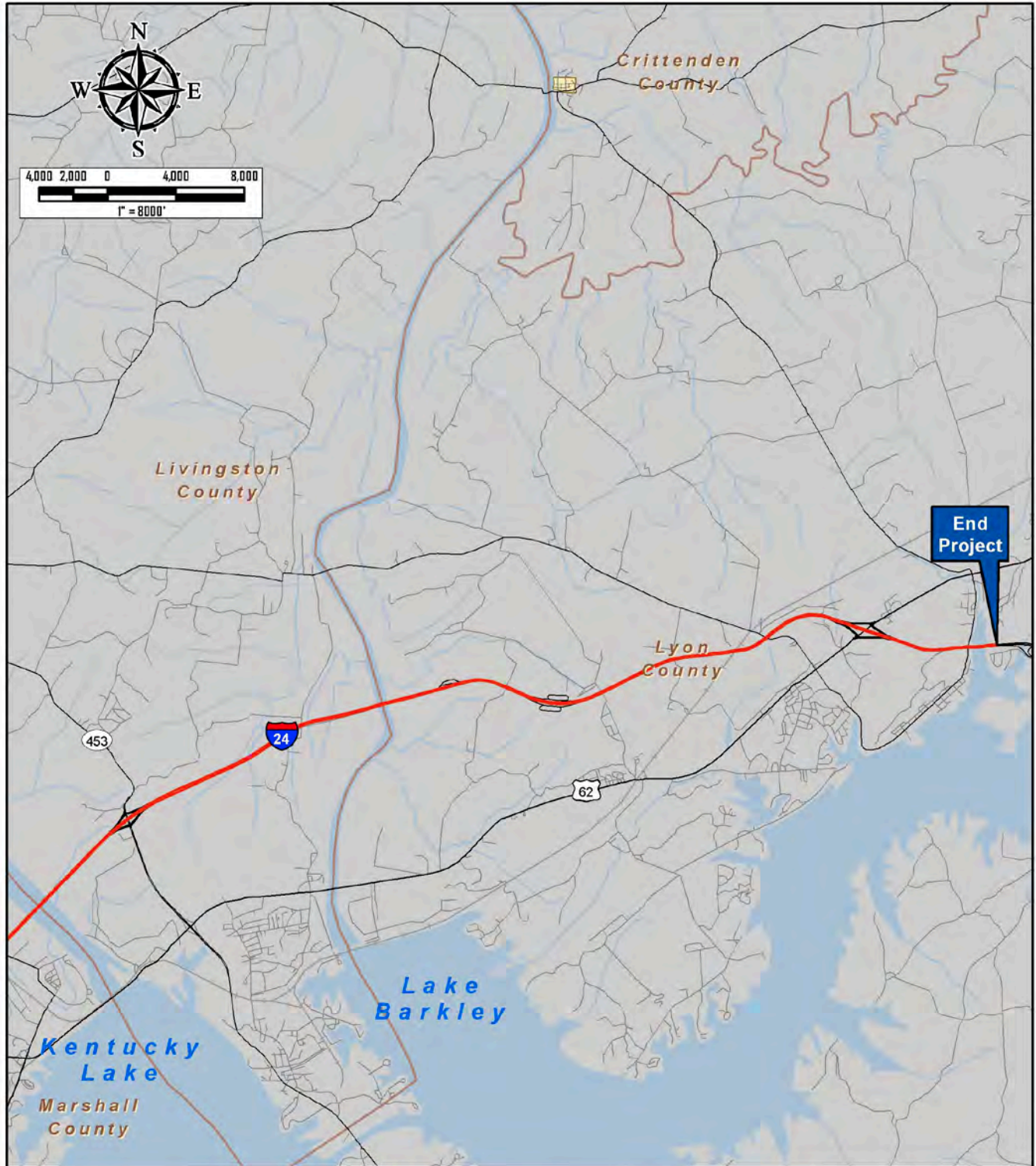


Figure 5-5
Existing Bridge Condition
Horizontal Clearance
I-69 Corridor
Fulton to Eddyville

Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties, Kentucky

B. Vertical Clearance of Overpasses and Sign Trusses

The vertical clearance of an overpass bridge is defined as the minimum height between the pavement and the bottom of the overpass structure and should be at least 16 feet across the entire width of the roadway, including the auxiliary lanes and the width of paved shoulder. The vertical clearance for a sign truss that crosses over the highway is minimum 17 feet for the entire width of the roadway.

The vertical clearance for the overpass bridges on the Purchase Parkway and I-24 were measured in the field to obtain the most accurate results for this study. The vertical clearance of sign trusses that cross over the Purchase Parkway were measured in the field as well. The clearance values depicted in **Table 5-3** are the minimum clearance measured by location on the roadway. Also noted are bridges that are less than 16.5 feet. The vertical clearance of these bridges will need to be monitored closely with future pavement rehabilitation.

As shown in the table, the Purchase Parkway has 4 bridges that have clearances less than 16 feet, all located in Graves County. The lowest clearances are 15.12 feet (southbound) and 15.30 feet (northbound) at the KY 80 interchange bridges. The other two bridges that do not meet minimum clearance are the KY 58 and Tater Road overpass bridges. The vertical bridge clearance information is provided in **Figure 5-6** through **Figure 5-10**.

C. Crash Worthy Pier Protection

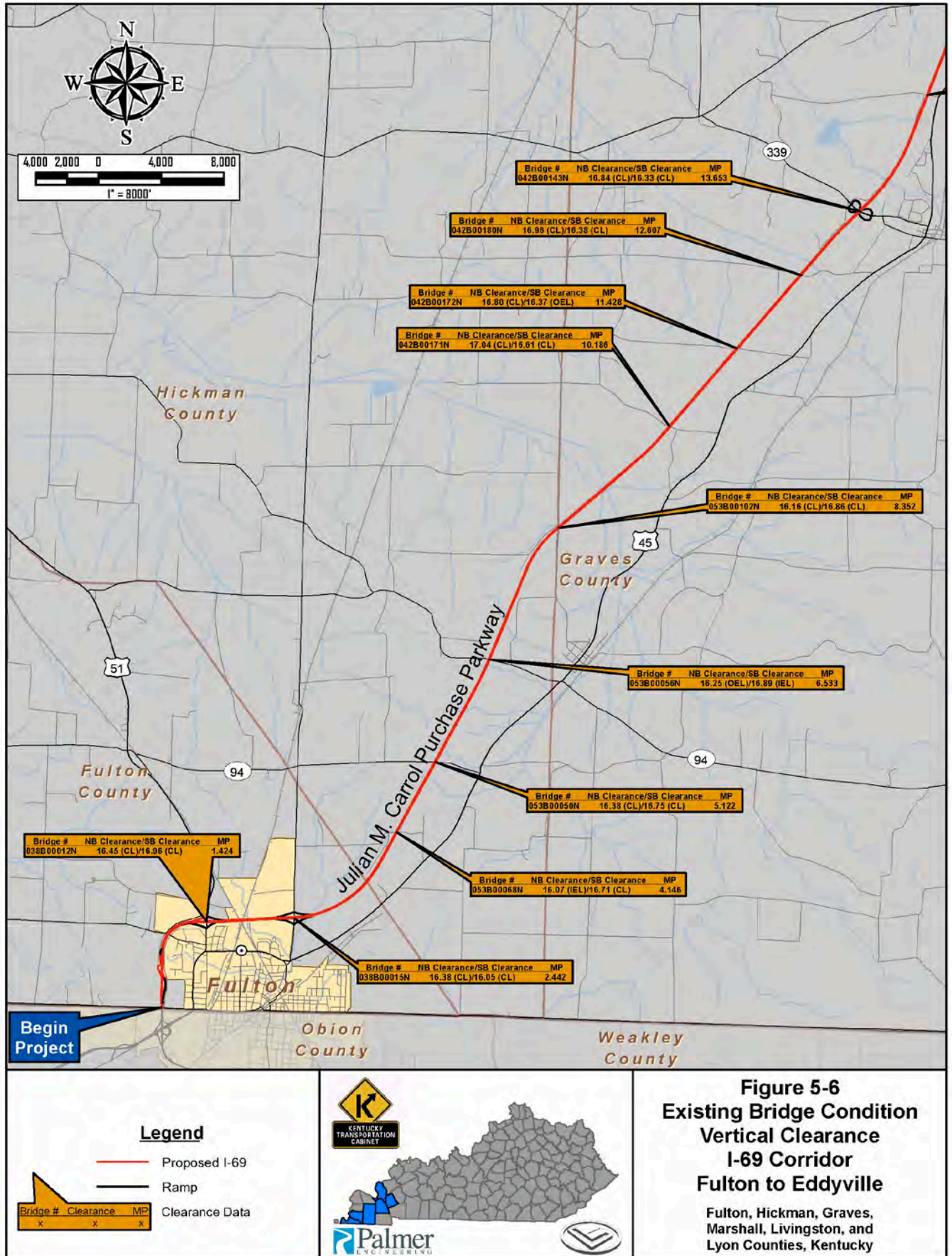
There are currently earthen mound bridge pier protections that do not meet current standards. These protections are located at the following overpass bridge locations: MP 1.424 (US 51), MP 10.186 (KY 1763), MP 11.428 (Grissom Road), MP 12.607 (KY 944), MP 15.302 (Tater Road), MP 16.526 (KY 58), MP 17.334 (KY 1748), and MP 20.229 (Cardinal Road).

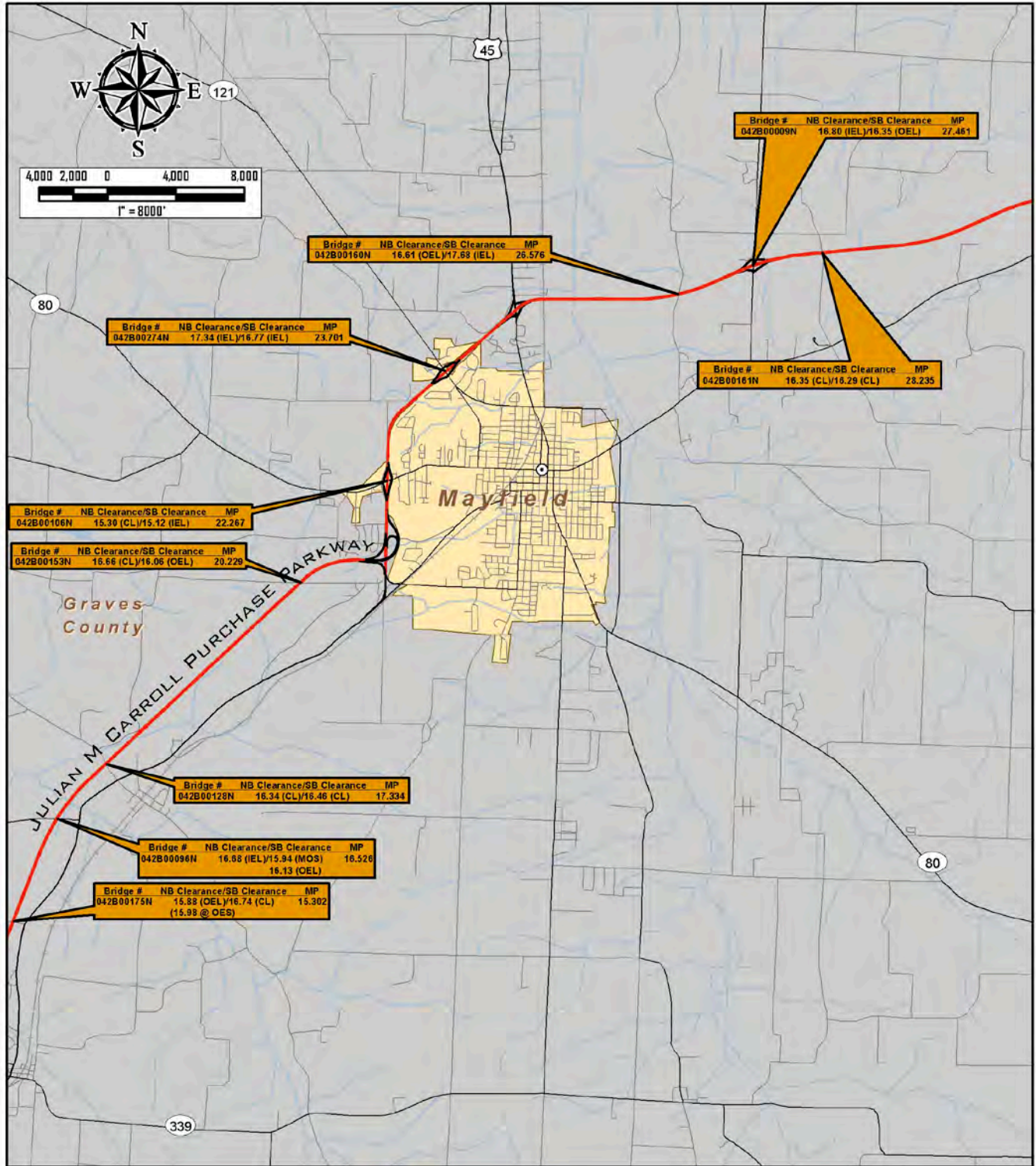


Eight overpass bridges have crash pier protection that does not meet current standard

MP	COUNTY	BRIDGE NO.	FEATURES INTERSECTED	MINIMUM VERTICAL CLEARANCE (ft)	
				NB	SB
PURCHASE PARKWAY					
1.424	Fulton	B00012	US 51	16.45 (CL)	16.96 (CL)
2.442	Fulton	B00015	KY 307 (Fulgham Rd)	16.38 (CL)	16.05 (CL)
4.146	Hickman	B00068	KY 2569 (Holland Rd)	16.07 (IEL)	16.71 (CL)
5.122	Hickman	B00050	KY 94	16.38 (CL)	16.75 (CL)
6.533	Hickman	B00056	KY 1529	16.25 (OEL)	16.89 (IEL)
8.352	Hickman	B00102	KY 1283	16.16 (CL)	16.86 (CL)
10.186	Graves	B00171	KY 1763	17.04 (CL)	16.61 (CL)
11.428	Graves	B00172	Grissom Rd	16.80 (CL)	16.37 (OEL)
12.607	Graves	B00180	KY 944	16.96 (CL)	16.38 (CL)
13.653	Graves	B00143	KY 339/Relocated KY 58	16.84 (CL)	16.33 (CL)
15.302	Graves	B00175	Tater Rd	15.88 (OEL) 15.98 (OES)	16.74 (CL)
16.526	Graves	B00096	KY 58	16.68 (IEL)	15.94 (MOS) 16.13 (OEL)
17.334	Graves	B00128	KY 1748	16.34 (CL)	16.46 (CL)
20.229	Graves	B00153	Cardinal Rd (Pryorsburg-Macedonia Rd)	16.66 (CL)	16.06 (OEL)
22.267	Graves	B00106	KY 80 (Fancy Farm Rd)	15.30 (CL)	15.12 (IEL)
23.701	Graves	B00274	KY 121	17.34 (IEL)	16.77 (IEL)
26.576	Graves	B00160	Hopewell Rd	16.61 (OEL)	17.68 (IEL)
27.461	Graves	B00009	KY 131	16.80 (IEL)	16.35 (OEL)
28.235	Graves	B00161	Twin Hill Rd (Spence Chapel Rd)	16.35 (CL)	16.29 (CL)
31.129	Graves	B00028	KY 301	16.22 (CL)	16.53 (CL)
32.734	Graves	B00164	Panther Creek (School) Rd	16.24 (CL)	16.38 (CL)
36.197	Marshall	B00068	KY 2603 / Vanzora Church Rd (Hale Springs Rd)	16.26 (CL)	16.54 (CL)
37.868	Marshall	B00071	Bondurant Ln / KY 2604 (Marvin Jones Rd)	16.33 (CL)	16.40 (CL)
40.054	Marshall	B00073	Jackson School Rd / KY 2606 (KY 299)	16.77 (CL)	16.42 (CL)
40.809	Marshall	B00126L	US 641 SB / Benton Bypass	16.98 (OEL)	17.45 (IEL)
40.809	Marshall	B00144R	US 641 NB / Benton Bypass	16.45 (OEL)	17.05 (IEL)
42.017	Marshall	B00103	KY 408 / Oak Level Rd	16.89 (CL)	16.20 (CL)
42.555	Marshall	B00102	KY 348 / Symsonia Rd	16.88 (CL)	16.43 (CL)
45.024	Marshall	B00012	KY 795 / Scale Rd (Scale-Briensburg Rd)	16.38 (OEL)	16.88 (IEL)
46.942	Marshall	B00001R	US 68 EB	16.29 (CL)	16.07 (CL)
46.942	Marshall	B00001L	US 68 WB	16.84 (CL)	16.61 (CL)
48.979	Marshall	B00050	Palma Rd (Palma-Birmingham Rd Relocation)	16.14 (OEL)	16.58 (CL)
49.84	Marshall	B00066	KY 2595 / Lakeview Church Rd	16.67 (CL)	16.32 (CL)
51.398 / 24.941	Marshall	B00114R	I-24 EB	18.26 (IEL)	17.25 (CL)
51.398 / 24.941	Marshall	B00114L	I-24 WB over Pkwy	17.27 (CL)	16.27 (CL)
MP	COUNTY	BRIDGE NO.	FEATURES INTERSECTED	MINIMUM VERTICAL CLEARANCE (ft)	
				EB	WB
I-24					
30.696	Livingston	B00064	KY 453	19.48 (OES)	16.51 (OEL)
35.293	Lyon	B00032	KY 6008 (Hopewell Church Rd)	16.27 (OEL)	17.46 (OEL)
36.413	Lyon	B00033	KY 810 (Martins Chapel Rd)	16.46 (CL)	16.00 (CL)
37.305	Lyon	B00034	KY 6010 (Poplar Creek Rd)	16.30 (OES)	16.59 (OES)
40.744	Lyon	B00038	KY 295	16.66 (CL)	16.24 (CL)
Bridge with Vertical Clearance less than the ASSHTO recommended minimum of 16 feet					
Bridge with Vertical Clearance less than 16.5 feet					
IEL- Inside Edge of Lane; CL-Center Line; OEL-Outside Edge of Lane; OES-Outside Edge of Shoulder; MOS-Middle of Outside Shoulder					

Table 5- 3 Summary of Substandard Vertical Clearances





Legend

- Proposed I-69
- Ramp

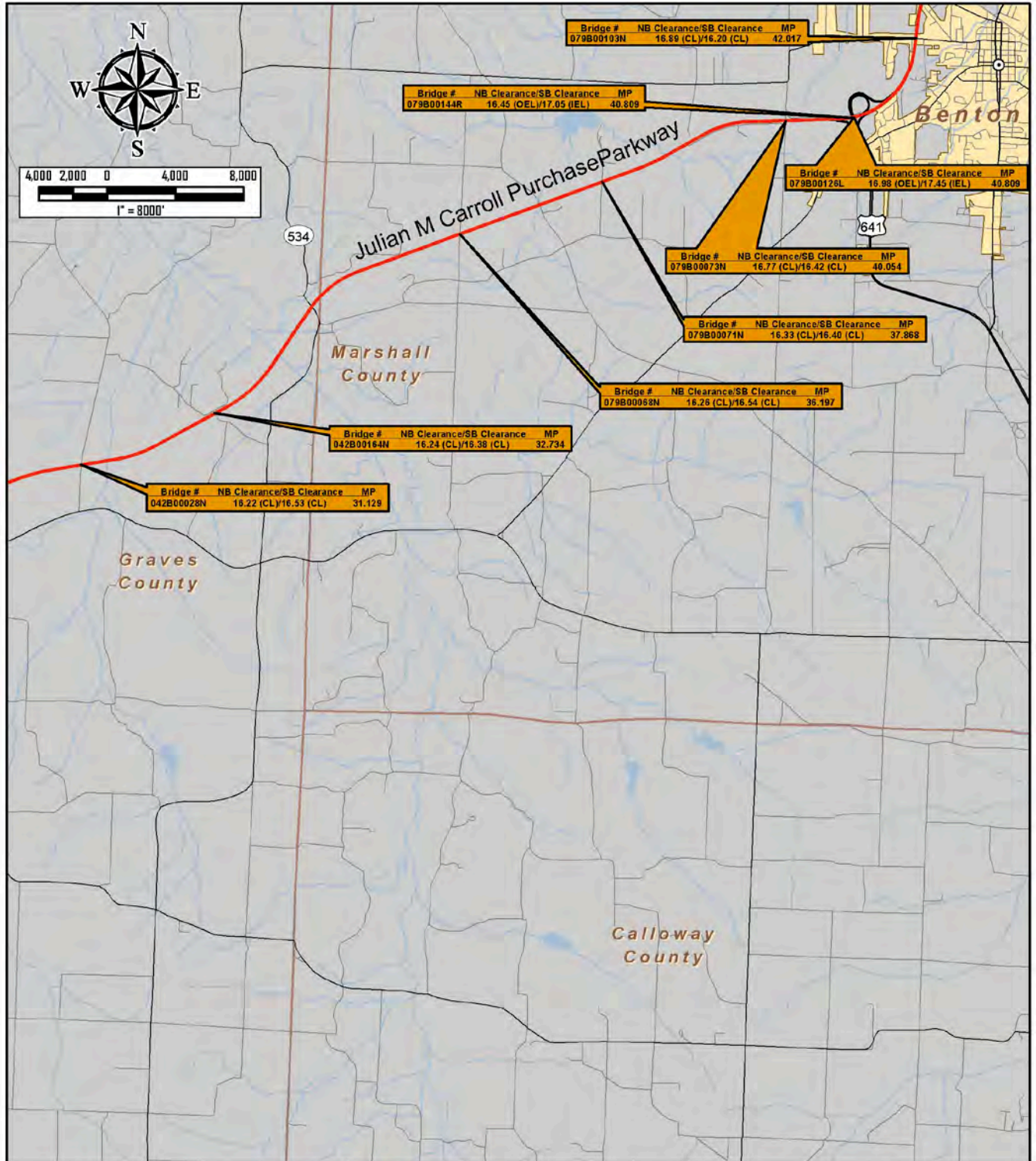
Bridge #	Clearance	MP
x	x	x

Clearance Data

Palmer
ENGINEERING

Figure 5-7
Existing Bridge Condition
Vertical Clearance
I-69 Corridor
Fulton to Eddyville

Fulton, Hickman, Graves,
Marshall, Livingston, and
Lyon Counties, Kentucky



Legend

- Proposed I-69
- Ramp

Bridge #	Clearance	MP
x	x	x

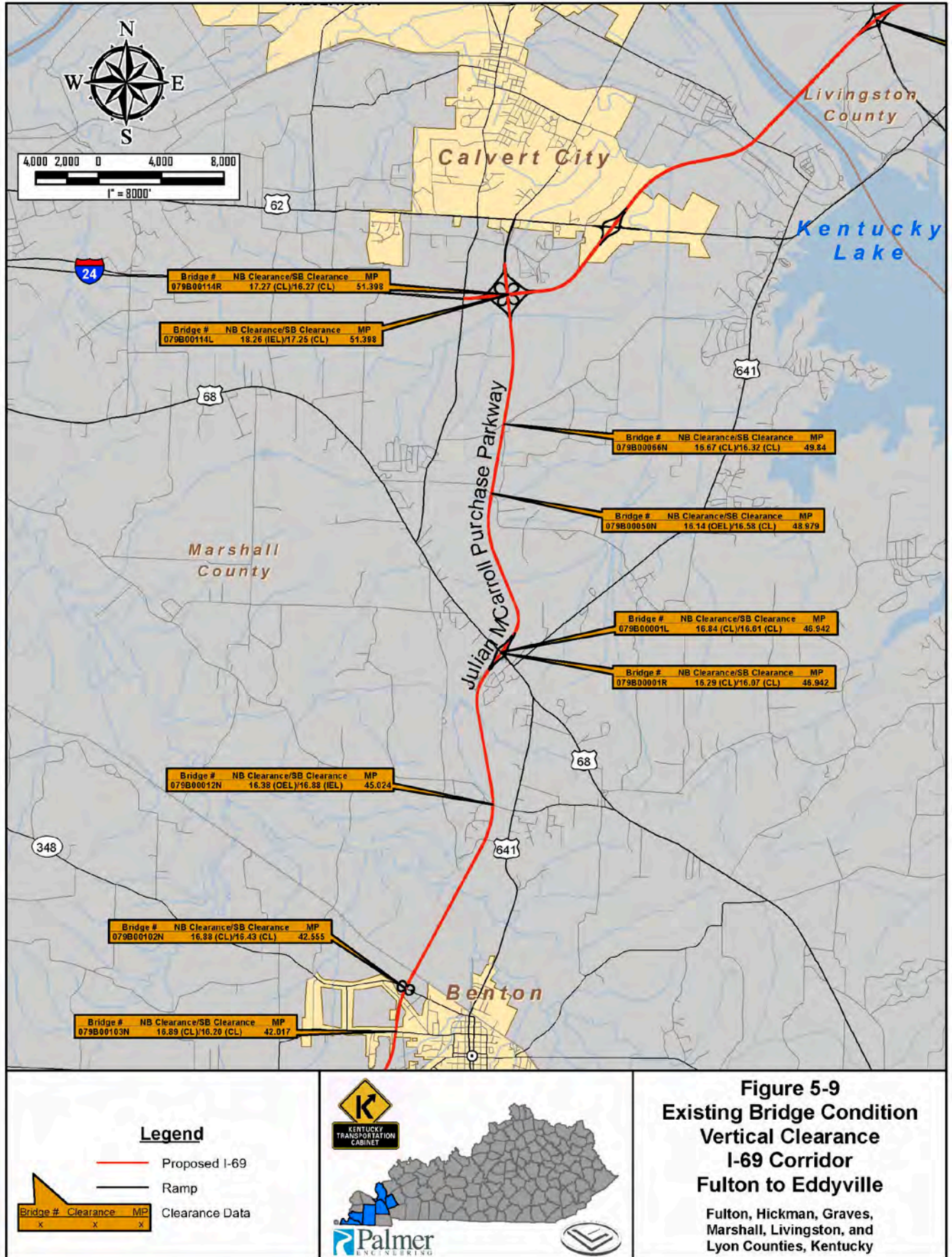
Clearance Data

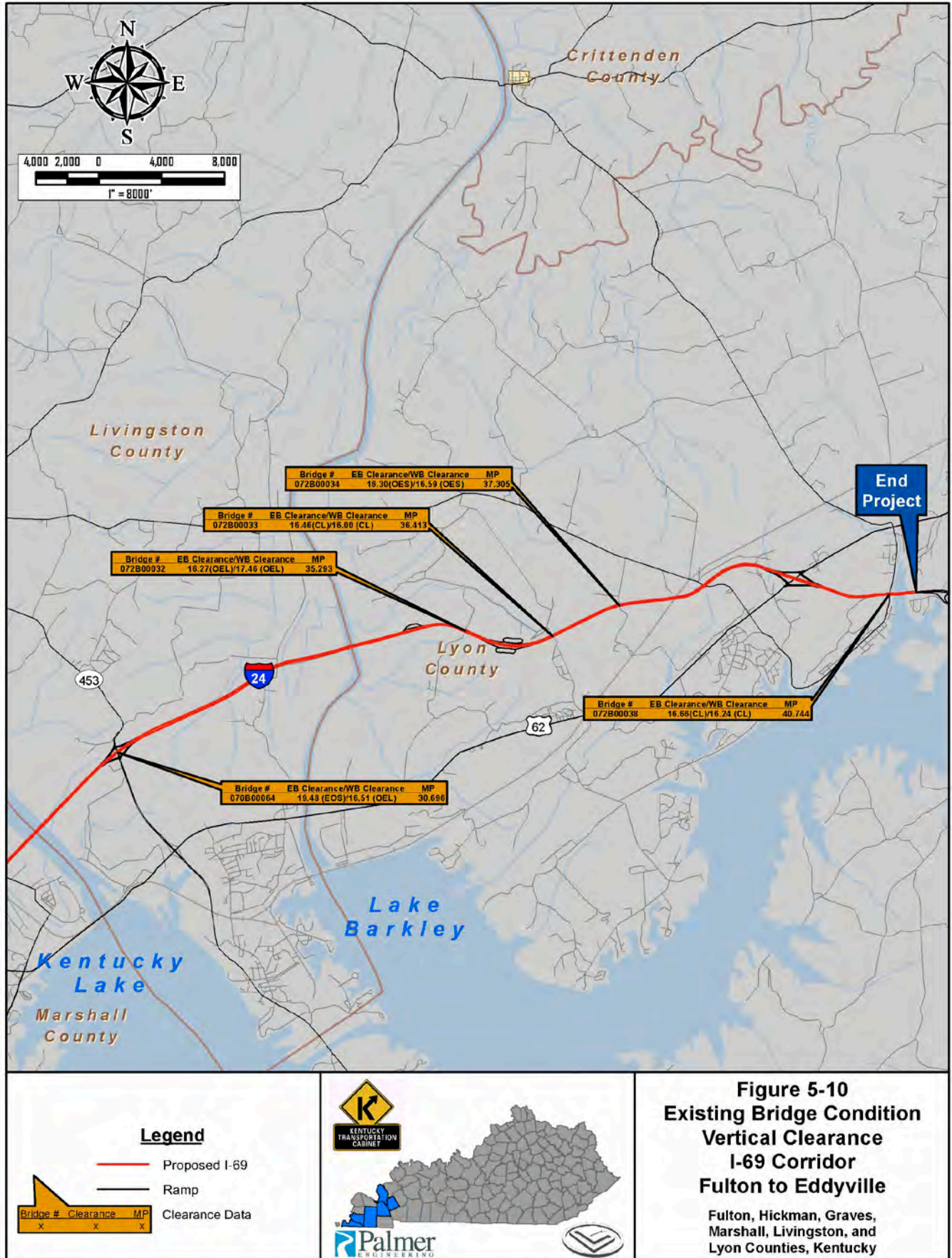
KENTUCKY TRANSPORTATION CABINET

Palmer
ENC ENGINEERING

Figure 5-8
Existing Bridge Condition
Vertical Clearance
I-69 Corridor
Fulton to Eddyville

Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties, Kentucky





D. Bridge Conditions

For this study the structural and functional capacity of each bridge was evaluated. The structural capacity of a bridge is determined by its sufficiency rating. A bridge that can no longer carry the vehicle weight it was originally designed to carry is classified as structurally deficient. A bridge that does not meet current geometric design guidelines, such as lane width, approach alignment, overhead clearance, etc is defined as functionally obsolete. Sufficiency and inventory ratings for bridges on the Purchase Parkway are provided in **Appendix F**. The following is a summary of the bridge sufficiency ratings on the Purchase Parkway.

- Currently, all Purchase Parkway mainline and overpass bridges have a sufficiency rating greater than 60.0.
- There are two overpass bridges at MP 46.942 in Marshall County that have a sufficiency rating of 66.2.
- The culvert at MP 38.687 in Marshall County has a sufficiency rating of 49.3, an inventory rating of HS 11.1 and an operating rating of HS 33.3
- The culverts at MP 37.135 and MP 44.587 in Marshall County have sufficiency ratings of 68.9 and 66.9, respectfully.

According to the KYTC Bridge Division, there is one bridge identified as functionally obsolete in the study area. It is a mainline bridge located in Graves County at MP 21.285. This bridge is part of the Exit 21 interchange on the Mayfield Bypass section of the Purchase Parkway. This identification is not in comparison to Interstate standards. Additional bridges can be expected to be identified as functionally obsolete when compared to interstate standards.

E. Overhead Signs

The minimum vertical clearance for an overhead sign truss is 17 feet according to current guidelines. The vertical clearances of the overhead sign trusses on the Purchase Parkway were measured in the field and none were found to be less than 17 feet. The overhead sign attached to the overpass bridge at MP 22.2 in the southbound direction is less than the 17 foot minimum. For this study, the overhead sign truss, cantilever sign trusses, and signs connected to overpass bridges were measured. The following table shows the locations and vertical clearance of overhead signs on the Purchase Parkway.

COUNTY	DIRECTION	MP	TYPE	VERTICAL CLEARANCE (ft)
Graves	NB	13.6	Bridge	18.1
Graves	NB	20	Overhead Truss	18.2
Graves	NB	20.9	Overhead Truss	18.1
Graves	NB	22	Overhead Truss	17.7
Marshall	NB	40.8	Bridge	17
Marshall	NB	42.5	Bridge	> Bottom of Bridge
Marshall	NB	51.1	Overhead Truss	18.5
Marshall	NB	51.4	Bridge	> Bottom of Bridge
Marshall	SB	51.5	Bridge	> Bottom of Bridge
Marshall	SB	42.6	Bridge	> Bottom of Bridge
Graves	SB	22.2	Bridge	15.93
Graves	SB	21.9	Overhead Truss	17.6
Graves	SB	21.6	Overhead Truss	17.9
Graves	SB	13.7	Bridge	> Bottom of Bridge
Fulton	SB	0.2	Cantilever	> 20

Table 5- 4 Overhead Sign Vertical Clearance

VI. INTERCHANGES AND RAMPS

This chapter summarizes the interchanges and ramp conditions on the Purchase Parkway. There are 13 interchanges on the Purchase Parkway along the project study corridor. Similar to the mainline geometry guidelines, AASHTO has criteria for minimum standards for interchanges and ramps. These guidelines are design speed, typical sections, and horizontal and vertical alignment. This chapter addresses each of those factors along with speed-change lanes, weaving characteristics, interchange crash data, interchange spacing, control of access, and interchange configuration. **Figures 6-1 through 6-3** and **Table 6-1** summarize the comparison of the interchange and ramp conditions taken from the as-built plans with the AASHTO guidelines for the key areas for interchange design.

A. Design Speed

The AASHTO minimum design speed for directional entrance ramps and exit ramps is 40 mph. The design speed for semi-directional ramps in rural areas is 35 mph and 25 mph in urban areas. For urban and rural areas, the minimum design speed for loop ramps is 25 mph. The corresponding horizontal minimum radii for 40 mph, 35 mph, and 25 mph design speeds is 444 feet, 314 feet, 134 feet, respectively.

The design speed for most of the ramps was not available or illegible on the as-built plans.



Weigh station exit ramp at Tennessee state line

B. Typical Sections

Similar to AASHTO minimum guidelines of lane widths and shoulder widths of the mainline typical section, there are also guidelines for minimum typical section for lane and shoulder width. The following is a comparison of the existing typical section for lane and shoulder widths to the current AASHTO guidelines and a discussion of existing rolled curbs on interchange ramps.

1. Lane Widths

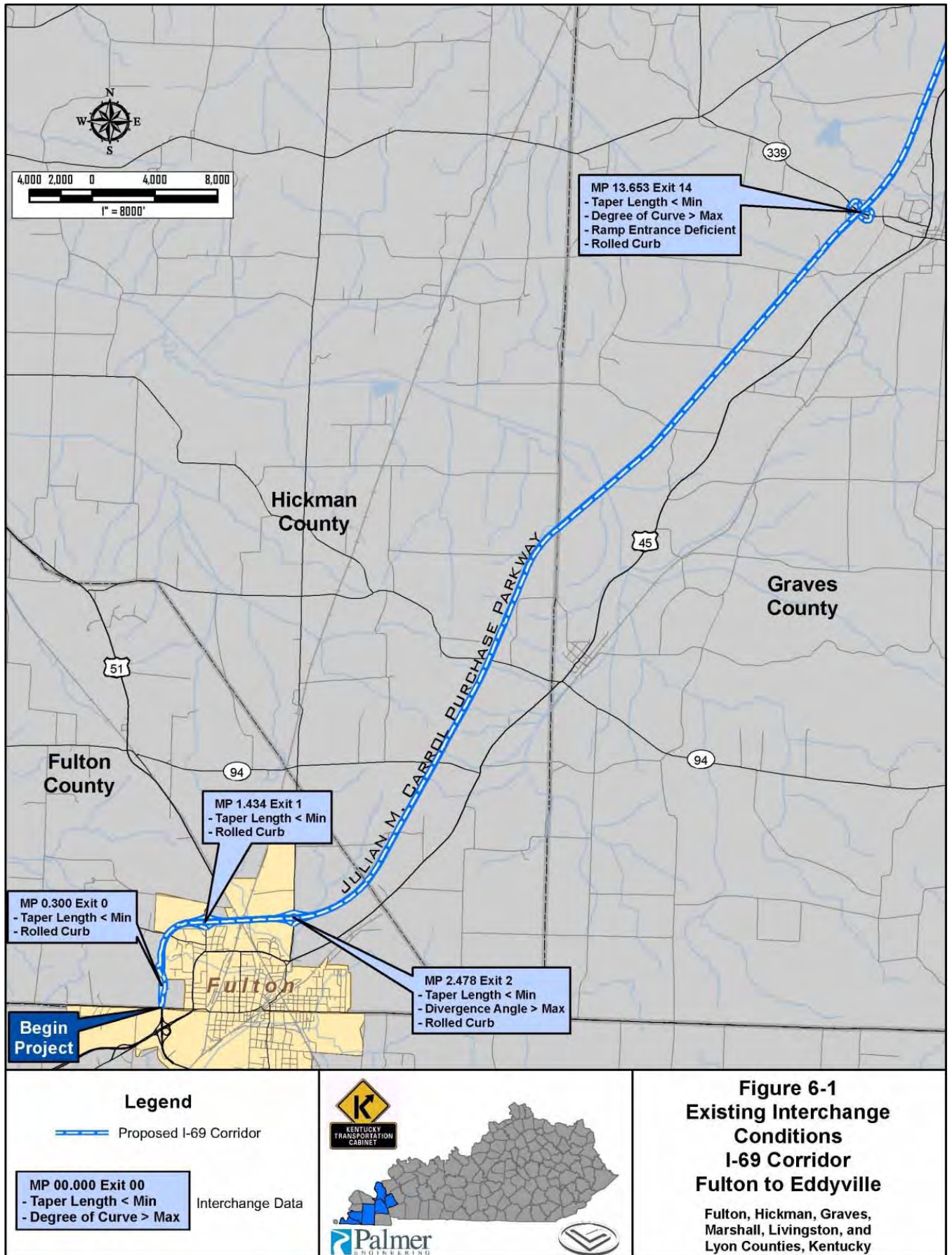
The current AASHTO minimum lane width along an interchange ramp is 15 feet. All of the interchange ramps on the Purchase Parkway meet the minimum requirement ranging in width from 15 to 18 feet. Refer to the **Table 6-1** for specific interchange ramp lane widths.

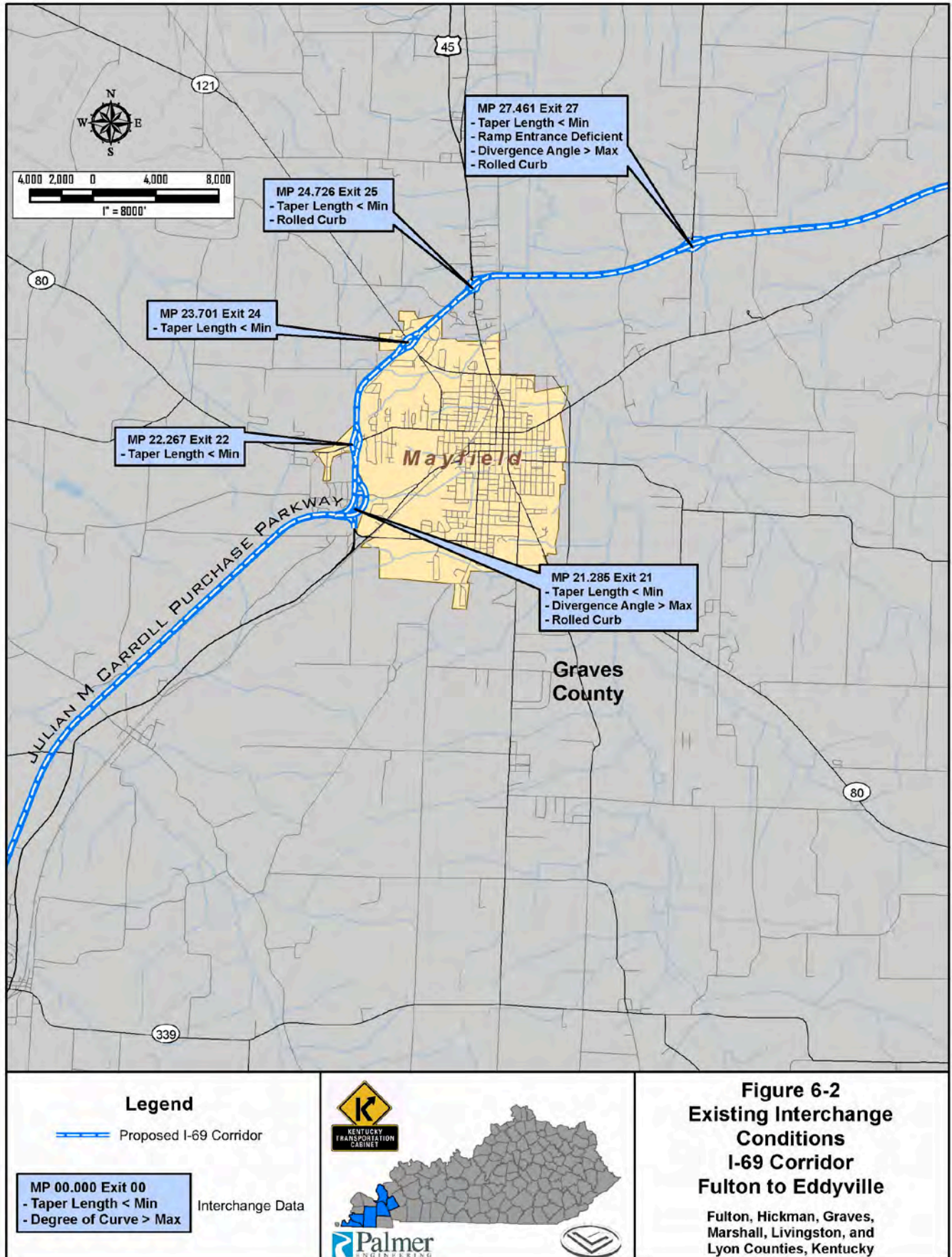
2. Shoulder Widths

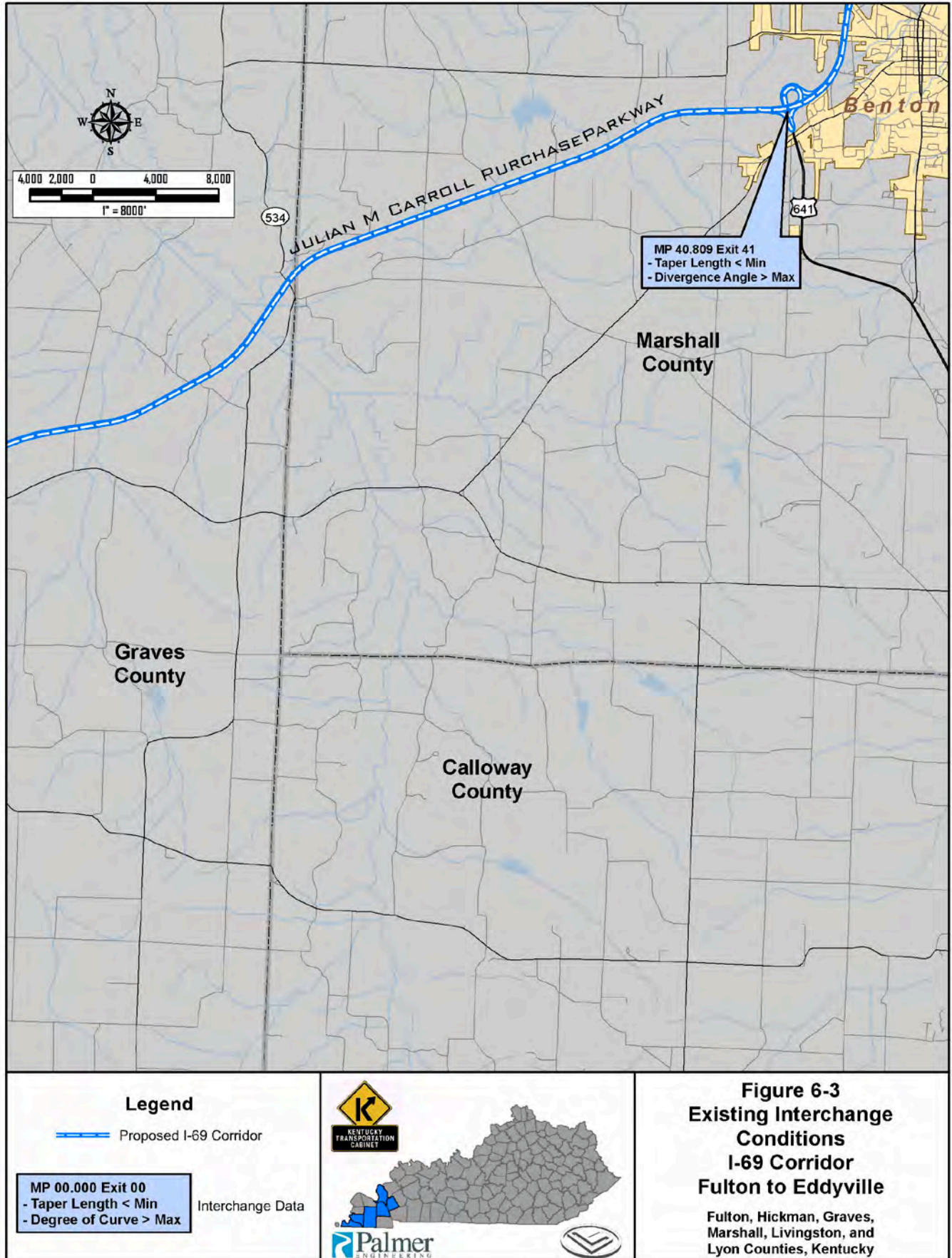
For normal one-way operation, the inside shoulder width should be 2 to 4 feet wide and paved and the outside shoulder width should be 8 to 10 feet wide and paved. The sum of the inside and outside shoulder width should not exceed 10 to 12 feet wide and paved. Much of the current interchange ramps have a rolled curb at the edge of the driving lane, therefore they do not meet AASHTO guidelines for shoulder widths. According to the as-built plans, the interchange ramps that do not have a rolled curb have an inside shoulder width of 6 feet and the outside shoulder width ranges from 6 to 10 feet.

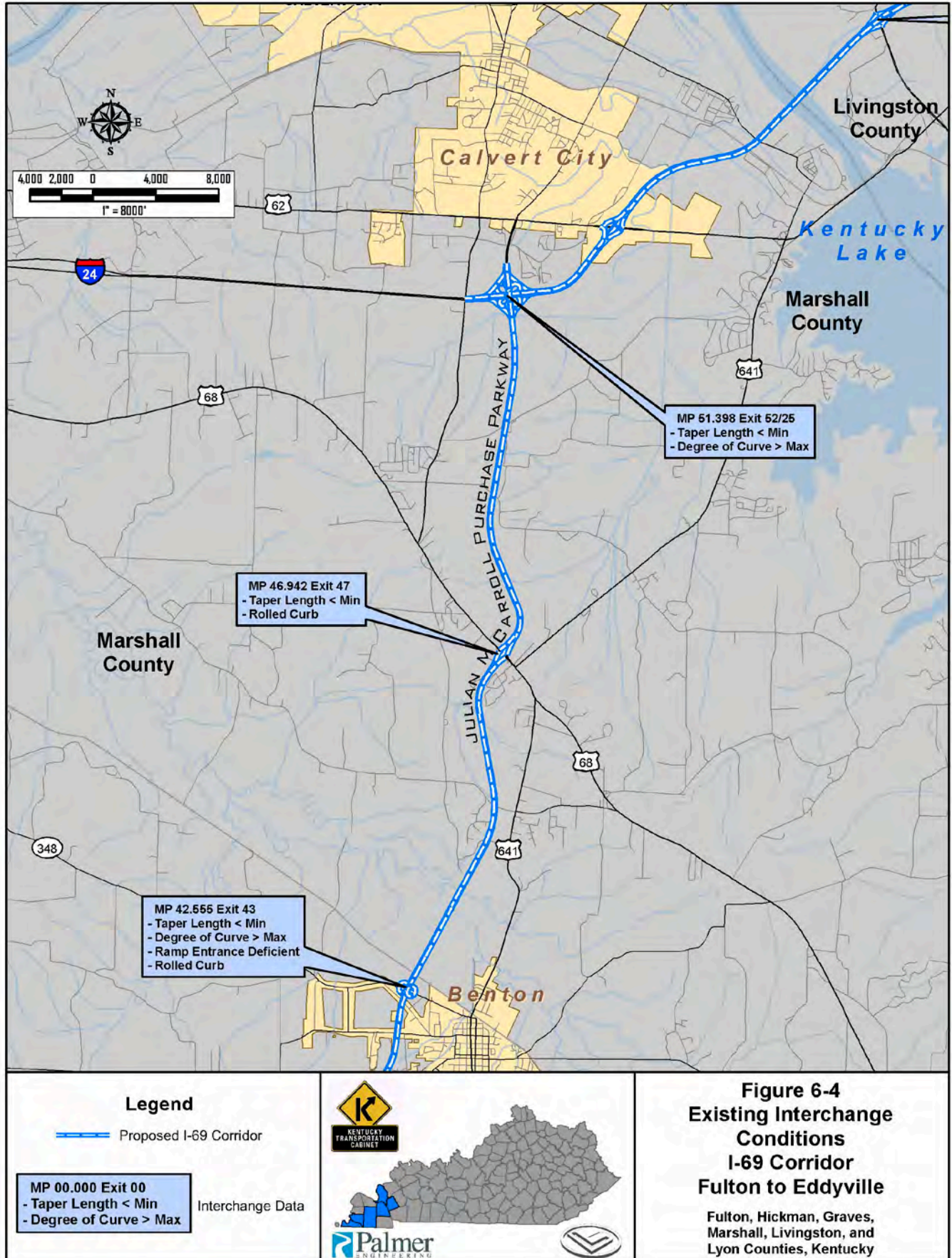
3. Rolled Curb

The current standard restricts the use of curb on mainline and ramps that are not intended for drainage purposes. The Purchase Parkway exits that have a rolled curb on the interchange ramps are Exits 0, 1, 2, 14, 21, 25, 27, 43, and 47. Refer to the following figures for the location of ramps with rolled curb that do not meet current standards.









COUNTY	INTERSECTING ROUTE	EXIT NUMBER	MP	PLAN YEAR	RAMP CHARACTERISTICS				MEET INTERSTATE STANDARDS?			REMARKS
					ENTRANCE	EXIT	TYPE	WIDTH	ENTRANCE / EXIT RADIUS ¹	RAMP RADIUS	TAPER ²	
FULTON	Frontage Road A; Frontage Road B	0	0.300	1966		A (RAMP "A")	Taper	18	Yes	Yes	No	KY 166 and Weigh Station
						B (RAMP "B")	Taper	18	Yes	Yes	No	
						C (Ramp "C")	Taper	18	Yes	No	No	
						D (Ramp "D")	Parallel	18	Yes	No	Yes	
FULTON	US 51	1	1.424	1966		A (Ramp "SW")	Taper	18	Yes		No	US 51 Diamond Interchange
						B (Ramp "SE")	Parallel	18	Yes		No	
						C (Ramp "NE")	Taper	18	Yes		No	
						D (Ramp "NW")	Taper	18	Yes	Yes	No	
FULTON	KY 307	2	2.478	1966		A (Ramp "B")	Taper	18	Yes		No	KY 307 Diamond Interchange
						B (RAMP "D")	Parallel	18	Yes	Yes	Yes	
						C (Ramp "C")	Taper	18	Yes	Yes	No	
						D (RAMP "A")	Parallel	18	Yes		Yes	
Graves	KY 339	14	13.653	?		A (Ramp "D")	Loop	18	No	No	No	KY 339 (Previous Toll Plaza)
						B (Ramp "C")	Loop	18	No	No	No	
						C (Ramp "A")	Loop	18	No	No	No	
						D (RAMP "B")	Loop	18	No	No	No	
Graves	MAYFIELD BYPASS	21	21.285	1966		A (RAMP "D")	Taper	18		Yes	Yes	US 45 Trumpet
						C (RAMP "C")	Taper	18	Yes		No	
						D (RAMP "B")	Loop	18	Yes		No	
Graves	KY 80	22	22.267	1961		A (RAMP 1)	N/A	16			N/A	KY 80 Diamond Interchange
						B (RAMP 4)	Taper	16	Yes		No	
						C (RAMP 3)	Taper	16	Yes		No	
						D (RAMP 2)	Taper	16	Yes		No	
Graves	KY 121	24	23.701	2000		A (RAMP "A")	Taper	18	Yes		No	KY 121 Diamond Interchange
						B (RAMP "C")	Parallel	18	Yes	Yes	Yes	
						C (RAMP "D")	Taper	18	Yes		No	
						D (RAMP "B")	Taper	18	Yes	Yes	Yes	
Graves	US 45	25	24.726	1966		A (RAMP "C")	Taper	18		Yes	No	US 45 Diamond Interchange
						B (RAMP "D")	Parallel	18	Yes	Yes	Yes	
						C (RAMP "B")	Taper	18	Tangent		No	
						D (RAMP "A")	Taper	18	Yes	Yes	Yes	
Graves	KY 131	27	27.461	1966/1978(?)		A (Ramp "SW")	Taper	15	No		No	KY 131 Diamond Interchange
						B (Ramp "SE")	Parallel	18	Yes		Yes	
						C (Ramp "NE")	Taper	18	No		No	
						D (Ramp "NW")	Parallel	15	No		Yes	

Table 6-1 Interchange Geometrics for I-69

COUNTY	INTERSECTING ROUTE	EXIT NUMBER	MP	PLAN YEAR	RAMP CHARACTERISTICS				MEET INTERSTATE STANDARDS?			REMARKS
					ENTRANCE	EXIT	TYPE	WIDTH	ENTRANCE / EXIT RADIUS ¹	RAMP RADIUS	TAPER ²	
Marshall	US 641	41	40.809	1998		A (Ramp "B")	Taper	15	Yes		No	US 641 Trumpet
					B (Ramp "A")		Parallel	18	Yes		Yes	
						C (Ramp "D")	Taper	18	Yes	Yes	No	
					D (Loop "D")		Loop	15	Yes	Yes	Yes	
Marshall	KY 348	43	42.555	1966		A (Ramp "D")	Loop	18	No	No	No	KY 348 (Previous Toll Plaza)
					B (RAMP "B")		Loop	18	No	No	No	
						C (Ramp "A")	Loop	18	No	No	No	
					D (Ramp "C")		Loop	18	No	No	No	
Marshall	US 68	47	46.942	1966		A (Ramp "B")	Taper	18		No	No	US 68 Diamond Interchange
					B (RAMP "D")		Parallel	18	no dwg available		Yes	
						C (Ramp "C")	Taper	18	no dwg available		No	
					D (RAMP "A")		Parallel	18	Yes		Yes	
Marshall	I-24	52	51.398	1966		A1 (Ramp "C")	Taper	18	No	Yes	No	I-24 Interchange Full Clover Leaf Interhcnage
						A2 (Ramp "H")	Loop	18			N/A	
					B1 (Ramp "G")		Parallel	18	Yes	Yes	Yes	
					B2 (Ramp "F")		Loop	18		Yes	N/A	
						C1 (Ramp "E")	Taper	18	Yes	Yes	No	
						C2 (Ramp "B")	Loop	18			N/A	
					D1 (Ramp "A")		Parallel	18	Yes	Yes	Yes	
					D2 (Ramp "D")		Loop	18			N/A	

¹Based on design speed and superelevation provided. Design speed calculated from current AASHTO 10% superelevation table. Reference Appendix F for design speed values.

Table 6-1 Interchange Geometrics for I-69 (continued)

C. Alignment Geometry

1. Horizontal Alignment

The minimum horizontal radius for a directional ramp in rural and urban areas is 444 feet. The minimum horizontal radius for rural and urban loop ramps is 134 feet (25 mph design speed). For rural areas, the minimum horizontal radius for a ramp is 314 feet (35 mph design speed) and 134 feet (25 mph design speed) in urban areas. For the interchanges on the Purchase Parkway, minimum ramp and loop radius are met for all interchanges except for Exit 14 (MP 13.653) in Graves County. Exit 14 is previous toll booth interchange. Refer to **Appendix F** for interchange data.

2. Superelevation Rate

From review of the as-built plans, the superelevation for the ramps, if provided, appear to meet the criterion for a maximum superelevation rate of 10%. Refer to **Appendix F** superelevation data collected.

3. Vertical Alignment

a. Vertical Grade

AASHTO guidelines designate a maximum vertical grade from 5% to 7% for all ramp types in both rural and urban areas. Of the legible information provided on the as-built plans, this minimum recommendation is met for all ramps on the Purchase Parkway. The US 641 interchange (Exit 41) in Marshall County is the only interchange that has a vertical grade greater than 5%. The loop ramp at this interchange has a vertical grade of 6% and -6%. The information provided on the as-built plans is located in **Appendix F**.

b. Vertical Length of Curve

For this study, the minimum length of curve was calculated on the vertical grades of the approaching ramp alignment and the recommended rate of vertical curvature for the minimum design speed. All of the analyses were completed for the entire length of the ramp. The following list provides the locations, actual vertical length of curve, and calculated minimum vertical length of curve of those that do not meet the criteria. The following vertical curves are located at the end of the interchange ramps and would be approaching stopping condition. This data is provided in **Appendix F**.

- Fulton County – Exit 1 Ramp NE– Actual 150 feet, calculated minimum 151 feet;
- Fulton County – Exit 1 Ramp SE – Actual 250 feet, calculated minimum 257 feet;
- Graves County – Exit 22 Ramp 1 – Actual 150 feet, calculated minimum 183 feet.

c. Stopping Sight Distance

Stopping sight distance was evaluated on the vertical curvature for the ramps. The minimum stopping sight distance with the corresponding ramp type minimum design speed was compared to the calculated stopping sight distance. There are two vertical curves that do not provide the minimum stopping sight distance calculated based on the minimum ramp design speed. The following list provides the locations, actual stopping sight distance, and calculated stopping sight distance. These vertical curves are located at the end of the interchange ramps and travel would be approaching stopping condition. This data is provided in **Appendix F**.

- Fulton County – Exit 1 Ramp SE – Actual 245 feet, calculated minimum 250 feet;
- Graves County – Exit 22 Ramp 1 – Actual 246 feet, calculated minimum 250 feet.

4. Divergence Angle

The recommended divergence angle of the alignment break for a taper exit per AASHTO is two to five degrees. The divergence angle was not provided or was illegible on the as-built plans. Aerial mapping was used to estimate the existing divergence angle for the Purchase Parkway

interchange exit ramps. The following exit ramps had divergence angle estimates exceeding 5 degrees:

- Exit 2 (MP 2.478) KY 307, Northbound and Southbound
- Exit 14 (MP 13.653), KY 339, Northbound and Southbound
- Exit 21 (MP21.285) US 45 Southbound;
- Exit 27 (MP27.461) KY 131, Southbound;
- Exit 41 (MP 40.809) US 641, Southbound.

D. Speed-Change Lanes and Weaving Characteristics

Speed-change lanes and traffic weaving situations may be the two most important factors affecting safety at interchanges. The following is summary of the geometry of the as-built ramp configurations when compared to the current AASHTO guidelines for speed-change lanes and designs for traffic weaving.

1. Speed-Change Lanes

Speed-change lane design for an entrance and exit ramp is either a parallel type or taper type. The recommended taper rate for a taper type entrance is 50:1 between the outer edge of the acceleration lane and the edge of the through traffic lane. The entrance length of a ramp for a parallel type entrance is dependent on the mainline design speed. Current practice for entrance ramp speed is 70% of the mainline design speed. The rural interstate design speed of 70 mph results in an entrance ramp speed of 49 mph and 35 mph for an urban interstate design speed of 50 mph. However, it is recommended to use a taper type entrance if the acceleration length is greater than 1300 feet. When a parallel entrance type is used, the taper length rate should be 25:1 from the downstream taper to the mainline.

An exit ramp can have a parallel or taper type configuration. The taper type ramp alignment is generally designed with an alignment break at the outer edge of the pavement. The minimum divergence angle of the taper type alignment break is two to five degrees. The exit parallel type begins with a taper rate of 20:1 and the deceleration length of the parallel lane is dependent on the design speed of the mainline roadway and ramp design speeds. Exiting traffic can be assumed to be traveling 70% of the mainline design speed.

The design speed for entrance and exit ramp curves was calculated based on the superelevation provided in the as-built plans. Most of the interchange ramps have a superelevation greater than 8% but less than 10%, therefore the current AASHTO 10% maximum superelevation tables were referenced for calculating the design speed. In addition to the KY 339 (Exit 14) and KY 348 (Exit 43) interchanges, the KY 131 (Exit 27) interchange does not meet the recommended ramp design speed. Data is provided in **Appendix F**.

Since the original construction, some of the interchange ramps on the Purchase Parkway have been improved. However, a majority of the existing ramps on the parkway do not meet the minimum guideline of 50:1 entrance tapers, and existing ramps have exit tapers less than the minimum 20:1 taper. According to guidelines from AASHTO, the minimum deceleration length for exit ramps to a stop condition is 615 feet. Exit 0 along with all diamond interchange exit ramps on the Purchase Parkway meet the minimum deceleration length.

For this study, a minimum of 413 feet of taper length for an exit taper ramp was used for comparison. This length comes from using the maximum divergence



Exit 14 – One of two previous toll booth plazas on the Purchase Parkway.

angle of 5 degrees and 36 feet of ramp separation from the mainline.

AASHTO recommends a 50:1 – 70:1 uniform taper for the entrance taper ramps. The entrance taper length used was 900 feet for an entrance taper ramp.

2. Weaving Characteristics

There are 2 interchanges that do not meet the 1,000 foot minimum weaving length distance recommended for a service-to-service interchange. These interchanges are located at Exit 14 – Wingo / Clinton (MP 13.653) in Graves County and Exit 43 Benton / Symsonia (MP 42.555) in Marshall County. These two interchanges were initially designed for toll collection stations. The full cloverleaf configurations included short weaving sections of approximately 300 feet. The toll plazas have since been suspended and the interchange at Exit 43 currently is being red-designed.

Currently, the Purchase Parkway interchange with I-24 is a full cloverleaf interchange that has a weaving distance of approximately 480 feet on the Purchase Parkway and approximately 430 feet on I-24. A weaving analysis was not conducted on this interchange because it does not meet the recommended systems interchange configuration.

In addition to the interchanges mentioned, there is another weaving segment on the Purchase Parkway, which is located between the Mayfield Bypass (US 45) trumpet interchange at Exit 21 and KY 80 interchange at Exit 22. An auxiliary lane is provided for the northbound Purchase Parkway to Exit 22. Traffic counts were provided by KYTC and measurements were taken in the field for the weaving analysis. Highway Capacity Software (HCS) was used for the analysis. A 2.5% annual growth rate was applied to the 2010 DHV traffic counts, which is the annual growth rate used to calculate the 2040 traffic with I-69 designation. These traffic volumes and existing weave distance resulted in a LOS of B (15.02 passenger cars per mile per lane). See **Appendix F** for HCS output.

E. Interchange Crash Data

To further analyze the interchange operations, crashes at interchanges were collected and analyzed. **Table 6-2** shows the types of crashes occurring within a 0.1 mile section on either side of the intersecting route at each interchange.

Exit	MP	County	Intersecting Route	Ramp	Total Crashes by Type ¹						Total	Fatalities
					Rear End	Fixed Object	Animal	Side Swipe	Ran Off Road	Other		
Purchase Parkway												
0	0.30	Fulton	Frontage Roads	0	1	1	2	0	1	0	5	0
1	1.42	Fulton	US 51	4	0	0	0	0	0	0	4	0
2	2.48	Fulton	KY 307	1	0	0	3	0	0	0	4	0
14	13.65	Graves	KY 339	2	1	0	0	1	2	0	6	0
21	21.29	Graves	US 45	4	2	14	1	2	1	2	26	1
22	22.27	Graves	KY 80	3	2	4	0	0	2	0	11	0
24	23.70	Graves	KY 121	3	2	1	0	0	2	1	9	0
25	24.73	Graves	US 45	4	0	5	2	3	4	0	18	0
27	27.46	Graves	KY 131	3	0	1	1	0	4	0	9	0
41	40.81	Marshall	US 641	13	0	0	2	1	2	0	18	0
43	42.56	Marshall	KY 348	31	3	7	0	5	1	1	48	0
47	46.94	Marshall	US 68	23	0	6	4	3	3	1	40	0
52	51.40	Marshall	I-24	55	1	3	2	4	5	4	74	0
Interstate 24												
25	24.94	Marshall	Purchase Pkwy	55	8	9	3	9	4	9	97	1
27	26.57	Marshall	US 62	14	6	7	1	5	2	4	39	1
31	30.73	Livingston	KY 453	1	3	1	3	3	3	9	23	2
40	39.52	Lyon	US 62	4	3	3	5	1	1	3	20	0
42	41.65	Lyon	Western KY Pkwy	23	3	1	2	5	4	3	41	1

¹ Number of crashes in period studied (2005-2009), within 0.1 mile on either side of intersection route.

Table 6-2 Interchange Crash Data

Along the Purchase Parkway, there are three interchanges that fall within a high crash segment, previously mentioned in **Sections 4 and 5 of Chapter III.**

- Exit 27, KY 131, in Graves County had nine crashes, of which four were ramp related;
- Exit 47, US 641, in Marshall County had 18 crashes. A majority of these crashes (13) were ramp related;
- Exit 43, KY 348 (previous toll plaza), in Marshall County had 48 crashes. 65% (31 of 48) were ramp related collisions.

Along I-24, there is one interchange that falls within a high crash segment.

- Exit 25, Purchase Parkway, in Marshall County had 97 crashes, of which 55 were ramp related.

The 171 crashes that occurred at the I-24 and Purchase Parkway Interchange accounted for 19% of all crashes during the study period.

F. Interchange Spacing

The current minimum spacing between interchanges on an interstate for rural areas is three miles and one mile for urban areas. This spacing is measured between the centerline of intersecting routes. The three interchanges at Fulton are spaced closer than the rural interstate minimum. These three interchange exits are spaced within three miles of each other. The interchange at Exit 0 is an unconventional interchange that is too close to Exit 1 (MP 1.424). The interchanges at Exit 1 (MP 1.424) and Exit 2 (MP 2.442) are spaced closer than the minimum for rural areas. The two interchanges at Benton are within the rural three-mile spacing limit. There is less than two miles between Exit 41 (MP 40.809) and Exit 43 (MP 42.555).

G. Interchange Control of Access

Interchange control of access is the distance measured from the ramp termini to the adjacent commercial or residential access. The measurement of control of access according to KYTC standards is from the end of the ramp termini radius or taper to the centerline of the adjacent commercial or residential access. The recommended interchange control of access for an urban area is 100 feet and 300 feet for rural areas. The following table illustrates the interchange control of access distance.

EXIT	RURAL/ URBAN	INTERSECTION ROUTE	QUADRANT	DISTANCE (FT)
14	RURAL	KY 339	Northwest	115
			Southwest	105
22	URBAN	KY 80	Northeast	65
			Northwest	85
			Southwest	60
27	RURAL	KY 131	Southeast	270
			Northwest	275
			Southwest	60
47	RURAL	US 68	Southeast	260
			Northeast	0
			Northwest	108
			Southwest	40

Table 6-3 Interchange Control of Access

H. Interchange Configuration

Currently the Purchase Parkway has several interchanges that are not inconsistent with common practice for interstate interchange configuration.

1. Systems Interchanges

Currently, the Purchase Parkway and I-24 interchange is a full clover leaf (graphic below), which meets the recommendation for the two fully controlled access facilities interchange. However, with the implementation of converting the Purchase Parkway to I-69, the clover leaf is inconsistent with AASHTO recommendations for a systems interchange. Currently, the ramps and loop ramps within the interchange are also one lane.



Exit 52 – I-24 / Purchase Parkway Interchange

2. Service Interchanges

Two service interchanges are inconsistent with AASHTO recommendations are the previous toll plazas located Exit 14 and Exit 43 (graphics below). As previously mentioned, both of these interchanges have less than the minimum weaving distance. At the date of this report, Exit 43 is in the design phase to be improved and meet interstate standards.



Exit 14 – Purchase Parkway / KY 339 Previous Toll Plaza



Exit 43 – Purchase Parkway / KY 348 Previous Toll Plaza

Another service interchange that is inconsistent with AASHTO recommended interchange configuration is Exit 0 in Fulton County at the Tennessee state line (graphic below). This interchange includes a weigh station for the northbound Purchase Parkway. The weigh station

provides access to Eastwood Drive. Southbound Purchase Parkway exit and entrance ramps connect to KY 166. The KYTC has made overture to the TDOT regarding this interchange, the existing weigh station, and overall connectivity for I-69 between Kentucky and Tennessee. Thus far there has been no coordination with TDOT.



Exit 0 – Purchase Parkway / Weigh Station / Eastwood Dr / KY 166

The interchange at Exit 21 in Mayfield does not provide continuity for the Purchase Parkway (graphic below). The modified trumpet interchange is configured for the Mayfield Bypass (US 45) as the major route and the Purchase Parkway as the minor route. The northbound Purchase Parkway merges from two lanes to one lane, which then travels over US 45 and ultimately merges into the Mayfield Bypass. The southbound Purchase Parkway exits to the right via a one-lane ramp, while southbound US 45 continues straight.



Exit 21 – Purchase Parkway / Mayfield Bypass Interchange

VII. KEY FINDINGS OF EXISTING CONDITIONS OVERVIEW

Currently, the Purchase Parkway operates similarly to an interstate highway. As discussed in previous chapters, in some cases the Purchase Parkway lacks geometric compliance with current AASHTO guidelines. These AASHTO minimum guidelines are provided in **Table 7-1**. The Purchase Parkway provides the basic geometric characteristics of an interstate highway, such as full control of access, two travels lanes in each direction, 12 foot lanes, 10 foot outside paved shoulders, 36 foot rural medians, 70 mph rural design speed, and 50 mph urban design speed. However, the Purchase Parkway lacks compliance with the dimensions of other design features. **Figure 7-1** through **7-5** summarizes the deficiency locations for the project corridor. Each deficiency labeled on the figures is described in **Table 7-2** and **Table 7-3** in more detail. In addition to those labeled, the inside shoulder for the Purchase Parkway is deficient. The Purchase Parkway has a three foot paved inside shoulder, with the exception of the Mayfield Bypass, which has no inside paved shoulder.

Design Element	Rural			Urban			Urban/Rural		
	Mainline	Ramps	Loops	Mainline	Ramps	Loops	Directional	Entrance	Exit
Design Speed (MPH) (507,825,826) [2]	70	35	25	50	25	25	40		
Level of Service (504, 838) [3]	C			D					
Driving Lane Width (504,838) [3]	12'	15'	15'	12'	15'	15'			
Inside Shoulder Width (505,510,513,838) [3]									
4-lane freeway & ramps	4'	2'-4'	2'-4'	4'	2'-4'	2'-4'	1'-6'		
6-lane, Truck DDHGV<=250				10'					
6-lane, Truck DDHGV>250				12'					
Outside Shoulder Width (505,838) [3]									
Truck DDHV <= 250	10'	8'-10'	8'-10'	10'	8'-10'	8'-10'	8'-10'		
Truck DDHV > 250	12'			12'					
Median Width (509) [4] ¹	36'			10'					
Over Freeway Vertical Bridge Clearance (506,763)	16'-00"								
Over Freeway Vertical Sign Truss Clearance (507)	17'-00"								
Bridge Width (Horizonatal) ADT>2000	Traveled Lanes + Shoulders (approach roadway width)								
Bridge Width (Horizonatal), Length > 200' ²	Traveled Lanes + 3.5' each side								
Design ADT (vehicles per day)	> 6,000	750-1,500		> 6,000	750-1,500				
Clear Zone (Fill Slope 1V:4H or flatter) ³	30'-46'	10'-14'		20'-28'	10'-14'				
Clear Zone (Cut Slope 1V:3H or flatter) ³	22'-30'	10'-12'		14'-22'	10'-12'				
Superelevation (505) ⁴	+/-8%								
Horizontal Curvature Minimum Radius (8% max SE) (170)	1810'	314'	134'	758'	134'	134'	444'		
Minimum Runoff (8% max SE) (181)	240'	155'	137'	192'	137'	137'	166'		
Minimum Runout (8% max SE) (181)	60'	39'	34'	48'	34'	34'	41'		
Maximum Grade (506,829)	4%	5%-7%	5%-7%	5%	5%-7%	5%-7%	4%-6%		
Stopping Sight Distance (112)	730'	250'	155'	425'	155'	155'	305'		
Taper Ratio (845)								50:1	
Divergence Angle (849)									2°-5°

Note: Page number references from AASHTO's *A Policy on Geometric Design of Highways and Streets, 2004* are provided in parenthesis. Page number reference from AASHTO's *A Policy on Design Standards Interstate System, 2005* are provided in brackets.

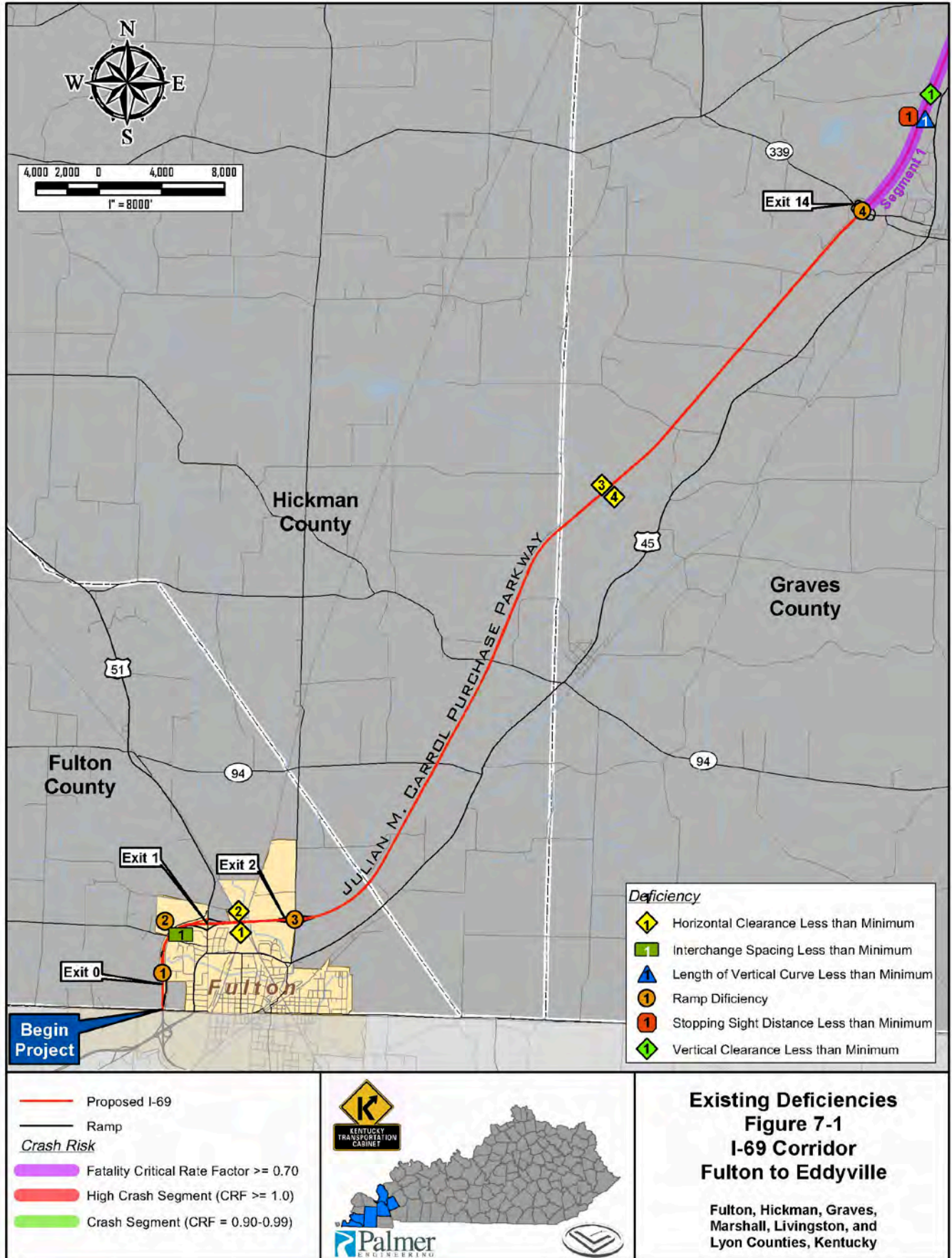
¹ AASHTO's *A Policy on Design Standards Interstate System, 2005* states 36' minimum depressed median in rural areas. AASHTO's *A Policy on Geometric Design of*

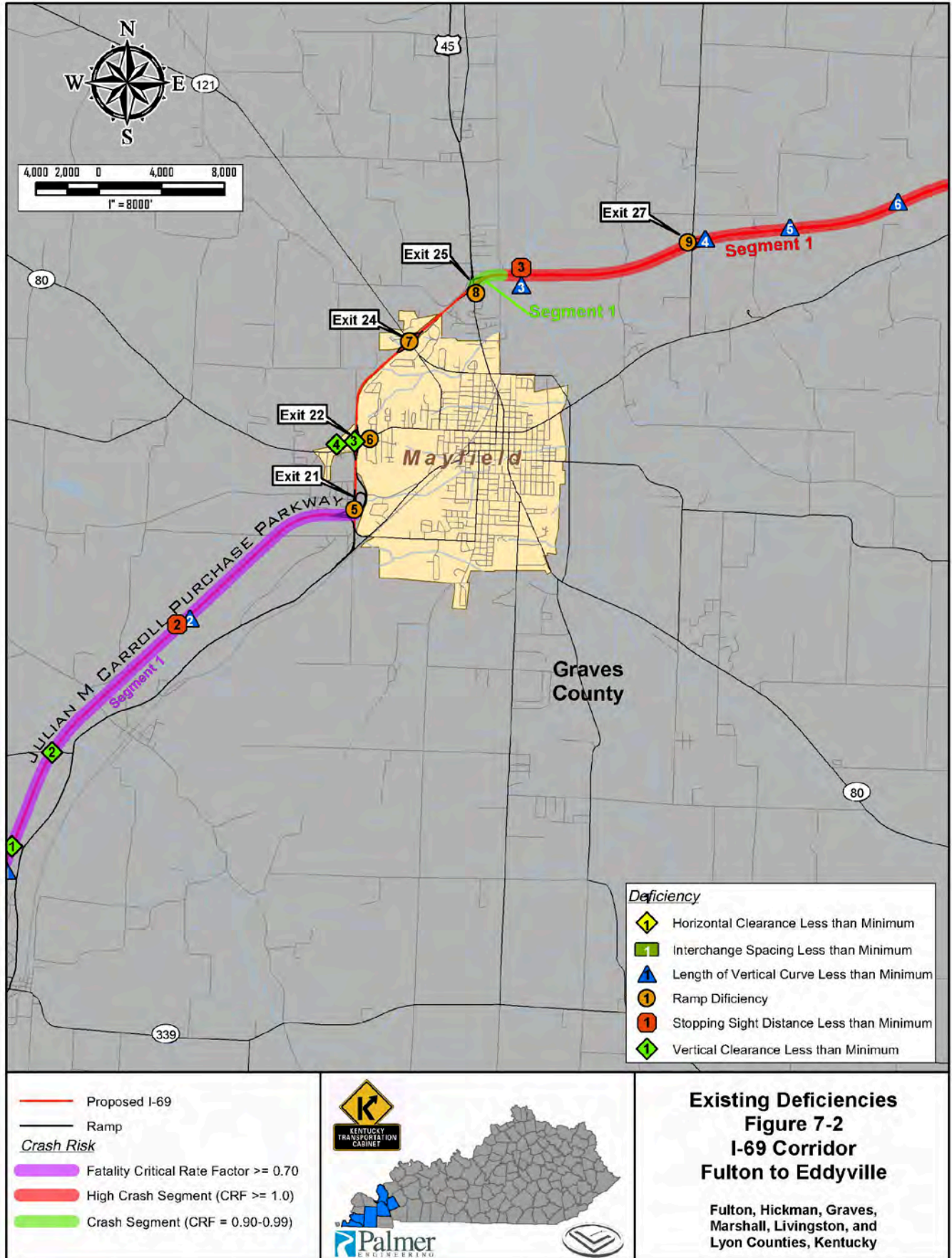
² This item is referenced in the AASHTO *A Policy on Design Standards Interstate System, 2005*

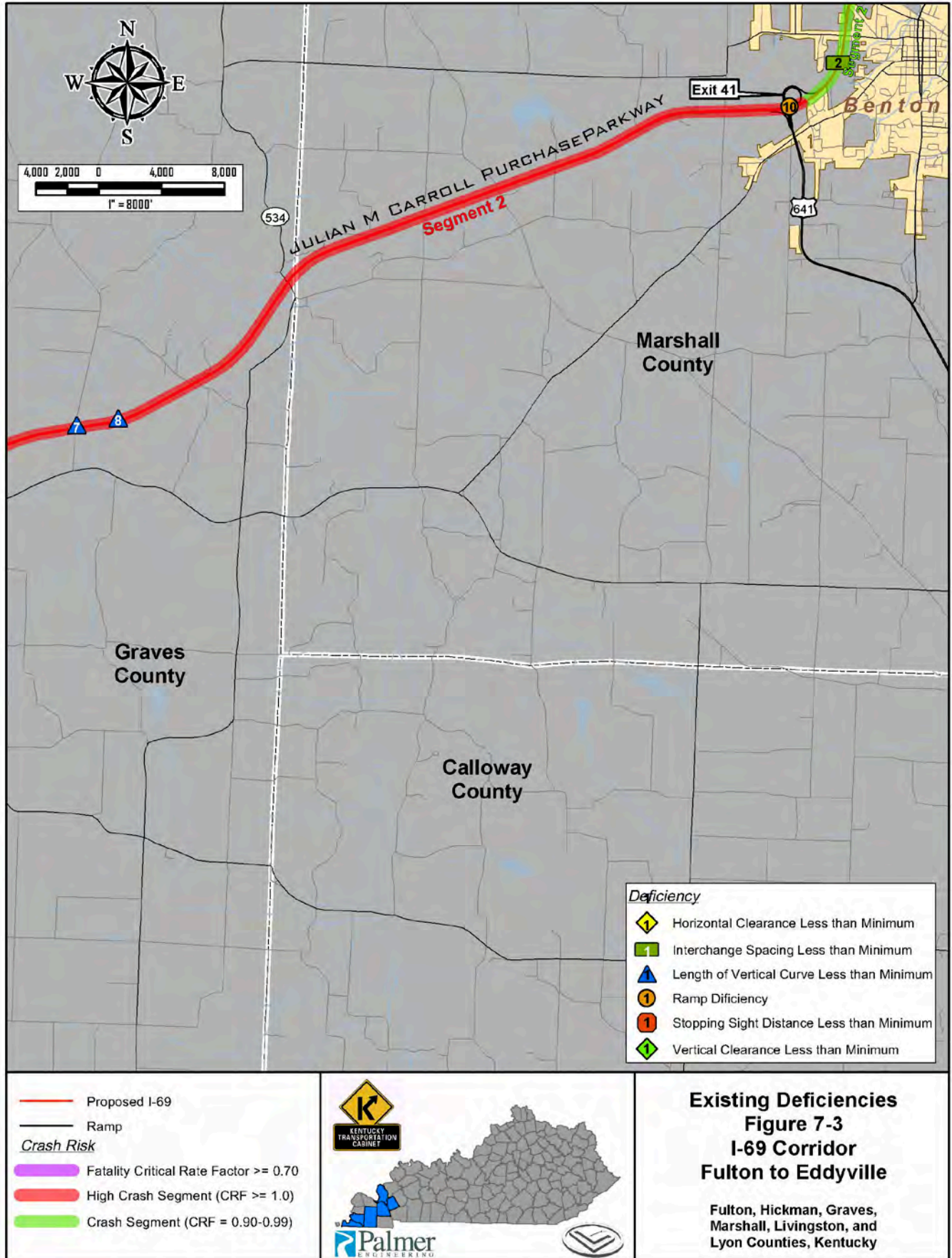
³ Information on clear zones is provided in AASHTO's *Roadside Design Guide Current Edition*.

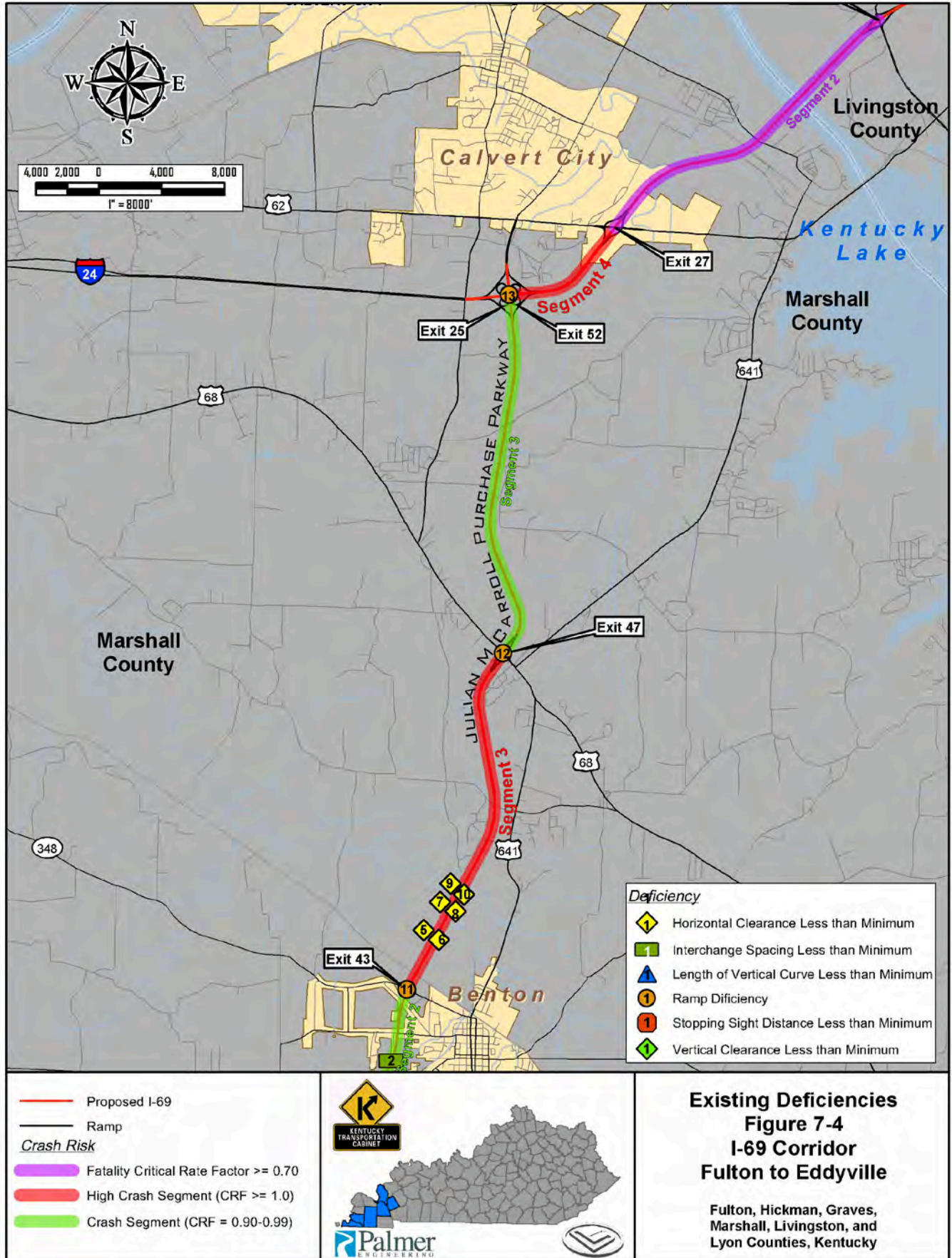
⁴ Common KYTC Practice is 8% maximum superelevation. KYTC has used 10% maximum superelevation on past projects including the Purchase Parkway.

Table 7-1 AASHTO Minimum Guidelines









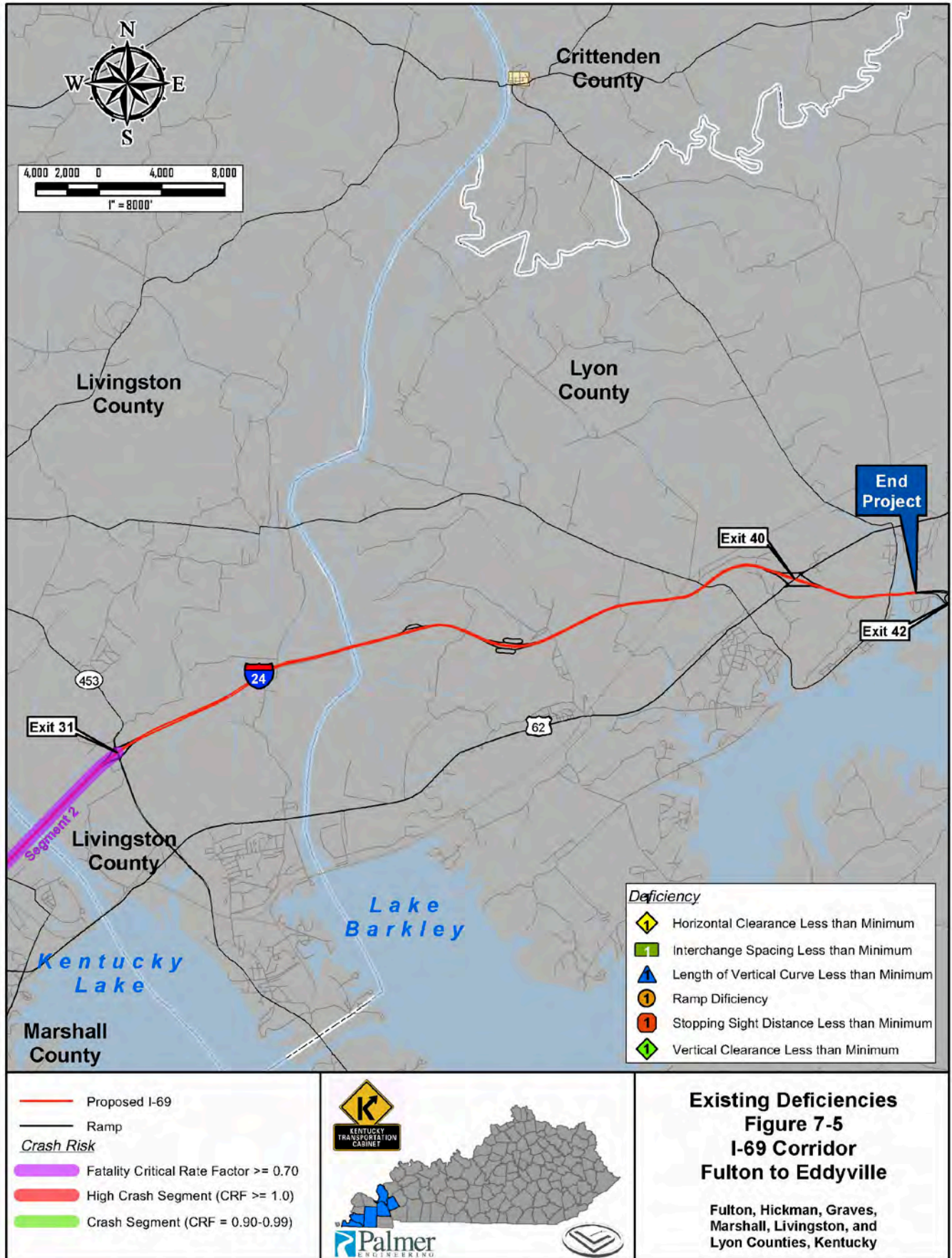


Table 7-2 Deficiencies Summary for the Purchase Parkway























Deficiency Type	Milepoint	Deficiency Description
Purchase Parkway - Fulton/Hickman County		
	Exit 0	Taper Length < Min; Rolled Curb
	MP 1.0	Interchange Spacing less than 3 mile minimum
	Exit 1	Taper Length < Min; Rolled Curb
	Exit 2	Taper Length < Min; Divergence Angle > Max; Rolled Curb
	1.781	Horizontal Clearance = 30' (Note bridge is over 200' long)
	1.781	Horizontal Clearance = 30' (Note bridge is over 200' long)
Purchase Parkway - Graves County		
	9.082	Horizontal Clearance = 30' (Note bridge is over 200' long)
	9.082	Horizontal Clearance = 30' (Note bridge is over 200' long)
	13.645 - 21.305	Fatality CRF = 0.75 (CRF >=0.70)
	Exit 14 MP 13.653	Taper Length < Min; Degree of Curve > Max; Ramp Entrance/Exit Deficient; Rolled Curb; Interchange control of access less than 300' minimum
	14.965	Length of Vertical Curve = 500' (696' calculated minimum)
	14.965	Stopping Sight Distance = 554' (730' minimum)
	15.302	Vertical clearance = 15.88' (16' minimum)
	16.526	Vertical clearance = 15.94' (16' minimum)
	18.727	Length of Vertical = 600' (624' calculated minimum)
	18.727	Stopping Sight Distance = 727' (730' minimum)
	Exit 21 MP 21.285	Taper Length < Min; Divergence Angle > Max; Rolled Curb
	Exit 22 MP 22.267	Taper Length < Min; Interchange control of access less than 100' minimum
	22.267	Vertical clearance = 15.30' (16' minimum)
	22.267	Vertical clearance = 15.12' (16' minimum)
	Exit 24 MP 23.701	Taper Length < Min
	Exit 25 MP 24.726	Taper Length < Min; Rolled Curb

Table 7-2 (Continued) Deficiencies Summary for the Purchase Parkway


























Deficiency Type	Milepoint	Deficiency Description
	24.747 - 25.100	Crash Segment CRF = 0.9 (CRF 0.90-0.99)
	25.100 - 27.452	High Crash Segment - CRF= 1.33 (CRF >=1.0)
	27.452 - 34.487	High Crash Segment - CRF = 1.05 (CRF >=1.0)
	25.32	Length of Vertical Curve = 536' (584' calculated minimum)
	25.32	Stopping Sight Distance = 721' (730' minimum)
	Exit 27 MP 27.461	Taper Length < Min; Ramp Entrance/Exit Deficient; Divergence Angle > Max; Rolled Curb; Interchange control of access less than 300' minimum
	27.517	Length of Vertical Curve = 536' (584' calculated minimum)
	28.625	Length of Vertical Curve = 400' (438' calculated minimum)
	29.970	Length of Vertical Curve = 400' (416' calculated minimum)
	31.144	Length of Vertical Curve = 400' (467' calculated minimum)
	31.646	Length of Vertical Curve = 600' (608' calculated minimum)
Purchase Parkway - Marshall County		
	34.487 - 41.035	High Crash Segment - CRF = 1.05 (CRF >=1.0)
	Exit 41 MP 40.809	Taper Length < Min; Divergence Angle > Max
	MP 41.682	Interchange spacing less than 3 mile minimum
	41.035 - 42.555	Crash Segment -CRF = 0.99 (CRF 0.90-0.99)
	42.555 - 46.942	High Crash Segment CRF =1.0 (CRF >=1.0)
	Exit 43 MP 42.555	Taper Length < Min; Degree of Curve > Max; Ramp Entrance/Exit Deficient; Rolled Curb
	43.277	Horizontal Clearance = 30' (Note bridge is over 200' long)
	43.277	Horizontal Clearance = 30' (Note bridge is over 200' long)
	43.614	Horizontal Clearance =30' (Note bridge is over 200' long)
	43.614	Horizontal Clearance =30' (Note bridge is over 200' long)
	43.872	Horizontal Clearance =30' (Note bridge is over 200' long)
	43.872	Horizontal Clearance = 30' (Note bridge is over 200' long)
	Exit 47 MP 46.942	Taper Length < Min; Rolled Curb; Interchange control of access less than 300' minimum
	46.942 - 51.398	Crash Segment - CRF = 0.91 (CRF 0.90-0.99)
	Exit 52 MP 51.398	Taper Length < Min; Degree of Curve > Max

Table 7-3 Deficiencies Summary of I-24

Deficiency Type	Milpoint	Deficiency Description
Interstate 24 - Marshall County		
<u>4</u>	24.941 - 26.558	High Crash Segment - CRF =1.10 (CRF >=1.0)
<u>2</u>	26.558 - 29.352	Fatality CRF = 0.71 (CRF >=0.70)
Interstate 24 - Livingston/Lyon County		
<u>2</u>	29.352 - 30.742	Fatality CRF = 0.71 (CRF >=0.70)

A. Operational Considerations and Safety

The following is a summary of the key findings related to the operational considerations and the safety of the Purchase Parkway and I-24:

- Crash Analysis: For the crash analysis, a high crash segment was defined as having a critical crash rate factor greater than or equal to one. Crash segments with a critical crash rate factor between 0.9 and 0.99 are identified in the report.
- Crash Analysis – Purchase Parkway: When compared to other Kentucky parkways, there is one high crash segment in Graves County (MP 25.1 – MP 27.452) where the crash rate exceeds the statewide average for all parkways. There is one segment in Graves and Marshall Counties (MP 27.452 – MP 41.035) with a critical crash rater factor between 0.9 and 0.99.
- Crash Analysis – I-24: When compared to other interstates within Kentucky, there is one high crash segment located near the Purchase Parkway interchange in Marshall County (MP 24.941-MP 26.558) where the crash rate exceeds the statewide average for all interstates.
- Crash Analysis – Purchase Parkway as an Interstate: When compared to Kentucky interstates, rather than state parkways, two additional high crash segments were identified along the Purchase Parkway located in Graves and Marshall Counties (MP 27.452 – MP 41.035 and MP 42.555 – MP 46.942).
- Crash Segment – Purchase Parkway as an Interstate: There are three segments with a critical crash rate factor between 0.9 and 0.99. These segments are: MP 24.747 – MP 25.1, MP 41.035 – MP 42.555, and MP 46.942 – MP 51.398.
- Additional Findings Related to Crash Analysis: There were only six crashes coded as *median cross-over or head-on collisions* for the Purchase Parkway and I-24 during the study period (2005-2009). Two crashes occurred on the Purchase Parkway and the remaining four happened on I-24. There were seven fatal crashes on the Purchase Parkway and six fatal crashes on I-24 during the study period (2005-2009).
- Current Traffic (2010): The current Purchase Parkway traffic volumes range from 7,060 vehicles per day (vpd) in Fulton County to 19,200 vpd near I-24 interchange in Marshall County. The current I-24 traffic volumes range from 21,900 vpd near the Purchase Parkway interchange to 28,200 vpd near Calvert City in Marshall County.
- Truck Percentages (2010): The existing truck percentages on the Purchase Parkway range from 24.9% at Mayfield, Kentucky in Graves County to 34.5% near Benton, Kentucky in Marshall County. On I-24, the truck percentage is 24.9%.
- Future Traffic (2040) without I-69: The projected annual growth rate along the Purchase Parkway and I-24 is 2%. This rate results in traffic volumes ranging from 12,800 vpd to 34,800 vpd on the Purchase Parkway and from 39,700 vpd to 51,100 vpd on I-24.
- Future Traffic (2040) with I-69: The projected annual growth rate along the Purchase Parkway and I-24 is 2.5%. This rate results in traffic volumes ranging from 14,800 vpd to 40,300 vpd on the Purchase Parkway and from 45,900 vpd to 53,900 vpd on I-24.
- Truck Percentages (2040): Future truck volumes were not forecasted for this project. However, truck traffic is expected to increase if the national goals of I-69 are met.
- Level of Service (2010): The Purchase Parkway and I-69 currently operate at a LOS C or better, which is acceptable to the AASHTO guidelines.

- Level of Service (2040): The Purchase Parkway and I-69 are expected to operate at a LOS C or better with or without the I-69 designation.

B. Mainline Geometry/Typical Section

The following is a summary of the key findings related to the Purchase Parkway geometry and typical section:

- Design Speed: The Purchase Parkway meets or exceeds the minimum design speed guidelines for interstate highways in rural and urban areas.
- Lane Width: The lane width on the Purchase Parkway meets the minimum AASHTO guidelines for interstate design.
- Outside Shoulder Width: The Purchase Parkway meets the AASHTO minimum outside shoulder width based on the current truck DDHV.
- Inside Shoulder Width: The Purchase Parkway does not comply with the minimum AASHTO design guidelines for inside paved shoulder widths. The AASHTO minimum inside paved shoulder width is four feet. The Purchase Parkway has a three foot inside paved shoulder with the exception of the Mayfield Bypass where no inside paved shoulder exists.
- Median Width: The Purchase Parkway meets the rural 36 foot AASHTO minimum median width in rural areas and the 10 foot AASHTO minimum median width in urban areas.
- Clear Zones: Based on the provided information and limited field reviews, it is not possible to evaluate the applicability of the current design standards for clear zone on the Purchase Parkway. The fill and cut slopes provided in the typical sections vary from 1V:2H to 1V:4H, the median ditch slope is 1V:4H, and the outside ditch slope is between 1V:3H and 1V:4H.
- Guardrail Placement and Condition: The guardrail end treatments on the Purchase Parkway meet the current standards. An evaluation of guardrail placement is not possible based on the insufficient information provided on the as-built plans.
- Superelevation: From the review of as-built plans, horizontal curves along the Purchase Parkway appear to comply with the AASHTO criteria of 10% maximum superelevation.
- Horizontal Alignment: The horizontal curvature for the Purchase Parkway is acceptable and in compliance with the current AASHTO design guidelines.
- Vertical Alignment: The majority of the vertical curves along the Purchase Parkway meet the current AASHTO guidelines. Eight vertical curves do not meet the guideline for the minimum length of vertical curves.
- Stopping Sight Distance: The minimum stopping sight distance guideline is not met for three vertical curves: MP 14.965, MP 18.727, and MP 25.320.

C. Bridges and Overpasses

The following is a summary of the key findings related to the bridges and overpasses on the Purchase Parkway and I-24:

- Lateral Clearance – Purchase Parkway: Of the 46 mainline bridges, 10 do not meet the minimum lateral clearance requirement.
- Vertical Clearance – Purchase Parkway and I-24: Of the 35 overpass bridges on the Purchase Parkway, 4 do not meet the minimum 16 foot vertical clearance requirement. The five overpass bridges on I-24 meet the minimum vertical clearance regulation.
- Functional Adequacy: One bridge (MP 21.285) is identified as functionally obsolete.
- Sufficiency Rating: All Purchase Parkway mainline and overpass bridges have a sufficiency rating greater than 60.0.

D. Interchanges and Ramps

The following is a summary of the key findings related to the interchanges and ramps on the Purchase Parkway:

- Design Speed: Design speed for ramps were not provided on the as-built plans.

- Lane Width: Lane widths for the interchange ramps range from 15 feet to 18 feet, which is compliant with AASHTO guidelines.
- Shoulder Width: A majority of the interchange ramps on the Purchase Parkway do not meet the AASHTO guidelines for shoulder width. 10 of the 13 interchanges have ramp shoulder widths that do not meet criteria.
- Horizontal Alignment: One loop ramp at Exit 14 (MP 13.653) does not meet the minimum radius for 25 mph design speed. This ramp has a 130 foot radius within the ramp and the minimum loop ramp radius is 134 feet for 25 mph design speed.
- Vertical Alignment-Vertical Grade: The minimum vertical grade is met on all interchange ramps that were provided on the as-built plans.
- Vertical Alignment-Vertical Length of Curve: Three vertical curve ramps did not meet the requirement for minimum length of curve that were calculated based on the minimum ramp design speed. These ramps are located at the US 51 interchange (Exit 1) and KY 80 interchange (Exit 22).
- Vertical Alignment-Stopping Sight Distance: Two vertical curve ramps did not meet the minimum stopping sight distance requirement that were calculated based on the minimum ramp design speed. These ramps are located at the US 51 interchange (Exit 1) and KY 80 interchange (Exit 22).
- Superelevation: Based on review of as-built plans, existing ramps appear to satisfy the AASHTO criteria for 10% maximum superelevation.
- Speed-Change Lanes: Many of the existing ramps on the Purchase Parkway do not meet the minimum criteria for acceleration and deceleration lengths.
- Weaving Characteristics: The one location with an existing weaving situation between interchanges will operate at a LOS B with future I-69 traffic projections. The interchanges at Exits 14, 43, and 52 are cloverleaf interchanges with weaving within the interchange.
- Interchange Spacing: On the Purchase Parkway, there are two locations where the minimum interchange spacing requirements are not met. The three interchanges (Exits 0, 1, 2) in Fulton are within three miles of each other. The two interchanges (Exit 41 and Exit 43) in Benton are within three miles of each other.
- Interchange Control of Access: The Purchase Parkway has four interchanges that do not meet the minimum interchange control of access requirements.
- Interchange Configuration: Currently, the Purchase Parkway has four service interchanges that do not meet the recommended interstate interchange configuration. They are located at Exit 0, Exit 14, Exit 21, and Exit 43. The interchange configurations at I-24 and the Purchase Parkway is not recommended for a systems interchange.

E. Design Feature Deficiency and Crash History Analysis

To further evaluate the impact of the roadway feature deficiencies on safety, a crash analysis was conducted to verify the deficiency has an impact on safety.

1. Mainline Geometry/Typical Section

a. Median Type – Mayfield Bypass

On the section of the Purchase Parkway that has a 16 foot non mountable median, there were not any 'cross-over', 'head-on' or fatal collisions. The highest critical rate factor when analyzed as an interstate for segments with this median is 0.55.

b. Vertical Alignment – Minimum Vertical Curves, Minimum Stopping Sight Distance

A rolling crash analysis was conducted for vertical alignment deficiencies. The crashes were analyzed in 0.3 mile segments with reference given to each vertical alignment deficiency. **Table 7-4** below illustrates the findings of analysis.

2. Bridges/Overpasses

a. Bridge Width – Mainline Bridges

A crash analysis was conducted for narrow mainline bridge deficiencies. The crashes were analyzed in 0.3 mile segments with reference given to each vertical alignment deficiency. **Table 7-5** below illustrates the findings of analysis.

F. Superelevation Crash Analysis

As part of this study, a crash analysis was conducted on horizontal curves with a superelevation greater than 8%. **Table 7-6** below illustrates the findings of these analyses. The horizontal curve at MP 47.417 has a critical crash rate factor greater than 1.0. This curve has a radius of 1910 feet and superelevation of 8.3%. From MP 47.117 to 47.717, there were 26 crashes from 2005-2009. Of these crashes, 54% occurred when the roadway condition was either icy, wet, or snow/slush. Five of these crashes (20%) were coded *COLLISION WITH ANIMAL* and five crashes were coded *1 VEHICLE PARKED POSITION (NOT PARKING LOT/DRIVEWAY)*. Based on the analysis, it is not apparent that the crash history is directly related to superelevation. Therefore, it is not recommended for improvement.

G. Mayfield Bypass

The City of Mayfield, KY has a population of 10,024 and has 4,739 housing units, according to the U.S. Census Bureau. The total area of Mayfield is 6.2 square miles and its population density per square mile of land area is 1,455. Mayfield is the county seat of Graves County. The population of Graves County is 37,121. There are 16,777 housing units within Graves County.

According to KYTC, the functional classification of the Mayfield Bypass is Urban Freeways & Expressways. The Mayfield Bypass traverses approximately for three miles along the west and north borders of the city limits.

The Mayfield Bypass was designed with the intention to serve the City of Mayfield as an urban expressway. The interchanges are spaced at 1 mile or farther. The traffic volumes are approximately 170% higher along the Mayfield Bypass than the rural sections of the Purchase Parkway to the north and south of Mayfield. The 16 foot non mountable median was constructed as an urban expressway. Based on the crash analysis, the Mayfield Bypass operates safer than most of the Purchase Parkway. For this study, the Mayfield Bypass is classified as an urban expressway and was analyzed based on the urban geometric criterion.

Chapter VII – Key Findings of Existing Conditions Overview

DEFICIENCY		MP	Begin MP	End MP	ADT	Avg Crash Rate	Critical Crash Rate	Avg Fatality Rate	Critical Fatality Rate	Crashes				HM/M	Rates per HM/M				Critical Crash Rate Factor	Critical Fatality Rate Factor
Min Length of Vertical Curve (Actual, Minimum)	Min SSD (Actual, Minimum)									Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total		
500' , 696'	554' , 730'	14.965	14.665	14.965	8,590	52	148.29	0.8	22.06	0	0	2	2	0.05	0.00	0.00	42.53	42.53	0.29	0.00
			14.765	15.065	8,590	52	148.29	0.8	22.06	0	0	2	2	0.05	0.00	0.00	42.53	42.53	0.29	0.00
			14.865	15.165	8,590	52	148.29	0.8	22.06	0	0	2	2	0.05	0.00	0.00	42.53	42.53	0.29	0.00
600' , 624'	727' , 730'	18.727	14.965	15.265	8,590	52	148.29	0.8	22.06	0	0	1	1	0.05	0.00	0.00	21.26	21.26	0.14	0.00
			18.427	18.727	8,590	52	148.29	0.8	22.06	0	0	1	1	0.05	0.00	0.00	21.26	21.26	0.14	0.00
			18.527	18.827	8,590	52	148.29	0.8	22.06	0	0	3	3	0.05	0.00	0.00	63.79	63.79	0.43	0.00
536' , 584'	721' , 730'	25.320	18.627	18.927	8,590	52	148.29	0.8	22.06	0	0	4	4	0.05	0.00	0.00	85.05	85.05	0.57	0.00
			18.727	19.027	8,590	52	148.29	0.8	22.06	1	0	5	6	0.05	21.26	0.00	106.31	127.58	0.86	0.96
			25.020	25.320	7,790	52	153.67	0.8	23.68	1	1	7	9	0.04	23.45	23.45	164.13	211.02	1.37	0.99
500' , 543'	-	27.517	25.120	25.420	7,790	52	153.67	0.8	23.68	1	1	6	8	0.04	23.45	23.45	140.68	187.57	1.22	0.99
			25.220	25.520	7,790	52	153.67	0.8	23.68	0	2	6	8	0.04	0.00	46.89	140.68	187.57	1.22	0.00
			25.320	25.620	7,790	52	153.67	0.8	23.68	0	1	3	4	0.04	0.00	23.45	70.34	93.79	0.61	0.00
400' , 438'	-	28.625	27.217	27.517	7,320	52	157.27	0.8	24.79	0	1	3	4	0.04	0.00	24.95	74.86	99.81	0.63	0.00
			27.317	27.617	7,320	52	157.27	0.8	24.79	0	1	2	3	0.04	0.00	24.95	49.90	74.86	0.48	0.00
			27.417	27.717	7,320	52	157.27	0.8	24.79	0	1	0	1	0.04	0.00	24.95	0.00	24.95	0.16	0.00
400' , 416'	-	29.970	27.517	27.817	7,320	52	157.27	0.8	24.79	0	0	0	0	0.04	0.00	0.00	0.00	0.00	0.00	0.00
			28.325	28.625	7,320	52	157.27	0.8	24.79	0	2	1	3	0.04	0.00	49.90	24.95	74.86	0.48	0.00
			28.425	28.725	7,320	52	157.27	0.8	24.79	0	2	1	3	0.04	0.00	49.90	24.95	74.86	0.48	0.00
400' , 467'	-	31.144	28.525	28.825	7,320	52	157.27	0.8	24.79	0	1	1	2	0.04	0.00	24.95	24.95	49.90	0.32	0.00
			28.625	28.925	7,320	52	157.27	0.8	24.79	0	0	1	1	0.04	0.00	0.00	24.95	24.95	0.16	0.00
			29.670	29.970	7,320	52	157.27	0.8	24.79	0	3	1	4	0.04	0.00	74.86	24.95	99.81	0.63	0.00
600' , 608'	-	31.646	29.770	30.070	7,320	52	157.27	0.8	24.79	0	3	1	4	0.04	0.00	74.86	24.95	99.81	0.63	0.00
			29.870	30.170	7,320	52	157.27	0.8	24.79	0	0	0	0	0.04	0.00	0.00	0.00	0.00	0.00	0.00
			29.970	30.270	7,320	52	157.27	0.8	24.79	0	0	0	0	0.04	0.00	0.00	0.00	0.00	0.00	0.00
600' , 608'	-	31.646	30.844	31.144	7,320	52	157.27	0.8	24.79	0	2	2	4	0.04	0.00	49.90	49.90	99.81	0.63	0.00
			30.944	31.244	7,320	52	157.27	0.8	24.79	0	2	4	6	0.04	0.00	49.90	99.81	149.71	0.95	0.00
			31.044	31.344	7,320	52	157.27	0.8	24.79	0	0	3	3	0.04	0.00	0.00	74.86	74.86	0.48	0.00
600' , 608'	-	31.646	31.144	31.444	7,320	52	157.27	0.8	24.79	0	0	2	2	0.04	0.00	0.00	49.90	49.90	0.32	0.00
			30.844	31.144	7,320	52	157.27	0.8	24.79	0	1	1	2	0.04	0.00	24.95	24.95	49.90	0.32	0.00
			30.944	31.244	7,320	52	157.27	0.8	24.79	0	2	1	3	0.04	0.00	49.90	24.95	74.86	0.48	0.00
600' , 608'	-	31.646	31.044	31.344	7,320	52	157.27	0.8	24.79	0	3	2	5	0.04	0.00	74.86	49.90	124.76	0.79	0.00
			31.144	31.444	7,320	52	157.27	0.8	24.79	0	2	6	8	0.04	0.00	49.90	149.71	199.62	1.27	0.00

Table 7-4 Vertical Curve Deficiency Crash Analysis

MP	Begin MP	End MP	ADT	Avg Crash Rate	Critical Crash Rate	Avg Fatality Rate	Critical Fatality Rate	Crashes				HMVM	Rates per HMVM				Critical Crash Rate Factor	Critical Fatality Rate Factor	
								Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total			
1.781	1.481	1.781	7,060	52	159.42	0.8	25.45	0	0	0	0	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1.581	1.881	7,060	52	159.42	0.8	25.45	0	0	0	0	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1.681	1.981	7,060	52	159.42	0.8	25.45	0	1	2	3	0.04	0.00	25.87	51.74	77.61	0.49	0.00	0.00
	1.781	2.081	7,060	52	159.42	0.8	25.45	0	1	2	3	0.04	0.00	25.87	51.74	77.61	0.49	0.00	0.00
9.082	8.782	9.082	7,290	52	157.51	0.8	24.86	0	1	1	2	0.04	0.00	25.05	25.05	50.11	0.32	0.00	0.00
	8.882	9.182	7,290	52	157.51	0.8	24.86	0	1	1	2	0.04	0.00	25.05	25.05	50.11	0.32	0.00	0.00
	8.982	9.282	7,290	52	157.51	0.8	24.86	0	0	1	1	0.04	0.00	0.00	25.05	25.05	0.16	0.00	0.00
	9.082	9.382	7,290	52	157.51	0.8	24.86	0	2	0	2	0.04	0.00	50.11	0.00	50.11	0.32	0.00	0.00
21.285	20.985	21.285	8,590	97 ¹	224.62	0.5	19.53	0	1	5	6	0.05	0.00	21.26	106.31	127.58	0.57	0.00	0.00
	21.085	21.385	8,590	97 ¹	224.62	0.5	19.53	1	2	5	8	0.05	21.26	42.53	106.31	170.10	0.76	1.09	0.00
	21.185	21.485	8,590	97 ¹	224.62	0.5	19.53	1	1	5	7	0.05	21.26	21.26	106.31	148.84	0.66	1.09	0.00
	21.285	21.585	8,590	97 ¹	224.62	0.5	19.53	1	1	6	8	0.05	21.26	21.26	127.58	170.10	0.76	1.09	0.00
43.277	42.977	43.277	18,800	52	114.76	0.8	12.84	0	2	12	14	0.10	0.00	19.43	116.58	136.01	1.19	0.00	0.00
	43.077	43.377	18,800	52	114.76	0.8	12.84	0	3	7	10	0.10	0.00	29.15	68.01	97.15	0.85	0.00	0.00
	43.177	43.477	18,800	52	114.76	0.8	12.84	0	2	4	6	0.10	0.00	19.43	38.86	58.29	0.51	0.00	0.00
	43.277	43.577	18,800	52	114.76	0.8	12.84	0	2	4	6	0.10	0.00	19.43	38.86	58.29	0.51	0.00	0.00
43.614	43.314	43.614	18,800	52	114.76	0.8	12.84	0	2	5	7	0.10	0.00	19.43	48.58	68.01	0.59	0.00	0.00
	43.414	43.714	18,800	52	114.76	0.8	12.84	0	0	5	5	0.10	0.00	0.00	48.58	48.58	0.42	0.00	0.00
	43.514	43.814	18,800	52	114.76	0.8	12.84	0	0	6	6	0.10	0.00	0.00	58.29	58.29	0.51	0.00	0.00
	43.614	43.914	18,800	52	114.76	0.8	12.84	0	1	10	11	0.10	0.00	9.72	97.15	106.87	0.93	0.00	0.00
43.872	43.572	43.872	18,800	52	114.76	0.8	12.84	0	0	6	6	0.10	0.00	0.00	58.29	58.29	0.51	0.00	0.00
	43.672	43.972	18,800	52	114.76	0.8	12.84	0	1	9	10	0.10	0.00	9.72	87.44	97.15	0.85	0.00	0.00
	43.772	44.072	18,800	52	114.76	0.8	12.84	0	1	9	10	0.10	0.00	9.72	87.44	97.15	0.85	0.00	0.00
	43.872	44.172	18,800	52	114.76	0.8	12.84	0	1	9	10	0.10	0.00	9.72	87.44	97.15	0.85	0.00	0.00

¹ Average statewide crash rate for interstates in an urban area

Table 7-5 Narrow Bridge Crash Analysis

Super-elevation	MP	BEGIN MP	END MP	ADT	Avg Crash Rate	Critical Crash Rate	Avg Fatality Rate	Critical Fatality Rate	Crashes				HMVM	Rates per HMVM				Critical Crash Rate Factor	Critical Fatality Rate Factor
									Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total		
e = 0.088	1.022	0.722	1.022	7,570	52	155.31	0.8	24.18	0	0	1	1	0.04	0.00	0.00	24.13	24.13	0.16	0.00
		0.822	1.122	7,570	52	155.31	0.8	24.18	0	0	1	1	0.04	0.00	0.00	24.13	24.13	0.16	0.00
		0.922	1.222	7,570	52	155.31	0.8	24.18	0	0	1	1	0.04	0.00	0.00	24.13	24.13	0.16	0.00
		1.022	1.322	7,570	52	155.31	0.8	24.18	0	0	0	0	0.04	0.00	0.00	0.00	0.00	0.00	0.00
e = 0.083	22.881	22.581	22.881	13,100	97 ¹	198.70	0.5	14.27	0	0	3	3	0.07	0.00	0.00	41.83	41.83	0.21	0.00
		22.681	22.981	13,100	97 ¹	198.70	0.5	14.27	0	0	2	2	0.07	0.00	0.00	27.89	27.89	0.14	0.00
		22.781	23.081	13,100	97 ¹	198.70	0.5	14.27	0	1	2	3	0.07	0.00	13.94	27.89	41.83	0.21	0.00
		22.881	23.181	13,100	97 ¹	198.70	0.5	14.27	0	3	6	9	0.07	0.00	41.83	83.66	125.48	0.63	0.00
e = 0.083	24.917	24.617	24.917	7,790	97 ¹	231.57	0.5	21.04	0	1	4	5	0.04	0.00	23.45	93.79	117.23	0.51	0.00
		24.717	25.017	7,790	97 ¹	231.57	0.5	21.04	0	2	6	8	0.04	0.00	46.89	140.68	187.57	0.81	0.00
		24.817	25.117	7,790	97 ¹	231.57	0.5	21.04	0	2	6	8	0.04	0.00	46.89	140.68	187.57	0.81	0.00
		24.917	25.217	7,790	97 ¹	231.57	0.5	21.04	1	1	6	8	0.04	23.45	23.45	140.68	187.57	0.81	1.11
e = 0.083	47.417	47.117	47.417	19,200	52	114.05	0.8	12.66	0	3	9	12	0.11	0.00	28.54	85.62	114.16	1.00	0.00
		47.217	47.517	19,200	52	114.05	0.8	12.66	0	4	11	15	0.11	0.00	38.05	104.64	142.69	1.25	0.00
		47.317	47.617	19,200	52	114.05	0.8	12.66	0	4	15	19	0.11	0.00	38.05	142.69	180.75	1.58	0.00
		47.417	47.717	19,200	52	114.05	0.8	12.66	0	2	12	14	0.11	0.00	19.03	114.16	133.18	1.17	0.00

¹ Average statewide crash rate for interstates in an urban area

Table 7-6 Superelevation Crash Analysis

VIII. POTENTIAL IMPROVEMENT ALTERNATIVES AND DEVELOPMENT COSTS

This chapter describes a range of alternatives to address the deficiencies identified on the Purchase Parkway. As discussed in **Chapter I**, the use of the existing parkways is a goal for designating as I-69 through Kentucky. Therefore, the development of a new alignment was not among alternatives considered.

A. Potential Improvements and Development Costs

For this study, the range of alternatives under consideration is No Build, Necessary Upgrades and Spot Safety Improvements, and Fully Compliant Reconstruction. These alternatives are discussed further below and represent incremental levels of infrastructure investment needed to implement I-69 along the Purchase Parkway from the Tennessee state line at Fulton to I-24 near Calvert City.

- **No Build** – This alternate would leave a gap in the nationally proposed I-69 route. However, the Purchase Parkway would provide the connectivity for the I-69 traffic to travel from Tennessee to I-24.
- **Necessary Upgrades and Spot Safety Improvements** - Key safety and operational concerns would be addressed. Design exceptions or variances would be obtained for the existing conditions that do not meet current AASHTO or KYTC guidelines that are deemed appropriate by the KYTC and the FHWA.
- **Fully Compliant Reconstruction** – This alternate would involve improvements within existing right of way or with minimum right of way acquisition necessary for making the existing Purchase Parkway meet minimum AASHTO criteria for interstate routes.

Figures are provided at the end of the chapter referencing improved interchanges for the cost estimates.

1. No Build

The Purchase Parkway and I-24 would remain as they are currently without the I-69 designation. This alternate would not require any additional funding for the construction related to upgrading the facilities to current interstate standards.

2. Necessary Upgrades and Spot Safety Improvements

Under this alternate the Purchase Parkway would not be upgraded to meet all current interstate standards. Design exceptions and variances would be necessary for those design features that do not meet current criteria or standards and are deemed appropriate by the KYTC and the FHWA. New infrastructure and improvements along the Purchase Parkway would be proposed to upgrade necessary features and improve safety. **Table 8-1** contains a summary of the preliminary costs and design assumptions for implementing improvements proposed in these alternatives.

Item	Unit	2011 Cost
Correct Vertical / Stopping Sight Distance Deficiencies (MP 25.32)	Total	\$30,000
Upgrade Crash Worthy Pier Protection	Location	\$30,000
Upgrade Mayfield Bypass Median	Mile	\$725,000
Mainline Structures (Upgrade Guardrail/Approaches/Railings)	Foot	\$85
Overpass Structures (Upgrade Deficiencies)	Total	\$330,000
Interchanges		
Interchange Ramp Improvements	Interchange	Variable
Toll Plaza - Exits 14 and 43 (Upgrade Deficiencies)	Interchange	\$21,600,000
Unique Interchanges		
Exit 21 (Upgrade Deficiencies)	Interchange	\$25,360,000
I-69 / I-24 (Upgrade Partial Deficiencies)	Interchange	\$15,700,000
Design and Environmental	15% of Construction Costs	
Right-of-Way and Utilities	30% of Construction Costs	

Table 8-1 Unit Costs - Necessary Upgrades and Spot Safety Improvements

A summary of the recommended improvements for this option are below:

- Maintain the existing mainline along the Purchase Parkway
- Correct vertical curve and stopping sight distance deficiencies at MP 25.32. This improvement is due to a crash rate greater than the statewide average at this location.
- Upgrade for crash worthy pier protection for existing structures
- Upgrade Mayfield Bypass median and inside shoulder
- Retrofit the bridge railing/barriers that do not meet current minimum standards
- Upgrade overpass structures to meet the minimum 16 foot vertical clearance (driving lanes and shoulders)
- Upgrade improvements to substandard interchanges
- Upgrade the previous toll booth interchanges at Exits 14 and 43 to meet interstate standards
- Upgrade the Exit 21 (US 45) Trumpet interchange (**Figures 8-3, 8-4**) to meet interstate standards
- Upgrade the I-69/I-24 systems interchange. Refer to **Figure 8-1** for recommended configuration.

As shown in **Table 8-2**, the preliminary cost associated with this alternate is \$132 million. Almost half of this cost is associated with the upgrading of the Exit 14 (KY 339) and Exit 43 (KY 348) previous toll booth interchanges and upgrading the interchanges at Exits 21 (US 45) and 52 (I-24).

Segment	Length (miles)	Design & Environmental (million)	ROW and Utilities (million)	Construction Costs (million)			Total Costs (million)
				Roadwork	Mainline & Overpass Structures	Interchanges	
Fulton MP 0.0 - MP 3.0	3	\$0.24	\$0.48	\$0.00	\$0.22	\$1.36	\$2.30
Fulton to Mayfield MP 3.0 - MP 21.0	18	\$3.32	\$6.64	\$0.00	\$0.52	\$21.60	\$32.08
Mayfield MP 21.0 - MP 25.2	4.2	\$4.30	\$8.59	\$2.18	\$0.27	\$26.16	\$41.50
Mayfield to Benton MP 25.2 - MP 40.0	14.8	\$0.11	\$0.22	\$0.03	\$0.25	\$0.43	\$1.04
Benton MP 40.0 - MP 43.0	3	\$3.25	\$6.50	\$0.00	\$0.03	\$21.63	\$31.41
Benton to Calvert City MP 43.0 - MP 51.4	8.4	\$2.45	\$4.89	\$0.00	\$0.21	\$16.07	\$23.62
Total	51.4	\$13.67	\$27.32	\$2.21	\$1.50	\$87.25	\$131.95

Table 8-2 Necessary Upgrades and Spot Safety Improvement Preliminary Cost Estimate

3. Fully Compliant Reconstruction

The Fully Compliant Reconstruction option would involve improving the Purchase Parkway to meet all the minimum design guidelines for interstate highways. **Table 8-3** contains a summary of the preliminary costs and design assumptions for implementing improvements proposed in this alternate.

Item	Unit	2011 Cost
Correct Vertical / Stopping Sight Distance Deficiencies	Total	\$250,000
Upgrade Crashworthy Pier Protections	Location	\$30,000
Widen Inside Shoulders to 4 foot paved	Mile	\$77,000
Auxiliary Lane (Interchange Spacing - Exit 41/Exit 43)	Mile	\$4,233,000
Upgrade Mayfield Bypass Median	Mile	\$725,000
Mainline Structures (Widen Deficient Bridges)	Foot	\$65
Mainline Structures (Upgrade Guardrail/Approaches/Railings)	Foot	\$200
Overpass Structures (Upgrade Deficiencies)	Total	\$330,000
Interchange Control of Access	Total	\$5,000,000
Interchanges		
<i>Interchange Ramp Improvements</i>	Interchange	Variable
<i>Toll Plaza - Exits 14 and 43 (Upgrade Deficiencies)</i>	Interchange	\$21,600,000
Unique Interchanges		
<i>Exit 21 Upgrade Deficiencies</i>	Interchange	\$25,360,000
<i>I-69 / I-24 (Replace with fully directional)</i>	Interchange	\$65,800,000
Design and Environmental	15% of Construction Costs	
Right-of-Way and Utilities	30% of Construction Costs	

Table 8-3 Unit Costs – Fully Compliant Reconstruction

A summary of the improvements for this option are below:

- Maintain the existing mainline along the Purchase Parkway
- Correct any vertical curve and stopping sight distance deficiencies
- Upgrade crash worthy pier protection
- Widen the inside paved shoulder to 4 foot
- Upgrade Mayfield Bypass median and inside shoulder
- Widen the mainline bridges that are deficient in horizontal lateral clearance to 31 feet. All of these bridges are greater than 200 feet long.
- Replace the bridge railing/barriers that do not meet current minimum standards
- Upgrade overpass structures to the meet minimum 16 foot vertical clearance (driving lanes and shoulders)
- Upgrade the improvements to substandard interchanges (acceleration/decelerations length, divergence angle, shoulder width, curb removal)
- Reconstruct the toll booth interchanges at Exits 14 and 43
- Upgrade Exit 21 (US 45) deficiencies (**Figure 8-6**)
- Upgrade the I-69/I-24 systems interchange Refer to **Figure 8-2** for interchange configuration
- Construct auxiliary lanes between Exit 41 and Exit 43 to comply with interchange spacing.

As indicated in **Table 8-4**, the improvements for this alternate are estimated at \$219 million. At an average cost per mile of \$4.26 million, the Purchase Parkway can be improved to meet the minimum interstate design standard without any design exceptions. The majority of the cost estimate is associated with the reconstructing interchanges on the Purchase Parkway.

Segment	Length (miles)	Design & Environmental (million)	ROW and Utilities (million)	Construction Costs (million)			Total Costs (million)
				Roadwork	Mainline & Overpass Structures	Interchanges	
Fulton MP 0.0 - MP 3.0	3	\$0.32	\$0.63	\$0.24	\$0.49	\$1.36	\$3.04
Fulton to Mayfield MP 3.0 - MP 21.0	18	\$3.58	\$7.16	\$1.67	\$0.51	\$21.68	\$34.60
Mayfield MP 21.0 - MP 25.2	4.2	\$4.31	\$8.62	\$2.27	\$0.24	\$26.22	\$41.66
Mayfield to Benton MP 25.2 - MP 40.0	14.8	\$0.35	\$0.69	\$1.26	\$0.53	\$0.50	\$3.33
Benton MP 40.0 - MP 43.0	3	\$3.98	\$7.96	\$4.47	\$0.10	\$21.94	\$38.45
Benton to Calvert City MP 43.0 - MP 51.4	8.4	\$10.13	\$20.25	\$0.65	\$0.66	\$66.17	\$97.86
Total	51.4	\$22.67	\$45.31	\$10.56	\$2.53	\$137.87	\$218.94 ¹

¹ Cost estimate does not include cost associated with connecting to Segments of Independent Utility (SIU) 5 (I-24 at Western Kentucky Parkway) or SIU 7 (Exits 0,1,2 at Fulton, KY).

Table 8-4 Fully Compliant Reconstruction Preliminary Cost Estimate

4. Summary

The following table provides a cost comparison of the potential alternates provided in this study. The cost per mile estimate is based on the 51.4 miles of the Purchase Parkway. The Necessary Upgrades / Spot Safety Improvements alternative cost is approximately two-thirds the cost of the Fully Compliant Reconstruction alternative. The difference in cost results from inside shoulder improvement, bridge widening, auxiliary lanes, and reconstructing the Purchase Parkway and I-24 interchange to meet full compliance for a systems interchange.

Alternative	Meet Current Standards	Impact on Environment	Cost (million)	Cost per Mile ¹ (million)
1. No Build	No	Least	\$0.00 ²	\$0.00
2. Necessary Upgrades / Spot Safety Improvements	Yes ³	Minimal	\$131.95	\$2.57
3. Fully Compliant Reconstruction	Yes	More Significant	\$218.94 ⁴	\$4.26

Table 8-5 Cost Comparison of Potential Alternatives

¹ Cost per mile based on 51.4 miles of Purchase Parkway.

² Cost for routine maintenance is not depicted in alternatives.

³ This alternative would include upgrading the design features along the Purchase Parkway that potentially represents the most significant safety and operational issues. This alternative requires design exceptions and variances where safety and operational conditions would not create undue risk to the motorist.

⁴ Cost estimate does not include cost associated with connecting to Segments of Independent Utility (SIU) 5 (I-24 at Western Kentucky Parkway) or SIU 7 (Exits 0,1,2 at Fulton, KY).

5. Potential Interchange Improvements/Reconstruction

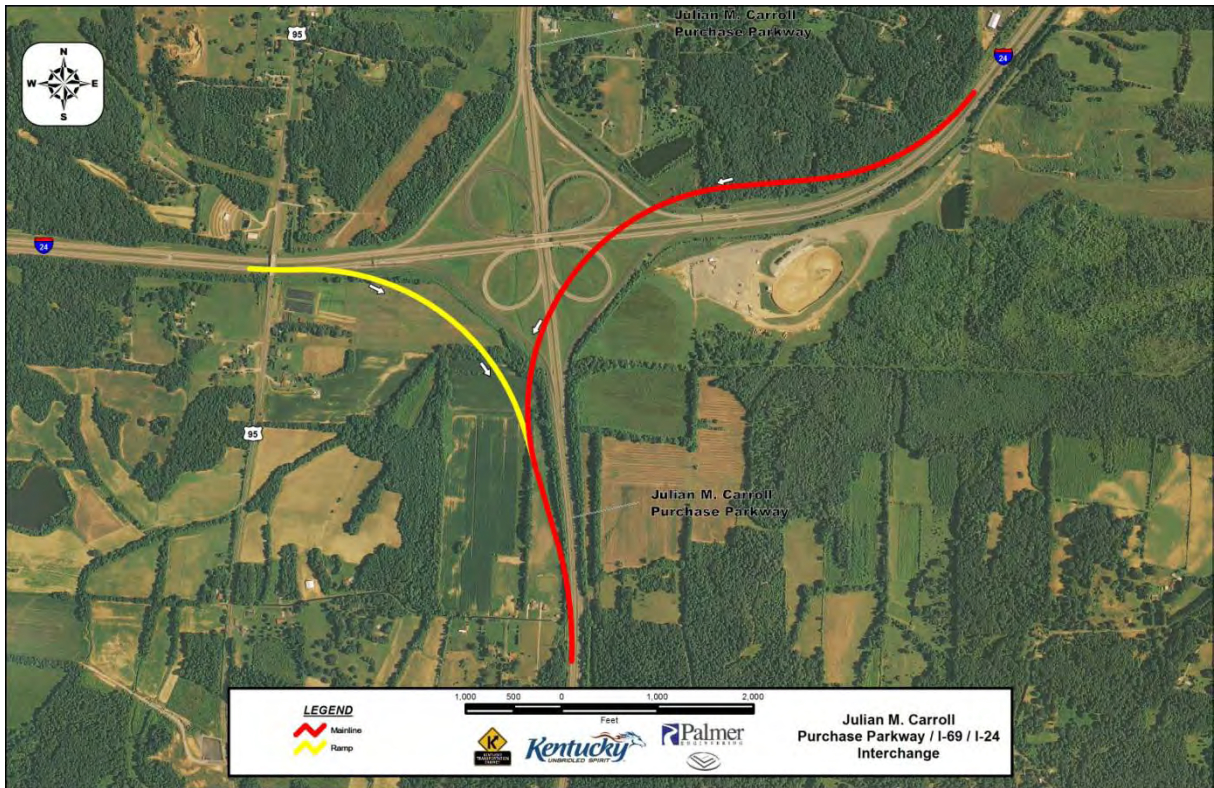


Figure 8-1 I-69 / I-24 Interchange (Upgrade Option)

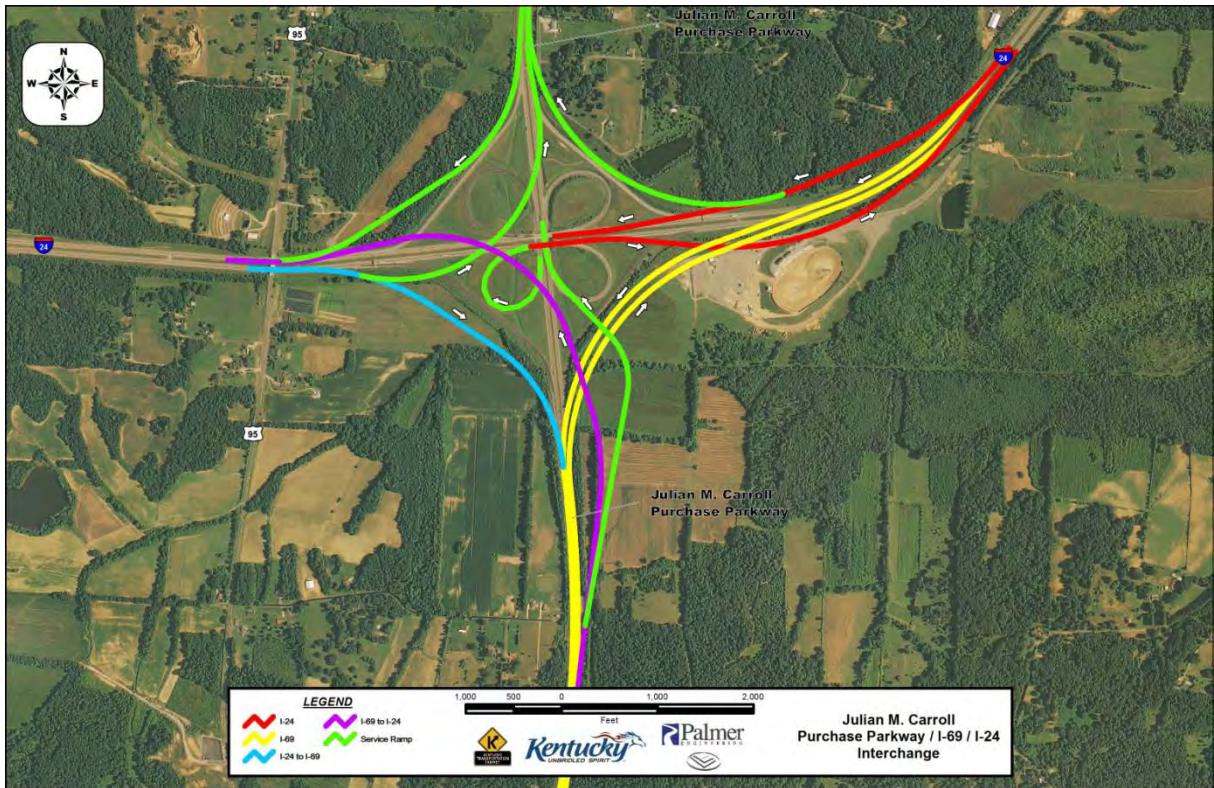


Figure 8-2 I-69 / I-24 Interchange (Reconstruction)



Figure 8-3 I-69 / US 45 Interchange (Upgrade Option 1)



Figure 8-4 I-69 / US 45 Interchange (Upgrade Option 2)



Figure 8-5 I-69 / US 45 Interchange (Reconstruction)

IX. RECOMMENDATIONS

The following chapter includes recommendations for improvements to the Purchase Parkway and related work for future designation as I-69.

As previously discussed in **Chapter I**, the FHWA has identified thirteen design features that are important to the operational and safety performance a highway. These controlling design features compiled are commonly known as the *13 controlling criteria*. A formal written design exception is required when any of the 13 criteria are not met on the National Highway System (NHS). The Interstate System is part of the NHS. The *13 controlling criteria* is listed below. Design features that deviate from common practice but are not included in the *13 controlling criteria* will be termed design variance. There are two categories for design variances. A design variance is a design feature that (1) varies from the current AASHTO criteria but not part of the *13 controlling criteria* or (2) a design feature that varies from common practice but not part of the *13 controlling criteria*. A summary of recommended design exceptions and design variances is provided at the end of this chapter.

1. Design speed
2. Lane width
3. Shoulder width
4. Bridge width
5. Horizontal alignment
6. Superelevation
7. Vertical alignment
8. Grade
9. Stopping sight distance
10. Cross slope
11. Vertical clearance
12. Lateral offset to obstruction
13. Structural capacity

A. Recommendations

It is recommended that the Necessary Upgrades and Spot Safety Improvements alternative be chosen for initial advancement based on the following:

- The Purchase Parkway adequately meets AASHTO guidelines for most design elements of an interstate. Of the design element deficiencies, others may be accepted as design exception/variance with agreement by the KYTC and the FHWA.
- Based on the operational and crash analysis included in this study, addressing those repairs identified for Needed Upgrades and Spot Safety Improvements will appropriately address any crash history concerns identified. The entire length of the Purchase Parkway meets the level of service required and only a few locations exhibit potential safety problems.

The following summarizes a strategy for implementing the Necessary Upgrades and Spot Safety Improvement alternative.

1. Geometry/Typical Section

- a. Inside paved shoulder (Four foot paved minimum) – It is recommended that a design exception be requested for the minimum inside paved shoulder on the Purchase Parkway that currently has three foot paved inside shoulders with the intention to correct the existing deficient inside shoulder during future pavement rehabilitation or resurfacing projects.

It is recommended to construct a 4 foot paved shoulder for the Mayfield Bypass section of the Purchase Parkway. Currently, there is not a paved inside shoulder on this section.

- b. Vertical Curve / Stopping Sight Distance – It is recommended to seek a design exception for the locations mentioned in **Chapter IV** that do not meet the minimum vertical length of curve and minimum stopping sight distance except one location at MP 25.32. Based on crash history data, **Table 7-4**, only this location (MP 25.32) has a significant crash history (CRF>1.0). Correction of this vertical curve is recommended. Since there is not a crash history associated with the other locations, it is not considered cost effective to improve. Correction of vertical curvature/stopping sight distance concerns may be addressed for other locations during future pavement rehabilitation or resurfacing projects.
- c. Superelevation – Referencing the Federal Highway Administration *Mitigation Strategies for Design Exceptions*, “A formal design exception is required if the State’s superelevation policy cannot be met in design of any curve on the NHS.” This document advises, “A design exception is also required if a superelevation rate is proposed that is different from the published rate per the State’s policy for that curve, regardless of whether the curve is a controlling one (minimum radius for a design speed) or not.” The current KYTC geometric policy references the AASHTO Policy on Geometric Design of Highway and Streets, current edition, which provides maximum superelevation rate tables for 4%, 6%, 8%, 10%, and 12%. From review of as-built plans and field inspections, it appears that the Purchase Parkway was constructed on the basis of 10% maximum superelevation.

A crash analysis on horizontal curves with a superelevation greater than 8% is provided in **Chapter VII**. There is one horizontal curve with a superelevation of 8.3% that has a critical crash rate factor greater than one. Based on the analysis, it is not apparent that the crash history is directly related to the superelevation.

Since the Purchase Parkway appears to have been constructed with a maximum superelevation of 10% which is compliant with the AASHTO and KYTC policies, and there are no apparent crash histories related to superelevation, a design exception for superelevation does not appear warranted.

- d. Mayfield Bypass Median Width/Type – It is recommended to construct a new median on the Mayfield Bypass section of the Purchase Parkway. Currently the median is defined as non mountable because it has a raised curb along edge of driving lane. The crash history for this section does not correlate with the need of a median barrier. According to the AASHTO Roadside Design Guide, a median barrier is optional for the existing median width (16 feet) and existing Average Daily Traffic (14,300 vpd). However, median barrier is recommended for the design year (2040) forecasted traffic as an interstate (30,000 vpd) on the Mayfield Bypass. It is recommended to construct a new median with barrier for this section based on the need to construct inside paved shoulders, forecasted interstate traffic, and drainage needs in the median after constructing inside paved shoulders.

2. Bridges and Overpasses

- a. Vertical Clearance – It is recommended to correct the vertical clearance for the four overpasses bridges that do not meet minimum criteria.
- b. Mainline Bridge Railing – It is recommended to retrofit the bridge railing for all mainline bridges to meets current criteria. Retrofitting the bridge railing should be completed prior to interstate designation.
- c. Mainline Bridge Width – It is recommended to seek a design exception for mainline bridge width. With the exception of the two mainline bridges at Exit 21, there are 10 bridges with an existing width of 30 feet. The mainline bridges identified as deficient are greater than

200 feet in length and would need to be widened from their existing 30 foot width to 31 feet. Based on the crash analysis, there does not appear to be a crash history related to bridge width at these locations.

- d. Crash Worthy Pier Protection – It is recommended to improve the crash worthy protection of overpass bridge piers along the Purchase Parkway. There are eight overpasses that have earthen mound pier protection that do not meet current standards.

3. Interchanges and Ramps

- a. Interchange Spacing – It is recommended to seek a design variance for interchange spacing for the rural interchange spacing in Fulton, KY (Exit 0, Exit 1, and Exit 3) and in Benton, KY (Exit 41 and Exit 43).
- b. Interchange Control of Access – It is recommended to seek a design variance for the interchange control of access deficiencies at Exit 14, Exit 22, Exit 27, and Exit 47. As future improvements and rehabilitation projects are indicated, control of access at these locations can be initialized.
- c. Interchange Deficiencies
 - Exit 0 Weigh Station Interchange – In the future, coordination between the Tennessee Department of Transportation and Kentucky Transportation Cabinet (KYTC) will more clearly define future I-69 connectivity between Kentucky and Tennessee at this location. Specific deficiencies will be more thoroughly addressed at that time.
 - Exit 14 Previous Toll Plaza Interchange – It is the recommended to improve the existing interchange at Exit 14 to meet current interstate criteria.
 - Exit 21 Mayfield Bypass Interchange – It is recommended to improve the interchange to meet current interstate criteria.
 - Exit 43 Previous Toll Plaza Interchange - It is the recommended to improve the existing interchange at Exit 43 to meet interstate standard. This interchange has been identified by KYTC for improvement and is currently under design.
 - I-24 / Purchase Parkway Interchange – It is recommended to improve the eastbound I-24 to southbound I-69 ramp and construct a new southbound I-69 flyover ramp from westbound I-24. The following existing ramps will be eliminated with this recommendation:
 - Westbound I-24 to northbound Purchase Parkway ramp
 - Westbound I-24 to southbound Purchase Parkway loop ramp
 - Eastbound I-24 to northbound Purchase Parkway loop ramp

The existing northbound Purchase Parkway to westbound I-24 loop ramp also will remain in place and serve as the northbound I-69 to westbound I-24 connector under this scenario.

This option will require a deferral (design exception) for the I-69 northbound movement. The existing northbound Purchase Parkway to eastbound I-24 ramp will serve as the I-69 north movement. This ramp will accommodate the traffic in the near future. However, it is recommended to improve the ramp to meet current criteria once traffic volumes exceed capacity. It also is recommended to construct a new northbound I-69

to westbound I-24 flyover ramp once the traffic volumes exceed the existing loop ramp capacity.

The recommended improvements are shown in **Figure 8-1** and the construction cost is provided in **Table 8-1 Unit Costs-Necessary Upgrade and Spot Safety Improvements**. Additional improvements to the interchange include extending acceleration and deceleration tapers.

- d. Ramp Typical Section – It is recommended to improve existing ramp cross section geometry that does not meet current interstate criteria. Currently, a majority of the interchange ramps have rolled curb and deficient shoulder widths. It is recommended to remove the rolled curb on the interchange ramps and construct minimum shoulder width in order to meet minimum interstate criteria.
- e. Ramp Alignment Geometry
 - Divergence Angle – It is recommended to correct the deficient ramps with divergence angles that do not meet current criteria.
- f. Speed Change Lanes – It is recommended to improve all ramp tapers and acceleration/deceleration lanes to meet current interstate criteria.

4. Design Exception and Variance Summary

The following table summarizes the essential design elements commonly known as the *13 controlling criteria*. Following the *13 controlling criteria* are design variances which do not meet the AASHTO criteria of an interstate.

13 Design Criteria	Meets Criteria (Yes or No)	Cost to Cure (\$)	Design Exception/Variance should be requested	Explanation
Design Speed	Yes*	\$33,860,000	Yes	The Purchase Parkway meets the design speed criteria except for the new I-69 through route at the I-69/I-24 interchange. It is recommended to improve the eastbound I-24 to southbound I-69 ramp, construct a new I-69 southbound flyover ramp, and seek a design exception for the northbound I-69 through movement.
Lane Width	Yes	-	-	-
Shoulder Width	No	\$3,730,000 ²	Yes	The inside paved shoulders need to be widened from 3 feet to 4 feet for the Purchase Parkway. The paved inside shoulder for the Mayfield Bypass should be widened in conjunction with construction of a new median. It is recommended to seek a design exception for inside paved shoulder of the Purchase Parkway, with the exception of the Mayfield Bypass shoulder improvement.
Bridge Width	No	\$2,370,000 ³	Yes	There are 12 bridges on the Purchase Parkway that do not meet criteria. 10 of these 12 bridges are long bridges (> 200 feet long). The remaining two bridges are part of the Exit 21 interchange that is recommended to be upgraded to meet interstate standards. It is recommended to seek a design exception for bridge width.
Horizontal Alignment	Yes	-	-	-
Superelevation	Yes	-	-	-
Vertical Alignment	No	\$250,000	Yes	There are eight deficient vertical curves on the Purchase Parkway. All of these curves are sag curves and six are close to meeting criteria. There is one deficient curve that is recommended to correct due to crash history.
Grade	Yes	-	-	-
Stopping Sight Distance	No	\$167,000	-	There are 3 vertical curves that do not meet the minimum stopping sight distance. All of these curves are a sag and 2 are close to meeting criteria. This cost is also included in the cost to cure vertical alignment deficiencies. It is recommended to improve one vertical curve due to crash history.
Cross Slope	Yes	-	-	-
Vertical Clearance	No	\$330,000	No	There are 4 overpasses on the Purchase Parkway that do not meet vertical clearance requirements. It is recommended to improve the overpass bridge clearance to meet current criteria.
Lateral offset to obstruction	-	-	-	-
Structural Capacity	Yes	-	-	-
Design Variances				
Acceleration & Deceleration Lengths / Divergence Angle	No	\$768,000 ¹	No	It is recommended to improve the deficient ramps to meet AASHTO criteria.
Interchange Spacing	No	\$4,233,000	Yes	The interchange spacing between Exit 41 and Exit 43 is less than the 3 mile rural recommended criteria. Cost to cure does not include the interchange spacing deficiency at Exit 0, Exit 1, and Exit 2. The connection of I-69 between Kentucky and Tennessee is still in question, which would include these exits at Fulton, KY and Fulton, TN.
Interchange Control of Access	No	\$5,000,000	Yes	There are four interchanges that have interchange control of access less than the minimum criteria
Interchange Ramp Shoulder Width / Curb	No	\$2,937,000 ¹	No	Many of the interchange ramps do not meet the minimum shoulder width and/or have an existing curb.
Bridge Side railing/barrier	No	\$930,000	No	All of the mainline bridges have brush blocks rather than a barrier slope that meets current standards. It is recommended to retrofit the existing side railing/barrier to meet criteria.
Bridge Pier Protection	No	\$240,000	No	Eight overpass bridges have earthen mound bridge pier protection that does not meet current standard. It is recommended to improve the pier protection to meet current standard.
Median Width / Type	Yes	\$2,175,000 ⁴	-	Construct a new median with barrier and inside shoulder on the Mayfield Bypass. (Cost includes median barrier and inside paved shoulders.)

Table 9-1 Summary of Design Exceptions and Variances

¹ Does not include improvements associated with Exit 14 (Toll Plaza), Exit 21 (Modified Trumpet), and Exit 43 (Toll Plaza)

² Does not include widening Mayfield Bypass inside paved shoulder.

³ Cost is associated with widening the deficient mainline bridges to 31 feet curb to curb.

⁴ The median width meets AASHTO criteria. The median type meets AASHTO criteria with current traffic volumes, but not future traffic projections.

Designation of the Purchase Parkway as I-69 may be accomplished by implementing the recommended improvement strategies in coordination with the Federal Highway Administration. Information presented herein is a *first look* to identify deficiencies and impediments for designation as I-69 and to identify a range of improvement strategies needed to upgrade the Purchase Parkway to satisfy applicable interstate criteria with applicable design exceptions/variances by the Federal Highway Administration. Thus, as projects for implementation of recommended improvement strategies are initiated, additional engineering analysis and studies may be needed to further refine the specifics for improvements. For example, the following may be areas for further analysis.

- Operational Considerations – There may be roadway conditions not shown in crash data contributing to crash history. Additional analyses during preliminary engineering may provide additional insight which could refine the scope of needed improvements at a given location.
- Mainline Geometry and Typical Section – Analyses for mainline geometry and typical section were evaluated using as-built plans supplemented with field reviews of existing conditions. Actual design features may require further verification with non-detailed field reviews of the roadway cross-section during preliminary engineering for implementing improvement strategies.
- Interchanges and Ramps – Most of the interchange ramps are deficient and some design features were illegible on the as-built plans. Therefore, as interchanges are identified for improvement, geometric features (i.e. superelevation rate, horizontal and vertical alignments, design speed, etc.) should be further analyzed.

B. Summary and Conclusion

Based on the findings of this study, it can generally be concluded that the Purchase Parkway is currently providing motorists efficient and safe travel from US 51 in Tennessee to I-24 with operating conditions similar to an interstate. There would be minimal to no impact to the operating characteristics of the Purchase Parkway in the near future if it was designated as I-69 under the current conditions. The operation characteristics of the I-69 corridor would not be expected to be altered until more sections of I-69 are completed across the country especially in Tennessee and Indiana. As sections of I-69 are completed and thus provide continuity at a regional and national level, additional truck traffic volume will likely grow on the Purchase Parkway to the point that estimated truck traffic and congestion along the existing Purchase Parkway may eventually alter the operational characteristics.

Intuitively, there may be sections of interstate in Kentucky and around the United States that do not meet the current design standards. Some design features on these other interstates may be very similar to the existing design features on the Purchase Parkway. Based on the impact to other sections of Parkways that are designated as future interstate corridors and existing interstates with similar design feature deficiencies, designation of the Purchase Parkway as I-69 under the Parkway's existing conditions appears realistic.

There are two broad based potential improvement alternatives recommended for improving the Purchase Parkway to meet interstate standards. The Necessary Upgrades and Spot Safety Improvement alternative includes upgrading the Purchase Parkway to meet all current interstate standards but with design exceptions/variances. The Fully Compliant Reconstruction alternative would upgrade the Purchase Parkway to meet interstate standards with no design exceptions or variances. Right of way acquisitions will be needed for interchange improvements.

In general, improvements related to bridge deficiencies, Mayfield Bypass median, interchange acceleration and deceleration lanes, and toll plaza interchange improvements are recommended. It is also recommended that initially, minimal improvements should be made to the Purchase

Parkway and I-24 interchange and US 45 interchange in Mayfield. The minimal improvements should be designed to provide continuity and capacity for the forecasted traffic, while maintaining consideration for crash history and safety for the traveling public. Ultimately, as traffic operations change and traffic volumes increase, additional improvements to these interchanges may be needed to improve safety and meet current interstate criteria.

Appendix A. Environmental Overview

Environmental Overview for I-69 from Fulton to Eddyville

Introduction

This environmental overview covers the proposed I-69 corridor from the Kentucky–Tennessee state line in Fulton, Kentucky, to Knob Creek Bridge near Eddyville, Kentucky extending approximately 67 miles. The corridor lies within the Coastal Plain physiographic region (also known as the Jackson Purchase or Mississippi Embayment) which is dominated by flat, low plains dissected by a dendritic drainage network of low-gradient streams and small rivers flowing into the Mississippi and Tennessee Rivers. Uplands are underlain by sand, gravel, silt, and clay deposited by the last inland invasion of the seas more than 65 million years ago. It is part of the oldest northern extension of today's Coastal Plain of the southeastern United States. A silty mantle covers much of the region, but it is deepest along the Mississippi River where bluffs formed by this windblown material (loess).

Ecological

Potential ecological impacts were researched using available literature and internet-based searches. Some of the federal and state agencies from which information was sought were US Fish and Wildlife Service (USFWS), Kentucky Department of Fish and Wildlife Resources (KDFWR), Kentucky Division of Water (KDOW), Kentucky State Nature Preserve Commission (KSNPC), Kentucky Transportation Cabinet (KYTC), US Geological Service (USGS) topographical maps, and National Wetland Inventory (NWI) maps. Additional ecological information is located at the end of this overview.

Surface Waters

The USGS 7.5 minute topographic maps covering the project area were reviewed to determine the number and type of stream crossing. This is a partial list of all stream crossings since not all streams are labeled on topographical maps. Notable stream crossings include: Bayou du Chien and all its tributaries are Outstanding State Resource Waters because they are known habitat for the federally endangered relict darter; Panther Creek is a state Exceptional Quality and Reference Reach stream; Tennessee and Cumberland Rivers are Outstanding State Resource Water because they are known habitat for federally endangered mussel species; Clarks River because it is part of the Clarks River National Wildlife Refuge.

Number of blue-line streams crossed by county

Number of Blue-line Perennial	Number of Blue-line Intermittent	Lake	Rivers
27	52	1	4

Wetlands

Since much of the Lower Cumberland and Purchase area is alluvial floodplain with rich soils ideal for farming, agriculture is a large part of the local economy. The alluvial floodplains are also rich in wetlands. NWI maps show an abundance of wetlands scattered throughout and in proximity to the corridor. The following is a list of wetlands that the corridor bisects or is adjacent to as indicated by NWI mapping. The actual number of wetlands can only be determined by field reconnaissance.

Number of wetlands by type

Type of Wetland	Number of Occurrences
Emergent	5
Ponded Emergent	1
Ponded Scrub Shrub	1
Ponded Forested	10
Riverine	4
Lacustrine	1
Total	22

Threatened and Endangered Species

The 2008 USFWS list of threatened and endangered species was referenced for the counties involved. The KSNPC species database for each county was also referenced. Individual federally listed species and a quantitative listing of state species is presented by each county in project corridor. Notable species on the USFWS list are the Indiana bat, gray bat, relict darter, and mussels. Communications with USFWS and KSNPC will refine the number of listed species potentially affected by this project.

After reviewing USGS topographic maps, aerial maps, and field reconnaissance the several potential bat habitat and travel corridors were identified: creeks (Bayou du Chien, Mayfield, West Fork Clarks); rivers (Clarks, Tennessee, Cumberland); and wildlife management areas (Land Between the Lakes, Clarks River National Wildlife Refuge). Other natural features were determined throughout the project area as potential areas suitable for sustaining Indiana bats and gray bats.

The relict darter is endemic to Bayou du Chien drainage basin and because of this the Bayou du Chien and its tributaries are listed as Outstanding State Resource Waters by the KDOW. The current project bisects known relict darter habitat in the Bayou du Chien, roughly 5,200 feet downstream of the species' primary breeding area in Jackson Creek. Given the relict darter's limited distribution and apparent dependence on one spawning area (Jackson Creek), the relict darter is extremely vulnerable to anthropogenic activities (Warren et al. 1994).

The project corridor crosses the Tennessee and Cumberland Rivers, known habitat areas for federally and state endangered mussels. Little impact, if any, is anticipated because no known modifications are expected for bridges that cross these rivers.

Socioeconomic

Environmental Justice Populations

Based on the current level of information available, no significant adverse social or economic impacts are anticipated from proposed project; however, these preliminary findings will require validation through appropriate environmental Baseline studies required in subsequent project phases.

Relocations

Based on the current level of information available, no residential, commercial, or non-profit organization relocations are anticipated from the proposed project; however, these preliminary findings will require validation through appropriate environmental Baseline studies required in subsequent project phases.

Cultural Historic Resources

Historic Architectural Resources

If the project advances using federal funds, a historical baseline analysis will be required. Since a reconstruction project has the potential to have adverse impacts to historic resources, Section 106 of the National Historic Preservation Act of 1966 initiation would begin once the environmental documentation and design of any future project started.

Archaeological Resources

Even though a low potential for intact archaeological sites has been projected, the project area has not been subjected to a Phase I archeological investigation, and the presence of currently unidentified archaeological sites within the project area are possible.

Air

The U. S. Environmental Protection Agency (EPA) has identified seven air pollutants of national concern, including carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), sulfur oxides (SO_x), and lead (Pb). FHWA requires, by the development of air quality base studies, the modeling of CO, if needed, to determine and compare calculated existing and future concentrations with the National Ambient Air Quality Standards (NAAQS) and, if required, a qualitative hot spot analysis for PM_{2.5}. A CO analysis will not be required because traffic projections will not exceed the 80,000 average daily traffic (ADT) Jefferson County is currently designated by the U.S. Environmental Protection Agency (EPA) to be in maintenance for O₃. Carbon Monoxide is not considered a concern for this project. Projects within Jefferson County increasing roadway capacity will be required to comply with the fine particulate, PM_{2.5}, hotspot consideration requirements. In addition, a Mobile Source Air Toxics (MSATs) analysis will be required for the proposed project.

A project-specific air quality impact assessment will be required for this undertaking as a part of the NEPA-phase project activities. This will be necessary in order to insure that the selected alternative does not adversely affect air quality programs currently in place and maintains conformity with the Transportation Improvement Program (TIP). This assessment will take into consideration the affects of local climate and topography and include a microscale dispersion analysis. Project impacts on future air quality conditions through air quality modeling will be used to compare the relative effects of each project alternative and to determine whether or not CO emissions attributable to the project would cause or contribute to an exceedance of the NAAQS. Since the project area consists of residential and commercial land uses, representative air quality receptors will need to be identified in conjunction with the existing facility and with specific alignment alternatives and considered as a part of the assessment. Depending on the results of the assessment, air quality impacts may be important in determining the constructability of the various alternatives and in selecting a preference among them.

Construction-period air quality impacts will need to be evaluated to expose the potential short-term effects of site preparation, demolition, material storage, construction actions, and to determine if any appropriate mitigation commitments will be incorporated into the project plans.

Noise

To determine potential noise impacts from construction and operation of the proposed project, each representative noise-sensitive land use will need to be identified in conjunction with specific alignment alternatives and existing measured ambient noise levels. The procedure for conducting

field monitoring will be based on FHWA requirements and KYTC Noise Abatement Policy. Noise levels will be measured in terms of L_{eq} , which reflects the average equivalent steady state sound level; in a stated time period, usually one hour, it would contain the same acoustic energy as the time-varying sound level during the same time period. For future noise level predictions, FHWA TNM (Traffic Noise Model) 2.5 will be used for noise impact analysis.

Given the location of the project area, the vehicle mix, patterns and volumes of traffic, and the general absence of sensitive receptors, highway noise impacts are not expected to influence project feasibility or location decisions; however, a project-specific noise impact analysis will be required to verify noise impact conditions.

Fulton County - There are no federal or state natural areas

USFWS

Group	Species	Common Name	Legal Status	Occurrence
Mammals	<i>Myotis sodalis</i>	Indiana bat	Endangered	Potential
Mussels	<i>Potamilus capax</i>	Fat pocketbook	Endangered	Potential
Fishes	<i>Scaphirhynchus albus</i>	Pallid sturgeon	Endangered	Potential
	<i>Etheostoma chienense</i>	Relict darter	Endangered	Potential
Birds	<i>Sterna antillarum</i>	Interior least tern	Endangered	Known
	<i>Haliaeetus leucociphalus</i>	Bald eagle	Delisted	Known

KSNPC

Group		Total number of species in each group	Number of state endangered species	Number of state threatened species	Number of state Special Concern species
Terrestrial	Vascular Plants	26	7	14	5
	Snail	1		1	
	Insects	2		1	1
	Birds	16	6	5	5
	Mammals	3	1		2
	Reptiles	6	2	2	2
Aquatic	Amphibians	3	1		2
	Fishes	20	8	6	6
	Crustaceans	3	1	1	1
	Mussels	3	2		1
Totals		83	28	30	25

Natural communities in need of protection include: Bottomland hardwood forest, Bottomland marsh, Coastal plain slough, and Cypress (tupelo) swamp

Hickman County – Obion Creek State Nature Preserve is a 1,601 acre scientific research facility protecting a mosaic of wetland communities, upland slopes, and Murphy’s Pond. It is located in the Obion River watershed and is part of one of the largest remaining tracts of wetland in Kentucky. This nature preserve is located approximately 8 miles east of the corridor. BMP to prevent siltation downstream will have to be in place to protect this resource.

USFWS

Group	Species	Common Name	Legal Status	Occurrence
Mammals	<i>Myotis sodalis</i>	Indiana bat	Endangered	Known
Mussels	<i>Potamilus capax</i>	Fat pocketbook	Endangered	Potential
	<i>Lampsilis abrupt</i>	Pink mucket	Endangered	Known
Fishes	<i>Scaphirhynchus albus</i>	Pallid sturgeon	Endangered	Known
	<i>Etheostoma chienense</i>	Relict darter	Endangered	Known
Birds	<i>Sterna antillarum</i>	Interior least tern	Endangered	Known
	<i>Haliaeetus leucociphalus</i>	Bald eagle	Delisted	Known

KSNPC

Group		Total number of species in each group	Number of state endangered species	Number of state threatened species	Number of state Special Concern species
Terrestrial	Vascular Plants	24	7	10	7
	Snail	1		1	
	Insects	2		2	
	Birds	11	3	3	5
	Mammals	4	2		2
	Reptiles	5	1	1	3
Aquatic	Amphibians	4	1		3
	Fishes	17	9	5	3
	Crustaceans	4	2	1	1
	Mussels	4	3		1
Totals		46	28	23	25

Natural communities in need of protection include: Bottomland hardwood forest, Shrub swamp, Coastal plain slough, and Cypress (tupelo) swamp

Graves County – Bayou du Chien River Drainage (Hickman and Graves Counties) – The relict darter is endemic to this drainage and is listed as endangered by the USFWS. The current project bisects known relict darter habitat in the Bayou du Chien, roughly 5,200 feet downstream of the primary breeding area, Jackson Creek, for the species. Given the relict darter's limited distribution and apparent dependence on one spawning area (Jackson Creek), the relict darter is extremely vulnerable to anthropogenic activities (Warren et al. 1994). This entire drainage is listed as sensitive waters by the KYTC. **Panther Creek** is listed as a sensitive water area. Panther Creek is considered an exceptional water and reference reach for Graves County.

USFWS

Group	Species	Common Name	Legal Status	Occurrence
Mammals	<i>Myotis sodalis</i>	Indiana bat	Endangered	Potential
Fishes	<i>Etheostoma chienense</i>	Relict darter	Endangered	Known

KSNPC

Group		Total number of species in each group	Number of state endangered species	Number of state threatened species	Number of state Special Concern species
Terrestrial	Vascular Plants	13	4	3	6
	Insects	2	1	1	
	Birds	3	2		1
	Mammals	2	1		1
	Reptiles	4		2	2
Aquatic	Amphibians	4		1	3
	Fishes	17	12	4	1
	Crustaceans	3	2	1	
	Mussels	2	1		1
Totals		50	23	12	15

No natural communities in need of protection include:

Marshall County – Clarks River National Wildlife Refuge is located along the Clarks River north of Benton. It is the first national refuge established wholly within the state. The majority of this refuge is located west of the corridor but there is a small tract of land located in the corridor at the Clarks River Bridge crossing.

USFWS

Group	Species	Common Name	Legal Status	Occurrence
Mammals	<i>Myotis sodalis</i>	Indiana bat	Endangered	Potential
	<i>Myotis grisescens</i>	Gray bat	Endangered	Potential
Mussels	<i>Pleurobema clava</i>	Clubshell	Endangered	Known
	<i>Lampsilis abrupt</i>	Pink mucket	Endangered	Known
	<i>Plethobasus cooperianus</i>	Orangefoot pimpleback	Endangered	Known
	<i>Obovaria retusa</i>	Ring pink	Endangered	Known
	<i>Cumberlandia monodonta</i>	Spectaclecase	Candidate	Potential
	<i>Plethobasus cyphus</i>	Sheepnose	Candidate	Potential
	<i>Cyprogenia stegaria</i>	Fanshell	Endangered	Potential
Plants	<i>Apios priceana</i>	Price's potato-bean	Threatened	Potential
Birds	<i>Sterna antillarum</i>	Interior least tern	Endangered	Known
	<i>Haliaeetus leucociphalus</i>	Bald eagle	Delisted	Known

KSNPC

Group		Total number of species in each group	Number of state endangered species	Number of state threatened species	Number of state Special Concern species
Terrestrial	Vascular Plants	22	9	7	6
	Insects				
	Birds	10	3	3	4
	Mammals	2	1		1
	Reptiles	5		2	3
Aquatic	Amphibians	4			4
	Fishes	11	4	4	3
	Snail	3			3
	Crustaceans	1		1	
	Mussels	12	10	1	1
Totals		60	24	15	21

Natural communities in need of protection include: Bottomland hardwood forest, Acidid sub-xeric forest, and Xerophydric flatwoods

Livingston County – Land Between the Lake Natural Recreational Area is located on each side of the I-24 corridor.

USFWS

Group	Species	Common Name	Legal Status	Occurrence
Mammals	<i>Myotis sodalis</i>	Indiana bat	Endangered	Known
	<i>Myotis grisescens</i>	Gray bat	Endangered	Known
Mussels	<i>Pleurobema clava</i>	Clubshell	Endangered	Known
	<i>Lampsilis abrupt</i>	Pink mucket	Endangered	Potential
	<i>Plethobasus cooperianus</i>	Orangefoot pimpleback	Endangered	Known
	<i>Obovaria retusa</i>	Ring pink	Endangered	Known
	<i>Cumberlandia monodonta</i>	Spectaclecase	Candidate	Potential
	<i>Plethobasus cyphyus</i>	Sheepnose	Candidate	Potential
	<i>Potamilus capax</i>	Fat pocketbook	Endangered	Known
	<i>Pleurobema plenum</i>	Rough pigtoe	Endangered	Potential
Plants	<i>Apios priceana</i>	Price's potato-bean	Threatened	Known
Birds	<i>Sterna antillarum</i>	Interior least tern	Endangered	Known
	<i>Haliaeetus leucociphalus</i>	Bald eagle	Delisted	Known
Reptiles		Copperbelly water snake	SCA	

SCA = Species covered by a State Conservation Agreement

KSNPC

Group		Total number of species in each group	Number of state endangered species	Number of state threatened species	Number of state Special Concern species
Terrestrial	Vascular Plants	27	13	7	7
	Non-vascular plant	1	1		
	Insects	1		1	
	Birds	11	1	3	7
	Mammals	3	2	1	
	Reptiles	4		1	3
	Aquatic	Amphibians	4		
	Fishes	12	4	4	4
	Snail	4			4
	Crustaceans	3	1	2	
	Mussels	14	11	2	1
Totals		84	33	21	30

Natural communities in need of protection include: Limestone slope glade, Sandstone barrens (open woodland), and Shawnee Hills sandstone glade

Lyon County

USFWS

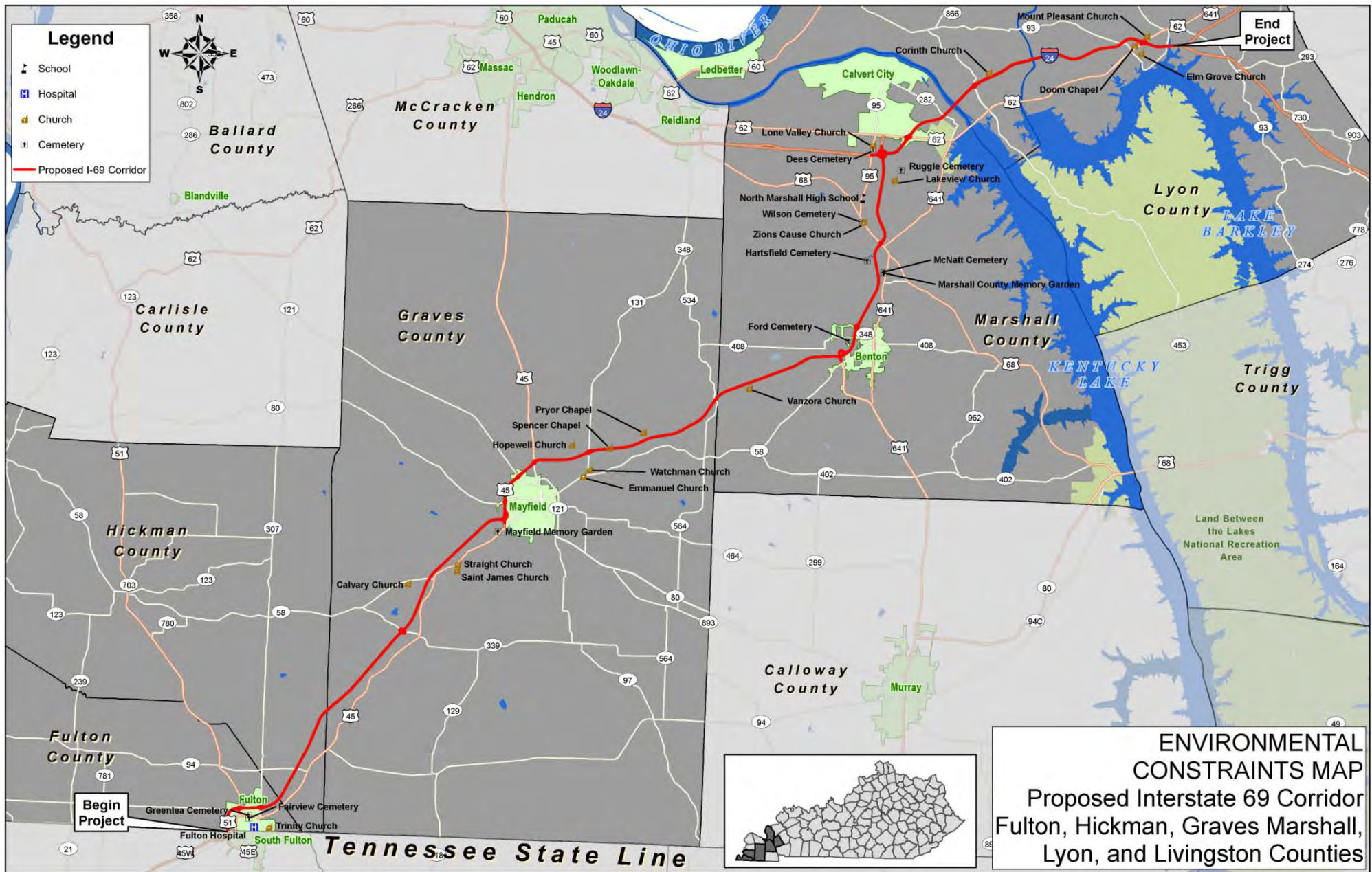
Group	Species	Common Name	Legal Status	Occurrence
Mammals	<i>Myotis sodalis</i>	Indiana bat	Endangered	Potential
	<i>Myotis grisescens</i>	Gray bat	Endangered	Potential
Mussels	<i>Pleurobema clava</i>	Clubshell	Endangered	Known
	<i>Lampsilis abrupt</i>	Pink mucket	Endangered	Known
	<i>Plethobasus cooperianus</i>	Orangefoot pimpleback	Endangered	Known
	<i>Obovaria retusa</i>	Ring pink	Endangered	Known
	<i>Plethobasus cyphus</i>	Sheepnose	Candidate	Potential
	<i>Cyprogenia stegaria</i>	Fanshell	Endangered	Known
Plants	<i>Apios priceana</i>	Price's potato-bean	Threatened	Known
Birds	<i>Sterna antillarum</i>	Interior least tern	Endangered	Known
	<i>Haliaeetus leucociphalus</i>	Bald eagle	Delisted	Known
Insects	<i>Nicrophorus americanus</i>	American burying beetle	Endangered	Considered extirpated

SCA = Species covered by a State Conservation Agreement

KSNPC

Group		Total number of species in each group	Number of state endangered species	Number of state threatened species	Number of state Special Concern species
Terrestrial	Vascular Plants	24	9	8	7
	Insects	1	1 extirpated		
	Birds	11	4	3	4
	Mammals	1			1
	Reptiles	5		1	4
Aquatic	Amphibians	1			1
	Fishes	5	1	1	3
	Snail	1			1
	Mussels	11	10	1	
Totals		60	24	14	21

No natural communities in need of protection



Appendix B. Local Officials Meeting Minutes and Material

Local Officials Meeting Minutes

I-69 Strategic Corridor Planning Study, Fulton to Eddyville, KY
Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties
Purchase Area Development District Office
Mayfield, Kentucky
2:00 p.m. (CST), November 15, 2010

This meeting was held with local officials from Fulton, Hickman, Graves, Marshall, Livingston, Lyon, and surrounding counties to discuss the I-69 Strategic Corridor Planning Study from Fulton to Eddyville, KY. The project was introduced and the attendants were able to discuss potential project issues and provide input on specific local concerns. Those in attendance included:

Dan Voegeli	Mayor of Fulton
Kenney Etherton	City Manager of Fulton
Lee McCollum	Mayor of Kuttawa
John C. Mahre	Christian County
William M. "Bill" Corum	Madisonville-Hopkins County EDC
Ken Winters	State Senator – District 1
Will R. Coursey	State Representative – District 6
Mike Miller	Marshall County Judge Executive
Larry Kelley	Ballard County Chamber of Commerce
Greg Terry	Carlisle County Judge Executive
Vickie Viniard	Ballard County Judge Executive
John Anderson	Purchase ADD Staff
Marty Wiles	Field Representative for Senator McConnell
Mickey Beck	Clinton City Councilman
Tony Smith	Graves County Judge Executive
Arthur Byrn	Mayor of Mayfield
Jim LeFevre	KYTC – District Office
Jill Asher	KYTC – Central Office
Tonya Higdon	KYTC – Central Office
Steve Ross	KYTC – Central Office
Shane Tucker	KYTC – Planning
David Martin	KYTC – Highway Design
Stacey Courtney	Purchase ADD Staff
Mark Davis	Purchase ADD Staff
Will Conkin	Palmer Engineering
David Lindeman	Palmer Engineering
Gary Sharpe	Palmer Engineering
Chuck Wood	Palmer Engineering
Lee Kileman	Bernardin, Lochmuller, and Associates
David Isley	Bernardin, Lochmuller, and Associates

As the attendants arrived, they were asked to sign the attendance sheet and were given a project brochure and questionnaire. Several exhibits were on display for the local officials to look at. KYTC and consultant staff personnel were on hand to answer any questions at this time. Copies of the questionnaire, project brochure, and exhibits are attached to the end of Appendix C.

The meeting was opened by Jim LeFevre of KYTC welcomed the attendants and provided an introduction to the project. David Lindeman of Palmer Engineering then gave a project overview and presented a slide show to the attendants. The presentation included background information on previous studies, scope of work for this project, overview of existing conditions, and discussion of interstate design standards. The slides from the presentation are attached to the end of Appendix C.

Following the slide show presentation, the floor was opened for attendants to ask question and make comments concerning the information presented. Questions from attendants (underlined) and responses from the consultants and KYTC staff during the meeting included:

- Will there be work completed on the Mayfield Bypass?
In the current state, the median does not meet interstate standards. The median width is acceptable, but the median type does not meet interstate standards and separation will have to be provided with a concrete barrier.
- Will the power line at the Purchase Parkway and the I-24 interchange be affected by the new interstate design?
It is not known what exactly will be affected at the I-24 and Purchase Parkway interchange, but it is believed that the power line will not be affected.
- What is the time frame?
There is not a set time frame for final designation of the Purchase Parkway as I-69. Due to the fact that there is no longer an interstate program, funding will have to come from normal federal and state funds. KYTC is going to take an incremental approach to final designation of I-69. For example, KYTC has identified projects on the Parkways where the roadway is known not to meet interstate standards. The toll booth plazas are known interchanges that do not meet interstate standards. The KY 348 interchange in Benton has been let for design. KYTC is working with the FHWA to identify design exceptions and variances for the Wendell H. Ford and Edward T. Breathitt Parkways. These exceptions and variances will set precedence for designating the Purchase Parkway as I-69. KYTC has many larger projects that are consuming the current budget, including the Kennedy Interchange project, the Louisville Bridges project, the Lake Bridges project, and the Milton Madison Bridge project. In addition, the transition of the parkways to an interstate designation has to begin at an existing interstate and end at a logical terminus. It is believed that the first segment to be completed will be from I-24 east towards Edward T. Breathitt Parkway on the Wendell H. Ford Parkway.

- Are any preliminary costs available?

There are not any preliminary cost available at this time. The final report will provide a planning level cost estimate.

- Can you expound upon the issues at the Tennessee state line and Fulton?

The current Kentucky project will extend to the state line because the width is available to do so. Tennessee has currently stopped their I-69 design approximately two (2) miles south of the state line. There is currently no coordination with Tennessee. It is presumed that there will be coordination at the state line once Tennessee begins to look seriously at making the connection.

- Will a median barrier be required?

A Jersey style concrete barrier will probably be used instead of a cable barrier on the Mayfield Bypass. The rest of the Purchase Parkway meets the minimum interstate median width.

- What are the current plans for the I-24 interchange?

Yes, a fully-directional interchange would be required, but specifics are not yet known. KYTC is looking at providing an interim solution for short-term conversion to I-69. In the future, the I-24 interchange will probably need to be redesigned to a fully-directional interchange. KYTC is looking at providing an interim solution for short-term conversion to I-69.

- Are there other known interchanges where improvements will be required?

The former toll booth plazas at Benton and Wingo are known to not meet interstate standards.

- How will any bridge height problems be fixed?

The bridge can be torn down and replaced, the existing bridge can be raised, or the pavement under the bridge can be lowered as long as there are no drainage issues.

- What is the plan for the approach?

Kentucky has to work from the existing interstate out to get interstate designation on work that has been previously completed. The redesign and improvements to the I-24 interchange will be a big job. At this interchange all ramps may be replaced with two-lane ramps. Improvement can be completed anywhere on the Purchase Parkway, but the I-69 designation cannot be achieved until the roadway is contiguous with I-24.

- What effect will the progress for the I-69 connection in Henderson across the Ohio River have on the project?

The lack of bridges in Henderson will probably not have an effect on this project.

Appendix C. Public Meeting Minutes and Material

1. Public Meeting Minutes, Graves County, November 15, 2010
2. Public Meeting Questionnaire Handout
3. Public Meeting Questionnaire Summary
4. Public Meeting Handout
5. Public Meeting Exhibits

Public Involvement Meeting Minutes

I-69 Strategic Corridor Planning Study, Fulton to Eddyville, KY
Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties

Purchase Area Development District Office
Mayfield, Kentucky
5:30 p.m. to 7:30 p.m. (CST), November 15, 2010

A public involvement open house meeting was held on Monday, November 15, 2010 from 5:30 p.m. to 7:30 p.m. (CST) at Purchase Area Development District (PADD) Office, 1002 Medical Drive, Mayfield, Kentucky 42066. The following Kentucky Transportation Cabinet (KYTC) and consultant staff personnel were in attendance:

Jill Asher	KYTC – Central Office
Tonya Higdon	KYTC – Central Office
Steve Ross	KYTC – Central Office
Shane Tucker	KYTC – Planning
David Martin	KYTC – Highway Design
Jim LeFevre	KYTC – District Office
Will Conkin	Palmer Engineering
David Lindeman	Palmer Engineering
Gary Sharpe	Palmer Engineering
Chuck Wood	Palmer Engineering
Lee Kileman	Bernardin, Lochmuller, and Associates

Employees of PADD and Pennyriple Area Development District (PEADD) were also in attendance. A total of 59 people registered their attendance during the public involvement open house (this number excludes those 9 individuals listed above and the employees of PADD and PEADD). Two members of the media, a local newspaper and a television news reporter, were on-hand to cover the meeting.

As attendees arrived, they were asked to sign-in and were given a project brochure and questionnaire. Attendees were invited to view the exhibits and ask questions to KYTC and consultant staff personal. Copies of the questionnaire, project brochure, and exhibits are attached to the end of this appendix.

After a time of informal gathering, Jim LeFevre of KYTC formally welcomed all attendants and provided an introduction to the project. David Lindeman of Palmer Engineering then gave a project overview and presented a slide show to the attendants. The presentation included background information on previous studies, scope of work for this project, overview of existing conditions, and discussion of interstate design standards. The slides from the presentation are attached to the end of this appendix.

Following the slide show presentation, the floor was opened for attendants to ask question and make comments concerning the information presented. Questions from attendants (underlined) and responses from KYTC and consultant staff during the meeting included:

- What are the bridge rehabilitation requirements?
There are four (4) bridges that do not meet the interstate standards. The bridge can be torn down and replaced or raised to the appropriate elevation. The pavement below the bridge can also be lowered to obtain minimum clearance if the drainage issues can be addressed.
- Will seismic retro-fitting be a part of the rehabilitation?
It is currently unknown if seismic retro-fitting will be a part of the raising of bridges on this project, but would be included as a part of new bridges.
- Will work have to be completed to the Purchase Parkway and I-24 interchange?
Yes, a fully-directional interchange would be required, but specifics are not yet known. KYTC is looking at providing an interim solution for short-term conversion to I-69.
- Is the proposed alignment totally along with the existing parkway?
Yes, with some localized exceptions. For instance, the former toll booth interchanges will have to be redesigned, which will require some right-of-way acquisition. Also, the I-24 interchange will probably require some right-of-way work. The area near Fulton will have to be studied further to incorporate the existing road network at the Purchase Parkway with the integration of I-69.
- What will happen at the Tennessee/Kentucky state line?
Currently KYTC is not sure how the situation will be handled. The area around the state line is very busy with many roadways and access points. KYTC will have to work with Tennessee Department of Transportation (TDOT) to find a solution. Tennessee has recently elected a new governor and when the administration changes, projects tend to sit in limbo until everything is settled. Kentucky will have to wait until Tennessee is ready to talk about the I-69 connection.
- What is the timing of completion?
The project must first get into the 6-Year Highway Plan. The 6-Year Highway Plan already has about 15 years worth of projects in it. KYTC is also already planning to build several other bridges throughout the state. The timing of the funding for I-69 is unknown. KYTC hopes to identify and proceed in incremental steps along the Purchase Parkway. KYTC currently has one interchange on the Purchase Parkway that does not meet interstate standards in the design phase. A roadway cannot get interstate designation on sections that do not connect to an existing interstate and stop at a logical terminus.

- Why is Tennessee so far ahead of Kentucky in terms of the construction of I-69?
KYTC can't say why Tennessee is ahead of Kentucky in terms of construction of I-69, but does know why Indiana has proceeded and talked about leasing the toll way.
- Will there be federal funds to build the interstate if the "interstate program is over?"
Yes, but it will probably have to come from federal funds allotted to Kentucky, not from a new or separate funding source.
- What happens if Kentucky and Tennessee disagree about how I-69 will meet up at the state line?
The states will have to work together to find a solution.
- Will the railroad track bridge have to be removed for the new interchange design at KY 348 in Benton?
It is not yet known if the railroad track bridge will have to be removed for the new interchange design at KY 348 in Benton. A final decision has not yet been made and may be subject to funding. The new interchange will not be built until 2013 or 2014. The new interchange will need design, right-of-way acquisition, utility relocation, etc. It is currently in the design phase.
- Will the number of current interchanges in Fulton change?
Currently, KYTC does not intend to remove or add any interchanges to the Purchase Parkway for the designation as I-69. Future studies will be conducted in the Fulton area to determine access to I-69.
- Has the amount of traffic on I-24 once the two interstates (I-69 and I-66) are built been looked at?
Yes, the projections have been performed out to 2040. I-66 probably will not get constructed in the foreseeable future, but the state's priorities can change especially when politics are involved.
- Will there be any realignment of the weigh station at Fulton, or will it stay the same?
KYTC does not see how the weigh station could stay the same. If the weigh station is replaced, then it will have to be done at a more northern location and will probably involve some advanced technology that may allow for a weigh-in-motion setup.
- Is there a website where the public can track developments for the project?
KYTC will add it to the Division of Planning portion of the KYTC website. The presentation shown today will be added to the PADD website.
- What is the time frame for purchasing right-of-way for the KY 348 interchange in Benton?

There is not a set schedule for the purchase of right-of-way for the KY 348 interchange in Benton. Property owners may use their property any way they wish. Construction is not expected within the next two years.

At the close of the meeting attendants could turn in any completed questionnaires or were given the option of mailing them back by December 1, 2010. A total of 26 public comment questionnaires were completed at the meeting. An additional 7 public comment questionnaires were received from individuals in attendance at the meeting at a later date.

The meeting closed at 7:30 p.m. (CST).

QUESTIONNAIRE

I-69 Strategic Corridor Planning Study November __, 2010
Purchase Parkway / I-24 - Fulton to Eddyville, KY
Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties
(Please Print)

Name: _____ Phone: _____
Address _____
City, State, Zip _____
County _____
e-mail _____ (optional)

1. How often do you use the Julian M. Carroll (Purchase) Parkway?

Daily ____ Weekly ____ Monthly ____

2. Is your usage considered local (travel within a county) or regional (from one county/city to another)?

Local ____ Regional ____

3. Are there any specific safety issues along the study area? Where and what problems exist?

4. Improvements to the corridor may include improving existing interchanges. Which interchange(s) do you think have the highest priority of improving?

5. Are there sensitive locations or issues that you know of within corridor?

Use Back Page for Additional Comments

Name: _____ November ____, 2010

I-69 STRATEGIC CORRIDOR PLANNING STUDY ADDITIONAL COMMENTS

If you have other concerns or issues that have not been addressed with this questionnaire, please use the space below to provide additional comments or express concerns.

Comments: _____

Your answers and comments will be given to the Project Team for further development of strategies, options and recommendations for improvements to the Julian M. Carroll (Purchase) Parkway and ultimately I-69. Please turn them in tonight at the registration desk or mail them by December 1, 2010 to:

Jim LeFevre, P. E.
Kentucky Transportation Cabinet – District 1
5501 Kentucky Dam Road
Paducah, KY 42003

Public Questionnaire Summary

I-69 Strategic Corridor Planning Study, Fulton to Eddyville, KY
Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties

Distribution of Responses by County:

Fulton	4
Graves	18
Groves	1
Hopkins	1
Marshall	1
McCracken	2
Obion (TN)	3

1. How often do you use the Julian M. Carroll (Purchase) Parkway?

Daily	9
Weekly	19
Monthly	1
Yearly	2

2. Is your usage considered local (travel within a county) or regional (from one county/city to another)?

Local	13
Regional	24

3. Any there any specific safety issues along the study area? Where and what problems exist?

Exit 14	3
Exit 21	5
Exit 43	1
Access for Emergency Vehicles	1
Fulton Exits	1
I-24/Purchase Parkway Interchange	3
Lighting	1
Mayfield Bypass	1
Minimal Needed	1
Old Toll Both	1
Ramp and Taper Length	2
Short Access Ramps in Mayfield	1
West Broadway (KY 80)	1

4. Improvements to the corridor may include improving existing interchanges. Which interchange(s) do you think have the highest priority of improving?

Calvert City (I-24)	1
Exit 0	6
Exit 14	5
Exit 21	7
Exit 22	2
Exit 24	2
Exit 43	6
Fulton	3
I-24/Purchase Parkway Interchange	4
Mayfield (south)	1

5. Are there sensitive locations or issues that you know of within the corridor?

Cell Tower at Exit 14	1
Exit 21	2
Exit 24	1
Exit 43	1
Exit 52	1
Guardrails at Exit 14 and Mayfield Bypass	2
KY 166 Curve	1
Emergency Vehicle Access from Mile Marker 2 to 9	1
Old Toll Booth	1
State Line	1

Additional Questionnaire Questions and Comments:

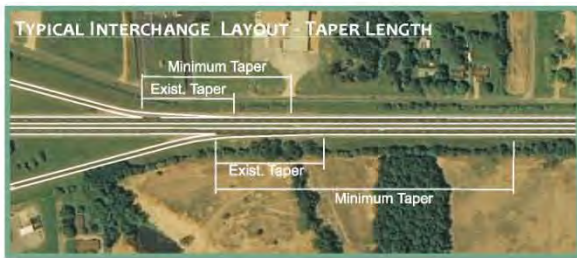
- Why was stimulus funding not used for this project?
- A man was killed because he missed Exit 21.
- This project will improve safety and open up the opportunity for new commerce.
- Kentucky stands to gain much from this investment.
- When and how will the new KY 80 tie to the Mayfield Bypass southwest of Mayfield?
- Try to avoid business disruption, utility relocation, and traffic congestion during construction.
- I request widening of connector from 121-Bypass to US 45.
- I hope I-69 can be moved forward as quickly as possible and using as much existing roadway as possible.
- I am concerned about the impact the new corridor will have on existing improvements along the south-bound leg of the interstate near the Mayfield-Fulton exit.
- Traffic is funneled down to one lane in a curve and then widens back to four lanes

- Let's get started!
- Consider using noise walls in residential areas near road.
- KY 58/80 needs to be improved significantly on both sides. We need curb and gutter and better lighting.
- Good informational session!
- I have been on the board for many years and the time for planning is over.
- We want to have the necessary changes made to open up western Kentucky and put people back to work.
- Turn this road into a toll road.
- The guardrails are too close to traffic at the Mayfield Bypass exit and Exit 14 (Wingo).
- I'm excited about this project. The sooner it becomes I-69 the better.
- At Exit 14, traffic comes from both directions when entering and exiting. The guardrails on the ramp are too close to the traffic.
- The Obion County Commission would like to see the I-68 project enter into Tennessee at the present location.
- We are a concerned fire department in southern Graves County (Water Valley). We cover approximately eight to nine miles of what is going to be I-69. Our concern is the unavailability of an entrance/exit ramp near our station. At the present time we must drive to Fulton or Wingo to access the Parkway. This is a seven to 10 mile drive just to get to the Parkway and does not count travel time to the scene. People on the new interstate deserve a quick response no matter what section of I-69 they are traveling. We are presently looking at a minimum approximate response time of 15 minutes. If the fire or motor vehicle accident is at the end of our district it could be 20 minutes or longer. Our biggest concern is safety for the public driving on our roads. We are sure you would agree. We would greatly appreciate your consideration of an entrance ramp to enable us to respond and serve more efficiently and effectively.
- The entrance and exit ramps at The Wingo exit need to be lengthened.
- I am concerned with the area between the mile marker 2 and the mile marker 9. The Water Valley Fire Department responds to this area and in order for them to get to an emergency call they have to go all the way to Fulton at Exit 2. If there is a wreck or someone is entrapped in a vehicle that is on fire that is a very long trip for the fire department to make. I know if your family was having an emergency at the 8 mile marker and it took the fire department 20 to 30 minutes to get there you wouldn't be too happy. They are a volunteer department and have to drive from a location to the fire department, so that extends the response time as well. I feel the access of a ramp would greatly help the fire department and the safety of the drivers on I-69. I know there are bridges over the Parkway for Highway 1529 and Highway 1283 just outside of Water Valley. It would be greatly appreciated if you could consider one of those overpasses for an entrance.

PROJECT DESCRIPTION

The Kentucky Transportation (KYTC) has undertaken a Strategic Corridor Planning Study for a portion of proposed Interstate 69 (I-69). I-69 is proposed to extend from the Mexican border in Texas to the Canadian border in Michigan. This project involves a study of the Julian M. Carroll (Purchase) Parkway north from the Tennessee state line at Fulton through Fulton, Graves, Marshall, Livingston, and Lyon Counties to the interchange with I-24. The study corridor continues east on I-24 to just west of the Wendell H. Ford Parkway and I-24 interchange. Evaluation of the remaining segments of I-69 in Kentucky have been addressed by another study. The primary purposes of this project are:

- ▶ to review the existing conditions along the Julian M. Carroll (Purchase) Parkway and I-24 to identify locations that do not meet current highway design guidelines for Interstate routes
- ▶ to evaluate the degree to which these guidelines are not met
- ▶ to identify options for making improvements to address identified deficiencies
- ▶ to make recommendations regarding the suitability of routing this segment of I-69.



Recommendations for improving taper lengths to meet minimum interstate standards will be included in the report.

PROJECT FOCUS

This project will focus on evaluating existing conditions in the context of the following:

- ▶ roadway geometry (lane, shoulder, and median widths; horizontal and vertical clearance)
- ▶ bridge geometry, structural condition, load rating, and functional attributes
- ▶ interchange geometry and access control.

PROJECT SCHEDULE

Notice to Proceed	April 2010
Complete Inventory of Existing Conditions	August 2010
Public Meeting	November 2010
Interdisciplinary Meeting	January 2011
Final Report	February 2011



PROCEDURE FOR SUBMITTING COMMENTS

Representatives of the Kentucky Transportation Cabinet and their engineering consultants are available to answer questions you may have regarding this project. In addition, exhibits and displays are available to assist you in understanding the various facets of this project. You are encouraged to make an official comment that will be incorporated into the project summary.

To make a written statement, complete one of the comment sheets provided and leave it tonight with one of the representatives or mail it by December 1, 2010, to the address listed below.

Jim LeFevre, P.E.
 Department of Highways, District 1
 5501 Kentucky Dam Road
 Paducah, KY 42003

I-69 Strategic Corridor Planning Study Fulton to Eddyville, KY



November 15, 2010
 5:30 p.m. - 7:30 p.m. CT

Purchase Area Development District (PADD)
 1002 Medical Drive
 Mayfield, KY 42066





I-69 STRATEGIC PLANNING STUDY CORRIDOR

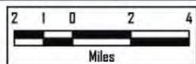
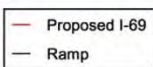
CRASHES OCCURRING BETWEEN 2005 AND 2009

I-24 Crashes

- 6 Fatalities
- 68 Injuries
- 255 Property Damage Only

Purchase Parkway Crashes

- 7 Fatalities
- 136 Injuries
- 449 Property Damage Only



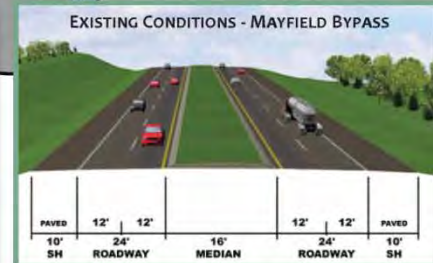
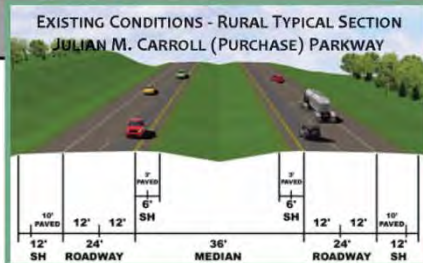
TRAFFIC DATA

- 7,500 = 2010 ADT (Average Daily Traffic)
- 37,500 (41,000) = 2040 ADT Without I-69 (2040 ADT With I-69)

Proposed I-69 Corridor

TYPICAL SECTIONS

Typical sections shown below illustrate existing conditions and the minimum standards that must be met for designation as I-69.



Tennessee State Line

Begin Project

End Project



Hickman County

Fulton County

MAYFIELD
Graves County

Marshall County

Livingston County

Lyon County

Kentucky Lake

BENTON

JULIAN M. CARROLL PURCHASE PARKWAY

FULTON

534

131

45

121

80

339

94

51

94

93

62

62

641

68

68

24

68

68

68

68

68

68

68

68

68

68

25,700

46,800 (53,900)

51,100 (59,200)

39,700 (45,900)

34,800 (40,300)

34,100 (39,400)

30,300 (35,000)

13,300 (15,400)

14,100 (16,300)

21,700 (25,200)

23,700 (27,500)

25,900 (30,000)

15,600 (18,000)

13,200 (15,300)

13,700 (15,900)

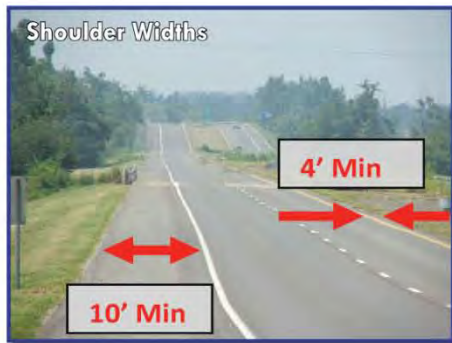
15,400 (17,800)



I-69 Strategic Planning Corridor STUDY ISSUES

The Project Corridor will be studied to identify needed changes to meet Interstate Highway Standards.

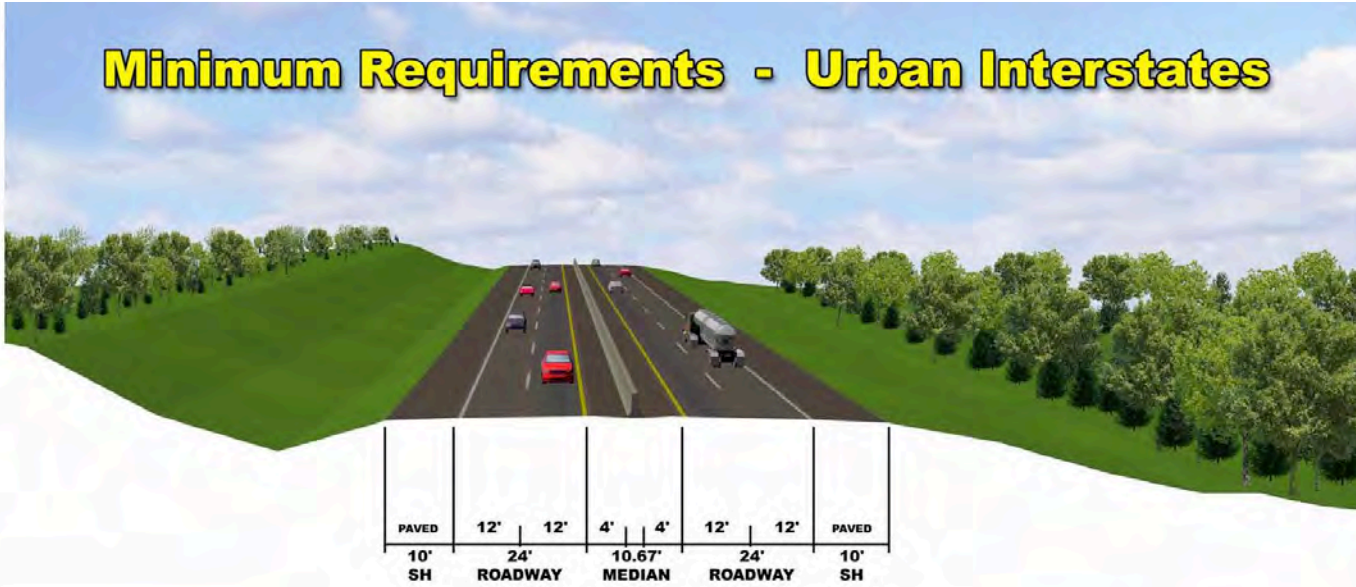
Examples of items that need to be addressed are shown below:



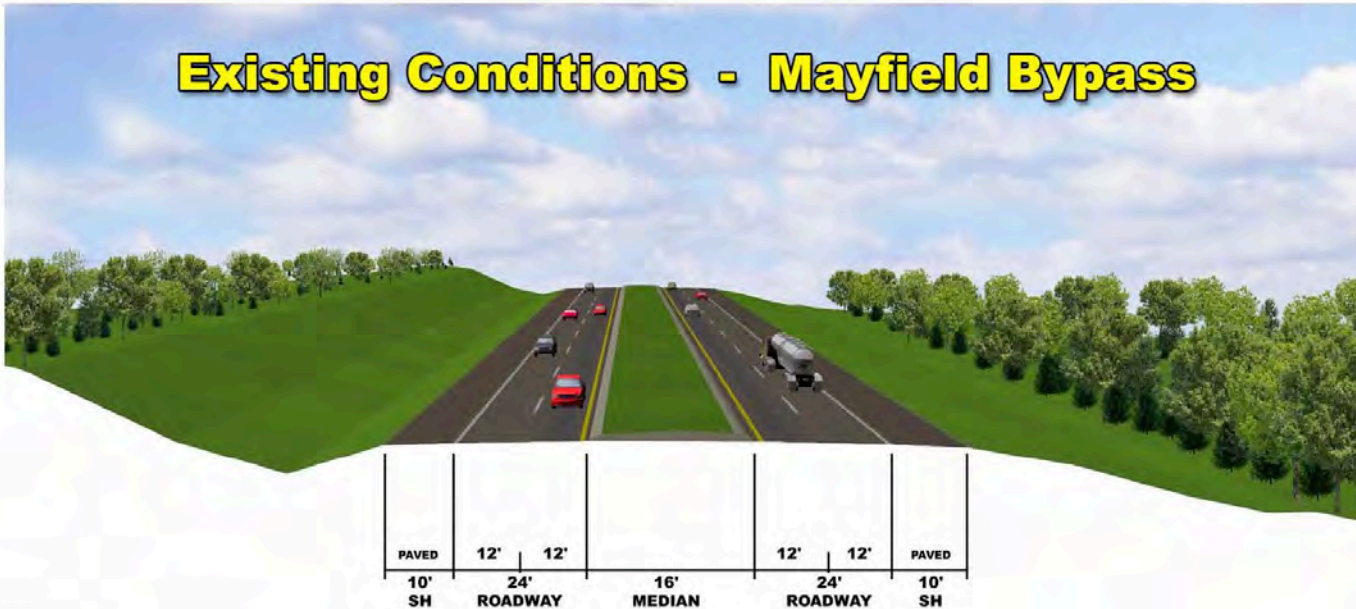
- ▶ Acceleration & Deceleration Taper Lengths
- ▶ Ramp Curvature
- ▶ Access Control

- ▶ Rural - 36' Minimum
- ▶ Urban - 10' Minimum

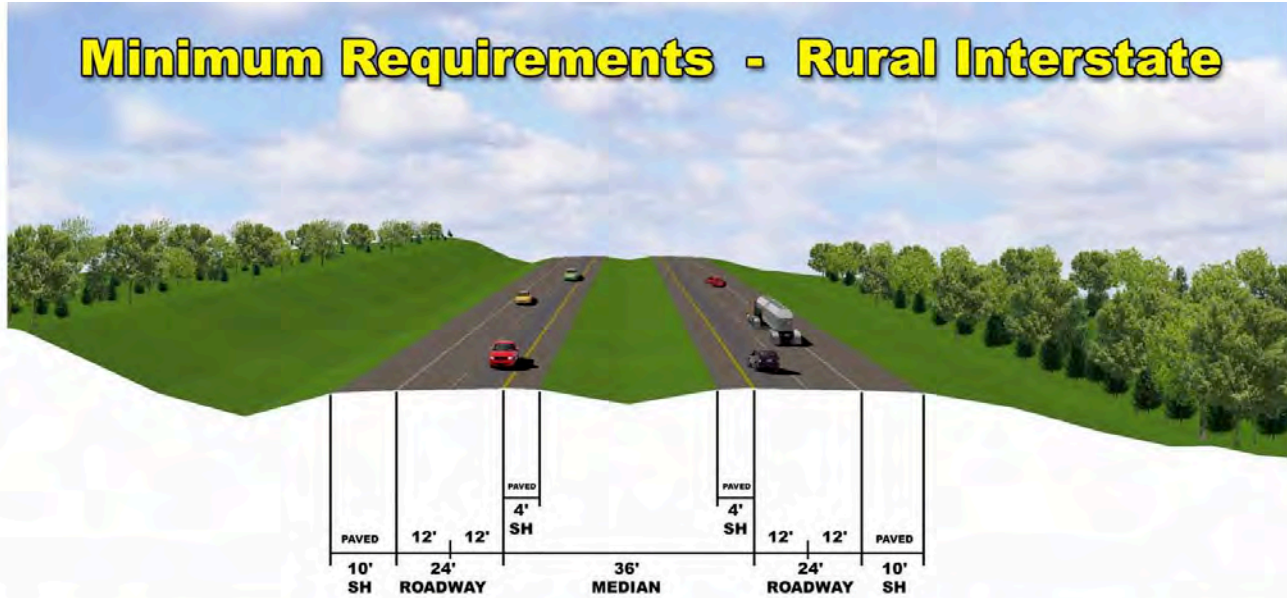
Minimum Requirements - Urban Interstates



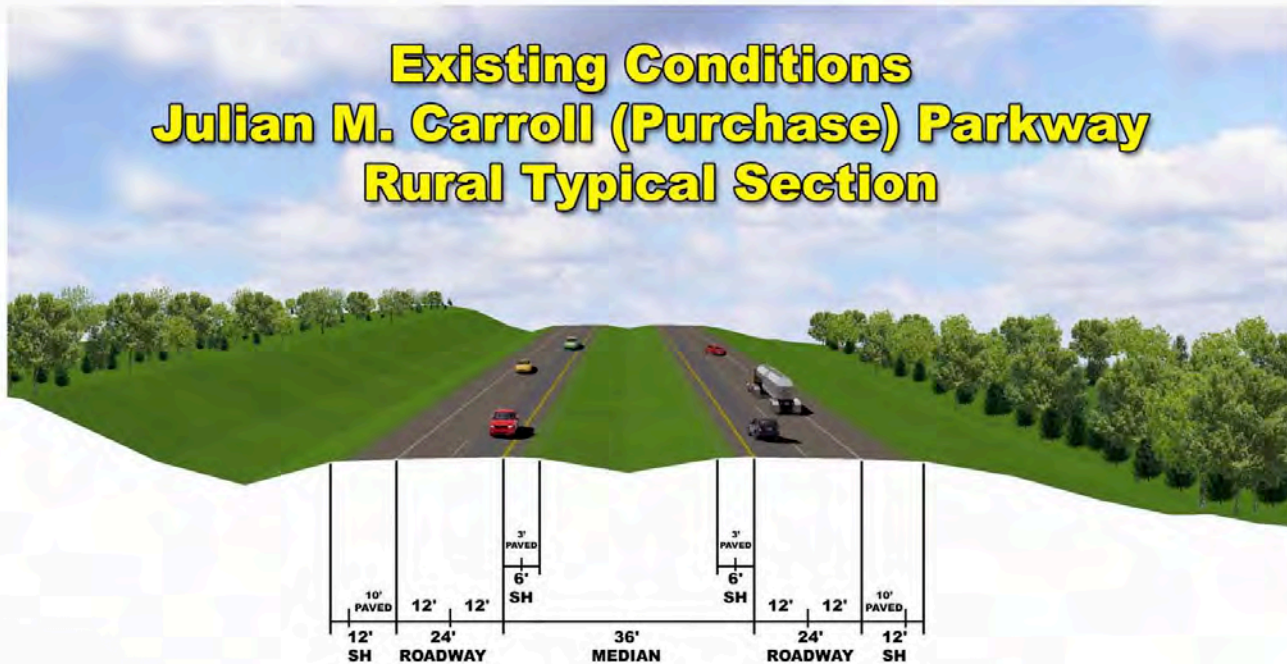
Existing Conditions - Mayfield Bypass



Minimum Requirements - Rural Interstate

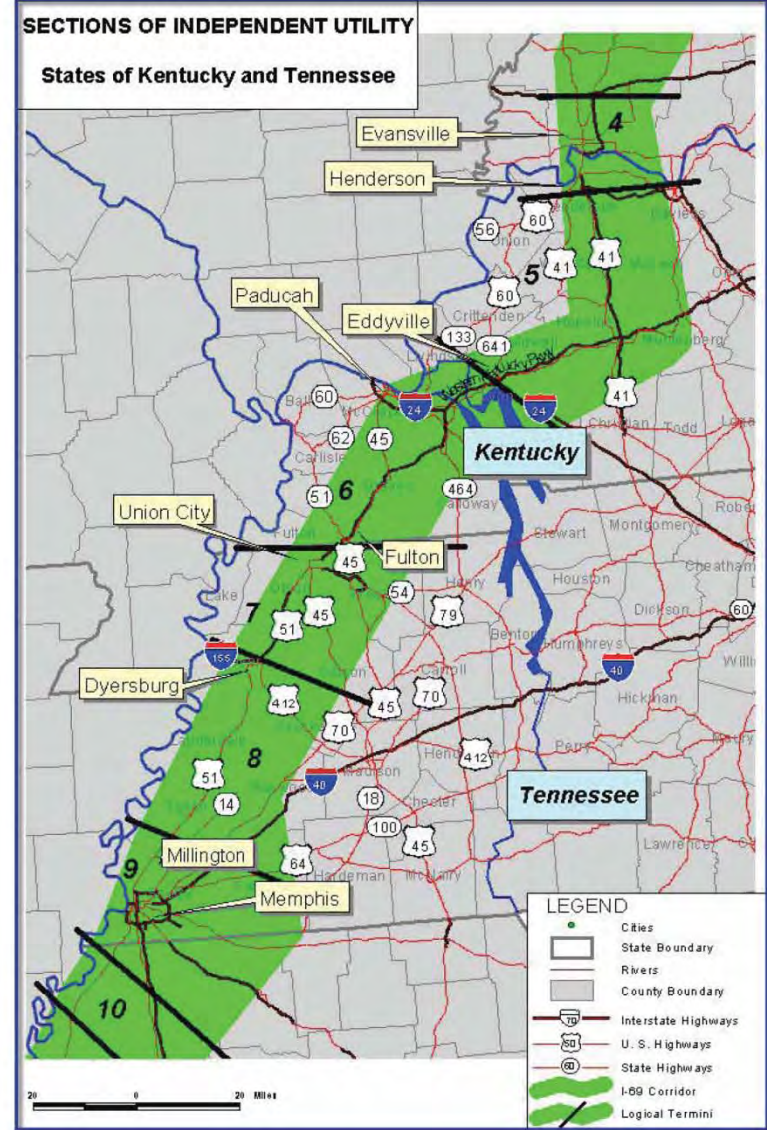
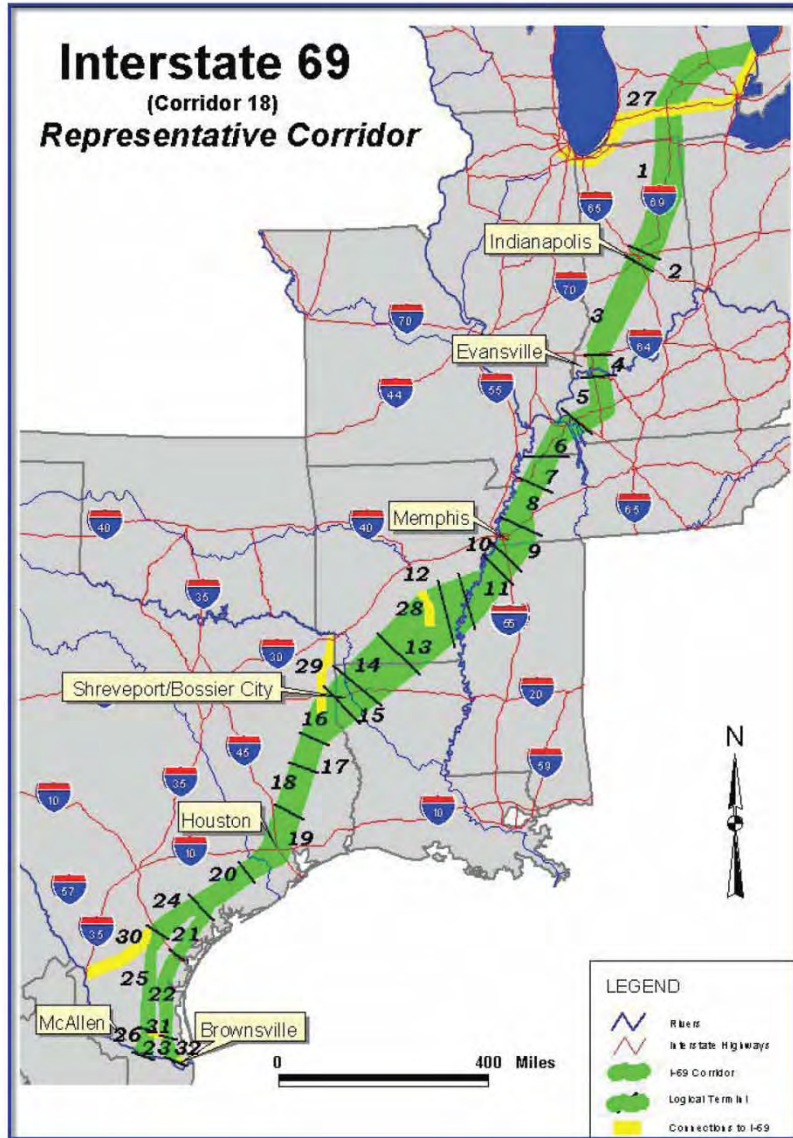


Existing Conditions Julian M. Carroll (Purchase) Parkway Rural Typical Section





I-69 CORRIDOR



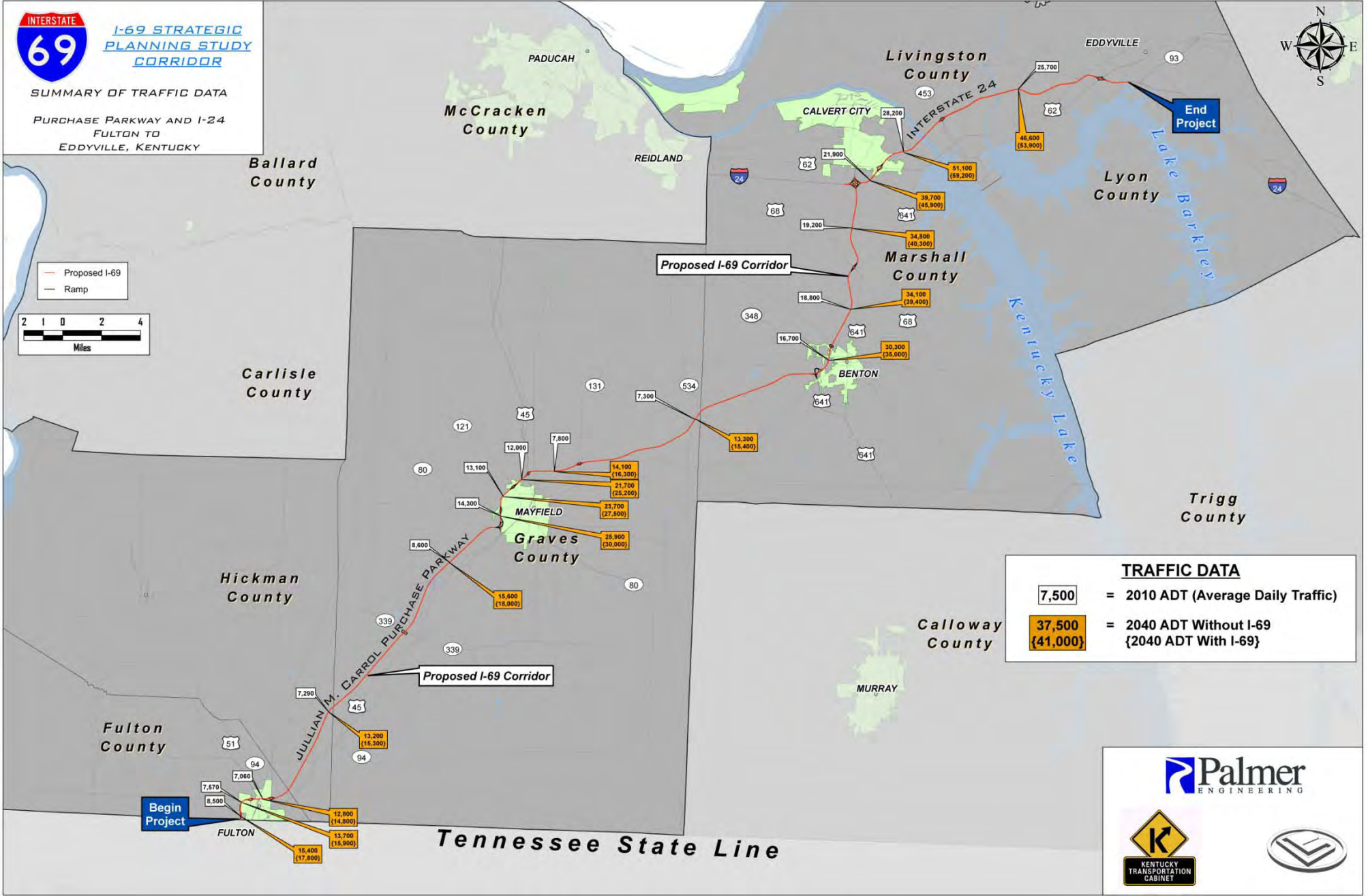


I-69 STRATEGIC PLANNING STUDY CORRIDOR

SUMMARY OF TRAFFIC DATA

PURCHASE PARKWAY AND I-24
FULTON TO
EDDYVILLE, KENTUCKY

Proposed I-69
Ramp



TRAFFIC DATA	
7,500	= 2010 ADT (Average Daily Traffic)
37,500	= 2040 ADT Without I-69
{41,000}	{2040 ADT With I-69}

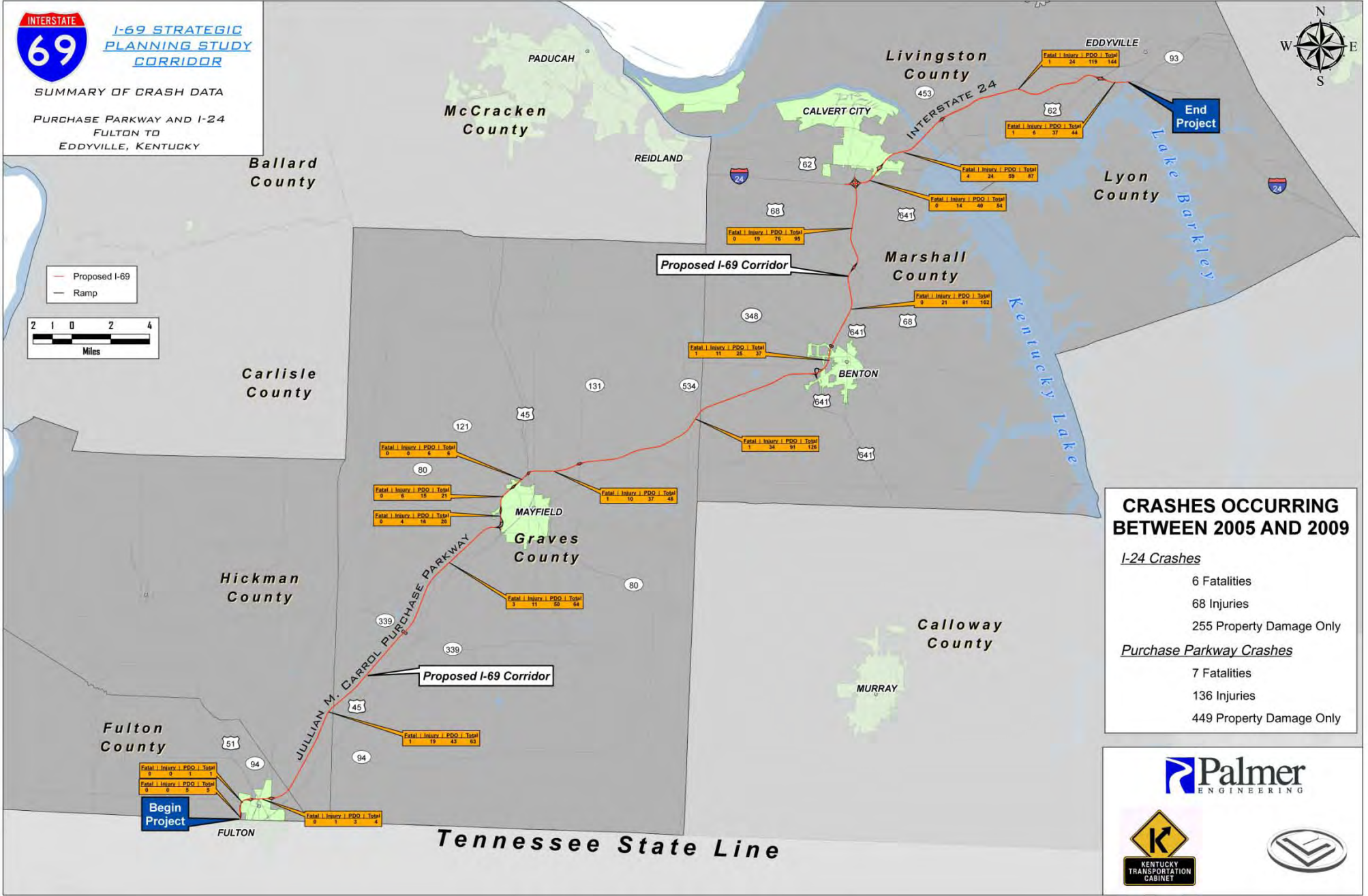
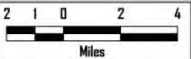


I-69 STRATEGIC PLANNING STUDY CORRIDOR

SUMMARY OF CRASH DATA
PURCHASE PARKWAY AND I-24
FULTON TO
EDDYVILLE, KENTUCKY



Proposed I-69
Ramp



CRASHES OCCURRING BETWEEN 2005 AND 2009

- I-24 Crashes
- 6 Fatalities
 - 68 Injuries
 - 255 Property Damage Only
- Purchase Parkway Crashes
- 7 Fatalities
 - 136 Injuries
 - 449 Property Damage Only



Tennessee State Line



I-69 Strategic Planning Corridor Study: Fulton To Eddyville, KY

Fulton, Hickman, Graves, Marshall,
Livingston, Lyon Counties

Public Meeting
November 15, 2010

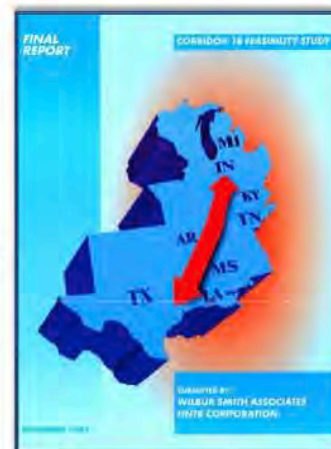


BERNARDIN, LOCHMILLER & ASSOCIATES, INC.
ENGINEERING • SURVEYING • PLANNING • ENVIRONMENTAL SERVICES

Project Background: Corridor 18 Feasibility Study

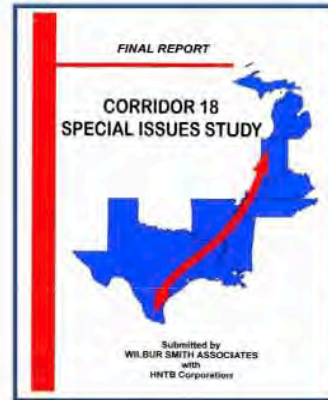
- Produced information regarding cost, economic efficiency, impacts on economic development, financial viability and other relevant features of this large scale highway project.

- **Completed November 1995**



Project Background: Corridor 18 Special Issues Study

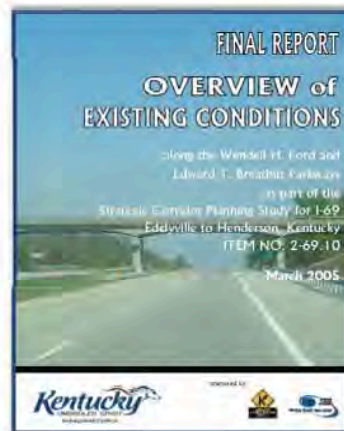
- Redefined the corridor from Indianapolis, IN to the Lower Rio Grande Valley
- **Completed July 1997**



Project Background:

Strategic Corridor Planning Study for I-69: Eddyville to Henderson, KY

- Segment of Independent Utility (SIU) 5
- Overview of Existing Conditions
- Wendell H. Ford and Edward T. Breathitt Parkways
- **Completed March 2005**

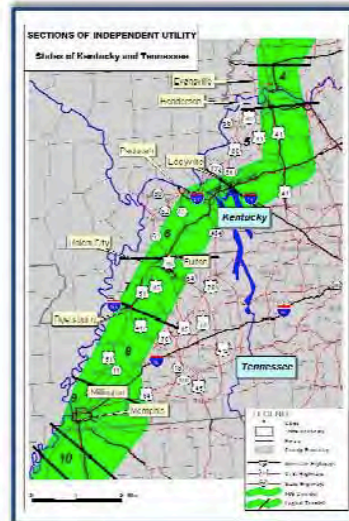


This Project: Strategic Planning Study

Purchase Parkway / I-24

Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties

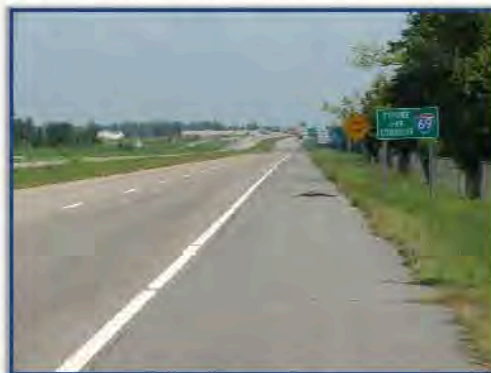
- SIU 6
- Beginning – Tennessee State Line in Fulton County
- Ending – West of I-24 and Western Kentucky Parkway Interchange in Lyon County



Strategic Planning Study: I-69 Corridor Purchase Parkway / I-24

Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties

- Study Beginning - April 2010



- **Anticipated Completion - February 2011**

Strategic Planning Study: I-69 Corridor Purchase Parkway / I-24

Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties

- Scope of Work
 - Inventory existing conditions
 - Define Interstate criteria
 - Determine and evaluate deficiencies
 - Identify options and strategies for needed improvements
 - Develop recommendations and potential cost
 - Document findings

Strategic Planning Study: I-69 Corridor Interstate Design Standards

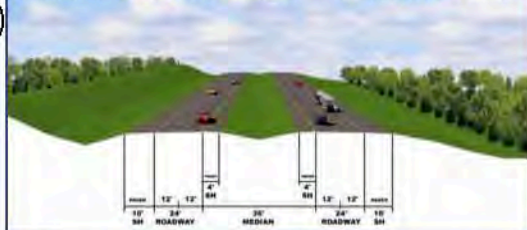
- Fully Controlled Access
 - At Ramp Terminals
 - Minimum 100 foot urban
 - Minimum 300 foot rural
- Design Speed
 - 70 MPH – Rural
 - 50 MPH – Urban
- Four Lanes
 - 12 feet wide



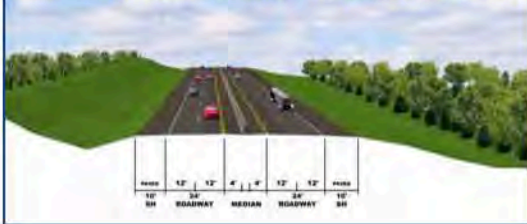
Strategic Planning Study: I-69 Corridor Interstate Design Standards

- Shoulder Widths (paved)
 - Inside – 4 foot min
 - Outside – 10 foot min
- Median
 - Rural – 36 foot min
 - Urban – 10 foot min

Minimum Requirements - Rural Interstate



Minimum Requirements - Urban Interstates



Strategic Planning Study: I-69 Corridor Interstate Design Standards



- Minimum Horizontal Curvature
 - Rural - 1810 foot radius
 - Urban - 758 foot radius
- Minimum Stopping Sight Distance
 - Rural - 730 feet
 - Urban - 425 feet

Strategic Planning Study: I-69 Corridor Interstate Design Standards

- Bridges
 - All lanes and shoulders at least 16 foot vertical clearance
 - Full paved shoulder width
 - Crashworthy barrier railing
 - Structurally adequate
- Sign Trusses – 17 foot vertical clearance



Strategic Planning Study: I-69 Corridor Interstate Design Standards

- Interchange
 - Provide all traffic movements
 - Spacing between interchanges
 - Minimum 1 mile Urban
 - Minimum 3 mile Rural
 - Adequate Acceleration/Deceleration Tapers



Strategic Planning Study: I-69 Corridor Overview of Existing Conditions



- Traffic – 2010 Vehicles per day (vpd)
 - Purchase Parkway
 - Ranges from 7,060 vpd to 19,200 vpd
 - I-24
 - Ranges from 21,900 vpd to 28,200 vpd

Strategic Planning Study: I-69 Corridor Traffic Forecasts



- Traffic – 2040 Vehicles per day (vpd)
 - Purchase Parkway
 - Ranges from 14,800 vpd to 40,300 vpd
 - I-24
 - Ranges from 45,900 vpd to 59,200 vpd

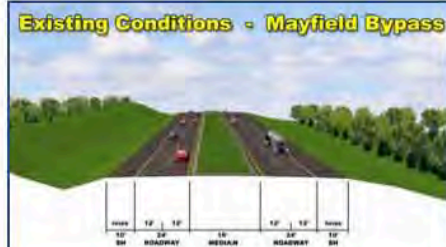
Strategic Planning Study: I-69 Corridor Overview of Existing Conditions

- Crash History (2005-2009)
 - Purchase Parkway
 - 7 Fatalities
 - 136 Injuries
 - 449 Property Damage Only
 - I-24
 - 6 Fatalities
 - 68 Injuries
 - 255 Property Damage Only



Strategic Planning Study: I-69 Corridor Overview of Existing Conditions

- Roadway Geometry
 - Lane Widths
 - 12 feet wide
 - Shoulder Widths
 - Inside 0 – 6 feet
 - Outside 10-12 feet
 - Median Widths
 - Urban 16 feet
 - Rural 36 feet



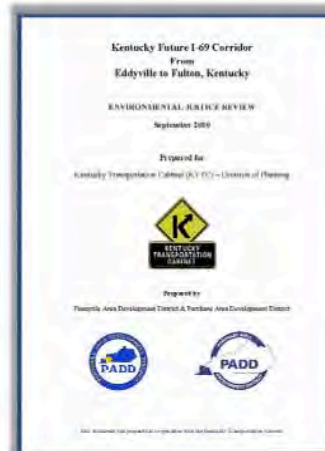
Strategic Planning Study: I-69 Corridor Overview of Existing Conditions



- Bridges
 - Width
 - 30 – 38 feet
 - Vertical Clearance
 - 15.12 – 19.48 feet
 - Bridge Railing
 - Upgrade to current standards

Strategic Planning Study: I-69 Corridor Environmental Overview

- Overview of critical environmental (NEPA) considerations
- Environmental Justice
 - Review of the Socioeconomic characteristics along the project area
 - 2000 U.S. Census Bureau
 - Findings of no impact to the studied area populations since corridor is with-in existing Right of Way



Strategic Planning Study: I-69 Corridor Geotechnical Overview



- Overview of anticipated improvements and geotechnical considerations
- To be completed in conjunction with final report

Strategic Planning Study: I-69 Corridor Public Meeting Handout

PROJECT DESCRIPTION

The Kentucky Transportation Cabinet (KYTC) has announced a Strategic Corridor Planning Study for a portion of proposed Interstate 69 (I-69) that would extend from the Mississippi River in The Woodlands, Texas to the Gulf of Mexico in Eddyville, KY. The project involves a study of the route from Fulton, Kentucky to Eddyville, KY. The study will include a geotechnical study of the route from Fulton, KY to Eddyville, KY. The study will also include a study of the route from Fulton, KY to Eddyville, KY.

- to identify existing conditions along the route from Fulton, KY to Eddyville, KY
- to identify existing conditions along the route from Fulton, KY to Eddyville, KY
- to identify existing conditions along the route from Fulton, KY to Eddyville, KY
- to identify existing conditions along the route from Fulton, KY to Eddyville, KY

PROJECT SCHEDULE

Start of Project	April 2010
Final Report	December 2010
Public Meeting	November 15, 2010
Final Report	December 2010

**I-69 Strategic Corridor Planning Study
Fulton to Eddyville, KY**

November 15, 2010
5:30 p.m. - 7:30 p.m. C.T.

Bankers Area Development Center (BADC)
1002 Medical Office
Waynesville, KY 40386

PROCEDURE FOR SUBMITTING COMMENTS

Comments should be submitted to the project manager at the following address:

Project Manager
1002 Medical Office
Waynesville, KY 40386

FRONT

Strategic Planning Study: I-69 Corridor Public Meeting Handout



BACK

Strategic Planning Study: I-69 Corridor Questionnaire / Comment Sheet

- Public Awareness
- Obtain Public Input
 - Constraints
 - Site Specific Issues/Concerns
 - Determine Expectations

QUESTIONNAIRE
September 2010

Telford Strategic Consulting, Inc. / State of Georgia
Purchase Parkway, 12110 Wilshire, 30074-1111
Telford, Michigan (Phone: 248.644.1111) / Fax: 248.644.1111

Name: _____ Phone: _____
 Address: _____
 City, State, Zip: _____
 County: _____
 E-mail: _____

1. How often do you use the Julian M. Carroll (Peachtree Parkway)?
 Circle: _____

2. In your area, would you build a road with a center turn lane or a road with a center turn lane?
 Circle: _____

3. Are there any specific sites or areas along the route that you know of which are problematic?

4. Are there any other sites or areas along the route that you know of which are problematic?

5. Are there any other sites or areas along the route that you know of which are problematic?

Please Print Name: _____

**Strategic Planning Study: I-69 Corridor
Purchase Parkway / I-24**

Fulton, Hickman, Graves, Marshall, Livingston, and Lyon Counties

Questions and Comments



Appendix D. Geotechnical Overview



Stantec



Report of Geotechnical
Overview

I-69 Strategic Planning Corridor
Study from Fulton to Eddyville,
Kentucky

Fulton, Hickman, Graves,
Marshall, Livingston and Lyon
Counties, Kentucky

Stantec Consulting Services Inc.

One Team. Infinite Solutions

1409 North Forbes Road

Lexington, KY 40511-2050

Tel: (859) 422-3000 • Fax: (859) 422-3100

www.stantec.com

Prepared for:

Palmer Engineering
Winchester, Kentucky

February 14, 2011



Stantec

Stantec Consulting Services Inc.
1409 North Forbes Road
Lexington, KY 40511-2050
Tel: (859) 422-3000
Fax: (859) 422-3100

February 14, 2011

rpt_001_175561002

Mr. Gary Sharpe, PE, PLS
Palmer Engineering
400 Shoppers Village
P.O. Box 747
Winchester, Kentucky 40392-0747

Re: Report of Geotechnical Overview
I-69 Strategic Planning Corridor Study
from Fulton to Eddyville, Kentucky
Fulton, Hickman, Graves, Marshall, Livingston and Lyon Counties, Kentucky

Dear Gary:

Stantec Consulting Services Inc. (Stantec) is pleased to submit this geotechnical overview for the proposed Interstate 69 corridor situated between the cities of Fulton and Eddyville, Kentucky in Fulton, Hickman, Graves, Marshall, Livingston and Lyon counties. The overview is based upon research of available published data and input from various Project Team meetings.


Palmer Engineering provided Stantec with preliminary locations for the study area. The scope of work performed and results of the overview are presented in the accompanying attachment. Stantec appreciates having the opportunity to provide these engineering services and would be happy to answer any questions and further assist you concerning this project.

Sincerely,

STANTEC CONSULTING SERVICES INC.


T. Craig Barnett, PE
Geotechnical Engineer


Adam Crace, PE
Project Manager


Mark A. Litkenhus, PE
Senior Principal

/rws

**Report of Geotechnical Overview
I-69 Strategic Planning Corridor Study
from Fulton to Eddyville, Kentucky
Fulton, Hickman, Graves, Marshall, Livingston and Lyon Counties,
Kentucky**

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Report of Geotechnical Overview

I-69 Strategic Planning Corridor
Study from Fulton to Eddyville,
Kentucky
Fulton, Hickman, Graves,
Marshall, Livingston and Lyon
Counties, Kentucky

Prepared for:
Palmer Engineering
Winchester, Kentucky

February 14, 2011

Report of Geotechnical Overview
I-69 Strategic Planning Corridor Study
from Fulton to Eddyville, Kentucky
Fulton, Hickman, Graves, Marshall, Livingston and Lyon Counties,
Kentucky

1. Project Description

The Kentucky Transportation Cabinet (KYTC) is evaluating a corridor for the proposed Interstate 69 (I-69) that would include the Purchase Parkway from the Tennessee state line to the Interstate 24 (I-24) interchange, and then east along I-24 to west of the Western Kentucky Parkway. This overview will be utilized to identify possible improvements needed to bring the corridor up to current interstate standards. It is anticipated the current alignment of the Purchase Parkway will be utilized and that significant improvements will be needed at the major interchanges. In addition, it is anticipated 10 bridge structures will require some type of widening effort to meet current interstate criteria.

The Project Team prepared an environmental footprint of the area to be studied. This area incorporates portions of Fulton, Hickman, Graves, Marshall, Livingston and Lyon Counties. The proposed I-69 corridor is approximately 68 miles in length.

2. Scope of Work

The scope of work for this study consists of performing a geotechnical overview for the proposed corridor based upon research of available published data and Stantec's experience with highway design and construction within the region. General geotechnical and geologic characteristics of the study area have been identified and are discussed in this report. Stantec personnel, using a variety of sources, performed a literature search that included reviews of the following sources:

- Available topographic and geologic mapping of the project area published by the United States Geological Survey (USGS) and the Kentucky Geological Survey (KGS);
- The Geologic Map of Kentucky, published by the USGS and the KGS (1988);
- KYTC Geotechnical Data, published by the KGS and KYTC, <http://kgs.uky.edu/kgsmap/kytcLinks.asp>;
- United States Department of Agriculture, Soil Conservation Service (SCS) Soil Survey Publications for affected counties;
- Physiographic Regions, published by KGS, <http://kgs.uky.edu/kgsweb>; and
- KY Lakes, published by Kentucky Division of Geographic Information (GIS), <http://kymartian.ky.gov>

3. Physiographic and Stratigraphic Setting

3.1. Topography and Drainage

The proposed I-69 corridor for this study is located in Western Kentucky, situated on portions of ten USGS 7.5-minute topographic quadrangle maps. They are the Calvert City (1993), Briensburg (1969), Eddyville (1967, revised 1973), Hickory (1994), Westplains (1993), Oak Level (1969, revised 1987), Hardin (1969, revised 1986), Dublin (1969), Mayfield (1994) and Water Valley (1969, revised 1981) Quadrangles.

The study area is situated within the Mississippi Embayment and the Mississippian Plateaus Physiographic Regions of Kentucky. The eastern portion of the project alignment is situated within the Mississippian Plateaus Region. The Mississippian Plateaus contains gently to moderately rolling topography that has been partially influenced by karst weathering in some areas. The karst areas in the Mississippian Plateaus Region are characterized by the existence of sinkholes, ridgetop ponds, sinking streams, springs, and various subterranean channels. The remaining portions of the proposed project alignment are located within the Mississippi Embayment Region which consists of broad, flat flood plains along the Mississippi River to gently rolling uplands of low relief. The alluvial areas are relatively level. The limits of each Region is detailed in Figure 1.

Surface drainage within the region is directed towards numerous swales, ditches, creeks, and streams, including the Cumberland River, Tennessee River, Clarks River, Bayou du Chien River and Mississippi River, as well as karst features in the area. The Kentucky Lake and Lake Barkley reservoirs are located on the eastern side of the study area.

3.2. Stratigraphy

Corresponding USGS geologic quadrangles are available for the Calvert City (1968), Briensburg (1964), Eddyville (1963), Hickory (1965), Westplains (1967), Oak Level (1968), Hardin (1968), Dublin (1972), Mayfield (1965) and Water Valley (1963) Quadrangles.

Based on the various geologic mapping and literature reviewed, the proposed corridor is primarily underlain by alluvium, loess and continental deposits of the Tertiary and Quaternary age. The Mississippian Plateaus Region on the eastern end of the proposed corridor is primarily underlain by limestone, shale and possibly some sandstones. The bedrock consists of Mississippian age limestones, shales and isolated sandstones. The limestones are predominantly gray, medium to coarse grained, zones argillaceous, with fossiliferous and cherty zones. The shales are gray, clayey to silty, with calcareous zones. The sandstones are generally light to yellowish gray, and very fine to medium grained.

The Mississippi Embayment Region is predominantly underlain by alluvium, loess and continental deposits. Less common deposits include the Clayton and McNairy, Porters Creek Clay and the Coastal Plain deposits. The overburden soils are unconsolidated and easily eroded. Alluvial deposits of silt, sand, and gravel are also present along major streams and rivers in the area. The loess deposit consists of silt. The continental deposits consist of gravel, sand and clay. The Clayton and McNairy deposits consist of sand. The Porters Creek Clay consists of clay and sand. The Coastal Plain deposits consist of sand and clay.

The overburden soils are greater than 100 feet thick along the proposed corridor within the Mississippi Embayment Region. Bedrock is not mapped on the Dublin, Hardin, Hickory, Mayfield, Oak Level or Westplains Quadrangles.

3.3. Faulting in the Area

Based on USGS Geologic mapping, several unnamed faults are near the footprint studied on the eastern part of the corridor near the Western Kentucky Parkway. USGS Geologic mapping also indicates a series of concealed probable faults near the proposed roadway between Calvert City and Benton Kentucky. A series of hypothetical faults are noted between Benton and Mayfield Kentucky on the USGS Geologic mapping. Faults are not noted on the section of the proposed corridor between Mayfield and Fulton Kentucky. These faults are mapped within portions of the western portion of the studied corridor. The study area is near the New Madrid Fault Zone and discussed further in 3.5.

3.4. Soils and Unconsolidated Materials

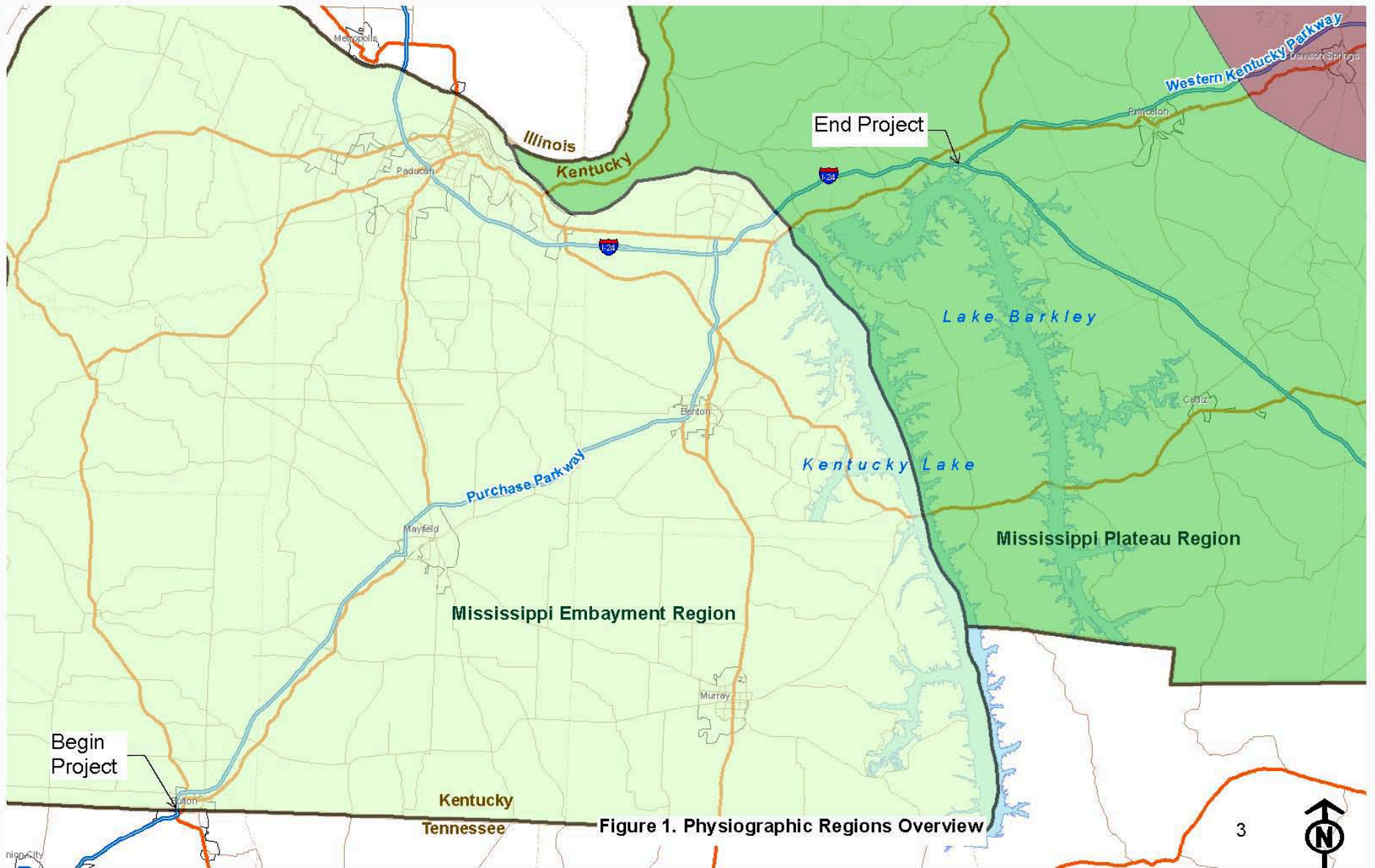
Alluvial materials are the predominate soil type along the proposed alignment within the Mississippi Embayment Region and are comprised of sands, silts, clays and gravels covering the floodplains of major streams and tributaries in the study area. Major streams within the environmental footprint include Cumberland River, Tennessee River, Clarks River, Bayou du Chien River and Mississippi River. The Kentucky Lake and Lake Barkley reservoirs are located on the eastern side of the study area.

Residual soils are the predominate soil type within the eastern portion of the study area near the Western Kentucky Parkway. Soil descriptions contained herein are based upon SCS soil surveys and on Stantec's knowledge of the study area. Soils within the Mississippian Plateaus Region along the corridor are predominantly a clayey to silty clay and range in depths from four feet to greater than twelve feet. Soils can become very thin to very deep in karst areas within a relatively short distance.

3.5. Regional Seismicity

Seismicity within the Commonwealth of Kentucky varies widely depending on location. The western portion of the state is dominated by the New Madrid and Wabash Valley source zones. In general, these zones are fairly active with many documented historical seismic events. Central and eastern portions of the state experience less frequent earthquakes because the source zones are quite distant from these areas. To assist designers in the Commonwealth of Kentucky, the KYTC began a research project in conjunction with the University of Kentucky and the Kentucky Transportation Center (KTC) in 1996. The products of this effort are documents in the publication "Source Zones, Recurrence Rates, and Time Histories for Earthquakes Affecting Kentucky", Research Report KTC-96-4, by Ron Street, et al., (1996). This document and other information available from the Kentucky Geological Survey (KGS) were reviewed in relation to the Interstate 69 Corridor.

An Earthquake Epicenters and Magnitudes Map for the Central and Eastern United States from 1568 to 1987 is presented in Figure 2. This map indicates that the I-69 Corridor area could be affected by earthquake events, particularly the New Madrid Seismic Zone (NMSZ). The NMSZ lies within the Central Mississippi Valley, extending from northeast Arkansas, southeast Missouri, western Tennessee, western Kentucky, and southern Illinois. The NMSZ is the most seismically active region in the United States east of the Rocky Mountains.



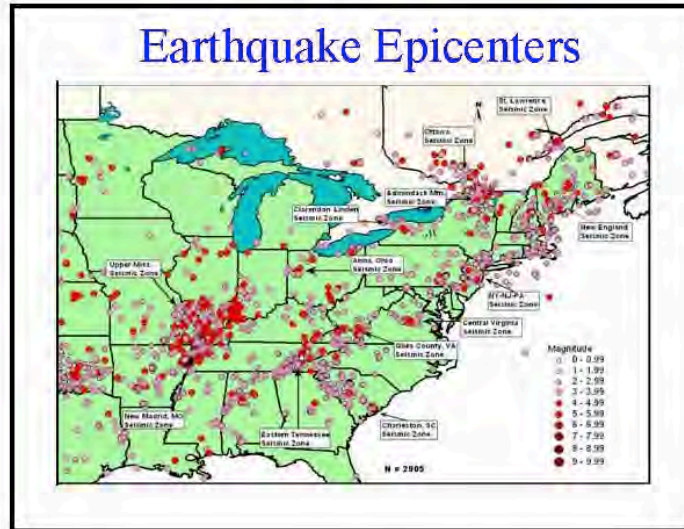


Figure 2. Earthquake Epicenters and Magnitudes in the Central and Eastern United States from 1568 - 1987

The KTC-96-4 research report indicated that a Central Kentucky earthquake event occurred on February 28, 1854 and assigned a Modified Mercalli intensity of V. The most severe effects of that earthquake was reported in Lebanon, where dishes and windows rattled. The earthquake was felt at numerous other locations in Kentucky including Bardstown and Harrodsburg.

4. Geotechnical Considerations

4.1. General

Based on discussions with the Project Team, it is not anticipated that there will be many new cuts or fills required along the existing roadways for the proposed I-69 alignments. However, it does appear that several interchanges will need to be reworked / realigned to meet the current interstate standards. The revisions to the interchanges will include lengthening ramps and changing horizontal / vertical alignments. As the interchanges are reworked, the Project Team should consider the geotechnical considerations that are included in Section 4 as they pertain to karst activity, erosion, cut slopes, embankments, widened structures and seismicity.

4.2. Karst Activity in the Area

Karst activity exists over portions of the project area near the Western Kentucky Parkway. Based on existing occurrences of known karst in the area, bedrock in the Mississippian Plateaus Region is considered to have a moderate to high potential for karst development. The potential for moderate to high karst activity is greater near the Western Kentucky Parkway and I-24.

An inventory of karst features is recommended during the next phase of study in areas where there is potential for karst activity. The inventory may be utilized to refine alignments and account for environmental related concerns such as water runoff into such features.

4.3. Erosion

The Mississippi Embayment Region consists of broad, flat flood plains along the Mississippi River to gently rolling uplands of low relief. The gently rolling terrain formed as streams gradually eroded the loess and continental deposits. The areas of erosion have exposed the less common Porters Creek Clay formation. Erosion concerns will affect the cut slope configuration and is further discussed in Section 4.4.

4.4. Cut Slope Considerations

The majority of the roadway cuts within the Mississippian Plateaus Region are likely to be shallow cuts in soils and bedrock. As previously discussed, rock types will consist of limestones, shales, and possibly sandstones. Cut slope configurations in rock are generally controlled by bedrock lithology, bedrock quality, results of Slake Durability Index (SDI) tests in shales and siltstones, and by the presence of any fractures and/or joints. In general, if joint/fracture angles are high (as measured from horizontal), steeper cut slopes can be constructed and an acceptable level of stability can be maintained. If discontinuities exhibit low angles and steep cut slopes are utilized, large block failures may occur along the open cut face.

Slope configurations for rock cuts in durable or Type I non-durable rock generally range from 1H:4V to 1H:2V pre-split slopes on approximate 30-foot intervals of vertical height. These types of cuts could be anticipated within the Mississippian Plateaus Region. Shallow cuts in bedrock may be best handled on 2H:1V slopes, covered with a soil layer and vegetated.

Slope configurations for soil cuts in alluvial deposits are generally constructed on a 2H:1V or flatter. Due to erosion concerns within the Mississippi Embayment Region, soil cuts in alluvium may be best handled on a 3H:1V or flatter and covered with vegetation.

4.5. Embankment Considerations

Embankments constructed of durable rock materials generally exhibit adequate stability at 2H:1V slope configurations. However, flatter embankment slopes may be required for tall embankments or in areas where embankments are founded on alluvial materials. Alluvial soils can be expected throughout the majority of the study area from the Tennessee state line to I-24. Since most of the improvements will be focused at interchanges, it is anticipated the embankments will be constructed from borrow and offsite sources.

Low shear strengths and high settlement potentials are generally associated with alluvial deposits. Consolidation settlements and short-term embankment stability problems are common for roadway embankments in alluvial floodplains, and controlled embankment construction rates and/or flatter embankment side slopes should be anticipated for these areas.

4.6. Structures

Based on discussions with the Project Team, it is anticipated that approximately 10 mainline structures will need to be widened to meet horizontal clearance requirements for an interstate. At this time, it is unknown as to whether the widening would require new and/or widened substructure elements. Based on Stantec's knowledge of the area, it can be anticipated that the majority of the structures within the project corridor are likely supported

on deep foundation friction elements. It can be problematic at times to install new deep foundation elements for widened structures due to access and existing battered pile elements. In addition, deep foundation elements may be difficult to install because of the presence of dense chert or gravel layers. Therefore, piles may need to be outfitted with pile points or pre-drilling may be warranted. Therefore, the Project Team should be prepared to study the structures on a case-by-case basis and anticipate special foundation designs in the next phase of the design process.

4.7. Seismic Concerns

The seismic hazard at a bridge site shall be characterized by the acceleration response spectrum for the site and the site factors for the relevant site class. A comprehensive geotechnical investigation will be required to determine the site class. The 2010 AASHTO LRFD Bridge Design Specifications provides guidelines for selecting a seismic performance category and a soil profile type for bridge sites. This information establishes the elastic seismic response coefficient and spectrum for use in further structural design and analyses. Refer to Section 3.10.2 for specifications.

Appendix E. Traffic Counts and Directional Design Hourly
Volumes (DDHV)

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # 1

I.D. # K 9 0 0 3 - 0 2 2 . 1 H C

Route Code: K (Interstate), 9 (Ky or Parkways), 0 (County Rd), 0 (FS), 3 (U.S.), S (City St), 0 (Other), F (FS)

Route Number: 9003 Suffix: - none

Milepoint: 0 2 2 . 1

Array: M (Tube), M (2 tubes), M (Loop), M (2 loops), M (mixed), H (Piezo), C (WIM Piezo)

Add Delete Combine
Must be accompanied by reason

Estimate

Special

Index

STA # 0 4 2 X 0 1 A 2 A C 1 1

County Number: 0 4 2 Station#: X 0 1

Lanes Counter is counting: A (All Lanes), N (all NB), B (Part NB & SB), E (all EB), C (Part EB & WB), S (all SB), 1 (lane 1), 2 (lane 2), W (all WB)

Lanes at Station: A (All Lanes), L (Loop), P (Piezo), T (WIM Piezo)

Counter is counting: V (Vehicles), A (Axes)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 1 1

ESTIMATE

of houses _____ x 10 = _____

of Business _____ x 25 = _____

Total

File # G 2 0 0 0 1 2 1 . 6 0 0

County name GRAVES

Route TR 9003

Latitude N 3 6 . 4 4 2 6 1

Station number X 0 1 Machine # 18286 . 028

City name _____

Road/Street name PURCHASE PARKWAY

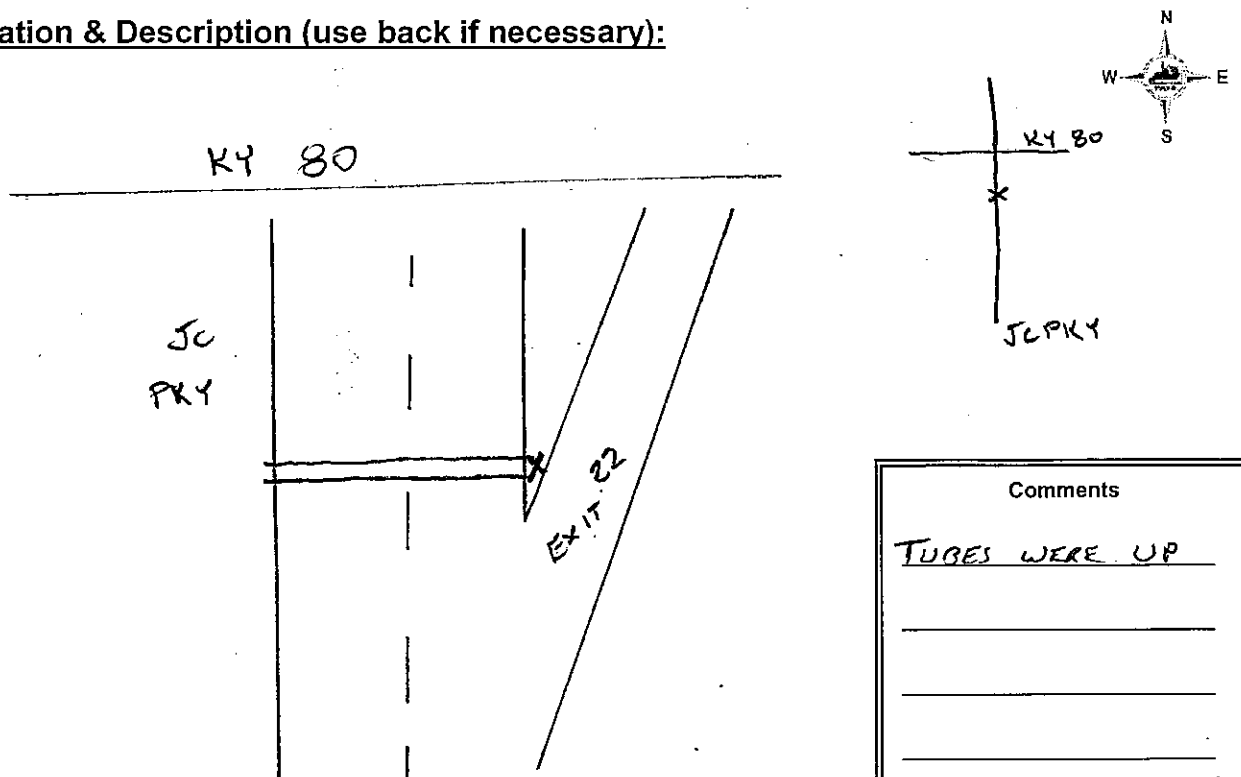
Longitude W 8 8 . 4 0 0 4 3

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1430	7	20	10
Recorder Picked Up	0800	7	29	10

Station Location & Description (use back if necessary):



Comments

TUBES WERE UP

over (more on back)

Field Technician DS DC

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003

GRAVES COUNTY

STATION X01

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	32	44	23	40	50			189
1- 2 AM	37	29	44	31	32			173
2- 3 AM	55	60	48	28	18			209
3- 4 AM	37	58	56	36	20			207
4- 5 AM	64	73	65	37	29			268
5- 6 AM	134	167	159	52	33			545
6- 7 AM	269	285	300	91	48			993
7- 8 AM	437	430	409	148	74			1498
8- 9 AM	308	309	344	199	126			1286
9-10 AM	321	337	372	308	165			1503
10-11 AM	296	317	355	235	192			1395
11-12 AM	301	329	332	275	208			1445
12- 1 PM	306	332	348	265	247			1498
1- 2 PM	272	339	314	235	222			1382
2- 3 PM	310	341	320	231	219			1421
3- 4 PM	313	372	298	242	205			1430
4- 5 PM	402	464	372	232	231			1701
5- 6 PM	300	323	309	203	191			1326
6- 7 PM	240	248	249	178	158			1073
7- 8 PM	151	156	166	138	131			742
8- 9 PM	139	162	129	117	110			657
9-10 PM	151	144	114	84	112			605
10-11 PM	122	125	82	80	96			505
11-12 PM	89	92	92	74	68			415
TOTALS:	5086	5536	5300	3559	2985			22466

AVERAGE DAILY TRAFFIC: 4358

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 120
 AM HIGH HOUR: 437
 PM HIGH HOUR: 464
 BETWEEN 7- 8 AM ON WEDNESDAY
 BETWEEN 4- 5 PM ON THURSDAY
 MILE POINT : 22.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 22.100
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 4358 IN 2010
 LOCATION INFORMATION: PURCHASE PKWY NB JUST SOUTH OF KY 80
 STATION: X01 BOTH N-S
 ROUTE: KY9003
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS							OTHERS	TOTAL VEHICLES		
					2 AXLE BUSES	3 AXLE 6 TIRE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE			6 AXLE	7 OR MORE AXLE
06-07AM	7/20/10	3	22	54	1	19	3	1	9	13	1	0	0	0	126
07-08AM	7/20/10	4	34	89	2	27	5	1	12	13	2	0	0	0	190
08-09AM	7/20/10	3	28	75	2	25	5	0	7	13	1	0	0	0	161
09-10AM	7/20/10	4	28	84	3	28	7	0	11	21	1	0	0	0	187
10-11AM	7/20/10	4	31	75	3	27	7	0	10	17	1	0	0	0	175
11-12AM	7/20/10	4	31	77	4	25	6	0	11	21	1	0	0	1	181
12-01PM	7/20/10	7	35	80	3	28	9	0	7	20	1	0	0	0	188
01-02PM	7/20/10	5	31	73	3	22	7	0	11	18	1	0	0	0	173
02-03PM	7/20/10	6	31	77	4	22	7	0	8	20	1	0	0	0	178
03-04PM	7/20/10	5	35	80	3	29	6	0	8	24	0	1	0	0	191
04-05PM	7/20/10	6	45	104	3	35	6	0	11	22	0	0	0	0	233
05-06PM	7/20/10	6	34	82	2	24	5	1	9	18	1	0	0	0	233
06-07PM	7/20/10	5	28	61	2	19	4	0	7	15	0	0	0	0	182
07-08PM	7/20/10	3	19	38	2	12	4	0	4	19	0	0	0	0	141
08-09PM	7/20/10	4	16	31	1	13	4	0	3	13	1	0	0	0	101
09-10PM	7/20/10	4	15	32	2	11	3	0	2	12	0	0	0	0	86
10-11PM	7/20/10	2	12	25	1	9	3	0	2	11	0	0	0	0	80
11-12PM	7/20/10	3	11	21	1	5	2	0	2	7	1	0	0	0	66
12-01AM	7/20/10	1	5	7	0	2	1	0	2	5	0	0	0	0	53
01-02AM	7/20/10	1	4	5	0	2	1	0	2	5	0	0	0	0	23
02-03AM	7/20/10	1	5	9	0	3	1	0	2	5	0	0	0	0	21
03-04AM	7/20/10	1	4	10	0	2	2	0	2	5	0	0	0	0	26
04-05AM	7/20/10	1	4	11	0	5	2	0	2	8	1	0	0	0	27
05-06AM	7/20/10	1	7	11	0	5	2	0	2	8	0	0	0	0	36
TOTAL VEHICLES		85	522	1226	43	409	100	5	148	336	18	1	0	0	2897
PERCENT OF TOTAL		2.9	18.0	42.3	1.5	14.1	3.5	0.2	5.1	11.6	0.6	0.0	0.0	0.1	0.0

% HEAVY TRUCKS = 1064/ 2897 = 36.7 %
 AXLES / TRUCKS = 3637/ 1064 = 3.418
 % TRAILER TRUCKS = 507/ 2897 = 17.5 %
 % TRAILERS BPK HR = 34/ 233 = 14.6 %
 PEAK HOUR BETWEEN 04-05PM = 233 VEHICLES
 TOTAL HOURS = 24
 AXLE CORRECTION FACTOR = 0.79
 % SINGLE UNIT TRUCKS = 577/ 2897 = 19.2 %
 % TRUCKS AT PEAK HOUR = 78/ 233 = 33.5 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning

Traffic Count Record

District # 1

I.D. # U 0 0 4 5 - 0 1 5 . 4 H C

Route Code: U=U.S., I=Interstate, K=Ky or Parkways, R=County Rd., F=FS
 Suffix: S, M, A, D
 Milepoint: M M M M
 Array: T=Tube, R=Radar, H=2 tubes, P=Piezo, L=Loop, W=WIM Piezo, B=2 loops, M=mixed

Add Delete Combine
 Must be accompanied by reason

Estimate
 Special
 Index

STA # 0 4 2 X 0 2 A 2 A C I I

County Number: C C C
 Station#: S S S
 Lanes at Station: N L P T M A
 Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 Counter is counting: V=Vehicles, A=Axles
 Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM
 Machine # of All Machines at Station

ESTIMATE

of houses ___ x 10 = ___
 # of Business ___ x 25 = ___

Total

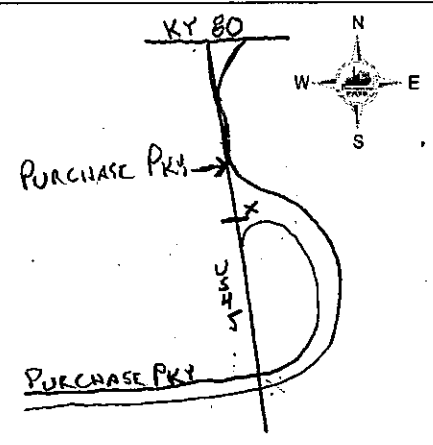
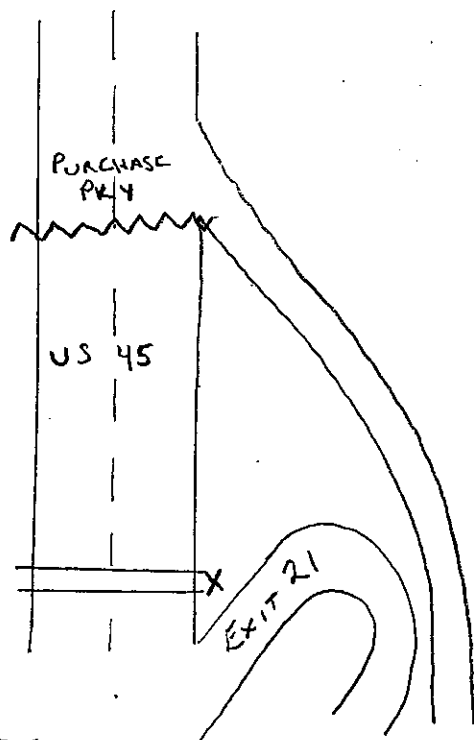
File # G 2 0 0 0 1 6 1 . 2 0 0
 County name GRAVES
 Route US 45
 Latitude N 3 6 . 4 3 7 6 4

Station number X 0 2 Machine # 18286-004
 City name _____
 Road/Street name _____
 Longitude W 8 8 . 4 0 0 3 8

Type Record (check one) Volume Class Length
 Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	14:55	7	20	10
Recorder Picked Up	0900	7	29	10

Station Location & Description (use back if necessary):



Comments

TUBES WERE UP

over (more on back)

Field Technician DS DC

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: US0045

GRAVES COUNTY

STATION X02

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12-1 AM	7	10	11	11	21	14	13	87
1-2 AM	10	8	7	7	7	11	6	56
2-3 AM	34	35	22	13	10	12	34	160
3-4 AM	21	25	29	9	5	20	22	131
4-5 AM	31	34	27	12	15	37	37	193
5-6 AM	87	88	91	26	18	82	93	485
6-7 AM	185	184	185	58	23	191	196	1022
7-8 AM	271	283	252	88	31	290	262	1477
8-9 AM	184	190	181	111	79	213	194	1152
9-10 AM	185	157	183	135	109	173	146	1089
10-11 AM	152	163	194	140	101	182	155	1087
11-12 AM	156	160	178	142	81	167	157	1041
12-1 PM	142	151	181	141	128	186	171	1097
1-2 PM	126	152	181	106	108	174	135	982
2-3 PM	141	165	160	110	99	172	160	1007
3-4 PM	141	190	183	130	96	168	176	1106
4-5 PM	272	284	208	114	118	276	279	1551
5-6 PM	167	211	175	104	105	209	197	1168
6-7 PM	157	142	140	111	93	117	140	900
7-8 PM	73	101	96	81	73	85	87	596
8-9 PM	80	80	67	69	55	76	86	513
9-10 PM	71	67	69	54	54	49	51	415
10-11 PM	47	45	44	37	47	50	52	322
11-12 PM	28	26	35	36	22	30	31	208
TOTALS:	2790	2951	2896	1846	1498	2984	2880	17845

AVERAGE DAILY TRAFFIC: 2472

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 290 BETWEEN 7-8 AM ON MONDAY
 PM HIGH HOUR: 284 BETWEEN 4-5 PM ON THURSDAY
 MILE POINT : 15.4
 COUNTED BY : GEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 15.400
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 2472 IN 2010
 LOCATION INFORMATION: US 45 NORTHBOUND AT PURCHASE PKWY INTERCHANGE
 STATION: X02 BOTH N-S
 ROUTE: US 45
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 16

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					2 AXLE 4 TIRE	2 AXLE 6 TIRE	3 AXLE MORE AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/20/10	1	71	48	0	13	2	1	9	6	1	0	0	1	0	
07-08AM	7/20/10	1	102	70	1	20	4	1	15	7	1	0	0	1	0	
08-09AM	7/20/10	1	60	62	1	19	4	1	11	7	2	0	0	1	0	
09-10AM	7/20/10	1	51	59	2	21	4	0	9	7	1	0	0	0	0	
10-11AM	7/20/10	1	53	57	2	19	4	1	10	6	1	0	0	1	0	
11-12AM	7/20/10	1	51	53	2	17	4	1	13	7	1	0	0	1	0	
12-01PM	7/20/10	2	57	55	2	19	4	1	11	6	1	0	0	1	0	
01-02PM	7/20/10	1	47	50	2	17	5	1	10	6	1	0	0	1	0	
02-03PM	7/20/10	1	54	47	2	18	5	1	10	5	1	0	0	1	0	
03-04PM	7/20/10	1	64	54	1	18	3	1	8	7	1	0	0	1	0	
04-05PM	7/20/10	2	105	81	1	20	4	2	12	4	1	0	0	0	0	
05-06PM	7/20/10	1	84	58	0	11	3	0	7	5	1	0	0	0	0	
06-07PM	7/20/10	1	61	46	0	9	4	1	6	2	0	0	0	0	0	
07-08PM	7/20/10	1	39	30	0	7	3	0	6	2	0	0	0	0	0	
08-09PM	7/20/10	1	28	27	0	9	2	0	3	3	0	0	0	0	0	
09-10PM	7/20/10	1	27	21	0	6	2	0	2	1	0	0	0	0	0	
10-11PM	7/20/10	0	20	17	0	5	0	0	2	2	0	0	0	0	0	
11-12PM	7/20/10	0	14	11	0	3	1	0	1	1	0	0	0	0	0	
12-01AM	7/20/10	0	6	4	0	2	0	0	0	1	0	0	0	0	0	
01-02AM	7/20/10	0	4	2	0	1	1	0	0	1	0	0	0	0	0	
02-03AM	7/20/10	0	11	9	0	2	1	0	1	1	0	0	0	0	0	
03-04AM	7/20/10	0	7	7	0	1	2	0	1	2	0	0	0	0	0	
04-05AM	7/20/10	0	10	12	0	3	2	0	1	2	0	0	0	0	0	
05-06AM	7/20/10	1	31	25	0	6	2	0	4	6	0	0	0	0	0	
TOTAL VEHICLES		19	1057	905	16	264	67	11	147	97	13	0	0	9	0*	
PERCENT OF TOTAL		0.7	40.6	34.7	0.6	10.1	2.6	0.4	5.6	3.7	0.5	0.0	0.0	0.3	0.0	

% HEAVY TRUCKS = 624/ 2605 = 24.0 %
 AXLES / TRUCK = 2019/ 624 = 3.236
 % TRAILER TRUCKS = 266/ 2605 = 10.2 %
 % TRAILERS @PK HR = 18/ 233 = 7.7 %
 PEAK HOUR BETWEEN 04-05PM = 233 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.87
 % SINGLE UNIT TRUCKS = 358/ 2605 = 13.7 %
 % SINGLE UNIT @ PK HR = 27/ 233 = 11.6 %
 % TRUCKS AT PEAK HOUR = 45/ 233 = 19.3 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # _____

I.D. # K 9 0 0 3 - 0 2 2 . 1 H C

Route Code: R (Interstate), N (Ky or Parkways), N (U.S.), N (City St.), N (County Rd), S (Other), S (FS)

Milepoint: M M M M

Array: T (Tube), H (2 tubes), L (Loop), B (2 loops), M (mixed), R (Radar), P (Piezo), W (WIM Piezo)

Add Delete Combine
Must be accompanied by reason

Estimate

Special

Index

STA # 0 4 2 X 0 3 A 2 A C L L

County Number: C C C

Station#: S S S N L P T M A

Lanes Counter is counting:
 A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T

Counter is counting: V (Vehicles), A (Axes)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: M A

ESTIMATE

of houses _____ x 10 = _____

of Business _____ x 25 = _____

Total

File # 62000141.200

County name Graves

Route TK 9003

Latitude N 36.44336

Station number 203 Machine # 13236.063

City name _____

Road/Street name _____

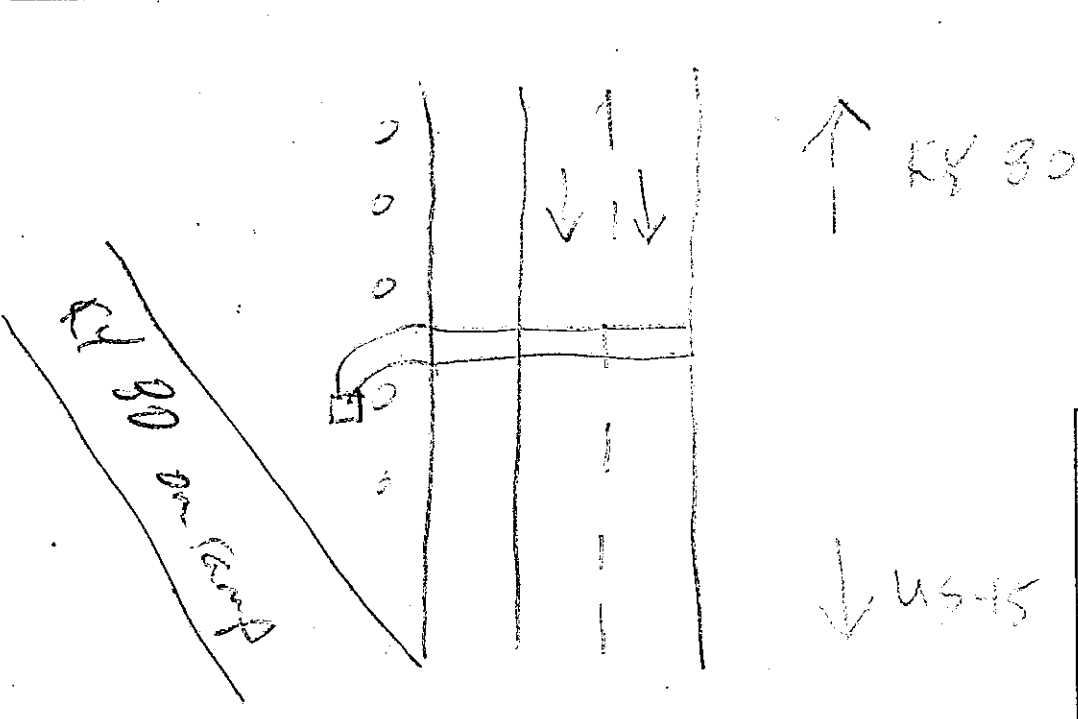
Longitude W 88.40060

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1430	7	28	10
Recorder Picked Up	0900	7	29	10

Station Location & Description (use back if necessary):



Comments

over (more on back)

Field Technician _____

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003

GRAVES COUNTY

STATION X03

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12-1 AM	48	68	39	64	69	39	43	370
1-2 AM	30	44	32	58	52	38	42	296
2-3 AM	47	40	42	44	29	35	34	271
3-4 AM	43	54	68	31	22	55	49	322
4-5 AM	68	52	55	45	28	60	57	365
5-6 AM	144	148	106	65	27	159	145	794
6-7 AM	200	198	181	95	33	193	191	1091
7-8 AM	234	269	247	131	63	261	215	1420
8-9 AM	249	264	245	130	94	217	249	1448
9-10 AM	236	227	242	172	134	264	249	1524
10-11 AM	286	230	285	191	160	267	218	1637
11-12 AM	271	286	274	226	202	295	262	1816
1-2 PM	286	310	289	204	213	251	274	1827
2-3 PM	278	293	370	234	251	289	273	1988
3-4 PM	320	312	330	230	219	321	292	2024
4-5 PM	376	394	414	272	254	355	374	2439
5-6 PM	387	389	360	282	273	357	413	2461
6-7 PM	369	365	359	259	251	361	359	2323
7-8 PM	246	257	285	243	238	243	239	1751
8-9 PM	190	213	211	245	229	230	213	1531
9-10 PM	185	200	206	178	153	171	176	1269
10-11 PM	152	180	186	215	136	172	197	1258
11-12 PM	122	117	149	155	103	132	127	905
TOTALS:	4854	4999	5099	3863	3302	4857	4772	31746

AVERAGE DAILY TRAFFIC: 4398

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 295
 PM HIGH HOUR: 414

BETWEEN 11-12 AM ON MONDAY
 BETWEEN 3-4 PM ON FRIDAY
 MILE POINT : 22.1
 COUNTED BY : GEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 22.100
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 4398 IN 2010
 LOCATION INFORMATION: PURCHASE PKWY SB JUST SOUTH OF KY 80
 STATION: X03 BOTH N-S
 ROUTE: KY9003
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSES 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE						
06-07AM	7/20/10	1	73	39	1	7	2	0	14	26	1	2	0	1	0	0	0	0	167
07-08AM	7/20/10	2	98	42	2	10	2	4	13	33	2	1	0	0	0	0	0	209	
08-09AM	7/20/10	1	92	46	1	8	4	6	16	34	2	1	0	0	0	0	0	211	
09-10AM	7/20/10	2	99	47	2	7	3	1	18	37	2	1	0	0	0	0	0	219	
10-11AM	7/20/10	3	100	48	2	11	3	5	23	40	3	1	0	0	0	0	0	239	
11-12AM	7/20/10	3	115	53	2	10	5	5	22	42	2	1	0	0	0	0	0	263	
12-01PM	7/20/10	2	125	53	2	8	4	3	23	38	1	2	0	0	0	0	0	261	
01-02PM	7/20/10	3	142	59	1	9	4	4	22	39	2	1	0	0	0	0	0	287	
02-03PM	7/20/10	3	153	60	1	8	3	4	25	34	2	1	0	0	0	0	0	294	
03-04PM	7/20/10	3	188	72	2	12	3	4	27	38	2	1	0	0	0	0	0	360	
04-05PM	7/20/10	3	209	79	2	10	2	4	25	34	2	1	0	0	0	0	0	359	
05-06PM	7/20/10	4	203	67	1	11	1	0	22	28	2	0	0	0	0	0	0	339	
06-07PM	7/20/10	3	145	45	1	6	2	0	18	30	2	0	0	0	0	0	0	252	
07-08PM	7/20/10	1	118	38	1	5	1	0	16	27	1	0	0	0	0	0	0	208	
08-09PM	7/20/10	2	102	33	0	4	1	0	10	24	1	1	0	0	0	0	0	178	
09-10PM	7/20/10	2	100	31	0	3	1	0	9	25	0	2	0	0	0	0	0	173	
10-11PM	7/20/10	1	70	20	0	2	1	0	7	20	1	1	0	0	0	0	0	124	
11-12PM	7/20/10	1	50	14	0	1	0	0	3	16	0	0	0	0	0	0	0	85	
12-01AM	7/20/10	0	26	10	0	2	1	0	4	9	0	0	0	0	0	0	0	52	
01-02AM	7/20/10	0	19	5	0	1	1	0	3	11	0	0	0	0	0	0	0	40	
02-03AM	7/20/10	0	17	5	0	1	1	0	3	11	0	0	0	0	0	0	0	38	
03-04AM	7/20/10	0	18	7	0	1	1	0	4	13	0	0	0	0	0	0	0	47	
04-05AM	7/20/10	0	18	9	0	1	2	0	5	17	0	0	0	0	0	0	0	53	
05-06AM	7/20/10	2	50	33	1	4	1	0	10	18	1	2	0	0	0	0	0	122	
TOTAL VEHICLES		42	2330	917	22	142	51	36	342	644	29	20	1	4	0	0	0	4580	
PERCENT OF TOTAL		0.9	50.9	20.0	0.5	3.1	1.1	0.8	7.5	14.1	0.6	0.4	0.0	0.1	0.0	0.0	0.0		

% HEAVY TRUCKS = 1291/ 4580 = 28.2%
 AXLES / TRUCKS = 5521/ 1291 = 4.277
 % TRAILER TRUCKS = 1040/ 4580 = 22.7%
 % TRAILERS APK HR = 69/ 360 = 19.2%
 PEAK HOUR BETWEEN 03-04PM = 360 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.76
 % SINGLE UNIT TRUCKS = 251/ 4580 = 5.5%
 % SINGLE UNIT @ PK HR = 21/ 360 = 5.8%
 % TRUCKS AT PEAK HOUR = 90/ 360 = 25.0%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # _____

I.D. # U 0 0 4 5 - 0 1 5 . 3 7 C

R N N N N S M M M M A D

Route Code: U=U.S., K=Ky or Parkways, R=County Rd, F=FS
 U=U.S., S=City St., O=Other

Milepoint: _____
 Array - T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radars, P=Piezo, W=WIM Piezo

Add Delete Combine
 Must be accompanied by reason

Estimate
 Special
 Index

STA # 0 4 2 X 0 4 A 2 A C 1 1

C C C S S S N L P T M A

County Number: _____
 Station#: _____
 Lanes at Station: _____
 Machine # of All Machines at Station: _____

Lanes Counter is counting:
 A=All Lanes, B=Part NB & SB, C=Part EB & WB
 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting:
 V=Vehicles, A=Axles

Type Record:
 V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

ESTIMATE

of houses _____ x 10 = _____
 # of Business _____ x 25 = _____

Total

File # G 2000 151 L00

County name Warren

Route US 45

Latitude N 36.43677

Station number X04 Machine # 18236003

City name _____

Road/Street name _____

Longitude W 88.40053

	Time	Month	Day	Year
Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	1505	7	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	0900	7	29 10

Station Location & Description (use back if necessary):

Comments

TUBES WERE UP

over (more on back)

Field Technician [Signature] countcard04-01.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: US0045

GRAVES COUNTY

STATION X04

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	21	22	23	24	25	26	27	16
1- 2 AM	16	15	19	23	27	27	27	15
2- 3 AM	15	19	23	27	27	27	27	19
3- 4 AM	23	23	27	27	27	27	27	23
4- 5 AM	27	27	27	27	27	27	27	27
5- 6 AM	106	132	132	142	130	125	132	106
6- 7 AM	132	142	130	125	132	132	142	132
7- 8 AM	142	130	125	132	132	142	130	142
8- 9 AM	130	125	132	132	142	130	125	130
9-10 AM	125	132	132	142	130	125	132	125
10-11 AM	148	133	163	173	173	173	173	148
11-12 AM	133	163	173	173	173	173	173	133
12- 1 PM	163	173	173	173	173	173	173	163
1- 2 PM	173	173	173	173	173	173	173	173
2- 3 PM	174	217	217	244	244	244	244	174
3- 4 PM	217	244	244	244	244	244	244	217
4- 5 PM	244	228	228	228	228	228	228	244
5- 6 PM	228	228	228	228	228	228	228	228
6- 7 PM	132	132	132	132	132	132	132	132
7- 8 PM	88	108	108	108	108	108	108	88
8- 9 PM	108	88	88	88	88	88	88	108
9-10 PM	88	88	88	88	88	88	88	88
10-11 PM	88	88	88	88	88	88	88	88
11-12 PM	39	39	39	39	39	39	39	39
TOTALS:	2728	2728	2728	2728	2728	2728	2728	2728

AVERAGE DAILY TRAFFIC: 2646

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 24
 AM HIGH HOUR: 148 BETWEEN 10-11 AM ON WEDNESDAY
 PM HIGH HOUR: 244 BETWEEN 4- 5 PM ON WEDNESDAY
 MILE POINT : 15.3
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 15.300
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 2646 IN 2010
 LOCATION INFORMATION: US 45 SOUTHBOUND AT PURCHASE PKWY INTERCHANGE
 STATION: X04, BOTH N-S
 ROUTE: US 45
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 16

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					2 AXLE BUSES	2 AXLE TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/20/10	0	1	12	0	4	0	0	1	0	0	0	0	0	0	29
07-08AM	7/20/10	0	18	9	0	2	0	0	2	0	0	0	0	0	0	32
08-09AM	7/20/10	1	16	8	0	2	0	0	2	0	0	0	0	0	0	31
09-10AM	7/20/10	0	17	9	0	1	0	0	1	0	0	0	0	0	0	30
10-11AM	7/20/10	0	20	8	0	2	0	0	3	0	0	0	0	0	0	36
11-12AM	7/20/10	0	22	8	0	1	0	0	3	0	0	0	0	0	0	36
12-01PM	7/20/10	0	23	12	0	1	0	0	3	0	0	0	0	0	0	43
01-02PM	7/20/10	0	19	9	0	3	0	0	4	0	0	0	0	0	0	40
02-03PM	7/20/10	0	8	10	0	2	0	0	1	0	0	0	0	0	0	26
03-04PM	7/20/10	0	10	10	0	4	0	0	1	0	0	0	0	0	0	26
04-05PM	7/20/10	0	27	16	0	5	0	0	2	0	0	0	0	0	0	54
05-06PM	7/20/10	2	30	14	0	3	0	0	1	0	0	0	0	0	0	53
06-07PM	7/20/10	1	21	6	0	0	0	0	2	0	0	0	0	0	0	30
07-08PM	7/20/10	1	15	3	0	0	0	0	1	0	0	0	0	0	0	20
08-09PM	7/20/10	0	20	2	0	0	0	0	1	0	0	0	0	0	0	23
09-10PM	7/20/10	0	15	3	0	0	0	0	1	0	0	0	0	0	0	19
10-11PM	7/20/10	0	10	2	0	0	0	0	1	0	0	0	0	0	0	13
11-12PM	7/20/10	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
12-01AM	7/20/10	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
01-02AM	7/20/10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
02-03AM	7/20/10	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
03-04AM	7/20/10	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
04-05AM	7/20/10	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
05-06AM	7/20/10	0	4	1	0	0	0	0	0	0	0	0	0	0	0	6
TOTAL VEHICLES		7	334	155	1	34	8	2	19	31	2	0	0	1	0*	594
PERCENT OF TOTAL		1.2	56.2	26.1	0.2	5.7	1.3	0.3	3.2	5.2	0.3	0.0	0.0	0.2	0.0	

% HEAVY TRUCKS = 98/ 594 = 16.5 %
 AXLES / TRUCK = 352/ 98 = 3.592
 % TRAILER TRUCKS = 53/ 594 = 8.9 %
 % TRAILERS @PK HR = 4/ 54 = 7.4 %
 PEAK HOUR BETWEEN 04-05PM = 54 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.88
 % SINGLE UNIT TRUCKS = 45/ 594 = 7.6 %
 % SINGLE UNIT @ PK HR = 5/ 54 = 9.3 %
 % TRUCKS AT PEAK HOUR = 9/ 54 = 16.7 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # 1

I.D. # K 9 0 0 3 - 0 2 1 . 4 T C

Route Code: R (County Rd) U.S. S (City St) Milepoint: M M M M District making count: D

Route Number: 9003 Suffix: - none Array: T (Tube) H=2 tubes L=Loop B=2 loops M=mixed
R=Radars P=Piezo W=WIM Piezo

Add Delete Combine
Must be accompanied by reason

Estimate
 Special
 Index

STA # 0 4 2 X 0 5 A L A V I I

County Number: 042 Station#: X05 Lanes at Station: LANE 1 Type Record: V (Volume) Machine # of All Machines at Station: 18286

Lanes Counter is counting:
A=All Lanes N=all NB
B=Part NB & SB E=all EB
C=Part EB & WB S=all SB
1=lane 1 W=all WB
2=lane 2

Counter is counting:
V=Vehicles
A=Axes

ESTIMATE

of houses x 10 =
of Business x 25 =

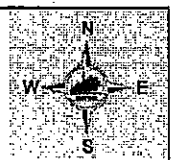
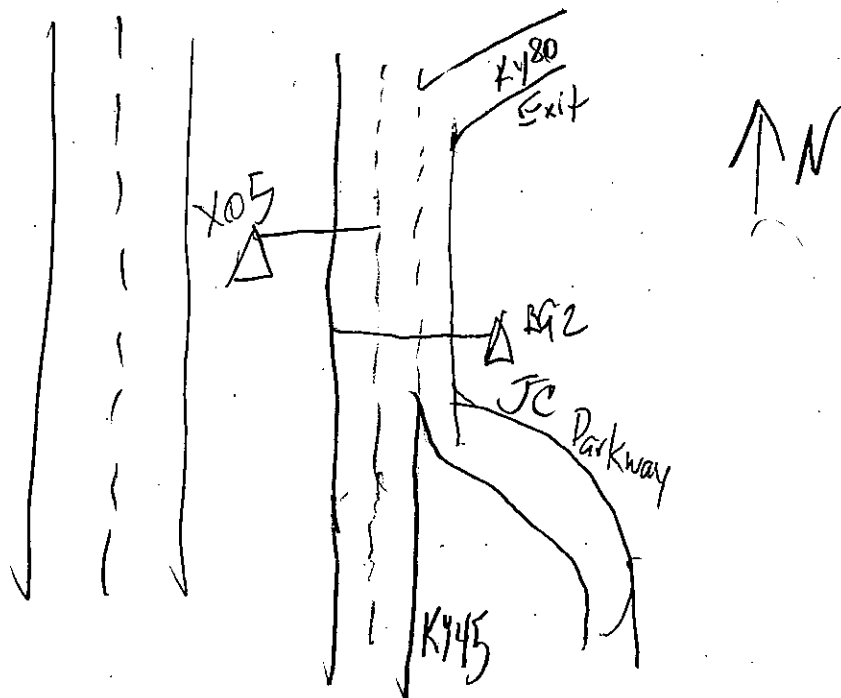
Total

File # G 2000181. L00
County name Groves
Route JC 9003
Latitude N 36.73611

Station number X05 Machine # 18286-010
City name
Road/Street name
Longitude W 88.66752

	Time	Month	Day	Year	
Type Record (check one) <input checked="" type="checkbox"/> Volume <input type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	15:28	07	20	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	9:25	07	29	2010

Station Location & Description (use back if necessary):



Comments

over (more on back)

Field Technician GM/JH

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003

GRAVES COUNTY

STATION X05

WEEK OF JULY 21 TO JULY 27 2010

DATE:	21	22	23	24	25	26	27	TOTALS
DAY:	WED	THU	FRI	SAT	SUN	MON	TUE	
12-1 AM	2	0	1	1	5	7	2	18
1-2 AM	2	0	8	0	0	2	2	12
2-3 AM	3	7	4	7	0	3	7	31
3-4 AM	3	7	4	7	0	3	7	23
4-5 AM	2	6	4	6	0	3	2	31
5-6 AM	4	5	8	2	1	2	9	31
6-7 AM	17	40	34	9	5	21	32	138
7-8 AM	68	68	71	10	9	79	75	380
8-9 AM	124	116	107	23	4	138	102	614
9-10 AM	59	55	87	33	19	73	57	333
10-11 AM	47	64	63	45	24	52	46	341
11-12 AM	66	65	64	51	26	76	41	389
12-1 PM	62	47	56	43	23	53	59	343
1-2 PM	61	71	63	45	28	62	54	384
2-3 PM	37	56	64	38	49	68	51	363
3-4 PM	68	61	61	40	36	50	60	376
4-5 PM	63	59	59	47	34	38	76	376
5-6 PM	96	128	72	35	23	102	94	550
6-7 PM	68	63	60	37	25	76	56	385
7-8 PM	49	42	43	33	15	24	27	233
8-9 PM	16	14	29	22	15	11	20	127
9-10 PM	18	26	13	15	12	11	19	132
10-11 PM	18	23	9	12	12	15	12	101
11-12 PM	10	14	9	11	9	18	15	86
TOTALS:	968	1035	996	577	381	1006	922	5885

AVERAGE DAILY TRAFFIC: 671

MONTHLY FACTOR: 93
 AXLE FACTOR: 86
 TOTAL HOURS: 168
 AM HIGH HOUR: 138 BETWEEN 7-8 AM ON MONDAY
 PM HIGH HOUR: 128 BETWEEN 4-5 PM ON THURSDAY

MILE POINT : 21.4
 COUNTED BY : CEN OFF
 DATA SOURCE : VOLUME
 ARRAY : TUBE
 LANES COUNTED: ALL LANES

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 4 7 . 0 H C

Route Code: R (Interstate), N (Ky or Parkways), N (County Rd), N (FS), S (U.S.), S (City St), O (Other), F (FS)

Route Number: 9003 Suffix: none

Milepoint: 0 4 7 . 0

Array: T (Tube), H (2 tubes), L (Loop), B (2 loops), M (mixed), R (Radar), P (Piezo), W (WIM Piezo), O (Other)

Ramp # 311

EXIT 47
US 68

STA # 0 7 9 3 1 1 A 1 A C 1 1

County Number: C C C Station#: S S S

Lanes Counter is counting: A (All Lanes), B (Part NB & SB), C (Part EB & WB), 1 (lane 1), 2 (lane 2)

Lanes at Station: N (all NB), L (all EB), P (all SB), T (all WB)

Counter is counting: V (Vehicles), A (Axles)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 14161-0029

Ramp Signage

68 641

DRAFFENVILLE

AURORA

File # G2000011.L00

Station number 311 Machine # 14161-0029

of Lanes 1 Lane Width 15

Traffic light Stop sign Merge

County Marshall

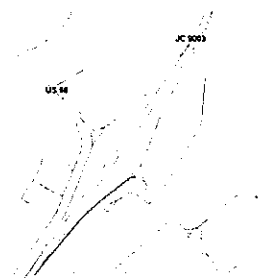
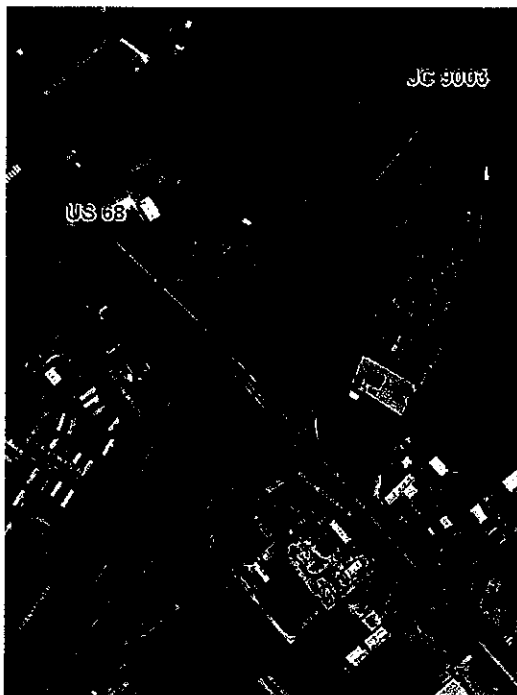
Route 079-JC-9003 -311 079350

Latitude N 36.555555

Longitude W 88.20879

Type Record (check one)	<input type="checkbox"/> Volume	<input checked="" type="checkbox"/> Class	<input type="checkbox"/> Length	Recorder Set Out	0805	7	20	10	
Type Sensor (check one)	<input checked="" type="checkbox"/> Tube	<input type="checkbox"/> Loop	<input type="checkbox"/> Radar	<input type="checkbox"/> Other	Recorder Picked Up	1300	7	28	10

Station Location & Description (use back if necessary):



* TUBES WERE UP

Left Shoulder N

Shoulder width 1

Right Shoulder N

Shoulder width 1

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC

KENTUCKY TRANSPORTATION CABINET--DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

MARSHALL COUNTY

STATION 311

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	19	15	19	24	19			96
1- 2 AM	4	10	10	13	12			49
2- 3 AM	5	9	7	6	8			35
3- 4 AM	9	7	10	9	6			41
4- 5 AM	23	22	12	16	8			81
5- 6 AM	70	62	55	29	14			230
6- 7 AM	111	98	107	55	18			389
7- 8 AM	173	171	161	62	30			597
8- 9 AM	121	141	131	127	35			575
9-10 AM	132	144	131	151	101			659
10-11 AM	142	158	167	162	117			746
11-12 AM	157	164	190	203	106			820
12- 1 PM	157	154	180	172	157			820
1- 2 PM	159	164	179	165	142			809
2- 3 PM	160	160	187	144	121			772
3- 4 PM	199	213	187	141	125			865
4- 5 PM	219	255	238	146	121			979
5- 6 PM	217	220	260	143	138			978
6- 7 PM	161	181	202	142	125			811
7- 8 PM	101	136	129	114	100			580
8- 9 PM	87	89	86	76	79			417
9-10 PM	56	63	80	78	50			327
10-11 PM	30	37	47	49	37			200
11-12 PM	20	31	33	27	14			125
TOTALS:	2532	2704	2808	2254	1703			12001

AVERAGE DAILY TRAFFIC: 2328

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 120
 AM HIGH HOUR: 203 BETWEEN 11-12 AM ON SATURDAY
 PM HIGH HOUR: 260 BETWEEN 5- 6 PM ON FRIDAY
 MILE POINT : 47.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 47.000
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 2328 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY NB TO US 68
 STATION: 311 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/21/10	1	59	38	0	4	1	0	2	1	0	0	0	0	0	106
07-08AM	7/21/10	2	110	45	2	8	1	0	3	2	0	0	0	0	0	173
08-09AM	7/21/10	0	83	36	0	6	1	0	5	1	0	0	0	0	0	132
09-10AM	7/21/10	0	94	34	0	6	1	0	2	2	0	0	0	0	0	139
10-11AM	7/21/10	0	97	41	0	4	2	0	3	0	1	0	0	0	0	152
11-12AM	7/21/10	2	111	37	1	6	2	0	3	2	0	0	0	0	0	164
12-01PM	7/21/10	1	100	43	1	6	2	1	0	0	0	0	0	0	0	158
01-02PM	7/21/10	1	114	34	1	5	2	0	3	0	0	0	0	0	0	163
02-03PM	7/21/10	2	101	48	1	5	3	0	1	0	0	0	0	0	0	162
03-04PM	7/21/10	4	139	52	1	8	3	0	3	0	0	0	0	0	0	208
04-05PM	7/21/10	2	165	58	1	6	0	0	2	1	0	0	0	0	0	239
05-06PM	7/21/10	2	161	44	1	7	1	0	3	2	0	0	0	0	0	221
06-07PM	7/21/10	3	116	45	0	6	0	0	1	1	0	0	0	0	0	172
07-08PM	7/21/10	1	80	32	0	4	0	0	1	1	0	0	0	0	0	120
08-09PM	7/21/10	1	66	17	0	4	0	0	0	0	0	0	0	0	0	88
09-10PM	7/21/10	0	47	11	0	2	0	0	0	0	0	0	0	0	0	61
10-11PM	7/21/10	1	25	7	0	1	0	0	1	0	0	0	0	0	0	35
11-12PM	7/21/10	1	18	5	0	1	0	0	2	1	0	0	0	0	0	28
12-01AM	7/21/10	0	11	6	0	0	0	0	0	0	0	0	0	0	0	17
01-02AM	7/21/10	0	4	3	0	0	0	0	0	0	0	0	0	0	0	8
02-03AM	7/21/10	0	6	1	0	0	0	0	0	1	0	0	0	0	0	8
03-04AM	7/21/10	0	5	2	0	0	0	0	0	1	0	0	0	0	0	9
04-05AM	7/21/10	0	18	5	0	0	0	0	1	0	0	0	0	0	0	24
05-06AM	7/21/10	0	43	17	0	4	1	0	3	0	0	0	0	0	0	68
TOTAL VEHICLES		24	1773	661	11	93	21	1	45	24	0	2	0	0	0*	2655
PERCENT OF TOTAL		0.9	66.8	24.9	0.4	3.5	0.8	0.0	1.7	0.9	0.0	0.1	0.0	0.0	0.0	

% HEAVY TRUCKS = 197/ 2655 = 7.4 %
 AXLES / TRUCKS = 585/ 197 = 2.970
 % TRAILER TRUCKS = 71/ 2655 = 2.7 %
 % TRAILERS APK HR = 5/ 239 = 2.1 %
 PEAK HOUR BETWEEN 04-05PM = 239 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.97
 % SINGLE UNIT TRUCKS = 126/ 2655 = 4.7 %
 % SINGLE UNIT @ PK HR = 9/ 239 = 3.8 %
 % TRUCKS AT PEAK HOUR = 14/ 239 = 5.9 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning

Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 4 7 0 H C

Route Code: R (Interstate), N (U.S.), N (Ky or Parkways), N (County Rd), N (FS), S (City St), O (Other)

Milepoint: 0 4 7 0

Array: M (Tube), M (2 tubes), M (Loop), M (2 loops), M (mixed), H (Radar), A (Piezo), C (WIM Piezo), D (Other)

Ramp # 321

EXIT 47
US 68

STA # 0 7 9 3 2 1 A 1 A C 1 1

County Number: C C C

Station #: S S S N L P T M A

Lanes Counter is counting: A (All Lanes), B (Part NB & SB), C (Part EB & WB), 1 (lane 1), 2 (lane 2)

Lanes at Station: N (all NB), L (all EB), P (all SB), T (all WB)

Counter is counting: V (Vehicles), A (Axles)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 1 1

Ramp Signage

File # 6200021 L00

of Lanes 1 Lane Width 16

County Marshall

Latitude N 36.55810

Station number 321 Machine # 12897 0020

Traffic light _____ Stop sign Merge

Route 079-JC-9003 -321 079351

Longitude W 88.20654

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	0819	7	20	10
Recorder Picked Up	1300	7	28	10

Station Location & Description (use back if necessary):



Left Shoulder (Y) N

Shoulder width 3

Right Shoulder (Y) N

Shoulder width 7

Type: No shoulders exist
Bituminous Concrete
N/A Stabilized
Combination Earth
Curbed

Field Technician DS DC

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

MARSHALL COUNTY

STATION 321

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	21	22	23	24	25	26	27	87
1- 2 AM	7	12	23	9	21	9	6	40
2- 3 AM	3	3	8	7	7	7	9	64
3- 4 AM	8	10	9	14	3	9	11	56
4- 5 AM	11	8	7	7	3	9	11	251
5- 6 AM	46	46	40	20	12	48	39	572
6- 7 AM	98	101	84	52	29	101	107	1186
7- 8 AM	216	207	220	73	48	216	206	1317
8- 9 AM	255	219	218	105	55	234	231	1317
9-10 AM	174	183	182	156	115	178	178	1166
10-11 AM	184	176	164	172	176	198	179	1249
11-12 AM	187	182	207	215	197	160	164	1312
1- 2 PM	199	177	200	184	165	200	164	1289
2- 3 PM	175	173	178	187	234	184	165	1296
3- 4 PM	132	181	180	147	193	153	185	1171
4- 5 PM	176	181	185	142	162	171	151	1168
5- 6 PM	161	164	161	161	171	134	137	1089
6- 7 PM	168	183	194	173	156	152	189	1215
7- 8 PM	141	173	222	163	158	195	189	1241
8- 9 PM	122	124	158	195	157	129	120	1005
9-10 PM	82	69	99	170	129	82	89	720
10-11 PM	114	121	80	131	91	76	78	691
11-12 PM	9	97	76	98	67	43	55	518
TOTALS:	2802	2853	2992	2695	2397	2732	2715	19186

AVERAGE DAILY TRAFFIC: 2657

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 255 BETWEEN 7- 8 AM ON WEDNESDAY
 PM HIGH HOUR: 234 BETWEEN 12- 1 PM ON SUNDAY
 MILE POINT : 47.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 47.000
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 2657 IN 2010
 LOCATION INFORMATION: RAMP FROM US 68 ONTO PURCHASE PARKWAY NB
 STATION: 321 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS							OTHERS	TOTAL VEHICLES		
					2 AXLE 4 TIRE BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE			5 OR LESS AXLE	6 AXLE
06-07AM	7/20/10	3	110	57	1	2	2	0	3	1	0	0	0	0	179
07-08AM	7/20/10	1	149	37	0	2	1	0	4	1	0	0	0	0	196
08-09AM	7/20/10	1	123	36	0	2	1	0	5	1	0	0	0	0	169
09-10AM	7/20/10	1	127	39	0	2	1	0	6	1	0	0	0	0	177
10-11AM	7/20/10	1	136	37	1	3	1	0	5	2	0	0	0	0	186
11-12AM	7/20/10	1	129	36	1	3	1	0	5	3	0	0	0	0	179
12-01PM	7/20/10	1	131	40	1	2	2	0	3	2	0	0	0	0	182
01-02PM	7/20/10	2	124	33	1	3	1	0	3	2	0	0	0	0	169
02-03PM	7/20/10	1	120	38	1	2	1	0	3	2	0	0	0	0	168
03-04PM	7/20/10	1	118	29	1	2	0	0	2	2	0	0	0	0	156
04-05PM	7/20/10	1	130	35	0	1	0	0	2	1	0	0	0	0	171
05-06PM	7/20/10	1	136	32	0	1	1	0	4	1	0	0	0	0	176
06-07PM	7/20/10	1	104	31	0	1	0	0	3	1	0	0	0	0	142
07-08PM	7/20/10	0	81	17	0	1	0	0	2	1	0	0	0	0	102
08-09PM	7/20/10	1	75	18	0	0	0	0	2	0	0	0	0	0	96
09-10PM	7/20/10	1	58	14	0	0	0	0	1	1	0	0	0	0	75
10-11PM	7/20/10	0	35	7	0	0	0	0	1	0	0	0	0	0	43
11-12PM	7/20/10	0	19	19	0	0	0	0	0	0	0	0	0	0	21
12-01AM	7/20/10	0	9	2	0	0	0	0	0	0	0	0	0	0	11
01-02AM	7/20/10	0	4	2	0	0	0	0	0	0	0	0	0	0	5
02-03AM	7/20/10	0	5	1	0	0	0	0	0	0	0	0	0	0	8
03-04AM	7/20/10	0	5	3	0	0	0	0	0	0	0	0	0	0	8
04-05AM	7/20/10	0	28	9	0	0	0	0	0	0	0	0	0	0	38
05-06AM	7/20/10	2	54	25	0	3	0	0	1	1	0	0	0	0	86
TOTAL VEHICLES		21	2010	581	8	31	12	0	56	23	0	1	0	0	2743
PERCENT OF TOTAL		0.8	73.3	21.2	0.3	1.1	0.4	0.0	2.0	0.8	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 131/ 2743 = 4.8 %
 AXLES / TRUCK = 458/ 131 = 3.496
 % TRAILER TRUCKS = 80/ 2743 = 2.9 %
 % TRAILERS @PK HR = 5/ 196 = 2.6 %
 PEAK HOUR BETWEEN 07-08AM = 196 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.97
 % SINGLE UNIT TRUCKS = 51/ 2743 = 1.9 %
 % SINGLE UNIT @ PK HR = 4/ 196 = 2.0 %
 % TRUCKS AT PEAK HOUR = 9/ 196 = 4.6 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 4 7 . 0 U C

Route Code: R (Interstate), N (Ky or Parkways), S (City St.), U (U.S.), O (Other), F (FS)

Route Number: 9003 Suffix: none

Milepoint: 047.0

Array: M (2 tubes), M (2 tubes), M (Loop), M (2 loops), A (Mixed), D (Other)

Ramp # 331

EXIT 47
US 68

STA # 0 7 9 3 3 1 A 1 A C 1 1

County Number: 079 Station #: 331

Lanes Counter is counting: A (All Lanes), B (Part NB & SB), C (Part EB & WB), 1 (lane 1), 2 (lane 2)

Lanes at Station: N (all NB), L (all EB), P (all SB), T (all WB)

Counter is counting: V (Vehicles), A (Axes)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 11

Ramp Signage

47

DRAFFENVILLE

AURORA

File # 62000001.L00

of Lanes 1 Lane Width 16

County Marshall

Latitude N 36.55810

Station number 331 Machine # 18144-034

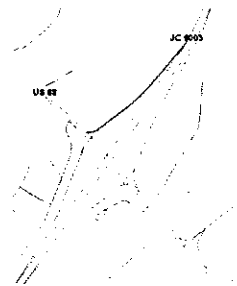
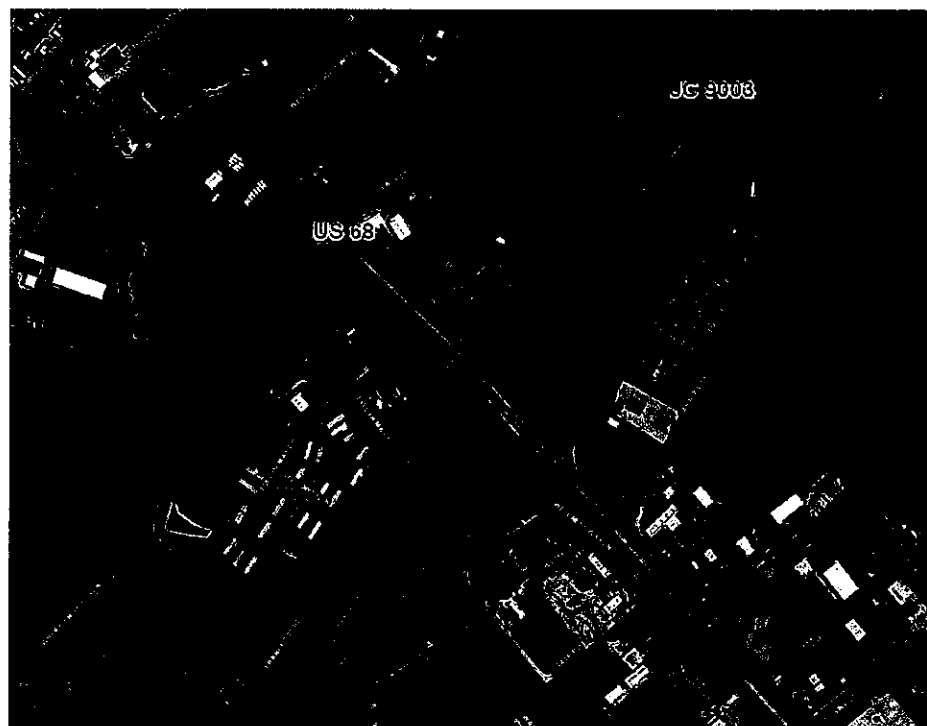
Traffic light Stop sign Merge

Route 079-JC-9003-331 079352

Longitude W 88.20697

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	0715	7	20	10
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	1300	7	28	10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4

Right Shoulder N

Shoulder width 8

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

MARSHALL COUNTY

STATION 331

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	30	19	36	40	28	14	20	187
2- 2 AM	8	8	13	25	18	6	6	84
3- 3 AM	1	9	3	14	9	3	6	45
4- 4 AM	6	9	14	6	9	7	8	59
5- 5 AM	13	12	13	9	8	7	10	72
6- 6 AM	28	30	34	18	10	28	44	192
7- 7 AM	56	52	50	34	20	51	55	318
8- 8 AM	86	99	87	74	35	99	93	573
9- 9 AM	97	109	109	102	49	125	123	714
10-10 AM	135	117	104	126	84	128	112	806
11-11 AM	135	133	151	140	94	147	129	904
12-12 AM	135	152	156	176	127	171	156	1053
1- 1 PM	168	175	175	155	174	167	158	1091
2- 2 PM	180	173	209	192	162	158	140	1202
3- 3 PM	180	198	191	207	142	195	185	1298
4- 4 PM	266	282	307	182	150	254	253	1704
5- 5 PM	266	292	268	206	134	260	279	1705
6- 6 PM	254	288	286	226	131	251	290	1726
7- 7 PM	169	211	219	162	136	153	158	1208
8- 8 PM	114	149	175	136	101	109	137	921
9- 9 PM	118	118	174	138	76	71	99	794
10-10 PM	64	108	140	92	77	71	84	636
11-11 PM	43	74	97	78	50	44	50	436
11-12 PM	50	48	53	48	29	38	46	312
TOTALS:	2532	2846	3064	2586	1853	2557	2602	18040

AVERAGE DAILY TRAFFIC: 2499

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 176 BETWEEN 11-12 AM ON SATURDAY
 PM HIGH HOUR: 307 BETWEEN 3- 4 PM ON FRIDAY
 MILE POINT : 47.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 47.000
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 2499 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY SB TO TO US 68
 STATION: 331 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS		MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES	
					2 AXLE BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE					
06-07AM	7/20/10	0	32	12	0	1	1	0	0	1	2	0	0	0	0	0	0	0	49
07-08AM	7/20/10	0	62	17	0	1	1	0	0	1	1	0	0	0	0	0	0	84	
08-09AM	7/20/10	1	74	24	1	2	1	0	0	1	1	0	0	0	0	0	0	106	
09-10AM	7/20/10	1	79	26	0	2	1	0	0	1	1	0	0	0	0	0	0	114	
10-11AM	7/20/10	1	86	31	0	4	2	0	0	2	2	0	0	0	0	0	0	130	
11-12AM	7/20/10	1	106	32	0	2	1	0	0	2	2	0	0	0	0	0	0	148	
12-01PM	7/20/10	0	105	33	1	3	2	0	0	1	1	0	0	0	0	0	0	152	
01-02PM	7/20/10	1	127	29	1	2	1	0	0	1	1	0	0	0	0	0	0	169	
02-03PM	7/20/10	2	132	41	0	3	1	0	0	1	1	0	0	0	0	0	0	187	
03-04PM	7/20/10	2	170	64	0	4	1	0	0	1	1	0	0	0	0	0	0	248	
04-05PM	7/20/10	1	188	47	0	3	0	0	0	1	1	0	0	0	0	0	0	247	
05-06PM	7/20/10	2	188	45	0	2	0	0	0	1	1	0	0	0	0	0	0	242	
06-07PM	7/20/10	2	134	35	0	2	0	0	0	1	1	0	0	0	0	0	0	242	
07-08PM	7/20/10	1	100	25	0	1	0	0	0	0	0	0	0	0	0	0	0	173	
08-09PM	7/20/10	1	89	19	0	1	0	0	0	1	1	0	0	0	0	0	0	131	
09-10PM	7/20/10	1	72	17	0	1	0	0	0	1	1	0	0	0	0	0	0	113	
10-11PM	7/20/10	0	50	10	0	0	0	0	0	0	0	0	0	0	0	0	0	93	
11-12PM	7/20/10	0	34	8	0	0	0	0	0	1	1	0	0	0	0	0	0	61	
12-01AM	7/20/10	0	22	4	0	0	0	0	0	0	0	0	0	0	0	0	0	43	
01-02AM	7/20/10	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	27	
02-03AM	7/20/10	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
03-04AM	7/20/10	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
04-05AM	7/20/10	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
05-06AM	7/20/10	0	13	11	0	1	1	0	0	0	0	0	0	0	0	0	0	11	
TOTAL VEHICLES		17	1886	535	4	34	13	0	0	70	20	0	0	0	0	0	0	2579	
PERCENT OF TOTAL		0.7	73.1	20.7	0.2	1.3	0.5	0.0	0.0	2.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

% HEAVY TRUCKS = 141/ 2579 = 5.5 %
 AXLES / TRUCK = 495/ 141 = 3.511
 % TRAILER TRUCKS = 90/ 2579 = 3.5 %
 % TRAILERS @PK HR = 7/ 248 = 2.8 %
 PEAK HOUR BETWEEN 03-04PM = 248 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.96
 % SINGLE UNIT TRUCKS = 51/ 2579 = 2.0 %
 % SINGLE UNIT @ PK HR = 5/ 248 = 2.0 %
 % TRUCKS AT PEAK HOUR = 12/ 248 = 4.8 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 4 7 . 0 W C

Route Code: R (Interstate), N (U.S.), N (City St.), N (County Rd), S (FS), W (Other)

Milepoint: 0 4 7 . 0

Array: M (Tube), M (2 tubes), M (Loop), M (2 loops), M (mixed)

Ramp # 341

EXIT 47
US 68

STA # 0 7 9 3 4 1 A 1 A C 1 1

County Number: C C C

Station #: S S S N L P T M A

Lanes Counter is counting: A (All Lanes), C (Part EB & WB)

Lanes at Station: N L P T M A

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 1 1

Ramp Signage

File # 6 1 3 0 0 0 1 1 . L 0 0

of Lanes 1 Lane Width 1.5

County Marshall

Latitude N 3 6 . 5 5 6 5 7

Station number 3 4 1 Machine # 14772-0045

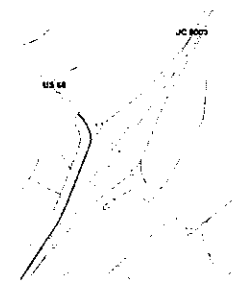
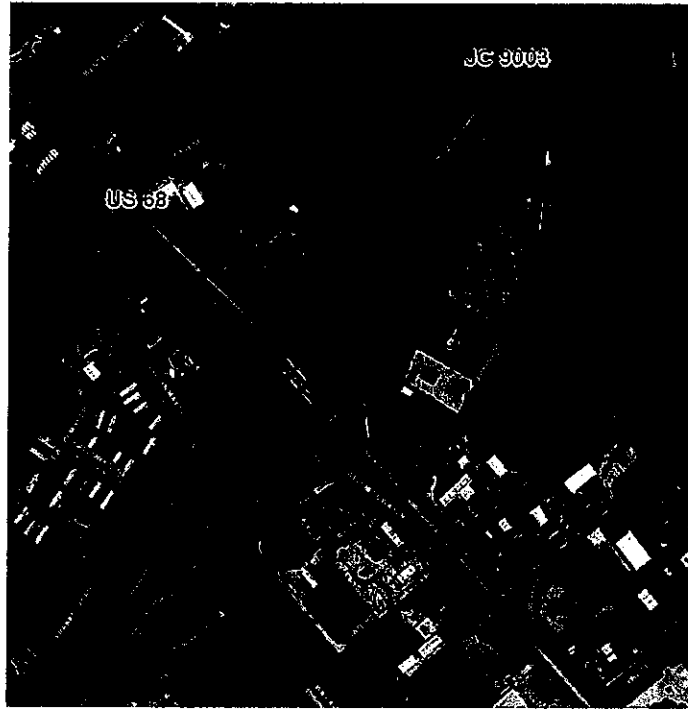
Traffic light Stop sign Merge

Route 079-JC-9003 -341 079353

Longitude W 8 8 . 2 0 8 6 0

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	0735	7	20	10
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	1300	7	28	10

Station Location & Description (use back if necessary):



* COUNTER DEFAULT TO INCORRECT DATE
7-13-10
SHOULD BE
7-20-10

Left Shoulder N

Shoulder width 1

Right Shoulder N

Shoulder width 1

Type: No shoulders exist
Bituminous Concrete
N/A Stabilized
Combination Earth
Curbed

Field Technician DS DC

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

MARSHALL COUNTY

STATION 341

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12-1 AM	11	12	27	31	33	14	13	141
1-2 AM	6	3	8	12	19	6	6	60
2-3 AM	4	5	4	12	11	6	3	45
3-4 AM	9	9	15	11	6	11	11	72
4-5 AM	17	10	21	13	8	18	11	98
5-6 AM	60	59	50	19	6	60	47	301
6-7 AM	117	113	95	44	24	117	128	638
7-8 AM	158	176	159	77	33	172	168	943
8-9 AM	148	154	136	90	83	164	149	924
9-10 AM	117	136	137	118	107	134	128	877
10-11 AM	134	133	142	145	117	155	119	945
11-12 AM	157	152	161	160	109	149	120	1008
12-1 PM	169	182	150	129	149	167	138	1084
1-2 PM	151	163	167	121	136	157	162	1057
2-3 PM	175	161	171	130	119	172	158	1086
3-4 PM	197	193	210	141	145	151	202	1239
4-5 PM	192	195	189	166	146	182	196	1266
5-6 PM	155	183	191	141	145	190	191	1196
6-7 PM	150	128	138	132	137	112	112	909
7-8 PM	88	96	111	118	138	123	112	786
8-9 PM	121	136	97	145	125	77	117	818
9-10 PM	61	93	93	108	82	72	80	589
10-11 PM	58	53	97	110	54	48	56	476
11-12 PM	56	50	52	43	20	28	32	281
TOTALS:	2511	2595	2621	2216	1952	2485	2459	16839

AVERAGE DAILY TRAFFIC: 2332

MONTHLY FACTOR: 97
 AXLE FACTOR: 100
 TOTAL HOURS: 168
 AM HIGH HOUR: 176 BETWEEN 7-8 AM ON THURSDAY
 PM HIGH HOUR: 210 BETWEEN 3-4 PM ON FRIDAY
 MILE POINT: 47.0
 COUNTED BY: CEN OFF
 DATA SOURCE: CLASS
 ARRAY: 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R 2332 IN 2010
 LATEST ADT COUNT: 2332 IN 2010
 LOCATION INFORMATION: RAMP FROM US 68 ONTO PURCHASE PKWY WB
 STATION: 353 BOTH E-W
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							OTHERS	TOTAL VEHICLES		
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE			5 OR LESS AXLE	
06-07AM	7/13/10	2	59	27	1	4	0	0	1	1	0	0	0	0	95
07-08AM	7/13/10	1	98	35	0	2	0	0	2	1	0	0	0	0	140
08-09AM	7/13/10	0	94	33	0	4	0	0	2	1	0	0	0	0	135
09-10AM	7/13/10	1	83	32	0	5	0	0	2	1	0	0	0	0	125
10-11AM	7/13/10	1	93	34	1	3	1	1	1	1	0	0	0	0	137
11-12AM	7/13/10	1	95	36	0	3	1	0	2	2	0	0	0	0	140
12-01PM	7/13/10	1	106	38	0	4	1	0	2	2	0	0	0	0	154
01-02PM	7/13/10	1	103	36	0	4	0	0	2	1	0	0	0	0	148
02-03PM	7/13/10	2	107	38	0	5	1	0	1	1	0	0	0	0	157
03-04PM	7/13/10	1	115	46	0	7	0	0	4	1	0	0	0	0	175
04-05PM	7/13/10	1	127	45	0	5	0	0	3	1	0	0	0	0	182
05-06PM	7/13/10	1	125	39	0	3	0	0	4	1	0	0	0	0	173
06-07PM	7/13/10	1	87	36	0	3	0	0	2	1	0	0	0	0	129
07-08PM	7/13/10	1	76	27	0	3	0	0	2	0	0	0	0	0	109
08-09PM	7/13/10	1	81	29	0	2	0	0	1	1	0	0	0	0	116
09-10PM	7/13/10	1	62	20	0	1	0	0	0	0	0	0	0	0	86
10-11PM	7/13/10	0	49	13	0	2	0	0	1	0	0	0	0	0	65
11-12PM	7/13/10	0	27	9	0	0	0	0	0	0	0	0	0	0	36
12-01AM	7/13/10	0	14	5	0	0	0	0	0	0	0	0	0	0	19
01-02AM	7/13/10	0	7	2	0	0	0	0	0	0	0	0	0	0	9
02-03AM	7/13/10	0	4	1	0	0	0	0	0	0	0	0	0	0	5
03-04AM	7/13/10	0	8	1	0	0	0	0	0	0	0	0	0	0	9
04-05AM	7/13/10	0	8	4	0	0	0	0	0	0	0	0	0	0	15
05-06AM	7/13/10	1	29	13	0	1	0	0	0	1	0	0	0	0	45
TOTAL VEHICLES		18	1657	599	3	62	9	1	38	17	0	0	0	0	2404
PERCENT OF TOTAL		0.7	68.9	24.9	0.1	2.6	0.4	0.0	1.6	0.7	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 130/ 2404 = 5.4 %
 AXLES / TRUCK = 398/ 130 = 3.062
 % TRAILER TRUCKS = 55/ 2404 = 2.3 %
 % TRAILERS @PK HR= 4/ 182 = 2.2 %
 PEAK HOUR BETWEEN 04-05PM = 182 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.97
 % SINGLE UNIT TRUCKS = 75/ 2404 = 3.1 %
 % SINGLE UNIT @ PK HR = 5/ 182 = 2.7 %
 % TRUCKS AT PEAK HOUR = 9/ 182 = 4.9 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning

Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 . 1 H C

Route Code: K (Interstate), 9 (Ky or Parkways), 0 (County Rd), 0 (FS), 0 (U.S.), 0 (City St), 0 (Other), r (Suffix), 0 (M), 0 (M), 0 (M), 0 (M), 1 (H), C (District making count)

Route Number: 355 Suffix: none

Milepoint: 0 0 0 . 1

Array - T = Tube, H = 2 tubes, L = Loop, B = 2 loops, M = mixed
 R = Radar, P = Piezo, W = WIM Piezo, O = Other

Ramp # 131

EXIT 41
US 641

STA # 0 7 9 1 3 T A L A C I I

County Number: 0 7 9 Station #: 1 3 T

Lanes Counter is counting: A (All Lanes), N (all NB), E (all EB), S (all SB), W (all WB), 1 (lane 1), 2 (lane 2)

Lanes at Station: N L P T M A

Counter is counting: V (Vehicles), A (Axles)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: I I

Ramp Signage

Hardin

Murray

Murray St. University

File # G 2000001.100

of Lanes 1 Lane Width 14'

County Marshall

Latitude N 3 6 . 9 9 7 3 3

Station number 1 3 1 Machine # 11221-0011

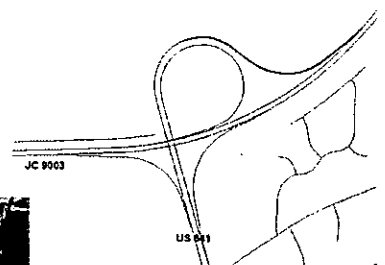
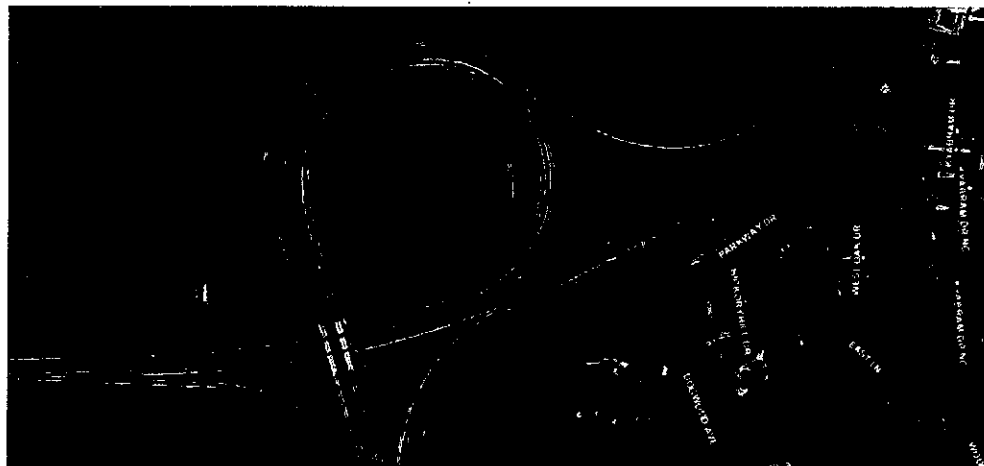
Traffic light Stop sign Merge

Route 079-JC-9003 -131

Longitude W 8 8 . 2 8 7 1 6

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	7:19	07	20	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	14:08	07	28	2010

Station Location & Description (use back if necessary):



355-38

Left Shoulder N

Shoulder width 5'

Right Shoulder N

Shoulder width 6'

Type: No shoulders exist

Bituminous Concrete

N/A Stabilized

Combination Earth

Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

MARSHALL COUNTY

STATION 431

355

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	21	22	23	24	25	26	27	
1- 2 AM	36	43	44	65	77	43	38	346
2- 3 AM	19	24	16	44	44	19	18	184
3- 4 AM	16	22	20	26	25	17	21	147
4- 5 AM	18	21	19	19	24	23	18	147
5- 6 AM	29	25	32	17	14	29	29	175
6- 7 AM	78	82	83	36	25	70	80	454
7- 8 AM	158	162	162	82	37	163	172	936
8- 9 AM	225	221	188	93	61	243	218	1249
9-10 AM	195	177	200	119	117	176	194	1178
10-11 AM	202	247	229	167	106	198	188	1337
11-12 AM	202	215	205	184	148	219	217	1390
12- 1 PM	232	234	263	203	149	236	235	1552
1- 2 PM	241	266	253	246	203	262	246	1717
2- 3 PM	270	262	287	228	221	265	294	1827
3- 4 PM	334	341	356	266	219	289	261	2066
4- 5 PM	409	474	458	264	256	418	434	2723
5- 6 PM	458	436	380	291	256	401	446	2668
6- 7 PM	369	344	396	313	282	381	358	2443
7- 8 PM	256	270	266	258	252	236	275	1813
8- 9 PM	178	208	251	238	212	195	196	1478
9-10 PM	197	219	200	237	204	171	184	1412
10-11 PM	148	179	210	220	141	147	164	1209
11-12 PM	106	121	212	192	101	99	104	935
TOTALS:	4445	4677	4872	3910	3247	4363	4460	29974

AVERAGE DAILY TRAFFIC: 4153

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 263 BETWEEN 11-12 AM ON FRIDAY
 PM HIGH HOUR: 474 BETWEEN 3- 4 PM ON THURSDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 4153 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PKWY WB ONTO US 641
 STATION: 355 BOTH E-W
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/20/10	3	63	46	2	9	2	1	2	10	0	0	0	0	0	138
07-08AM	7/20/10	2	102	51	1	7	3	3	2	12	0	0	0	0	0	183
08-09AM	7/20/10	1	89	50	2	11	2	2	4	12	0	0	0	0	0	173
09-10AM	7/20/10	1	98	55	2	10	3	3	6	13	0	0	0	0	0	192
10-11AM	7/20/10	2	110	58	2	6	2	3	5	13	0	0	0	0	0	201
11-12AM	7/20/10	1	126	64	3	9	2	3	4	11	0	0	0	0	0	221
12-01PM	7/20/10	1	148	74	3	9	2	2	5	11	0	0	0	0	0	245
01-02PM	7/20/10	2	179	83	2	11	3	2	6	13	0	0	0	0	0	260
02-03PM	7/20/10	2	179	83	1	13	2	2	5	10	0	0	0	0	0	297
03-04PM	7/20/10	3	230	117	1	15	4	1	7	11	0	1	0	0	0	390
04-05PM	7/20/10	2	249	107	1	12	2	2	6	10	0	0	0	0	0	389
05-06PM	7/20/10	3	233	90	1	9	1	0	4	9	0	0	0	0	0	350
06-07PM	7/20/10	2	167	70	0	5	1	0	4	8	0	0	0	0	0	257
07-08PM	7/20/10	2	138	56	0	5	1	0	4	5	0	0	0	0	0	209
08-09PM	7/20/10	1	136	46	0	5	1	0	3	5	0	0	0	0	0	197
09-10PM	7/20/10	2	122	39	0	4	1	0	1	5	0	0	0	0	0	174
10-11PM	7/20/10	1	90	30	0	3	0	0	1	5	0	0	0	0	0	130
11-12PM	7/20/10	2	51	19	0	1	0	0	2	4	0	0	0	0	0	81
12-01AM	7/20/10	1	29	11	0	1	0	0	1	4	0	0	0	0	0	47
01-02AM	7/20/10	0	16	5	0	0	0	0	0	3	0	0	0	0	0	25
02-03AM	7/20/10	0	12	3	0	0	0	0	0	3	0	1	0	0	0	19
03-04AM	7/20/10	0	11	4	1	1	0	0	1	4	0	0	0	0	0	22
04-05AM	7/20/10	0	12	4	1	1	0	0	1	4	0	0	0	0	0	26
05-06AM	7/20/10	1	30	19	1	4	0	0	1	9	0	0	0	0	0	66
TOTAL VEHICLES		35	2578	1177	25	151	35	20	74	195	0	2	0	0	0	4292
PERCENT OF TOTAL		0.8	60.1	27.4	0.6	3.5	0.8	0.5	1.7	4.5	0.0	0.0	0.0	0.0	0.0	0*

% HEAVY TRUCKS = 502/ 4292 = 11.7 %
 AXLES / TRUCKS = 1818/ 502 = 3.632
 % TRAILER TRUCKS = 271/ 4292 = 6.3 %
 % TRAILERS @PK HR= 19/ 390 = 4.9 %
 PEAK HOUR BETWEEN 03-04PM = 390 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.91
 % SINGLE UNIT TRUCKS = 231/ 4292 = 5.4 %
 % SINGLE UNIT @ PK HR = 21/ 390 = 5.4 %
 % TRUCKS AT PEAK HOUR = 40/ 390 = 10.3 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning

Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 . 1 H C

Route Code: K (Interstate), 9 (Ky or Parkways), 0 (County Rd), 0 (FS), 0 (U.S.), 0 (City St.), 0 (Other), r (FS)

Milepoint: 0 0 0 . 1 H C

Array - T = Tube, H = 2 tubes, L = Loop, B = 2 loops, M = mixed, R = Radar, P = Piezo, W = WIM Piezo, O = Other

Ramp # 111

EXIT 41
US 641

STA # D 7 9 1 1 1 A L A C 1 1

County Number: D 7 9

Station #: 1 1 1

Lanes at Station: A L A C

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 1 1

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2

Counter is counting: V=Vehicles, A=Axles

Ramp Signage

*Murray State University
*641 Spur Hardin Murray
*Benton

File # G 2000011.000

of Lanes 1 Lane Width 18.5'

County Marshall

Latitude N 3 6 . 8 4 7 7 3

Station number 1 1 1 Machine # 12896-0016

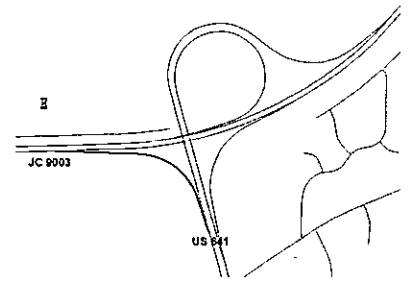
Traffic light _____ Stop sign Merge

Route 079-JC-9003 -111

Longitude W 8 8 . 3 8 1 8 4

	Time	Month	Day	Year	
Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	7:41	07	20	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	14:12	07	28	2010

Station Location & Description (use back if necessary):



Left Shoulder (Y) N
Shoulder width 4'

Right Shoulder (Y) N
Shoulder width 5'

Type: No shoulders exist
Bituminous Concrete
N/A Stabilized
Combination Earth
Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

MARSHALL COUNTY

STATION 441

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	1	0	2	4	3	5	2	17
1- 2 AM	2	2	2	5	5	1	2	19
2- 3 AM	1	1	2	1	0	1	1	7
3- 4 AM	0	1	1	2	0	1	0	5
4- 5 AM	0	2	1	0	0	1	1	5
5- 6 AM	6	6	6	2	4	5	7	36
6- 7 AM	5	10	11	2	2	9	12	52
7- 8 AM	27	24	28	8	3	19	24	133
8- 9 AM	17	25	16	9	6	19	19	111
9-10 AM	13	12	20	3	3	16	16	96
10-11 AM	18	21	21	14	5	17	25	118
11-12 AM	19	7	29	11	8	14	17	112
12- 1 PM	35	19	22	14	12	15	10	127
1- 2 PM	15	25	19	18	19	14	14	122
2- 3 PM	19	30	29	17	19	23	14	151
3- 4 PM	33	30	34	23	14	24	22	186
4- 5 PM	41	48	26	22	25	32	42	236
5- 6 PM	37	39	50	20	14	29	39	228
6- 7 PM	23	25	22	17	6	21	22	136
7- 8 PM	16	13	24	6	12	8	12	91
8- 9 PM	11	9	16	8	6	17	5	72
9-10 PM	11	13	16	11	9	6	9	75
10-11 PM	5	10	10	7	7	4	7	50
11-12 PM	4	3	13	9	4	6	5	44
TOTALS:	359	375	420	249	186	307	333	2229

AVERAGE DAILY TRAFFIC: 308

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 29 BETWEEN 11-12 AM ON FRIDAY
 PM HIGH HOUR: 50 BETWEEN 5- 6 PM ON FRIDAY
 MILE POINT : 0.1
 COUNTED BY : GEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 308 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PKWY EB ONTO US 641
 STATION: 356 BOTH E-W
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE VEHICLES	SINGLE UNIT TRUCKS					SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES	
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE				
06-07AM	7/20/10	0	3	3	0	1	0	0	0	0	1	0	0	0	0	0	0	8
07-08AM	7/20/10	0	11	7	0	1	0	0	0	0	1	0	0	0	0	0	0	20
08-09AM	7/20/10	0	10	4	0	1	0	0	0	0	1	0	0	0	0	0	0	17
09-10AM	7/20/10	0	7	5	0	1	0	0	0	0	0	0	0	0	0	0	0	13
10-11AM	7/20/10	0	8	5	0	2	0	0	0	0	1	0	0	0	0	0	0	17
11-12AM	7/20/10	0	7	6	0	1	0	0	0	0	1	0	0	0	0	0	0	15
12-01PM	7/20/10	0	10	6	0	1	0	0	0	0	1	0	0	0	0	0	0	19
01-02PM	7/20/10	0	8	7	0	1	0	0	0	0	1	0	0	0	0	0	0	17
02-03PM	7/20/10	0	12	9	0	1	0	0	0	0	1	0	0	0	0	0	0	21
03-04PM	7/20/10	0	12	7	0	1	0	0	0	0	1	0	0	0	0	0	0	27
04-05PM	7/20/10	0	20	11	0	2	0	0	0	0	1	0	0	0	0	0	0	34
05-06PM	7/20/10	0	17	12	0	2	0	0	0	0	1	0	0	0	0	0	0	35
06-07PM	7/20/10	0	12	6	0	1	0	0	0	0	1	0	0	0	0	0	0	20
07-08PM	7/20/10	0	7	5	0	1	0	0	0	0	0	0	0	0	0	0	0	13
08-09PM	7/20/10	0	7	3	0	1	0	0	0	0	0	0	0	0	0	0	0	10
09-10PM	7/20/10	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7
10-11PM	7/20/10	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
11-12PM	7/20/10	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12-01AM	7/20/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
01-02AM	7/20/10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02-03AM	7/20/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03-04AM	7/20/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04-05AM	7/20/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05-06AM	7/20/10	0	3	2	0	0	0	0	0	0	1	0	0	0	0	0	0	6
TOTAL VEHICLES		0	171	106	0	20	2	0	0	6	13	0	0	0	0	0	0	318
PERCENT OF TOTAL	0.0	53.8	33.3	0.0	6.3	0.6	0.0	1.9	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

% HEAVY TRUCKS = 41/
 AXLES / TRUCK = 135/
 % TRAILER TRUCKS = 19/
 % TRAILERS @PK HR = 1/
 PEAK HOUR BETWEEN 04-05PM = 24
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.92
 % SINGLE UNIT TRUCKS = 22/
 % SINGLE UNIT @ PK HR = 2/
 % TRUCKS AT PEAK HOUR = 3/
 318 = 6.9 %
 34 = 5.9 %
 34 = 8.8 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 1 H C
R N N N N S M M M M A D
 Route Code: K=Ky or Parkways, R=County Rd, F=FS, U=U.S., S=City St, O=Other
 Milepoint: 357
 Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed, R=Radar, P=Piezo, W=WIM/Piezo, D=Other

Ramp # 121
 EXIT 41
 US 641

STA # 0 7 9 2 T A I A C I I
C C C S S S N L P T M A
 County Number: 0 7 9
 Station#: 2 T A I A C I I
 Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2, N=all NB, E=all EB, S=all SB, W=all WB
 Lanes at Station: 2 T A I A C I I
 Counter is counting: V=Vehicles, A=Axles
 Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM
 Machine # of All Machines at Station: _____

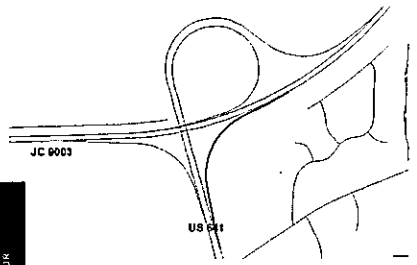
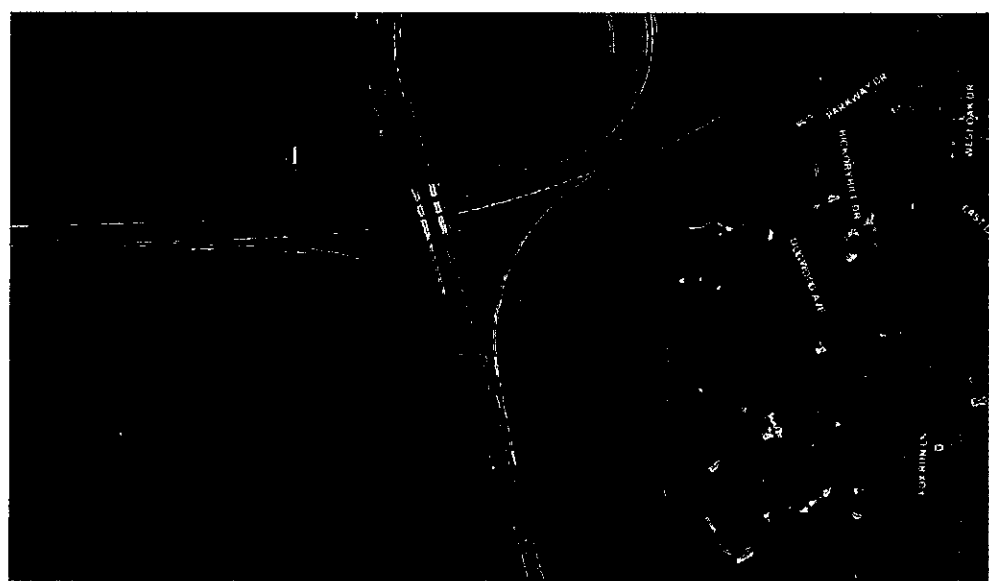
Ramp Signage
Calvert city

File # G2000021.L00
 # of Lanes 1 Lane Width 16'
 County Marshall
 Latitude N 36.84631

Station number 121 Machine # 12897-0068
 Traffic light _____ Stop sign Merge
 Route 079-JC-9003 -121
 Longitude W 88.37822

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	8:00	07	20	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	14:26	07	28	2010

Station Location & Description (use back if necessary):



Left Shoulder (Y) N
 Shoulder width 3'
 Right Shoulder (Y) N
 Shoulder width 6'
 Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

MARSHALL COUNTY

STATION 124 ³⁵⁷

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12-1 AM	30	22	27	33	32	26	23	193
1-2 AM	10	13	8	17	19	15	17	99
2-3 AM	7	20	18	11	13	13	13	95
3-4 AM	20	34	20	12	22	18	31	157
4-5 AM	79	61	62	52	23	75	77	429
5-6 AM	200	203	183	96	60	204	201	1147
6-7 AM	353	359	337	139	78	346	353	1965
7-8 AM	445	444	426	183	116	461	421	2496
8-9 AM	343	323	307	258	148	315	335	2029
9-10 AM	314	291	314	310	222	282	267	2000
10-11 AM	288	299	306	364	275	274	309	2115
11-12 AM	308	265	356	312	279	288	275	2063
12-1 PM	284	286	327	260	307	300	245	2009
1-2 PM	273	286	336	258	261	296	290	2000
2-3 PM	284	330	311	250	248	297	277	1997
3-4 PM	270	353	359	258	241	312	309	2082
4-5 PM	313	353	375	287	260	324	361	2273
5-6 PM	300	312	386	273	288	320	307	2186
6-7 PM	222	224	325	207	188	190	191	1547
7-8 PM	146	171	180	159	176	112	144	1088
8-9 PM	111	138	115	143	128	95	139	870
9-10 PM	67	109	105	99	86	78	69	613
10-11 PM	55	58	67	62	54	48	51	395
11-12 PM	38	45	49	45	31	33	31	272
TOTALS:	4760	4999	5259	4088	3555	4723	4736	32120

AVERAGE DAILY TRAFFIC: 4450

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 461 BETWEEN 7-8 AM ON MONDAY
 PM HIGH HOUR: 386 BETWEEN 5-6 PM ON FRIDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 4450 IN 2010
 LOCATION INFORMATION: RAMP FROM US 641 ONTO PURCHASE PKWY EB
 STATION: 357 BOTH E-W
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE					
06-07AM	7/20/10	2	164	97	1	12	2	0	5	8	0	0	0	0	0	0	0	0	291
07-08AM	7/20/10	2	242	85	1	14	4	0	6	9	0	0	0	0	0	0	0	363	
08-09AM	7/20/10	2	185	73	1	13	7	0	4	14	0	0	0	0	0	0	0	299	
09-10AM	7/20/10	3	178	71	2	9	4	0	5	16	0	0	0	0	0	0	0	288	
10-11AM	7/20/10	1	187	80	2	8	5	1	4	15	0	0	0	0	0	0	0	302	
11-12AM	7/20/10	2	177	79	1	9	5	1	5	16	0	0	0	0	0	0	0	295	
12-01PM	7/20/10	1	180	74	2	8	2	0	5	15	0	0	0	0	0	0	0	287	
01-02PM	7/20/10	2	177	71	1	9	5	1	4	14	0	0	0	0	0	0	0	284	
02-03PM	7/20/10	2	176	76	2	9	3	0	4	13	0	0	0	0	0	0	0	285	
03-04PM	7/20/10	2	180	83	1	12	2	0	4	11	0	0	0	0	0	0	0	295	
04-05PM	7/20/10	2	204	87	1	12	1	0	6	10	0	0	0	0	0	0	0	322	
05-06PM	7/20/10	2	213	77	1	5	1	0	4	9	0	0	0	0	0	0	0	314	
06-07PM	7/20/10	3	143	50	1	9	0	0	3	7	0	0	0	0	0	0	0	217	
07-08PM	7/20/10	1	102	37	0	4	0	0	2	8	0	0	0	0	0	0	0	153	
08-09PM	7/20/10	1	84	27	0	2	1	0	1	6	0	0	0	0	0	0	0	123	
09-10PM	7/20/10	1	58	20	0	2	0	0	1	3	0	0	0	0	0	0	0	88	
10-11PM	7/20/10	0	40	10	0	2	0	0	1	3	0	0	0	0	0	0	0	56	
11-12PM	7/20/10	1	24	5	0	1	1	0	1	4	0	0	0	0	0	0	0	37	
12-01AM	7/20/10	0	16	4	0	1	0	0	1	4	0	0	0	0	0	0	0	26	
01-02AM	7/20/10	0	8	3	0	0	0	0	0	3	0	0	0	0	0	0	0	14	
02-03AM	7/20/10	0	6	2	0	0	0	0	1	4	0	0	0	0	0	0	0	13	
03-04AM	7/20/10	0	10	6	0	0	0	0	0	4	0	0	0	0	0	0	0	21	
04-05AM	7/20/10	1	37	15	2	1	0	0	3	2	0	0	0	0	0	0	0	65	
05-06AM	7/20/10	0	97	51	1	8	2	0	3	6	0	0	0	0	0	0	0	168	
TOTAL VEHICLES		31	2888	1183	20	153	45	3	74	207	0	2	0	0	0	0	0*	4606	
PERCENT OF TOTAL		0.7	62.7	25.7	0.4	3.3	1.0	0.1	1.6	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

% HEAVY TRUCKS = 504/ 4606 = 10.9%
 % TRAILER TRUCKS = 1834/ 4606 = 3.99%
 % TRAILERS @PK HR = 15/ 363 = 4.1%
 PEAK HOUR BETWEEN 07-08AM = 363 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.92
 % SINGLE UNIT TRUCKS = 221/ 4606 = 4.8%
 % SINGLE UNIT @ PK HR = 19/ 363 = 5.2%
 % TRUCKS AT PEAK HOUR = 34/ 363 = 9.4%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning

Ramp Traffic Count Record

District # 1

I.D. # k 9 0 0 3 r 0 0 0 1 H C

Route Code: R (Interstate), N (City St.), S (County Rd), M (U.S.), A (Other)

Milepoint: 0 0 0 1

Array: T (Tube), H (2 tubes), L (Loop), B (2 loops), M (mixed), R (Radar), P (Piezo), W (WIM Piezo), O (Other)

Ramp # 132

EXIT 41
US 641

STA # 0 7 9 1 3 2 A L A C I I

County Number: C C C S S S N L P T M A

Station #: 0 7 9 1 3 2 A L A C I I

Lanes Counter is counting: A (All Lanes), N (all NB), B (Part NB & SB), E (all EB), C (Part EB & WB), S (all SB), 1 (lane 1), 2 (lane 2)

Lanes at Station: N

Counter is counting: V (Vehicles), A (Axles)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: I I

Ramp Signage
Manfield Fulton

File # G 2000031 L00

of Lanes 1 Lane Width 13'

County Marshall

Latitude N 3 6 . 8 5 0 7 1

Station number 1 3 2 Machine # 12061-052

Traffic light Stop sign Merge

Route 079-JC-9003 -132

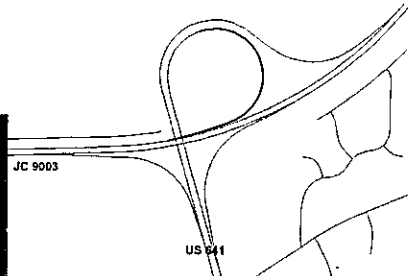
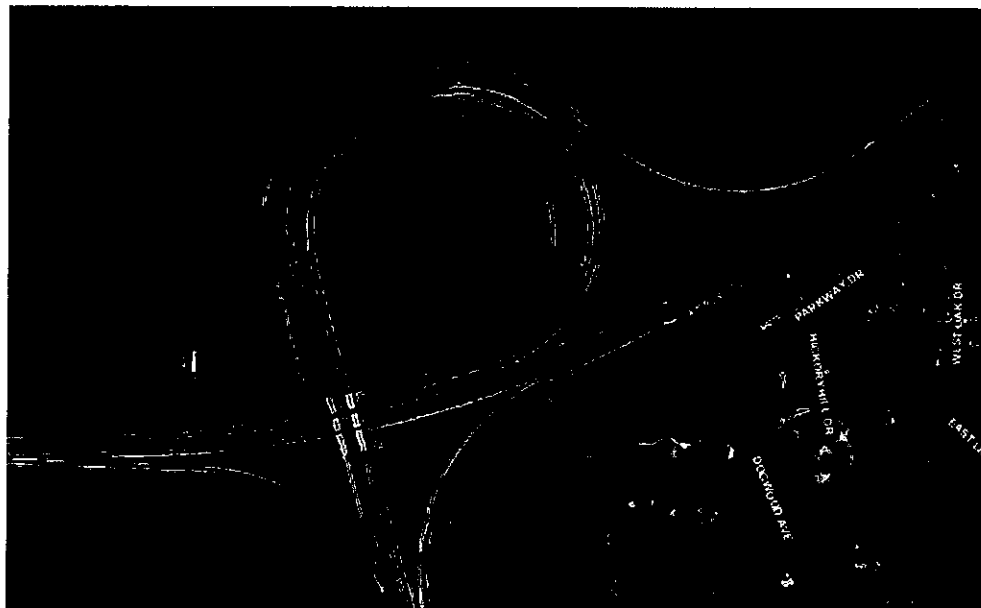
Longitude W 8 8 . 3 7 6 2 5

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	8:14	07	20	2010
Recorder Picked Up	14:37	07	28	2009

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4'

Right Shoulder N

Shoulder width 9'

Type: No shoulders exist
Bituminous Concrete
N/A Stabilized
Combination Earth
Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

MARSHALL COUNTY

STATION 132

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	0	0	0	3	1	2	0	9
1- 2 AM	0	1	1	0	1	0	2	4
2- 3 AM	0	1	0	0	1	0	1	3
3- 4 AM	0	1	1	0	1	0	1	4
4- 5 AM	3	1	3	3	1	1	1	13
5- 6 AM	5	3	5	1	1	5	4	24
6- 7 AM	17	20	19	4	1	22	16	99
7- 8 AM	26	25	21	15	5	40	26	158
8- 9 AM	28	23	38	6	10	27	28	155
9-10 AM	14	16	20	8	10	20	22	110
10-11 AM	15	13	15	11	12	13	20	99
11-12 AM	16	15	14	13	12	15	15	107
12- 1 PM	19	11	12	14	13	13	13	98
1- 2 PM	11	19	12	13	13	17	13	88
2- 3 PM	19	8	11	10	8	15	18	93
3- 4 PM	24	17	19	10	22	15	25	132
4- 5 PM	23	32	24	10	11	27	29	156
5- 6 PM	20	15	27	12	19	12	14	119
6- 7 PM	9	14	16	5	15	7	12	83
7- 8 PM	5	8	9	8	7	2	2	46
8- 9 PM	7	10	7	8	9	2	11	54
9-10 PM	3	10	4	8	4	3	7	35
10-11 PM	5	7	6	3	7	6	3	41
11-12 PM	1	1	3	4	0	1	2	12
TOTALS:	284	282	304	187	195	288	293	1833

AVERAGE DAILY TRAFFIC: 253

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 40 BETWEEN 6- 7 AM ON MONDAY
 PM HIGH HOUR: 32 BETWEEN 4- 5 PM ON THURSDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 R 0 2 7 . 1 H C

Route Code: I=Interstate, U=U.S., K=Ky or Parkways, S=City St., R=County Rd, O=Other, F=FS

U.S. City St. Other

Route Number: 0024 Suffix: none

Milepoint: 0 2 7 . 1

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed, R=Radars, P=Piezo, W=WIM Piezo, O=Other

Ramp # 211

EXIT 27

STA # 0 7 9 2 1 1 A 1 A C 1 1

County Number: 0 7 9 Station#: 2 1 1

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2

N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: 1

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 1 1

Ramp Signage 62

KENTUCKY DAM

File # G 1 9 0 0 0 0 1 . 4 0 0

of Lanes 1 Lane Width 16

County Marshall

Latitude N 3 7 . 0 0 0 5 5

Station number 2 1 1 Machine # 11222-0089

Traffic light Stop sign Merge

Route 079-I-0024-211

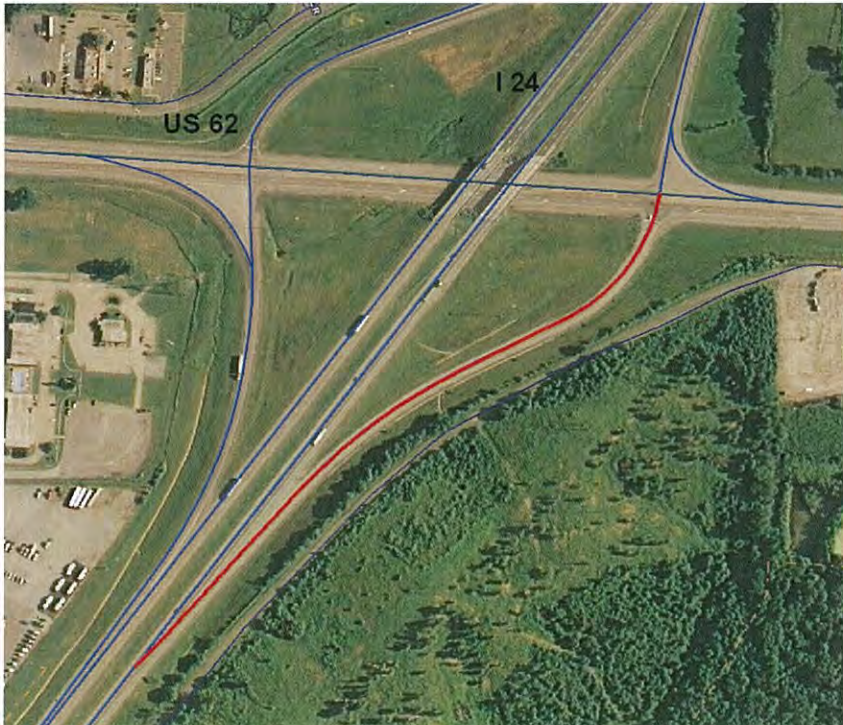
Longitude W 8 2 . 1 9 5 7 5

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1300	7	19	10
Recorder Picked Up	1100	7	28	10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4

Right Shoulder N

Shoulder width 8

Type: No shoulders exist

Bituminous Concrete

N/A Stabilized

Combination Earth

Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024R

MARSHALL COUNTY

STATION 211

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	20	21	22	23	24	25	26	
1- 2 AM	22	21	31	22	59	42	11	208
2- 3 AM	19	21	22	33	31	19	13	158
3- 4 AM	20	21	24	25	27	21	21	157
4- 5 AM	19	26	28	21	24	18	19	155
5- 6 AM	30	18	22	30	28	17	21	166
6- 7 AM	67	56	66	63	38	28	65	385
7- 8 AM	99	94	116	94	41	42	96	582
8- 9 AM	96	97	115	94	79	57	107	645
9-10 AM	105	125	126	126	86	67	116	751
10-11 AM	119	124	144	159	143	113	135	937
11-12 AM	127	145	125	152	157	129	127	962
1- 2 PM	132	153	167	185	193	136	180	1166
2- 3 PM	146	187	167	163	164	184	148	1159
3- 4 PM	156	151	154	191	162	186	181	1181
4- 5 PM	168	177	195	192	173	181	164	1250
5- 6 PM	168	149	183	221	170	139	167	1197
6- 7 PM	185	171	212	122	161	155	178	1184
7- 8 PM	143	177	196	279	195	143	170	1303
8- 9 PM	153	162	176	212	149	112	130	1094
9-10 PM	104	109	121	148	139	94	98	813
10-11 PM	68	91	93	138	105	80	74	649
11-12 PM	81	75	99	91	77	71	66	560
TOTALS:	2330	2458	2704	2908	2529	2139	2378	17446

AVERAGE DAILY TRAFFIC: 2317

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 193 BETWEEN 11-12 AM ON SATURDAY
 PM HIGH HOUR: 279 BETWEEN 5- 6 PM ON FRIDAY
 MILE POINT : 27.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET--DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 27.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 2317 IN 2010
 LOCATION INFORMATION: RAMP FROM I 24 EASTBOUND TO US 62
 STATION: 211 BOTH E-W
 ROUTE: I 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/19/10	2	27	27	1	7	5	0	4	13	1	0	0	0	0	87
07-08AM	7/19/10	2	33	22	2	4	12	0	3	19	1	0	0	0	0	98
08-09AM	7/19/10	1	38	27	1	7	8	0	3	23	1	0	0	0	0	109
09-10AM	7/19/10	2	44	33	2	9	11	0	4	26	2	1	0	0	0	135
10-11AM	7/19/10	2	49	36	2	9	11	0	5	24	1	0	0	0	0	139
11-12AM	7/19/10	2	59	45	1	8	9	1	6	31	2	0	0	0	0	164
12-01PM	7/19/10	2	67	44	2	9	9	0	4	25	1	0	0	0	0	163
01-02PM	7/19/10	3	66	43	2	10	9	0	5	27	1	1	0	0	0	167
02-03PM	7/19/10	2	68	47	1	9	8	0	4	27	1	0	0	0	0	167
03-04PM	7/19/10	1	73	50	1	10	3	0	6	24	2	0	0	0	0	170
04-05PM	7/19/10	2	83	45	1	9	2	0	5	23	1	0	0	0	0	172
05-06PM	7/19/10	2	87	52	1	9	1	0	6	21	1	0	0	0	0	180
06-07PM	7/19/10	3	87	43	2	9	1	0	5	21	1	0	0	0	0	180
07-08PM	7/19/10	2	64	30	2	5	1	0	2	26	1	0	0	0	0	151
08-09PM	7/19/10	2	49	37	3	5	1	0	3	21	1	0	0	0	0	115
09-10PM	7/19/10	0	30	23	1	4	0	0	1	19	1	0	0	0	0	91
10-11PM	7/19/10	0	22	15	0	3	0	0	2	17	1	0	0	0	0	78
11-12PM	7/19/10	1	15	8	1	2	0	0	1	14	1	0	0	0	0	61
12-01AM	7/19/10	0	10	6	0	1	0	0	0	11	0	0	0	0	0	44
01-02AM	7/19/10	0	7	3	0	0	0	0	0	10	0	0	0	0	0	29
02-03AM	7/19/10	1	6	3	0	1	0	0	1	9	0	0	0	0	0	21
03-04AM	7/19/10	1	7	5	0	0	0	0	0	9	0	0	0	0	0	21
04-05AM	7/19/10	0	7	5	0	0	0	0	1	6	0	0	0	0	0	20
05-06AM	7/19/10	0	18	16	2	7	0	0	1	8	1	0	0	0	0	25
TOTAL VEHICLES		33	966	652	29	138	93	1	73	449	25	2	0	0	2	2463
PERCENT OF TOTAL		1.3	39.2	26.5	1.2	5.6	3.8	0.0	3.0	18.2	1.0	0.1	0.0	0.1	0.1	0.0

% HEAVY TRUCKS = 812/ 2463 = 33.0 %
 AXLES / TRUCK = 3528/ 812 = 4.099
 % TRAILER TRUCKS = 551/ 2463 = 22.4 %
 % TRAILERS @PK HR = 28/ 180 = 15.6 %
 PEAK HOUR BETWEEN 05-06PM = 180 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.74
 % SINGLE UNIT TRUCKS = 261/ 2463 = 10.6 %
 % SINGLE UNIT @ PK HR = 11/ 180 = 6.1 %
 % TRUCKS AT PEAK HOUR = 39/ 180 = 21.7 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 R 0 2 7 . 1 H C

Route Code: I=Interstate, U=U.S., K=Ky or Parkways, R=County Rd, F=FS
 Suffix: N=City St., O=Other

Route Number: 0024 Suffix: none

Milepoint: 0 2 7 . 1

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radars, P=Piezo, W=WIM Piezo, O=Other

Ramp # 221

EXIT
27

STA # 0 7 9 2 2 1 A 1 A C 1 1

County Number: 0 7 9 Station#: 2 2 1

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T M A

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 1 1

Ramp Signage

File # 61900011.400

of Lanes 1 Lane Width 16

County Marshall

Latitude N 37.00297

Station number 221 Machine # 12061-044

Traffic light _____ Stop sign Merge

Route 079-I-0024-221

Longitude W 88.19360

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1315	7	19	10
Recorder Picked Up	1100	7	28	10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4

Right Shoulder N

Shoulder width 10

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024R

MARSHALL COUNTY

STATION 221

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	19	26	39	31	63	51	22	251
1- 2 AM	16	23	17	32	34	17	11	150
2- 3 AM	18	18	28	28	19	14	17	142
3- 4 AM	18	24	28	20	20	17	18	145
4- 5 AM	32	34	30	41	36	23	27	223
5- 6 AM	77	74	93	56	50	35	68	453
6- 7 AM	90	85	107	78	79	44	64	547
7- 8 AM	120	99	138	120	90	77	96	740
8- 9 AM	123	133	142	136	119	108	114	875
9-10 AM	134	142	141	156	155	130	125	983
10-11 AM	140	126	167	163	162	162	117	1037
11-12 AM	133	139	139	148	152	162	150	1023
12- 1 PM	143	168	170	178	162	147	164	1132
1- 2 PM	145	157	164	183	118	168	155	1090
2- 3 PM	181	183	206	190	149	174	166	1249
3- 4 PM	214	181	194	236	119	138	183	1265
4- 5 PM	209	189	207	181	133	129	201	1249
5- 6 PM	170	152	184	222	106	130	165	1129
6- 7 PM	144	143	135	181	113	106	114	936
7- 8 PM	92	107	114	109	100	98	70	690
8- 9 PM	68	69	86	109	91	95	75	593
9-10 PM	72	61	74	85	64	56	57	469
10-11 PM	56	68	56	84	58	63	43	428
11-12 PM	42	39	53	56	41	50	36	317
TOTALS:	2456	2440	2712	2823	2233	2194	2258	17116

AVERAGE DAILY TRAFFIC: 2273

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 167
 PM HIGH HOUR: 236

BETWEEN 10-11 AM ON THURSDAY
 BETWEEN 3- 4 PM ON FRIDAY

MILE POINT : 27.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 27.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 2273 IN 2010
 LOCATION INFORMATION: RAMP FROM US 62 ONTO I 24 EASTBOUND
 STATION: 221 BOTH E-W
 ROUTE: 1 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE	OTHERS			
06-07AM	7/19/10	1	34	20	1	5	0	0	1	13	2	0	0	0	0	1	0	78
07-08AM	7/19/10	0	45	31	1	5	1	0	2	17	2	0	0	0	0	1	0	105
08-09AM	7/19/10	1	51	36	1	6	1	0	3	21	2	0	0	0	0	1	0	123
09-10AM	7/19/10	1	59	38	1	5	1	0	3	25	2	1	0	0	0	1	0	137
10-11AM	7/19/10	2	64	40	2	5	1	0	4	23	2	0	0	0	0	1	0	144
11-12AM	7/19/10	1	62	41	1	8	1	0	4	22	2	0	0	0	0	1	0	143
12-01PM	7/19/10	2	74	47	1	6	0	0	3	22	2	0	0	0	0	1	0	159
01-02PM	7/19/10	1	74	43	1	7	1	0	3	22	2	0	0	0	0	1	0	155
02-03PM	7/19/10	1	81	47	1	8	2	0	3	26	2	1	0	0	0	0	0	173
03-04PM	7/19/10	1	92	55	1	7	2	0	4	19	2	0	0	0	0	0	0	182
04-05PM	7/19/10	2	93	52	1	8	1	0	4	18	2	0	0	0	0	0	0	181
05-06PM	7/19/10	1	82	49	1	5	0	0	2	17	1	0	0	0	0	0	0	161
06-07PM	7/19/10	1	62	38	1	7	0	0	1	18	2	0	0	0	0	0	0	128
07-08PM	7/19/10	2	47	27	0	2	0	0	1	16	1	0	0	0	0	1	0	98
08-09PM	7/19/10	1	39	20	0	3	0	0	1	16	2	0	0	0	0	0	0	83
09-10PM	7/19/10	1	29	17	1	2	0	0	1	11	1	0	0	0	0	0	0	64
10-11PM	7/19/10	1	27	17	0	2	0	0	1	11	1	0	0	0	0	0	0	61
11-12PM	7/19/10	1	18	8	0	1	0	0	1	12	1	0	0	0	0	1	0	44
12-01AM	7/19/10	0	13	8	0	1	0	0	1	10	1	0	0	0	0	0	0	34
01-02AM	7/19/10	0	6	4	0	0	0	0	1	8	1	0	0	0	0	0	0	21
02-03AM	7/19/10	0	6	2	0	1	0	0	1	7	2	0	0	0	0	0	0	22
03-04AM	7/19/10	1	6	2	0	0	0	0	1	8	2	0	0	0	0	0	0	19
04-05AM	7/19/10	0	11	5	0	1	0	0	1	10	1	0	0	0	0	0	0	30
05-06AM	7/19/10	0	23	21	1	4	0	0	1	11	2	0	0	0	0	1	0	65
TOTAL VEHICLES		21	1098	668	17	99	17	0	47	383	41	2	0	0	17	0*		2410
PERCENT OF TOTAL		0.9	45.6	27.7	0.7	4.1	0.7	0.0	2.0	15.9	1.7	0.1	0.0	0.0	0.7	0.0		

% HEAVY TRUCKS = 623/ 2410 = 25.9%
 AXLES / TRUCK = 2761/ 623 = 4.432
 % TRAILER TRUCKS = 490/ 2410 = 20.3%
 % TRAILERS @PK HR= 24/ 182 = 13.2%
 PEAK HOUR BETWEEN 03-04PM = 182 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.76
 % SINGLE UNIT TRUCKS = 133/ 2410 = 5.5%
 % SINGLE UNIT @ PK HR = 10/ 182 = 5.5%
 % TRUCKS AT PEAK HOUR = 34/ 182 = 18.7%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 R 0 2 7 . 1 H C

Route Code: I=Interstate, U=U.S., K=Ky or Parkways, R=County Rd, F=FS
 U=U.S., S=City St., O=Other

Route Number: 0024 Suffix: none

Milepoint: 027.1

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radars, P=Piezo, W=WIM Piezo, O=Other

Ramp # 231

EXIT
27

STA # 0 7 9 2 3 1 A 1 A C 1 1

County Number: 079 Station#: 231

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: 1

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 11

Ramp Signage

62

KENTUCKY DAM

CALVERT CITY

File # 61900021.600

of Lanes 1 Lane Width 15

County Marshall

Latitude N 37.00315

Station number 231 Machine # 12896 0011

Traffic light Stop sign Merge

Route 079-I-0024-231

Longitude W 88.19384

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1205	7	19	10
Recorder Picked Up	1100	7	28	10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 5

Right Shoulder N

Shoulder width 8

Type: Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024R

MARSHALL COUNTY

STATION 231

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	22	27	32	38	30	29	32	210
1- 2 AM	19	21	26	21	28	23	11	149
2- 3 AM	15	16	18	29	14	18	20	130
3- 4 AM	19	22	23	32	24	21	12	153
4- 5 AM	39	53	44	39	37	32	36	280
5- 6 AM	88	88	93	87	37	30	91	514
6- 7 AM	195	195	199	174	71	58	176	1066
7- 8 AM	140	142	136	156	91	61	120	846
8- 9 AM	127	134	124	126	108	77	100	796
9-10 AM	128	147	142	125	128	105	128	903
10-11 AM	133	148	175	132	146	130	140	1004
11-12 AM	155	153	164	190	142	159	168	1131
12- 1 PM	171	162	147	155	148	185	149	1117
1- 2 PM	156	161	164	165	143	176	169	1134
2- 3 PM	167	163	170	147	141	158	151	1097
3- 4 PM	172	169	177	175	154	123	140	1110
4- 5 PM	160	169	177	190	177	135	152	1160
5- 6 PM	169	140	159	167	123	162	135	1055
6- 7 PM	150	168	149	181	196	145	134	1123
7- 8 PM	99	93	100	153	127	101	105	778
8- 9 PM	109	106	115	123	106	99	73	731
9-10 PM	60	76	80	112	80	58	62	528
10-11 PM	76	64	67	69	56	60	66	458
11-12 PM	34	40	40	39	37	32	37	259
TOTALS:	2601	2657	2721	2825	2344	2177	2407	17732

AVERAGE DAILY TRAFFIC: 2355

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 199
 PM HIGH HOUR: 196

BETWEEN 6- 7 AM ON THURSDAY
 BETWEEN 6- 7 PM ON SATURDAY

MILE POINT : 27.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 27.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 2355 IN 2010
 LOCATION INFORMATION: RAMP FROM I 24 WESTBOUND TO US 62
 STATION: 231 BOTH E-W
 ROUTE: I 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS		MULTI-TRAILER TRUCKS			TOTAL VEHICLES	
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE	OTHERS			
06-07AM	7/19/10	1	95	39	1	2	0	0	1	1	16	0	0	0	0	0	0	155
07-08AM	7/19/10	1	74	24	1	3	1	1	2	17	0	0	0	0	0	0	124	
08-09AM	7/19/10	1	72	22	1	2	1	0	2	15	0	0	0	0	0	0	116	
09-10AM	7/19/10	1	76	23	1	2	1	0	3	18	0	0	0	0	0	0	125	
10-11AM	7/19/10	0	81	27	1	3	1	0	2	22	0	0	0	1	0	0	138	
11-12AM	7/19/10	2	95	29	1	4	1	0	3	24	0	0	0	1	0	0	160	
12-01PM	7/19/10	1	99	28	0	3	2	0	2	23	0	0	0	0	0	0	159	
01-02PM	7/19/10	1	99	29	1	3	1	0	3	22	0	0	0	0	0	0	159	
02-03PM	7/19/10	2	95	30	1	2	1	0	2	24	0	0	0	0	0	0	157	
03-04PM	7/19/10	1	97	30	0	4	1	0	2	21	0	0	0	0	0	0	156	
04-05PM	7/19/10	1	101	34	0	3	1	0	3	22	0	0	0	0	0	0	165	
05-06PM	7/19/10	2	92	27	1	2	0	0	1	22	0	0	0	0	0	0	147	
06-07PM	7/19/10	1	95	26	1	3	0	0	3	24	0	0	0	0	0	0	153	
07-08PM	7/19/10	1	61	18	1	2	0	0	1	23	0	0	0	0	0	0	106	
08-09PM	7/19/10	1	56	15	1	2	1	0	2	24	0	0	0	0	0	0	102	
09-10PM	7/19/10	1	39	11	0	1	0	0	1	21	0	0	0	0	0	0	74	
10-11PM	7/19/10	0	34	8	0	1	0	0	1	18	0	0	0	0	0	0	62	
11-12PM	7/19/10	0	20	6	0	0	0	0	0	11	0	0	0	0	0	0	37	
12-01AM	7/19/10	1	11	3	0	1	0	0	1	12	0	0	0	1	0	0	30	
01-02AM	7/19/10	0	8	1	0	0	0	0	0	9	0	0	0	0	0	0	19	
02-03AM	7/19/10	0	6	2	0	1	0	0	0	8	0	0	0	0	0	0	17	
03-04AM	7/19/10	0	8	2	0	1	0	0	0	9	0	0	0	0	0	0	20	
04-05AM	7/19/10	0	21	9	0	1	0	0	1	9	0	0	0	0	0	0	41	
05-06AM	7/19/10	1	43	18	0	1	0	0	1	11	0	0	0	0	0	0	75	
TOTAL VEHICLES		20	1478	461	11	47	12	1	37	425	1	1	3	0	0	0*	2497	
PERCENT OF TOTAL	0.8	59.2	18.5	0.4	1.9	0.5	0.0	1.5	17.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0		

% HEAVY TRUCKS = 538/ 2497 = 21.5 %
 AXLES / TRUCK = 2458/ 538 = 4.569
 % TRAILER TRUCKS = 467/ 2497 = 18.7 %
 % TRAILERS @PK HR= 25/ 165 = 15.2 %
 PEAK HOUR BETWEEN 04-05PM = 165 VEHICLES
 TOTAL HOURS = 24

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

AXLE CORRECTION FACTOR = 0.78
 % SINGLE UNIT TRUCKS = 71/ 2497 = 2.8 %
 % SINGLE UNIT @ PK HR = 4/ 165 = 2.4 %
 % TRUCKS AT PEAK HOUR = 29/ 165 = 17.6 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 R 0 2 7 . 1 H C

Route Code: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS; U=U.S., S=City St., O=Other

Route Number: 0024 Suffix: none Milepoint: 027.1 District making count: C

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed; R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 241

EXIT
27

STA # 0 7 9 2 4 1 A 1 A C 1 1

County Number: 079 Station#: 241 Lanes at Station: LANE Type Record: APCT Machine #: 11

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2; N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine #: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Ramp Signage

File # 61900031.L00

of Lanes 1 Lane Width 20

County Marshall

Latitude N 37.00053

Station number 241 Machine # 12061-012

Traffic light Stop sign Merge

Route 079-I-0024-241

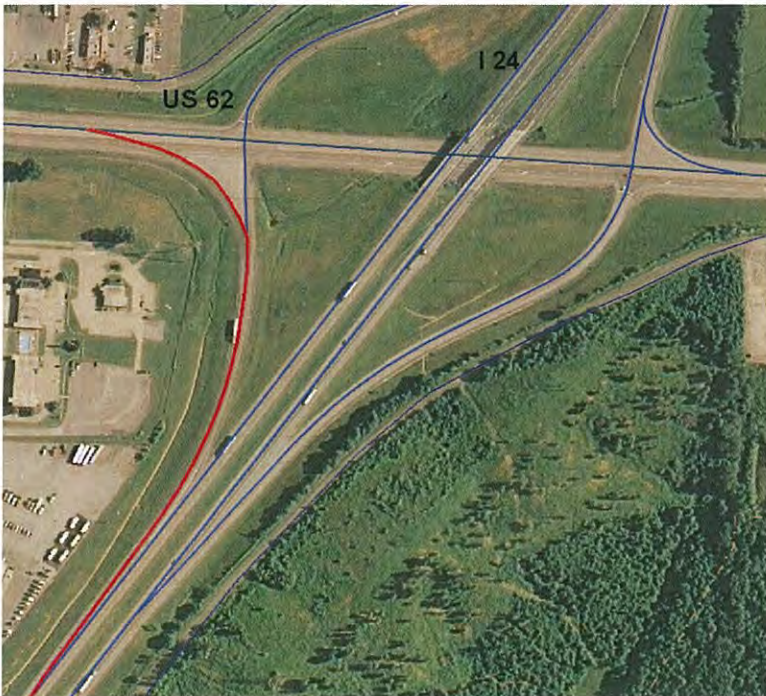
Longitude W 88.19624

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1229	7	19	10
Recorder Picked Up	1100	7	28	10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4

Right Shoulder N

Shoulder width 8

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024R

MARSHALL COUNTY

STATION 241

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	12	22	26	17	27	25	12	141
1- 2 AM	16	18	25	19	18	17	14	127
2- 3 AM	10	22	18	25	16	10	10	111
3- 4 AM	13	17	20	14	19	12	16	111
4- 5 AM	27	44	29	33	25	20	16	194
5- 6 AM	60	53	56	59	34	31	46	339
6- 7 AM	83	100	100	93	42	37	84	539
7- 8 AM	148	131	121	133	98	53	84	789
8- 9 AM	105	107	144	114	105	94	105	782
9-10 AM	115	132	127	128	124	114	113	865
10-11 AM	113	131	141	120	140	159	115	919
11-12 AM	103	142	126	126	140	171	114	922
12- 1 PM	104	123	121	147	143	160	124	922
1- 2 PM	108	121	143	141	163	175	125	976
2- 3 PM	132	160	151	142	148	150	140	1003
3- 4 PM	144	141	152	146	126	140	139	988
4- 5 PM	124	124	116	123	122	113	120	842
5- 6 PM	124	136	148	121	134	150	99	912
6- 7 PM	101	98	113	131	183	109	79	814
7- 8 PM	92	90	81	139	135	102	103	742
8- 9 PM	74	91	86	130	109	85	73	648
9-10 PM	47	71	72	57	97	65	48	457
10-11 PM	42	40	44	58	56	43	30	313
11-12 PM	26	30	36	41	41	23	22	219
TOTALS:	1923	2144	2176	2257	2245	2058	1872	14675

AVERAGE DAILY TRAFFIC: 1949

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 171 BETWEEN 11-12 AM ON SUNDAY
 PM HIGH HOUR: 183 BETWEEN 6- 7 PM ON SATURDAY
 MILE POINT : 27.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 27.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 1949 IN 2010
 LOCATION INFORMATION: RAMP FROM US 62 TO I 24 WESTBOUND
 STATION: 241 BOTH E-W
 ROUTE: 1 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							TOTAL VEHICLES				
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE		5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE	OTHERS
06-07AM	7/19/10	0	29	20	2	4	1	0	2	22	1	0	0	0	0	81
07-08AM	7/19/10	1	54	26	1	5	2	1	2	25	0	0	0	0	0	116
08-09AM	7/19/10	1	47	27	2	6	1	1	3	23	1	0	0	0	0	113
09-10AM	7/19/10	1	56	32	1	5	1	1	2	21	0	0	0	0	0	123
10-11AM	7/19/10	2	61	28	1	4	1	1	5	26	0	0	0	0	0	129
11-12AM	7/19/10	1	64	30	1	5	2	1	6	22	0	0	0	0	0	132
12-01PM	7/19/10	2	65	31	1	6	0	0	5	18	0	0	0	0	0	130
01-02PM	7/19/10	1	65	32	1	5	2	1	5	22	0	0	0	0	0	134
02-03PM	7/19/10	1	69	36	1	6	1	0	5	22	0	0	0	0	0	141
03-04PM	7/19/10	1	66	37	1	5	0	0	5	21	0	0	0	0	0	138
04-05PM	7/19/10	1	60	33	0	6	0	0	4	16	0	0	0	0	0	119
05-06PM	7/19/10	1	62	33	2	4	1	0	3	21	0	0	0	0	0	127
06-07PM	7/19/10	2	55	27	2	4	1	0	4	19	0	0	0	0	0	114
07-08PM	7/19/10	0	49	27	3	5	0	0	4	15	0	0	0	0	0	102
08-09PM	7/19/10	1	41	22	1	3	0	0	4	15	0	0	0	0	0	87
09-10PM	7/19/10	0	32	12	0	1	0	0	2	17	0	0	0	0	0	64
10-11PM	7/19/10	0	20	8	0	2	0	0	1	12	0	0	0	0	0	43
11-12PM	7/19/10	0	16	5	0	1	0	0	1	8	0	0	0	0	0	31
12-01AM	7/19/10	0	8	4	0	0	0	0	0	6	0	0	0	0	0	20
01-02AM	7/19/10	0	6	2	0	1	0	0	0	6	0	0	0	0	0	16
02-03AM	7/19/10	0	4	3	0	0	0	0	1	7	0	0	0	0	0	15
03-04AM	7/19/10	0	4	3	0	0	0	0	1	8	0	0	0	0	0	16
04-05AM	7/19/10	0	7	5	0	1	0	0	1	13	0	0	0	0	0	26
05-06AM	7/19/10	0	15	12	2	2	0	0	1	15	0	0	0	0	0	47
TOTAL VEHICLES		16	955	495	22	81	17	6	67	400	2	1	2	0	0	2064
PERCENT OF TOTAL		0.8	46.3	24.0	1.1	3.9	0.8	0.3	3.2	19.4	0.1	0.0	0.1	0.0	0.0	

% HEAVY TRUCKS = 598/ 2064 = 29.0 %
 AXLES / TRUCK = 2578/ 598 = 4.311
 % TRAILER TRUCKS = 472/ 2064 = 22.9 %
 % TRAILERS @PK HR = 27/ 141 = 19.1 %
 PEAK HOUR BETWEEN 02-03PM = 14.1 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.75
 % SINGLE UNIT TRUCKS = 126/ 2064 = 6.1 %
 % SINGLE UNIT @ PK HR = 8/ 141 = 5.7 %
 % TRUCKS AT PEAK HOUR = 35/ 141 = 24.8 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 R 0 2 5 . 1 H C

Route Code: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS
 U=U.S., S=City St., O=Other

Route Number: 0024 Suffix: none

Milepoint: 025.1

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 111

EXIT 25 B
 Fulton, Calvert
 City/JC Pkwy

STA # 0 7 9 1 1 1 A 1 A C 1 1

County Number: 079 Station#: 111

Lanes Counter is counting:
 A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: 1

Counter is counting:
 V=Vehicles, A=Axles

Type Record:
 V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 17058

Ramp Signage

NORTH To

PURCHASE PKY 62

CALVERT CITY

File # 61900071.400

of Lanes 1 Lane Width 14

County Marshall

Latitude N 36.59486

Station number 111 Machine # 17058-0029

Traffic light Stop sign Merge

Route 079-I-0024-111 079853

Longitude W 88.20505

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1400	7	19	10
Recorder Picked Up	1200	7	28	10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 6

Right Shoulder N

Shoulder width 7

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024R

MARSHALL COUNTY

STATION 111

DATE:	20	21	22	23	24	25	26	TOTALS
DAY:	TUE	WED	THU	FRI	SAT	SUN	MON	
12- 1 AM	2	0	0	1	0	0	0	3
1- 2 AM	0	0	2	2	1	1	0	5
2- 3 AM	0	1	0	0	1	1	0	3
3- 4 AM	0	0	0	0	1	1	0	2
4- 5 AM	3	0	2	1	0	1	0	7
5- 6 AM	2	0	0	1	0	0	0	4
6- 7 AM	1	1	1	3	2	0	0	10
7- 8 AM	2	4	2	1	7	3	2	17
8- 9 AM	6	4	2	2	4	4	4	27
9-10 AM	1	1	4	1	3	2	2	17
10-11 AM	3	2	5	2	6	4	2	27
11-12 AM	6	6	5	4	3	3	3	33
1- 2 PM	3	6	5	6	9	5	5	42
2- 3 PM	3	7	4	0	3	5	6	27
3- 4 PM	4	9	3	10	3	7	7	42
4- 5 PM	5	4	3	5	6	2	2	34
5- 6 PM	5	4	4	7	3	2	2	25
6- 7 PM	7	9	6	10	11	7	5	34
7- 8 PM	6	6	9	5	12	5	6	49
8- 9 PM	2	2	1	3	1	2	4	15
9-10 PM	0	2	2	2	5	5	1	21
10-11 PM	2	1	2	6	1	2	3	14
11-12 PM	3	3	3	1	3	0	2	10
TOTALS:	68	76	66	75	82	67	57	491

AVERAGE DAILY TRAFFIC: 65

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOURS : 7 BETWEEN 8- 9 AM ON SATURDAY
 PM HIGH HOUR : 12 BETWEEN 6- 7 PM ON SATURDAY
 MILE POINT : 25.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 2010

COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 25.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 65 IN 2010
 LOCATION INFORMATION: RAMP FROM I 24 EB ONTO PURCHASE PARKWAY SB

STATION: 111 BOTH E-W
 ROUTE: 1 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS			SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	
07-08AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	
08-09AM	7/19/10	0	1	1	0	0	0	0	1	0	0	0	0	0	
09-10AM	7/19/10	0	1	1	0	0	0	0	0	0	0	0	0	0	
10-11AM	7/19/10	0	1	1	0	0	0	0	0	0	0	0	0	0	
11-12AM	7/19/10	0	2	1	0	0	0	0	1	0	0	0	0	0	
12-01PM	7/19/10	0	2	2	0	0	0	1	0	0	0	0	0	0	
01-02PM	7/19/10	0	1	2	0	0	0	0	1	0	0	0	0	0	
02-03PM	7/19/10	0	2	2	0	0	0	0	0	0	0	0	0	0	
03-04PM	7/19/10	0	1	2	0	0	0	0	0	0	0	0	0	0	
04-05PM	7/19/10	0	1	1	0	0	0	0	0	0	0	0	0	0	
05-06PM	7/19/10	0	3	2	0	0	0	0	1	0	0	0	0	0	
06-07PM	7/19/10	0	2	3	0	0	0	0	0	0	0	0	0	0	
07-08PM	7/19/10	0	1	1	0	0	0	0	0	0	0	0	0	0	
08-09PM	7/19/10	0	1	1	0	0	0	0	0	0	0	0	0	0	
09-10PM	7/19/10	0	1	0	0	0	0	0	1	0	0	0	0	0	
10-11PM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	
11-12PM	7/19/10	0	1	0	0	0	0	0	0	0	0	0	0	0	
12-01AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	
01-02AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	
02-03AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	
03-04AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	
04-05AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	
05-06AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL VEHICLES		0	22	20	0	3	0	0	1	6	0	0	0	0*	
PERCENT OF TOTAL		0.0	42.3	38.5	0.0	5.8	0.0	0.0	1.9	11.5	0.0	0.0	0.0	0.0	

% HEAVY TRUCKS = 10/
 AXLES / TRUCK = 40/
 % TRAILER TRUCKS = 7/
 % TRAILERS @PK HR= 1/
 PEAK HOUR BETWEEN 05-06PM = 7 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.84
 % SINGLE UNIT TRUCKS = 3/
 % SINGLE UNIT @ PK HR = 1/
 % TRUCKS AT PEAK HOUR = 2/
 52 = 5.8 %
 7 = 14.3 %
 7 = 28.6 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 - 0 0 0 1 H C

Route Code: I=Interstate, U=U.S., K=Ky or Parkways, R=County Rd, F=FS
 U.S. Code: U=U.S., S=City St., O=Other

Route Number: 0024 Suffix: none

Milepoint: 0001

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 112

EXIT 25
 Fulton, Calvert
 City/JC Pkwy

STA # 0 7 9 1 1 2 A A C 1 1

County Number: 079 Station#: 112

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 11

Ramp Signage

Fulton
South Parkway

File # 619 00051 . 400

of Lanes 1 Lane Width 17'

County Marshall

Latitude N 36.98961

Station number 112 Machine # 12163-0058

Traffic light Stop sign Merge

Route 079-I-0024 -112

Longitude W 88.34921

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	14:10	07	19	2016
Recorder Picked Up	13:10	07	28	2016

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4'

Right Shoulder N

Shoulder width 5'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET--DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024

MARSHALL COUNTY

STATION 112

WEEK OF JULY 20 TO JULY 26 2010

DATE:	20	21	22	23	24	25	26	TOTALS
DAY:	TUE	WED	THU	FRI	SAT	SUN	MON	
12- 1 AM	1	0	1	0	0	1	0	2
1- 2 AM	0	0	0	0	1	0	0	2
2- 3 AM	0	0	0	0	2	0	0	2
3- 4 AM	1	1	1	0	0	0	0	3
4- 5 AM	3	0	1	0	0	0	2	6
5- 6 AM	2	2	0	2	2	0	0	8
6- 7 AM	2	2	1	0	0	0	0	5
7- 8 AM	2	5	1	4	0	0	1	13
8- 9 AM	5	2	7	4	3	9	1	31
9-10 AM	5	5	5	4	7	2	4	37
10-11 AM	5	5	4	7	5	8	6	37
11-12 AM	1	6	7	4	4	3	9	31
12- 1 PM	7	11	2	3	4	2	2	39
1- 2 PM	5	9	5	4	5	3	8	39
2- 3 PM	6	6	4	3	5	2	4	30
3- 4 PM	9	6	4	7	6	2	5	39
4- 5 PM	2	10	2	1	2	2	3	23
5- 6 PM	3	13	3	7	4	1	3	34
6- 7 PM	5	3	1	3	1	5	1	19
7- 8 PM	0	1	1	2	1	4	0	9
8- 9 PM	1	2	2	4	4	2	1	16
9-10 PM	1	2	2	3	1	2	3	14
10-11 PM	0	0	3	1	0	2	1	7
11-12 PM	0	0	1	4	1	0	0	6
TOTALS:	61	91	58	67	58	51	54	440

AVERAGE DAILY TRAFFIC: 57

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 9 BETWEEN 8- 9 AM ON SUNDAY
 PM HIGH HOUR: 13 BETWEEN 5- 6 PM ON WEDNESDAY

MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT

COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 57 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PKWY SB ONTO I 24 EB
 STATION: 112 BOTH E-W
 ROUTE: I 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/19/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07-08AM	7/19/10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
08-09AM	7/19/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	3
09-10AM	7/19/10	0	1	2	0	1	0	0	0	0	0	0	0	0	0	4
10-11AM	7/19/10	0	2	2	0	0	0	0	0	0	0	0	0	0	0	5
11-12AM	7/19/10	0	3	1	0	0	0	0	0	0	0	0	0	0	0	5
12-01PM	7/19/10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
01-02PM	7/19/10	0	2	2	0	0	0	0	0	0	0	0	0	0	0	5
02-03PM	7/19/10	0	2	2	0	0	0	0	0	0	0	0	0	0	0	5
03-04PM	7/19/10	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
04-05PM	7/19/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	3
05-06PM	7/19/10	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3
06-07PM	7/19/10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
07-08PM	7/19/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08-09PM	7/19/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
09-10PM	7/19/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
10-11PM	7/19/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
11-12PM	7/19/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12-01AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-02AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-03AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03-04AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04-05AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05-06AM	7/19/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VEHICLES		0	25	19	0	1	0	0	0	6	0	0	0	0	0*	51
PERCENT OF TOTAL		0.0	49.0	37.3	0.0	2.0	0.0	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0	

% HEAVY TRUCKS = 7/
 AXLES / TRUCK = 32/
 % TRAILER TRUCKS = 6/
 % TRAILERS @PK HR= 1/
 PEAK HOUR BETWEEN 02-03PM = 5 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.85
 % SINGLE UNIT TRUCKS = 1/
 % SINGLE UNIT @ PK HR = 0/
 % TRUCKS AT PEAK HOUR = 1/
 51 = 2.0 %
 5 = 0.0 %
 5 = 20.0 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 R 0 2 5 . 1 H C

Route Code: I=Interstate, U=U.S., K=Ky or Parkways, R=County Rd, F=FS
 Suffix: S=City St., O=Other

Route Number: 0024 Suffix: none

Milepoint: 0 2 5 . 1

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radars, P=Piezo, W=WIM Piezo, O=Other

Ramp # 121

EXIT 25
 Fulton, Calvert
 City/JC Pkwy

STA # 0 7 9 1 2 1 A 1 A C 1 1

County Number: 0 7 9 Station#: 1 2 1

Lanes Counter is counting:
 A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T M A

Counter is counting: V=Vehicles, A=Axes

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: _____

Ramp Signage

24 WEST

PAVEMENT

File # 61900041.400

of Lanes 1 Lane Width 16

County Marshall

Latitude N 36.59431

Station number 121 Machine # 17058008

Traffic light _____ Stop sign Merge 079

Route 079-I-0024-121 ~~857MB~~

Longitude W 88.21116

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1412	7	19	10
Recorder Picked Up	1100	7	28	10

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 4

Right Shoulder Y N

Shoulder width 7

Type: Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024R

MARSHALL COUNTY

STATION 121

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	0	3	3	5	21	17	12	61
1- 2 AM	5	1	0	3	6	1	0	16
2- 3 AM	4	1	3	3	2	2	1	16
3- 4 AM	3	2	3	3	3	6	3	23
4- 5 AM	8	4	13	9	6	6	11	57
5- 6 AM	30	35	28	34	29	18	44	218
6- 7 AM	49	45	47	54	22	18	46	281
7- 8 AM	63	74	74	55	19	17	66	368
8- 9 AM	53	49	42	55	23	13	38	273
9-10 AM	43	39	48	36	50	22	48	286
10-11 AM	35	43	49	44	42	26	46	285
11-12 AM	40	50	35	56	77	37	50	345
12- 1 PM	52	42	37	63	77	35	42	348
1- 2 PM	37	40	45	42	33	31	30	258
2- 3 PM	53	52	47	59	33	29	41	314
3- 4 PM	119	117	114	108	38	34	98	628
4- 5 PM	113	113	115	92	35	31	101	600
5- 6 PM	97	69	75	73	41	45	69	469
6- 7 PM	30	32	37	44	29	25	41	238
7- 8 PM	22	27	20	35	26	19	22	171
8- 9 PM	22	20	15	18	21	14	12	122
9-10 PM	15	15	8	16	17	10	11	92
10-11 PM	14	15	19	23	30	21	14	136
11-12 PM	6	6	3	11	17	7	6	56
TOTALS:	913	894	880	941	697	484	852	5661

AVERAGE DAILY TRAFFIC: 751

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 77 BETWEEN 11-12 AM ON SATURDAY
 PM HIGH HOUR: 119 BETWEEN 3- 4 PM ON TUESDAY
 MILE POINT : 25.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 25.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 751 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY NB ONTO I 24 EB
 STATION: 121 BOTH E-W
 ROUTE: I 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/19/10	1	34	6	0	1	0	0	0	1	0	0	0	0	0	43
07-08AM	7/19/10	0	44	8	0	1	0	1	1	2	0	0	0	0	0	58
08-09AM	7/19/10	0	30	8	0	1	0	0	1	2	0	0	0	0	0	42
09-10AM	7/19/10	0	28	8	0	1	1	1	1	2	0	0	0	0	0	42
10-11AM	7/19/10	0	27	9	0	1	1	0	1	2	0	0	0	0	0	41
11-12AM	7/19/10	0	34	10	0	1	1	1	1	2	0	0	0	0	0	50
12-01PM	7/19/10	0	36	9	0	1	0	0	1	2	0	0	0	0	0	49
01-02PM	7/19/10	0	24	6	0	1	1	1	1	2	0	0	0	0	0	36
02-03PM	7/19/10	0	32	9	0	1	1	0	0	2	0	0	0	0	0	45
03-04PM	7/19/10	2	56	28	0	2	1	0	1	2	0	0	0	0	0	92
04-05PM	7/19/10	0	56	14	0	1	1	0	1	2	0	0	0	0	0	89
05-06PM	7/19/10	1	50	15	0	1	1	0	0	1	0	0	0	0	0	69
06-07PM	7/19/10	0	25	6	0	0	0	0	0	1	0	0	0	0	0	32
07-08PM	7/19/10	0	17	5	0	0	1	0	0	1	0	0	0	0	0	24
08-09PM	7/19/10	0	14	4	0	0	0	0	0	1	0	0	0	0	0	19
09-10PM	7/19/10	0	11	1	0	0	0	0	0	0	0	0	0	0	0	12
10-11PM	7/19/10	0	14	1	0	0	1	0	0	0	0	0	0	0	0	17
11-12PM	7/19/10	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
12-01AM	7/19/10	0	6	1	0	0	0	0	0	0	0	0	0	0	0	8
01-02AM	7/19/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02-03AM	7/19/10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03-04AM	7/19/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	3
04-05AM	7/19/10	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
05-06AM	7/19/10	1	22	7	0	1	0	0	0	1	0	0	0	0	0	32
TOTAL VEHICLES		5	592	161	0	15	12	4	9	25	0	0	0	0	0	823
PERCENT OF TOTAL	0.6	71.9	19.6	0.0	1.8	1.5	0.5	1.1	3.0	0.0	0.0	0.0	0.0	0.0	0.0	

% HEAVY TRUCKS = 65/ 823 = 7.9 %
 AXLES / TRUCK = 243/ 65 = 3.738
 % TRAILER TRUCKS = 34/ 823 = 4.1 %
 % TRAILERS @PK HR = 3/ 92 = 3.3 %
 PEAK HOUR BETWEEN 03-04PM = 92 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.94
 % SINGLE UNIT TRUCKS = 31/ 823 = 3.8 %
 % SINGLE UNIT @ PK HR = 3/ 92 = 3.3 %
 % TRUCKS AT PEAK HOUR = 6/ 92 = 6.5 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 - 0 0 0 1 A C

Route Code: I=Interstate, U=U.S., K=Ky or Parkways, R=County Rd, F=FS
 U=U.S., S=City St., O=Other

Route Number: 0024 Suffix: none

Milepoint: 0001

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radars, P=Piezo, W=WIM Piezo, O=Other

Ramp # 122

EXIT 25
 Fulton, Calvert
 City/JC Pkwy

STA # 0 7 9 1 2 2 A L A C 1 1

County Number: 079 Station#: 122

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T M A

Counter is counting: V=Vehicles, A=Axes

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: _____

Ramp Signage
Nashville East

File # G1900061.200
 # of Lanes 1 Lane Width 15.5'
 County Marshall
 Latitude N 36.99054

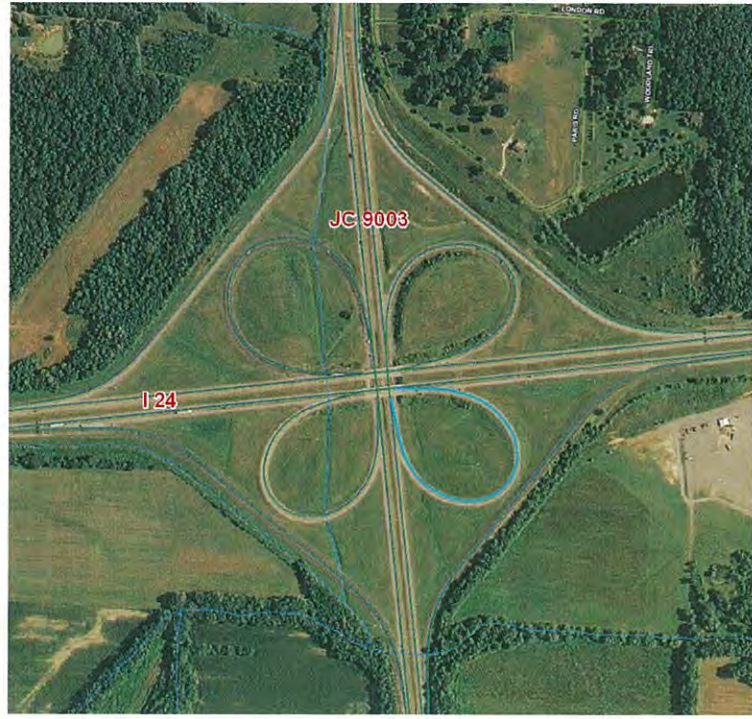
Station number 122 Machine # 12897-0059
 Traffic light _____ Stop sign Merge
 Route 079-I-0024-122
 Longitude W 88.34521

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	14:25	07	19	2010
Recorder Picked Up	13:18	07	28	2010

Station Location & Description (use back if necessary):



Left Shoulder (Y) N
 Shoulder width 5'

Right Shoulder (Y) N
 Shoulder width 6'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024

MARSHALL COUNTY

STATION 122

WEEK OF JULY 20 TO JULY 26 2010

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	3	6	9	4	7	5	3	37
1- 2 AM	4	2	6	5	8	4	1	30
2- 3 AM	1	0	4	1	7	8	0	21
3- 4 AM	0	2	2	2	7	4	2	19
4- 5 AM	17	8	10	15	8	9	8	75
5- 6 AM	24	40	41	39	12	11	34	201
6- 7 AM	115	108	119	102	16	14	115	589
7- 8 AM	122	113	102	99	23	14	110	583
8- 9 AM	69	51	41	57	27	11	49	305
9-10 AM	33	42	34	35	54	24	31	253
10-11 AM	36	32	45	33	36	17	28	227
11-12 AM	35	33	38	43	22	21	33	225
12- 1 PM	42	37	35	44	24	30	39	254
1- 2 PM	37	35	35	43	44	24	39	257
2- 3 PM	44	46	40	50	50	39	44	313
3- 4 PM	53	62	51	56	43	31	45	341
4- 5 PM	68	76	68	58	50	50	66	399
5- 6 PM	53	69	73	58	50	43	65	411
6- 7 PM	37	51	43	37	46	33	45	285
7- 8 PM	23	25	40	42	49	26	37	249
8- 9 PM	29	28	37	46	38	23	34	235
9-10 PM	34	14	28	42	26	29	27	200
10-11 PM	14	18	15	23	20	14	14	118
11-12 PM	9	7	10	26	16	5	5	78
TOTALS:	902	905	929	923	683	489	874	5705

AVERAGE DAILY TRAFFIC: 757

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 122 BETWEEN 7- 8 AM ON TUESDAY
 PM HIGH HOUR: 76 BETWEEN 4- 5 PM ON WEDNESDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 757 IN 2010
 LOCATION INFORMATION: RAMP FROM I 24 EB ONTO PURCHASE PKWY NB
 STATION: 122 BOTH E-W
 ROUTE: I 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS		MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE		
06-07AM	7/19/10	1	60	24	0	1	0	0	0	2	0	0	0	0	88
07-08AM	7/19/10	1	74	11	0	0	0	0	0	2	0	0	0	0	89
08-09AM	7/19/10	1	35	5	0	0	1	0	0	2	0	0	0	0	44
09-10AM	7/19/10	0	25	7	0	1	0	0	0	2	0	0	0	0	35
10-11AM	7/19/10	0	23	6	0	0	0	0	0	2	0	0	0	0	31
11-12AM	7/19/10	0	23	6	0	1	0	0	0	2	0	0	0	0	33
12-01PM	7/19/10	0	26	6	0	0	0	0	0	1	0	0	0	0	33
01-02PM	7/19/10	1	28	5	0	1	0	0	0	2	0	0	0	0	37
02-03PM	7/19/10	1	35	4	0	1	0	0	0	2	0	0	0	0	44
03-04PM	7/19/10	0	39	9	0	2	0	0	0	1	0	0	0	0	52
04-05PM	7/19/10	0	49	7	0	1	0	0	0	1	0	0	0	0	59
05-06PM	7/19/10	1	53	6	0	0	0	0	0	1	0	0	0	0	61
06-07PM	7/19/10	0	35	5	0	0	0	0	0	1	0	0	0	0	42
07-08PM	7/19/10	1	27	6	0	0	0	0	0	1	0	0	0	0	34
08-09PM	7/19/10	0	27	5	0	0	0	0	0	1	0	0	0	0	32
09-10PM	7/19/10	0	22	5	0	0	0	0	0	0	0	0	0	0	29
10-11PM	7/19/10	0	13	2	0	1	0	0	0	1	0	0	0	0	15
11-12PM	7/19/10	0	8	2	0	0	0	0	0	0	0	0	0	0	10
12-01AM	7/19/10	0	3	1	0	0	0	0	0	0	0	0	0	0	4
01-02AM	7/19/10	0	2	1	0	0	0	0	0	0	0	0	0	0	3
02-03AM	7/19/10	0	2	1	0	0	0	0	0	0	0	0	0	0	3
03-04AM	7/19/10	0	2	1	0	0	0	0	0	0	0	0	0	0	3
04-05AM	7/19/10	0	9	1	0	0	0	0	0	0	0	0	0	0	11
05-06AM	7/19/10	0	19	2	0	0	0	0	0	0	0	0	0	0	30
TOTAL VEHICLES		7	639	137	0	10	3	0	4	24	0	0	0	0	824
PERCENT OF TOTAL		0.8	77.5	16.6	0.0	1.2	0.4	0.0	0.5	2.9	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 41/
 AXLES / TRUCK = 165/
 % TRAILER TRUCKS = 28/
 % TRAILERS @PK HR = 2/
 PEAK HOUR BETWEEN 07-08AM = 24
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.95
 % SINGLE UNIT TRUCKS = 13/
 % SINGLE UNIT @ PK HR = 1/
 % TRUCKS AT PEAK HOUR = 3/
 824 = 1.6 %
 89 = 1.1 %
 89 = 3.4 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 R 0 2 5 . 1 H C

Route Code: I=Interstate, U=U.S., K=Ky or Parkways, R=County Rd, F=FS
 Suffix: S, M, A, D
 Milepoint: M M M M
 Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed, R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 131

EXIT 25 A
Fulton, Calvert
City/JC Pkwy

STA # 0 7 9 1 3 1 A 1 A C 1 1

County Number: C C C
 Station #: S S S
 Lanes at Station: N L P T
 Machine #: M A

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB
 Counter is counting: V=Vehicles, A=Axles
 Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM
 Machine #: M of All Machines at Station

Ramp Signage

SOUTH

PURCHASE PKY

FULTON

File # 6 1 9 0 0 0 5 1 . L 0 0

of Lanes 1 Lane Width 14

County Marshall

Latitude N 3 6 . 5 9 3 9 3

Station number 131 Machine # 14161 -0010

Traffic light Stop sign Merge

Route 079-I-0024 -131 079858

Longitude W 8 8 . 2 1 1 1 1

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Time	Month	Day	Year
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Set Out	1440	7	19 10
	Recorder Picked Up	1100	7	28 10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4

Right Shoulder N

Shoulder width 8

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024R

MARSHALL COUNTY

STATION 131

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	20	21	22	23	24	25	26	
1- 2 AM	29	34	25	31	51	40	23	233
2- 3 AM	16	16	20	20	35	41	10	158
3- 4 AM	11	9	17	16	25	21	4	103
4- 5 AM	11	7	13	14	15	20	9	89
5- 6 AM	18	14	13	20	24	13	11	113
6- 7 AM	33	37	33	38	15	8	28	192
7- 8 AM	68	63	65	68	44	16	60	384
8- 9 AM	138	133	130	118	67	27	121	734
9-10 AM	110	140	116	126	84	47	109	732
10-11 AM	120	128	127	142	98	73	129	817
11-12 AM	134	121	142	153	137	81	132	900
12- 1 PM	154	138	149	153	154	108	168	1024
1- 2 PM	163	154	187	186	175	129	163	1157
2- 3 PM	179	174	201	203	200	143	175	1275
3- 4 PM	217	211	231	254	225	159	205	1502
4- 5 PM	249	268	301	342	219	171	273	1823
5- 6 PM	296	308	328	171	275	157	295	1830
6- 7 PM	210	309	315	358	263	139	328	1922
7- 8 PM	182	175	211	213	188	153	155	1277
8- 9 PM	134	139	168	180	154	100	137	1012
9-10 PM	116	132	168	208	173	128	137	1062
10-11 PM	132	110	148	200	164	88	117	959
11-12 PM	82	63	88	139	124	53	55	604
TOTALS:	2844	2926	3249	3447	2976	1954	2888	20284

AVERAGE DAILY TRAFFIC: 2694

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 168 BETWEEN 11-12 AM ON MONDAY
 PM HIGH HOUR: 358 BETWEEN 5- 6 PM ON FRIDAY
 MILE POINT : 25.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 25.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 2694 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY SB ONTO I 24 EB
 STATION: 131 BOTH E-W
 ROUTE: I 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					2 AXLE BUSES	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE			
06-07AM	7/19/10	0	33	13	1	1	0	1	7	0	0	0	0	0	57	
07-08AM	7/19/10	0	83	14	0	2	0	1	7	1	0	0	0	0	108	
08-09AM	7/19/10	1	74	18	0	3	0	2	7	1	0	0	0	0	107	
09-10AM	7/19/10	1	78	22	0	4	0	3	7	0	0	0	0	0	118	
10-11AM	7/19/10	1	94	22	0	2	0	3	7	0	0	0	0	0	130	
11-12AM	7/19/10	1	115	20	1	1	0	4	5	1	0	0	0	0	150	
12-01PM	7/19/10	1	123	26	1	2	0	5	5	1	0	0	0	0	167	
01-02PM	7/19/10	2	140	25	0	3	0	5	6	1	0	0	0	0	183	
02-03PM	7/19/10	1	170	31	0	1	0	4	4	0	0	0	0	0	212	
03-04PM	7/19/10	2	209	35	0	3	0	4	5	1	0	0	0	0	262	
04-05PM	7/19/10	2	222	35	0	1	0	4	3	1	0	0	0	0	269	
05-06PM	7/19/10	2	237	34	0	1	0	3	4	1	0	0	0	0	283	
06-07PM	7/19/10	2	154	19	0	1	0	2	4	1	0	0	0	0	183	
07-08PM	7/19/10	1	119	16	0	1	0	2	2	1	0	0	0	0	142	
08-09PM	7/19/10	1	123	17	0	1	0	1	2	0	0	0	0	0	146	
09-10PM	7/19/10	1	114	14	0	1	0	0	3	0	0	0	0	0	134	
10-11PM	7/19/10	1	68	9	0	0	0	0	2	0	0	0	0	0	81	
11-12PM	7/19/10	1	40	5	0	0	0	0	1	0	0	0	0	0	51	
12-01AM	7/19/10	0	24	4	0	0	0	0	3	0	0	0	0	0	30	
01-02AM	7/19/10	0	16	3	0	0	0	0	2	0	0	0	0	0	18	
02-03AM	7/19/10	0	10	1	0	0	0	0	1	0	0	0	0	0	13	
03-04AM	7/19/10	0	7	1	0	0	0	0	2	0	0	0	0	0	11	
04-05AM	7/19/10	0	8	2	0	0	0	0	3	0	0	0	0	0	16	
05-06AM	7/19/10	0	16	3	0	2	0	1	4	0	0	0	0	0	27	
TOTAL VEHICLES		21	2277	387	3	33	17	0	47	96	11	6	0	0	2898	
PERCENT OF TOTAL		0.7	78.6	13.4	0.1	1.1	0.6	0.0	1.6	3.3	0.4	0.2	0.0	0.0	0.0	

% HEAVY TRUCKS = 213/ 2898 = 7.3 %
 AXLES / TRUCK = 887/ 213 = 4.164
 % TRAILER TRUCKS = 160/ 2898 = 5.5 %
 % TRAILERS @PK HR = 8/ 283 = 2.8 %
 PEAK HOUR BETWEEN 05-06PM = 283 VEHICLES
 TOTAL HOURS = 24

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 - 0 0 0 1 H C

Route Code: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS
 U=U.S., S=City St., O=Other

Route Number: 0024 Suffix: none

Milepoint: 0001

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 132

EXIT 25
 Fulton, Calvert
 City/JC Pkwy

STA # 0 7 9 1 3 2 A L A C 1 1

County Number: 079 Station#: 132

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 11222-0086

Ramp Signage

Calvert City
North to 42

File # G 1900071.L00

of Lanes 1 Lane Width 16'

County Marshall

Latitude N 36.99172

Station number 132 Machine # 11222-0086

Traffic light Stop sign Merge

Route 079-I-0024 -132 station 079152

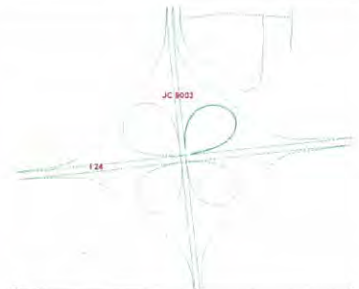
Longitude W 88.34505

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	14:40	07	19	2010
Recorder Picked Up	13:21	07	28	2010

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 4'

Right Shoulder Y N

Shoulder width 6'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician G.M./J.A. ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024

MARSHALL COUNTY

STATION 132

WEEK OF JULY 20 TO JULY 26 2010

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	8	10	13	13	10	16	9	77
1- 2 AM	7	9	4	8	6	12	11	69
2- 3 AM	11	9	13	9	6	12	5	65
3- 4 AM	9	18	13	13	8	7	10	78
4- 5 AM	36	39	40	37	19	10	37	218
5- 6 AM	89	81	83	80	44	35	105	517
6- 7 AM	198	207	186	195	74	55	189	1104
7- 8 AM	282	323	290	268	110	52	307	1632
8- 9 AM	222	233	232	211	170	115	229	1412
9-10 AM	235	224	238	253	183	137	213	1483
10-11 AM	221	230	211	219	254	180	198	1513
11-12 AM	202	212	196	222	238	174	178	1422
12- 1 PM	197	180	194	203	193	223	223	1413
1- 2 PM	182	184	219	215	196	219	194	1409
2- 3 PM	179	162	203	216	173	191	186	1310
3- 4 PM	189	176	176	203	190	175	178	1314
4- 5 PM	213	193	216	203	196	174	188	1383
5- 6 PM	215	187	222	224	199	172	224	1473
6- 7 PM	124	125	151	190	180	160	140	1070
7- 8 PM	84	79	67	130	138	99	72	669
8- 9 PM	48	82	94	70	117	85	56	552
9-10 PM	52	47	61	77	81	58	38	414
10-11 PM	32	28	38	49	71	37	23	278
11-12 PM	19	18	26	34	32	21	22	172
TOTALS:	3054	3055	3213	3372	2898	2420	3035	21047

AVERAGE DAILY TRAFFIC: 2795

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 323 BETWEEN 7- 8 AM ON WEDNESDAY
 PM HIGH HOUR: 254 BETWEEN 5- 6 PM ON FRIDAY

MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 2795 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PKWY NB TO I 24 WB
 STATION: 132 BOTH E-W
 ROUTE: 1 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS			SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE		
06-07AM	7/20/10	0	72	22	1	1	0	0	1	3	0	0	0	0	200
07-08AM	7/20/10	1	116	18	0	1	1	0	2	2	0	0	0	0	282
08-09AM	7/20/10	1	90	18	0	1	1	0	2	4	0	0	0	0	234
09-10AM	7/20/10	1	88	17	0	2	0	0	2	4	0	0	0	0	228
10-11AM	7/20/10	1	86	17	0	1	0	0	2	4	0	0	0	0	224
11-12AM	7/20/10	1	81	17	0	1	0	0	2	5	0	0	0	0	214
12-01PM	7/20/10	0	79	18	0	0	0	0	2	4	0	0	0	0	210
01-02PM	7/20/10	1	75	17	0	1	1	0	1	4	0	0	0	0	200
02-03PM	7/20/10	0	76	16	0	0	0	0	1	4	0	0	0	0	196
03-04PM	7/20/10	1	79	21	0	1	1	0	2	4	0	0	0	0	218
04-05PM	7/20/10	1	89	20	0	1	0	0	1	3	0	0	0	0	230
05-06PM	7/20/10	1	97	17	0	1	0	0	2	3	0	0	0	0	242
06-07PM	7/20/10	1	62	12	0	1	0	0	2	3	0	0	0	0	162
07-08PM	7/20/10	0	39	8	0	1	0	0	1	2	0	0	0	0	102
08-09PM	7/20/10	0	34	6	0	0	0	0	1	2	0	0	0	0	86
09-10PM	7/20/10	0	24	4	0	0	0	0	1	1	0	0	0	0	86
10-11PM	7/20/10	0	18	3	0	0	0	0	0	1	0	0	0	0	44
11-12PM	7/20/10	0	10	1	0	0	0	0	0	1	0	0	0	0	24
12-01AM	7/20/10	0	4	1	0	0	0	0	0	1	0	0	0	0	12
01-02AM	7/20/10	0	3	1	0	0	0	0	0	1	0	0	0	0	10
02-03AM	7/20/10	0	3	1	0	0	0	0	0	1	0	0	0	0	12
03-04AM	7/20/10	0	4	1	0	0	0	0	0	1	0	0	0	0	10
04-05AM	7/20/10	0	13	3	0	0	0	0	0	1	0	0	0	0	12
05-06AM	7/20/10	1	34	12	0	1	0	0	0	1	0	0	0	0	36
TOTAL VEHICLES		22	2552	542	2	36	10	0	48	120	0	2	0	0	3334
PERCENT OF TOTAL		0.7	76.5	16.3	0.1	1.1	0.3	0.0	1.4	3.6	0.0	0.1	0.0	0.0	0.0

% HEAVY TRUCKS = 218/ 3334 = 6.5%
 AXLES / TRUCK = 908/ 218 = 4.165
 % TRAILER TRUCKS = 170/ 3334 = 5.1%
 % TRAILERS @PK HR = 4/ 282 = 1.4%
 PEAK HOUR BETWEEN 07-08AM = 48
 TOTAL HOURS = 48

AXLE CORRECTION FACTOR = 0.93
 % SINGLE UNIT TRUCKS = 48/ 3334 = 1.4%
 % SINGLE UNIT @ PK HR = 2/ 282 = 0.7%
 % TRUCKS AT PEAK HOUR = 6/ 282 = 2.1%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 R D 2 5 . 1 H C

Route Code: I=Interstate, U=U.S., K=Ky or Parkways, S=City St., R=County Rd, F=FS

Route Number: 0024 Suffix: _ = none

Milepoint: M M M M

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 141

EXIT 25
Fulton, Calvert
City/JC Pkwy

STA # 0 7 9 1 4 1 A 1 A C 1 1

County Number: C C C Station#: S S S

Lanes Counter is counting:
A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T M A

Counter is counting:
V=Vehicles, A=Axles

Type Record:
V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 1 1

Ramp Signage

52A
24 EAST
NASHVILLE

File # 6 19 000 61 . 200

of Lanes 1 Lane Width 16

County Marshall

Latitude N 36 . 59 2 08

Station number 141 Machine # 12897.0050

Traffic light Stop sign Merge

Route 079-I-0024 -141 079851

Longitude W 88 . 207 8.2

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1451	7	19	10
Recorder Picked Up	1200	7	28	10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4

Right Shoulder N

Shoulder width 5

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024R

MARSHALL COUNTY

STATION 141

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	32	21	25	33	35	31	23	200
1- 2 AM	20	21	22	32	24	23	21	163
2- 3 AM	26	18	15	24	19	5	16	123
3- 4 AM	20	22	27	26	21	13	33	162
4- 5 AM	53	44	56	64	32	26	43	318
5- 6 AM	94	93	100	85	59	31	87	549
6- 7 AM	147	153	164	158	84	55	154	915
7- 8 AM	205	188	191	177	136	95	188	1180
8- 9 AM	183	215	198	198	184	125	170	1180
9-10 AM	185	224	224	244	273	164	220	1273
10-11 AM	267	266	241	270	312	240	250	1534
11-12 AM	196	237	225	262	241	222	231	1846
12- 1 PM	224	234	246	235	225	227	195	1614
1- 2 PM	200	210	211	284	180	272	239	1586
2- 3 PM	219	264	258	269	209	218	205	1596
3- 4 PM	209	233	245	279	174	242	206	1642
4- 5 PM	215	207	268	307	186	207	226	1616
5- 6 PM	218	237	226	278	185	189	217	1510
6- 7 PM	160	175	143	244	155	148	174	1350
7- 8 PM	104	118	129	138	137	140	124	1199
8- 9 PM	85	113	94	126	124	111	104	890
9-10 PM	76	82	122	81	79	77	61	757
10-11 PM	55	55	74	84	74	72	52	578
11-12 PM	31	52	61	43	49	35	39	466
TOTALS:	3224	3482	3565	3941	3197	2968	3278	23655

AVERAGE DAILY TRAFFIC: 3142

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 312 BETWEEN 10-11 AM ON SATURDAY
 PM HIGH HOUR: 307 BETWEEN 4- 5 PM ON FRIDAY
 MILE POINT : 25.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 25.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 3142 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY SB ONTO I 24 WB
 STATION: 141 BOTH E-W
 ROUTE: 1 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS			SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE MORE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/19/10	3	56	38	1	9	5	4	18	0	0	0	0	0	134
07-08AM	7/19/10	2	80	45	2	9	11	5	20	0	0	0	0	0	174
08-09AM	7/19/10	2	82	49	2	10	6	6	25	0	0	0	0	0	182
09-10AM	7/19/10	2	97	59	2	12	11	7	31	0	0	0	0	0	221
10-11AM	7/19/10	2	115	66	3	12	14	6	38	0	1	0	0	0	257
11-12AM	7/19/10	3	94	58	2	10	11	6	40	0	0	0	0	0	224
12-01PM	7/19/10	3	104	53	3	9	9	6	37	0	0	0	0	0	225
01-02PM	7/19/10	3	104	56	3	10	8	5	37	1	1	0	0	0	228
02-03PM	7/19/10	3	107	57	3	8	9	4	40	1	1	0	0	0	233
03-04PM	7/19/10	3	102	60	3	10	5	4	35	0	1	0	0	0	231
04-05PM	7/19/10	2	110	60	2	12	0	5	34	0	1	0	0	0	231
05-06PM	7/19/10	2	102	59	2	10	0	4	34	0	0	0	0	0	216
06-07PM	7/19/10	3	75	41	2	7	2	3	29	0	0	0	0	0	162
07-08PM	7/19/10	1	55	27	1	6	1	3	29	0	0	0	0	0	123
08-09PM	7/19/10	2	46	24	1	4	1	2	26	0	0	0	0	0	106
09-10PM	7/19/10	1	34	22	1	3	1	1	20	0	0	0	0	0	85
10-11PM	7/19/10	1	24	13	1	3	1	1	19	0	1	1	0	0	64
11-12PM	7/19/10	1	14	8	1	2	1	2	14	0	0	0	0	0	43
12-01AM	7/19/10	0	8	4	0	1	0	1	14	0	0	0	0	0	29
01-02AM	7/19/10	1	6	2	0	1	0	0	12	0	0	0	0	0	23
02-03AM	7/19/10	0	5	2	1	0	0	1	8	0	0	0	0	0	17
03-04AM	7/19/10	0	7	3	1	1	0	1	9	0	0	0	0	0	24
04-05AM	7/19/10	0	16	11	1	4	0	1	11	0	1	0	0	0	47
05-06AM	7/19/10	1	34	21	1	6	3	3	13	0	0	0	0	0	82
TOTAL VEHICLES		42	1477	840	39	159	110	80	593	2	9	2	0	0	3353
PERCENT OF TOTAL		1.3	44.1	25.1	1.2	4.7	3.3	2.4	17.7	0.1	0.3	0.1	0.0	0.0	

% HEAVY TRUCKS = 994/ 3353 = 29.6 %
 AXLES / TRUCK = 4080/ 994 = 4.105
 % TRAILER TRUCKS = 686/ 3353 = 20.5 %
 % TRAILERS @PK HR = 45/ 257 = 17.5 %
 PEAK HOUR BETWEEN 10-11AM = 257 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.76
 % SINGLE UNIT TRUCKS = 308/ 3353 = 9.2 %
 % SINGLE UNIT @ PK HR = 29/ 257 = 11.3 %
 % TRUCKS AT PEAK HOUR = 74/ 257 = 28.8 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning

Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 - 0 0 0 1 H C

Route Code: I=Interstate, U=U.S., K=Ky or Parkways, R=County Rd, F=FS
 Suffix: S=City St, O=Other

Route Number: 0024 Suffix: none

Milepoint: 0 0 0 1

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 142

EXIT 25
Fulton, Calvert
City/JC Pkwy

STA # 0 7 9 1 4 2 A L A C 1 1

County Number: 0 7 9 Station#: 1 4 2

Lanes at Station: A L A C

Type Record: L P T M A

Machine # of All Machines at Station: 1 1

Lanes Counter is counting:
 A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting:
 V=Vehicles, A=Axles

Ramp Signage

Paducah

24 West

File # 6 1 9 0 0 0 8 1 . 2 0 0

of Lanes 1 Lane Width 17'

County Marshall

Latitude N 3 6 . 9 9 0 8 1

Station number 1 4 2 Machine # 14161-0017

Traffic light Stop sign Merge

Route 079-I-0024-142

Longitude W 8 8 . 3 4 9 2 4

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	14:05	07	19	2010
Recorder Picked Up	13:27	07	28	2010

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 4'

Right Shoulder Y N

Shoulder width 5'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/TH ramp_countcard-07-2010.ppt

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 - 0 0 0 1 H C

Route Code: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS; U=U.S., S=City St, O=Other

Route Number: 0024 Suffix: none

Milepoint: 0001

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed; R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 111

EXIT 31

STA # 0 7 0 1 1 1 A 1 A C 1 1

County Number: 070 Station#: 111

Lanes at Station: ANLP

Machine # of All Machines at Station: 11

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2; N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Ramp Signage

Smithland

Grand Rivers (453)

File # G1900021.200

of Lanes 1 Lane Width 14'

County Livingston

Latitude N 37.03895

Station number 111 Machine # 12061-0004

Traffic light Stop sign Merge

Route 070-I-0024-111

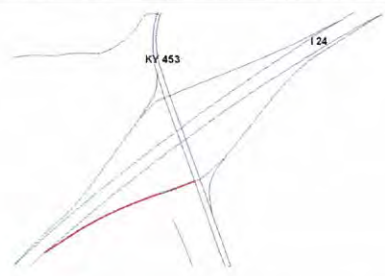
Longitude W 88.26987

	Time	Month	Day	Year
Recorder Set Out	12:04	07	19	2010
Recorder Picked Up	11:32	07	28	2010

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

Station Location & Description (use back if necessary):



** Counter set up on 1st study as channel instead of class **

Left Shoulder N

Shoulder width 5'

Right Shoulder N

Shoulder width 6'

Type: No shoulders exist

Bituminous Concrete

N/A Stabilized

Combination Earth

Curbed

Field Technician GM/JH

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024 RAMP

LIVINGSTON COUNTY

STATION 111

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	10	9	19	22	24	19	10	113
1- 2 AM	5	6	13	5	16	13	6	64
2- 3 AM	5	6	2	5	7	2	2	29
3- 4 AM	3	6	8	6	12	5	3	43
4- 5 AM	12	7	11	21	11	12	8	82
5- 6 AM	38	43	37	33	24	12	31	218
6- 7 AM	75	70	82	58	33	19	57	395
7- 8 AM	98	70	102	67	42	31	57	467
8- 9 AM	94	85	89	71	60	41	56	496
9-10 AM	81	84	83	79	93	58	57	535
10-11 AM	109	102	83	115	103	97	82	691
11-12 AM	110	106	100	111	112	97	113	749
12- 1 PM	107	120	119	127	131	123	102	829
1- 2 PM	110	131	127	117	106	126	101	818
2- 3 PM	132	121	137	159	112	132	106	899
3- 4 PM	176	152	145	171	115	100	151	1010
4- 5 PM	166	159	180	128	138	76	171	1018
5- 6 PM	164	143	146	183	123	105	162	1026
6- 7 PM	103	103	102	165	115	77	100	765
7- 8 PM	61	62	72	96	92	61	70	514
8- 9 PM	56	39	66	80	61	76	55	433
9-10 PM	44	56	54	60	59	45	52	370
10-11 PM	29	32	40	41	41	31	25	239
11-12 PM	25	19	25	37	28	14	20	168
TOTALS:	1813	1731	1842	1957	1658	1372	1598	11971

AVERAGE DAILY TRAFFIC: 1590

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 115 BETWEEN 10-11 AM ON FRIDAY
 PM HIGH HOUR: 183 BETWEEN 5- 6 PM ON FRIDAY

MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 - 0 0 0 1 H C

Route Code: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS; U=U.S., S=City St., O=Other

Route Number: 0024 Suffix: none

Milepoint: 0001

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed; R=Radars, P=Piezo, W=WIM Piezo, O=Other

Ramp # 121

EXIT 31

STA # 0 7 0 1 2 1 A 1 A C 1 1

County Number: 070 Station#: 121

Lanes at Station: LANE

Counter is counting: V=Vehicles, A=Axes

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 1

Ramp Signage

T-24

File # G1900031.200

of Lanes 1 Lane Width 18' tapered

County Livingston

Latitude N 37.04112

Station number 121 Machine # 18144-009

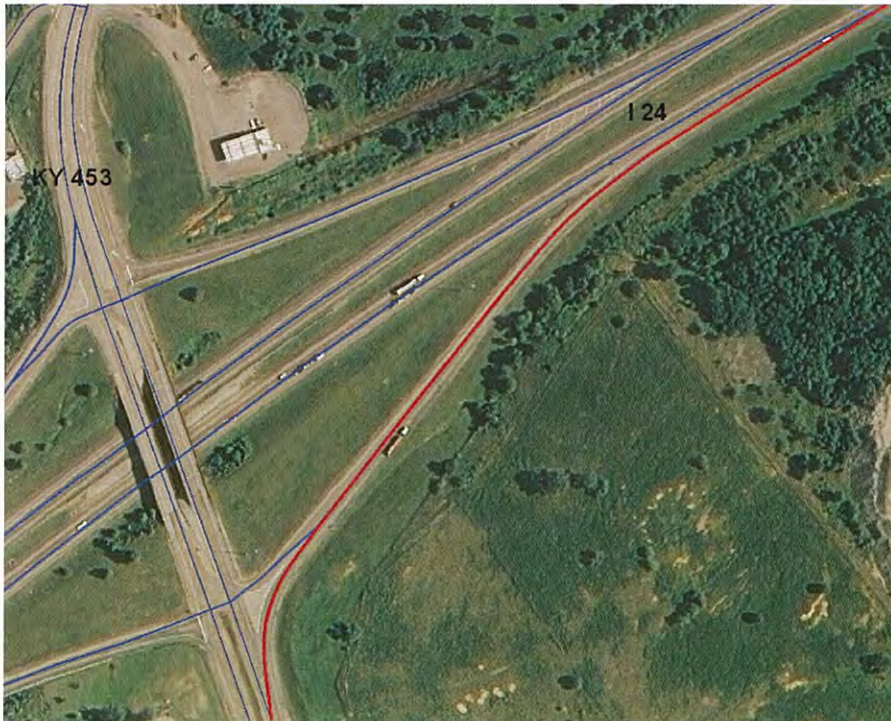
Traffic light Stop sign Merge

Route 070-I-0024-121

Longitude W 88.26625

	Time	Month	Day	Year	
Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	12:21	07	19	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	11:45	07	28	2010

Station Location & Description (use back if necessary):



Counter set with 1st study as channel instead of class

Left Shoulder Y N

Shoulder width 4'

Right Shoulder Y N

Shoulder width 7'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024 RAMP

LIVINGSTON COUNTY

STATION 121

WEEK OF JULY 20 TO JULY 26 2010

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	2	3	2	2	9	8	4	30
1- 2 AM	4	2	0	4	5	3	1	19
2- 3 AM	1	7	0	4	9	8	2	22
3- 4 AM	4	6	2	5	9	2	9	43
4- 5 AM	7	4	5	5	4	2	4	31
5- 6 AM	20	29	21	22	10	10	22	134
6- 7 AM	38	30	32	28	23	14	28	193
7- 8 AM	53	35	41	35	27	29	33	256
8- 9 AM	32	30	44	36	37	38	34	251
9-10 AM	30	59	35	50	41	64	39	329
10-11 AM	38	45	43	50	26	81	42	317
11-12 AM	44	41	50	47	41	78	38	318
12- 1 PM	37	51	44	30	26	71	35	305
1- 2 PM	37	41	52	43	63	57	43	346
2- 3 PM	42	41	45	60	73	83	36	375
3- 4 PM	41	53	49	54	76	68	57	402
4- 5 PM	36	41	49	45	83	83	34	376
5- 6 PM	30	36	41	40	55	73	35	316
6- 7 PM	25	36	28	40	48	50	29	261
7- 8 PM	21	13	35	32	46	32	30	213
8- 9 PM	15	14	26	40	57	31	27	216
9-10 PM	5	20	17	42	56	28	17	195
10-11 PM		7	10	22	29	13	11	97
11-12 PM		6	7	8	19	3	2	50
TOTALS:	599	648	681	754	870	928	615	5095

AVERAGE DAILY TRAFFIC: 676

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 81 BETWEEN 10-11 AM ON SUNDAY
 PM HIGH HOUR: 83 BETWEEN 4- 5 PM ON SATURDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 - 0 0 0 . 1 H C

Route Code: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS; U=U.S., S=City St., O=Other

Route Number: 0024 Suffix: _ = none

Milepoint: 000.1

Array: T=Tube, R=Radars, H=2 tubes, P=Piezo, L=Loop, W=WIM Piezo, B=2 loops, O=Other, M=mixed

Ramp # 131

EXIT 31

STA # 0 7 0 1 3 1 A 1 A C 1 1

County Number: 070 Station#: 131

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2; N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: 1

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 11221-0030

Ramp Signage

Grand Rivers 453

Smithland

File # G 1 9 0 0 0 0 1 . L 0 0

of Lanes 1 Lane Width 15'

County Livingston

Latitude N 3 7 . 0 4 1 9 9

Station number 1 3 1 Machine # 11221-0030

Traffic light Stop sign Merge

Route 070-I-0024 -131

Longitude W 8 8 . 2 6 6 8 6

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	11:32	07	19	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	11:13	07	28	2010

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4'

Right Shoulder N

Shoulder width 6'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician Gm, JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024 RAMP

LIVINGSTON COUNTY

STATION 131

WEEK OF JULY 20 TO JULY 26 2010

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	1	6	8	6	15	19	8	63
1- 2 AM	3	4	3	5	16	7	4	42
2- 3 AM	2	4	7	3	9	5	4	34
3- 4 AM	3	7	4	7	9	6	4	40
4- 5 AM	3	7	4	7	9	6	4	35
5- 6 AM	3	3	4	5	4	9	7	35
6- 7 AM	14	17	18	15	7	6	12	89
7- 8 AM	26	29	26	29	24	8	33	175
8- 9 AM	33	28	32	22	25	14	23	177
9-10 AM	32	39	28	30	21	24	35	207
10-11 AM	35	41	34	46	37	40	29	262
11-12 AM	38	54	58	53	100	66	45	414
1- 2 PM	56	63	56	68	115	73	44	462
2- 3 PM	55	68	64	73	108	75	47	466
3- 4 PM	55	69	69	73	108	83	60	533
4- 5 PM	51	70	55	95	94	100	54	490
5- 6 PM	59	71	77	82	95	83	60	532
6- 7 PM	59	70	72	95	94	71	67	529
7- 8 PM	75	50	66	104	82	75	67	476
8- 9 PM	38	55	58	91	76	61	57	462
9-10 PM	35	32	30	85	58	32	23	295
10-11 PM	25	28	30	60	43	26	18	230
11-12 PM	20	24	23	45	28	17	14	175
TOTALS:	746	835	857	1144	1200	899	721	6402

AVERAGE DAILY TRAFFIC: 850

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 115 BETWEEN 11-12 AM ON SATURDAY
 PM HIGH HOUR: 111 BETWEEN 6- 7 PM ON FRIDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: LIVINGSTON 2010
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 850 IN 2010
 LOCATION INFORMATION: RAMP FROM I 24 WB ONTO KY 453
 STATION: 131 BOTH E-W
 ROUTE: I 24R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					2 AXLE BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/19/10	2	22	0	0	0	0	0	0	0	0	0	0	0	0	26
07-08AM	7/19/10	2	22	0	0	0	0	0	0	0	0	0	0	0	0	27
08-09AM	7/19/10	3	25	0	0	0	0	0	0	0	0	0	0	0	0	29
09-10AM	7/19/10	1	34	0	0	0	0	0	0	0	0	0	0	0	0	36
10-11AM	7/19/10	1	52	0	0	0	0	0	0	0	0	0	0	0	0	57
11-12AM	7/19/10	3	57	0	0	0	0	0	0	0	0	0	0	0	0	64
12-01PM	7/19/10	2	61	0	0	0	0	0	0	0	0	0	0	0	0	65
01-02PM	7/19/10	3	65	0	0	0	0	0	0	0	0	0	0	0	0	70
02-03PM	7/19/10	2	62	0	0	0	0	0	0	0	0	0	0	0	0	66
03-04PM	7/19/10	4	66	0	0	0	0	0	0	0	0	0	0	0	0	72
04-05PM	7/19/10	2	67	0	0	0	0	0	0	0	0	0	0	0	0	72
05-06PM	7/19/10	3	63	0	0	0	0	0	0	0	0	0	0	0	0	66
06-07PM	7/19/10	3	58	0	0	0	0	0	0	0	0	0	0	0	0	62
07-08PM	7/19/10	2	34	0	0	0	0	0	0	0	0	0	0	0	0	38
08-09PM	7/19/10	2	27	0	0	0	0	0	0	0	0	0	0	0	0	30
09-10PM	7/19/10	1	20	0	0	0	0	0	0	0	0	0	0	0	0	22
10-11PM	7/19/10	0	17	0	0	0	0	0	0	0	0	0	0	0	0	19
11-12PM	7/19/10	1	8	0	0	0	0	0	0	0	0	0	0	0	0	10
12-01AM	7/19/10	1	7	0	0	0	0	0	0	0	0	0	0	0	0	9
01-02AM	7/19/10	0	5	0	0	0	0	0	0	0	0	0	0	0	0	6
02-03AM	7/19/10	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4
03-04AM	7/19/10	0	4	0	0	0	0	0	0	0	0	0	0	0	0	5
04-05AM	7/19/10	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
05-06AM	7/19/10	1	11	0	0	0	0	0	0	0	0	0	0	0	0	13
TOTAL VEHICLES		37	794	10	0	3	0	0	2	24	0	0	2	0	0*	872
PERCENT OF TOTAL		4.2	91.1	1.1	0.0	0.3	0.0	0.0	0.2	2.8	0.0	0.0	0.2	0.0	0.0	

% HEAVY TRUCKS = 31/
 AXLES / TRUCK = 146/
 % TRAILER TRUCKS = 28/
 % TRAILERS @PK HR = 1/
 PEAK HOUR BETWEEN 04-05PM
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.95
 % SINGLE UNIT TRUCKS @ PK HR = 3/
 % TRUCKS AT PEAK HOUR = 2/
 % OTHERS = 0.3%
 % SINGLE UNIT @ PK HR = 1/
 % TRUCKS AT PEAK HOUR = 2/
 % OTHERS = 0.4%
 % SINGLE UNIT @ PK HR = 1/
 % TRUCKS AT PEAK HOUR = 2/
 % OTHERS = 1.4%
 % SINGLE UNIT @ PK HR = 1/
 % TRUCKS AT PEAK HOUR = 2/
 % OTHERS = 2.8%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # I 0 0 2 4 - 0 0 0 . 1 A C

Route Code: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS
 U=U.S., S=City St., O=Other

Route Number: 0024 Suffix: _ = none

Milepoint: 000.1

Array: T=Tube, R=Radar, H=2 tubes, P=Piezo, L=Loop, W=WIM Piezo, B=2 loops, O=Other, M=mixed

Ramp # 141

EXIT 31

STA # 0 7 0 1 4 1 A 1 A C 1 1

County Number: 070 Station#: 141

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: LANE

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 121

Ramp Signage

121

File # G 1 9 0 0 0 1 1 . 2 0 0

of Lanes 1 Lane Width 15'

County Livingston

Latitude N 3 7 . 0 3 9 4 7

Station number 1 4 1 Machine # 12163-0052

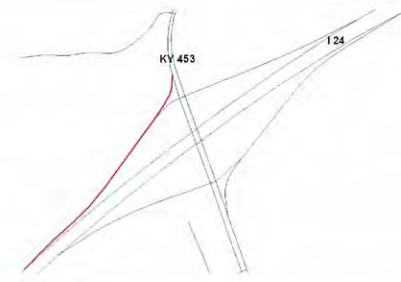
Traffic light Stop sign Merge

Route 070-I-0024-141

Longitude W 8 8 . 2 7 0 5 9

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	Time	Month	Day	Year
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	11:23	07	28	2010
		11:44	07	19	2010

Station Location & Description (use back if necessary):



Counter set with 1st study as channel instead of class

Left Shoulder N

Shoulder width 4'

Right Shoulder N

Shoulder width 6 1/2'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024 RAMP

LIVINGSTON COUNTY

STATION 141

WEEK OF JULY 20 TO JULY 26 2010

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	6	8	7	9	16	21	5	72
1- 2 AM	6	7	6	8	16	11	5	59
2- 3 AM	8	3	8	8	7	8	11	53
3- 4 AM	8	9	12	11	13	13	8	74
4- 5 AM	22	22	27	26	21	19	26	159
5- 6 AM	75	67	66	66	47	25	70	390
6- 7 AM	144	152	150	125	83	27	124	769
7- 8 AM	161	148	155	130	96	46	143	866
8- 9 AM	111	118	109	126	96	79	109	748
9-10 AM	112	143	125	143	106	109	115	853
10-11 AM	153	119	151	141	112	145	134	955
11-12 AM	152	110	142	162	137	116	114	933
12- 1 PM	151	123	131	130	128	161	139	963
1- 2 PM	157	134	145	134	137	153	130	990
2- 3 PM	147	127	161	142	141	141	125	984
3- 4 PM	158	148	133	139	156	130	136	1000
4- 5 PM	161	142	142	145	175	145	144	1054
5- 6 PM	131	104	118	131	124	155	105	868
6- 7 PM	89	95	103	135	158	115	84	779
7- 8 PM	72	34	84	86	82	77	58	493
8- 9 PM	81	67	68	97	116	86	50	565
9-10 PM	50	61	58	108	107	43	47	474
10-11 PM	32	43	40	62	66	41	26	310
11-12 PM	13	16	20	45	34	21	13	162
TOTALS:	2200	2000	2161	2309	2095	1887	1921	14573

AVERAGE DAILY TRAFFIC: 1935

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 162 BETWEEN 11-12 AM ON FRIDAY
 PM HIGH HOUR: 175 BETWEEN 4- 5 PM ON SATURDAY

MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # _____

I.D. # K 9 0 0 3 - 0 1 2 . 6 H C

Route Code: R N N N N S M M M M A D

Route Number: 9003 Suffix: _ = none Milepoint: 012.6 District making count: H C

Route Code Legend: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS, U=U.S., S=City St, O=Other

Array Legend: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed, R=Radar, P=Piezo, W=WIM Piezo

Add Delete Combine
Must be accompanied by reason

Estimate

Special

Index

STA # 0 1 2 3 1 0 A 4 A C 1 1

County Number: C C C Station#: S S S N L P T M A

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2

Lanes at Station: N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 1 1

ESTIMATE

of houses _____ x 10 = _____

of Business _____ x 25 = _____

Total

File # G 2 1 0 0 0 4 1 . L 0 0

County name Grant

Route TR 1003

Latitude N 3 6 . 3 8 1 5 3

Station number 312 Machine # 18236 067

City name _____

Road/Street name _____

Longitude W 8 8 . 4 5 2 7 1

	Time	Month	Day	Year
Type Record (check one) <input type="checkbox"/> Volume <input type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	9	7	10
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	1000	7	29

Station Location & Description (use back if necessary):

KY 339

Public Line

Comments

over (more on back)

Field Technician [Signature] countcard04-01.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003

GRAVES COUNTY

STATION 310

DATE:	THU	FRI	SAT	SUN	MON	TUE	WED	TOTALS
12- 1 AM	86	72	94	97	60	78	91	578
1- 2 AM	64	56	80	57	51	57	64	429
2- 3 AM	54	63	54	41	48	50	61	371
3- 4 AM	70	72	54	43	61	56	67	423
4- 5 AM	82	89	60	40	82	74	74	501
5- 6 AM	176	152	77	48	172	137	153	915
6- 7 AM	280	284	138	80	289	292	283	1646
7- 8 AM	436	425	195	109	383	356	409	2313
8- 9 AM	382	414	242	154	352	351	378	2273
9-10 AM	416	442	372	236	406	377	418	2667
10-11 AM	363	458	367	301	414	377	401	2681
11-12 AM	439	441	422	322	427	425	381	2857
12- 1 PM	467	479	354	357	424	437	409	2927
1- 2 PM	470	469	408	407	443	419	443	3059
2- 3 PM	449	511	375	376	416	440	466	3033
3- 4 PM	517	552	444	388	453	503	492	3349
4- 5 PM	536	519	398	380	462	466	513	3274
5- 6 PM	433	505	388	338	410	439	414	2927
6- 7 PM	331	411	354	351	289	321	324	2381
7- 8 PM	254	302	280	276	245	266	230	1853
8- 9 PM	243	241	235	221	212	209	208	1589
9-10 PM	210	193	188	163	230	199	212	1491
10-11 PM	207	193	188	168	230	173	150	1243
11-12 PM	122	156	146	103	128	145	128	928
TOTALS:	7087	7549	5974	5056	6626	6647	6769	45708

AVERAGE DAILY TRAFFIC: 6333

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 458 BETWEEN 10-11 AM ON FRIDAY
 PM HIGH HOUR: 552 BETWEEN 3- 4 PM ON FRIDAY

MILE POINT : 12.6
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 12.600
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 6333 IN 2010
 LOCATION INFORMATION: PURCHASE PARKWAY JUST SOUTH OF KY 339
 STATION: 310 BOTH N-S
 ROUTE: KY9003
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					2 AXLE BUSES	2 AXLE TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/21/10	2	106	49	1	13	5	0	29	32	2	4	0	0	0	243
07-08AM	7/21/10	3	168	73	3	15	5	3	32	32	2	2	0	0	0	341
08-09AM	7/21/10	3	147	71	2	14	4	4	32	44	3	2	0	0	0	327
09-10AM	7/21/10	4	169	85	4	15	4	1	46	51	2	2	0	0	0	387
10-11AM	7/21/10	4	171	80	4	16	6	2	47	49	2	2	0	0	0	383
11-12AM	7/21/10	6	193	84	4	15	5	4	44	53	2	2	0	0	0	413
12-01PM	7/21/10	4	188	87	5	21	8	3	46	54	3	3	0	0	0	424
01-02PM	7/21/10	5	204	90	4	17	8	2	44	53	5	2	1	1	0	436
02-03PM	7/21/10	5	220	88	3	16	4	2	44	50	2	2	0	0	0	436
03-04PM	7/21/10	4	247	95	4	16	4	4	49	54	3	3	0	0	0	481
04-05PM	7/21/10	5	248	92	3	17	5	3	46	51	2	2	0	0	0	473
05-06PM	7/21/10	4	224	86	4	17	2	1	43	40	3	3	0	0	0	423
06-07PM	7/21/10	3	180	84	2	12	2	1	35	40	1	1	0	0	0	342
07-08PM	7/21/10	2	139	44	3	11	2	0	28	39	1	1	0	0	0	264
08-09PM	7/21/10	2	117	36	1	9	1	0	27	30	1	1	0	0	0	228
09-10PM	7/21/10	3	111	35	2	9	1	0	29	30	1	1	0	0	0	212
10-11PM	7/21/10	2	96	29	1	6	1	0	19	23	1	1	0	0	0	180
11-12PM	7/21/10	1	111	35	1	4	1	0	25	29	1	1	0	0	0	131
12-01AM	7/21/10	1	67	23	1	5	0	0	17	17	0	2	0	0	0	84
01-02AM	7/21/10	1	35	14	2	4	1	0	12	14	0	1	0	0	0	59
02-03AM	7/21/10	0	27	6	1	2	0	0	10	13	0	0	0	0	0	52
03-04AM	7/21/10	0	20	6	1	1	0	0	9	15	0	0	0	0	0	52
04-05AM	7/21/10	0	21	9	1	3	1	0	11	16	0	1	0	0	0	64
05-06AM	7/21/10	0	25	9	0	4	1	0	12	20	0	2	0	0	0	73
05-06AM	7/21/10	1	51	23	1	9	2	0	21	21	1	4	0	0	0	134
TOTAL VEHICLES		64	3174	1278	54	260	74	27	720	840	38	43	9	9	0*	6590
PERCENT OF TOTAL		1.0	48.2	19.4	0.8	3.9	1.1	0.4	10.9	12.7	0.6	0.7	0.1	0.1	0.0	

% HEAVY TRUCKS = 2074/ 6590 = 31.5 %
 AXLES / TRUCK = 8598/ 2074 = 4.146
 % TRAILER TRUCKS = 1659/ 6590 = 25.2 %
 % TRAILERS @PK HR= 109/ 481 = 22.7 %
 PEAK HOUR BETWEEN 03-04PM = 481 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.75
 % SINGLE UNIT TRUCKS = 415/ 6590 = 6.3 %
 % SINGLE UNIT @ PK HR = 26/ 481 = 5.4 %
 % TRUCKS AT PEAK HOUR = 135/ 481 = 28.1 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # 1

I.D. # K 9 0 0 3 - 0 2 1 . 7 T C

Route Code: K Interstate, 9 U.S., 0 City St., 0 Other, 3 County Rd., - FS
 Milepoint: 0 2 1 . 7
 Array: T Tube, M 2 tubes, M Loop, M 2 loops, M mixed, C Radar, P Piezo, W WIM Piezo

Add Delete Combine
 Must be accompanied by reason

Estimate
 Special
 Index

STA # 0 4 2 B 9 2 A 3 A V 1 1

County Number: 0 4 2 (C, C, C)
 Station#: B 9 2 (S, S, S)
 Lanes at Station: A 3 A (N, L, P)
 Machine #: V 1 1 (T, M, A)

Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB
 Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM
 Machine # of All Machines at Station

ESTIMATE

of houses _____ x 10 = _____
 # of Business _____ x 25 = _____

Total

File # G 2 0 0 0 1 7 1 . 4 0 0
 County name Graves
 Route JC 9003
 Latitude N 3 6 . 7 3 4 9 2

Station number B 9 2 Machine # 18286-002
 City name _____
 Road/Street name _____
 Longitude W 8 8 . 6 6 7 3 . 2

	Time	Month	Day	Year
Type Record (check one) <input checked="" type="checkbox"/> Volume <input type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	15:24	07	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	9:25	07	2010

Station Location & Description (use back if necessary):

Exit 80

A

B92

Comments

Field Technician GM/JH countcard04-01.ppt

over (more on back)

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003

GRAVES COUNTY

STATION B92

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	58	70	53	59	74	72	81	467
1- 2 AM	66	63	62	55	45	48	59	398
2- 3 AM	91	94	84	43	27	72	80	491
3- 4 AM	67	76	90	46	42	75	55	451
4- 5 AM	109	139	113	55	32	97	121	666
5- 6 AM	229	240	246	77	57	233	200	1282
6- 7 AM	414	436	431	148	78	411	434	2352
7- 8 AM	611	586	569	225	116	612	576	3295
8- 9 AM	471	451	545	313	189	453	458	2880
9-10 AM	544	531	564	451	287	507	420	3304
10-11 AM	502	496	507	376	305	510	493	3189
11-12 AM	487	514	525	441	294	471	478	3210
12- 1 PM	544	544	541	374	361	521	519	3404
1- 2 PM	439	526	513	365	371	523	474	3211
2- 3 PM	459	541	499	349	375	446	514	3183
3- 4 PM	459	603	489	351	321	459	591	3341
4- 5 PM	669	701	589	529	342	623	592	3856
5- 6 PM	487	478	481	325	300	511	535	3117
6- 7 PM	376	366	395	291	269	278	364	2339
7- 8 PM	258	289	295	220	205	257	258	1782
8- 9 PM	220	261	199	176	205	225	256	1542
9-10 PM	223	196	187	133	160	165	176	1240
10-11 PM	196	189	132	129	151	169	166	1132
11-12 PM	105	123	146	128	102	106	137	847
TOTALS:	8152	8513	8255	5470	4708	7844	8037	50979

AVERAGE DAILY TRAFFIC: 7063

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM-HIGH HOUR: 612 BETWEEN 7- 8 AM ON MONDAY
 PM HIGH HOUR: 701 BETWEEN 4- 5 PM ON THURSDAY
 MILE POINT : 21.7
 COUNTED BY : CEN OFF
 DATA SOURCE : VOLUME
 ARRAY : TUBE
 LANES COUNTED: ALL LANES

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # 1

I.D. # K9003-023.3

Route Code: R N N N N S Milepoint: M M M M A D

Route Number: 9003 Suffix: none

Array: T H L B M
T=Tube H=2 tubes L=Loop B=2 loops M=mixed
R=Radar P=Piezo W=WIM Piezo

Interstate
 U.S.
 Ky or Parkways
 City St.
 County Rd
 Other
 FS

Add Delete Combine
 Must be accompanied by reason

Estimate
 Special
 Index

STA # 042A07N4AC12

County Number: C C C Station#: S S S N L P T M A

Lanes Counter is counting:
 A=All Lanes N=all NB
 B=Part NB & SB E=all EB
 C=Part EB & WB S=all SB
 1=lane 1 W=all WB
 2=lane 2

Lanes at Station: N L

Counter is counting:
 V=Vehicles
 A=Axes

Type Record:
 V=Volume
 C=Cls x Spd
 L=Len x Spd
 W=WIM

Machine # of All Machines at Station: 12

ESTIMATE

of houses _____ x 10 = _____

of Business _____ x 25 = _____

Total

File # 62000081.200

County name Graves

Route TR 9003

Latitude N 36.45100

Station number A07 Machine # 18285-025

City name _____

Road/Street name _____


Longitude W 85.39816

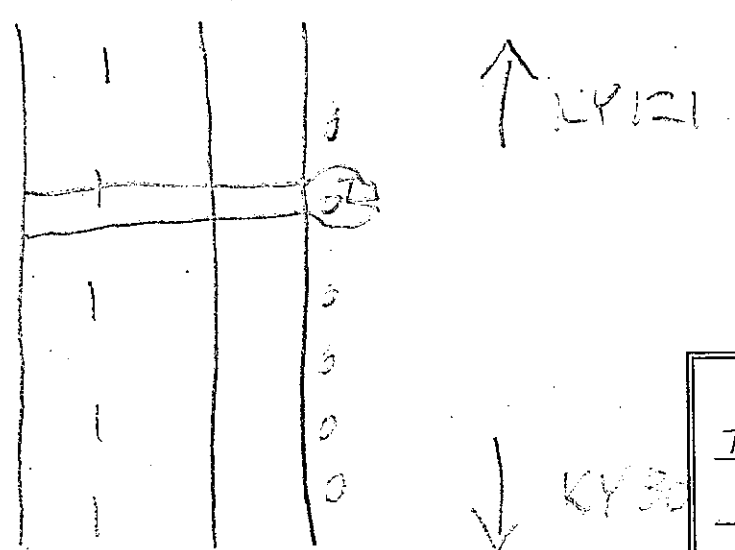
Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1245	7	20	10
Recorder Picked Up	0800	7	29	10

Station Location & Description (use back if necessary):





Comments

TUBE WAS UP

over (more on back)

Field Technician JK

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003

GRAVES COUNTY

STATION A07 N

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12-1 AM	21	22	23	24	25	26	27	
1-2 AM	35	41	31	43	55	43	45	293
2-3 AM	38	31	38	33	33	26	30	229
3-4 AM	54	59	56	32	20	45	51	317
4-5 AM	43	52	57	33	26	45	37	293
5-6 AM	83	96	84	45	34	93	100	535
6-7 AM	198	209	194	67	52	202	184	1106
7-8 AM	397	398	427	141	75	425	417	2280
8-9 AM	587	576	536	216	106	601	529	3151
9-10 AM	397	372	463	273	173	398	385	2461
10-11 AM	393	404	456	381	265	414	353	2666
11-12 AM	388	387	439	334	246	402	372	2568
TOTALS:	369	400	430	377	268	363	371	2578
	410	420	439	341	358	397	400	2765
	325	389	396	317	328	412	360	2527
	354	403	419	311	314	353	408	2562
	378	447	447	331	285	364	406	3082
	492	560	471	309	309	470	471	2618
	349	400	424	313	273	405	394	2958
	301	302	332	258	225	235	273	1926
	174	192	210	199	167	182	183	1307
	174	192	178	146	154	167	169	1180
	161	148	135	113	144	126	129	956
	130	143	104	97	112	116	116	818
	11-12 PM	100	102	88	63	75	85	588
TOTALS:	6305	6721	6828	4798	4085	6359	6268	41364

AVERAGE DAILY TRAFFIC: 5849

MONTHLY FACTOR: 99
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 601 BETWEEN 7- 8 AM ON MONDAY
 PM HIGH HOUR: 560 BETWEEN 4- 5 PM ON THURSDAY
 MILE POINT : 22.8
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LAMES COUNTED: ALL NB LNS

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 22.800
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 11571 IN 2010
 LOCATION INFORMATION: BTWN KY 80 AND KY 121
 STATION: A07 N
 ROUTE: KY9003
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS							MULTI-TRAILER TRUCKS							TOTAL VEHICLES
					2 AXLE BUSES	2 AXLE TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE	OTHERS											
06-07AM	7/20/10	3	201	77	1	9	4	0	24	20	2	1	0	0	0	1	0	0	345							
07-08AM	7/20/10	2	301	96	1	13	4	1	34	18	3	1	0	0	0	1	0	0	475							
08-09AM	7/20/10	2	216	69	1	12	5	1	28	22	4	0	0	0	1	0	0	0	475							
09-10AM	7/20/10	3	214	76	2	12	7	1	37	24	3	2	0	0	1	0	0	0	361							
10-11AM	7/20/10	3	208	73	3	13	7	1	35	23	3	0	0	0	1	0	0	0	382							
11-12AM	7/20/10	4	203	73	3	11	6	1	36	24	4	1	0	0	1	0	0	0	371							
12-01PM	7/20/10	4	220	73	3	15	9	1	38	28	4	1	0	0	1	0	0	0	396							
01-02PM	7/20/10	3	190	70	2	16	9	2	38	27	3	2	0	0	1	0	0	0	363							
02-03PM	7/20/10	3	210	67	2	14	5	1	39	27	3	1	1	0	1	0	0	0	373							
03-04PM	7/20/10	3	212	71	2	12	6	1	38	26	4	0	0	0	1	0	0	0	377							
04-05PM	7/20/10	3	258	92	2	15	4	1	44	26	4	2	0	0	1	0	0	0	448							
05-06PM	7/20/10	3	222	67	1	9	3	1	34	22	4	0	0	0	1	0	0	0	367							
06-07PM	7/20/10	4	166	50	1	7	2	0	22	16	4	0	0	0	0	0	0	0	270							
07-08PM	7/20/10	2	102	33	1	4	2	0	22	17	1	0	0	0	0	0	0	0	184							
08-09PM	7/20/10	1	93	31	0	4	1	0	17	15	1	2	1	1	0	0	0	0	166							
09-10PM	7/20/10	2	79	24	0	2	2	0	12	15	1	1	1	1	0	0	0	0	139							
10-11PM	7/20/10	0	68	17	0	1	1	0	11	14	1	1	1	1	0	0	0	0	114							
11-12PM	7/20/10	1	48	13	0	2	0	0	8	9	0	0	0	0	0	0	0	0	82							
12-01AM	7/20/10	0	20	7	0	1	0	0	5	8	1	1	0	0	0	0	0	0	44							
01-02AM	7/20/10	0	12	5	0	1	0	0	6	8	1	1	0	0	0	0	0	0	33							
02-03AM	7/20/10	0	25	9	0	1	0	0	5	7	1	0	0	0	0	0	0	0	46							
03-04AM	7/20/10	0	19	7	0	1	0	0	5	8	0	0	0	0	0	0	0	0	44							
04-05AM	7/20/10	1	38	20	0	3	2	0	6	10	1	0	0	0	0	0	0	0	83							
05-06AM	7/20/10	2	92	35	0	7	2	0	13	15	1	2	2	0	0	0	0	0	169							
TOTAL VEHICLES		49	3417	1155	27	185	83	12	557	429	47	21	3	12	0	0	0	0	5997							
PERCENT OF TOTAL	0.8	57.0	19.3	0.5	3.1	1.4	0.2	9.3	7.2	0.8	0.4	0.1	0.2	0.0												

% HEAVY TRUCKS = 1376/ 5997 = 22.9 %
 AXLES / TRUCK = 5583/ 1376 = 4.057
 % TRAILER TRUCKS = 1069/ 5997 = 17.8 %
 % TRAILERS @PK HR = 57/ 475 = 12.0 %
 PEAK HOUR BETWEEN 07-08AM = 24
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.81
 % SINGLE UNIT TRUCKS = 307/ 5997 = 5.1 %
 % SINGLE UNIT @ PK HR = 19/ 475 = 4.0 %
 % TRUCKS AT PEAK HOUR = 76/ 475 = 16.0 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # 1

I.D. # K 9 0 6 3 - 0 2 2 . 8 H K

Route Code: R N N N N S Milepoint: M M M M A D

Route Code Legend: R=County Rd, N=U.S., S=City SL, O=Other, F=FS

Milepoint Legend: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed, R=Radars, P=Piezo, W=WIM Piezo

Suffix: _ = none

Add Delete Combine
Must be accompanied by reason

Estimate
 Special
 Index

STA # 0 4 2 2 0 7 5 4 A 2 2

County Number: C C C Station#: S S S N L P T M A

Lanes Counter is counting:
A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: M A

ESTIMATE

of houses ___ x 10 = ___
of Business ___ x 25 = ___

Total

File # G 2 0 0 0 0 7 1 . L 0 0
County name Groves
Route TR 9023
Latitude N 3 6 . 4 5 1 0 0


Station number A 0 7 Machine # 18286 019
City name _____
Road/Street name _____
Longitude W 8 5 . 3 9 5 1 6

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	12:40	7	30	10
Recorder Picked Up	0800	7	29	10

Station Location & Description (use back if necessary):



↑ KY 721

↓ 28

32

Comments

over (more on back)

Field Technician 32 countcard04-01.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003

GRAVES COUNTY

STATION A07 S

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	56	83	58	78	81	50	50	456
1- 2 AM	38	49	37	68	66	47	44	349
2- 3 AM	57	44	51	44	36	41	38	311
3- 4 AM	49	59	69	38	26	59	52	352
4- 5 AM	72	57	60	51	34	66	65	405
5- 6 AM	158	158	118	76	36	172	163	881
6- 7 AM	235	235	212	105	43	222	229	1281
7- 8 AM	289	323	310	159	81	320	277	1759
8- 9 AM	312	331	322	158	125	298	309	1855
9-10 AM	309	278	297	216	182	313	327	1922
10-11 AM	342	282	351	245	219	343	279	2061
11-12 AM	334	360	366	292	269	372	336	2329
12- 1 PM	341	393	380	266	267	337	363	2347
1- 2 PM	334	353	463	310	325	368	372	2525
2- 3 PM	404	405	425	292	271	415	387	2599
3- 4 PM	479	509	552	344	319	467	468	3138
4- 5 PM	525	511	485	349	359	495	570	3294
5- 6 PM	494	501	470	337	311	481	493	3087
6- 7 PM	343	346	380	305	294	341	326	2335
7- 8 PM	239	283	266	311	301	308	286	1994
8- 9 PM	269	262	250	254	193	226	246	1700
9-10 PM	198	265	254	259	167	207	245	1595
10-11 PM	140	151	198	194	133	159	149	1124
11-12 PM	109	106	142	124	86	107	93	767
TOTALS:	6126	6344	6516	4875	4224	6214	6167	40466

AVERAGE DAILY TRAFFIC: 5722

MONTHLY FACTOR: 99
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 372 BETWEEN 11-12 AM ON MONDAY
 PM HIGH HOUR: 570 BETWEEN 4- 5 PM ON TUESDAY
 MILE POINT : 22.8
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL SB LNS

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 22.800
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 11571 IN 2010
 LOCATION INFORMATION: BTWN KY 80 AND KY 121

STATION: A07 S
 ROUTE: KY9003
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS		MULTI-TRAILER TRUCKS			TOTAL VEHICLES		
					BUSSES	2 AXLE TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE		7 OR MORE AXLE	OTHERS
06-07AM	7/20/10	3	73	60	2	16	2	1	17	21	2	2	0	199		
07-08AM	7/20/10	2	105	73	3	19	3	4	24	23	4	1	0	262		
08-09AM	7/20/10	3	100	77	3	22	4	5	24	25	3	2	0	268		
09-10AM	7/20/10	3	105	80	4	20	5	2	28	27	3	1	0	279		
10-11AM	7/20/10	4	100	89	3	23	5	5	34	31	2	1	0	298		
11-12AM	7/20/10	4	125	101	3	23	5	5	30	30	4	0	0	334		
12-01PM	7/20/10	3	133	97	3	21	5	2	32	32	2	2	0	334		
01-02PM	7/20/10	5	147	111	3	22	6	4	32	31	3	1	0	366		
02-03PM	7/20/10	5	160	114	3	22	5	3	33	30	3	1	0	380		
03-04PM	7/20/10	5	199	148	3	28	4	5	36	30	4	0	0	461		
04-05PM	7/20/10	5	230	150	3	28	3	1	37	37	3	0	0	491		
05-06PM	7/20/10	6	220	139	2	27	2	1	35	29	2	1	0	455		
06-07PM	7/20/10	3	158	106	2	17	3	2	24	22	3	0	0	338		
07-08PM	7/20/10	3	131	77	2	16	1	0	21	22	0	0	0	275		
08-09PM	7/20/10	2	116	73	2	12	2	0	17	17	2	1	0	242		
09-10PM	7/20/10	2	108	67	1	9	1	0	14	17	1	2	0	224		
10-11PM	7/20/10	1	75	42	1	6	1	0	11	15	2	0	0	156		
11-12PM	7/20/10	1	51	28	1	4	1	0	8	10	1	1	0	105		
12-01AM	7/20/10	1	30	17	1	4	1	0	6	8	1	0	0	67		
01-02AM	7/20/10	1	20	11	1	3	2	0	5	5	0	0	0	51		
02-03AM	7/20/10	1	18	8	1	2	2	0	5	8	1	0	0	46		
03-04AM	7/20/10	0	17	11	1	3	3	0	6	9	1	1	0	52		
04-05AM	7/20/10	0	17	14	1	4	2	0	8	11	1	0	0	58		
05-06AM	7/20/10	2	45	46	1	10	1	0	12	14	2	2	0	135		
TOTAL VEHICLES		65	2483	1739	49	361	69	37	498	488	53	22	1	11	0*	5876
PERCENT OF TOTAL		1.1	42.3	29.6	0.8	6.1	1.2	0.6	8.5	8.3	0.9	0.4	0.0	0.2	0.0	

% HEAVY TRUCKS = 1589/ 5876 = 27.0 %
 AXLES / TRUCK = 6118/ 1589 = 3.850
 % TRAILER TRUCKS = 1073/ 5876 = 18.3 %
 % TRAILERS APK HR = 71/ 491 = 14.5 %
 PEAK HOUR BETWEEN 04-05PM = 491 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.80
 % SINGLE UNIT TRUCKS = 516/ 5876 = 8.8 %
 % SINGLE UNIT @ PK HR = 35/ 491 = 7.1 %
 % TRUCKS AT PEAK HOUR = 106/ 491 = 21.6 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 2010

COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 22.800
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 11571 IN 2010
 LOCATION INFORMATION: BTWN KY 80 AND KY 121

STATION: A07
 ROUTE: KY9003
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE	OTHERS			
06-07AM	7/20/10	6	274	137	3	25	6	1	41	41	4	3	0	1	0	0	572	
07-08AM	7/20/10	4	406	169	4	32	7	5	58	41	7	2	0	2	0	0	737	
08-09AM	7/20/10	5	316	146	4	34	9	6	51	47	7	2	0	0	0	0	629	
09-10AM	7/20/10	6	319	156	6	36	12	3	65	51	6	3	0	2	0	0	661	
10-11AM	7/20/10	7	308	162	6	36	12	6	69	54	5	3	0	0	0	0	669	
11-12AM	7/20/10	8	328	174	6	34	11	7	66	54	8	3	0	0	0	0	701	
12-01PM	7/20/10	7	353	170	6	36	14	3	70	60	6	3	0	0	0	0	730	
01-02PM	7/20/10	8	337	181	6	38	15	6	70	58	5	3	0	0	0	0	729	
02-03PM	7/20/10	8	370	181	5	36	10	4	72	57	6	2	0	0	0	0	753	
03-04PM	7/20/10	8	411	219	5	40	10	4	74	56	8	1	0	0	0	0	838	
04-05PM	7/20/10	8	488	242	5	43	7	2	81	55	5	1	0	0	0	0	939	
05-06PM	7/20/10	9	442	206	3	36	5	2	69	42	6	1	0	0	0	0	822	
06-07PM	7/20/10	7	324	156	3	24	5	0	46	38	4	0	1	0	0	0	608	
07-08PM	7/20/10	5	233	110	3	20	3	0	43	32	2	0	0	0	0	0	459	
08-09PM	7/20/10	3	209	104	1	16	3	0	34	32	2	3	0	0	0	0	408	
09-10PM	7/20/10	4	187	91	1	11	2	0	26	29	3	2	1	1	0	0	363	
10-11PM	7/20/10	1	143	59	1	7	1	0	22	22	1	1	1	0	0	0	270	
11-12PM	7/20/10	2	99	41	1	6	1	0	16	19	1	1	0	0	0	0	187	
12-01AM	7/20/10	1	50	24	1	5	1	0	12	14	2	1	0	0	0	0	111	
01-02AM	7/20/10	1	32	16	2	4	2	0	10	16	1	0	0	0	0	0	84	
02-03AM	7/20/10	1	43	15	1	3	2	0	10	15	1	0	0	0	0	0	92	
03-04AM	7/20/10	0	36	20	1	4	5	0	11	17	1	1	0	0	0	0	96	
04-05AM	7/20/10	1	55	34	1	7	4	0	14	21	2	2	0	0	0	0	141	
05-06AM	7/20/10	4	137	81	1	17	3	0	25	29	3	4	0	0	0	0	304	
TOTAL VEHICLES	114	5900	2894	76	546	152	49	1055	917	100	43	4	23	0*	0	0	11873	
PERCENT OF TOTAL	1.0	49.7	24.4	0.6	4.6	1.3	0.4	8.9	7.7	0.8	0.4	0.0	0.2	0.0	0.0	0.0		

% HEAVY TRUCKS = 2965/11873 = 25.0 %
 AXLES / TRUCK = 11701/ 2965 = 3.946
 % TRAILER TRUCKS = 2142/11873 = 18.0 %
 % TRAILERS @PK HR= 144/ 939 = 15.3 %
 PEAK HOUR BETWEEN 04-05PM 939 VEHICLES
 TOTAL HOURS = NORTH BOUND 24 - SOUTH BOUND 24

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

AXLE CORRECTION FACTOR = 0.80
 % SINGLE UNIT TRUCKS = 823/11873 = 6.9 %
 % SINGLE UNIT @ PK HR = 57/ 939 = 6.1 %
 % TRUCKS AT PEAK HOUR = 201/ 939 = 21.4 %

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # 1

I.D. # K 9 0 0 3 - 0 3 4 . 1 H C

Route Code: R N N N N S Milepoint: M M M M A D

Route Code Legend:
 I=Interstate U=U.S.
 K=Ky or Parkways S=City St.
 R=County Rd C=Other
 F=FS

Suffix: _ = none

Array - T=Tube H=2 tubes L=Loop B=2 loops M=mbxd
 R=Radars P=Piezo W=WIM Piezo

Add Delete Combine
 Must be accompanied by reason

Estimate
 Special
 Index

STA # 0 4 2 1 1 5 A 4 A C 1 1

County Number: C C C Station#: S S S N L P T M A

Lanes Counter is counting:
 A=All Lanes N=all NB
 B=Part NB & SB E=all EB
 C=Part EB & WB S=all SB
 1=lane 1 W=all WB
 2=lane 2

Lanes at Station: N L P T

Counter is counting:
 V=Vehicles
 A=Axes

Type Record:
 V=Volume
 C=Cls x Spd
 L=Len x Spd
 W=WIM

Machine # of All Machines at Station: 1 1

ESTIMATE

of houses _____ x 10 = _____
 # of Business _____ x 25 = _____

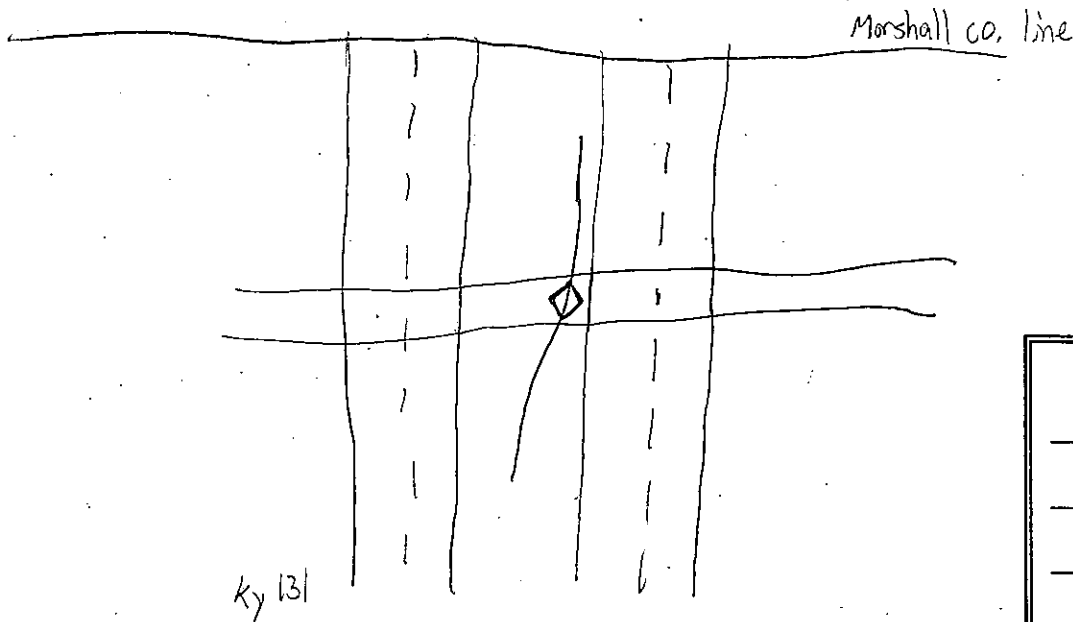
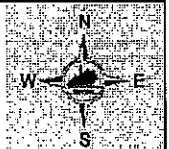
Total

File # G 20 000 41 . L 00
 County name Graves
 Route JC 903
 Latitude N 36 . 8 1 1 ' 9 8

Station number 1 1 5 Machine # 14772-0059
 City name _____
 Road/Street name _____
 Longitude W 8 8 . 4 8 9 3 . 0

	Time	Month	Day	Year	
Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	8:35	07	20	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	7:38	07	29	2010

Station Location & Description (use back if necessary):



Comments

over (more on back)

Field Technician GM/JH

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003

GRAVES COUNTY

STATION 115

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	70	79	60	77	70	59	60	475
1- 2 AM	38	33	46	56	47	40	48	322
2- 3 AM	46	35	39	34	22	34	40	250
3- 4 AM	56	60	58	49	25	53	48	349
4- 5 AM	93	97	87	53	31	83	86	530
5- 6 AM	183	200	166	78	47	169	155	998
6- 7 AM	293	329	319	152	74	343	316	1826
7- 8 AM	382	377	375	196	119	359	362	2170
8- 9 AM	306	326	359	246	182	333	368	2120
9-10 AM	365	355	354	356	225	385	346	2386
10-11 AM	394	387	413	354	298	413	392	2551
11-12 AM	381	377	448	333	304	364	382	2589
12- 1 PM	416	419	414	345	322	348	396	2624
1- 2 PM	378	452	452	322	385	407	369	2732
2- 3 PM	431	390	458	309	370	380	393	2731
3- 4 PM	485	498	486	334	337	467	505	3112
4- 5 PM	504	511	495	346	367	419	488	3130
5- 6 PM	435	448	530	312	353	425	425	2928
6- 7 PM	347	319	423	321	293	262	282	2247
7- 8 PM	237	250	296	271	281	242	214	1791
8- 9 PM	211	211	243	189	177	199	199	1429
9-10 PM	151	198	213	199	173	149	171	1254
10-11 PM	134	140	149	156	155	110	145	989
11-12 PM	116	108	134	115	93	75	102	743
TOTALS:	6452	6530	7031	5203	4750	6118	6292	42376

AVERAGE DAILY TRAFFIC: 5871

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 448 BETWEEN 11-12 AM ON FRIDAY
 PM HIGH HOUR: 530 BETWEEN 5- 6 PM ON FRIDAY
 MILE POINT : 34.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 34.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 5871 IN 2010
 LOCATION INFORMATION: PURCHASE PARKWAY JUST WEST OF THE MARSHALL CO. LINE
 STATION: 115 BOTH N-S
 ROUTE: KY9003
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					2 AXLE BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE					
06-07AM	7/20/10	7	87	92	4	29	8	1	5	39	2	0	0	1	1	0	0	0	275
07-08AM	7/20/10	4	118	100	5	25	8	7	8	45	3	1	1	1	1	0	0	325	
08-09AM	7/20/10	6	103	91	4	22	7	3	10	49	2	1	1	1	1	0	0	304	
09-10AM	7/20/10	7	107	109	6	33	12	3	13	54	2	1	1	1	1	0	0	348	
10-11AM	7/20/10	8	115	110	8	30	13	9	11	68	3	2	2	0	0	0	0	378	
11-12AM	7/20/10	11	112	105	8	24	12	10	8	65	4	4	1	1	1	0	0	361	
12-01PM	7/20/10	11	116	105	6	30	14	6	11	69	5	2	2	2	1	1	0	374	
01-02PM	7/20/10	9	123	110	9	32	14	5	10	70	5	3	2	0	0	0	0	390	
02-03PM	7/20/10	10	133	112	7	34	9	6	9	66	3	3	3	1	1	1	0	391	
03-04PM	7/20/10	9	176	128	8	34	8	5	12	69	3	2	2	1	1	0	0	454	
04-05PM	7/20/10	9	178	136	8	35	7	0	8	63	3	2	2	0	0	0	0	449	
05-06PM	7/20/10	9	168	124	5	30	5	1	10	61	2	2	2	1	1	1	0	416	
06-07PM	7/20/10	8	116	89	5	22	4	1	5	54	2	2	2	0	0	0	0	308	
07-08PM	7/20/10	8	94	63	5	14	4	3	6	54	2	2	2	0	0	0	0	248	
08-09PM	7/20/10	5	76	49	3	10	3	0	4	44	1	1	1	1	1	0	0	196	
09-10PM	7/20/10	6	68	42	3	9	2	0	4	37	1	1	1	1	1	0	0	176	
10-11PM	7/20/10	5	51	33	3	5	2	0	3	34	1	0	0	1	1	0	0	137	
11-12PM	7/20/10	3	34	25	2	6	2	0	2	26	0	0	0	1	1	0	0	101	
12-01AM	7/20/10	3	22	11	2	4	2	0	1	21	0	0	0	0	0	0	0	66	
01-02AM	7/20/10	2	12	9	1	4	1	0	1	20	0	0	0	0	0	0	0	47	
02-03AM	7/20/10	1	8	6	1	2	1	0	1	15	0	0	0	0	0	0	0	36	
03-04AM	7/20/10	2	10	9	1	3	2	0	2	21	0	0	0	1	1	0	0	36	
04-05AM	7/20/10	2	17	22	1	6	2	0	2	24	0	0	0	0	0	0	0	50	
05-06AM	7/20/10	4	46	49	3	12	4	0	4	28	1	1	1	0	0	0	0	77	
TOTAL VEHICLES		149	2090	1729	109	452	146	62	150	1096	41	16	5	14	14	0*	0	6059	
PERCENT OF TOTAL		2.5	34.5	28.5	1.8	7.5	2.4	1.0	2.5	18.1	0.7	0.3	0.1	0.2	0.2	0.0	0.0		

% HEAVY TRUCKS = 2091/ 6059 = 34.5 %
 AXLES / TRUCK = 8342/ 2091 = 3.989
 % TRAILER TRUCKS = 1322/ 6059 = 21.8 %
 % TRAILERS @PK HR = 86/ 454 = 18.9 %
 PEAK HOUR BETWEEN 03-04PM = 454 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.74
 % SINGLE UNIT TRUCKS = 769/ 6059 = 12.7 %
 % SINGLE UNIT @ PK HR = 55/ 454 = 12.1 %
 % TRUCKS AT PEAK HOUR = 141/ 454 = 31.1 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # 1

I.D. # K 9 0 0 3 - 0 4 5 . 0 H C

Route Code: R (Interstate), N (Ky or Parkways), N (County Rd), N (FS)
 U.S. City St. Other: S (U.S.), N (City St.), N (Other)

Route Number: 9003 Suffix: none

Milepoint: 045.0

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radar, P=Piezo, W=WIM Piezo

Add Delete Combine
 Must be accompanied by reason

Estimate
 Special
 Index

STA # 0 7 9 5 8 2 A 4 A C 1 1

County Number: 079 Station#: 582

Lanes at Station: ANLP

Machine # of All Machines at Station: 11

Lanes Counter is counting:
 A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting:
 V=Vehicles, A=Axles

Type Record:
 V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

ESTIMATE

of houses _____ x 10 = _____
 # of Business _____ x 25 = _____

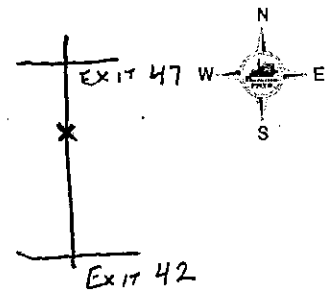
Total

File # G 2 0 0 0 3 1 . 4 0 0
 County name MARSHALL
 Route TR 9003
 Latitude N 3 6 . 5 4 1 0 0

Station number 582 Machine # 18144 002
 City name _____
 Road/Street name PURCHASE PARKWAY
 Longitude W 8 8 . 2 0 8 4 4

	Time	Month	Day	Year
Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	0905	7	20
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	1400	7	28

Station Location & Description (use back if necessary):



Comments

over (more on back)

Field Technician DS DC

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003

MARSHALL COUNTY

STATION 582

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	157	146	149	226	193	155	151	1177
1- 2 AM	81	97	100	123	128	94	100	723
2- 3 AM	82	83	86	96	76	70	79	572
3- 4 AM	105	120	120	92	75	109	115	736
4- 5 AM	209	199	202	134	90	191	186	1211
5- 6 AM	483	486	440	223	150	442	474	2698
6- 7 AM	876	903	871	385	208	880	881	5004
7- 8 AM	1086	1101	1003	523	298	1109	1024	6164
8- 9 AM	951	922	921	664	464	901	977	5800
9-10 AM	965	961	1009	840	597	948	904	6224
10-11 AM	979	1030	1009	974	746	1010	1031	6779
11-12 AM	1031	1012	1160	1004	776	1033	980	6996
12- 1 PM	1035	1060	1097	927	960	1037	986	7102
1- 2 PM	1019	1108	1213	919	1053	1104	1089	7505
2- 3 PM	1171	1144	1249	918	917	1103	1062	7564
3- 4 PM	1312	1438	1383	944	981	1276	1344	8678
4- 5 PM	1339	1493	1403	1072	971	1339	1361	8978
5- 6 PM	1259	1284	1407	998	977	1296	1318	8539
6- 7 PM	943	914	1134	890	826	808	861	6376
7- 8 PM	658	740	821	762	739	665	690	5075
8- 9 PM	603	666	679	682	600	566	624	4420
9-10 PM	437	569	597	582	479	462	513	3639
10-11 PM	351	374	474	478	359	325	349	2710
11-12 PM	259	305	335	309	207	204	254	1873
TOTALS:	17391	18155	18862	14765	12870	17127	17373	116543

AVERAGE DAILY TRAFFIC: 16149

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 1160 BETWEEN 11-12 AM ON FRIDAY
 PM HIGH HOUR: 1493 BETWEEN 4- 5 PM ON THURSDAY
 MILE POINT : 45.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 45.000
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 16149 IN 2010
 LOCATION INFORMATION: BTWN KY 348 AND US 68
 STATION: 582 BOTH N-S
 ROUTE: KY9003
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE	OTHERS			
06-07AM	7/20/10	20	80	340	10	172	24	5	36	45	3	0	0	0	1	0	736	
07-08AM	7/20/10	19	123	480	12	132	25	11	45	51	7	1	0	0	1	0	907	
08-09AM	7/20/10	23	97	435	13	138	27	10	46	47	7	0	0	0	0	0	844	
09-10AM	7/20/10	27	102	456	16	141	36	9	52	60	5	0	0	0	2	0	906	
10-11AM	7/20/10	35	105	485	17	153	41	12	56	65	7	1	1	0	0	0	979	
11-12AM	7/20/10	37	102	500	17	156	37	12	57	61	7	1	1	0	2	0	989	
12-01PM	7/20/10	38	116	502	19	158	39	8	63	64	7	1	1	0	0	0	1018	
01-02PM	7/20/10	37	128	532	18	161	43	9	61	64	7	1	1	0	3	0	1064	
02-03PM	7/20/10	35	130	555	16	167	38	10	67	58	7	0	0	1	3	0	1087	
03-04PM	7/20/10	36	178	625	15	205	34	6	76	58	8	0	0	0	0	0	1244	
04-05PM	7/20/10	35	193	680	16	189	32	3	85	47	6	0	0	0	0	0	1289	
05-06PM	7/20/10	31	179	659	11	170	26	2	77	53	5	0	0	0	2	0	1216	
06-07PM	7/20/10	30	127	476	11	127	23	2	49	47	4	0	0	0	2	0	898	
07-08PM	7/20/10	27	112	373	9	94	22	1	30	40	4	0	0	0	1	0	713	
08-09PM	7/20/10	23	107	324	6	75	19	1	27	37	2	0	0	0	0	0	622	
09-10PM	7/20/10	19	99	261	6	64	15	1	19	32	2	0	0	0	1	0	519	
10-11PM	7/20/10	16	79	177	4	46	12	0	15	29	1	0	0	0	0	0	379	
11-12PM	7/20/10	15	53	116	4	30	13	0	10	21	0	0	0	0	0	0	262	
12-01AM	7/20/10	12	32	65	3	18	10	0	7	18	1	0	0	0	0	0	166	
01-02AM	7/20/10	10	16	37	3	9	8	0	4	15	0	0	0	0	0	0	103	
02-03AM	7/20/10	7	15	27	3	5	6	0	4	15	0	0	0	1	0	0	83	
03-04AM	7/20/10	9	15	36	4	12	8	0	4	15	0	0	0	0	0	0	107	
04-05AM	7/20/10	10	17	72	5	31	9	0	8	23	1	0	0	0	0	0	176	
05-06AM	7/20/10	14	44	190	7	82	14	0	18	29	1	0	0	0	0	0	399	
TOTAL VEHICLES		565	2249	8403	244	2535	561	103	915	1001	92	5	3	2	31	0*	16706	
PERCENT OF TOTAL		3.4	13.5	50.3	1.5	15.2	3.4	0.6	5.5	6.0	0.6	0.0	0.0	0.0	0.2	0.0		

% HEAVY TRUCKS = 5489/16706 = 32.9%
 AXLES / TRUCK = 17124/ 5489 = 3.120
 % TRAILER TRUCKS = 2046/16706 = 12.2%
 % TRAILERS BPK HR = 141/ 1289 = 10.9%
 PEAK HOUR BETWEEN 04-05PM = 1289 VEHICLES
 TOTAL HOURS = 24

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # 1

I.D. # K 9 0 0 3 - 0 5 0 . 2 H C

Route Code: R (County Rd) | U.S. N N N N | Milepoint: M M M M | District making count: A D

Array - T=Tube H=2 tubes L=Loop B=2 loops M=mixed
R= Radar P= Piezo W= WIM Piezo O= Other

Add Delete Combine
Must be accompanied by reason

Estimate
 Special
 Index

STA # 0 7 9 7 5 6 A 4 A C 1 1

County Number: C C C | Station#: S S S N L P T M A

Lanes Counter is counting:
A=All Lanes N=all NB E=all EB
B=Part NB & SB S=all SB
C=Part EB & WB 1=lane 1 W=all WB
2=lane 2

Lanes at Station: N L P T M A

Counter is counting:
V=Vehicles A=Axles

Type Record:
V=Volume C=Cls x Spd
L=Len x Spd W=WIM

Machine # of All Machines at Station: 1 1

ESTIMATE

of houses x 10 =

of Business x 25 =

Total

File # _____

County name Marshall

Route JC PKWY

Latitude N 3 6 . 9 6 8 2 9

Station number 7 5 6 Machine # 14772-0012

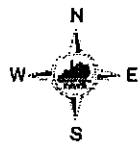
City name _____

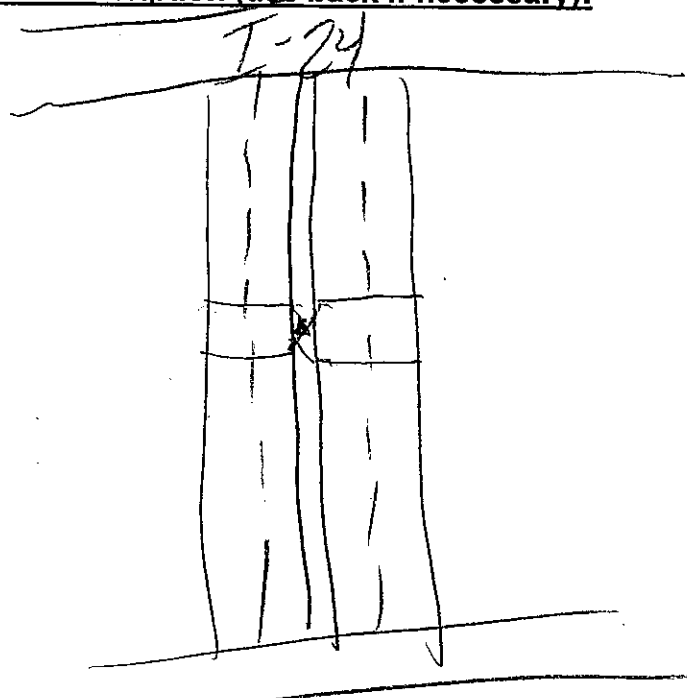
Road/Street name _____

Longitude W 8 8 . 3 4 7 2 5

	Time	Month	Day	Year
Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	15:12	07	19 2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	13:51	07	28 2010

Station Location & Description (use back if necessary):





Comments

Special -
previous
count already
accepted on station

over (more on back)

Field Technician GM/JH countcard04-01.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 50.200
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 15584 IN 2010
 LOCATION INFORMATION: BTWN US 68 AND I-24
 STATION: 756 BOTH N-S
 ROUTE: KY9003
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			TOTAL VEHICLES
					BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE	
06-07AM	7/19/10	3	534	114	2	7	9	5	11	59	6	0	0	0	753
07-08AM	7/19/10	4	688	71	3	9	15	15	13	63	10	1	0	0	896
08-09AM	7/19/10	3	608	86	3	11	11	9	13	64	8	1	1	0	822
09-10AM	7/19/10	3	631	93	4	13	17	9	16	78	9	2	0	0	879
10-11AM	7/19/10	4	684	97	4	13	18	13	15	87	12	0	0	0	953
11-12AM	7/19/10	5	682	99	4	15	17	12	15	88	12	2	0	0	955
12-01PM	7/19/10	5	695	107	5	13	15	9	17	88	9	2	0	0	971
01-02PM	7/19/10	5	742	99	4	15	15	12	15	86	13	2	0	0	1013
02-03PM	7/19/10	5	801	106	4	14	13	8	14	82	13	2	0	0	1067
03-04PM	7/19/10	5	953	101	4	8	9	11	14	78	16	2	0	0	1212
04-05PM	7/19/10	6	993	103	3	10	10	8	14	69	14	1	0	0	1236
05-06PM	7/19/10	4	962	89	2	6	6	7	11	71	13	1	0	0	1177
06-07PM	7/19/10	4	694	66	3	7	3	4	8	68	10	0	0	0	872
07-08PM	7/19/10	3	532	41	1	3	2	4	9	61	5	0	0	0	664
08-09PM	7/19/10	2	476	34	1	2	2	2	7	54	4	2	2	0	588
09-10PM	7/19/10	2	398	29	1	2	2	1	5	47	4	2	2	0	494
10-11PM	7/19/10	1	277	21	1	1	1	1	4	41	2	2	1	0	352
11-12PM	7/19/10	1	183	11	0	1	1	0	3	41	2	1	1	0	235
12-01AM	7/19/10	1	103	11	1	0	1	0	3	33	1	2	0	0	145
01-02AM	7/19/10	0	56	4	0	1	1	0	2	29	0	1	0	0	92
02-03AM	7/19/10	0	43	5	1	1	1	0	2	22	0	1	0	0	76
03-04AM	7/19/10	0	53	6	0	1	1	0	2	27	0	1	0	0	93
04-05AM	7/19/10	1	111	22	0	3	1	0	5	32	1	1	0	0	179
05-06AM	7/19/10	2	270	52	1	6	3	1	8	40	2	2	1	0	389
TOTAL VEHICLES		69	12169	1462	52	166	172	131	226	1394	163	33	8	68	16113
PERCENT OF TOTAL		0.4	75.5	9.1	0.3	1.0	1.1	0.8	1.4	8.7	1.0	0.2	0.0	0.4	0.0

% HEAVY TRUCKS = 2413/16113 = 15.0%
 AXLES / TRUCK = 11017/2413 = 4.566
 % TRAILER TRUCKS = 1892/16113 = 11.7%
 % TRAILERS @PK HR = 103/ 1236 = 8.3%
 PEAK HOUR BETWEEN 04-05PM = 1236 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.84
 % SINGLE UNIT TRUCKS = 521/16113 = 3.2%
 % SINGLE UNIT @ PK HR = 31/ 1236 = 2.5%
 % TRUCKS AT PEAK HOUR = 134/ 1236 = 10.8%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Traffic Count Record

District # 1

I.D. # I 0 0 2 4 - 0 2 8 . 1 H C

Route Code: I (Interstate) 0 0 2 4 (Route Number) S (Suffix) 0 2 8 . 1 (Milepoint) H C (District making count)

Route Code Legend: U=U.S., K=Ky or Parkways, R=County Rd, F=FS; S=City St, O=Other

Array Legend: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed; R=Radar, P=Piezo, W=WIM Piezo

Add Delete Combine
Must be accompanied by reason

Estimate
 Special
 Index

STA # 0 7 9 0 4 9 A 4 A C 1 7

County Number: 0 7 9 Station#: 0 4 9 Lanes at Station: A 4 Type Record: A C Machine #: 1 7

Lanes Counter is counting:
A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting:
V=Vehicles, A=Axles

Type Record Legend: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station

ESTIMATE

of houses _____ x 10 = _____
of Business _____ x 25 = _____

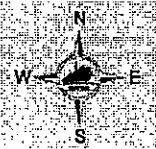
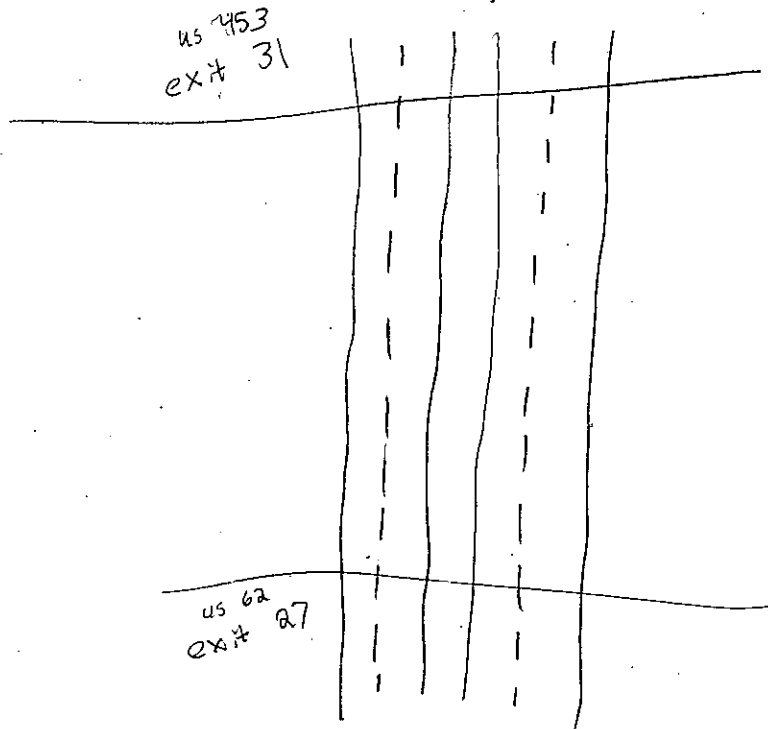
Total

File # G1900041.200
County name Marshall
Route I-24
Latitude N 37.01558

Station number 049 Machine # 11222-0016
City name _____
Road/Street name _____
Longitude W 88.30287

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length		Time	Month	Day	Year
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Set Out	13:08	07	19	2010
	Recorder Picked Up	12:14	07	28	2010

Station Location & Description (use back if necessary):



Comments

Tubes up + cut
on arrival and
port 4 pulled out.
Bushoggers??

over (more on back)

Field Technician _____

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024

MARSHALL COUNTY

STATION 049

WEEK OF JULY 20 TO JULY 26 2010

DATE:	TUE	WED	THU	FRI	SAT	SUN	MON	TOTALS
12- 1 AM	316	322	466	468	583	400	312	2867
1- 2 AM	251	286	373	353	467	322	246	2298
2- 3 AM	241	259	296	350	335	227	215	1923
3- 4 AM	246	258	288	307	348	244	214	1905
4- 5 AM	340	364	401	432	358	246	276	2417
5- 6 AM	597	664	670	646	411	273	441	3702
6- 7 AM	963	933	1035	1021	780	395	637	5764
7- 8 AM	1285	1229	1356	1242	1033	620	789	7554
8- 9 AM	1374	1322	1462	1450	1354	788	800	8490
9-10 AM	1415	1551	1608	1798	1834	1078	875	10159
10-11 AM	1593	1577	1931	1919	2024	1283	1041	11368
11-12 AM	1580	1618	1794	1939	2002	1363	963	11259
12- 1 PM	1580	1651	1777	2000	1978	1316	934	11236
1- 2 PM	1536	1731	1835	2127	1929	1339	969	11466
2- 3 PM	1681	1896	2060	2127	2036	1259	1031	12090
3- 4 PM	1891	1899	1998	2221	2066	1179	1029	12343
4- 5 PM	1908	1793	2022	1760	1731	1219	1039	11472
5- 6 PM	1606	1642	1864	2469	1158	1219	967	10925
6- 7 PM	1445	1480	1416	1964	1607	1075	824	9811
7- 8 PM	1009	1051	1141	1589	1125	878	732	7525
8- 9 PM	914	1068	1208	1282	925	791	653	6841
9-10 PM	761	818	923	1072	833	568	533	5608
10-11 PM	640	649	767	1038	706	565	485	4850
11-12 PM	452	526	609	789	587	401	343	3687
TOTALS:	25624	26587	29300	32343	28210	19148	16348	177560

AVERAGE DAILY TRAFFIC: 23589

MONTHLY FACTOR: 93
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 2024 BETWEEN 10-11 AM ON SATURDAY
 PM HIGH HOUR: 2469 BETWEEN 5- 6 PM ON FRIDAY
 MILE POINT : 28.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: MARSHALL
 DISTRICT: 1
 MILEPOST: 28.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 23589 IN 2010
 LOCATION INFORMATION: BTWN US 62 AND LIVINGSTON COUNTY LINE
 STATION: 049 BOTH E-W
 ROUTE: I 24
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 1

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS										TOTAL VEHICLES		
					2 AXLE BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE			
06-07AM	7/19/10	68	404	76	6	8	11	3	4	17	122	16	6	3	12	1	753
07-08AM	7/19/10	78	557	89	7	10	13	4	19	134	25	8	8	3	14	2	963
08-09AM	7/19/10	84	629	98	7	11	12	3	20	142	32	5	5	2	16	3	1064
09-10AM	7/19/10	81	762	115	9	12	14	7	24	158	37	4	4	4	21	4	1252
10-11AM	7/19/10	84	864	116	9	15	17	6	28	169	47	6	6	4	22	5	1392
11-12AM	7/19/10	85	858	122	9	13	14	7	25	165	45	4	6	2	22	5	1378
12-01PM	7/19/10	73	916	130	10	16	14	7	25	175	43	4	6	4	22	5	1447
01-02PM	7/19/10	70	933	139	11	15	15	7	29	163	46	4	8	3	20	5	1464
02-03PM	7/19/10	60	999	146	7	16	16	8	29	181	53	5	7	3	25	6	1556
03-04PM	7/19/10	62	1039	148	9	13	14	12	26	174	54	4	5	3	27	6	1592
04-05PM	7/19/10	63	976	148	9	11	14	8	25	158	49	4	5	3	19	6	1495
05-06PM	7/19/10	68	924	121	7	11	11	5	23	166	48	4	4	2	23	5	1421
06-07PM	7/19/10	74	786	106	7	7	9	9	24	175	40	3	3	2	20	4	1421
07-08PM	7/19/10	79	589	73	6	7	8	3	18	157	23	3	3	2	16	3	988
08-09PM	7/19/10	80	502	59	6	6	7	2	22	164	23	6	6	2	14	2	898
09-10PM	7/19/10	73	413	43	5	5	5	2	15	134	18	8	8	3	11	1	745
10-11PM	7/19/10	61	347	43	5	5	5	1	13	125	15	7	7	2	8	1	639
11-12PM	7/19/10	46	253	30	6	4	4	0	13	106	6	5	5	2	4	0	485
12-01AM	7/19/10	38	182	22	4	2	4	0	8	91	5	4	4	2	4	0	378
01-02AM	7/19/10	30	129	15	4	3	4	0	12	84	4	5	5	3	3	0	305
02-03AM	7/19/10	26	102	14	3	3	4	0	9	84	4	4	5	2	3	0	264
03-04AM	7/19/10	23	102	15	3	3	3	0	9	85	4	4	5	2	2	0	256
04-05AM	7/19/10	32	137	23	4	4	5	0	12	92	6	6	6	3	2	0	326
05-06AM	7/19/10	53	247	43	4	6	6	0	14	100	9	9	7	2	7	0	498
TOTAL VEHICLES	1491	13650	1940	161	206	233	96	460	3320	653	145	63	339	64*	22821		
PERCENT OF TOTAL	6.5	59.8	8.5	0.7	0.9	1.0	0.4	2.0	14.5	2.9	0.6	0.3	1.5	0.3			

% HEAVY TRUCKS = 5676/22821 = 24.9%
 AXLES / TRUCK = 27651/5676 = 4.872
 % TRAILER TRUCKS = 4980/22821 = 21.8%
 % TRAILERS BPK HR = 289/1592 = 18.2%
 PEAK HOUR BETWEEN 03-04PM = 1592 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.74
 % SINGLE UNIT TRUCKS = 696/22821 = 3.0%
 % SINGLE UNIT @ PK HR = 48/1592 = 3.0%
 % TRUCKS AT PEAK HOUR = 337/1592 = 21.2%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 1 H C

Route Code: K (Interstate), 9 (Ky or Parkways), 0 (County Rd), 0 (FS), 0 (FS), 0 (FS), 1 (FS), H (U.S.), C (City St. or Other)

Route Number: 9003 Suffix: r (none)

Milepoint: 0 0 0 1

Array: H (2 tubes), C (2 loops), M (mixed)

Ramp # 611

EXIT 27
KY 131

STA # 0 4 2 6 5 2 A 1 A C 1 1

County Number: 0 4 2 (C) Station#: 6 5 2 (S)

Lanes at Station: A 1 A C (N, L, P, T)

Machine # of All Machines at Station: 1 1 (M, A)

Lanes Counter is counting:
A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting:
V=Vehicles, A=Axles

Type Record:
V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Ramp Signage

Exit 131

File # G 2 0 0 0 0 7 1 . 4 0 0

of Lanes 1 Lane Width 18'

County Graves

Latitude N 3 6 . 7 7 4 6 2

Station number 652 Machine # 11222-0079

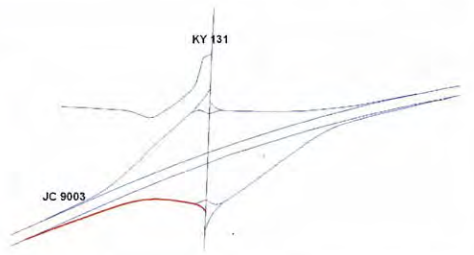
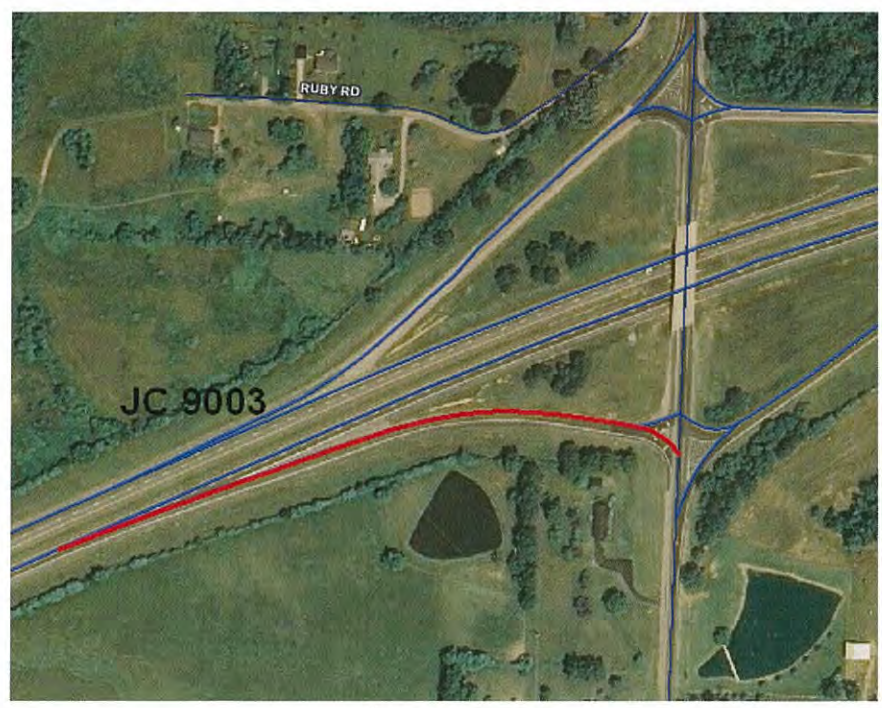
Traffic light Stop sign Merge

Route 042-JC-9003 -611 STATION 652

Longitude W 8 8 . 5 9 8 2 2

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	Time	Month	Day	Year
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	8:04	07	29	2010
		10:19	07	20	2010

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 3'

Right Shoulder Y N

Shoulder width 6'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician G.M./J.H. ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 652

WEEK OF JULY 21 TO JULY 27 2010

DATE:	21	22	23	24	25	26	27	TOTALS
DAY:	WED	THU	FRI	SAT	SUN	MON	TUE	
12- 1 AM	11	11	6	11	9	8	11	67
1- 2 AM	5	8	4	11	7	3	5	43
2- 3 AM	12	11	6	4	5	10	11	59
3- 4 AM	3	1	3	3	2	7	6	28
4- 5 AM	2	3	3	4	2	2	6	22
5- 6 AM	17	11	21	3	3	11	19	85
6- 7 AM	31	26	22	7	2	23	26	137
7- 8 AM	48	45	46	32	15	45	51	282
8- 9 AM	52	40	52	39	176	41	41	341
9-10 AM	35	28	45	38	61	39	47	293
10-11 AM	62	37	66	39	56	61	51	372
11-12 AM	65	58	56	62	32	47	63	383
12- 1 PM	66	46	65	58	55	45	58	393
1- 2 PM	60	46	64	55	55	51	50	381
2- 3 PM	74	69	87	34	41	62	68	435
3- 4 PM	83	75	81	69	46	90	92	536
4- 5 PM	131	121	109	53	78	114	119	725
5- 6 PM	146	132	128	44	81	100	124	775
6- 7 PM	92	93	90	47	43	67	75	507
7- 8 PM	44	49	44	43	40	63	64	347
8- 9 PM	40	61	50	51	37	37	50	326
9-10 PM	36	51	47	33	27	23	35	252
10-11 PM	14	18	34	24	18	25	20	153
11-12 PM	15	28	26	19	15	17	20	140
TOTALS:	1144	1088	1155	783	809	991	1112	7082

AVERAGE DAILY TRAFFIC: 980

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 76
 PM HIGH HOUR: 152

BETWEEN 8- 9 AM ON SUNDAY
 BETWEEN 5- 6 PM ON THURSDAY

MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 2010

COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 980 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY NB ONTO KY 131

STATION: 652 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							OTHERS	TOTAL VEHICLES			
					BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE			5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE
06-07AM	7/20/10	0	9	9	0	2	0	0	0	0	1	0	0	0	0	21
07-08AM	7/20/10	0	18	15	0	4	0	0	0	1	0	0	0	0	0	39
08-09AM	7/20/10	0	22	18	0	5	0	0	0	1	0	0	0	0	0	47
09-10AM	7/20/10	0	18	16	0	5	0	0	0	2	0	0	0	0	0	43
10-11AM	7/20/10	0	21	23	0	3	0	0	0	1	0	0	0	0	0	51
11-12AM	7/20/10	0	25	18	0	5	0	0	0	2	0	0	0	0	0	52
12-01PM	7/20/10	0	25	20	1	4	0	0	0	2	0	0	0	0	0	55
01-02PM	7/20/10	1	28	20	0	4	0	0	0	2	0	0	0	0	0	56
02-03PM	7/20/10	1	30	25	0	4	0	0	0	1	0	0	0	0	0	64
03-04PM	7/20/10	1	39	29	0	5	0	0	0	1	0	0	0	0	0	77
04-05PM	7/20/10	1	54	44	0	6	0	0	0	1	0	0	0	0	0	108
05-06PM	7/20/10	1	59	42	0	8	0	0	0	2	0	0	0	0	0	114
06-07PM	7/20/10	1	41	28	0	2	0	0	0	1	0	0	0	0	0	75
07-08PM	7/20/10	1	27	17	0	3	0	0	0	1	0	0	0	0	0	49
08-09PM	7/20/10	0	25	17	0	2	0	0	0	0	0	0	0	0	0	45
09-10PM	7/20/10	1	17	14	0	2	0	0	0	1	0	0	0	0	0	35
10-11PM	7/20/10	0	12	9	0	1	0	0	0	0	0	0	0	0	0	23
11-12PM	7/20/10	0	11	7	0	1	0	0	0	0	0	0	0	0	0	19
12-01AM	7/20/10	0	5	3	0	0	0	0	0	0	0	0	0	0	0	9
01-02AM	7/20/10	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
02-03AM	7/20/10	0	5	2	0	1	0	0	0	0	0	0	0	0	0	8
03-04AM	7/20/10	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
04-05AM	7/20/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
05-06AM	7/20/10	0	6	5	0	1	0	0	0	0	0	0	0	0	0	13
TOTAL VEHICLES		8	504	384	1	70	8	0	0	15	25	0	0	0	0	1015
PERCENT OF TOTAL		0.8	49.7	37.8	0.1	6.9	0.8	0.0	0.0	1.5	2.5	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 119/ 1015 = 11.7 %
 AXLES / TRUCK = 351/ 119 = 2.950
 % TRAILER TRUCKS = 40/ 1015 = 3.9 %
 % TRAILERS @PK HR = 3/ 114 = 2.6 %
 PEAK HOUR BETWEEN 05-06PM = 114 VEHICLES
 TOTAL HOURS = 24

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # k 9 0 0 3 r 0 0 0 . 1 H C

Route Code: k (Interstate), 9 (Ky or Parkways), 0 (County Rd), 0 (FS), 0 (U.S.), 0 (City St.), 0 (Other), r (FS), 0 (U.S.), 0 (City St.), 0 (Other), 1 (U.S.), H (City St.), C (Other)

Route Number: 9003 Suffix: none

Milepoint: 0.1

Array: T (Tube), H (2 tubes), L (Loop), B (2 loops), M (mixed), R (Radar), P (Piezo), W (WIM Piezo), O (Other)

Ramp # 621

EXIT 27
KY 131

STA # 0 4 2 6 5 3 A L A C I L

County Number: 042 Station#: 653 Lanes at Station: ALAC Machine # of All Machines at Station: IL

Lanes Counter is counting: A (All Lanes), B (Part NB & SB), C (Part EB & WB), 1 (lane 1), 2 (lane 2)

Counter is counting: V (Vehicles), A (Axes)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Ramp Signage
JC PKWY North

File # 6 2 0 0 0 0 8 1 . L 0 0

of Lanes 1 Lane Width 15'

County Graves

Latitude N 3 6 . 7 7 5 0 6

Station number 653 Machine # 14772-0050

Traffic light Stop sign Merge

Route 042-JC-9003-621 station 653

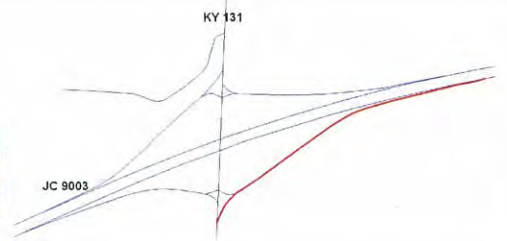
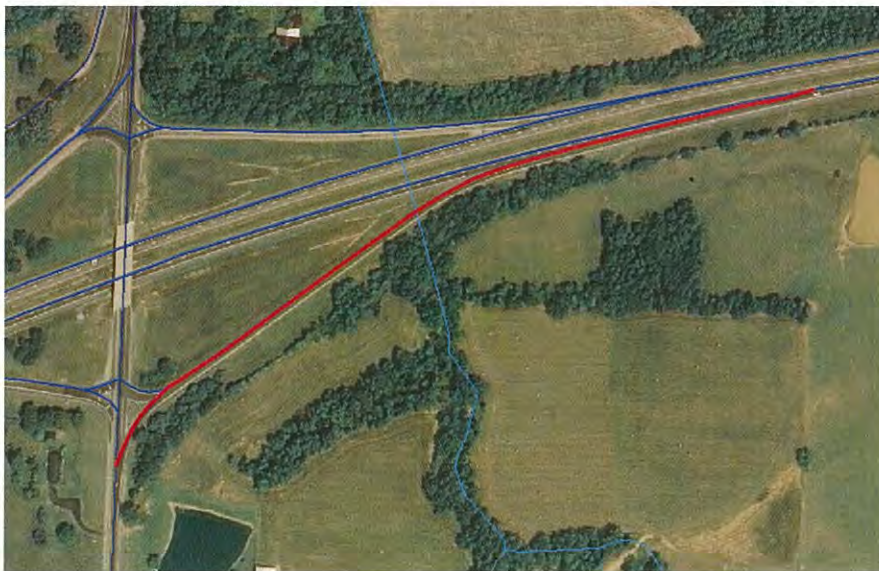
Longitude W 8 8 . 5 9 4 8 7

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	10:29	07	20	2010
Recorder Picked Up	8:11	07	29	2009

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 1'

Right Shoulder Y N

Shoulder width 2'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 653

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	21	22	23	24	25	26	27	12
1- 2 AM	1	2	0	4	3	2	0	9
2- 3 AM	0	0	0	1	3	4	1	8
3- 4 AM	1	1	1	0	1	2	2	21
4- 5 AM	5	2	4	4	1	3	2	59
5- 6 AM	12	11	9	3	7	8	13	125
6- 7 AM	24	24	23	9	7	20	18	125
7- 8 AM	42	49	42	22	7	43	49	254
8- 9 AM	42	44	35	14	8	42	48	233
9-10 AM	27	27	20	27	18	47	29	195
10-11 AM	29	33	33	42	21	25	45	228
11-12 AM	27	40	38	26	24	31	31	217
12- 1 PM	24	24	32	37	18	15	29	179
1- 2 PM	30	20	30	32	21	22	39	198
2- 3 PM	24	26	20	27	35	22	36	190
3- 4 PM	29	29	32	24	34	35	28	211
4- 5 PM	34	33	43	20	16	31	33	210
5- 6 PM	41	34	40	29	27	28	36	235
6- 7 PM	25	27	50	22	18	21	27	190
7- 8 PM	28	29	29	21	17	21	13	158
8- 9 PM	6	10	24	20	14	14	14	108
9-10 PM	11	15	22	15	14	16	10	103
10-11 PM	8	6	19	9	5	7	8	62
11-12 PM	2	8	8	12	4	3	5	42
TOTALS:	474	497	562	421	332	465	518	3269

AVERAGE DAILY TRAFFIC: 452

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 49
 PM HIGH HOUR: 50

BETWEEN 6- 7 AM ON THURSDAY
 BETWEEN 5- 6 PM ON FRIDAY

MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 452 IN 2010
 LOCATION INFORMATION: RAMP FROM KY 131 ONTO PURCHASE PARKWAY NB
 STATION: 653 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/20/10	0	25	11	0	0	0	0	1	1	0	0	0	0	0	38
07-08AM	7/20/10	0	26	7	0	1	1	0	1	1	0	0	0	0	0	37
08-09AM	7/20/10	1	18	6	0	0	1	0	1	1	0	0	0	0	0	28
09-10AM	7/20/10	0	21	8	0	0	0	0	1	1	0	0	0	0	0	28
10-11AM	7/20/10	0	20	7	0	1	1	0	1	1	0	0	0	0	0	31
11-12AM	7/20/10	0	18	4	0	1	1	0	1	1	0	0	0	0	0	26
12-01PM	7/20/10	0	17	5	0	0	1	0	1	1	0	0	0	0	0	25
01-02PM	7/20/10	0	17	6	0	0	0	0	1	1	0	0	0	0	0	26
02-03PM	7/20/10	0	20	2	0	0	0	0	0	0	0	0	0	0	0	28
03-04PM	7/20/10	0	21	6	0	1	0	0	1	1	0	0	0	0	0	29
04-05PM	7/20/10	0	25	6	0	0	0	0	1	1	0	0	0	0	0	33
05-06PM	7/20/10	0	21	5	0	0	0	0	0	0	0	0	0	0	0	26
06-07PM	7/20/10	0	17	4	0	0	0	0	0	0	0	0	0	0	0	21
07-08PM	7/20/10	1	12	2	0	0	0	0	0	0	0	0	0	0	0	15
08-09PM	7/20/10	0	12	2	0	0	0	0	0	0	0	0	0	0	0	14
09-10PM	7/20/10	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
10-11PM	7/20/10	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
11-12PM	7/20/10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
12-01AM	7/20/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01-02AM	7/20/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02-03AM	7/20/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03-04AM	7/20/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04-05AM	7/20/10	0	7	2	0	0	0	0	0	0	0	0	0	0	0	10
05-06AM	7/20/10	0	12	4	0	1	0	0	0	1	0	0	0	0	0	17
TOTAL VEHICLES		2	326	95	0	7	7	0	10	10	0	0	0	0	0*	457
PERCENT OF TOTAL		0.4	71.3	20.8	0.0	1.5	1.5	0.0	2.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 34/
 AXLES / TRUCK = 125/
 % TRAILER TRUCKS = 20/
 % TRAILERS @PK HR = 2/
 PEAK HOUR BETWEEN 06-07AM = 24
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.94
 % SINGLE UNIT TRUCKS = 14/
 % SINGLE UNIT @ PK HR = 0/
 % TRUCKS AT PEAK HOUR = 2/
 457 = 3.1 %
 38 = 0.0 %
 38 = 5.3 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 1 H C

Route Code: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS; U=U.S., S=City St, O=Other

Route Number: 9003 Suffix: r = none

Milepoint: 0 0 0 1

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed; R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 631

EXIT 27
KY 131
3

STA # 0 4 2 6 5 0 A 1 A C 1 1

County Number: 0 4 2 Station #: 6 5 0

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2; N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: 1

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 1 1

Ramp Signage

Ky 131

File # G 2 0 0 0 0 5 1 . 4 0 0

of Lanes 1 Lane Width 15'

County Graves

Latitude N 3 6 . 7 2 6 5 1

Station number 6 5 0 Machine # 11222-0010

Traffic light Stop sign Merge

Route 042-JC-9003 -631 STATION 042650

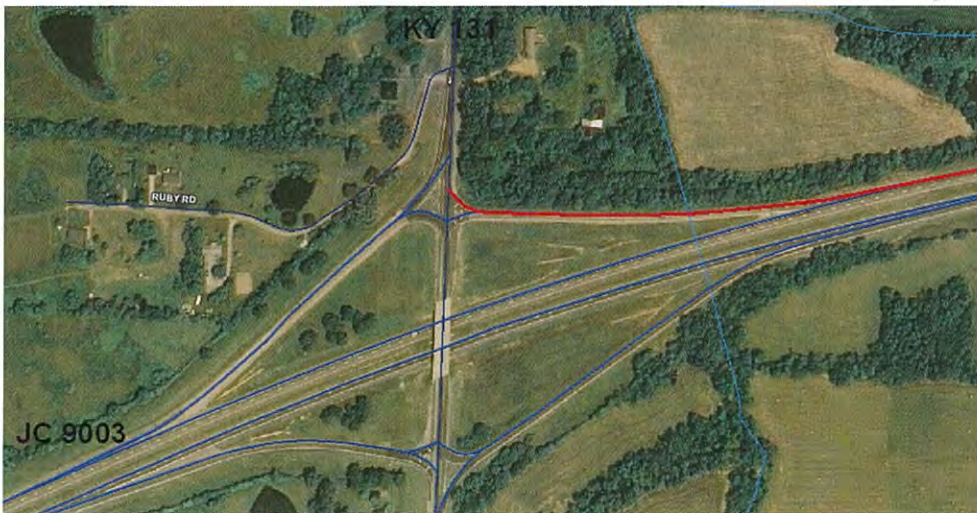
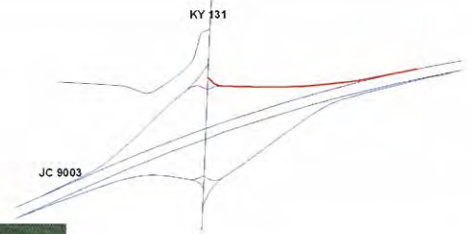
Longitude W 8 8 . 5 9 3 7 1

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	9:51	07	20	2010
Recorder Picked Up	7:52	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 1'

Right Shoulder Y N

Shoulder width 1.5'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET--DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 650

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	21	22	23	24	25	26	27	
1- 2 AM	5	7	10	3	16	3	1	45
2- 3 AM	2	2	4	4	7	2	3	24
3- 4 AM	2	0	0	2	3	2	4	13
4- 5 AM	2	0	0	3	1	0	1	9
5- 6 AM	2	0	1	3	0	0	1	7
6- 7 AM	6	5	5	4	1	6	5	32
7- 8 AM	10	17	17	5	3	10	12	74
8- 9 AM	25	24	21	11	9	10	22	146
9-10 AM	23	31	21	16	15	26	40	172
10-11 AM	24	20	17	20	20	23	18	142
11-12 AM	24	25	31	14	9	21	21	145
1- 2 PM	17	22	30	18	14	19	27	147
2- 3 PM	27	23	24	20	15	25	25	163
3- 4 PM	16	29	31	24	17	21	28	199
4- 5 PM	34	23	37	28	20	21	36	273
5- 6 PM	38	46	52	19	18	51	49	303
6- 7 PM	49	50	43	33	25	54	49	332
7- 8 PM	37	61	56	36	43	52	47	332
8- 9 PM	42	26	36	33	29	23	24	213
9-10 PM	17	19	33	24	25	13	20	149
10-11 PM	18	19	27	31	27	22	15	159
11-12 PM	20	14	28	31	19	12	8	132
TOTALS:	12	13	12	21	19	5	7	90
	8	4	14	12	8	4		57
	460	478	550	415	363	451	471	3188

AVERAGE DAILY TRAFFIC: 441

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 40
 PM HIGH HOUR: 61

BETWEEN 8- 9 AM ON TUESDAY
 BETWEEN 5- 6 PM ON THURSDAY

MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 441 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY SB ONTO KY 131
 STATION: 650 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS							TOTAL VEHICLES			
					2 AXLE BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE		5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE
05-07AM	7/20/10	0	7	2	0	1	0	0	0	0	0	0	0	0	10
07-08AM	7/20/10	0	16	4	0	0	0	0	0	0	0	0	0	0	21
08-09AM	7/20/10	0	16	5	0	1	0	0	0	0	0	0	0	0	25
09-10AM	7/20/10	0	12	4	0	1	0	0	0	0	0	0	0	0	19
10-11AM	7/20/10	0	12	6	0	1	0	0	0	0	0	0	0	0	22
11-12AM	7/20/10	0	14	5	0	0	0	0	0	0	0	0	0	0	21
12-01PM	7/20/10	0	14	5	0	0	0	0	0	0	0	0	0	0	21
01-02PM	7/20/10	0	15	4	0	1	0	0	0	0	0	0	0	0	23
02-03PM	7/20/10	0	18	7	0	1	0	0	0	0	0	0	0	0	27
03-04PM	7/20/10	0	24	11	0	0	0	0	0	0	0	0	0	0	38
04-05PM	7/20/10	0	34	9	0	1	0	0	0	0	0	0	0	0	46
05-06PM	7/20/10	0	38	7	0	1	0	0	0	0	0	0	0	0	47
06-07PM	7/20/10	0	21	7	0	0	0	0	0	0	0	0	0	0	28
07-08PM	7/20/10	0	16	4	0	0	0	0	0	0	0	0	0	0	20
08-09PM	7/20/10	0	16	3	0	0	0	0	0	0	0	0	0	0	20
09-10PM	7/20/10	0	12	3	0	0	0	0	0	0	0	0	0	0	16
10-11PM	7/20/10	0	9	2	0	0	0	0	0	0	0	0	0	0	12
11-12PM	7/20/10	0	5	1	0	0	0	0	0	0	0	0	0	0	6
12-01AM	7/20/10	0	2	1	0	0	0	0	0	0	0	0	0	0	3
01-02AM	7/20/10	0	4	2	0	0	0	0	0	0	0	0	0	0	6
02-03AM	7/20/10	0	2	1	0	0	0	0	0	0	0	0	0	0	3
03-04AM	7/20/10	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04-05AM	7/20/10	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05-06AM	7/20/10	0	4	1	0	0	0	0	0	0	0	0	0	0	5
TOTAL VEHICLES		0	312	93	0	10	1	3	7	13	0	0	0	0	439
PERCENT OF TOTAL		0.0	71.1	21.2	0.0	2.3	0.2	0.7	1.6	3.0	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 34/439 = 7.7%
 AXLES / TRUCK = 128/34 = 3.765
 % TRAILER TRUCKS = 20/439 = 4.6%
 % TRAILERS @PK HR = 1/47 = 2.1%
 PEAK HOUR BETWEEN 05-06PM = 47 VEHICLES
 TOTAL HOUR = 24

AXLE CORRECTION FACTOR = 0.94
 % SINGLE UNIT TRUCKS = 14/439 = 3.2%
 % SINGLE UNIT @ PK HR = 1/47 = 2.1%
 % TRUCKS AT PEAK HOUR = 2/47 = 4.3%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # k 9 0 0 3 r 0 0 0 1 H C

Route Code: I=Interstate, U=U.S., K=Ky or Parkways, R=County Rd, F=FS; S=City St, O=Other

Route Number: 9003 Suffix: _ = none

Milepoint: 0 0 0 1

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed, R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 641

EXIT 27
KY 121
3

STA # 0 4 2 6 5 1 A L A C 1 1

County Number: C C C S S S N L P T M A

Station #: 6 5 1

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2; N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T M A

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: _____

Ramp Signage

JC PKWY South

File # G 2000061 L00

of Lanes 1 Lane Width 22' tapers

County Graves

Latitude N 3 6 . 7 7 6 2 1

Station number 6 5 1 Machine # 12061-028

Traffic light _____ Stop sign Merge

Route 042-JC-9003 -641 station 042651

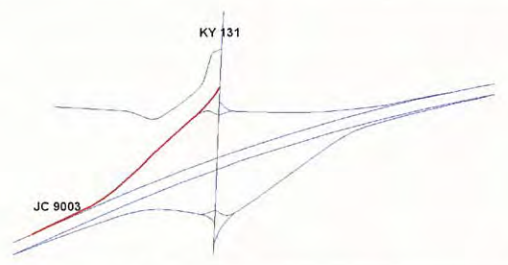
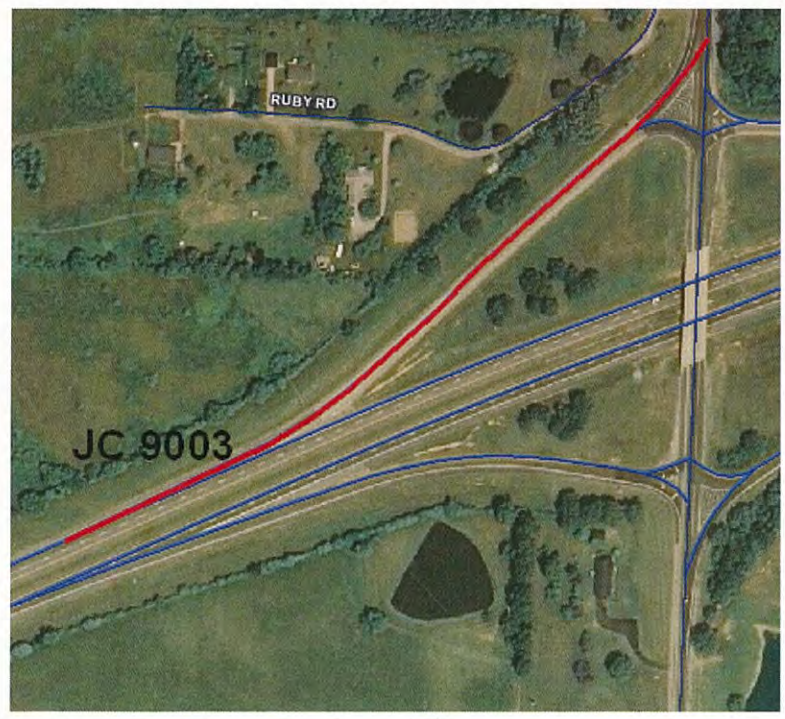
Longitude W 8 8 . 5 9 6 8 0

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	10:03	07	20	2010
Recorder Picked Up	7:57	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 3'

Right Shoulder Y N

Shoulder width 6'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician G M / SH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 651

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	6	3	2	7	8	11	3	43
1- 2 AM	2	3	3	4	6	4	7	26
2- 3 AM	9	5	7	11	8	5	7	53
3- 4 AM	4	5	8	3	5	9	4	38
4- 5 AM	16	12	12	10	1	13	18	82
5- 6 AM	68	59	47	15	3	53	54	299
6- 7 AM	74	68	70	26	7	83	81	409
7- 8 AM	115	110	105	46	13	108	109	606
8- 9 AM	80	62	69	35	29	68	72	415
9-10 AM	57	52	63	52	56	61	61	402
10-11 AM	66	50	66	62	51	46	74	417
11-12 AM	53	50	57	61	79	63	49	440
12- 1 PM	70	52	75	52	74	64	53	440
1- 2 PM	58	61	66	50	51	45	65	396
2- 3 PM	63	63	61	50	42	48	75	402
3- 4 PM	45	49	67	56	35	53	65	370
4- 5 PM	76	81	71	54	58	68	88	496
5- 6 PM	47	78	80	58	59	70	76	468
6- 7 PM	69	62	71	45	47	69	47	410
7- 8 PM	35	35	27	31	76	40	44	288
8- 9 PM	86	61	51	41	34	33	33	319
9-10 PM	33	38	44	31	32	29	33	258
10-11 PM	26	27	44	21	22	18	21	179
11-12 PM	12	11	18	18	11	10	13	93
TOTALS:	1170	1103	1182	839	807	1071	1149	7321

AVERAGE DAILY TRAFFIC: 1013

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 115 BETWEEN 7- 8 AM ON WEDNESDAY
 PM HIGH HOUR: 88 BETWEEN 4- 5 PM ON TUESDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT

COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 1013 IN 2010
 LOCATION INFORMATION: RAMP FROM KY 131 ONTO PURCHASE PARKWAY SB

STATION: 651 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR CYCLES	PASSENGER CARS	VEHICLE CLASSIFICATION										TOTAL VEHICLES			
				OTHER 2 AXLE 4 TIRE VEHICLES	BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE		7 OR MORE AXLE	OTHERS	
06-07AM	7/20/10	0	15	34	0	12	0	0	1	1	1	0	0	0	0	0	63
07-08AM	7/20/10	0	16	52	0	15	1	0	1	1	1	0	0	0	0	0	86
08-09AM	7/20/10	0	15	34	0	9	1	0	1	1	1	0	0	0	0	0	62
09-10AM	7/20/10	0	14	30	0	8	1	0	1	3	0	0	0	0	0	0	57
10-11AM	7/20/10	0	17	27	1	10	1	0	1	2	1	0	0	0	0	0	60
11-12AM	7/20/10	0	14	26	1	8	0	0	1	2	0	0	0	0	0	0	52
12-01PM	7/20/10	0	16	30	1	8	1	0	2	2	1	0	0	0	0	0	60
01-02PM	7/20/10	0	17	27	0	7	0	0	3	2	0	0	0	0	0	0	57
02-03PM	7/20/10	1	17	28	0	8	0	0	2	1	0	0	0	0	0	0	58
03-04PM	7/20/10	0	16	27	0	8	0	0	2	1	0	0	0	0	0	0	54
04-05PM	7/20/10	1	18	37	0	10	0	0	1	1	0	0	0	0	0	0	68
05-06PM	7/20/10	0	19	36	0	9	1	0	1	0	0	0	0	0	0	0	66
06-07PM	7/20/10	0	17	31	0	8	1	0	1	0	0	0	0	0	0	0	66
07-08PM	7/20/10	0	10	22	0	4	0	0	1	1	0	0	0	0	0	0	38
08-09PM	7/20/10	0	14	27	0	4	0	0	1	0	0	0	0	0	0	0	35
09-10PM	7/20/10	0	11	20	0	4	0	0	0	0	0	0	0	0	0	0	35
10-11PM	7/20/10	0	9	11	0	3	0	0	1	1	0	0	0	0	0	0	26
11-12PM	7/20/10	0	5	6	0	2	0	0	0	1	0	0	0	0	0	0	14
12-01AM	7/20/10	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5
01-02AM	7/20/10	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
02-03AM	7/20/10	0	2	4	0	1	0	0	0	0	0	0	0	0	0	0	7
03-04AM	7/20/10	0	3	2	0	1	0	0	0	0	0	0	0	0	0	0	6
04-05AM	7/20/10	0	3	6	0	2	0	0	0	0	0	0	0	0	0	0	11
05-06AM	7/20/10	0	14	25	0	6	0	0	0	0	0	0	0	0	0	0	45
TOTAL VEHICLES		2	285	547	3	148	9	0	21	20	4	0	0	0	0	0	1039
PERCENT OF TOTAL		0.2	27.4	52.6	0.3	14.2	0.9	0.0	2.0	1.9	0.4	0.0	0.0	0.0	0.0	0.0	

% HEAVY TRUCKS = 205/ 1039 = 19.7%
 AXLES / TRUCK = 537/ 205 = 2.620
 % TRAILER TRUCKS = 45/ 1039 = 4.3%
 % TRAILERS @PK HR= 2/ 86 = 2.3%
 PEAK HOUR BETWEEN 07-08AM = 86 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.94
 % SINGLE UNIT TRUCKS = 160/ 1039 = 15.4%
 % SINGLE UNIT @ PK HR = 16/ 86 = 18.6%
 % TRUCKS AT PEAK HOUR = 18/ 86 = 20.9%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning

Ramp Traffic Count Record

District # 1

I.D. # k 9 0 0 3 r 0 0 0 . 1 H C

Route Code: R (Interstate), N (U.S.), N (Ky or Parkways), N (County Rd), S (City St), S (Other)

Route Number: 9003 Suffix: none

Milepoint: 0.1

Array: M (Tube), M (2 tubes), M (Loop), M (2 loops), M (mixed), H (Radar), A (Piezo), C (WIM Piezo), D (Other)

Ramp # 411

EXIT 24
Murray

STA # 0 4 2 4 6 0 A 1 A C 1 1

County Number: C C C Station#: S S S

Lanes Counter is counting: A (All Lanes), B (Part NB & SB), C (Part EB & WB), 1 (lane 1), 2 (lane 2)

Lanes at Station: N (all NB), L (all EB), P (all SB), T (all WB)

Counter is counting: V (Vehicles), A (Axles)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 1 1

Ramp Signage

Mayfield / Wickliffe

File # G 2000091.400

of Lanes 1 Lane Width 16.5'

County Graves

Latitude N 36.75476

Station number 460 Machine # 12163-0013

Traffic light Stop sign Merge

Route 042-JC-9003 -411 station 042460

Longitude W 88.65910

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	12:08	07	20	2010
Recorder Picked Up	8:20	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4.5'

Right Shoulder N

Shoulder width 5'

Type: No shoulders exist

Bituminous Concrete

N/A Stabilized

Combination Earth

Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 460

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	5	6	3	7	17	10	9	59
1- 2 AM	8	8	6	8	11	5	3	48
2- 3 AM	12	12	12	8	7	5	8	64
3- 4 AM	7	5	8	3	4	7	4	38
4- 5 AM	17	12	12	5	5	20	15	86
5- 6 AM	52	59	43	14	7	52	48	275
6- 7 AM	98	96	116	42	23	134	119	628
7- 8 AM	202	189	151	63	22	225	152	1004
8- 9 AM	120	116	131	60	30	146	114	717
9-10 AM	96	96	117	82	59	141	104	695
10-11 AM	107	112	129	68	39	136	92	683
11-12 AM	96	118	118	77	50	130	94	683
12- 1 PM	103	113	120	71	71	127	120	764
1- 2 PM	81	108	111	59	79	131	86	655
2- 3 PM	90	104	111	69	62	107	118	643
3- 4 PM	84	111	99	53	71	95	84	597
4- 5 PM	111	146	105	54	61	137	149	763
5- 6 PM	82	112	97	61	59	144	103	658
6- 7 PM	78	91	80	50	73	81	104	557
7- 8 PM	33	46	58	51	44	47	55	334
8- 9 PM	47	42	34	30	41	47	41	282
9-10 PM	34	28	21	14	23	32	22	174
10-11 PM	15	25	24	25	16	22	21	148
11-12 PM	18	18	16	19	15	16	20	122
TOTALS:	1596	1773	1704	994	928	1997	1685	10677

AVERAGE DAILY TRAFFIC: 1479

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 225
 PM HIGH HOUR: 149

BETWEEN 7- 8 AM ON MONDAY
 BETWEEN 4- 5 PM ON TUESDAY

MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 1479 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY NB ONTO KY 21
 STATION: 460 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE	OTHERS			
06-07AM	7/20/10	0	61	23	1	1	0	0	1	2	4	0	0	0	0	0	0	91
07-08AM	7/20/10	1	108	32	1	3	1	0	1	1	4	0	0	0	0	0	0	152
08-09AM	7/20/10	1	75	20	0	2	1	0	1	1	6	0	0	0	0	0	0	106
09-10AM	7/20/10	0	67	23	1	2	1	0	1	1	4	0	0	0	0	0	0	99
10-11AM	7/20/10	0	64	20	2	4	1	0	1	1	5	0	0	0	0	0	0	97
11-12AM	7/20/10	0	61	23	1	3	1	0	3	3	5	0	0	0	0	0	0	97
12-01PM	7/20/10	1	71	24	1	2	1	0	1	1	6	0	0	0	0	0	0	107
01-02PM	7/20/10	0	63	21	1	3	1	0	2	2	4	0	0	0	0	0	0	95
02-03PM	7/20/10	1	64	19	1	2	1	0	1	2	4	0	0	0	0	0	0	94
03-04PM	7/20/10	0	55	20	0	3	1	0	1	1	5	0	0	0	0	0	0	85
04-05PM	7/20/10	1	69	30	0	3	1	0	1	1	4	0	0	0	0	0	0	109
05-06PM	7/20/10	1	66	20	0	1	0	0	1	1	3	0	0	0	0	0	0	92
06-07PM	7/20/10	1	66	20	0	1	0	0	1	1	3	0	0	0	0	0	0	92
07-08PM	7/20/10	1	32	18	0	0	1	0	1	1	2	0	0	0	0	0	0	79
08-09PM	7/20/10	0	27	10	0	0	1	0	0	0	2	0	0	0	0	0	0	46
09-10PM	7/20/10	0	19	9	0	0	1	0	1	1	2	0	0	0	0	0	0	40
10-11PM	7/20/10	0	17	5	0	0	1	0	0	0	1	0	0	0	0	0	0	26
11-12PM	7/20/10	0	12	3	0	0	0	0	0	0	1	0	0	0	0	0	0	21
12-01AM	7/20/10	0	6	1	0	0	0	0	0	0	1	0	0	0	0	0	0	16
01-02AM	7/20/10	0	4	1	0	0	0	0	0	0	1	0	0	0	0	0	0	8
02-03AM	7/20/10	0	6	1	0	0	0	0	0	0	1	0	0	0	0	0	0	6
03-04AM	7/20/10	0	3	1	0	0	0	0	0	0	1	0	0	0	0	0	0	4
04-05AM	7/20/10	0	7	4	0	0	0	0	0	0	2	0	0	0	0	0	0	13
05-06AM	7/20/10	1	27	11	0	0	0	0	1	1	2	0	0	0	0	0	0	42
TOTAL VEHICLES		9	1040	342	9	29	14	0	20	70	0	0	0	0	0	0	0	1533
PERCENT OF TOTAL	0.6	67.8	22.3	0.6	1.9	0.9	0.0	1.3	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

% HEAVY TRUCKS = 142/ 1533 = 9.3 %
 AXLES / TRUCK = 548/ 142 = 3.859
 % TRAILER TRUCKS = 90/ 1533 = 5.9 %
 % TRAILERS @PK HR = 6/ 152 = 3.9 %
 PEAK HOUR BETWEEN 07-08AM = 152 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.92
 % SINGLE UNIT TRUCKS = 52/ 1533 = 3.4 %
 % SINGLE UNIT @ PK HR = 5/ 152 = 3.3 %
 % TRUCKS AT PEAK HOUR = 11/ 152 = 7.2 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 1 H C

Route Code: R (Interstate), N (U.S.), N (Ky or Parkways), N (City St.), N (County Rd), S (FS)

Route Number: 9003

Suffix: r (none)

Milepoint: 0 0 0 1

Array: H (2 tubes), A (Loop), C (2 loops), D (mixed)

Ramp # 421

EXIT 24
Murray

STA # 0 4 2 4 6 1 A L A C 1 1

County Number: 0 4 2

Station #: 4 6 1

Lanes Counter is counting: A (All Lanes), L (Part NB & SB), A (Part EB & WB)

Lanes at Station: A (all NB), L (all EB), A (all SB), C (all WB)

Counter is counting: V (Vehicles), A (Axles)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 1 1

Ramp Signage
JC PKWY

File # G 2 0 0 0 1 0 1 . L 0 0

of Lanes 1 Lane Width 16'

County Graves

Latitude N 3 6 . 7 5 7 5 5

Station number 4 6 1 Machine # 12897-0064

Traffic light Stop sign Merge

Route 042-JC-9003 -421 Station 461

Longitude W 8 8 . 6 5 4 6 7

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	<u>12:19</u>	<u>07</u>	<u>20</u>	<u>2010</u>
Recorder Picked Up	<u>8:26</u>	<u>07</u>	<u>29</u>	<u>2010</u>

Station Location & Description (use back if necessary):



Left Shoulder (Y) N

Shoulder width 5'

Right Shoulder (Y) N

Shoulder width 5'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 461

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	21	22	23	24	25	26	27	34
1- 2 AM	5	4	5	7	5	2	6	29
2- 3 AM	4	6	3	8	1	0	4	14
3- 4 AM	4	2	2	0	2	0	1	21
4- 5 AM	4	2	3	3	3	1	5	43
5- 6 AM	5	9	10	2	2	5	10	163
6- 7 AM	37	34	26	17	7	25	27	273
7- 8 AM	53	49	44	32	12	51	47	395
8- 9 AM	75	54	62	21	17	74	81	292
9-10 AM	42	50	49	53	21	64	45	338
10-11 AM	48	48	48	55	24	69	56	416
11-12 AM	63	60	71	52	27	74	79	424
12- 1 PM	65	62	78	31	42	49	61	395
1- 2 PM	60	65	78	53	35	69	64	424
2- 3 PM	77	55	75	47	31	75	70	430
3- 4 PM	77	76	83	42	30	79	89	472
4- 5 PM	92	98	87	36	52	75	98	545
5- 6 PM	72	85	87	36	34	62	61	437
6- 7 PM	40	65	70	41	33	57	48	354
7- 8 PM	25	34	42	42	29	55	40	267
8- 9 PM	14	36	31	22	14	19	48	184
9-10 PM	26	17	26	23	22	19	24	157
10-11 PM	12	15	23	21	22	10	16	119
11-12 PM	9	6	17	7	11	11	10	71
TOTALS:	981	976	1097	671	513	1021	1038	6297

AVERAGE DAILY TRAFFIC: 872

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 81 BETWEEN 7- 8 AM ON TUESDAY
 PM HIGH HOUR: 98 BETWEEN 4- 5 PM ON THURSDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 872 IN 2010
 LOCATION INFORMATION: RAMP FROM KY 21 ONTO PURCHASE PARKWAY NB
 STATION: 461 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 4 TIRE VEHICLES	SINGLE UNIT TRUCKS					SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS				OTHERS	TOTAL VEHICLES
					2 AXLE Busses	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE					
06-07AM	7/20/10	1	27	9	0	1	0	0	1	2	0	0	0	0	0	0	0	41
07-08AM	7/20/10	1	37	13	0	1	0	0	1	2	0	0	0	0	0	0	57	
08-09AM	7/20/10	0	29	10	0	1	0	0	1	1	0	0	0	0	0	0	43	
09-10AM	7/20/10	1	31	13	0	1	0	0	1	2	0	0	0	0	0	0	50	
10-11AM	7/20/10	0	43	12	1	1	0	0	1	2	0	0	0	0	0	0	60	
11-12AM	7/20/10	1	42	14	0	2	0	0	2	1	0	0	0	0	0	0	62	
12-01PM	7/20/10	0	41	10	0	0	0	0	1	3	0	0	0	0	0	0	57	
01-02PM	7/20/10	1	44	13	0	1	0	0	1	2	0	0	0	0	0	0	60	
02-03PM	7/20/10	0	44	13	0	1	0	0	1	2	0	0	0	0	0	0	62	
03-04PM	7/20/10	0	51	13	0	1	0	0	1	0	0	0	0	0	0	0	69	
04-05PM	7/20/10	1	63	12	0	1	0	0	1	2	0	0	0	0	0	0	80	
05-06PM	7/20/10	0	48	12	0	0	0	0	0	1	0	0	0	0	0	0	62	
06-07PM	7/20/10	1	48	12	0	1	0	0	1	1	0	0	0	0	0	0	62	
07-08PM	7/20/10	0	36	10	0	0	0	0	0	2	0	0	0	0	0	0	50	
08-09PM	7/20/10	0	29	6	0	0	0	0	0	1	0	0	0	0	0	0	36	
09-10PM	7/20/10	0	21	6	0	0	0	0	0	1	0	0	0	0	0	0	28	
10-11PM	7/20/10	0	17	4	0	0	0	0	0	1	0	0	0	0	0	0	21	
11-12PM	7/20/10	0	13	2	0	0	0	0	0	0	0	0	0	0	0	0	16	
12-01AM	7/20/10	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	11	
01-02AM	7/20/10	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5	
02-03AM	7/20/10	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4	
03-04AM	7/20/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	
04-05AM	7/20/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	
05-06AM	7/20/10	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	6	
05-06AM	7/20/10	0	19	4	0	0	0	0	0	2	0	0	0	0	0	0	25	
TOTAL VEHICLES		7	653	183	1	11	10	0	14	30	0	0	0	0	0	0*	909	
PERCENT OF TOTAL		0.8	71.8	20.1	0.1	1.2	1.1	0.0	1.5	3.3	0.0	0.0	0.0	0.0	0.0	0.0		

% HEAVY TRUCKS = 66/
 AXLES / TRUCK = 260/
 % TRAILER TRUCKS = 44/
 % TRAILERS aPK HR = 2/
 PEAK HOUR BETWEEN 04-05PM = 24
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.93
 % SINGLE UNIT TRUCKS = 22/
 % SINGLE UNIT a PK HR = 2/
 % TRUCKS AT PEAK HOUR = 4/
 909 = 2.4 %
 80 = 2.5 %
 80 = 5.0 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # k 9 0 0 3 r 0 0 0 1 A C

Route Code: R (R=County Rd), N (N=Northbound), N (N=Northbound), N (N=Northbound), N (N=Northbound), S (S=Southbound), M (M=Mixed), M (M=Mixed), M (M=Mixed), M (M=Mixed), A (A=All Lanes), D (D=District making count)

Route Number: 9003 Suffix: r (none)

Milepoint: 0001

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed, R=Radars, P=Piezo, W=WIM Piezo, O=Other

Ramp # 431

EXIT 24
Murray

STA # 0 4 2 4 6 2 A 1 A C 1 1

County Number: 042 Station #: 462 Lanes at Station: A 1 A C 1 1

Lanes Counter is counting:
A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting:
V=Vehicles, A=Axles

Type Record:
V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: _____

Ramp Signage
Mayfield Wickliffe
121

File # G 2000111.000
of Lanes 1 Lane Width 17'
County Graves
Latitude N 36.75830

Station number 462 Machine # 12896-0019
Traffic light Stop sign Merge _____
Route 042-JC-9003 -431 Station 462
Longitude W 88.65605

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length		Time	Month	Day	Year
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Set Out	11:32	07	20	2010
	Recorder Picked Up	8:30	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 4'

Right Shoulder Y N

Shoulder width 5.5'

Type: No shoulders exist
Bituminous Concrete
N/A Stabilized
Combination Earth
Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 462

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	21	22	23	24	25	26	27	
1- 2 AM	9	7	11	4	12	3	5	54
2- 3 AM	3	3	5	4	4	5	2	26
3- 4 AM	4	1	6	5	6	4	4	30
4- 5 AM	2	3	2	7	1	9	1	25
5- 6 AM	7	9	4	6	3	10	6	45
6- 7 AM	32	30	32	13	3	32	26	168
7- 8 AM	62	47	65	23	16	85	54	352
8- 9 AM	93	96	82	34	7	122	102	536
9-10 AM	70	64	71	27	11	86	67	396
10-11 AM	60	52	58	41	22	63	71	367
11-12 AM	71	65	64	26	33	76	69	404
1- 2 PM	60	62	74	38	34	56	59	383
2- 3 PM	65	56	86	45	52	60	56	418
3- 4 PM	64	76	81	54	32	84	64	445
4- 5 PM	54	62	59	54	51	63	69	412
5- 6 PM	66	60	49	42	31	70	89	404
6- 7 PM	82	83	82	42	59	85	96	529
7- 8 PM	57	60	81	42	60	76	77	453
8- 9 PM	42	63	50	39	50	64	54	362
9-10 PM	24	31	21	26	38	39	23	202
10-11 PM	31	33	23	30	31	27	30	205
11-12 PM	16	24	43	27	30	19	18	177
TOTALS:	12	14	14	14	13	4	12	83
TOTALS:	1001	1016	1080	656	617	1155	1069	6594

AVERAGE DAILY TRAFFIC: 913

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 122 BETWEEN 7- 8 AM ON MONDAY
 PM HIGH HOUR: 96 BETWEEN 4- 5 PM ON TUESDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 913 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY SB ONTO KY 21
 STATION: 462 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							OTHERS	TOTAL VEHICLES		
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE			5 OR LESS AXLE	
06-07AM	7/20/10	0	44	7	0	0	0	0	0	1	2	0	0	0	54
07-08AM	7/20/10	0	68	9	0	0	0	0	0	1	2	0	0	0	80
08-09AM	7/20/10	0	49	8	0	0	0	0	0	1	2	0	0	0	61
09-10AM	7/20/10	0	41	9	0	0	0	0	0	1	2	0	0	0	54
10-11AM	7/20/10	0	43	9	0	0	0	0	0	1	3	0	0	0	54
11-12AM	7/20/10	0	43	8	0	0	0	0	0	1	3	0	0	0	56
12-01PM	7/20/10	1	42	10	0	0	0	0	0	1	3	0	0	0	59
01-02PM	7/20/10	1	49	9	0	0	0	0	0	1	4	0	0	0	65
02-03PM	7/20/10	0	44	9	0	0	0	0	0	1	2	0	0	0	58
03-04PM	7/20/10	0	45	10	0	0	0	0	0	0	3	0	0	0	59
04-05PM	7/20/10	1	60	10	0	0	0	0	0	0	2	0	0	0	74
05-06PM	7/20/10	1	52	8	0	0	0	0	0	0	2	0	0	0	64
06-07PM	7/20/10	0	40	8	0	0	0	0	0	0	1	0	0	0	49
07-08PM	7/20/10	1	22	4	0	0	0	0	0	0	1	0	0	0	28
08-09PM	7/20/10	0	23	5	0	0	0	0	0	0	1	0	0	0	29
09-10PM	7/20/10	0	21	3	0	0	0	0	0	0	0	0	0	0	24
10-11PM	7/20/10	0	13	2	0	0	0	0	0	0	1	0	0	0	16
11-12PM	7/20/10	0	10	1	0	0	0	0	0	0	0	0	0	0	11
12-01AM	7/20/10	0	6	1	0	0	0	0	0	0	1	0	0	0	8
01-02AM	7/20/10	0	2	0	0	0	0	0	0	0	1	0	0	0	3
02-03AM	7/20/10	0	3	0	0	0	0	0	0	0	1	0	0	0	3
03-04AM	7/20/10	0	2	1	0	0	0	0	0	0	0	0	0	0	3
04-05AM	7/20/10	0	4	1	0	0	0	0	0	0	1	0	0	0	6
05-06AM	7/20/10	1	18	5	0	0	0	0	0	1	1	0	0	0	26
TOTAL VEHICLES		6	744	137	0	9	0	5	10	38	0	0	0	0	949
PERCENT OF TOTAL		0.6	78.4	14.4	0.0	0.9	0.0	0.5	1.1	4.0	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 62/
 AXLES / TRUCK = 268/
 % TRAILER TRUCKS = 48/
 % TRAILERS aPK HR = 3/
 PEAK HOUR BETWEEN 07-08AM = 24
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.93
 % SINGLE UNIT TRUCKS = 14/
 % SINGLE UNIT a PK HR = 0/
 % TRUCKS AT PEAK HOUR = 3/
 949 = 1.5 %
 80 = 0.0 %
 80 = 3.7 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 1 H C

Route Code: R (Interstate), N (Ky or Parkways), N (County Rd), N (City St), N (Other), S (U.S.), M (Milepoint), M (Milepoint), M (Milepoint), M (Milepoint), A (District making count), D (District making count)

Route Number: 9003 Suffix: _ = none

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed, R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 441

EXIT 24
Murray

STA # 0 4 2 4 6 3 A 1 A C 1 1

County Number: C C C Station#: S S S N L P T M A

Lanes Counter is counting:
A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T M A

Counter is counting:
V=Vehicles, A=Axles

Type Record:
V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 1 1

Ramp Signage
JC PKWY

File # G 2 0 0 0 1 2 1 . L 0 0

of Lanes 1 Lane Width 17.5'

County Graves

Latitude N 3 6 . 7 5 6 2 3

Station number 4 6 3 Machine # 12061-048-

Traffic light _____ Stop sign Merge

Route 042-JC-9003 -441 STATION 042403

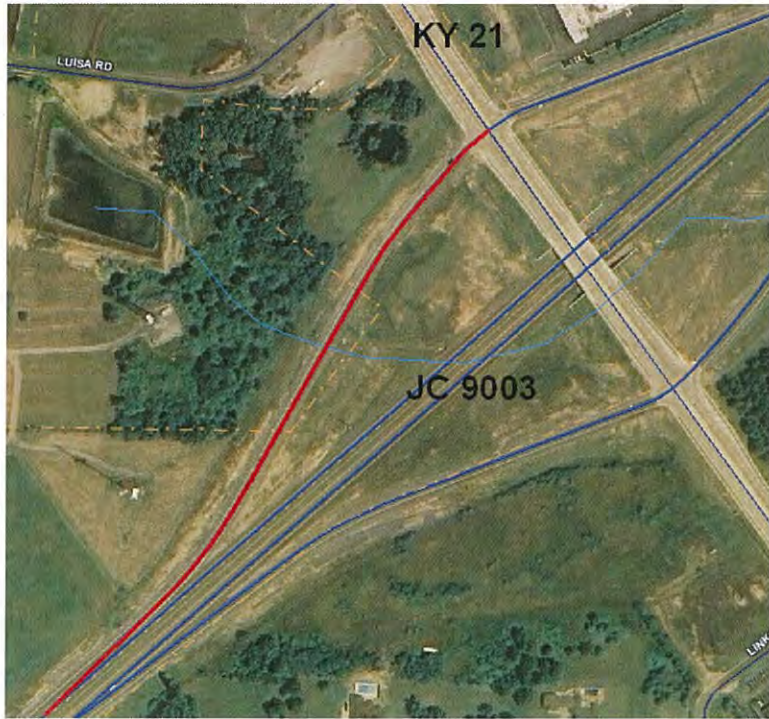
Longitude W 8 8 . 6 5 8 7 9

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	11:47	07	20	2010
Recorder Picked Up	8:40	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4'

Right Shoulder N

Shoulder width 4.5'

Type: No shoulders exist
 Bituminous _____ Concrete _____
 N/A _____ Stabilized _____
 Combination _____ Earth _____
 Curbed _____

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 463

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	7	10	9	2	12	8	8	61
1- 2 AM	8	6	7	2	5	2	5	35
2- 3 AM	6	7	5	4	2	8	2	34
3- 4 AM	5	7	10	6	2	5	5	40
4- 5 AM	8	8	11	7	4	11	11	60
5- 6 AM	32	29	25	9	3	11	32	160
6- 7 AM	44	53	47	25	8	30	57	292
7- 8 AM	77	79	83	42	21	90	73	465
8- 9 AM	66	71	79	41	25	84	60	426
9-10 AM	83	74	92	41	39	85	82	496
10-11 AM	88	68	85	50	31	123	70	515
11-12 AM	100	101	102	71	43	105	83	605
12- 1 PM	99	120	100	58	55	97	92	621
1- 2 PM	84	90	146	66	64	107	89	646
2- 3 PM	96	110	100	56	55	121	118	656
3- 4 PM	121	134	125	62	69	130	127	766
4- 5 PM	136	128	120	67	95	151	163	860
5- 6 PM	137	134	125	60	51	124	116	747
6- 7 PM	73	97	60	66	55	120	81	557
7- 8 PM	46	69	42	55	55	118	89	474
8- 9 PM	46	62	36	42	34	56	62	338
9-10 PM	28	51	33	37	38	37	53	277
10-11 PM	22	25	28	27	27	28	19	176
11-12 PM	29	19	25	16	11	14	11	125
TOTALS:	1441	1552	1493	917	809	1712	1508	9432

AVERAGE DAILY TRAFFIC: 1306

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 123 BETWEEN 10-11 AM ON MONDAY
 PM HIGH HOUR: 163 BETWEEN 4- 5 PM ON TUESDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 1306 IN 2010
 LOCATION INFORMATION: RAMP FROM KY 21 ONTO PURCHASE PARKWAY SB
 STATION: 463 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12
 2010

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES							TOTAL VEHICLES			
				2 AXLE 4 TIRE	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 OR MORE AXLE	5 OR LESS AXLE		6 OR MORE AXLE	7 OR MORE AXLE	
06-07AM	7/20/10	0	31	10	0	0	0	0	0	0	0	0	42	
07-08AM	7/20/10	0	46	13	1	0	0	1	1	0	0	0	67	
08-09AM	7/20/10	0	37	15	2	1	0	1	1	0	0	0	60	
09-10AM	7/20/10	1	43	16	1	2	0	2	4	0	0	0	70	
10-11AM	7/20/10	0	47	17	1	2	0	2	5	0	0	0	74	
11-12AM	7/20/10	1	58	20	2	1	0	1	5	0	0	0	88	
12-01PM	7/20/10	0	60	17	1	1	0	2	4	0	0	0	85	
01-02PM	7/20/10	0	63	19	1	1	0	1	6	0	0	0	92	
02-03PM	7/20/10	0	67	19	1	2	0	2	5	0	0	0	96	
03-04PM	7/20/10	1	82	22	2	0	0	1	3	0	0	0	113	
04-05PM	7/20/10	1	101	20	1	0	0	1	5	0	0	0	129	
05-06PM	7/20/10	1	85	21	1	1	0	0	3	0	0	0	112	
06-07PM	7/20/10	1	61	11	0	1	0	0	0	0	0	0	77	
07-08PM	7/20/10	1	51	10	0	1	0	0	2	0	0	0	65	
08-09PM	7/20/10	1	40	8	0	1	0	0	1	0	0	0	51	
09-10PM	7/20/10	0	32	6	0	1	0	0	1	0	0	0	40	
10-11PM	7/20/10	0	19	4	0	0	0	0	1	0	0	0	24	
11-12PM	7/20/10	0	13	2	0	0	0	0	1	0	0	0	16	
12-01AM	7/20/10	0	6	2	0	0	0	0	1	0	0	0	9	
01-02AM	7/20/10	0	3	1	0	0	0	0	1	0	0	0	5	
02-03AM	7/20/10	0	3	1	0	0	0	0	1	0	0	0	5	
03-04AM	7/20/10	0	3	2	0	0	0	0	1	0	0	0	5	
04-05AM	7/20/10	0	6	2	0	0	0	0	0	0	0	0	8	
05-06AM	7/20/10	0	13	9	0	0	0	0	2	0	0	0	24	
TOTAL VEHICLES		8	970	267	2	15	16	1	14	62	2	0	0	1357
PERCENT OF TOTAL	0.6	71.5	19.7	0.1	1.1	1.2	0.1	1.0	4.6	0.1	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 112/ 1357 = 8.3%
 AXLES / TRUCK = 464/ 112 = 4.143
 % TRAILER TRUCKS = 78/ 1357 = 5.7%
 % TRAILERS @PK HR = 6/ 129 = 4.7%
 PEAK HOUR BETWEEN 04-05PM = 129 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.92
 % SINGLE UNIT TRUCKS = 34/ 1357 = 2.5%
 % SINGLE UNIT @PK HR = 1/ 129 = 0.8%
 % TRUCKS AT PEAK HOUR = 7/ 129 = 5.4%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 2 2 0 H C

Route Code: K = Interstate, 9 = U.S., 0 = City St., 0 = Other, 3 = County Rd, R = FS
 U.S. Code: 0 = Interstate, 2 = City St., 2 = Other, 0 = County Rd, H = FS
 Milepoint: 0 2 2 0

Route Number: 9003 Suffix: R = none

Array: T = Tube, H = 2 tubes, L = Loop, B = 2 loops, M = mixed
 Sensor: R = Radar, P = Piezo, W = WIM Piezo, O = Other

Ramp # 311

EXIT 22
Fancy Farm & Mayfield

STA # 0 4 2 3 1 1 A 1 A C 1 1

County Number: 0 4 2 Station#: 3 1 1

Lanes Counter is counting: A = All Lanes, N = all NB, L = all EB, P = Part NB & SB, S = all SB, T = Part EB & WB, M = all WB
 Counter is counting: V = Vehicles, A = Axles

Lanes at Station: 1 Type Record: V = Volume, C = Cls x Spd, L = Len x Spd, W = WIM

Machine # of All Machines at Station: 1 1

Ramp Signage

80

FANCY FARM

MAYFIELD

File # G 2 0 0 0 1 1 1 . 2 0 0

of Lanes 1 Lane Width 16

County Graves

Latitude N 3 6 . 4 4 2 5 3

Station number 3 1 1 Machine # 14161-0034

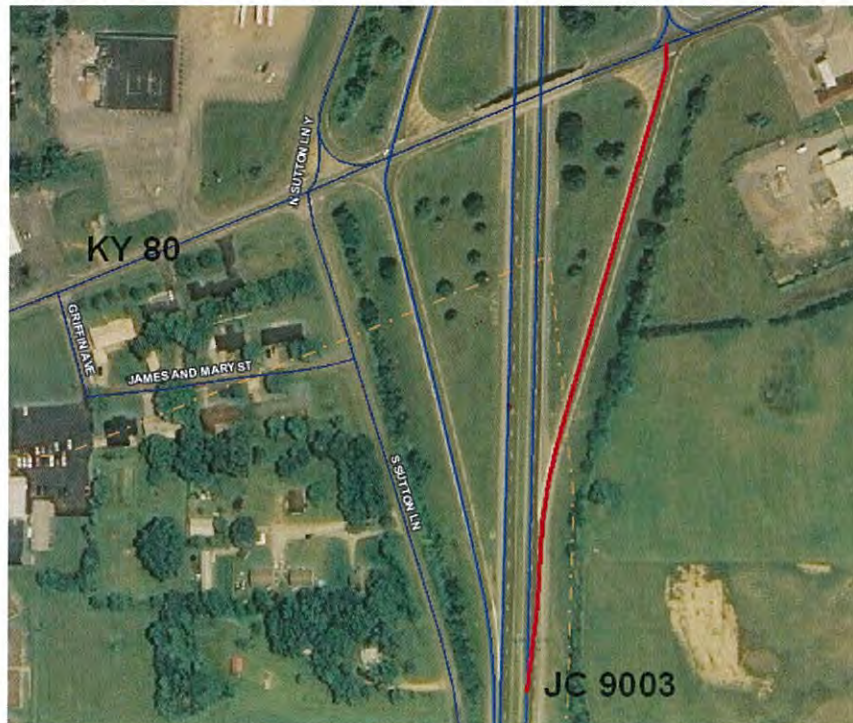
Traffic light Stop sign Merge

Route 042-jc9003 -311 042450

Longitude W 8 8 . 4 0 0 4 2

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	Time	Month	Day	Year
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	0800	7	29	10
		1250	7	20	10

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 4

Right Shoulder Y N

Shoulder width 8

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE : KY9003R

GRAVES COUNTY

STATION 311

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	21	22	23	24	25	26	27	56
1- 2 AM	3	3	11	10	13	7	9	38
2- 3 AM	4	6	5	10	4	4	5	41
3- 4 AM	7	7	6	10	4	2	6	27
4- 5 AM	4	4	3	1	4	3	4	23
5- 6 AM	5	1	19	11	6	21	16	110
6- 7 AM	20	17	25	15	6	31	33	187
7- 8 AM	42	35	69	29	12	80	72	412
8- 9 AM	74	76	67	41	25	71	72	405
9-10 AM	68	67	65	64	52	60	39	413
10-11 AM	68	65	67	72	51	79	82	503
11-12 AM	73	79	74	67	42	67	61	440
12- 1 PM	62	67	76	61	49	69	66	473
1- 2 PM	82	70	93	49	57	78	60	465
2- 3 PM	60	68	66	61	48	83	59	446
3- 4 PM	59	70	94	50	50	89	85	517
4- 5 PM	71	78	95	47	49	114	115	646
5- 6 PM	118	108	76	42	50	107	91	567
6- 7 PM	110	91	66	57	52	64	59	426
7- 8 PM	64	64	55	44	35	56	42	330
8- 9 PM	44	54	38	28	29	28	40	240
9-10 PM	39	38	41	37	22	17	17	181
10-11 PM	21	26	22	21	18	12	22	131
11-12 PM	17	19	22	21	18	17	11	113
TOTALS:	1128	1123	1159	852	696	1160	1072	7190

AVERAGE DAILY TRAFFIC: 996

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 82
 PM HIGH HOUR: 118

BETWEEN 10-11 AM ON TUESDAY
 BETWEEN 4- 5 PM ON WEDNESDAY

MILE POINT : 22.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 22.000
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 996 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY NB TO KY 80
 STATION: 450 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							OTHERS	TOTAL VEHICLES		
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE			5 OR LESS AXLE	6 AXLE
06-07AM	7/20/10	0	21	6	0	0	0	0	0	0	0	0	0	0	27
07-08AM	7/20/10	1	48	12	0	1	1	1	1	1	2	0	0	0	66
08-09AM	7/20/10	0	42	12	0	1	1	0	1	0	2	0	0	0	59
09-10AM	7/20/10	0	42	12	0	1	1	0	0	0	2	0	0	0	58
10-11AM	7/20/10	1	51	15	0	2	1	1	1	1	1	0	0	0	72
11-12AM	7/20/10	0	46	15	0	1	0	1	1	0	1	0	0	0	64
12-01PM	7/20/10	0	51	14	0	2	1	0	1	0	2	0	0	0	71
01-02PM	7/20/10	0	47	13	0	2	0	1	1	0	0	0	0	0	64
02-03PM	7/20/10	0	46	14	0	2	1	0	1	0	2	0	0	0	66
03-04PM	7/20/10	0	56	13	0	0	1	0	1	0	0	0	0	0	72
04-05PM	7/20/10	1	77	17	0	1	1	0	1	0	0	0	0	0	99
05-06PM	7/20/10	1	69	12	0	1	1	0	1	0	1	0	0	0	99
06-07PM	7/20/10	0	52	9	0	0	0	0	1	0	2	0	0	0	86
07-08PM	7/20/10	0	42	6	0	0	0	0	0	0	1	0	0	0	62
08-09PM	7/20/10	0	29	4	0	0	0	0	0	0	0	0	0	0	48
09-10PM	7/20/10	0	22	4	0	0	0	0	0	0	1	0	0	0	34
10-11PM	7/20/10	0	16	2	0	0	0	0	0	0	0	0	0	0	26
11-12PM	7/20/10	0	14	2	0	0	0	0	0	0	1	0	0	0	18
12-01AM	7/20/10	0	8	0	0	0	0	0	0	0	0	0	0	0	9
01-02AM	7/20/10	0	3	1	0	0	0	0	0	0	1	0	0	0	5
02-03AM	7/20/10	0	5	1	0	0	0	0	0	0	0	0	0	0	6
03-04AM	7/20/10	0	3	0	0	0	0	0	0	0	0	0	0	0	3
04-05AM	7/20/10	0	2	1	0	0	0	0	0	0	0	0	0	0	3
05-06AM	7/20/10	1	10	3	0	0	0	0	0	0	1	0	0	0	15
TOTAL VEHICLES		5	802	188	0	14	8	0	10	23	0	0	0	0	1050
PERCENT OF TOTAL	0.5	76.4	17.9	0.0	1.3	0.8	0.0	1.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 55/ 1050 = 5.2 %
 AXLES / TRUCK = 207/ 55 = 3.764
 % TRAILER TRUCKS = 33/ 1050 = 3.1 %
 % TRAILERS @PK HR = 2/ 99 = 2.0 %
 PEAK HOUR BETWEEN 04-05PM = 99 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.96
 % SINGLE UNIT TRUCKS = 22/ 1050 = 2.1 %
 % SINGLE UNIT @PK HR = 2/ 99 = 2.0 %
 % TRUCKS AT PEAK HOUR = 4/ 99 = 4.0 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 2 2 . 0 H C

Route Code: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS
 U=U.S., S=City St, O=Other

Route Number: 9003 Suffix: _ = none

Milepoint: 0 2 2 . 0

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 321

EXIT 22
Fancy Farm & Mayfield

STA # 0 4 2 3 2 1 A L A C L L

County Number: C C C Station#: S S S N L P T M A

Lanes Counter is counting:
 A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting:
 V=Vehicles, A=Axles

Lanes at Station: L

Type Record:
 V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: L L

Ramp Signage

File # G 2 0 0 0 1 3 1 . L 0 0

of Lanes 1 Lane Width 16

County Graves

Latitude N 3 6 . 4 4 4 8 8

Station number 3 2 1 Machine # 12896 - 027

Traffic light _____ Stop sign Merge

Route 042-JC-9003 -321 042451

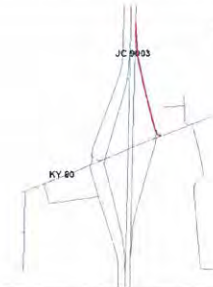
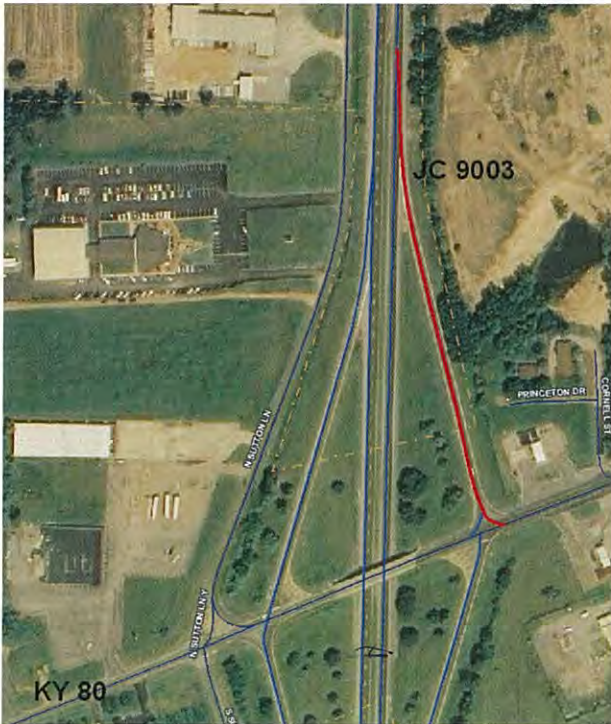
Longitude W 8 8 . 4 0 0 4 5

Type Record (check one): Volume Class Length

Type Sensor (check one): Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1320	7	20	10
Recorder Picked Up	0900	7	29	10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4

Right Shoulder N

Shoulder width 8

Type: Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 321

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	21	22	23	24	25	26	27	42
1- 2 AM	2	2	6	10	10	6	6	42
2- 3 AM	5	4	2	4	6	3	4	27
3- 4 AM	1	2	5	8	3	2	2	24
4- 5 AM	4	2	6	1	3	3	4	23
5- 6 AM	12	14	17	8	9	18	24	102
6- 7 AM	61	51	44	13	12	53	50	284
7- 8 AM	115	111	105	35	18	125	119	628
8- 9 AM	173	159	148	51	27	178	157	893
9-10 AM	104	103	119	50	35	106	93	610
10-11 AM	79	79	89	62	74	110	97	590
11-12 AM	94	91	105	77	44	94	80	585
1- 2 PM	83	94	114	82	53	73	94	595
2- 3 PM	98	106	88	78	102	83	95	644
3- 4 PM	63	81	93	64	93	107	87	583
4- 5 PM	72	77	97	68	68	107	96	565
5- 6 PM	66	81	81	69	76	96	61	546
6- 7 PM	95	108	103	74	81	103	117	681
7- 8 PM	104	124	101	76	73	118	103	699
8- 9 PM	81	79	85	63	61	70	58	497
9-10 PM	36	43	40	49	30	52	39	289
10-11 PM	59	40	49	24	40	30	31	273
11-12 PM	26	32	31	29	32	28	29	207
TOTALS:	1460	1533	1560	1026	979	1577	1463	9598

AVERAGE DAILY TRAFFIC: 1329

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 178 BETWEEN 7- 8 AM ON MONDAY
 PM HIGH HOUR: 124 BETWEEN 5- 6 PM ON THURSDAY
 MILE POINT : 22.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 22.000
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 1329 IN 2010
 LOCATION INFORMATION: RAMP FROM KY 80 ONTO PURCHASE PARKWAY NB
 STATION: 451 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR CYCLES	PASSENGER CARS	SINGLE UNIT TRUCKS										OTHERS	TOTAL VEHICLES		
				OTHER 2 AXLE 4 TIRE VEHICLES	BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE			7 OR MORE AXLE	
06-07AM	7/20/10	1	64	25	0	2	0	0	0	1	1	0	0	0	0	0	95
07-08AM	7/20/10	1	99	30	0	5	1	0	0	1	1	0	0	0	0	0	139
08-09AM	7/20/10	0	66	19	0	2	1	0	0	2	0	0	0	0	0	0	91
09-10AM	7/20/10	1	61	16	0	3	1	1	1	1	0	0	0	0	0	0	85
10-11AM	7/20/10	1	57	19	0	3	1	1	1	2	0	0	0	0	0	0	85
11-12AM	7/20/10	1	58	20	0	2	1	1	1	1	0	0	0	0	0	0	85
12-01PM	7/20/10	0	63	21	0	3	1	0	1	2	0	0	0	0	0	0	91
01-02PM	7/20/10	1	56	20	1	3	1	1	1	1	0	0	0	0	0	0	86
02-03PM	7/20/10	0	56	19	0	2	1	1	1	2	0	0	0	0	0	0	82
03-04PM	7/20/10	0	53	18	0	3	1	1	1	1	0	0	0	0	0	0	78
04-05PM	7/20/10	0	66	24	0	4	1	1	1	1	0	0	0	0	0	0	98
05-06PM	7/20/10	1	73	22	0	2	1	0	0	1	0	0	0	0	0	0	101
06-07PM	7/20/10	1	52	16	0	1	0	0	0	0	0	0	0	0	0	0	70
07-08PM	7/20/10	1	32	17	0	1	0	0	0	0	0	0	0	0	0	0	41
08-09PM	7/20/10	0	29	9	0	0	0	0	0	0	0	0	0	0	0	0	38
09-10PM	7/20/10	0	24	5	0	0	0	0	0	0	0	0	0	0	0	0	29
10-11PM	7/20/10	0	15	3	0	0	0	0	0	0	0	0	0	0	0	0	18
11-12PM	7/20/10	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
12-01AM	7/20/10	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
01-02AM	7/20/10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
02-03AM	7/20/10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	4
03-04AM	7/20/10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
04-05AM	7/20/10	0	9	6	0	0	0	0	0	1	0	0	0	0	0	0	16
05-06AM	7/20/10	0	31	11	0	2	0	0	0	1	0	0	0	0	0	0	45
TOTAL VEHICLES		9	984	318	1	38	11	7	12	19	1	0	0	0	0	0*	1400
PERCENT OF TOTAL		0.6	70.3	22.7	0.1	2.7	0.8	0.5	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	

% HEAVY TRUCKS = 89/ 1400 = 6.4 %
 AXLES / TRUCKS = 288/ 89 = 3.236
 % TRAILER TRUCKS = 32/ 1400 = 2.3 %
 % TRAILERS @PK HR= 3/ 139 = 2.2 %
 PEAK HOUR BETWEEN 07-08AM = 139 VEHICLES
 TOTAL HOURS = 24

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 2 2 . 0 H C

Route Code: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS
 U=U.S., S=City St., O=Other

Route Number: 9003 Suffix: _ = none

Milepoint: 0 2 2 . 0

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed
 R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 331

EXIT 22
Fancy Farm & Mayfield

STA # 0 4 2 3 3 1 A L A C 1 1

County Number: 0 4 2 Station#: 3 3 1

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T M A

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 1 1

Ramp Signage

80

MAYFIELD

FANCY FARM

File # G 2 0 0 0 0 9 1 . L 0 0

of Lanes 1 Lane Width 16

County Graves

Latitude N 3 6 . 4 4 4 4 4

Station number 3 3 1 Machine # 12061 - 059

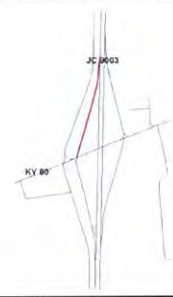
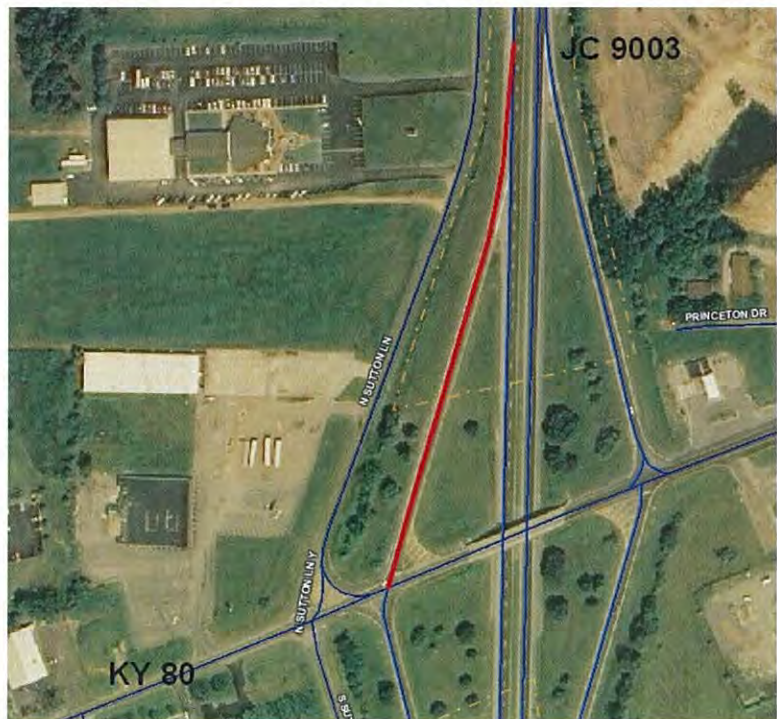
Traffic light Stop sign Merge

Route 042-JC-9003 -331 042452

Longitude W 8 8 . 4 0 0 6 5

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	1220	7	20	10
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	0800	7	29	10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4

Right Shoulder N

Shoulder width 8

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 331

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	6	16	15	15	11	9	8	80
2- 2 AM	4	4	4	0	14	6	2	46
3- 3 AM	8	4	4	0	7	4	3	30
4- 4 AM	4	3	1	6	3	3	2	22
5- 5 AM	4	3	4	8	4	6	7	36
6- 6 AM	11	10	10	7	8	11	14	71
7- 7 AM	32	29	27	12	8	11	30	167
8- 8 AM	64	58	67	22	19	29	63	349
9- 9 AM	62	66	77	33	28	56	63	406
10-10 AM	65	52	58	45	50	77	84	418
11-11 AM	67	53	57	46	63	76	60	422
12- 1 PM	67	77	99	63	61	84	67	518
1- 2 PM	69	85	97	69	65	84	87	556
2- 3 PM	54	72	98	72	71	82	88	537
3- 4 PM	87	90	102	66	55	102	97	599
4- 5 PM	111	122	135	70	63	113	118	732
5- 6 PM	150	130	136	70	90	138	169	883
6- 7 PM	138	147	128	83	73	129	147	845
7- 8 PM	106	91	85	69	56	93	82	582
8- 9 PM	55	71	62	71	74	89	72	494
9-10 PM	76	67	45	75	48	50	66	427
10-11 PM	51	75	67	40	30	39	53	355
11-12 PM	19	48	52	50	30	30	22	251
TOTALS:	1334	1391	1454	1032	950	1384	1416	8961

AVERAGE DAILY TRAFFIC: 1241

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 99 BETWEEN 11-12 AM ON FRIDAY
 PM HIGH HOUR: 169 BETWEEN 4- 5 PM ON TUESDAY
 MILE POINT : 22.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 22.000
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 1241 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY SB TO KY 80
 STATION: 452 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES	
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE						
06-07AM	7/20/10	0	14	10	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	27
07-08AM	7/20/10	0	30	16	0	3	1	1	1	1	1	0	0	0	0	0	0	0	53	
08-09AM	7/20/10	0	31	19	1	3	1	0	2	1	1	0	0	0	0	0	0	0	58	
09-10AM	7/20/10	0	34	19	1	3	0	0	2	1	1	0	0	0	0	0	0	0	62	
10-11AM	7/20/10	1	29	22	0	4	2	0	1	1	1	0	0	0	0	0	0	0	60	
11-12AM	7/20/10	0	40	27	0	4	1	0	1	1	1	0	0	0	0	0	0	0	74	
12-01PM	7/20/10	1	42	26	0	3	2	0	1	1	1	0	0	0	0	0	0	0	76	
01-02PM	7/20/10	1	44	27	0	3	2	1	1	1	1	0	0	0	0	0	0	0	79	
02-03PM	7/20/10	0	49	28	0	3	2	0	1	1	1	0	0	0	0	0	0	0	84	
03-04PM	7/20/10	0	62	36	0	5	1	0	1	1	1	0	0	0	0	0	0	0	107	
04-05PM	7/20/10	1	84	42	0	4	0	0	1	1	1	0	0	0	0	0	0	0	133	
05-06PM	7/20/10	1	78	42	0	4	0	0	1	1	1	0	0	0	0	0	0	0	126	
06-07PM	7/20/10	0	53	30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	86	
07-08PM	7/20/10	1	45	30	0	2	0	0	1	1	1	0	0	0	0	0	0	0	70	
08-09PM	7/20/10	0	39	23	0	1	0	0	0	0	0	0	0	0	0	0	0	0	63	
09-10PM	7/20/10	0	34	14	0	1	0	0	0	0	0	0	0	0	0	0	0	0	51	
10-11PM	7/20/10	1	22	10	0	2	0	0	1	1	1	0	0	0	0	0	0	0	34	
11-12PM	7/20/10	0	14	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	19	
12-01AM	7/20/10	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	
01-02AM	7/20/10	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
02-03AM	7/20/10	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
03-04AM	7/20/10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
04-05AM	7/20/10	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
05-06AM	7/20/10	0	7	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	
TOTAL VEHICLES		8	770	429	2	49	14	2	16	12	0	0	0	0	0	0	0	0	1302	
PERCENT OF TOTAL		0.6	59.1	32.9	0.2	3.8	1.1	0.2	1.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

% HEAVY TRUCKS = 95/ 1302 = 7.3 %
 AXLES / TRUCK = 276/ 95 = 2.905
 % TRAILER TRUCKS = 28/ 1302 = 2.2 %
 % TRAILERS APK HR = 2/ 133 = 1.5 %
 PEAK HOUR BETWEEN 04-05PM = 133 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.97
 % SINGLE UNIT TRUCKS = 67/ 1302 = 5.1 %
 % SINGLE UNIT @ PK HR = 4/ 133 = 3.0 %
 % TRUCKS AT PEAK HOUR = 6/ 133 = 4.5 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 2 2 0 4 C

Route Code: K (Interstate), 9 (Ky or Parkways), 0 (County Rd), 0 (FS), 3 (U.S.), R (City St), 0 (Other), 2 (None), 2 (None), 0 (None), 4 (None), C (None)

Route Number: 9003 Suffix: R (none)

Milepoint: 0 2 2 0

Array: 0 (Tube), 2 (2 tubes), 2 (Loop), 0 (2 loops), 4 (mixed), C (Other)

Ramp # 341

EXIT 22
Fancy Farm &
Mayfield

STA # 0 4 2 3 4 1 A 1 A C 1 1

County Number: 0 4 2 Station #: 3 4 1

Lanes at Station: A 1 A

Type Record: C (Cls x Spd), 1 (Len x Spd), 1 (WIM)

Machine # of All Machines at Station: 1 1

Counter is counting: V (Vehicles), A (Axles)

Lanes Counter is counting: A (All Lanes), B (Part NB & SB), C (Part EB & WB), 1 (lane 1), 2 (lane 2)

N=all NB, E=all EB, S=all SB, W=all WB

Ramp Signage

File # G 2 0 0 0 1 0 1 . L 0 0

Station number 3 4 1 Machine # 12897 . 0062

of Lanes 1 Lane Width 16

Traffic light _____ Stop sign Merge

County Graves

Route 042-JC-9003 -341 042453

Latitude N 3 6 . 4 4 2 0 8

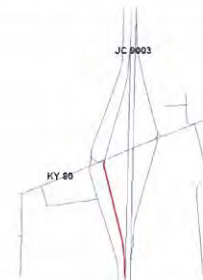
Longitude W 8 8 . 4 0 0 6 3

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	1230	7	20	10
Recorder Picked Up	0800	7	29	10

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 4

Right Shoulder N

Shoulder width 6

Type: No shoulders exist
Bituminous Concrete
N/A Stabilized
Combination Earth
Curbed

Field Technician DS DC

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 341

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	4	7	6	7	12	6	5	47
1- 2 AM	5	5	1	7	8	3	5	34
2- 3 AM	2	0	0	3	5	2	3	15
3- 4 AM	9	4	5	2	5	5	4	34
4- 5 AM	8	13	13	6	6	11	9	66
5- 6 AM	31	31	26	15	4	29	28	164
6- 7 AM	51	43	40	28	8	50	57	277
7- 8 AM	68	73	70	32	13	74	75	405
8- 9 AM	62	72	54	43	11	68	60	370
9-10 AM	72	69	67	56	40	66	76	446
10-11 AM	61	73	69	71	47	74	60	455
11-12 AM	55	69	69	60	51	64	81	449
12- 1 PM	85	82	83	70	68	74	70	530
1- 2 PM	85	87	85	73	59	74	78	541
2- 3 PM	73	73	86	43	46	87	81	489
3- 4 PM	83	85	100	50	46	93	97	554
4- 5 PM	76	87	82	51	61	108	96	561
5- 6 PM	96	90	79	36	54	83	75	513
6- 7 PM	58	58	60	57	40	52	58	383
7- 8 PM	42	51	56	33	34	41	41	298
8- 9 PM	45	43	39	34	36	45	38	280
9-10 PM	49	34	43	27	26	54	25	258
10-11 PM	21	21	18	18	13	9	20	120
11-12 PM	4	14	19	26	18	12	4	97
TOTALS:	1143	1184	1170	848	711	1184	1146	7386

AVERAGE DAILY TRAFFIC: 1023

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 81 BETWEEN 11-12 AM ON TUESDAY
 PM HIGH HOUR: 108 BETWEEN 4- 5 PM ON MONDAY

MILE POINT : 22.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 22.000
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 1023 IN 2010
 LOCATION INFORMATION: RAMP FROM KY 80 ONTO PURCHASE PARKWAY SB
 STATION: 453 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							OTHERS	TOTAL VEHICLES		
					BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE			5 OR LESS AXLE	6 AXLE
06-07AM	7/20/10	0	29	10	0	0	0	0	0	0	0	0	0	0	40
07-08AM	7/20/10	0	45	10	0	1	2	0	0	0	0	0	0	0	59
08-09AM	7/20/10	0	35	11	0	1	2	1	0	0	0	0	0	0	53
09-10AM	7/20/10	0	42	16	1	2	2	0	0	0	0	0	0	0	66
10-11AM	7/20/10	1	44	14	1	1	1	1	1	2	0	0	0	0	65
11-12AM	7/20/10	1	42	15	0	1	1	1	1	2	0	0	0	0	64
12-01PM	7/20/10	1	51	19	0	1	1	1	1	1	0	0	0	0	76
01-02PM	7/20/10	1	52	17	0	1	1	1	1	2	0	0	0	0	75
02-03PM	7/20/10	0	50	15	0	1	1	0	0	1	0	0	0	0	70
03-04PM	7/20/10	0	54	20	0	1	1	0	0	1	0	0	0	0	79
04-05PM	7/20/10	0	63	14	0	1	1	0	0	1	0	0	0	0	82
05-06PM	7/20/10	1	57	15	0	1	1	0	0	1	0	0	0	0	77
06-07PM	7/20/10	1	41	9	0	1	1	0	0	1	0	0	0	0	53
07-08PM	7/20/10	0	34	4	0	0	1	0	0	0	0	0	0	0	41
08-09PM	7/20/10	0	34	4	0	0	1	0	0	1	0	0	0	0	40
09-10PM	7/20/10	0	32	15	0	0	0	0	0	0	0	0	0	0	37
10-11PM	7/20/10	0	15	1	0	0	1	0	0	0	0	0	0	0	17
11-12PM	7/20/10	0	11	1	0	0	0	0	0	0	0	0	0	0	12
12-01AM	7/20/10	0	6	1	0	0	0	0	0	0	0	0	0	0	8
01-02AM	7/20/10	0	4	1	0	0	0	0	0	0	0	0	0	0	5
02-03AM	7/20/10	0	1	1	0	0	0	0	0	0	0	0	0	0	3
03-04AM	7/20/10	0	3	0	0	0	0	0	0	0	0	0	0	0	3
04-05AM	7/20/10	0	5	2	0	0	0	0	0	0	0	0	0	0	10
05-06AM	7/20/10	1	16	6	0	1	1	0	0	0	0	0	0	0	25
TOTAL VEHICLES		7	766	212	3	19	21	2	8	22	0	0	0	0	1060
PERCENT OF TOTAL		0.7	72.3	20.0	0.3	1.8	2.0	0.2	0.8	2.1	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 75/1060 = 7.1%
 AXLES / TRUCKS = 257/75 = 3.427
 % TRAILER TRUCKS = 30/1060 = 2.8%
 % TRAILERS @PK HR = 2/82 = 2.4%
 PEAK HOUR BETWEEN 04-05PM = 82 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.95
 % SINGLE UNIT TRUCKS = 45/1060 = 4.2%
 % SINGLE UNIT @ PK HR = 3/82 = 3.7%
 % TRUCKS AT PEAK HOUR = 5/82 = 6.1%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning

Ramp Traffic Count Record

District # 1

I.D. # R 9003 r 000.1 H C

Route Code: R=County Rd, N=U.S., S=City St, H=2 tubes, M=Mixed, A=District making count

Route Number: 9003 Suffix: none Milepoint: 000.1

Array: T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed, R=Radars, P=Plazo, W=WIM Plazo, O=Other

Ramp # 202

STA # 042900A1AC11

County Number: 042 Station#: 900

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2

Lanes at Station: NLP

Counter is counting: V=Vehicles, A=Axes

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Machine # of All Machines at Station: 18286018

Ramp Signage: PKWY, Memphis

File # 42000131.L00

of Lanes 1 Lane Width 15'

County Graves

Latitude N 36.72957

Station number 900 Machine # 18286018

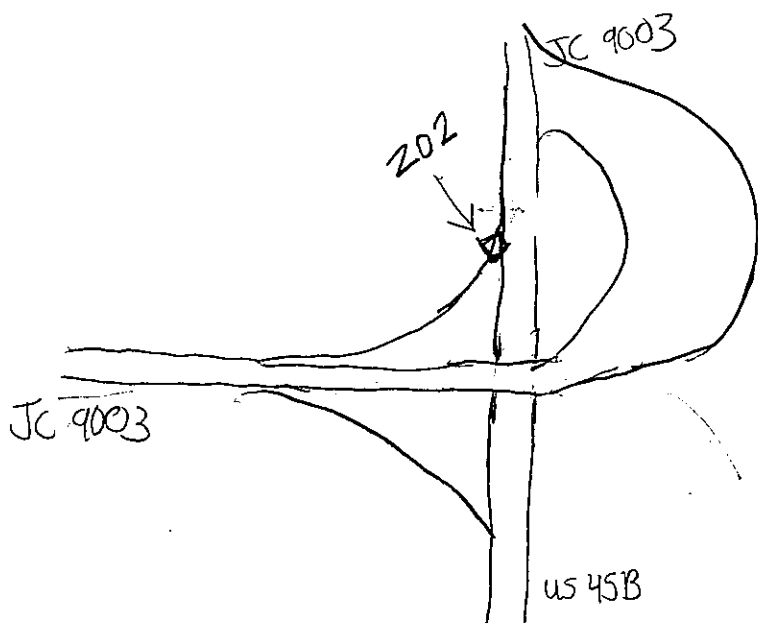
Traffic light _____ Stop sign Merge

Route JC Pkwy 9003 station 042900

Longitude W 88.66764

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	14:13	07	20	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	8:51	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 1'

Right Shoulder N

Shoulder width 1'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth

Curbed

Field Technician GM/JH Ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 900

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12-1 AM	21	22	23	24	25	26	27	
1-2 AM	38	58	58	47	44	25	34	278
2-3 AM	21	34	32	40	39	31	31	219
3-4 AM	31	22	29	33	21	17	22	175
4-5 AM	29	34	30	24	18	41	31	207
5-6 AM	48	38	38	38	20	38	31	251
6-7 AM	74	76	63	47	19	83	75	437
7-8 AM	120	111	119	62	29	123	108	672
8-9 AM	154	188	172	94	44	161	143	956
9-10 AM	189	199	166	98	74	164	190	1080
10-11 AM	187	176	190	130	99	198	187	1167
11-12 AM	201	162	209	156	129	201	145	1203
12-1 PM	198	206	196	164	162	201	199	1326
1-2 PM	203	214	206	142	163	189	210	1327
2-3 PM	201	218	249	191	201	214	211	1485
3-4 PM	224	201	250	171	170	219	196	1431
4-5 PM	247	248	283	227	197	227	219	1648
5-6 PM	222	233	231	212	207	226	264	1595
6-7 PM	235	229	226	196	184	205	221	1496
7-8 PM	176	165	213	180	194	144	159	1231
8-9 PM	148	134	162	178	179	132	143	1076
9-10 PM	127	124	168	133	106	113	117	888
10-11 PM	113	127	136	149	86	153	130	894
11-12 PM	85	83	96	102	67	77	85	595
TOTALS:	3326	3331	3561	2882	2517	3247	3207	22071

AVERAGE DAILY TRAFFIC: 3058

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 209 BETWEEN 10-11 AM ON FRIDAY
 PM HIGH HOUR: 283 BETWEEN 3-4 PM ON FRIDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 3058 IN 2010
 LOCATION INFORMATION: RAMP FROM KY PURCHASE PKWY/US 45B ONTO PURCHASE PKWY SB
 STATION: 900 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE	OTHERS			
06-07AM	7/20/10	1	24	24	1	11	1	0	0	4	31	1	2	0	0	0	0	100
07-08AM	7/20/10	2	41	35	2	12	2	5	3	37	1	1	0	0	0	0	141	
08-09AM	7/20/10	3	46	40	1	13	3	8	4	35	1	1	0	0	0	0	155	
09-10AM	7/20/10	3	50	50	3	13	3	2	6	37	1	1	0	0	0	0	159	
10-11AM	7/20/10	3	48	47	2	13	3	7	7	43	0	1	0	0	0	0	174	
11-12AM	7/20/10	4	50	54	2	15	3	8	7	44	1	1	0	0	0	0	189	
12-01PM	7/20/10	3	58	56	2	14	4	4	7	40	0	2	0	0	0	0	190	
01-02PM	7/20/10	4	68	68	2	17	3	4	6	42	1	1	0	0	0	0	216	
02-03PM	7/20/10	4	69	64	1	17	2	4	7	38	0	1	0	0	0	0	207	
03-04PM	7/20/10	3	82	76	2	16	3	5	7	44	0	0	0	0	0	0	234	
04-05PM	7/20/10	3	89	76	1	14	3	5	8	38	1	0	0	0	0	0	238	
05-06PM	7/20/10	3	77	69	2	18	2	1	6	34	0	0	0	0	0	0	212	
06-07PM	7/20/10	2	60	56	1	11	2	1	5	37	0	0	0	0	0	0	174	
07-08PM	7/20/10	5	51	45	1	10	2	0	4	34	0	0	0	0	0	0	149	
08-09PM	7/20/10	2	42	39	0	7	2	0	3	26	0	1	0	0	0	0	122	
09-10PM	7/20/10	1	49	39	0	6	2	0	2	28	0	2	0	0	0	0	129	
10-11PM	7/20/10	1	19	22	0	4	1	0	2	21	0	1	0	0	0	0	80	
11-12PM	7/20/10	2	12	18	1	2	1	0	0	16	0	0	0	0	0	0	59	
12-01AM	7/20/10	1	8	11	0	2	1	0	1	12	0	0	0	0	0	0	41	
01-02AM	7/20/10	0	8	7	0	1	1	0	0	13	0	0	0	0	0	0	30	
02-03AM	7/20/10	0	8	3	0	0	0	0	1	13	0	0	0	0	0	0	25	
03-04AM	7/20/10	1	6	3	0	1	1	0	1	15	0	0	0	0	0	0	29	
04-05AM	7/20/10	1	5	6	1	2	1	0	1	20	0	0	0	0	0	0	36	
05-06AM	7/20/10	1	13	16	1	5	1	0	3	23	0	2	0	0	0	0	65	
TOTAL VEHICLES		50	1002	924	27	224	45	49	96	721	7	18	1	0	0	0*	3164	
PERCENT OF TOTAL		1.6	31.7	29.2	0.9	7.1	1.4	1.5	3.0	22.8	0.2	0.6	0.0	0.0	0.0	0.0		

% HEAVY TRUCKS = 1188/ 3164 = 37.5 %
 AXLES / TRUCK = 4960/ 1188 = 4.175
 % TRAILER TRUCKS = 843/ 3164 = 26.6 %
 % TRAILERS @PK HR = 51/ 238 = 21.4 %
 PEAK HOUR BETWEEN 03-04PM = 238 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.71
 % SINGLE UNIT TRUCKS = 345/ 3164 = 10.9 %
 % SINGLE UNIT @ PK HR = 26/ 238 = 10.9 %
 % TRUCKS AT PEAK HOUR = 77/ 238 = 32.4 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 1 H C

Route Code: R (Interstate), N (Ky or Parkways), N (County Rd), N (City St), N (Other), S (U.S.), M (Milepoint), M (Milepoint), M (Milepoint), M (Milepoint), A (District making count), D (District making count)

Route Number: 9003 Suffix: r = none

Array - T=Tube H=2 tubes L=Loop B=2 loops M=mixed
R=Radars P=Piezo W=WIM Piezo O=Other

Ramp # 211

EXIT 22
Fancy Farm &
Mayfield

STA # 0 4 2 2 1 1 A 1 A C 1 1

County Number: 0422 Station #: 11A1AC11

Lanes Counter is counting:
A=All Lanes N=all NB
B=Part NB & SB E=all EB
C=Part EB & WB S=all SB
1=lane 1 W=all WB
2=lane 2

Lanes at Station: 1

Counter is counting:
V=Vehicles
A=Axles

Type Record:
V=Volume
C=Cls x Spd
L=Len x Spd
W=WIM

Machine # of All Machines at Station: _____

Ramp Signage

US 45

File # G2000141.L00

of Lanes 1 Lane Width 15'

County Graves

Latitude N 36.72619

Station number 211 Machine # 11221-0015

Traffic light _____ Stop sign Merge

Route 042-JC9003 -211

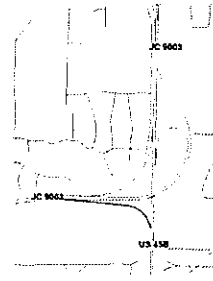
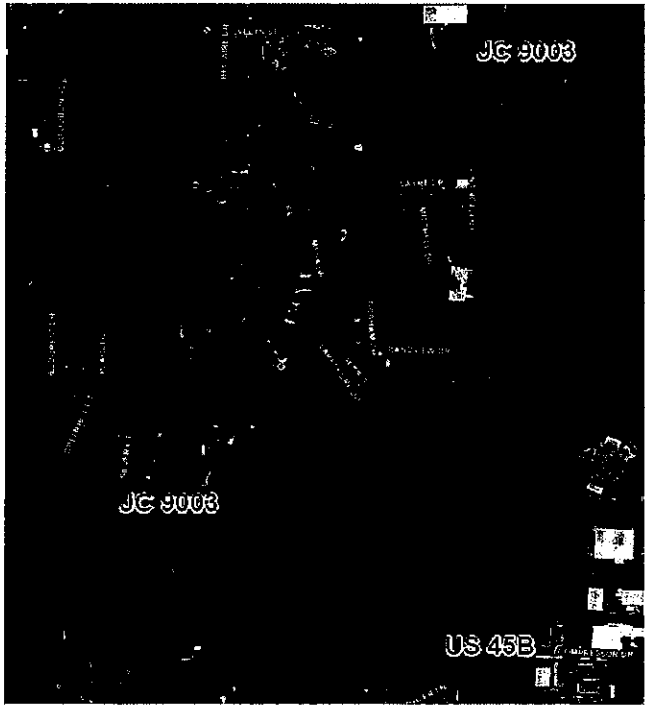
Longitude W 88.67152

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	13:01	07	20	2010
Recorder Picked Up	8:55	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 1'

Right Shoulder N

Shoulder width 1'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 211

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12-1 AM	21	22	23	24	25	26	27	
1-2 AM	1	1	2	4	4	3	3	18
2-3 AM	5	2	1	3	2	0	1	15
3-4 AM	2	1	5	2	1	0	1	12
4-5 AM	1	3	4	3	3	2	3	19
5-6 AM	2	2	2	1	3	2	0	12
6-7 AM	5	5	6	1	1	6	7	31
7-8 AM	9	8	8	1	2	8	7	49
8-9 AM	23	26	17	10	3	16	24	117
9-10 AM	17	10	16	5	3	24	11	86
10-11 AM	15	13	16	9	14	24	11	99
11-12 AM	15	21	23	28	14	11	21	124
1-2 PM	26	16	17	18	3	15	14	110
2-3 PM	22	19	16	15	9	14	15	109
3-4 PM	17	23	21	19	14	20	21	135
4-5 PM	24	26	18	14	16	16	21	135
5-6 PM	23	27	27	18	21	32	40	188
6-7 PM	35	23	26	15	20	32	24	175
7-8 PM	22	23	33	13	13	24	22	150
8-9 PM	14	21	24	14	7	11	17	108
9-10 PM	7	5	5	10	14	11	7	67
10-11 PM	8	8	4	7	10	4	4	45
11-12 PM	15	8	4	6	7	11	9	62
TOTALS:	11	4	9	9	4	5	8	50
TOTALS:	324	300	319	238	186	298	300	1965

AVERAGE DAILY TRAFFIC: 271

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 28 BETWEEN 10-11 AM ON SATURDAY
 PM HIGH HOUR: 40 BETWEEN 3-4 PM ON TUESDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 271 IN 2010
 LOCATION INFORMATION: RAMP US 45B TO CONTINUE ON PURCHASE PARKWAY NB
 STATION: 211 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12
 2010

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							OTHERS	TOTAL VEHICLES		
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE			5 OR LESS AXLE	6 AXLE
06-07AM	7/20/10	0	4	2	0	0	0	0	0	0	0	0	0	0	7
07-08AM	7/20/10	0	12	4	0	0	0	0	0	0	0	0	0	0	18
08-09AM	7/20/10	0	7	3	0	0	0	0	0	0	0	0	0	0	13
09-10AM	7/20/10	0	9	3	0	0	0	0	0	0	0	0	0	0	14
10-11AM	7/20/10	0	11	3	0	0	0	0	0	0	0	0	0	0	17
11-12AM	7/20/10	0	10	3	0	0	0	0	0	0	0	0	0	0	15
12-01PM	7/20/10	0	10	4	0	0	0	0	0	0	0	0	0	0	15
01-02PM	7/20/10	0	12	5	0	0	0	0	0	0	0	0	0	0	20
02-03PM	7/20/10	0	12	5	0	0	0	0	0	0	0	0	0	0	19
03-04PM	7/20/10	0	19	5	0	0	0	0	0	0	0	0	0	0	27
04-05PM	7/20/10	0	18	6	0	0	0	0	0	0	0	0	0	0	25
05-06PM	7/20/10	0	16	5	0	0	0	0	0	0	0	0	0	0	22
06-07PM	7/20/10	0	10	4	0	0	0	0	0	0	0	0	0	0	15
07-08PM	7/20/10	0	7	2	0	0	0	0	0	0	0	0	0	0	9
08-09PM	7/20/10	0	5	1	0	0	0	0	0	0	0	0	0	0	6
09-10PM	7/20/10	0	6	1	0	0	0	0	0	0	0	0	0	0	8
10-11PM	7/20/10	0	6	0	0	0	0	0	0	0	0	0	0	0	7
11-12PM	7/20/10	0	4	2	0	0	0	0	0	0	0	0	0	0	6
12-01AM	7/20/10	0	2	1	0	0	0	0	0	0	0	0	0	0	3
01-02AM	7/20/10	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02-03AM	7/20/10	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03-04AM	7/20/10	0	2	0	0	0	0	0	0	0	0	0	0	0	3
04-05AM	7/20/10	0	1	1	0	0	0	0	0	0	0	0	0	0	3
05-06AM	7/20/10	0	3	0	0	0	0	0	0	0	0	0	0	0	4
TOTAL VEHICLES		0	189	60	0	2	0	0	2	24	0	0	0	0	277
PERCENT OF TOTAL		0.0	68.2	21.7	0.0	0.7	0.0	0.0	0.7	8.7	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 28/277 = 10.1%
 AXLES / TRUCK = 132/277 = 4.74%
 % TRAILER TRUCKS = 26/277 = 9.4%
 % TRAILERS APK HR = 2/27 = 7.4%
 PEAK HOUR BETWEEN 03-04PM = 27 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.88
 % SINGLE UNIT TRUCKS = 2/277 = 0.7%
 % SINGLE UNIT a PK HR = 0/27 = 0.0%
 % TRUCKS AT PEAK HOUR = 2/27 = 7.4%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # k 9 0 0 3 r 0 0 0 . 1 H C

Route Code: R N N N N S M M M M A D

Route Number: 9003 Suffix: none Milepoint: 000.1 District making count: C

Route Code Legend: I=Interstate, K=Ky or Parkways, R=County Rd, F=FS; U=U.S., S=City St, O=Other

Array Legend: T=Tube, H=2 tubes, L=Loop, B=2 loops, M= mixed; R=Radar, P=Piezo, W=WIM Piezo, O=Other

Ramp # 201

STA # 0 4 2 2 0 1 A 1 A C 1 1

County Number: C C C Station#: S S S N L P T M A

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2; N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: N L P T M A

Counter is counting: V=Vehicles, A=Axles

Type Record: V=Volume, C=Cls x Spd, L=Lan x Spd, W=WIM

Machine # of All Machines at Station: _____

Ramp Signage

File # G2000151.400

of Lanes _____ Lane Width 21' tapers

County Graves

Latitude N 36.72621

Station number 201 Machine # 18286037

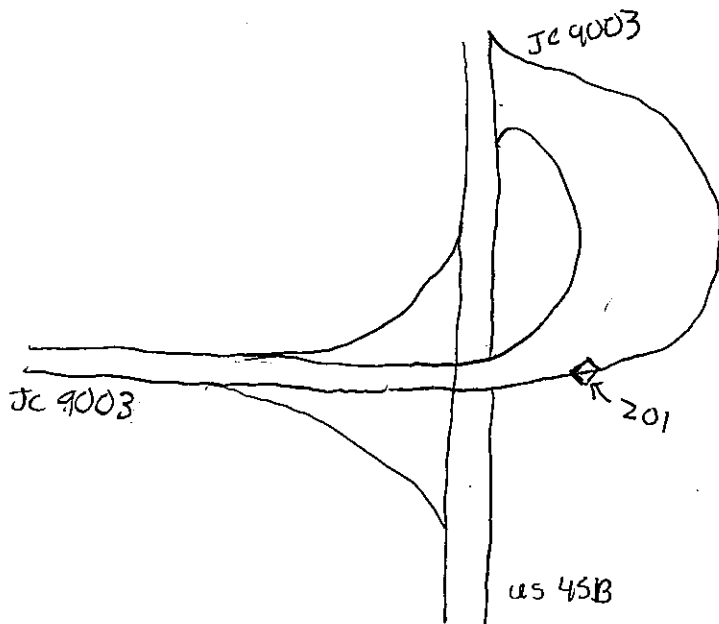
Traffic light _____ Stop sign Merge

Route JC 9003

Longitude W 88.66981

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length		Time	Month	Day	Year
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Set Out	14:38	07	20	2010
	Recorder Picked Up	9:05	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 3'

Right Shoulder Y N

Shoulder width 9'

Type: No shoulders exist

Bituminous Concrete

N/A Stabilized

Combination Earth

Curbed

Field Technician GM/JH Ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET--DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 201

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	29	31	22	37	38	33	35	225
2- 3 AM	28	27	37	27	17	17	27	191
3- 4 AM	19	29	30	23	12	27	20	169
4- 5 AM	37	30	32	25	21	26	11	164
5- 6 AM	65	40	41	26	17	38	42	241
6- 7 AM	127	81	73	39	27	69	50	404
7- 8 AM	251	123	143	52	33	138	141	757
8- 9 AM	195	172	224	103	61	227	200	1298
9-10 AM	217	241	229	147	85	158	188	1174
10-11 AM	208	222	258	260	130	197	164	1467
11-12 AM	216	222	232	190	166	229	221	1458
12- 1 PM	246	239	245	227	184	197	194	1472
1- 2 PM	209	245	235	205	178	205	213	1531
2- 3 PM	219	230	242	198	209	222	207	1529
3- 4 PM	222	235	242	198	191	181	221	1482
4- 5 PM	253	291	274	190	175	204	254	1528
5- 6 PM	223	200	248	188	179	207	202	1594
6- 7 PM	137	153	190	175	151	222	217	1436
7- 8 PM	110	103	127	149	126	116	140	1011
8- 9 PM	82	104	106	118	101	104	104	769
9-10 PM	82	97	87	89	90	89	104	664
10-11 PM	86	88	61	67	86	71	72	562
11-12 PM	58	66	81	68	52	59	68	509
TOTALS:	3348	3521	3667	2871	2410	3105	3165	22087

AVERAGE DAILY TRAFFIC: 3060

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 260 BETWEEN 9-10 AM ON SATURDAY
 PM HIGH HOUR: 291 BETWEEN 4- 5 PM ON THURSDAY

MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 3060 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PKWY NB TO CONTINUE ON PURCHASE PKWY/US 45 N
 STATION: Z01 BOTH N-S
 ROUTE: KY900SR
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 4 AXLE VEHICLES	SINGLE UNIT TRUCKS							OTHERS	TOTAL VEHICLES		
					2 AXLE BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE			5 OR LESS AXLE	6 AXLE
06-07AM	7/20/10	1	50	22	0	6	5	0	4	24	0	2	0	0	114
07-08AM	7/20/10	1	103	50	1	9	3	0	4	23	0	1	0	0	195
08-09AM	7/20/10	2	73	46	1	7	4	0	6	30	1	0	0	0	175
09-10AM	7/20/10	2	95	47	1	9	7	0	9	39	1	0	0	0	211
10-11AM	7/20/10	3	93	50	2	8	7	0	8	38	1	0	0	0	210
11-12AM	7/20/10	3	94	47	2	7	5	0	7	41	1	0	0	0	208
12-01PM	7/20/10	4	90	49	2	10	9	0	9	45	1	0	0	0	218
01-02PM	7/20/10	2	96	48	3	9	8	0	7	42	1	2	0	0	220
02-03PM	7/20/10	2	94	49	2	9	5	0	7	44	0	1	0	0	214
03-04PM	7/20/10	2	98	49	2	8	5	0	8	44	1	2	0	0	218
04-05PM	7/20/10	3	103	47	1	9	2	0	10	46	1	0	0	0	226
05-06PM	7/20/10	3	92	46	1	10	2	0	8	41	0	0	0	0	204
06-07PM	7/20/10	1	65	33	1	5	1	0	5	29	0	0	0	0	140
07-08PM	7/20/10	1	44	21	1	4	0	0	4	34	0	0	0	0	109
08-09PM	7/20/10	1	37	18	0	3	1	0	3	27	0	2	0	0	92
09-10PM	7/20/10	2	35	14	0	2	1	0	3	24	0	2	1	0	82
10-11PM	7/20/10	0	34	11	0	2	0	0	3	20	0	1	0	0	71
11-12PM	7/20/10	0	29	11	0	2	0	0	2	16	0	1	0	0	62
12-01AM	7/20/10	0	11	6	0	1	0	0	2	13	0	1	0	0	34
01-02AM	7/20/10	0	7	4	0	0	0	0	1	11	0	0	0	0	28
02-03AM	7/20/10	0	7	3	0	1	0	0	1	11	0	0	0	0	23
03-04AM	7/20/10	0	8	4	0	0	0	0	1	11	0	0	0	0	23
04-05AM	7/20/10	0	12	6	0	1	0	0	1	14	0	2	0	0	24
05-06AM	7/20/10	0	22	9	0	4	1	0	2	18	0	1	0	0	37
TOTAL VEHICLES		34	1395	690	22	126	70	0	116	687	8	23	1	0	3172
PERCENT OF TOTAL		1.1	44.0	21.8	0.7	4.0	2.2	0.0	3.7	21.7	0.3	0.7	0.0	0.0	0.0

% HEAVY TRUCKS = 1053/ 3172 = 33.2 %
 AXLES / TRUCKS = 4574/ 1053 = 4.344
 % TRAILER TRUCKS = 835/ 3172 = 26.3 %
 % TRAILERS @PK HR = 57/ 226 = 25.2 %
 PEAK HOUR BETWEEN 04-05PM = 24
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.72
 % SINGLE UNIT TRUCKS = 218/ 3172 = 6.9 %
 % SINGLE UNIT @ PK HR = 16/ 226 = 7.1 %
 % TRUCKS AT PEAK HOUR = 73/ 226 = 32.3 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # k 9 0 0 3 r 0 0 0 1 H C

Route Code: R (Interstate), N (City St.), S (County Rd), M (FS)
 U.S. (U.S.), S (City St.), O (Other)

Route Number: 9003 Suffix: none

Milepoint: 0 0 0 1

Array: T (Tube), H (2 tubes), L (Loop), B (2 loops), M (mixed)
 R (Radar), P (Piezo), W (WIM Piezo), O (Other)

Ramp # 231

EXIT 22
Fancy Farm &
Mayfield

STA # 0 4 2 2 3 1 A L A C 1 1

County Number: 0 4 2 Station#: 2 3 1

Lanes Counter is counting: A (All Lanes), L (Part NB & SB), A (Part EB & WB), C (lane 1), 1 (lane 2)
 N=all NB, E=all EB, S=all SB, W=all WB

Lanes at Station: L (Lanes at Station)

Counter is counting: V (Vehicles), A (Axes)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 1 1

Ramp Signage

File # 42000161.200

of Lanes 1 Lane Width 16'

County Graves

Latitude N 36.72630

Station number 231 Machine # 14772-0030

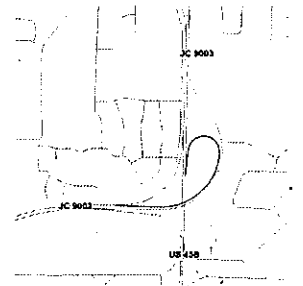
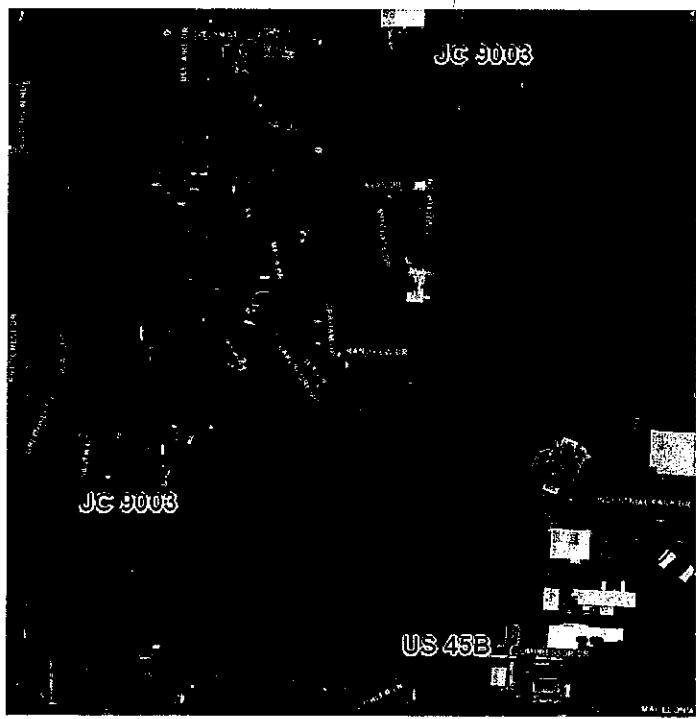
Traffic light _____ Stop sign Merge

Route 042-JC9003 -231

Longitude W 88.66966

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	13:12	07	20	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	9:08	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder (Y) N

Shoulder width 3'

Right Shoulder (Y) N

Shoulder width 10'

Type: No shoulders exist

Bituminous Concrete

N/A Stabilized

Combination Earth

Curbed

Field Technician GM/JH ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 231

WEEK OF JULY 21 TO JULY 27 2010

DATE:	WED	THU	FRI	SAT	SUN	MON	TUE	TOTALS
12- 1 AM	3	0	1	1	3	4	2	16
1- 2 AM	2	0	2	7	0	0	1	15
2- 3 AM	4	4	2	1	2	1	1	15
3- 4 AM	2	3	1	2	2	0	2	12
4- 5 AM	6	0	2	0	1	0	2	13
5- 6 AM	19	16	20	6	4	16	17	98
6- 7 AM	20	16	17	9	3	14	16	95
7- 8 AM	22	27	21	6	4	24	19	123
8- 9 AM	20	14	21	10	5	19	19	108
9-10 AM	15	16	20	12	12	17	16	113
10-11 AM	16	18	12	15	12	15	14	99
11-12 AM	16	19	16	19	7	21	17	114
1- 2 PM	18	15	20	16	13	23	10	124
2- 3 PM	25	16	14	9	17	20	21	112
3- 4 PM	21	21	19	16	17	19	19	131
4- 5 PM	17	21	26	18	13	19	19	137
5- 6 PM	17	36	19	14	12	16	17	131
6- 7 PM	11	23	31	9	16	16	15	127
7- 8 PM	8	10	11	15	14	12	14	87
8- 9 PM	9	6	11	14	3	17	9	68
9-10 PM	6	10	11	9	8	11	5	63
10-11 PM	9	11	14	11	5	10	10	67
11-12 PM	4	4	5	8	9	12	5	70
TOTALS:	317	315	328	237	188	310	279	1974

AVERAGE DAILY TRAFFIC: 273

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 27 BETWEEN 7- 8 AM ON THURSDAY
 PM HIGH HOUR: 36 BETWEEN 4- 5 PM ON THURSDAY

MILE POINT : 0.1
 COUNTED BY : GEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: U
 LATEST ADT COUNT: 273 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PKWY NB ONTO US 458 SB
 STATION: 231 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 12

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS					SINGLE TRAILER TRUCKS		MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					2 AXLE BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/20/10	0	7	5	0	1	0	0	0	0	1	0	0	0	0	14
07-08AM	7/20/10	0	6	8	0	2	0	0	0	0	2	0	0	0	0	19
08-09AM	7/20/10	0	5	6	0	3	0	0	0	0	3	0	0	0	0	16
09-10AM	7/20/10	0	4	7	0	2	0	0	0	0	3	0	0	0	0	17
10-11AM	7/20/10	0	4	6	0	2	0	0	0	0	3	0	0	0	0	15
11-12AM	7/20/10	0	3	7	0	2	0	0	0	0	2	0	0	0	0	17
12-01PM	7/20/10	0	5	7	0	3	0	0	0	0	2	0	0	0	0	17
01-02PM	7/20/10	0	5	6	1	3	0	0	0	0	2	0	0	0	0	17
02-03PM	7/20/10	0	6	7	0	2	0	0	0	0	2	0	0	0	0	20
03-04PM	7/20/10	0	8	8	0	3	0	0	0	0	2	0	0	0	0	21
04-05PM	7/20/10	0	8	8	0	2	0	0	0	0	2	0	0	0	0	20
05-06PM	7/20/10	0	7	9	0	2	0	0	0	0	1	0	0	0	0	17
06-07PM	7/20/10	0	5	6	0	1	0	0	0	0	1	0	0	0	0	13
07-08PM	7/20/10	0	4	4	0	1	0	0	0	0	1	0	0	0	0	10
08-09PM	7/20/10	0	4	4	0	1	0	0	0	0	0	0	0	0	0	9
09-10PM	7/20/10	0	4	4	0	1	0	0	0	0	0	0	0	0	0	10
10-11PM	7/20/10	0	5	3	0	1	0	0	0	0	1	0	0	0	0	9
11-12PM	7/20/10	0	4	4	0	1	0	0	0	0	0	0	0	0	0	5
12-01AM	7/20/10	0	1	3	0	1	0	0	0	0	0	0	0	0	0	2
01-02AM	7/20/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
02-03AM	7/20/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
03-04AM	7/20/10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04-05AM	7/20/10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05-06AM	7/20/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL VEHICLES		0	103	116	1	33	0	0	0	5	29	0	0	0	0	287
PERCENT OF TOTAL	0.0	35.9	40.4	0.3	11.5	0.0	0.0	0.0	1.7	10.1	0.0	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 68/287 = 23.7%
 AXLES / TRUCK = 233/68 = 3.426
 % TRAILER TRUCKS = 34/287 = 11.8%
 % TRAILERS @PK HR = 3/21 = 14.3%
 PEAK HOUR BETWEEN 03-04PM = 21 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.86
 % SINGLE UNIT TRUCKS = 34/287 = 11.8%
 % SINGLE UNIT @ PK HR = 2/21 = 9.5%
 % TRUCKS AT PEAK HOUR = 5/21 = 23.8%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 1 4 . D H C

Route Code: R (County Rd) | NNNN (Route Number) | S (Suffix) | MMMM (Milepoint) | A (District making count)

Legend: U=U.S., S=City St., O=Other, F=FS

Array - T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mixed, R=Radar, P=Piezo, W=WIM/Piezo, O=Other

Ramp # 111

EXIT 14

STA # 0 4 2 1 1 1 A L A C 1 1

County Number: 042 | Station#: 111 | Lanes at Station: ANL | Type Record: APT | Machine #: 11

Legend: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2

Legend: N=all NB, E=all EB, S=all SB, W=all WB

Legend: V=Vehicles, A=Axes

Legend: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM

Ramp Signage

339

CLINTON

WINGO

File # G 2 1 0 0 0 3 1 . L 0 0

of Lanes 1 Lane Width 16

County GRAVES

Latitude N 3 6 . 3 8 7 7 4

Station number 1 1 1 Machine # 18286-030

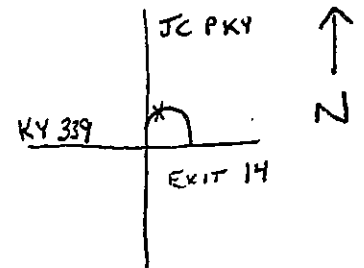
Traffic light Stop sign Merge

Route 042-JC-9003-111 042/42

Longitude W 8 8 . 4 5 1 6 5

	Time	Month	Day	Year	
Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	0915	7	21	10
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	1000	7	29	10

Station Location & Description (use back if necessary):



Left Shoulder Y (N)

Shoulder width _____

Right Shoulder Y (N)

Shoulder width _____

Type: No shoulders exist

Bituminous Concrete

N/A Stabilized

Combination Earth

Curbed

Field Technician DK DC Ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET--DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 111

WEEK OF JULY 22 TO JULY 28 2010

DATE:	THU	FRI	SAT	SUN	MON	TUE	WED	TOTALS
12- 1 AM	2	3	2	4	1	3	3	18
1- 2 AM	2	1	6	3	1	2	2	17
2- 3 AM	2	2	1	2	0	0	1	7
3- 4 AM	3	1	2	0	0	1	3	12
4- 5 AM	2	1	1	0	0	0	0	4
5- 6 AM	3	2	1	1	1	3	1	12
6- 7 AM	3	2	1	3	5	5	1	22
7- 8 AM	8	5	4	7	15	10	6	66
8- 9 AM	13	14	13	2	6	7	7	88
9-10 AM	10	6	5	4	7	10	5	40
10-11 AM	8	11	13	9	7	11	14	50
11-12 AM	9	13	10	7	17	16	11	75
12- 1 PM	10	17	10	11	12	13	11	86
1- 2 PM	12	15	12	12	12	11	5	84
2- 3 PM	12	18	17	11	13	11	10	92
3- 4 PM	30	28	20	10	24	26	25	163
4- 5 PM	28	27	10	10	17	17	28	142
5- 6 PM	21	29	15	12	23	32	25	157
6- 7 PM	19	16	9	6	15	19	22	106
7- 8 PM	5	16	11	7	8	9	10	66
8- 9 PM	11	7	12	4	8	10	14	66
9-10 PM	6	2	11	5	7	3	5	39
10-11 PM	6	8	8	4	7	2	6	41
11-12 PM	12	10	11	4	16	14	12	79
TOTALS:	242	268	206	139	227	236	242	1560

AVERAGE DAILY TRAFFIC: 215

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 17 BETWEEN 11-12 AM ON MONDAY
 PM HIGH HOUR: 32 BETWEEN 5- 6 PM ON TUESDAY

MILE POINT : 14.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 14.000
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 215 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY NB ONTO KY 339
 STATION: 142 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS		MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/21/10	0	2	2	0	0	0	0	0	1	0	0	0	0	5
07-08AM	7/21/10	0	9	3	0	0	0	0	0	0	0	0	0	0	12
08-09AM	7/21/10	0	4	1	0	0	0	0	0	0	0	0	0	0	5
09-10AM	7/21/10	0	3	2	1	0	0	0	0	1	0	0	0	0	7
10-11AM	7/21/10	0	6	3	1	0	0	0	0	0	0	0	0	0	10
11-12AM	7/21/10	1	6	4	1	0	0	0	0	1	0	0	0	0	13
12-01PM	7/21/10	0	7	4	1	0	0	0	0	1	0	0	0	0	12
01-02PM	7/21/10	0	7	3	1	0	0	0	0	0	0	0	0	0	11
02-03PM	7/21/10	0	9	3	1	0	0	0	0	1	0	0	0	0	15
03-04PM	7/21/10	0	14	7	0	0	0	0	0	1	0	0	0	0	22
04-05PM	7/21/10	1	13	6	1	0	0	0	0	0	0	0	0	0	22
05-06PM	7/21/10	1	15	6	1	0	0	0	0	1	0	0	0	0	23
06-07PM	7/21/10	0	10	3	0	0	0	0	0	0	0	0	0	0	14
07-08PM	7/21/10	0	7	3	0	0	0	0	0	1	0	0	0	0	8
08-09PM	7/21/10	0	7	1	0	0	0	0	0	0	0	0	0	0	9
09-10PM	7/21/10	0	3	2	0	0	0	0	0	0	0	0	0	0	5
10-11PM	7/21/10	0	4	1	0	0	0	0	0	0	0	0	0	0	5
11-12PM	7/21/10	0	7	4	0	0	0	0	0	0	0	0	0	0	11
12-01AM	7/21/10	0	2	1	0	0	0	0	0	0	0	0	0	0	3
01-02AM	7/21/10	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02-03AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03-04AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04-05AM	7/21/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05-06AM	7/21/10	0	1	1	0	0	0	0	0	0	0	0	0	0	2
TOTAL VEHICLES		3	139	56	0	9	3	0	0	8	0	0	0	0	218
PERCENT OF TOTAL		1.4	63.8	25.7	0.0	4.1	1.4	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 20/
 AXLES / TRUCK = 67/
 % TRAILER TRUCKS = 8/
 % TRAILERS @PK HR = 0/
 PEAK HOUR BETWEEN 05-06PM = 23 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.94
 % SINGLE UNIT TRUCKS = 12/
 % SINGLE UNIT @ PK HR = 1/
 % TRUCKS AT PEAK HOUR = 1/
 218 = 5.5 %
 23 = 4.3 %
 23 = 4.3 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 1 4 . 0 H C

Route Code (I=Interstate, K=Ky or Parkways, R=County Rd, F=FS) R U=U.S. S=City St. O=Other

Route Number: 9 0 0 3 Suffix: none Milepoint: 0 1 4 . 0 District making count: C

Array - T=Tube, H=2 tubes, L=Loop, B=2 loops, M=mbred, R=Radar, P=Piezo, W=WIM Piezo, Q=Other

Ramp # 121

Exit 14

STA # 0 4 2 1 2 1 A 1 A C 1 1

County Number: 0 4 2 Station#: 1 2 1 Lanes at Station: A 1 Type Record: A C Machine # of All Machines at Station: 1 1

Lanes Counter is counting: A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2. N=all NB, E=all EB, S=all SB, W=all WB.

Counter is counting: V=Vehicles, A=Axes.

Type Record: V=Volume, C=Cls x Spd, L=Len x Spd, W=WIM.

Ramp Signage

File # G 2 1 0 0 0 2 1 . L 0 0

of Lanes 1 Lane Width 16

County GRAVES

Latitude N 3 6 . 3 8 7 3 3

Station number 1 2 1 Machine # 12036 - 0026

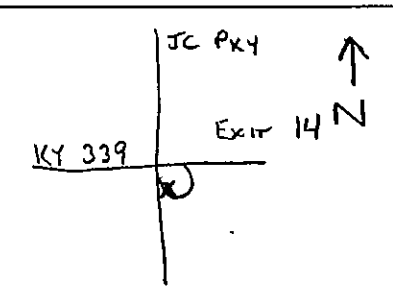
Traffic light Stop sign Merge

Route 042-JC-9003-121 042143

Longitude W 8 8 . 4 5 2 1 4

	Time	Month	Day	Year	
Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	0900	7	21	10
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	1000	7	29	10

Station Location & Description (use back if necessary):



Left Shoulder Y (N)

Shoulder width _____

Right Shoulder Y (N)

Shoulder width _____

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
Curbed

Field Technician DS DC Ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 121

WEEK OF JULY 22 TO JULY 28 2010

DATE:	THU	FRI	SAT	SUN	MON	TUE	WED	TOTALS
12- 1 AM	22	23	24	25	26	27	28	
1- 2 AM	3	1	5	3	2	2	2	18
2- 3 AM	0	0	3	4	1	1	1	11
3- 4 AM	1	1	2	0	1	1	1	7
4- 5 AM	2	2	3	3	3	1	4	18
5- 6 AM	3	4	3	3	6	4	7	28
6- 7 AM	11	7	6	1	12	10	14	61
7- 8 AM	22	22	15	5	23	25	34	146
8- 9 AM	41	38	16	6	45	44	47	237
9-10 AM	23	25	18	8	23	25	30	152
10-11 AM	30	24	28	19	17	27	24	169
11-12 AM	27	18	18	16	25	15	28	147
1- 2 PM	27	12	19	12	22	17	24	133
2- 3 PM	18	31	20	20	25	21	23	162
3- 4 PM	22	16	14	18	18	16	16	141
4- 5 PM	29	24	21	12	18	21	16	141
5- 6 PM	27	23	20	19	23	29	21	162
6- 7 PM	20	27	26	15	20	25	18	151
7- 8 PM	24	10	12	13	27	36	15	142
8- 9 PM	10	31	22	10	11	19	13	116
9-10 PM	4	16	10	11	10	9	4	64
10-11 PM	14	9	10	11	8	15	15	82
11-12 PM	11	4	4	10	11	9	7	60
TOTALS:	375	355	304	235	368	376	395	2408

AVERAGE DAILY TRAFFIC: 353

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 47 BETWEEN 7- 8 AM ON WEDNESDAY
 PM HIGH HOUR: 36 BETWEEN 5- 6 PM ON TUESDAY

MILE POINT : 14.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 14.000
 ROAD DESIGNATION: R
 LATEST ADI COUNT: 335 IN 2010
 LOCATION INFORMATION: RAMP FROM KY 339 ONTO PURCHASE PKWY NB
 STATION: 163 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS							SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE						
06-07AM	7/21/10	0	8	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	21
07-08AM	7/21/10	0	12	0	15	8	0	0	0	0	0	0	0	0	0	0	0	0	35
08-09AM	7/21/10	0	7	0	10	4	0	0	1	0	0	0	0	0	0	0	0	0	22
09-10AM	7/21/10	0	6	0	11	4	0	0	0	1	0	0	0	0	0	0	0	0	25
10-11AM	7/21/10	0	5	0	10	4	1	0	0	1	0	0	0	0	0	0	0	1	22
11-12AM	7/21/10	0	4	0	9	5	0	0	0	1	0	0	0	0	0	0	0	0	19
12-01PM	7/21/10	0	5	0	11	5	0	0	0	0	0	0	0	0	0	0	0	0	21
01-02PM	7/21/10	0	5	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	19
02-03PM	7/21/10	0	4	0	10	6	0	0	0	1	0	0	0	0	0	0	0	0	20
03-04PM	7/21/10	0	4	0	11	6	0	0	0	0	0	0	0	0	0	0	0	0	21
04-05PM	7/21/10	0	5	0	12	5	0	0	0	0	0	0	0	0	0	0	0	0	22
05-06PM	7/21/10	0	5	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	18
06-07PM	7/21/10	0	3	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	16
07-08PM	7/21/10	0	2	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	8
08-09PM	7/21/10	0	4	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	12
09-10PM	7/21/10	0	2	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	8
10-11PM	7/21/10	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	4
11-12PM	7/21/10	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	4
01-02AM	7/21/10	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	4
02-03AM	7/21/10	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
03-04AM	7/21/10	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04-05AM	7/21/10	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
05-06AM	7/21/10	0	3	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5
TOTAL VEHICLES		0	91	0	154	88	1	0	1	4	1	0	0	0	0	0	0	0*	341
PERCENT OF TOTAL		0.0	26.7	0.0	45.2	25.8	0.3	0.0	0.3	1.2	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	

% HEAVY TRUCKS = 250/
 AXLES / TRUCKS = 524/
 % TRAILER TRUCKS = 7/
 % TRAILERS @PK HR = 0/
 PEAK HOUR BETWEEN 07-08AM
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.97
 % SINGLE UNIT TRUCKS = 243/
 % SINGLE UNIT @ PK HR = 23/
 % TRUCKS AT PEAK HOUR = 23/
 341 = 71.3 %
 35 = 65.7 %
 35 = 65.7 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 1 4 . 0 H C

Interstate
 Ky or Parkways
 County Rd
 FS

U.S.
 City St.
 Other

Route Number: 9003 Suffix: none

Milepoint: 014.0

Array - T = Tube H = 2 tubes L = Loop B = 2 loops M = mixed
 R = Radar P = Piezo W = WIM Piezo O = Other

District making count: C

Ramp # 131

Exit 14

STA # 0 4 2 1 3 1 A 1 A C 1 1

Interstate
 County Rd
 FS

U.S.
 City St.
 Other

County Number: 042 Station #: 131

Lanes Counter is counting:
 A = All Lanes N = all NB
 B = Part NB & SB E = all EB
 C = Part EB & WB S = all SB
 1 = lane 1 W = all WB
 2 = lane 2

Lanes at Station: 1

Counter is counting:
 V = Vehicles
 A = Axes

Type Record:
 V = Volume
 C = Cts x Spd
 L = Len x Spd
 W = WIM

Machine # of All Machines at Station: _____

Ramp Signage

File # G 2 1 0 0 2 1 1 . L 0 0

of Lanes 1 Lane Width 16

County GRAVES

Latitude N 3 6 . 3 8 7 7 1

Station number 131 Machine # 18286.001

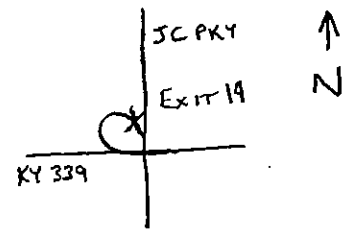
Traffic light _____ Stop sign Merge

Route 042-JC-9003-131 042/44

Longitude W 8 8 . 4 5 1 9 8

	Time	Month	Day	Year
Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	0900	7	21 10
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	1000	7	29 10

Station Location & Description (use back if necessary):



Left Shoulder Y (N)

Shoulder width _____

Right Shoulder Y (N)

Shoulder width _____

Type: No shoulders exist

Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician DS DC Ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 131

DATE:	THU	FRI	SAT	SUN	MON	TUE	WED	TOTALS
12- 1 AM	0	3	4	2	1	0	1	11
1- 2 AM	3	1	1	2	0	0	0	7
2- 3 AM	2	0	2	1	2	4	0	12
3- 4 AM	0	1	0	2	0	0	0	5
4- 5 AM	6	8	2	2	6	8	5	37
5- 6 AM	10	6	3	3	10	10	12	54
6- 7 AM	35	31	13	4	31	23	32	182
7- 8 AM	30	32	8	4	21	19	30	148
8- 9 AM	14	13	7	3	19	19	14	89
9-10 AM	14	15	6	9	13	9	11	85
10-11 AM	9	19	23	8	15	6	11	91
11-12 AM	12	11	21	9	12	13	13	91
12- 1 PM	18	23	18	15	12	17	13	116
1- 2 PM	22	24	16	15	18	16	20	131
2- 3 PM	21	27	17	5	27	25	21	141
3- 4 PM	12	16	17	12	19	9	14	99
4- 5 PM	17	15	20	11	8	14	19	104
5- 6 PM	11	15	15	5	14	12	5	77
6- 7 PM	11	15	15	17	14	11	10	99
7- 8 PM	10	9	10	8	7	9	9	61
8- 9 PM	7	8	10	8	11	2	10	56
9-10 PM	9	10	6	3	3	5	6	42
10-11 PM	8	11	3	8	11	9	12	62
11-12 PM	3	5	6	6	3	1	4	28
TOTALS:	284	318	242	162	283	256	283	1828

AVERAGE DAILY TRAFFIC: 253

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 36 BETWEEN 6- 7 AM ON TUESDAY
 PM HIGH HOUR: 27 BETWEEN 2- 3 PM ON FRIDAY
 MILE POINT : 14.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET--DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 14.000
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 253 IN 2010
 LOCATION INFORMATION: RAMP FROM KY 339 ONTO PURCHASE PKWY SB
 STATION: 144 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/21/10	0	10	8	1	5	0	0	2	0	0	0	0	0	0	26
07-08AM	7/21/10	0	8	6	1	3	0	0	1	2	0	0	0	0	0	23
08-09AM	7/21/10	0	4	4	1	3	0	0	1	1	0	0	0	0	0	14
09-10AM	7/21/10	0	4	4	0	2	0	0	1	1	0	0	0	0	0	12
10-11AM	7/21/10	0	4	5	0	2	0	0	1	1	0	0	0	0	0	13
11-12AM	7/21/10	0	5	5	1	1	0	0	0	1	0	0	0	0	0	13
12-01PM	7/21/10	0	6	5	1	1	0	0	1	1	0	0	0	0	0	16
01-02PM	7/21/10	0	6	7	0	3	0	0	1	0	0	0	0	0	0	18
02-03PM	7/21/10	0	8	7	1	3	0	0	0	1	0	0	0	0	0	20
03-04PM	7/21/10	0	5	5	0	2	0	0	0	1	0	0	0	0	0	13
04-05PM	7/21/10	1	5	5	0	2	0	0	1	0	0	0	0	0	0	16
05-06PM	7/21/10	0	4	5	0	2	0	0	0	1	0	0	0	0	0	12
06-07PM	7/21/10	0	4	6	0	3	0	0	0	1	0	0	0	0	0	16
07-08PM	7/21/10	0	5	3	0	3	0	0	0	0	0	0	0	0	0	13
08-09PM	7/21/10	0	5	2	0	3	0	0	0	0	0	0	0	0	0	7
09-10PM	7/21/10	0	3	2	0	1	0	0	0	1	0	0	0	0	0	9
10-11PM	7/21/10	1	2	3	0	1	0	0	0	0	0	0	0	0	0	6
11-12PM	7/21/10	0	2	5	0	0	0	0	0	0	0	0	0	0	0	3
12-01AM	7/21/10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01-02AM	7/21/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02-03AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03-04AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04-05AM	7/21/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05-06AM	7/21/10	0	2	2	0	1	0	0	0	1	0	0	0	0	0	6
TOTAL VEHICLES		2	95	92	7	36	0	0	5	7	15	1	0	0	0	260
PERCENT OF TOTAL	0.8	36.5	35.4	2.7	13.8	0.0	0.0	1.9	2.7	5.8	0.4	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 71/260 = 27.3%
 % AXLES / TRUCKS = 215/71 = 3.028
 % TRAILER TRUCKS = 23/260 = 8.8%
 % TRAILERS @PK HR = 2/26 = 7.7%
 PEAK HOUR BETWEEN 06-07AM = 26 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.88
 % SINGLE UNIT TRUCKS = 48/260 = 18.5%
 % SINGLE UNIT @ PK HR = 6/26 = 23.1%
 % TRUCKS AT PEAK HOUR = 8/26 = 30.8%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 R 0 1 4 . 0 H C

Route Code: R (Interstate), N (Ky or Parkways), N (U.S.), N (City St.), N (County Rd.), S (FS), R (Other)

Route Number: 9003

Suffix: none

Milepoint: 014.0

Array: H (2 tubes), A (Loop), C (2 loops), D (mixed)

Ramp # 141

Exit 14

STA # 0 4 2 1 4 1 A 1 A C 1 1

County Number: 042

Station #: 141

Lanes Counter is counting: A (All Lanes), L (Len x Spd)

Lanes at Station: 1

Type Record: A (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 11

Ramp Signage

339

CLINTON

WINGO

File # G 2 1 0 0 0 0 1 . L 0 0

of Lanes 1 Lane Width 16

County GRAVES

Latitude N 3 6 . 3 8 7 4 2

Station number 141 Machine # 18286-032

Traffic light Stop sign Merge

Route 042-JC-9003-141

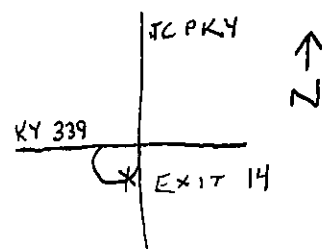
Longitude W 8 8 . 4 5 2 3 5

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	0900	7	21	10
Recorder Picked Up	0900	7	29	10

Station Location & Description (use back if necessary):



Left Shoulder Y (N)

Shoulder width _____

Right Shoulder Y (N)

Shoulder width _____

Type: No shoulders exist

Bituminous Concrete

N/A Stabilized

Combination Earth

Curbed

Field Technician DS DC

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

GRAVES COUNTY

STATION 141

WEEK OF JULY 22 TO JULY 28 2010

DATE:	THU	FRI	SAT	SUN	MON	TUE	WED	TOTALS
12- 1 AM	4	3	6	7	3	5	2	30
1- 2 AM	8	6	1	2	3	3	2	25
2- 3 AM	2	1	4	6	2	1	2	18
3- 4 AM	3	0	0	0	0	1	2	6
4- 5 AM	2	1	3	0	1	0	0	7
5- 6 AM	4	1	2	0	1	1	1	12
6- 7 AM	2	3	6	0	1	9	8	45
7- 8 AM	7	7	8	4	7	17	14	77
8- 9 AM	10	14	10	1	10	17	14	86
9-10 AM	17	11	13	2	18	18	10	116
10-11 AM	21	17	13	12	16	21	16	141
11-12 AM	15	18	17	11	15	14	17	107
12- 1 PM	19	16	14	9	6	12	21	97
1- 2 PM	27	28	18	16	15	16	17	137
2- 3 PM	17	21	14	17	32	21	29	152
3- 4 PM	21	21	17	14	22	25	21	137
4- 5 PM	21	21	17	14	22	25	23	180
5- 6 PM	33	30	19	22	40	33	29	207
6- 7 PM	43	43	15	22	49	40	35	247
7- 8 PM	29	18	12	15	22	25	20	141
8- 9 PM	16	25	17	13	16	17	21	125
9-10 PM	11	14	10	8	22	9	17	91
10-11 PM	20	21	20	4	15	13	32	125
11-12 PM	9	8	12	13	8	12	9	71
TOTALS:	381	374	277	229	359	344	357	2321

AVERAGE DAILY TRAFFIC: 321

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 21 BETWEEN 9-10 AM ON THURSDAY
 PM HIGH HOUR: 49 BETWEEN 5- 6 PM ON MONDAY
 MILE POINT : 14.0
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: GRAVES
 DISTRICT: 1
 MILEPOST: 14.000
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 321 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PKWY SB ONTO KY 339
 STATION: 141 BOTB N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS					SINGLE TRAILER TRUCKS		MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/21/10	0	4	1	0	0	0	0	0	0	0	0	0	0	0	6
07-08AM	7/21/10	0	8	2	0	0	0	0	0	0	0	0	0	0	0	12
08-09AM	7/21/10	0	11	2	0	0	0	0	0	0	0	0	0	0	0	14
09-10AM	7/21/10	0	11	4	0	0	0	0	0	0	0	0	0	0	0	17
10-11AM	7/21/10	0	12	4	0	0	0	0	0	0	0	0	0	0	0	17
11-12AM	7/21/10	0	9	3	0	0	0	0	0	0	0	0	0	0	0	14
12-01PM	7/21/10	0	13	4	0	0	0	0	0	0	0	0	0	0	0	19
01-02PM	7/21/10	1	14	4	0	0	0	0	0	0	0	0	0	0	0	21
02-03PM	7/21/10	0	14	5	0	0	0	0	0	0	0	0	0	0	0	19
03-04PM	7/21/10	0	17	8	0	0	0	0	0	0	0	0	0	0	0	26
04-05PM	7/21/10	0	26	4	0	0	0	0	0	0	0	0	0	0	0	30
05-06PM	7/21/10	1	29	5	0	0	0	0	0	0	0	0	0	0	0	37
06-07PM	7/21/10	0	15	4	0	0	0	0	0	0	0	0	0	0	0	19
07-08PM	7/21/10	0	13	4	0	0	0	0	0	0	0	0	0	0	0	17
08-09PM	7/21/10	0	10	4	0	0	0	0	0	0	0	0	0	0	0	14
09-10PM	7/21/10	0	13	3	0	0	0	0	0	0	0	0	0	0	0	17
10-11PM	7/21/10	0	6	3	0	0	0	0	0	0	0	0	0	0	0	10
11-12PM	7/21/10	0	8	3	0	0	0	0	0	0	0	0	0	0	0	11
01-02AM	7/21/10	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
02-03AM	7/21/10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
03-04AM	7/21/10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04-05AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05-06AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL VEHICLES		2	243	69	0	9	0	0	3	6	0	0	0	0	0	332
PERCENT OF TOTAL		0.6	73.2	20.8	0.0	2.7	0.0	0.0	0.9	1.8	0.0	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 18/ 332 = 5.4%
 AXLES / TRUCK = 60/ 332 = 3.33%
 % TRAILER TRUCKS = 9/ 332 = 2.7%
 % TRAILERS @PK HR = 1/ 37 = 2.7%
 PEAK HOUR BETWEEN 05-06PM = 37 VEHICLES
 TOTAL HOURS = 24

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 . 1 H C

Route Code: R (Interstate), N (Ky or Parkways), N (U.S.), N (City St.), N (Other), S (County Rd), S (FS)

Milepoint: 0 0 0 . 1

Array - T = Tube, H = 2 tubes, L = Loop, B = 2 loops, M = mixed
R = Radar, P = Piezo, W = WIM Piezo, O = Other

Ramp # 211

STA # 0 3 8 2 1 1 A 1 A C L 1

County Number: 0 3 8 (C), Station#: 2 1 1 (S)

Lanes at Station: A 1 (N, L)

Type Record: A C (P, T)

Machine # of All Machines at Station: L 1 (M, A)

Lanes Counter is counting:
A=All Lanes, B=Part NB & SB, C=Part EB & WB, 1=lane 1, 2=lane 2
N=all NB, E=all EB, S=all SB, W=all WB

Counter is counting:
V=Vehicles, A=Axes

Ramp Signage
JC 9003 PKWY North

File # G 2 1 0 0 0 3 1 . L 0 0

of Lanes 1 Lane Width 16'

County Fulton

Latitude N 3 6 . 5 1 9 2 3

Station number 2 1 1 Machine # 18286015

Traffic light _____ Stop sign Merge

Route JC 9003 PKWY

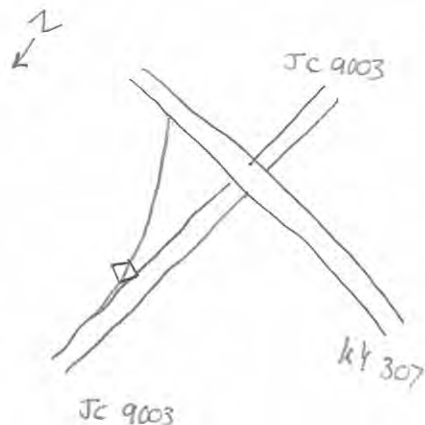
Longitude W 8 8 . 8 6 7 9 7

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	9:01	07	21	2010
Recorder Picked Up	10:24	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 1'

Right Shoulder N

Shoulder width .5'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

FULTON COUNTY

STATION 211

DATE:	WEEK OF	JULY	22 TO	JULY	28	2010	TOTALS	
DAY:	THU	FRI	SAT	SUN	MON	TUE	WED	
12- 1 AM	5	2	3	1	1	4	0	16
1- 2 AM	1	0	3	0	3	1	2	10
2- 3 AM	2	0	0	3	1	1	1	8
3- 4 AM	4	0	2	1	1	1	2	11
4- 5 AM	3	3	1	0	2	3	1	13
5- 6 AM	5	5	1	2	9	4	4	30
6- 7 AM	20	26	7	2	20	22	4	119
7- 8 AM	28	35	10	7	34	22	28	164
8- 9 AM	17	17	12	11	21	22	28	124
9-10 AM	18	20	15	13	24	17	18	125
10-11 AM	21	26	22	19	21	23	23	155
11-12 AM	15	19	20	10	17	16	27	142
12- 1 PM	30	18	25	13	19	19	18	150
1- 2 PM	19	28	15	18	22	24	24	146
2- 3 PM	17	26	18	10	18	20	21	130
3- 4 PM	18	27	19	22	21	23	16	146
4- 5 PM	43	42	20	17	22	27	35	206
5- 6 PM	32	35	20	20	21	24	30	182
6- 7 PM	12	22	13	14	16	13	9	92
7- 8 PM	6	9	9	14	8	3	7	56
8- 9 PM	7	5	13	10	7	6	3	51
9-10 PM	7	8	5	9	10	3	6	48
10-11 PM	4	4	9	5	4	5	4	35
11-12 PM	4	6	8	5	4	7	1	35
TOTALS:	338	383	270	219	326	306	330	2172

AVERAGE DAILY TRAFFIC: 300

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 35 BETWEEN 7- 8 AM ON FRIDAY
 PM HIGH HOUR: 43 BETWEEN 4- 5 PM ON THURSDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: FULTON
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 300 IN 2010
 LOCATION INFORMATION: RAMP FROM KY 307 ONTO PURCHASE PARKWAY SB
 STATION: 211 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS		MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE		
06-07AM	7/21/10	0	13	3	0	1	0	0	0	0	0	0	0	0	17
07-08AM	7/21/10	0	17	5	0	1	1	0	0	0	0	0	0	0	24
08-09AM	7/21/10	0	14	3	0	0	0	0	0	0	0	0	0	0	18
09-10AM	7/21/10	0	13	3	0	0	0	0	0	0	0	0	0	0	19
10-11AM	7/21/10	0	13	5	0	0	0	0	0	0	0	0	0	0	21
11-12AM	7/21/10	0	12	3	0	0	0	0	0	0	0	0	0	0	17
12-01PM	7/21/10	0	13	4	0	0	0	0	0	0	0	0	0	0	21
01-02PM	7/21/10	0	15	4	0	0	0	0	0	0	0	0	0	0	21
02-03PM	7/21/10	0	12	5	0	0	0	0	0	0	0	0	0	0	19
03-04PM	7/21/10	0	16	4	0	0	0	0	0	0	0	0	0	0	21
04-05PM	7/21/10	0	20	6	0	0	0	0	0	0	0	0	0	0	28
05-06PM	7/21/10	0	18	5	0	0	0	0	0	0	0	0	0	0	25
06-07PM	7/21/10	0	10	2	0	0	0	0	0	0	0	0	0	0	12
07-08PM	7/21/10	0	6	1	0	0	0	0	0	0	0	0	0	0	8
08-09PM	7/21/10	0	6	1	0	0	0	0	0	0	0	0	0	0	7
09-10PM	7/21/10	0	6	1	0	0	0	0	0	0	0	0	0	0	7
10-11PM	7/21/10	0	4	1	0	0	0	0	0	0	0	0	0	0	6
11-12PM	7/21/10	0	4	1	0	0	0	0	0	0	0	0	0	0	5
12-01AM	7/21/10	0	1	1	0	0	0	0	0	0	0	0	0	0	2
01-02AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02-03AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03-04AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04-05AM	7/21/10	0	2	0	0	0	0	0	0	0	0	0	0	0	2
05-06AM	7/21/10	0	3	0	0	0	0	0	0	0	0	0	0	0	4
TOTAL VEHICLES		0	221	58	0	12	1	0	3	13	0	0	0	0	308
PERCENT OF TOTAL		0.0	71.8	18.8	0.0	3.9	0.3	0.0	1.0	4.2	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 29/ 308 = 9.4 %
 AXLES / TRUCK = 104/ 29 = 3.586
 % TRAILER TRUCKS = 16/ 308 = 5.2 %
 % TRAILERS @PK HR= 1/ 28 = 3.6 %
 PEAK HOUR BETWEEN 04-05PM = 28 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.93
 % SINGLE UNIT TRUCKS = 13/ 308 = 4.2 %
 % SINGLE UNIT @ PK HR = 1/ 28 = 3.6 %
 % TRUCKS AT PEAK HOUR = 2/ 28 = 7.1 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 1 A C

Route Code: K (Interstate), 9 (Ky or Parkway), 0 (County Rd), 0 (FS), 0 (FS), 3 (FS), r (FS), 0 (FS), 0 (FS), 0 (FS), 1 (FS), A (U.S.), C (City St.)

Route Number: 9003 Suffix: r = none

Milepoint: 0001

Array: A (Tube), C (2 tubes), 0 (Loop), 0 (2 loops), 0 (mixed), 1 (Radar), 0 (Piezo), 0 (WIM Piezo), 0 (Other)

Ramp # 221

STA # 0 3 8 2 2 7 A 1 A C 1 1

County Number: 038 Station#: 227 Lanes at Station: A 1 A C 1 1

Lanes Counter is counting: A (All Lanes), 1 (lane 1), 1 (lane 2)

Counter is counting: V (Vehicles), A (Axles)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 1 1

Ramp Signage: Fulton, 307

File # G 21 000 21 . L 00

of Lanes 1 Lane Width 16'

County Fulton

Latitude N 36.51858

Station number 221 Machine # 18286007

Traffic light Stop sign Merge

Route JC 9003 PKWY

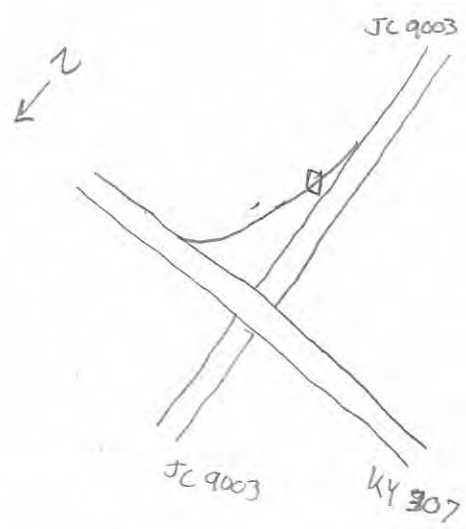
Longitude W 88.87429

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	8:38	07	21	2010
Recorder Picked Up	10:21	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 1'

Right Shoulder Y N

Shoulder width 1'

Type: No shoulders exist

Bituminous Concrete

N/A Stabilized

Combination Earth

Curbed

Field Technician G.M./J.H. Ramp_countcard-07-2010.ppt

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE : KY9003R

FULTON COUNTY

STATION 221

WEEK OF JULY 22 TO JULY 28 2010

DATE:	THU	FRI	SAT	SUN	MON	TUE	WED	TOTALS
12- 1 AM	4	4	2	6	4	6	5	31
1- 2 AM	2	3	5	1	4	0	2	17
2- 3 AM	2	5	4	2	0	2	2	17
3- 4 AM	5	1	1	2	0	1	2	12
4- 5 AM	2	1	0	2	1	0	1	7
5- 6 AM	6	6	1	3	6	7	7	36
6- 7 AM	18	18	15	2	23	24	27	127
7- 8 AM	25	19	11	6	20	20	18	119
8- 9 AM	16	12	13	10	18	15	16	100
9-10 AM	13	20	10	9	16	13	11	92
10-11 AM	23	22	26	12	13	21	15	132
11-12 AM	26	30	24	12	14	18	23	147
12- 1 PM	32	24	29	26	24	25	25	183
1- 2 PM	18	24	32	25	20	23	25	167
2- 3 PM	25	30	26	20	38	31	25	195
3- 4 PM	40	47	26	19	47	27	43	249
4- 5 PM	48	39	23	12	43	41	38	244
5- 6 PM	37	38	24	23	42	41	28	228
6- 7 PM	33	28	30	15	23	24	22	175
7- 8 PM	19	22	20	21	22	28	19	151
8- 9 PM	24	23	18	17	18	18	17	135
9-10 PM	8	18	15	16	13	14	17	101
10-11 PM	17	6	14	11	13	21	13	95
11-12 PM	18	21	15	9	12	14	15	104
TOTALS:	461	461	384	281	434	427	416	2864

AVERAGE DAILY TRAFFIC: 396

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 30 BETWEEN 11-12 AM ON FRIDAY
 PM HIGH HOUR: 48 BETWEEN 4- 5 PM ON THURSDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: FULTON
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 396 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY SB ONTO KY 307
 STATION: 221 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS		MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE		
06-07AM	7/21/10	0	15	4	0	0	0	0	0	0	0	0	0	0	19
07-08AM	7/21/10	0	12	3	0	1	0	0	0	0	0	0	0	0	16
08-09AM	7/21/10	0	10	3	0	0	0	0	0	0	0	0	0	0	13
09-10AM	7/21/10	0	10	2	0	0	0	0	0	0	0	0	0	0	12
10-11AM	7/21/10	0	13	5	0	0	0	0	0	0	0	0	0	0	18
11-12AM	7/21/10	0	13	7	0	1	0	0	1	0	0	0	0	0	22
12-01PM	7/21/10	0	17	7	0	0	0	0	1	0	0	0	0	0	26
01-02PM	7/21/10	0	15	6	0	0	0	1	0	0	0	0	0	0	23
02-03PM	7/21/10	0	21	7	0	1	0	0	0	0	0	0	0	0	29
03-04PM	7/21/10	0	25	8	0	1	0	0	1	0	0	0	0	0	36
04-05PM	7/21/10	0	26	7	0	0	0	0	1	0	0	0	0	0	34
05-06PM	7/21/10	0	24	7	0	1	0	0	0	0	0	0	0	0	32
06-07PM	7/21/10	1	17	5	0	0	0	0	0	0	0	0	0	0	23
07-08PM	7/21/10	0	17	4	0	0	0	0	0	0	0	0	0	0	21
08-09PM	7/21/10	0	14	4	0	0	0	0	0	0	0	0	0	0	18
09-10PM	7/21/10	0	11	2	0	0	0	0	1	0	0	0	0	0	14
10-11PM	7/21/10	0	11	2	0	0	0	0	0	0	0	0	0	0	13
11-12PM	7/21/10	0	10	4	0	0	0	0	0	0	0	0	0	0	14
12-01AM	7/21/10	0	3	1	0	0	0	0	0	0	0	0	0	0	4
01-02AM	7/21/10	0	2	1	0	0	0	0	0	0	0	0	0	0	3
02-03AM	7/21/10	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03-04AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04-05AM	7/21/10	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05-06AM	7/21/10	0	4	1	0	0	0	0	0	0	0	0	0	0	5
TOTAL VEHICLES		1	294	90	0	6	0	0	2	6	0	0	0	0	399
PERCENT OF TOTAL		0.3	73.7	22.6	0.0	1.5	0.0	0.0	0.5	1.5	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 14/399 = 3.5%
 AXLES / TRUCKS = 50/14 = 3.571
 % TRAILER TRUCKS = 8/399 = 2.0%
 % TRAILERS @PK HR = 2/36 = 5.6%
 PEAK HOUR BETWEEN 03-04PM = 36 VEHICLES
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.97
 % SINGLE UNIT TRUCKS = 6/399 = 1.5%
 % SINGLE UNIT @ PK HR = 1/36 = 2.8%
 % TRUCKS AT PEAK HOUR = 3/36 = 8.3%

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00%
 OTHER 2 AXLE 4 TIRE VEHICLES 00%
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00%

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # k 9 0 0 3 r 0 0 0 1 H C

Route Code: R (Interstate), N (U.S.), N (City St.), N (County Rd.), S (FS)

Milepoint: 0 0 0 1

Array: M (Tube), M (2 tubes), M (Loop), M (2 loops), M (mixed)

Ramp # 231

STA # 0 3 8 2 3 1 A L A C 1 1

County Number: C C C

Station #: S S S N L P T M A

Lanes Counter is counting: A (All Lanes), N (all NB), E (all EB), S (all SB), W (all WB)

Lanes at Station: N L

Counter is counting: V (Vehicles), A (Axles)

Type Record: V (Volume), C (Cls x Spd), L (Len x Spd), W (WIM)

Machine # of All Machines at Station: 1 1

Ramp Signage
Fulton, 307

File # G21 0000 1.200

of Lanes 1 Lane Width 16'

County Fulton

Latitude N 36.51952

Station number 231 Machine # 18286038

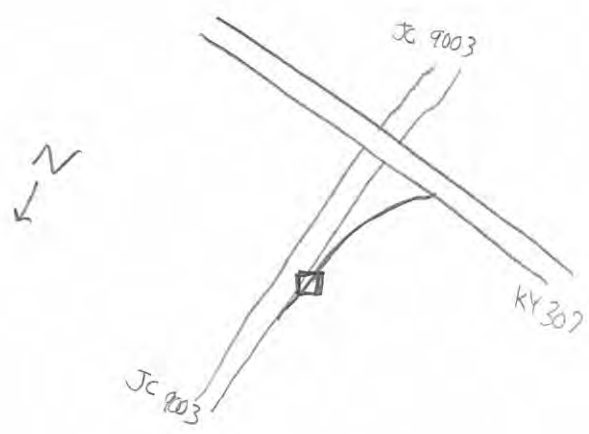
Traffic light Stop sign Merge

Route JC 9003 PKWY

Longitude W 88.86843

Type Record (check one) <input type="checkbox"/> Volume <input checked="" type="checkbox"/> Class <input type="checkbox"/> Length	Recorder Set Out	8:06	07	21	2010
Type Sensor (check one) <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Loop <input type="checkbox"/> Radar <input type="checkbox"/> Other	Recorder Picked Up	10:05	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder Y N

Shoulder width 1'

Right Shoulder Y N

Shoulder width 1'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003Q

FULTON COUNTY

STATION 231

DATE:	THU	FRI	SAT	SUN	MON	TUE	WED	TOTALS
12-1 AM	5	5	12	11	6	9	8	56
1-2 AM	2	2	4	4	3	1	2	12
2-3 AM	2	1	4	4	3	1	2	17
3-4 AM	3	1	4	3	2	3	2	18
4-5 AM	3	5	3	3	2	3	1	23
5-6 AM	5	1	0	1	2	3	4	16
6-7 AM	7	11	2	2	10	5	12	60
7-8 AM	24	25	7	5	21	16	25	125
8-9 AM	19	23	13	4	22	18	26	128
9-10 AM	24	18	10	10	16	21	25	124
10-11 AM	22	25	18	11	18	16	18	128
11-12 AM	25	19	21	13	21	26	21	146
12-1 PM	39	25	19	13	26	19	30	171
1-2 PM	31	20	19	19	31	21	26	167
2-3 PM	27	36	24	12	27	23	26	175
3-4 PM	30	33	30	19	35	25	32	204
4-5 PM	43	31	37	20	31	30	36	228
5-6 PM	34	33	21	23	27	33	22	193
6-7 PM	16	28	21	18	25	19	18	145
7-8 PM	13	21	19	20	14	10	13	110
8-9 PM	16	15	19	21	13	15	14	113
9-10 PM	20	24	15	17	22	17	16	131
10-11 PM	25	18	17	6	12	9	6	93
11-12 PM	4	5	10	19	10	9	4	61
TOTALS:	439	425	347	274	400	370	389	2644

AVERAGE DAILY TRAFFIC: 365

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 26 BETWEEN 11-12 AM ON TUESDAY
 PM HIGH HOUR: 43 BETWEEN 4-5 PM ON THURSDAY
 MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: FULTON
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 365 IN 2010
 LOCATION INFORMATION: RAMP FROM PURCHASE PARKWAY NB ONTO KY 307
 STATION: 231 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR-CYCLES	PASSENGER CARS	OTHER 2 AXLE 4 TIRE VEHICLES	SINGLE UNIT TRUCKS				SINGLE TRAILER TRUCKS			MULTI-TRAILER TRUCKS			OTHERS	TOTAL VEHICLES
					BUSSES	2 AXLE 6 TIRE	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE	6 AXLE	7 OR MORE AXLE		
06-07AM	7/21/10	0	4	3	0	1	0	0	0	1	0	0	0	0	0	9
07-08AM	7/21/10	0	12	3	0	2	0	0	0	1	0	0	0	0	0	18
08-09AM	7/21/10	0	11	4	0	2	0	0	0	1	0	0	0	0	0	18
09-10AM	7/21/10	0	13	4	0	1	0	0	0	0	0	0	0	0	0	20
10-11AM	7/21/10	0	14	4	0	1	0	0	0	1	0	0	0	0	0	20
11-12AM	7/21/10	0	14	4	0	1	0	0	0	1	0	0	0	0	0	20
12-01PM	7/21/10	0	17	5	0	1	0	0	0	1	0	0	0	0	0	25
01-02PM	7/21/10	0	17	5	0	0	0	0	0	1	0	0	0	0	0	25
02-03PM	7/21/10	0	18	5	0	1	0	0	0	1	0	0	0	0	0	23
03-04PM	7/21/10	0	22	5	0	1	0	0	0	0	0	0	0	0	0	25
04-05PM	7/21/10	1	26	4	0	1	0	0	0	0	0	0	0	0	0	28
05-06PM	7/21/10	0	22	4	0	1	0	0	0	1	0	0	0	0	0	33
06-07PM	7/21/10	0	16	3	0	1	0	0	0	1	0	0	0	0	0	29
07-08PM	7/21/10	0	12	2	0	1	0	0	0	1	0	0	0	0	0	21
08-09PM	7/21/10	0	12	3	0	0	0	0	0	1	0	0	0	0	0	15
09-10PM	7/21/10	0	16	3	0	0	0	0	0	0	0	0	0	0	0	19
10-11PM	7/21/10	0	11	1	0	0	0	0	0	0	0	0	0	0	0	12
11-12PM	7/21/10	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
12-01AM	7/21/10	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
01-02AM	7/21/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
02-03AM	7/21/10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
03-04AM	7/21/10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04-05AM	7/21/10	0	1	2	0	0	0	0	0	0	0	0	0	0	0	2
05-06AM	7/21/10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	4
TOTAL VEHICLES		1	275	70	0	15	0	0	0	3	12	0	0	0	0	376
PERCENT OF TOTAL		0.3	73.1	18.6	0.0	4.0	0.0	0.0	0.0	0.8	3.2	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 30/
 AXLES / TRUCK = 102/
 % TRAILER TRUCKS = 15/
 % TRAILERS @PK HR = 1/
 PEAK HOUR BETWEEN 04-05PM = 24
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.95
 % SINGLE UNIT TRUCKS = 15/
 % SINGLE UNIT @ PK HR = 1/
 % TRUCKS AT PEAK HOUR = 2/
 376 = 4.0 %
 35 = 3.0 %
 33 = 6.1 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %

Kentucky Transportation Cabinet - Division of Planning Ramp Traffic Count Record

District # 1

I.D. # K 9 0 0 3 r 0 0 0 . 1 H C

Route Code: R (Interstate), N (County Rd), N (County Rd), N (County Rd), N (County Rd), S (City St), M (Milepoint), M (Milepoint), M (Milepoint), M (Milepoint), A (District making count), D (District making count)

U=U.S. S=City St. O=Other
 Route Number: 9003 Suffix: r = none

Array - T = Tube H = 2 tubes L = Loop B = 2 loops M = mixed
 R = Radar P = Piezo W = WIM Piezo O = Other

Ramp # 241

STA # 0 3 8 2 4 1 A 1 A C 1 1

County Number: C C C Station#: S S S N L P T M A

Lanes Counter is counting:
 A=All Lanes N=all NB
 B=Part NB & SB E=all EB
 C=Part EB & WB S=all SB
 1=lane 1 W=all WB
 2=lane 2

Lanes at Station: N L P T M A

Counter is counting:
 V=Vehicles
 A=Axles

Type Record:
 V=Volume
 C=Cls x Spd
 L=Len x Spd
 W=WIM

Machine # of All Machines at Station: _____

Ramp Signage
JC 9003 PKWY South

File # G 2 1 0 0 0 1 1 . L 0 0

of Lanes 1 Lane Width 16'

County Fulton

Latitude N 3 6 . 5 1 9 1 5

Station number 241 Machine # 18286026

Traffic light _____ Stop sign Merge

Route JC 9003 PKWY

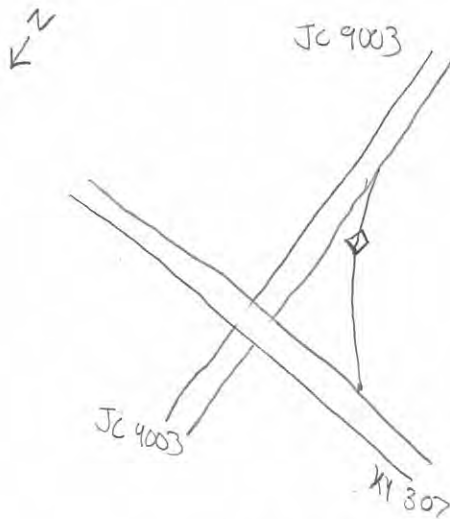
Longitude W 8 8 . 8 7 3 9 3

Type Record (check one) Volume Class Length

Type Sensor (check one) Tube Loop Radar Other

	Time	Month	Day	Year
Recorder Set Out	8:24	07	21	2010
Recorder Picked Up	10:07	07	29	2010

Station Location & Description (use back if necessary):



Left Shoulder N

Shoulder width 1'

Right Shoulder N

Shoulder width 1'

Type: No shoulders exist
 Bituminous Concrete
 N/A Stabilized
 Combination Earth
 Curbed

Field Technician GM/JH

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: KY9003R

FULTON COUNTY

STATION 241

DATE:	THU	FRI	SAT	SUN	MON	TUE	WED	TOTALS
12- 1 AM	4	9	5	0	7	5	7	37
1- 2 AM	1	2	6	1	1	1	3	15
2- 3 AM	2	1	3	1	2	1	2	12
3- 4 AM	5	1	4	3	0	0	2	15
4- 5 AM	13	8	5	0	8	11	9	54
5- 6 AM	17	20	7	0	24	23	27	125
6- 7 AM	49	40	28	9	47	42	54	269
7- 8 AM	39	46	13	8	57	57	44	264
8- 9 AM	36	39	29	19	29	33	29	214
9-10 AM	26	17	18	8	20	29	15	133
10-11 AM	25	34	24	14	23	21	18	159
11-12 AM	29	19	25	8	19	20	17	135
12- 1 PM	23	21	30	29	21	24	24	172
1- 2 PM	27	26	15	26	35	27	24	180
2- 3 PM	35	26	39	19	40	35	21	215
3- 4 PM	34	33	23	23	37	25	40	215
4- 5 PM	29	29	27	24	29	30	32	200
5- 6 PM	34	30	20	20	26	29	24	183
6- 7 PM	31	30	31	20	33	21	19	187
7- 8 PM	10	14	21	13	21	23	19	121
8- 9 PM	9	12	22	21	11	13	10	98
9-10 PM	11	15	12	11	11	17	10	107
10-11 PM	18	19	13	15	13	18	28	109
11-12 PM	19	17	8	10	15	16	15	100
TOTALS:	526	508	426	311	529	521	498	3319

AVERAGE DAILY TRAFFIC: 459

MONTHLY FACTOR: 97
 AXLE FACTOR : 100
 TOTAL HOURS : 168
 AM HIGH HOUR: 57 BETWEEN 7- 8 AM ON MONDAY
 PM HIGH HOUR: 40 BETWEEN 2- 3 PM ON MONDAY

MILE POINT : 0.1
 COUNTED BY : CEN OFF
 DATA SOURCE : CLASS
 ARRAY : 2 TUBES
 LANES COUNTED: ALL LANES

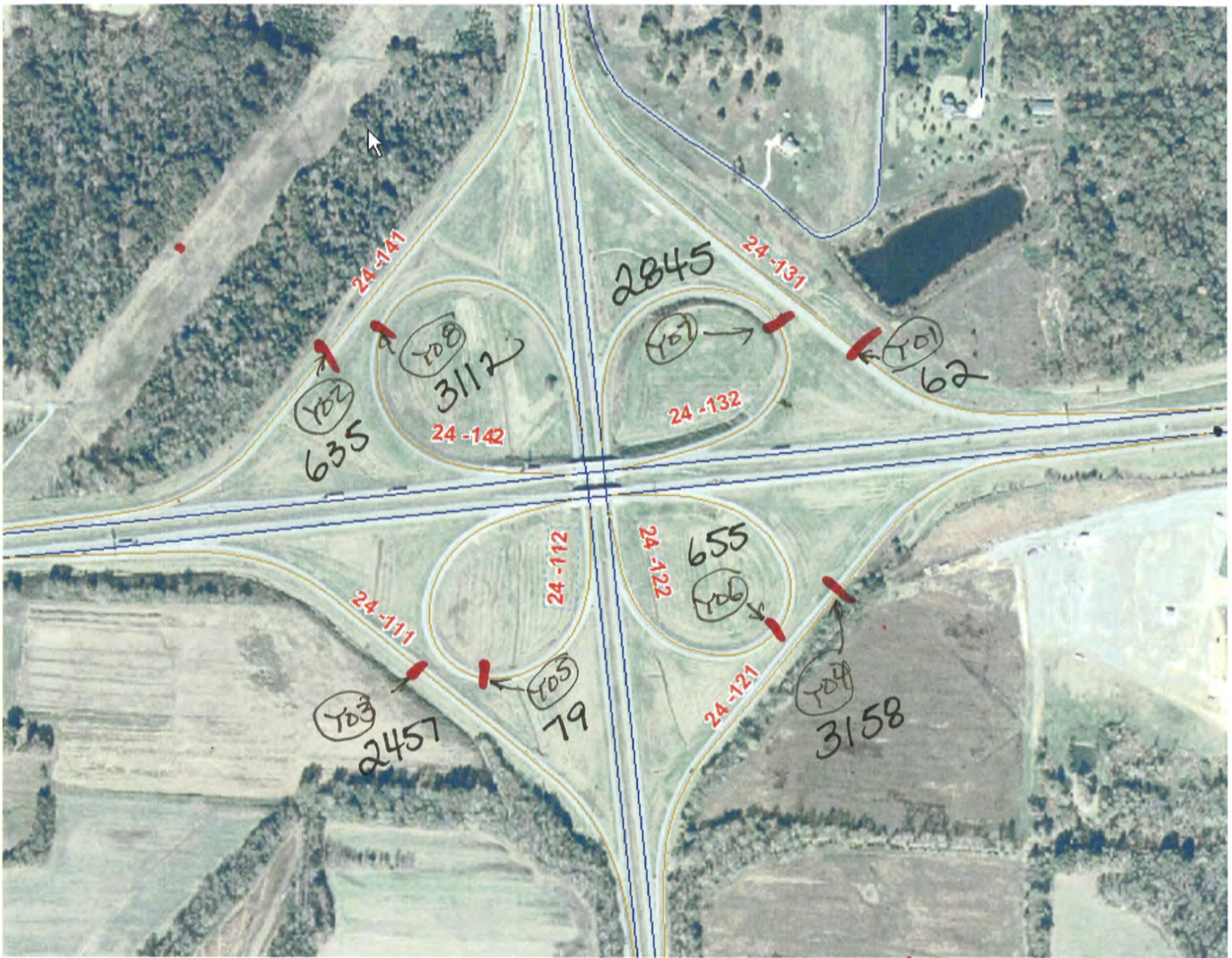
KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF PLANNING-TRAFFIC SURVEY AND ANALYSIS SECTION
 VEHICLE CLASSIFICATION COUNT
 COUNTY: FULTON
 DISTRICT: 1
 MILEPOST: 0.100
 ROAD DESIGNATION: R
 LATEST ADT COUNT: 459 IN 2010
 LOCATION INFORMATION: RAMP FROM KY 307 ONTO PURCHASE PARKWAY NB
 STATION: 241 BOTH N-S
 ROUTE: KY9003R
 TYPE COUNT: AUTOMATIC
 FUNCTIONAL CLASS: 2

TIME PERIOD	DATE	MOTOR CYCLES	PASSENGER CARS	OTHER VEHICLES	SINGLE UNIT TRUCKS							OTHERS	TOTAL VEHICLES		
					2 AXLE BUSES	3 AXLE	4 OR MORE AXLE	4 OR LESS AXLE	5 AXLE	6 OR MORE AXLE	5 OR LESS AXLE			6 AXLE	7 OR MORE AXLE
06-07AM	7/21/10	0	27	11	0	1	0	0	0	0	0	0	0	0	39
07-08AM	7/21/10	0	28	7	0	1	0	0	1	2	0	0	0	0	31
08-09AM	7/21/10	0	20	8	0	0	0	0	1	1	0	0	0	0	31
09-10AM	7/21/10	0	13	7	0	0	0	0	0	0	0	0	0	0	21
10-11AM	7/21/10	0	14	6	1	0	0	0	1	1	0	0	0	0	22
11-12AM	7/21/10	0	13	5	1	0	0	0	1	1	0	0	0	0	21
12-01PM	7/21/10	0	16	6	1	0	0	0	1	1	0	0	0	0	25
01-02PM	7/21/10	1	19	8	0	0	0	0	1	1	0	0	0	0	26
02-03PM	7/21/10	1	21	5	0	0	0	0	1	0	0	0	0	0	32
03-04PM	7/21/10	0	22	7	0	0	0	0	1	0	0	0	0	0	30
04-05PM	7/21/10	1	19	6	1	0	0	0	1	0	0	0	0	0	29
05-06PM	7/21/10	0	20	5	1	0	0	0	0	0	0	0	0	0	26
06-07PM	7/21/10	0	20	6	1	0	0	0	1	0	0	0	0	0	27
07-08PM	7/21/10	0	13	3	0	0	0	0	0	0	0	0	0	0	16
08-09PM	7/21/10	0	10	3	0	0	0	0	0	0	0	0	0	0	13
09-10PM	7/21/10	0	11	3	0	0	0	0	0	0	0	0	0	0	15
10-11PM	7/21/10	0	12	3	0	0	0	0	1	1	0	0	0	0	16
11-12PM	7/21/10	0	9	5	0	0	0	0	0	0	0	0	0	0	14
12-01AM	7/21/10	0	3	1	0	0	0	0	1	0	0	0	0	0	5
01-02AM	7/21/10	0	1	1	0	0	0	0	0	0	0	0	0	0	2
02-03AM	7/21/10	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03-04AM	7/21/10	0	1	0	0	0	0	0	1	1	0	0	0	0	2
04-05AM	7/21/10	0	5	3	0	0	0	0	0	0	0	0	0	0	8
05-06AM	7/21/10	0	12	6	0	0	0	0	1	0	0	0	0	0	19
TOTAL VEHICLES		3	331	115	0	9	1	0	6	15	0	0	0	0	480
PERCENT OF TOTAL	0.6	69.0	24.0	0.0	1.9	0.2	0.0	1.2	3.1	0.0	0.0	0.0	0.0	0.0	0.0

% HEAVY TRUCKS = 31/ 480 = 6.5 %
 AXLES / TRUCK = 120/ 31 = 3.871
 % TRAILER TRUCKS = 21/ 480 = 4.4 %
 % TRAILERS @PK HR = 2/ 39 = 5.1 %
 PEAK HOUR BETWEEN 07-08AM = 24
 TOTAL HOURS = 24

AXLE CORRECTION FACTOR = 0.94
 % SINGLE UNIT TRUCKS = 10/ 480 = 2.1 %
 % SINGLE UNIT @ PK HR = 2/ 39 = 5.1 %
 % TRUCKS AT PEAK HOUR = 4/ 39 = 10.3 %

* NOTE: RECOMMENDED OTHERS DISTRIBUTION IS CARS 00 %
 OTHER 2 AXLE 4 TIRE VEHICLES 00 %
 4 OR LESS AXLE SINGLE TRAILER TRUCKS 00 %



Marshall County I 24
 I 24 & Julian Carroll Pkwy
 app. mpt 25.0

Ramps	111	141	Y01-Y08
	112	142	
	121		
	122		
	131		
	132		

Oct 2007

079

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: I0024 RAMP@TR9003 MARSHALL COUNTY STATION Y01

WEEK OF OCTOBER 22 TO OCTOBER 28 2007

DATE:	22	23	24	25	26	27	28	TOTALS
DAY:	MON	TUE	WED	THU	FRI	SAT	SUN	
12- 1 AM		1	3					4
1- 2 AM		0	5					5
2- 3 AM		1	2					3
3- 4 AM		0	0					0
4- 5 AM		0	5					5
5- 6 AM		0	1					1
6- 7 AM	3	3						6
7- 8 AM	2	2						4
8- 9 AM	1	3						4
9-10 AM	4	10						14
10-11 AM	5	6						11
11-12 AM	13	4						17
12- 1 PM	10	2						12
1- 2 PM	7	7						14
2- 3 PM	8	10						18
3- 4 PM	5	9						14
4- 5 PM	3	3						6
5- 6 PM	6	5						11
6- 7 PM	4	3						7
7- 8 PM	1	2						3
8- 9 PM	0	4						4
9-10 PM	2	1						3
10-11 PM	4	4						8
11-12 PM	0	0						0
TOTALS:	78	80	16					174

AVERAGE DAILY TRAFFIC: 62

MONTHLY FACTOR: 99
 AXLE FACTOR : 72
 TOTAL HOURS : 48
 AM HIGH HOUR: 13 BETWEEN 11-12 AM ON MONDAY
 PM HIGH HOUR: 10 BETWEEN 12- 1 PM ON MONDAY
 MILE POINT : 0.0
 COUNTED BY : CEN OFF
 DATA SOURCE : VOLUME
 ARRAY : TUBE
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024 RAMP@TR9003 MARSHALL COUNTY STATION Y02

WEEK OF OCTOBER 22 TO OCTOBER 28 2007

DATE:	22	23	24	25	26	27	28	TOTALS
DAY:	MON	TUE	WED	THU	FRI	SAT	SUN	
12-1 AM		5	12					17
1-2 AM		5	2					7
2-3 AM		3	0					3
3-4 AM		5	1					6
4-5 AM		2	2					4
5-6 AM		14	11					25
6-7 AM	41	36						77
7-8 AM	56	61						117
8-9 AM	86	90						176
9-10 AM	46	68						114
10-11 AM	61	45						106
11-12 AM	43	43						86
12-1 PM	42	33						75
1-2 PM	46	48						94
2-3 PM	35	31						66
3-4 PM	50	42						92
4-5 PM	103	110						213
5-6 PM	103	116						219
6-7 PM	65	47						112
7-8 PM	39	39						78
8-9 PM	16	18						34
9-10 PM	16	6						22
10-11 PM	12	19						31
11-12 PM	5	5						10
TOTALS:	865	891	28					1784

AVERAGE DAILY TRAFFIC: 635

MONTHLY FACTOR: 99
 AXLE FACTOR: 72
 TOTAL HOURS: 48
 AM HIGH HOUR: 90 BETWEEN 8-9 AM ON TUESDAY
 PM HIGH HOUR: 116 BETWEEN 5-6 PM ON TUESDAY
 MILE POINT: 0.0
 COUNTED BY: CEN OFF
 DATA SOURCE: VOLUME
 ARRAY: TUBE
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: 10024 RAMP@TR9003 MARSHALL COUNTY STATION Y03

WEEK OF OCTOBER 22 TO OCTOBER 28 2007

DATE:	22	23	24	25	26	27	28	TOTALS
DAY:	MON	TUE	WED	THU	FRI	SAT	SUN	
12- 1 AM		54	63					117
1- 2 AM		32	47					79
2- 3 AM		15	18					33
3- 4 AM		27	17					44
4- 5 AM		13	23					36
5- 6 AM		31	22					53
6- 7 AM	40	56						96
7- 8 AM	87	119						206
8- 9 AM	194	194						388
9-10 AM	160	166						326
10-11 AM	154	150						304
11-12 AM	194	171						365
12- 1 PM	186	167						353
1- 2 PM	177	173						350
2- 3 PM	211	181						392
3- 4 PM	231	255						486
4- 5 PM	274	302						576
5- 6 PM	340	316						656
6- 7 PM	330	316						646
7- 8 PM	182	201						383
8- 9 PM	176	162						338
9-10 PM	132	134						266
10-11 PM	125	119						244
11-12 PM	78	79						157
TOTALS:	3271	3433	190					6894

AVERAGE DAILY TRAFFIC: 2457

MONTHLY FACTOR: 99
 AXLE FACTOR : 72
 TOTAL HOURS : 48
 AM HIGH HOUR: 194 BETWEEN 8- 9 AM ON MONDAY
 PM HIGH HOUR: 340 BETWEEN 5- 6 PM ON MONDAY
 MILE POINT : 0.0
 COUNTED BY : CEN OFF
 DATA SOURCE : VOLUME
 ARRAY : TUBE
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: I0024 RAMP@TR9003 MARSHALL COUNTY STATION Y04

WEEK OF OCTOBER 22 TO OCTOBER 28 2007

DATE:	22	23	24	25	26	27	28	TOTALS
DAY:	MON	TUE	WED	THU	FRI	SAT	SUN	
12- 1 AM		49	61					110
1- 2 AM		43	58					101
2- 3 AM		56	53					109
3- 4 AM		35	49					84
4- 5 AM		61	44					105
5- 6 AM		66	54					120
6- 7 AM	148	107						374
7- 8 AM	190	184						410
8- 9 AM	200	210						552
9-10 AM	274	278						612
10-11 AM	313	299						540
11-12 AM	277	263						588
12- 1 PM	297	291						612
1- 2 PM	299	313						614
2- 3 PM	314	300						548
3- 4 PM	269	279						593
4- 5 PM	316	277						522
5- 6 PM	272	250						385
6- 7 PM	293	273						366
7- 8 PM	182	203						291
8- 9 PM	195	171						234
9-10 PM	122	169						172
10-11 PM	101	133						
11-12 PM	72	100						
TOTALS:	4134	4410	319					8863

AVERAGE DAILY TRAFFIC: 3158

MONTHLY FACTOR: 99
 AXLE FACTOR : 72
 TOTAL HOURS : 48
 AM HIGH HOUR: 313 BETWEEN 10-11 AM ON MONDAY
 PM HIGH HOUR: 316 BETWEEN 4- 5 PM ON MONDAY
 MILE POINT : 0.0
 COUNTED BY : CEN OFF
 DATA SOURCE : VOLUME
 ARRAY : TUBE
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: I0024 RAMP@TR9003 MARSHALL COUNTY STATION Y05

WEEK OF OCTOBER 22 TO OCTOBER 28 2007

DATE:	22	23	24	25	26	27	28	TOTALS
DAY:	MON	TUE	WED	THU	FRI	SAT	SUN	
12- 1 AM		0	0					0
1- 2 AM		0	1					1
2- 3 AM		0	3					3
3- 4 AM		2	0					2
4- 5 AM		0	3					3
5- 6 AM		3	5					8
6- 7 AM	1	2						3
7- 8 AM	3	2						5
8- 9 AM	0	1						1
9-10 AM	5	5						10
10-11 AM	9	6						15
11-12 AM	7	6						13
12- 1 PM	6	6						12
1- 2 PM	3	5						8
2- 3 PM	5	10						15
3- 4 PM	12	26						38
4- 5 PM	3	9						12
5- 6 PM	11	19						30
6- 7 PM	13	3						16
7- 8 PM	12	4						16
8- 9 PM	3	1						4
9-10 PM	0	2						2
10-11 PM	0	3						3
11-12 PM	3	1						4
TOTALS:	96	116	12					224

AVERAGE DAILY TRAFFIC: 79

MONTHLY FACTOR: 99
 AXLE FACTOR : 72
 TOTAL HOURS : 48
 AM HIGH HOUR: 9 BETWEEN 10-11 AM ON MONDAY
 PM HIGH HOUR: 26 BETWEEN 3- 4 PM ON TUESDAY
 MILE POINT : 0.0
 COUNTED BY : CEN OFF
 DATA SOURCE : VOLUME
 ARRAY : TUBE
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: I0024 RAMP@TR9003 MARSHALL COUNTY STATION Y06

WEEK OF OCTOBER 22 TO OCTOBER 28 2007

DATE:	22	23	24	25	26	27	28	TOTALS
DAY:	MON	TUE	WED	THU	FRI	SAT	SUN	
12-1 AM		5	13					18
1-2 AM		8	3					11
2-3 AM		7	1					8
3-4 AM		1	1					2
4-5 AM		2	6					8
5-6 AM		10	9					19
6-7 AM	29	20						49
7-8 AM	96	85						181
8-9 AM	142	122						264
9-10 AM	43	45						88
10-11 AM	41	42						83
11-12 AM	34	45						79
12-1 PM	44	33						77
1-2 PM	49	45						94
2-3 PM	55	36						91
3-4 PM	44	72						116
4-5 PM	59	64						123
5-6 PM	63	74						137
6-7 PM	90	48						138
7-8 PM	41	34						75
8-9 PM	29	33						62
9-10 PM	23	26						49
10-11 PM	20	23						43
11-12 PM	9	16						25
TOTALS:	911	896	33					1840

AVERAGE DAILY TRAFFIC: 655

MONTHLY FACTOR: 99
 AXLE FACTOR: 72
 TOTAL HOURS: 48
 AM HIGH HOUR: 142 BETWEEN 8-9 AM ON MONDAY
 PM HIGH HOUR: 90 BETWEEN 6-7 PM ON MONDAY
 MILE POINT: 0.0
 COUNTED BY: CEN OFF
 DATA SOURCE: VOLUME
 ARRAY: TUBE
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: I0024_RAMP@TR9003 MARSHALL COUNTY STATION Y07

WEEK OF OCTOBER 22 TO OCTOBER 28 2007

DATE:	22	23	24	25	26	27	28	TOTALS
DAY:	MON	TUE	WED	THU	FRI	SAT	SUN	
12- 1 AM		32	38					70
1- 2 AM		14	19					33
2- 3 AM		19	9					28
3- 4 AM		9	15					24
4- 5 AM		22	15					37
5- 6 AM		45	43					88
6- 7 AM	128	95						223
7- 8 AM	260	228						488
8- 9 AM	422	366						788
9-10 AM	357	295						652
10-11 AM	254	252						506
11-12 AM	266	281						547
12- 1 PM	244	218						462
1- 2 PM	282	212						494
2- 3 PM	261	224						485
3- 4 PM	229	297						526
4- 5 PM	248	232						480
5- 6 PM	283	275						558
6- 7 PM	298	261						559
7- 8 PM	191	159						350
8- 9 PM	97	101						198
9-10 PM	88	70						158
10-11 PM	68	72						140
11-12 PM	33	57						90
TOTALS:	4009	3836	139					7984

AVERAGE DAILY TRAFFIC: 2845

MONTHLY FACTOR: 99
 AXLE FACTOR : 72
 TOTAL HOURS : 48
 AM HIGH HOUR: 422 BETWEEN 8- 9 AM ON MONDAY
 PM HIGH HOUR: 298 BETWEEN 6- 7 PM ON MONDAY
 MILE POINT : 0.0
 COUNTED BY : CEN OFF
 DATA SOURCE : VOLUME
 ARRAY : TUBE
 LANES COUNTED: ALL LANES

KENTUCKY TRANSPORTATION CABINET-DEPARTMENT OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING

PORTABLE TRAFFIC RECORDER REPORT

ROUTE: I0024 RAMP@TR9003 MARSHALL COUNTY STATION Y08

WEEK OF OCTOBER 22 TO OCTOBER 28 2007

DATE:	22	23	24	25	26	27	28	TOTALS
DAY:	MON	TUE	WED	THU	FRI	SAT	SUN	
12-1 AM		80	90					170
1-2 AM		67	57					124
2-3 AM		49	55					104
3-4 AM		80	76					156
4-5 AM		73	86					159
5-6 AM		74	71					145
6-7 AM	99	131						230
7-8 AM	202	200						402
8-9 AM	203	227						430
9-10 AM	219	222						441
10-11 AM	247	265						512
11-12 AM	242	282						524
12-1 PM	202	266						468
1-2 PM	242	241						483
2-3 PM	229	208						437
3-4 PM	185	130						315
4-5 PM	289	265						554
5-6 PM	331	428						759
6-7 PM	310	323						633
7-8 PM	273	230						503
8-9 PM	194	169						363
9-10 PM	136	159						295
10-11 PM	123	145						268
11-12 PM	122	137						259
TOTALS:	3848	4451	435					8734

AVERAGE DAILY TRAFFIC: 3112

MONTHLY FACTOR: 99
 AXLE FACTOR : 72
 TOTAL HOURS : 48
 AM HIGH HOUR: 282 BETWEEN 11-12 AM ON TUESDAY
 PM HIGH HOUR: 428 BETWEEN 5-6 PM ON TUESDAY
 MILE POINT : 0.0
 COUNTED BY : CEN OFF
 DATA SOURCE : VOLUME
 ARRAY : TUBE
 LANES COUNTED: ALL LANES

Appendix F Highway Information System Summary of Parkway Data

1. Geometric Characteristics
2. Highway Systems
3. Bridge Characteristics
4. Horizontal and Vertical Curve Data
5. Interchange Characteristics
6. Weaving Analysis

Geometric Characteristics

Purchase Parkway and I-24
Fulton to Eddyville

COUNTY	BEGIN MP	END MP	LENGTH (MILES)	NUMBER OF LANES	LANE WIDTH (FT)	INSIDE SHOULDER WIDTH (FT)	OUTSIDE PAVED SHOULDER WIDTH (FT)	INSIDE/OUTSIDE SHOULDER TYPE	SPEED LIMIT	ROADWAY TYPE	PAVEMENT TYPE
Purchase Parkway, MP 0.000 to MP 51.398											
Fulton	0.000	0.625	0.6	4	12	3	10	Paved w/ Bituminous Material	55	Divided Highway	High Flexible
	0.625	3.434	2.8	4	12	3	10	Paved w/ Bituminous Material	70	Divided Highway	High Flexible
Hickman	3.434	8.352	4.9	4	12	3	10	Paved w/ Bituminous Material	70	Divided Highway	High Flexible
Graves	8.352	21.887	13.5	4	12	3	10	Paved w/ Bituminous Material	70	Divided Highway	High Flexible
	21.887	24.901	3.0	4	12	0	10	Paved w/ Bituminous Material	70	Divided Highway	High Flexible
	24.901	34.487	9.6	4	12	3	10	Paved w/ Bituminous Material	70	Divided Highway	High Flexible
Marshall	34.487	51.398	16.9	4	12	3	10	Paved w/ Bituminous Material	70	Divided Highway	Composite;Flexible over Rigid
Interstate 24, MP 24.941 to MP 41.250											
Marshall	24.941	29.352	4.4	4	12	-	10	Paved w/ Bituminous Material	70	Divided Highway	High Flexible
Livingston	29.352	33.880	4.5	4	12	-	10	Paved w/ Bituminous Material	70	Divided Highway	Composite;Flexible over Rigid
Lyon	33.880	41.250	7.4	4	12	-	10	Paved w/ Bituminous Material	70	Divided Highway	High Flexible

Highway Systems

Julian M. Carroll (Purchase) Parkway and I-24
Fulton to Eddyville

COUNTY	BEGIN MP	END MP	STATE SYSTEM	NATIONAL TRUCK NETWORK	NATIONAL HIGHWAY SYSTEM	FUNCTIONAL CLASSIFICATION	TRUCK WEIGHT CLASS
Julian M. Carroll (Purchase) Parkway, MP 0.000 to MP 51.398							
Fulton	0.000	3.430	State Primary (Parkway)	Yes	Yes	Rural Principal Arterial	AAA
Hickman	3.430	8.352	State Primary (Parkway)	Yes	Yes	Rural Principal Arterial	AAA
Graves	8.350	21.305	State Primary (Parkway)	Yes	Yes	Rural Principal Arterial	AAA
	21.305	24.747	State Primary (Parkway)	Yes	Yes	Urban Freeways & Expressways	AAA
	24.747	34.487	State Primary (Parkway)	Yes	Yes	Rural Principal Arterial	AAA
Marshall	34.487	51.398	State Primary (Parkway)	Yes	Yes	Rural Principal Arterial	AAA
Interstate 24, MP 24.941 to MP 41.250							
Marshall	24.941	29.352	State Primary (Interstate)	Yes	Yes	Rural Interstate	AAA
Livingston	29.352	33.880	State Primary (Interstate)	Yes	Yes	Rural Interstate	AAA
Lyon	33.880	41.25	State Primary (Interstate)	Yes	Yes	Rural Interstate	AAA

Bridge Characteristics
 Julian M. Carroll (Purchase) Parkway and I-24
 Fulton to Eddyville

Mainline Bridges - Julian M. (Purchase) Parkway															
COUNTY	MP	BRIDGE NO.	DIRECTION	FEATURES INTERSECTED	Length (FT)	WIDTH (GUTTER TO GUTTER)(FT)	SUFFICIENCY RATING	Structural Function	DESIGN LOAD	INVENTORY RATING	OPERATING RATING	Load I (lbs)	Load II (lbs)	Load III (lbs)	Load IV (lbs)
Fulton	0.004	038B00053L	SB	Pkwy Over KY 116 (W. State Line St.)	153	38'-0"	96.6		HS 20-44 or Alt.	HS 33.3	-	128,000	134,000	150,000	204,000
Fulton	0.004	038B00053R	NB	Pkwy Over KY 116 (W. State Line St.)	152.9	38'-0"	99.6		HS 20-44 or Alt.	HS 33.3	-	128,000	134,000	150,000	204,000
Fulton	0.924	038B00054L	SB	Pkwy Over KY 166 (Middle Rd)	142.25	38'-0"	99.7		HS 20-44 or Alt.	HS 31.7	-	122,000	130,000	142,000	200,000
Fulton	0.924	038B00054R	NB	Pkwy Over KY 166 (Middle Rd)	142.25	38'-0"	99.7		HS 20-44 or Alt.	HS 31.7	-	122,000	130,000	142,000	200,000
Fulton	1.781	038B00055L	SB	Pkwy Over I.C.R.R. (ILL. Central railroad)	539.00	30'-0"	81.6		HS 20-44 or Alt.	HS 31.1	-	120,000	126,000	142,000	202,000
Fulton	1.781	038B00055R	NB	Pkwy Over I.C.R.R. (ILL. Central railroad)	485.42	30'-0"	81.6		HS 20-44 or Alt.	HS 31.1	-	120,000	126,000	142,000	202,000
Graves	9.082	042B00170L	SB	Pkwy over Bayou Du Chien Creek	310.25	30'-0"	82.6		HS 20-44 or Alt.	HS 36.1	-	134,000	140,000	154,000	208,000
Graves	9.082	042B00170R	NB	Pkwy over Bayou Du Chien Creek	310.25	30'-0"	82.6		HS 20-44 or Alt.	HS 36.1	-	134,000	140,000	154,000	208,000
Graves	12.788	042B00173L	SB	Pkwy over Bush Creek	127.17	38'-0"	98.7		HS 20-44 or Alt.	HS 32.2	-	122,000	130,000	144,000	212,000
Graves	12.788	042B00173R	NB	Pkwy over Bush Creek	127.17	38'-0"	98.7		HS 20-44 or Alt.	HS 32.2	-	122,000	130,000	144,000	212,000
Graves	16.751	042B00176L	SB	Pkwy over Obion Creek	208.25	38'-0"	98.6		HS 20-44 or Alt.	HS 34.4	-	138,000	144,000	156,000	208,000
Graves	16.751	042B00176R	NB	Pkwy over Obion Creek	208.25	38'-0"	99.6		HS 20-44 or Alt.	HS 34.4	-	138,000	144,000	156,000	208,000
Graves	17.777	042B00177L	SB	Pkwy over Opossum Creek	211.06	38'-0"	99.6		HS 20-44 or Alt.	HS 34.4	-	152,000	162,000	174,000	232,000
Graves	17.777	042B00177R	NB	Pkwy over Opossum Creek	211.06	38'-0"	99.6		HS 20-44 or Alt.	HS 34.4	-	152,000	162,000	174,000	232,000
Graves	21.285	042B00154L	SB	Pkwy over US 45 (Mayfield Bypass)	208.31	24'-0"	92.6		HS 20-44 or Alt.	HS 28.4	-	94,000	100,000	112,000	162,000
Graves	21.285	042B00154R	NB	Pkwy over US 45 (Mayfield Bypass)	201.17	24'-0"	78.2	Functionally Obsolete	HS 20-44 or Alt.	HS 28.4	-	94,000	100,000	112,000	162,000
Graves	24.726	042B00155L	SB	Pkwy over US 45 (Paducah Rd)	238.00	38'-0"	97.4		HS 20-44 or Alt.	HS 33.3	-	134,000	140,000	150,000	192,000
Graves	24.726	042B00155R	NB	Pkwy over US 45 (Paducah Rd)	238.00	38'-0"	97.6		HS 20-44 or Alt.	HS 33.3	-	134,000	140,000	150,000	192,000
Graves	25.068	042B00156L	SB	Pkwy Over I.C.R.R. (ILL. Central railroad)	172.17	38'-0"	99.6		HS 20-44 or Alt.	HS 35.6	-	144,000	150,000	162,000	208,000
Graves	25.068	042B00156R	NB	Pkwy Over I.C.R.R. (ILL. Central railroad)	172.17	38'-0"	99.6		HS 20-44 or Alt.	HS 35.6	-	144,000	150,000	162,000	208,000
Graves	25.405	042B00157L	SB	Pkwy over Mayfield Creek	208.42	38'-0"	98.6		HS 20-44 or Alt.	HS 30.0	-	116,000	124,000	134,000	182,000
Graves	25.405	042B00157R	NB	Pkwy over Mayfield Creek	208.42	38'-0"	99.6		HS 20-44 or Alt.	HS 30.0	-	116,000	124,000	134,000	182,000
Graves	25.637	042B00158L	SB	Pkwy over Mayfield Creek Overflow 1	97.17	38'-0"	96.6		HS 20-44 or Alt.	HS 29.5	-	102,000	112,000	128,000	214,000
Graves	25.637	042B00158R	NB	Pkwy over Mayfield Creek Overflow 1	97.17	38'-0"	96.6		HS 20-44 or Alt.	HS 29.5	-	102,000	112,000	128,000	214,000
Graves	25.863	042B00159L	SB	Pkwy over Mayfield Creek Overflow 2	97.17	38'-0"	99.6		HS 20-44 or Alt.	HS 32.2	-	110,000	120,000	140,000	234,000
Graves	25.863	042B00159R	NB	Pkwy over Mayfield Creek Overflow 2	97.17	38'-0"	99.6		HS 20-44 or Alt.	HS 32.2	-	110,000	120,000	140,000	234,000
Graves	31.402	042B00162L	SB	Pkwy over Panther Creek	188.65	38'-0"	99.7		HS 20-44 or Alt.	HS 30.0	-	128,000	136,000	148,000	208,000
Graves	31.402	042B00162R	NB	Pkwy over Panther Creek	188.65	38'-0"	99.7		HS 20-44 or Alt.	HS 30.0	-	128,000	136,000	148,000	208,000
Graves	31.573	042B00163L	SB	Pkwy over Panther Creek Overflow	97.17	38'-0"	99.7		HS 20-44 or Alt.	HS 29.5	-	102,000	112,000	128,000	156,000
Graves	31.573	042B00163R	NB	Pkwy over Panther Creek Overflow	97.17	38'-0"	99.7		HS 20-44 or Alt.	HS 29.5	-	102,000	112,000	128,000	156,000
Graves	33.524	042B00165L	SB	Pkwy over West Fork Clarks River Overflow 1	97.17	38'-0"	99.7		HS 20-44 or Alt.	HS 30.0	-	102,000	114,000	130,000	216,000
Graves	33.524	042B00165R	NB	Pkwy over West Fork Clarks River Overflow 1	97.17	38'-0"	99.7		HS 20-44 or Alt.	HS 30.0	-	102,000	114,000	130,000	216,000
Graves	33.686	042B00166L	SB	Pkwy over West Fork Clarks River	208.42	38'-0"	99.7		HS 20-44 or Alt.	HS 30.0	-	132,000	138,000	150,000	204,000
Graves	33.686	042B00166R	NB	Pkwy over West Fork Clarks River	208.42	38'-0"	99.7		HS 20-44 or Alt.	HS 30.0	-	132,000	138,000	150,000	204,000
Graves	34.012	042B00167L	SB	Pkwy over West Fork Clarks River Overflow 2	107.68	38'-0"	96.7		HS 20-44 or Alt.	HS 29.5	-	102,000	112,000	128,000	214,000
Graves	34.012	042B00167R	NB	Pkwy over West Fork Clarks River Overflow 2	107.68	38'-0"	96.7		HS 20-44 or Alt.	HS 29.5	-	102,000	112,000	128,000	214,000
Graves	34.330	042B00168L	SB	Pkwy over KY 564 (Wayne Freeman Rd / Wadesboro	132.29	38'-0"	96.7		HS 20-44 or Alt.	HS 31.7	-	120,000	130,000	142,000	210,000
Graves	34.330	042B00168R	NB	Pkwy over KY 564 (Wayne Freeman Rd / Wadesboro	132.29	38'-0"	97.7		HS 20-44 or Alt.	HS 31.7	-	120,000	130,000	142,000	210,000
Marshall	42.748	079B00074L	SB	Pkwy over NC & St. Louis Railroads	157.70	38'-0"	98.2		HS 20-44 (1961)	HS 40.5	-	134,000	142,000	154,000	204,000
Marshall	42.748	079B00074R	NB	Pkwy over NC & St. Louis Railroads	157.70	38'-0"	98.2		HS 20-44 (1961)	HS 40.5	-	134,000	142,000	154,000	204,000
Marshall	43.277	079B00075L	SB	Pkwy over Clarks River Relief No. 1	291.08	30'-0"	81		HS 20-44 (1961)	HS 26.6	-	122,000	130,000	142,000	158,000
Marshall	43.277	079B00075R	NB	Pkwy over Clarks River Relief No. 1	291.08	30'-0"	81		HS 20-44 (1961)	HS 26.6	-	122,000	130,000	142,000	158,000
Marshall	43.614	079B00076L	SB	Pkwy over East Fork Clarks River	518.92	30'-0"	79.7		HS 20-44 (1961)	HS 18.3	HS 30.6	84,000	86,000	92,000	110,000
Marshall	43.614	079B00076R	NB	Pkwy over East Fork Clarks River	518.92	30'-0"	77.1		HS 20-44 (1961)	HS 16.7	HS 30.0	90,000	96,000	102,000	132,000
Marshall	43.872	079B00064L	SB	Pkwy over Clarks River Relief No. 2	387.17	30'-0"	81		HS 20-44 (1961)	HS 33.9	-	124,000	130,000	142,000	196,000
Marshall	43.872	079B00064R	NB	Pkwy over Clarks River Relief No. 2	387.17	30'-0"	81		HS 20-44 (1961)	HS 33.9	-	124,000	130,000	142,000	196,000

Bridge Characteristics (continued)
Julian M. Carroll (Purchase) Parkway and I-24
Fulton to Eddyville

Overpass Bridges - Julian M. Carroll (Purchase) Parkway

COUNTY	MP	BRIDGE NO.	FEATURES INTERSECTED	NB MINIMUM VERTICAL CLEARANCE (FT)	SB MINIMUM VERTICAL CLEARANCE (FT)	SUFFICIENCY RATING	STRUCTURAL FUNCTION	MINIMUM HORZ CLEAR TO ABUT.		DESIGN LOAD	INVENTORY RATING
								CLEARANCE (FT)	MEASURED FROM OUTSIDE EDGE OF LANES (OEL) TO ABUTMENT FACE		
Fulton	1.424	038B00012N	US 51 over Pkwy	16.45 (CL)	16.96 (CL)	89.1		36.0	both abuts	HS 20-44 or Alt.	HS 27.3
Fulton	2.442	038B00015N	KY 307 (Fulgham Rd) over Pkwy	16.38 (CL)	16.05 (CL)	96.6		36.0	SB abut	HS 20-44 or Alt.	HS 17.2
Hickman	4.146	053B00068N	KY 2569 (Holland Rd) over Pkwy	16.07 (IEL)	16.71 (CL)	98		35.0	SB abut	H20-44	HS 26.6
Hickman	5.122	053B00050N	KY 94 over Pkwy	16.38 (CL)	16.75 (CL)	95.8		36.0	both abuts	H20-44	HS 23.9
Hickman	6.533	053B00056N	KY 1529 over Pkwy	16.25 (OEL)	16.89 (IEL)	95.2		34.5	both abuts	H20-44	HS 18.9
Hickman	8.352	053B00102N	KY 1283 over Pkwy	16.16 (CL)	16.86 (CL)	97		35.0	both abuts	H20-44	HS 27.8
Graves	10.186	042B00171N	KY 1763 over Pkwy	17.04 (CL)	16.61 (CL)	79.3		36.0	both abuts	H 20 (inspect rpt)	HS 11.1
Graves	11.428	042B00172N	Grissom Rd over Pkwy	16.80 (CL)	16.37 (OEL)	78.4		35.5	NB abut	H20-44	HS 11.1
Graves	12.607	042B00180N	KY 944 over Pkwy	16.96 (CL)	16.38 (CL)	69.4		33.5	SB abut	H20-44	HS 8.3
Graves	13.653	042B00143N	KY 339/Relocated KY 58 over Pkwy	16.84 (CL)	16.33 (CL)	94.5		34.0	both abuts	H20-44	HS 18.9
Graves	15.302	042B00175N	Tater Rd over Pkwy	15.88 (OEL) 15.98 (OES)	16.74 (CL)	82.2		35.0	both abuts	H20-44	HS 11.7
Graves	16.526	042B00096N	KY 58 over Pkwy	16.68 (IEL)	15.94 (MOS) 16.13 (OEL)	91.3		36.0	both abuts	H20-44	HS 27.8
Graves	17.334	042B00128N	KY 1748 over Pkwy	16.34 (CL)	16.46 (CL)	62.6		35.0	SB abut	H20-44	HS 8.3
Graves	20.229	042B00153N	Cardinal Rd (Pryorsburg-Macedonia Rd) over Pkwy	16.66 (CL)	16.06 (OEL)	78.4		36.0	both abuts	H20-44	HS 11.1
Graves	22.267	042B00106N	KY 80 (Fancy Farm Rd) over Pkwy	15.30 (CL)	15.12 (IEL)	82.2		n/a	n/a	H20-S16	HS 33.9
Graves	23.701	042B00274N	KY 121 over Pkwy	17.34 (IEL)	16.77 (IEL)	98.5		30.1	both abuts	HS 25 or Alt.	HS 25.0
Graves	26.576	042B00160N	Hopewell Rd over Pkwy	16.61 (OEL)	17.68 (IEL)	76.3		35.5	both abuts	H20-44	HS 11.1
Graves	27.461	042B00009N	KY 131 over Pkwy	16.80 (IEL)	16.35 (OEL)	79.8		35.0	both abuts	H20-S16 or Alt.	HS 17.8
Graves	28.235	042B00161N	Twin Hill Rd (Spence Chapel Rd) over Pkwy	16.35 (CL)	16.29 (CL)	80.3		36.0	both abuts	H20-44	HS 11.1
Graves	31.129	042B00028N	KY 301 over Pkwy	16.22 (CL)	16.53 (CL)	94.2		33.0	both abuts	H20-44	HS 19.5
Graves	32.734	042B00164N	Panther Creek (School) Rd over Pkwy	16.24 (CL)	16.38 (CL)	79.4		35.0	NB abut	H20-44	HS 11.1
Marshall	36.197	079B00068N	KY 2603 / Vanzora Church Rd (Hale Springs Rd) over Pkwy	16.26 (CL)	16.54 (CL)	80.9		37.0	NB abut	H20-44	HS 13.3
Marshall	37.868	079B00071N	Bondurant Ln / KY 2604 (Marvin Jones Rd) over Pkwy	16.33 (CL)	16.40 (CL)	85.7		37.0	both abuts	H20-44	HS 13.3
Marshall	40.054	079B00073N	Jackson School Rd / KY 2606 (KY 299) over Pkwy	16.77 (CL)	16.42 (CL)	86		37.0	both abuts	H20-44	HS 20.6
Marshall	40.809	079B00126L	US 641 SB / Benton Bypass over Pkwy	16.98 (OEL)	17.45 (IEL)	94.5		> 30.0	NB abut	HS 20-44 or Alt.	HS 22.2
Marshall	40.809	079B00144R	US 641 NB / Benton Bypass over Pkwy	16.45 (OEL)	17.05 (IEL)	91.4		> 30.0	NB abut	HS 25 or Alt. Mil.	HS 38.6
Marshall	42.017	079B00103N	KY 408 / Oak Level Rd over Pkwy	16.89 (CL)	16.20 (CL)	71.4		36.0	both abuts	H20-44 (1961)	HS 11.1
Marshall	42.555	079B00102N	KY 348 / Symsonia Rd over Pkwy	16.88 (CL)	16.43 (CL)	72		33.0	both abuts	Inspect rpt has H20.	HS 11.1
Marshall	45.024	079B00012N	KY 795 / Scale Rd (Scale-Briensburg Rd) over Pkwy	16.38 (OEL)	16.88 (IEL)	97.8		35.0	SB abut	H20-44 (1961)	HS 26.6
Marshall	46.942	079B00001R	US 68 EB over Pkwy	16.29 (CL)	16.07 (CL)	66.2		36.0	both abuts	HS 20-44 (1961)	HS 27.8
Marshall	46.942	079B00001L	US 68 WB over Pkwy	16.84 (CL)	16.61 (CL)	66.2		36.0	both abuts	HS 20-44 (1961)	HS 27.8
Marshall	48.979	079B00050N	Palma Rd (Palma-Birmingham Rd Relocation) over Pkwy	16.14 (OEL)	16.58 (CL)	86.4		36.0	NB abut	H20-44 (1961)	HS 26.1
Marshall	49.84	079B00066N	KY 2595 / Lakeview Church Rd over Pkwy	16.67 (CL)	16.32 (CL)	93.2		36.0	NB abut	H20-44 (1961)	HS 20.6
Marshall	51.398 / 24.941	079B00114R	I-24 EB over Pkwy	18.26 (IEL)	17.25 (CL)	97		25.0	both abuts	HS 20-44A or Alt.	HS 22.2
Marshall	51.398 / 24.941	079B00114L	I-24 WB over Pkwy	17.27 (CL)	16.27 (CL)	97		25.0	both abuts	HS 20-44A or Alt.	HS 22.2
Overpass Bridges - I-24											
Livingston	30.696	n/a	KY 453 over I 24	EB - 19.48 (EOS)	WB - 16.51 (OEL)	-	-	-	-	-	-
Lyon	35.293	n/a	KY 6008 (Hopewell Church Rd) over I 24	EB - 16.27 (OEL)	WB - 17.46 (OEL)	-	-	-	-	-	-
Lyon	36.413	n/a	KY 810 (Martins Chapel Rd) over I 24	EB - 16.46 (CL)	WB - 16.00 (CL)	-	-	-	-	-	-
Lyon	37.305	n/a	KY 6010 (Poplar Creek Rd) over I 24	EB - 16.30 (EOS)	WB - 16.59 (OES)	-	-	-	-	-	-
Lyon	40.744	n/a	KY 295 over I 24	EB - 16.66 (CL)	WB - 16.24 (CL)	-	-	-	-	-	-

Bridge Characteristics (continued)
 Julian M. Carroll (Purchase) Parkway and I-24
 Fulton to Eddyville

Culverts - Julian M. Carroll (Purchase) Parkway

COUNTY	CULVERT NO.	MP	SUFFICIENCY RATING	Structural Function	DESIGN LOAD	INVENTORY RATING	OPERATING RATING	LOCATION
Graves	042B00174N	14.151	83.1		HS 20-44 or Alt.	HS 20.0	-	Double 16' x 10' x 151' RCBC located at Cane Creek
Marshall	unknown	37.119	unknown		HS 20-44 or Alt.	unknown	-	Single 20' x 14' x 122' RCBC with KY 1949 / Wadesboro Rd N. running through it.
Marshall	079B00070N	37.135	68.9		HS20 or Alt. live load & 84 pcf earth dead load	HS 20.0	-	Double 14' x 10' x 163' RCBC located at Middle Fork Creek
Marshall	079B00072N	38.687	49.3		HS20-44 or Alt. live load & 84 pcf earth dead load	HS 11.1	HS 33.3	Double 12' x 10' x 238' located at Gibson Creek
Marshall	079B00065N	44.587	66.9		84 pcf earth DL (Inspect rpt has HS 20 for LL)	HS 61.1	-	Single 20' x 15' x 215' RCBC with Foust Sledd Rd (Old Benton Briensburg Rd) running through it. Should be 46' north of Clark River Relief Bridge 2 abutment.
Marshall	079B00067N	51.141	70		84 pcf earth DL (Inspect rpt has HS 20 for LL)	HS 20.0	-	Double 20' x 8' x 217' located at Little John Creek. Should be where Pkwy N. to I-24 E. ramp begins (exit 52A from Pkwy N.).

Horizontal and Vertical Curve Data
Julian M. Carroll (Purchase) Parkway
Fulton to Calvert City

URBAN/RURAL	STATION	MP	GRADE		VERTICAL LENGTH OF CURVE		HORIZONTAL CURVE		STOPPING SIGHT DISTANCE	
			IN %	OUT %	MINIMUM CRITERIA (FT)	ACTUAL (FT)	e	RADIUS ¹ ACTUAL (FT)	MINIMUM CRITERIA (FT)	ACTUAL (FT)
Fulton County - MP 0.00										
RURAL	32+00	0.606	-0.50	2.46	536	800	-	-	730	1141
RURAL	48+00	0.909	2.46	-1.87	1071	1800	-	-	730	947
RURAL	53+98	1.022	-	-	-	-	0.088	1910	-	-
RURAL	68+00	1.288	-1.87	0.53	435	1000	-	-	730	2149
RURAL	83+00	1.572	0.53	1.21	124	800	-	-	730	4211
RURAL	97+00	1.837	1.21	-1.43	654	1100	-	-	730	947
RURAL	119+50	2.257	-1.43	-0.55	159	600	-	-	730	2493
RURAL	127+00	2.399	-0.55	-1.00	111	600	-	-	730	2708
RURAL	145+00	2.740	-1.00	0.70	307	1000	-	-	730	2171
RURAL	168+18	3.179	-	-	-	-	0.024	6611	-	-
RURAL	180+00	3.403	0.70	0.50	49	700	-	-	730	5827
Hickman County - MP 3.434										
RURAL	215+00	4.084	0.50	2.00	272	800	-	-	730	1975
RURAL	238+00	4.520	2.00	-1.00	741	1500	-	-	730	1039
RURAL	262+00	4.974	-1.00	1.10	379	1000	-	-	730	3616
RURAL	296+00	5.618	1.10	-1.75	703	1200	-	-	730	954
RURAL	324+00	6.149	-1.75	-0.50	226	800	-	-	730	2349
RURAL	337+09	6.397	-	-	-	-	RC	22918	-	-
RURAL	370+00	6.980	-0.50	0.77	229	1000	-	-	730	2872
RURAL	401+00	7.567	0.77	-2.50	807	2000	-	-	730	1149
RURAL	417+00	7.870	-2.50	-0.50	362	800	-	-	730	4000
RURAL	424+58	8.014	-	-	-	-	0.028	5730	-	-
RURAL	434+00	8.192	-0.50	-1.81	325	1200	-	-	730	1421
Graves County - MP 8.352										
RURAL	451+50	8.524	1.81	-0.50	572	800	-	-	730	866
RURAL	473+00	8.250	-0.50	0.50	181	500	-	-	730	1858
RURAL	483+50	9.130	0.50	-0.55	259	500	-	-	730	1281
RURAL	493+00	9.310	-0.55	0.52	192	500	-	-	730	1754
RURAL	507+00	9.575	0.52	3.00	449	1000	-	-	730	1971
RURAL	520+19	9.825	-	-	-	-	0.015	11459	-	-
RURAL	545+00	10.295	3.00	-1.00	987	2000	-	-	730	1039
RURAL	566+00	10.693	-1.00	3.00	724	1000	-	-	730	977
RURAL	581+00	10.977	3.00	-1.00	988	1800	-	-	730	985
RURAL	611+50	11.554	-1.00	1.68	486	800	-	-	730	1364
RURAL	633+00	11.962	1.68	-2.42	1015	1800	-	-	730	972
RURAL	672+50	12.710	-2.42	0.54	536	800	-	-	730	1141
RURAL	688+50	13.013	0.54	3.00	445	800	-	-	730	1668
RURAL	690+00	13.041	-	-	-	-	RC	11459	-	-
RURAL	695+00	13.136	3.00	-1.35	1075	1800	-	-	730	945
RURAL	713+00	13.696	-1.35	0.50	336	400	-	-	730	5488
RURAL	723+00	13.885	0.50	-2.61	767	1300	-	-	730	950
RURAL	734+00	14.094	-2.61	1.84	805	900	-	-	730	808
RURAL	743+19	14.268	-	-	-	-	RC	11459	-	-
RURAL	764+00	14.662	1.84	-1.30	776	1300	-	-	730	945
RURAL	780+00	14.965	-1.30	2.55	696	500	-	-	730	554
RURAL	794+00	15.230	2.55	-1.75	1062	1800	-	-	730	950
RURAL	810+00	15.533	-1.75	-0.50	227	400	-	-	730	1222
RURAL	821+00	15.742	-0.50	-1.06	138	400	-	-	730	2127
RURAL	843+00	16.158	-1.06	-2.40	332	400	-	-	730	1003
RURAL	862+00	16.518	-2.40	0.45	517	750	-	-	730	1151
RURAL	867+62	16.598	-	-	-	-	RC	11459	-	-
RURAL	875+75	16.752	0.45	-0.69	282	400	-	-	730	1146
RURAL	883+00	16.889	-0.69	0.00	125	400	-	-	730	2137
RURAL	897+50	17.164	0.00	0.74	134	400	-	-	730	2005
RURAL	910+50	17.410	0.74	0.00	182	400	-	-	730	1662

Horizontal and Vertical Curve Data (continued)

Julian M. Carroll (Purchase) Parkway

Fulton to Calvert City

URBAN/RURAL	STATION	MP	GRADE		VERTICAL LENGTH OF CURVE		HORIZONTAL CURVE		STOPPING SIGHT DISTANCE	
			IN %	OUT %	MINIMUM CRITERIA (FT)	ACTUAL (FT)	e	RADIUS ¹ ACTUAL (FT)	MINIMUM CRITERIA (FT)	ACTUAL (FT)
RURAL	922+00	17.628	0.00	0.70	127	400	-	-	730	2108
RURAL	929+25	17.765	0.70	-0.70	346	600	-	-	730	1071
RURAL	936+50	17.903	-0.70	0.92	293	400	-	-	730	967
RURAL	949+50	18.149	0.92	3.00	377	400	-	-	730	1862
RURAL	966+50	18.471	3.00	-1.97	1227	2100	-	-	730	955
RURAL	980+00	18.727	-1.97	1.48	624	600	-	-	730	727
RURAL	1000+00	19.105	1.48	2.20	131	400	-	-	730	2050
RURAL	1018+00	19.446	2.20	-2.32	1115	1800	-	-	730	927
RURAL	1030+75	19.688	-2.32	1.74	733	750	-	-	730	747
RURAL	1053+00	20.109	1.74	-0.50	553	900	-	-	730	932
RURAL	1062+00	20.280	-0.50	0.74	224	400	-	-	730	1237
RURAL	1075+00	20.526	0.74	-2.14	711	1200	-	-	730	949
URBAN	1081+25	20.606	-	-	-	-	0.037	4297.19	-	-
URBAN	1088+00	20.734	-2.14	-0.53	155	400	-	-	425	969
URBAN	1106+00	21.075	-0.53	3.84	419	500	-	-	425	494
URBAN	1115+00	21.245	3.84	-3.87	648	1300	-	-	425	603
URBAN	1126+50	21.463	-3.87	1.07	475	1000	-	-	425	808
URBAN	1132+93	21.585	-	-	-	-	0.06	1145.92	-	-
URBAN	1143+00	21.775	1.07	-0.17	104	300	-	-	425	1021
URBAN	1143+93	21.793	-	-	-	-	0.06	1145.92	-	-
URBAN	86+00	22.245	0.80	-0.85	139	600	-	-	425	954
URBAN	96+00	22.434	-0.85	0.76	155	400	-	-	425	972
URBAN	97+00	22.453	-	-	-	-	-	-	-	-
URBAN	97+00	22.453	-	-	-	-	-	-	-	-
URBAN	105+50	22.645	0.76	-1.89	223	800	-	-	425	806
URBAN	117+97	22.881	-	-	-	-	0.083	1909.86	-	-
URBAN	118+50	22.891	-1.89	-1.25	62	400	-	-	425	2279
URBAN	136+00	23.223	-1.25	2.02	313	500	-	-	425	671
URBAN	144+00	23.374	2.02	0.50	127	600	-	-	425	1011
URBAN	151+52	23.517	0.50	-1.50	168	900	-	-	425	989
URBAN	164+00	23.753	-1.50	0.87	227	400	-	-	425	1089
URBAN	183+50	24.122	0.87	-0.51	115	400	-	-	425	985
URBAN	200+50	24.444	-0.51	-2.47	165	800	-	-	425	951
URBAN	207+00	24.567	-2.47	0.50	285	500	-	-	425	774
URBAN	216+00	24.738	0.50	-1.99	209	1200	-	-	425	1019
URBAN	224+50	24.890	-1.99	1.12	299	450	-	-	425	661
URBAN	225+47	24.917	-	-	-	-	0.083	1909.86	-	-
URBAN	235+00	25.089	1.12	-2.93	340	1650	-	-	425	938
RURAL	1231+48	25.320	-2.93	0.30	584	536	-	-	730	721
RURAL	1236+16	25.409	0.30	-0.30	148	400	-	-	730	1998
RURAL	1243+00	25.538	-0.30	0.00	54	400	-	-	730	4778
RURAL	1268+50	26.021	0.00	2.20	398	400	-	-	730	1422
RURAL	1282+00	26.277	2.20	0.80	346	600	-	-	730	1071
RURAL	1295+63	26.535	-	-	-	-	0.0156	11459	-	-
RURAL	1297+50	26.570	0.80	2.20	253	500	-	-	730	1355
RURAL	1313+50	26.873	2.20	-0.50	667	1300	-	-	730	1019
RURAL	1338+00	27.337	-0.50	-2.00	371	600	-	-	730	1019
RURAL	1347+50	27.517	-2.00	1.00	543	500	-	-	730	760
RURAL	1354+52	27.650	-	-	-	-	0.0156	11459	-	-
RURAL	1367+00	27.887	1.00	0.70	74	400	-	-	730	3797
RURAL	1386+00	28.247	0.70	-0.92	400	800	-	-	730	1066
RURAL	1406+00	28.625	-0.92	1.50	438	400	-	-	730	1021
RURAL	1416+50	28.824	1.50	-1.00	618	1100	-	-	730	974
RURAL	1432+50	29.127	-1.00	1.00	362	400	-	-	730	2400
RURAL	1442+00	29.307	1.00	-0.50	371	800	-	-	730	1119

Horizontal and Vertical Curve Data (continued)

Julian M. Carroll (Purchase) Parkway
Fulton to Calvert City

URBAN/RURAL	STATION	MP	GRADE		VERTICAL LENGTH OF CURVE		HORIZONTAL CURVE		STOPPING SIGHT DISTANCE	
			IN %	OUT %	MINIMUM CRITERIA (FT)	ACTUAL (FT)	e	RADIUS ¹ ACTUAL (FT)	MINIMUM CRITERIA (FT)	ACTUAL (FT)
RURAL	1450+48	29.468	-	-	-	-	0.0156	11459	-	-
RURAL	1466+00	29.762	-0.50	-1.70	296	600	-	-	730	1199
RURAL	1477+00	29.970	-1.70	0.60	416	400	-	-	730	1200
RURAL	1489+00	30.197	0.60	-2.20	692	1200	-	-	730	962
RURAL	1507+79	30.553	-	-	-	-	0.0156	11459	-	-
RURAL	1508+00	30.557	-2.20	-0.75	262	400	-	-	730	1071
RURAL	1522+00	30.822	-0.75	-2.36	397	800	-	-	730	1072
RURAL	1539+00	31.144	-2.36	0.22	467	400	-	-	730	863
RURAL	1555+00	31.447	0.22	-0.36	143	400	-	-	730	2070
RURAL	1565+50	31.646	-0.36	3.00	608	600	-	-	730	751
RURAL	1572+57	31.780	-	-	-	-	0.02	7639	-	-
RURAL	1580+00	31.921	3.00	0.52	613	1000	-	-	730	933
RURAL	1597+00	32.243	0.52	1.34	148	400	-	-	730	1819
RURAL	1606+00	32.413	1.34	-1.32	657	1100	-	-	730	945
RURAL	1644+00	33.132	-1.32	-2.67	334	600	-	-	730	1098
RURAL	1650+35	33.252	-	-	-	-	0.02	7639	-	-
RURAL	1654+67	33.391	-2.67	0.29	536	800	-	-	730	1142
RURAL	1664+50	33.520	0.29	-0.30	146	400	-	-	730	2024
RURAL	1670+00	33.624	-0.30	0.30	109	400	-	-	730	2443
RURAL	1675+90	33.736	0.30	-0.30	148	400	-	-	730	1998
RURAL	1683+50	33.880	-0.30	0.30	109	400	-	-	730	2443
RURAL	1690+50	34.013	0.30	-0.30	148	400	-	-	730	1998
RURAL	1699+89	34.190	-0.30	3.00	597	600	-	-	730	768
Marshall County - MP 34.487										
RURAL	1724+50	34.614	3.00	0.70	568	1000	-	-	730	969
RURAL	1727+02	34.661	-	-	-	-	0.028	5730	-	-
RURAL	1745+00	35.002	0.70	1.05	64	400	-	-	730	4086
RURAL	1768+00	35.438	1.05	-0.50	383	800	-	-	730	1095
RURAL	1815+00	36.328	-0.50	-0.80	73	400	-	-	730	3833
RURAL	1855+00	37.085	-0.80	-1.36	139	400	-	-	730	2123
RURAL	1866+00	37.294	-1.36	0.50	336	400	-	-	730	5293
RURAL	1897+00	37.881	0.50	2.29	324	400	-	-	730	14674
RURAL	1912+50	38.174	2.29	-1.52	940	1700	-	-	730	982
RURAL	1929+05	38.488	-	-	-	-	0.0156	11459	-	-
RURAL	1942+00	38.733	-1.52	2.42	712	800	-	-	730	812
RURAL	1971+50	39.292	2.42	-0.52	726	2100	-	-	730	1242
RURAL	1977+39	39.403	-	-	-	-	0.028	5730	-	-
RURAL	1997+02	39.982	-0.52	0.50	185	1000	-	-	730	3542
RURAL	2011+00	40.247	0.50	1.50	181	600	-	-	730	2209
RURAL	2023+00	40.474	1.50	-0.50	494	1600	-	-	730	1314
RURAL	2035+00	40.701	-0.50	0.50	181	600	-	-	730	2209
RURAL	2053+00	41.042	0.50	-0.50	247	2200	-	-	730	2179
RURAL	2071+79	41.398	-	-	-	-	0.035	4584	-	-
RURAL	2094+00	41.819	-0.50	-3.00	618	1000	-	-	730	929
RURAL	2113+00	42.179	-3.00	-1.86	206	400	-	-	730	1333
RURAL	2126+32	42.431	-	-	-	-	0.028	5730	-	-
RURAL	2135+00	42.595	-1.86	1.50	608	800	-	-	730	959
RURAL	2148+00	42.841	1.50	-3.00	1112	ILLEGIBLE	-	-	730	ILLEGIBLE
RURAL	2161+75	43.102	-3.00	0.00	543	600	-	-	730	880
RURAL	2208+25	43.983	0.00	3.00	543	600	-	-	730	880
RURAL	2232+00	44.432	3.00	1.10	469	800	-	-	730	968
RURAL	2256+50	44.896	-	-	-	-	0.028	5730	-	-
RURAL	2257+00	44.906	1.10	-0.68	440	1000	-	-	730	1106
RURAL	2269+00	45.133	-0.68	0.80	268	800	-	-	730	2000
RURAL	2293+00	45.587	0.80	-2.40	790	2000	-	-	730	1161

Horizontal and Vertical Curve Data (continued)

Julian M. Carroll (Purchase) Parkway
Fulton to Calvert City

URBAN/RURAL	STATION	MP	GRADE		VERTICAL LENGTH OF CURVE		HORIZONTAL CURVE		STOPPING SIGHT DISTANCE	
			IN %	OUT %	MINIMUM CRITERIA (FT)	ACTUAL (FT)	e	RADIUS ¹ ACTUAL (FT)	MINIMUM CRITERIA (FT)	ACTUAL (FT)
RURAL	2322+00	46.137	-2.40	2.20	833	1000	-	-	730	862
RURAL	2337+34	46.427	-	-	-	-	0.055	2865	-	-
RURAL	2340+00	46.478	2.20	0.90	321	800	-	-	730	1230
RURAL	2355+00	46.762	0.90	-0.80	420	800	-	-	730	1035
RURAL	2389+61	47.417	-	-	-	-	0.083	1910	-	-
RURAL	2415+00	47.898	-0.80	2.18	539	600	-	-	730	889
RURAL	2433+00	48.239	2.18	0.50	415	800	-	-	730	1042
RURAL	2447+00	48.504	0.50	-1.60	519	900	-	-	730	964
RURAL	2450+72	48.575	-	-	-	-	0.028	5730	-	-
RURAL	2470+00	48.940	-1.60	2.82	800	800	-	-	730	732
RURAL	2485+00	49.224	2.82	-1.60	1092	1800	-	-	730	937
RURAL	2501+00	49.527	-1.60	1.60	579	800	-	-	730	1021
RURAL	2515+00	49.792	1.60	-1.00	642	1200	-	-	730	998
RURAL	2544+00	50.309	-1.00	-3.00	494	800	-	-	730	940
RURAL	2558+51	50.584	-	-	-	-	ILLEGIBLE	11459	-	-
RURAL	2568+53	50.774	-3.00	0.00	543	800	-	-	730	1120
RURAL	2597+00	51.313	0.00	0.70	127	600	-	-	730	3110

Notes: 1) The minimum horizontal radius of the curve is 1810 feet for rural areas and 758 feet for urban areas.

Interchange Ramp Data
 Julian M. Carroll (Purchase) Parkway and I-24
 Fulton to Eddyville

COUNTY	MP	PLAN YEAR	INTERSECTING ROUTE	EXIT NUMBER	ENTRANCE	EXIT	TYPE	LANE WIDTH	SHOULDER		ROLLED CURB	DIVERGENCE ANGLE ¹	ENTRANCE/EXIT RADIUS (FEET)	ENTRANCE/EXIT RADIUS DESIGN SPEED (MPH) ²	RAMP/ LOOP RADIUS (FEET)	PARALLEL LENGTH MEASURED (FEET)	TAPER LENGTH MEASURED (FEET)	TAPER LENGTH (FEET)	SUPER-ELEVATION
									LT	RT									
Interchanges - Julian M. Carroll (Purchase) Parkway																			
FULTON	0.300	1966	FRONTAGE ROADS A & B	0		A (RAMP "A")	Taper	18	6'-11"	8'-11"	Y	4° 19' 19"	881	50			354	459	0.95
						B (RAMP "B")	Taper	18	6'-11"	8'-11"	Y	-	716	50			409	900	0.1
						C (Ramp "C")	Taper	18	6'-11"	8'-11"	Y	2° 56' 5"	955	50			367	561	0.093
						D (Ramp "D")	Parallel	18	6'-11"	8'-11"	Y	-	881	50		228	366	900	0.095
FULTON	1.424	1966	US 51	1		A (Ramp "SW")	Taper	18	6'-11"	8'-11"	Y	3° 13' 36"	1206	50			246	400	0.08
						B (Ramp "SE")	Parallel	18	6'-11"	8'-11"	Y	-	764	49		277	287	900	0.098
						C (Ramp "NE")	Taper	18	6'-11"	8'-11"	Y	4° 10' 52"	1432	49			370	459	0.07
						D (Ramp "NW")	Taper	18	6'-11"	8'-11"	Y	-	2122	51	1907		370	900	0.054
FULTON	2.478	1966	KY 307	2		A (Ramp "B")	Taper	18	6'-11"	8'-11"	Y	6° 26' 53"	1138				165	459	Unknown
						B (RAMP "D")	Parallel	18	6'-11"	8'-11"	Y	-	9291	63	3626	202	610	900	0.027
						C (Ramp "C")	Taper	18	6'-11"	8'-11"	Y	5° 50' 59"	2190	61	1432		184	480	0.07
						D (RAMP "A")	Parallel	18	6'-11"	8'-11"	Y	-	1637	49		358	584	900	0.063
Graves	13.653	?	KY339	14		A (Ramp "D")	Loop	18	6'-11"	8'-11"	Y	6° 38' 12"	150		2083/251		N/A		Variable
						B (Ramp "C")	Loop	18	6'-11"	8'-11"	Y	-	150		1557/130		N/A		Variable
						C (Ramp "A")	Loop	18	6'-11"	8'-11"	Y	9° 54' 42"	150		1432/237		N/A		Variable
						D (RAMP "B")	Loop	18	6'-11"	8'-11"	Y	-	150		477/235		N/A		Variable
Graves	21.285	1966	US 45	21		A (RAMP "D")	Taper	18	6'-11"	8'-11"	Y	4° 0' 44"			500		845	459	0.097
						C (RAMP "C")	Taper	18	6'-11"	8'-11"	Y	-			1146		190	459	0.083
						D (RAMP "B")	Loop	18	6'-11"	8'-11"	Y	-			294		250	459	0.1
Graves	22.267	1961	KY 80	22		A (RAMP 1)	N/A	16	6'	6'	N	-		N/A			N/A		Unknown
						B (RAMP 4)	Taper	16	6'	6'	N	-	716				330	400 ³	Unknown
						C (RAMP 3)	Taper	16	6'	6'	N	3° 7' 40"	716				315	480 ³	Unknown
						D (RAMP 2)	Taper	16	6'	6'	N	-	716				330	480 ³	Unknown
Graves	23.701	2000	KY 121	24		A (RAMP "A")	Taper	18	6'	6'	N	4° 12' 27"	984	50 ⁴			215	520 ³	0.076
						B (RAMP "C")	Parallel	18	6'	6'	N	-	984	50 ⁴	984	925	415	1050 ³	0.076
						C (RAMP "D")	Taper	18	6'	6'	N	3° 39' 21"	984	50 ⁴			275	520 ³	0.076
						D (RAMP "B")	Taper	18	6'	6'	N	-	984	50 ⁴	984		1250	1050 ³	0.076
Graves	24.726	1966	US 45	25		A (RAMP "C")	Taper	18	6'-11"	8'-11"	Y	4° 35' 6"	TAPER		716		200	459	Variable
						B (RAMP "D")	Parallel	18	6'-11"	8'-11"	Y	-	714	51		400	400	940 ³	0.1
						C (RAMP "B")	Taper	18	6'-11"	8'-11"	Y	-	Tangent				245	450 ³	-
						D (RAMP "A")	Taper	18	6'-11"	8'-11"	Y	-	725	51			585	900 ³	0.1
Graves	27.461	1966/ 1978(?)	KY 131	27		A (Ramp "SW")	Taper	15	6'	8'	N	3° 51' 39"	764	32			206	450 ³	0.06
						B (Ramp "SE")	Parallel	18	6'-11"	8'-11"	Y	-	716	51		375	656	900	0.1
						C (Ramp "NE")	Taper	18	6'-11"	8'-11"	Y	-	2865	47			294	458	0.036
						D (Ramp "NW")	Parallel	15	6'	8'	N	-	758	32		393	478	900	0.06

Interchange Ramp Data (continued)
Julian M. Carroll (Purchase) Parkway and I-24
Fulton to Eddyville

COUNTY	MP	PLAN YEAR	INTERSECTING ROUTE	EXIT NUMBER	ENTRANCE	EXIT	TYPE	LANE WIDTH	SHOULDER		ROLLED CURB	DIVERGENCE ANGLE ¹	ENTRANCE/EXIT RADIUS (FEET)	ENTRANCE/EXIT RADIUS DESIGN SPEED (MPH)	RAMP/LOOP RADIUS (FEET)	PARALLEL LENGTH MEASURED (FEET)	TAPER LENGTH MEASURED (FEET)	TAPER LENGTH (FEET)	SUPER-ELEVATION		
									LT	RT											
Marshall	40.809	1998	US 641	41	A (Ramp "B")	Taper	15	6'	10'	N	3° 11' 42"	759	52				233	530 ³	0.1		
					B (Ramp "A")	Parallel	18			N	-	819	50		243	811	675/300	0.098			
					C (Ramp "D")	Taper	18			N	6° 27' 11"	764	50	637	230	440	0.099/0.1				
					D (Loop "D")	Loop	15	6'	10'	N	-	4530		549/549/4523	360	940	900/295	??/0.1/?			
Marshall	42.555	1966	KY 348	43	A (Ramp "D")	Loop	18	6'-11"	8'-11"	Y	3° 57' 15"	135		230		0		Unknown			
					B (RAMP "B")	Loop	18	6'-11"	8'-11"	Y	-	135		230		0	Unknown				
					C (Ramp "A")	Loop	18	6'-11"	8'-11"	Y	3° 49' 12"	135		230		0	Unknown				
					D (Ramp "C")	Loop	18	6'-11"	8'-11"	Y	-	135		230		0	Unknown				
Marshall	46.942	1966	US 68	47	A (Ramp "B")	Taper	18	6'-11"	8'-11"	Y	4° 49' 19"	1910	74			246	459	0.1			
					B (RAMP "D")	Parallel	18			N		no drawing found			322	502	no dwg				
					C (Ramp "C")	Taper	18			N	4° 54' 15"				236						
Marshall	51.398	1966	I-24	52	A1 (Ramp "C")	Taper	18	6'-11"	8'-11"	Y		716	51	716		244	459	0.1			
					A2 (Ramp "H")	Loop	18	6'-11"	8'-11"	Y		716	51	358/230/358/716/1432		0		0.1			
					B1 (Ramp "G")	Parallel	18	6'-11"	8'-11"	Y		716	51	716	400	570		0.1			
					B2 (Ramp "F")	Loop	18	6'-11"	8'-11"	Y		716	51	1432/358/230/358		0		0.1			
					C1 (Ramp "E")	Taper	18	6'-11"	8'-11"	Y		716	51	716		343	645	0.1			
					C2 (Ramp "B")	Loop	18	6'-11"	8'-11"	Y		716	51	356/422/358/716		0		0.1			
					D1 (Ramp "A")	Parallel	18	6'-11"	8'-11"	Y		716	51	716	355	695	900	0.1			
					D2 (Ramp "D")	Loop	18	6'-11"	8'-11"	Y		716	51	358/230/358/716		0		0.1			
Interchanges - I-24																					
Marshall	-	-		25	A1	Taper											240				
					A2	Loop												0			
					B1	Parallel												390	420		
					B2	Loop													0		
					C1	Taper													240		
					C2	Loop													0		
					D1	Parallel													325	590	
Marshall	-	-		27	A	Taper											240				
					B	Parallel											270	520			
					C	Taper												200			
					D	Parallel												365	505		
Livingston	-	-		31	A	Taper											260				
					B	Parallel												220	510		
					C	Taper												290			
Lyon	-	-		40	D	Parallel											245	775			
					A	Taper												245			
					B	Parallel												285	490		
Lyon	-	-		42	C	Taper											215				
					D	Parallel												450	415		
					A	Taper													240		
Lyon	-	-		42	B	Parallel											260	550			
					C	Taper													240		
					D	Parallel													310	330	

¹ Divergence angle not provided in as built plans. Measurement from aerial drawing.

² Design Speed calculated from current AASHTO 10% max superlevation table.

³ Measured from as built plans.

⁴ Design Speed calculated from current AASHTO 8% max superlevation table.

Interchange Ramp Data
 Julian M. Carroll (Purchase) Parkway
 Fulton to Calvert City

INTERCHANGE	EXIT NUMBER	MP	DWG RAMP	TYPE	SPEED ¹	GRADE		VERTICAL LENGTH OF CURVE		STOPPING SIGHT DISTANCE	
						IN %	OUT %	MINIMUM CRITERIA (FT) ¹	ACTUAL (FT)	MINIMUM CRITERIA (FT) ¹	ACTUAL (FT)
Fulton County											
Frontage Road A; Frontage Road B	0	0.300	RAMP A	RAMP	35	-0.80	-0.09	35	200	250	1092
			RAMP B	RAMP	35	-0.09	0.38	23	200	250	1590
			RAMP C	RAMP	35	-2.88	-1.46	70	300	250	840
					35	-1.46	0.69	105	900	250	2931
			RAMP D	RAMP	35	-1.40	0.53	94	200	250	2243
					35	0.53	-0.50	30	200	250	1153
35	-0.50	0.50	49	200	250	800					
US 51 (Profile information almost entirely illegible. Values represent best guesses.)	1	1.424	RAMP NW	RAMP	35	0.70	-3.30	116	200	250	370
					35	-3.30	2.36	277	300	250	265
			RAMP NE	RAMP	35	-1.01	2.08	151	150	250	323
					35	2.08	-2.43	131	200	250	339
			RAMP SW	RAMP	35	-0.29	2.28	126	150	250	481
					35	2.28	-1.54	111	200	250	382
			RAMP SE	RAMP	35	2.00	-3.61	163	300	250	342
					35	-3.61	1.63	257	250	250	245
KY 307	2	2.478	RAMP A	RAMP	35	2.65	-1.42	118	200	250	365
					35	-1.42	1.80	158	200	250	355
			RAMP B	RAMP	35	-1.00	2.52	172	200	250	312
					35	2.52	-0.75	95	200	250	430
			RAMP C	RAMP	35	Varies	4.48	-	150	250	-
					35	4.48	-4.05	247	400	250	318
			RAMP D	RAMP	35	0.55	-4.57	148	300	250	361
					35	-4.57	-0.86	182	300	250	386
Graves County											
KY 339	14	13.65	RAMP A	LOOP	25	Illegible	1.84	-	-	-	-
					25	1.84	-1.00	34	200	155	480
			RAMP B	LOOP	25	-5.35	0.60	155	300	155	255
					25	0.60	2.62	53	200	155	1489
			RAMP C	LOOP	25	1.00	-2.04	36	200	155	455
					25	-2.04	-0.51	40	200	155	553
			RAMP D	LOOP	25	-1.04	2.66	96	300	155	387
					25	2.66	1.00	20	200	155	750
KY 80	22	22.267	RAMP 1	RAMP	35	0.50	4.00	172	200	250	314
					35	4.00	-2.30	183	150	250	246
			RAMP 2	RAMP	35	2.82	-4.00	198	200	250	258
					35	-4.00	-0.50	172	200	250	314
			RAMP 3	RAMP	35	0.50	3.60	152	200	250	378
					35	3.60	-2.56	179	200	250	275
			RAMP 4	RAMP	35	3.13	-3.40	189	200	250	265
					35	-3.40	-0.50	142	200	250	426
KY 121	24	24.726	RAMP A	RAMP	35	-1.00	1.76	135	328	250	645
					35	1.76	0.49	37	262	250	975
			RAMP B	RAMP	35	-1.45	0.55	98	328	250	2095
			RAMP C	RAMP	35	-2.17	2.00	204	426	250	450
RAMP D	RAMP	35	1.54	0.49	31	196	250	1118			
US 45	25	25.068	RAMP A	RAMP	35	0.57	3.66	152	250	250	437
					35	3.66	0.63	88	300	250	506
			RAMP B	RAMP	35	0.22	-4.35	132	350	250	411
					35	-4.35	-1.44	143	200	250	422
			RAMP C	RAMP	35	-2.55	-3.63	31	200	250	1100
					35	-3.63	0.82	218	300	250	321
			RAMP D	RAMP	35	-1.79	2.33	202	300	250	346
					35	2.33	-0.78	90	300	250	497

Interchange Ramp Data (continued)
 Julian M. Carroll (Purchase) Parkway
 Fulton to Calvert City

INTERCHANGE	EXIT NUMBER	MP	DWG RAMP	TYPE	SPEED ¹	GRADE		VERTICAL LENGTH OF CURVE		STOPPING SIGHT DISTANCE				
						IN %	OUT %	MINIMUM CRITERIA (FT) ¹	ACTUAL (FT)	MINIMUM CRITERIA (FT) ¹	ACTUAL (FT)			
KY 131	27	27.461	RAMP NE	RAMP	35	-1.32	3.69	245	350	250	330			
					35	3.69	0.50	92	300	250	489			
			RAMP SE	RAMP	35	-0.25	-3.68	99	300	250	465			
					35	-3.68	1.32	245	400	250	367			
			RAMP NW	RAMP	35	-0.91	0.30	59	300	250	972			
					35	0.30	0.60	15	200	250	2443			
			RAMP SW	RAMP	35	-1.30	2.26	174	350	250	455			
					35	2.26	0.80	42	300	250	889			
			Marshall County											
			US 641	41	40.809	RAMP A	RAMP	35	1.61	-3.37	144	650	250	531
35	-3.37	0.50						190	400	250	459			
RAMP B	RAMP	35				0.33	3.70	165	400	250	539			
		35				3.70	-2.06	167	800	250	547			
RAMP D	RAMP	35				-2.06	-0.27	88	300	250	10428			
		35				0.22	-2.66	84	400	250	574			
RAMP D	RAMP	35				-2.66	6.00	425	1000	250	497			
		35				6.00	2.61	98	300	250	468			
LOOP D	LOOP	25				-2.37	-6.00	44	280	155	437			
		25				-6.00	1.95	207	800	155	443			
25	1.95	-0.24	26	350	155	668								
KY 348	43	42.555	RAMP A	LOOP	25	0.32	2.21	49	200	155	2779			
					25	2.21	1.56	8	200	155	1760			
			RAMP C	LOOP	25	-1.55	-2.99	17	200	155	849			
					25	-2.99	1.18	108	200	155	255			
			RAMP B	LOOP	25	-1.56	-3.66	25	200	155	614			
					25	-3.66	-0.54	81	200	155	374			
			RAMP D	LOOP	25	-1.18	4.93	159	200	155	185			
					25	4.93	1.56	40	200	155	420			
			US 68	47	46.942	RAMP A	RAMP	35	-1.89	1.29	156	200	250	362
								35	-0.40	2.03	119	200	250	648
RAMP B	RAMP	35				2.03	1.56	14	200	250	2376			
		35				No drawing found								
RAMP C	RAMP	35				No drawing found								
RAMP D	RAMP	35				No drawing found								
I-24	52	51.398	RAMP A	RAMP	35	-0.84	0.80	80	400	250	956			
					35	0.80	-0.99	52	600	250	903			
			RAMP B	LOOP	35	-0.99	0.40	68	400	250	1109			
					25	-2.36	1.28	95	400	250	492			
			RAMP C	RAMP	25	1.28	4.48	83	400	250	578			
					35	-0.86	0.74	78	200	250	532			
			RAMP C	RAMP	35	0.74	3.00	111	400	250	1278			
					35	3.00	0.72	66	300	250	623			
			RAMP D	LOOP	25	-1.20	-3.06	22	300	250	730			
					25	-3.06	2.38	141	300	250	274			
			RAMP E	RAMP	35	-1.65	-0.79	42	300	250	1326			
					35	-0.79	1.33	104	300	250	1400			
			RAMP F	LOOP	25	-4.08	-0.51	93	400	250	502			
					25	-0.51	1.16	43	400	250	940			
			RAMP H	LOOP	25	-1.70	2.42	107	400	250	432			
					25	2.42	0.80	19	400	250	867			
			RAMP G	RAMP	35	0.80	-3.20	116	1000	250	735			
					35	-3.20	Illegible	-	400	250	-			

¹ Assumed minimum design speed

FREEWAY WEAVING WORKSHEET

General Information		Site Information	
Analyst	Purchase Parkway / KY 80	Freeway/Dir of Travel	Purchase Parkway
Agency/Company	Palmer Engineering	Weaving Seg Location	KY 80 and Purchase Parkway
Date Performed	11/17/2010	Jurisdiction	
Analysis Time Period		Analysis Year	2040

Inputs			
Freeway free-flow speed, S_{FF} (mi/h)	50	Weaving type	A
Weaving number of lanes, N	3	Volume ratio, VR	0.70
Weaving seg length, L (ft)	1115	Weaving ratio, R	0.27
Terrain	Level		

Conversions to pc/h Under Base Conditions									
(pc/h)	V	PHF	Truck %	RV %	E_T	E_R	f_{HV}	f_p	v
V_{o1}	367	0.90	25	0	1.5	1.2	0.889	1.00	458
V_{o2}	0	0.90	0	0	1.5	1.2	1.000	1.00	0
V_{w1}	229	0.90	25	0	1.5	1.2	0.889	1.00	286
V_{w2}	610	0.90	25	0	1.5	1.2	0.889	1.00	762
V_w				1048	V_{nw}				458
V									1506

Weaving and Non-Weaving Speeds				
	Unconstrained		Constrained	
	Weaving (i = w)	Non-Weaving (i = nw)	Weaving (i = w)	Non-Weaving (= nw)
a (Exhibit 24-6)			0.35	0.0020
b (Exhibit 24-6)			2.20	4.00
c (Exhibit 24-6)			0.97	1.30
d (Exhibit 24-6)			0.80	0.75
Weaving intensity factor, W_i			1.70	0.28
Weaving and non-weaving speeds, S_i (mi/h)			29.81	46.30
Number of lanes required for unconstrained operation, N_w			1.89	
Maximum number of lanes, N_w (max)			1.40	
<input type="checkbox"/> If $N_w < N_w(\max)$ unconstrained operation <input checked="" type="checkbox"/> if $N_w > N_w(\max)$ constrained operation				

Weaving Segment Speed, Density, Level of Service, and Capacity	
Weaving segment speed, S (mi/h)	33.43
Weaving segment density, D (pc/mi/ln)	15.02
Level of service, LOS	B
Capacity of base condition, c_b (pc/h)	4249
Capacity as a 15-minute flow rate, c (veh/h)	3777
Capacity as a full-hour volume, c_h (veh/h)	3399

- Notes**
- a. Weaving segments longer than 2500 ft. are treated as isolated merge and diverge areas using the procedures of Chapter 25, "Ramps and Ramp Junctions".
 - b. Capacity constrained by basic freeway capacity.
 - c. Capacity occurs under constrained operating conditions.
 - d. Three-lane Type A segments do not operate well at volume ratios greater than 0.45. Poor operations and some local queuing are expected in such cases.
 - e. Four-lane Type A segments do not operate well at volume ratios greater than 0.35. Poor operations and some local queuing are expected in such cases.
 - f. Capacity constrained by maximum allowable weaving flow rate: 2,800 pc/h (Type A), 4,000 (Type B), 3,500 (Type C).
 - g. Five-lane Type A segments do not operate well at volume ratios greater than 0.20. Poor operations and some local queuing are expected in such cases.
 - h. Type B weaving segments do not operate well at volume ratios greater than 0.80. Poor operations and some local queuing are expected in such cases.
 - i. Type C weaving segments do not operate well at volume ratios greater than 0.50. Poor operations and some local queuing are expected in such cases.

Appendix G. Project Meeting Minutes

MEETING REPORT
Kick Off Meeting
I-69 Strategic Planning Study – Fulton to Eddyville
MAY 26, 2010

A Project *“Kick-Off”* Meeting was conducted on May 26, 2010 for this project at the District 1 Office in Paducah, Kentucky.

Attendees were:

Tim Choate	KYTC District 1	Tim.choate@ky.gov
Bill Gulick	KYTC – Central Office	Bill.gulick@ky.gov
Ted Merryman	KYTC – Central Office	Edward.merryman@ky.gov
David Martin	KYTC – Central Office	Charles.martin@ky.gov
Steve Ross	KYTC – Central Office	Steve.ross@ky.gov
Jill Asher	KYTC – Central Office	Jill.asher@ky.gov
Tom Hines	KYTC District 1	Thomas.hines@ky.gov
Chris Kuntz	KYTC District 1	Chris.kuntz@ky.gov
Randy Williams	KYTC District 1	Randy.williams@ky.gov
Blake Beyer	KYTC – Environmental	Blake.beyer@ky.gov
Christa Turner	KYTC – Environmental	Christa.turner@ky.gov
Mike McGregor	KYTC – TEBM	Mike.mcgregor@ky.gov
Bryan Black	KYTC District 1	Bryan.black@ky.gov
Michael Oliver	KYTC District 1	Michael.oliver@ky.gov
Susan Oatman	KYTC District 1	Susan.oatman@ky.gov
Kyle Poat	KYTC District 1	Kyle.poat@ky.gov
David Isley	BLA	Disley@blainc.com
Lee Klieman	BLA	Lklieman@blainc.com
Gary Sharpe	Palmer Engineering	Gsharp@palmernet.com
Will Conkin	Palmer Engineering	Wconkin@palmernet.com

Following introductions, Tim Choate provided a brief overview of the project. Mr. Choate noted that this *“Kick-Off”* Meeting followed an earlier *“Pre-Kick-Off”* Meeting held April 29, 2010 with Tim Choate and Ted Merryman. The earlier meeting was held to facilitate the consultant getting started with initial evaluations of existing conditions.

Following opening remarks by Mr. Choate, Gary Sharpe summarized discussions from the *“Pre-Kick-Off”* Meeting held on April 29, 2010 at the District 1 Office. The meeting notes from this meeting are attached for reference (Attachment A) and resulted in the additional discussion points.

Key References for Applicable Geometric and Engineering Criteria:

- AASHTO Policy on Geometric Design of Highways and Streets, 2004 Edition
- AASHTO Policy on Design Standards Interstate Standards, 2005
- AASHTO Roadside Design Guide, 2006

Other reference sources will be the study reports for Section of Independent Utility No. 5 from Eddyville to Henderson, the various Corridor 18 Study Reports that may have application to this project, and the Division of Highway Design Manual, current edition.

The negotiated scope of services was used as a guide for discussions. In general, it was noted that work on the existing I 24 segment of the corridor would involve a more reduced scope of services. More specifically, for purposes of this study, the assessment of existing conditions on I 24 will be limited to the following:

- Existing vertical clearances
- Existing ramp taper lengths
- Crash history analyses
- Level of Service (LOS) calculations

In regard to Level of Service Calculations, it was noted that Level of Service is a matter of choice for the highway designer and is not a strict guideline for compliance in meeting requirements for designation of a route as an interstate highway. Agency policies for Level of Service may be a consideration for development of future improvement concepts. Thus Level of Service will be determined for roadway segments within the corridor and will be reported but will not be a consideration for developing recommendations for this study.

The extent that safety hardware and more specifically guardrail end treatments meet current criteria will be evaluated for this project. The consultant was directed to identify any second generation or older guardrail end treatments that do not meet current standards. Length of need will not be evaluated except for locations identified with sub-standard guardrail end treatments. Where substandard guardrail end treatments are identified, an estimate of length of need meeting current criteria will be developed and included in recommended improvement scenarios.

It was noted that guardrail end treatments on I 24 between MP 27 and 31 will be updated to current standards as a part of a pavement rehabilitation project during the summer 2010.

Earthen mounds used for pier protection in the median were discussed. It was noted that depending upon the width of median and side slopes, these may not be consistent with criteria in the AASHTO Roadside Design Guide, 2006 edition. District 1 staff noted that where the pier footings were below the elevation of the median, these could be removed and had been removed at some locations during earlier rehabilitation projects. The consultant was directed to review as-built structure plans and to validate locations in the field where modifications to existing pier protection may be needed.

Traffic forecasting assumptions were discussed. After discussion, it was ultimately decided that the annual growth rates for traffic analyses used for this segment of I 69 should be similar to those used with the previously completed section from Eddyville to Henderson. For the study from Eddyville to Henderson, the following parameters were used:

- Average Annual Growth Rates Without I 69: 1.7% to 2.1%
- Average Annual Growth Rates With I 69 & I 66 (Ford Parkway): 3.2% to 3.7%
- Average Annual Growth Rates with I 69 (Breathitt Parkway) 2.2% to 2.3%

Based on this information, the consultant was directed to use a 2% annual growth rate for the corridor without I 69. It can be seen from the above information that the relative increase in annual growth rate from the Eddyville to Henderson Study is 0.5% to 0.6% for the segments of the study that did not also include I 66. Thus, the *consultant recommends (on the basis of the adjacent section) that an annual growth rate of 2.5% for the corridor with an I 69 designation be used for this study.*

Treatment of roadside signs was discussed. The consultant was advised during the assessment of existing conditions that roadside signs that (1) were not shielded by guardrail, and (2) did not include *break-away posts* should be identified and addressed in the report. Signs that are obviously outside the clear zone should be noted as such.

The importance of identifying substandard vertical clearances was discussed as a critical aspect for the report and an ultimate designation of the corridor as a segment of I 69. The consultant advised that initial screening for substandard vertical clearances will be done using vertical clearance maps provided by the district, as-built plans, plans from more recent pavement rehabilitation projects, and data from pavement management records. The consultant concurred that vertical clearances will be verified in the field. Ted Merryman provided the consultant with a listing of structures that appeared to be less than the minimum 16.0 feet required for interstate designation.

Mr. Merryman also briefed the group on the status of recent meetings with the FHWA concerning concepts for upgrading segments of the Wendell H. Ford Western Kentucky Parkway and Edward T. Breathitt Pennyryle Parkway (SIU 5 between Eddyville and Henderson) to meet interstate standards. Mr. Merryman advised that many of the concepts and agreements evolving from these discussions for SIU 5 were likely to have application for this segment (SIU 6 Fulton to Eddyville).

Crashworthy bridge railing was discussed. The consultant was advised that substandard bridge railing not meeting NCHRP standards for crashworthy bridge railing should be replaced or upgraded to meet current standards. In situations where shoulder widths do not meet interstate criteria, shoulders should be widened to meet current criteria and bridge railing installed that meets interstate criteria. In situations where the existing shoulder width satisfies current standards for interstate routes but the bridge railing is substandard, bridge railings should be reconstructed or modified to meet current interstate standards. Discussions for modifying bridge railing included (1) removal of the existing railing and reconstruction with a bridge railing meeting current criteria, (2) adding either a constant slope wall or other approved shape wall on top of the existing curbs (if curb widths are sufficient), or (3) securely fastening thrie-beam guardrail to the existing bridge railing. The consultant was advised that the assessment of existing conditions would include identifying all locations with substandard bridge railing and substandard shoulder widths. It was further agreed that the consultant would work with Division of Highway Design staff to determine a "reasonable cost" for modifying bridge railing to meet current

interstate criteria and would use this as a basis for inclusion in cost estimates for needed improvements to meet interstate criteria.

Paved ditched in the median was discussed. It was noted that paved ditch in the median should not have an effect on potential designation as an interstate route unless median and ditch slopes were outside allowable criteria per the AASHTO Roadside Design Manual. The extent of pavement ditches in the median will be discussed in the report but will only be addressed recommendations if re-grading of the median is needed to meet interstate criteria.

Pier protection and crash attenuators for existing bridges were discussed. Crash attenuators that do not meet current criteria will be identified and addressed in recommendations for improvement scenarios. Of particular significance are those locations where bridge piers in the median are protected by earthen mounds. As-built bridge plans will be reviewed to determine the location of pier footings. Median slopes and distances from the driving lanes to the piers will be evaluated for compliance with the AASHTO Roadside Design Guide. Improvement scenarios for locations not meeting Roadside Design Guide criteria will be addressed in the report and recommendations.

Crash history analyses were discussed. Crash history data will be collected for the 2005-2009 period. Crash analysis will be conducted utilizing the Kentucky Transportation Center's Analysis of Traffic Accident Data in Kentucky methodology. Fatal crashes will be distinguished in the crash analysis. The consultant was requested to evaluate crash history data in combination with non-compliant design features to determine if there is a direct relationship between crash history and non-compliant design features.

During contract negotiations, it was requested that the format for reporting follow a similar format to the earlier study completed for SIU 5 between Eddyville and Henderson. The consultant requested and received the "Project Development Analysis Tool and Users Guide" used with SIU 5 Study and will use during preparation of the report for SIU 6 from Fulton to Eddyville.

Tim Choate led a discussion with the group concerning the section of the project involving the Mayfield Bypass. Mr. Choate distributed Attachment C and discussed the noted items in the context of a review of conditions observed during a recent visit to the site. The following summarizes the results of these discussions:

It was agreed that the items identified in the handout were valid concerns and should be addressed in some context. It was agreed that the Mayfield Bypass should be evaluated on the basis of urban interstate standards. It was specifically noted that since this project did not involve adding capacity, that noise walls would not be required. Finally, it was agreed that roll curbs should be eliminated for all ramps and mainline situations but could be left in place for cross-roads.

The meeting concluded with a brief discussion of the proposed public Meeting for this project. It was agreed that the location of the public meeting would be in the vicinity of Mayfield, Kentucky. It is anticipated that the public meeting will be held in mid October. District 1 will make arrangements for the location, date, and time for the meeting. It also

was discussed that a meeting of elected officials whose districts included the project corridor also could be scheduled the same day of the meeting.

Prepared By: Will Conkin, PE
Gary W. Sharpe, PE, PLS

MEETING NOTES

Project: I-69 (Purchase Parkway/I-24) Strategic Planning Study

Attendees: Tim Choate, KYTC Project Manager
Ted Merryman, KYTC I 69 Coordinator
Lee Klieman, Bernardin, Lochmueller & Associates
Will Conkin, Palmer Engineering
Gary W. Sharpe, Palmer Engineering

Purpose: Pre-kickoff meeting—getting started

Location: District 1 Office, Paducah

Meeting Date: April 29, 2010

The following items were discussed:

- A formalized Kickoff Meeting will be scheduled – Tim Choate will coordinate
- Key References:
 - 2005 Policy on Design Standards Interstate System
 - The 2004 AASHTO Policy on Geometric Design of Highways and Streets
 - 2006 AASHTO Roadside Design Guide
- Because of scope reductions, only the following work will be done on I 24:
 - Crash Analyses
 - Level of Service (LOS) Analyses
 - ADT
 - Ramp Taper Lengths
 - Mainline Vertical Clearances
- The following were noted as information to be included in the Assessment of Existing Conditions for comparison with current AASHTO Standards.
 - Vertical Clearances
 - Ramp Taper lengths
 - Bridge Widths including shoulder and brush block widths
- Information from the Corridor 18 studies will be reviewed for relevant information such as traffic forecast assumptions, truck percentages and annual growth rates, etc that were used
- Crash histories will be obtained from the beginning of the project to the I-24 Interchange with Western Kentucky Parkway
- The weaving section for the intersection of the Purchase Parkway and I-24 was noted as a potential concern
- Paved ditches with headwalls within the clear zone were discussed in the context of potential repairs needed for future rehabilitation projects
- The sign inventory was requested by Palmer Engineering and was provided by District 1

- End Treatments not meeting current standards should be identified
- Cost estimates will be included as part of the study
- Identify potential problems for interchanges within the corridor
- HIS may be another source of data in addition to As-built plans
- The Kentucky State Police website will be the source of crash data
- Potential access for the Graves Industrial Park should be mentioned in the final report
- For comparison with AASHTO standards, the Mayfield Bypass segment will be treated as an Urban interstate
- Questions and requests for information should be made through Tim Choate and copied to appropriate persons
- The Project Team will wear safety vests while collecting data in the field.
- KYTC will provide information on Pavement Rehabilitation contracts
- KYTC provided the maps of Bridge Vertical Clearances within the project area – Vertical clearances that are near 16 feet +/- will be validated
- Cross slopes for the Mayfield Bypass will be reviewed

Prepared by: Will Conkin

SIU 6

Vertical Clearance- Check

Approx.
MP 2.5

MP 4.1

MP 8.3

MP15.2(low)

MP16.5

MP17.7

MP22.2(low)

MP37.9

MP46.95

Check Mainline Ramp Tapers for AASHTO standards



Determine whether any correlation exists between noncompliant features and crash history.

Bridge Curbs

Guardrail End Treatments

HANDOUT PROVIDED BY TIM CHOATE

1. The need for auxiliary lanes Northbound and Southbound between exit 24 and exit 25.
2. Treatment of median. Barrier wall or cable barrier. High wall preferred due to curvature.
3. The need for auxiliary lanes between KY 80 exit and Trumpet Conflict between weaves and southbound departures. Also future extension of Pky. to southside of town 1-181.50 and 181.40
4. Can existing Trumpet function as system interchange without modifications
5. The need for 2-lane on-ramps and departure ramps in Trumpet
6. Elimination of roll curbs
7. Is noise walls required
8. Clearance at KY 80 overpass. Can middle span be modified with box beams to get 16 feet. Also widen bridge for sight distance with new barriers similar to what was done at Exit 27 (KY 131)
9. Can Additional overhead signage help with this system?

MEETING REPORT
I-69 Strategic Planning Study – Fulton to Eddyville
June 8, 2010

A Pre-Interdisciplinary Team Meeting for this project was held on June 8, 2011 at the Transportation Cabinet Central Office in Frankfort, Kentucky. The purpose of this meeting was to identify preliminary issues and concerns regarding the draft project study report prior to holding an Interdisciplinary Team Meeting for formal review of the draft report for this study. Initial draft copies of the study report were distributed to a small group (including attendees) for initial comments regarding the format and presentation of information included in the report.

Attendees were:

Ted Merryman	KYTC – Central Office	Edward.merryman@ky.gov
David Martin	KYTC – Central Office	Charles.martin@ky.gov
Keith Damron	KYTC – Central Office	Keith.damron@ky.gov
Steve Ross	KYTC – Central Office	Steve.ross@ky.gov
Jill Asher	KYTC – Central Office	Jill.asher@ky.gov
David Lindeman	Palmer Engineering	Dlindeman@palmernet.com
Gary Sharpe	Palmer Engineering	Gsharp@palmernet.com
Will Conkin	Palmer Engineering	Wconkin@palmernet.com

Attendees via *Video Teleconference* from the District 1 Office in Paducah were:

Jim LeFevre	KYTC – Central Office	James.lefevre@ky.gov
Mike McGregor	KYTC – District 1	Mike.mcgregor@ky.gov
Jessica Herring	KYTC – District 1	Jessica.herring@ky.gov

Gary Sharpe opened the meeting with a brief discussion of the status of the project and more specifically summarized information included in the draft report.

Ted Merryman, State Highway Engineer's Office and I-69 Coordinator, discussed the current status of a draft agreement between KYTC and FHWA for design variances and design exceptions associated with designating Section of Independent Utility (SIU) 5 as I-69. SIU 5 includes a segment of the Western Kentucky Parkway from I-24 near Eddyville and portions of the Pennyriple Parkway from the Western Kentucky Parkway to Henderson. Mr. Merryman further noted that initial emphasis for designation of I-69 in SIU 5 would be the 38 mile segment of the Western Kentucky Parkway from I-24 to the Pennyriple Parkway.

It was further discussed that it was anticipated that a similar agreement would ultimately be developed for the section of I-69 covered by this study – SIU 6 from Fulton at the Tennessee State Line along the Purchase Parkway to I 24 near Calvert City and then with I 24 to the Western Kentucky Parkway (beginning of SIU 5). It was further noted that since there are many similar issues and considerations for design variances and design exceptions among SIU 5 and SIU 6, some aspects of the draft agreement with the FHWA also may have application for SIU 6. An updated copy of the *Draft Interstate 69*

Agreement Between Commonwealth of Kentucky Transportation Cabinet and Federal Highway Administration was provided to the consultant for their information in finalizing the draft study report for SIU 6.

It was further noted in the meeting that it was the KYTC's intent to request design exceptions and design variances for design elements not meeting current interstate standards where there were no indications of crash histories with a critical rate factor exceeding 1.0. Mr. Merryman emphasized in his comments that if there were crash history data associated with any substandard roadway or structure element, these should be identified and an improvement strategy should be recommended for addressing the roadway or structure element in question. It was further emphasized that design exceptions and design variances could be treated as either permanent or temporary, depending on the specific conditions.

In the draft study report, a crash history analysis has been provided for roadway and structures deficiencies that do not meet current interstate standards. For example, a crash history analysis will be presented to describe crash history data associated with the narrow mainline bridges on the Purchase Parkway where mainline bridge width is not consistent with roadway and shoulder approach width.

Discussions continued regarding acceleration and deceleration taper lengths commonly used by the KYTC and presented in the Division of Highway Design Manual as opposed to minimum acceleration and deceleration taper lengths per AASHTO standards. It was agreed that determination of whether or not a ramp met criteria would be in accordance with AASHTO standards.

There also was discussion concerning parameters for developing cost estimates. It was agreed that cost estimates for spot improvements at interchanges would be developed on the basis of spot improvements (with design variances and design exceptions) at specific locations but would be summarized for the entire interchange so as to allow for a direct comparison of spot improvements as compared to a fully reconstructed interchange. Cost estimates will be developed for (1) spot improvement concepts with design exceptions and variances as appropriate and (2) more extensive improvement strategies without design exceptions and variances.

Bridge pier protection that does not meet interstate standards will be recommended for improvement. Currently some overpass bridge piers have earthen mound protection. An estimate will be provided in the report for improving these locations.

Jill Asher will coordinate with FHWA, but tentatively, an IDT meeting is scheduled for the last week of July 2011 at the Central Office in Frankfort. This meeting may be scheduled in conjunction with a Lake Bridges status meeting. *The IDT Meeting has since been scheduled for July 26, 2011 from 1:00 pm to 3:00 pm in Conference Room C122, Transportation Building, Frankfort, Kentucky*

Prepared By: Will Conkin, PE, PTOE
Gary W. Sharpe, PE, PLS

MEETING REPORT
I-69 Strategic Planning Study – Fulton to Eddyville
July 26, 2011

An Interdisciplinary Team Meeting for this project was held on July 26, 2011 at the Transportation Cabinet Central Office in Frankfort, Kentucky. The purpose of this meeting was to review the draft report for this study. Draft copies of the study report were distributed to the project team.

Attendees were:

Mike McGregor	KYTC – District 1	Mike.mcgregor@ky.gov
Kevin Damron	KYTC – Central Office	Kevin.Damron@ky.gov
Ted Merryman	KYTC – Central Office	Edward.merryman@ky.gov
David Martin	KYTC – Central Office	Charles.martin@ky.gov
Keith Damron	KYTC – Central Office	Keith.damron@ky.gov
Bill Gulick	KYTC – Central Office	Bgulick@ky.gov
Steve Ross	KYTC – Central Office	Steve.ross@ky.gov
Jill Asher	KYTC – Central Office	Jill.asher@ky.gov
Ryan Tenges	FHWA	ryan.tenges@dot.gov
John Ballantyne	FHWA	John.ballantyne@dot.gov
Steve Mills	FHWA	Steve.mills@dot.gov
David Lindeman	Palmer Engineering	Dlindeman@palmernet.com
Gary Sharpe	Palmer Engineering	Gsharpe@palmernet.com
Will Conkin	Palmer Engineering	Wconkin@palmernet.com
Lee Klieman	BLA	Lklieman@blainc.com
Ben Quinn	AEI	Benq@aei.com

Attendees via *Video Teleconference* from the District 1 Office in Paducah were:

Susan Oatman	KYTC – District 1
Randy Williams	KYTC – District 1
Jessica Herring	KYTC – District 1
Chris Kuntz	KYTC – District 1
Mike Oliver	KYTC – District 1
Craig Morris	Pennyrile ADD
Stacey Courtney	Purchase ADD

Gary Sharpe opened the meeting with a brief discussion of the status of the project and more specifically summarized information included in the draft report. A power point presentation was presented covering the findings of the report. During the presentation, the following discussions occurred referring to the content of the report.

Design Exception / Design Variance: In the report, design exceptions will specifically refer to the FHWA referenced controlling 13 design criteria which are the following:

- | | |
|-------------------------|-----------------------------------|
| 1. Design Speed | 8. Grade |
| 2. Lane Width | 9. Stopping Sight Distance |
| 3. Shoulder Widths | 10. Cross Slope |
| 4. Bridge Width | 11. Vertical Clearance |
| 5. Horizontal Alignment | 12. Lateral offset to obstruction |
| 6. Superelevation | 13. Structural Capacity |
| 7. Vertical Alignment | |

In the report deficient design elements not listed in the controlling 13 design criteria but that are deviations from typical practices for design of interstate highways will be referenced as design variances.

Vertical Curve / K value: Bill Gulick asked a question about the K value used to calculate the stopping sight distance. Mr. Gulick referenced the maximum K value (167 ft) provided on pages 270 and 274 of the AASHTO *A Policy Geometric Design of Highways and Streets* (Green Book) for crest and sag vertical curves and the relationship to pavement drainage. The passage from the Green Book is “It is not intended that K of 167 ft per percent grade be considered a design maximum, but merely a value beyond which drainage should be more carefully designed.” The minimum length of curve and stopping sight distance was calculated in the report using the following K values (Exhibits 3-72 and 3-75 of the Green Book).

Sag Vertical Curves

Rural 70 mph – K= 181
 Urban 50 mph – K = 96

Crest Vertical Curves

Rural 70 mph – K = 247
 Urban 50 mph – K =84

Mr. Gulick further described conditions on other interstate routes where K values had exceeded K = 167 and where there were significant crash histories. It was noted that vertical curves with insufficient length or with less than the required calculated stopping sight distance would be recommended for improvement if there was a significant crash history at that location (Critical Rate Factor > 1.0).

Interchange Control of Access: Measurement of the interchange control access was discussed. For the draft report, the interchange control of access was measured in the field from the ramp radius to the radius of the closest entrance. According to the KYTC Highway Design Manual, access control should have been measured from the end of the interchange ramp radius to the center line of the closest access point. It was agreed that control of access measurements presented in the report would be updated according to this standard.

Mainline Bridge Width: According to *A Policy on Design Standards Interstate System* the offset to the face of parapet or bridge rail on both the left and right side is 3.5 feet for bridges longer than 200 feet. Therefore, the minimum lateral clearance for mainline bridges is 31 feet (offsets plus 2-12 foot lanes). For bridges less than 200 feet, the lateral clearance shall, at a minimum, equal the paved approach roadway width. Therefore at a minimum, mainline bridges less than 200 feet long shall have a lateral clearance of 38 feet

(4 foot inside shoulder, 10 foot outside shoulder, and 2 -12 foot travel lanes). All bridges on the Purchase Parkway with a lateral clearance less than 38 feet longer than 200 feet.

Mainline Bridge Side Railing/Barriers: All mainline bridges have side railings/barriers with a 10" brush block that are inconsistent with current standards. It will be clarified in the report that the brush block is the deficient element of the side railing/barrier and not the railing. It was noted in the discussion that side railings/barriers with brush blocks can be retrofitted with thrie beam or improved with a sloped face barrier.

Mayfield Bypass Design Speed: The Mayfield Bypass meets the minimum horizontal alignment criteria for a 50 mph design speed, but not a 70 mph design speed. During discussions of the Mayfield Bypass segment of the project, the consultant was requested to back-calculate the design speed of the Mayfield Bypass based on the horizontal alignment and include this information in the report. The smallest radius for a curve on the Mayfield Bypass is 1146 feet (located at MP 21.585 and MP 21.793). Based on the 8% maximum superelevation tables, the 1146 radius results in a 59 mph design speed. This is based on a 8% superelevation. According to the as-built plans, both of these curves have a superelevation of 8%.

Superelevation: A superelevation rate of 8% is the maximum superelevation rate recommended in the current edition for the AASHTO Policy on the Geometric Design of Highways and Streets (Green Book) for areas with snow and ice. Thus, for interstate highways in Kentucky, the maximum rate for superelevation currently recommended is 8%. However, it was noted that when the Purchase Parkway was constructed, it was common to use superelevation rates up to 10% on high speed facilities. As a result of this practice, there were four (4) curves identified that exceed 8% superelevation (8.3%). With further discussion it was noted that although these curves do not meet the current standard, the greater superelevation does not necessarily result in an unsafe situation unless there was a significant crash history identified at that specific location. Thus it was agreed that recommendations for addressing areas with superelevation rates greater than 8% will be to measure actual superelevation rates in the field whenever the next pavement rehabilitation projects were scheduled and to make appropriate modifications in pavement cross-slope to meet current design criteria for superelevation during the next pavement rehabilitation project.

Earthen Mound / Pier Protection: Currently there are 8 overpass bridges that have an earthen mound pier protection that does not meet current standards. It was discussed that there are earthen mound pier protection at these overpass bridges because the pier footers may protrude above the ground line. As-built plans for bridges will be reviewed and the locations at which the footers are higher than the existing ground will be identified and included in the report.

SIU 5 / SIU 6 Connection: It was noted in the discussions that there had been some difficulties in coordinating with Tennessee Department of Transportation (TDOT) and FHWA-Tennessee concerning the connection of SIU 5 and SIU6 at the Tennessee and Kentucky state line. Mr. John Ballentyne and Mr. Steve Mills advised that they would facilitate a meeting with KYTC, TDOT, and FHWA concerning the connection of I-69 at the border.

I-69 / I-24 Interchange: The Project Team requested a fully directional interchange be evaluated and presented in the report as a potential alternative at the I-24 and Purchase Parkway Interchange. The interchange should include 70 mph design speed for the I-69 ramp through movements. As presented, the draft report included a fully directional interchange but with 50 mph design speed ramps for the I-69 through movements. The report also will include a lower cost partially reconstructed interchange at this location to address operational concerns (weaving lengths, etc) with construction of improvements staged based on traffic demand. It was initially envisioned that this concept would involve providing an I 24 westbound to I 69 southbound flyover ramp and an I 24 eastbound to I 69 southbound ramp improvement as the initial construction for this concept.

Cost: The construction costs of the alternatives should be based on geographical unit cost to achieve utmost accuracy. The unit costs for the estimate will be evaluated by the District 1 staff to verify local construction costs versus statewide average. Consultant will send District 1 unit cost from draft report.

Potential Alternatives: During the meeting the project team decided to present four potential alternatives for recommendations. The following alternatives provide brief description of desired alternatives:

1. No Build – This alternative would leave a gap in the nationally proposed I-69 route. However, the Purchase Parkway would provide the connectivity for the I-69 traffic to travel from Tennessee to I-24.
2. Necessary Upgrade and Spot Safety Improvements – Key safety and operational concerns would be addressed. In addition, design exceptions and variances would be obtained for the existing conditions that do not meet current AASHTO guidelines and are deemed appropriate by the KYTC and the FHWA.
3. Partially Compliant with Design Exceptions – This alternative would involve improvements within existing right of way or with minimum right of way acquisition necessary for making the existing parkway meet minimum AASHTO criteria for interstate routes with minimal design exceptions and variances.
4. Fully Compliant without Design Exceptions – This alternative would involve improvements within existing right of way or with minimum right of way acquisition necessary for making the existing parkway meet minimum AASHTO criteria for interstate routes without any design exceptions and variances.

Prepared By: Will Conkin, PE, PTOE
Gary W. Sharpe, PE, PLS

AGENDA
IDT Meeting
I-69 Strategic Corridor Planning Study
Overview of Existing Conditions of Julian M. Carroll (Purchase) Parkway and I-24
Fulton to Eddyville
Fulton/Hickman/Graves/Marshall/Livingston/Lyon Counties
Central Office, Frankfort
July 26, 2011

- A. Introductions
- B. Opening Comments – Ted Merryman / Mike McGregor
 - I. Purpose of Meeting
 - II. Previous Studies (Corridor 18 studies, SIU 5)
 - III. SIU 6 Study Philosophy
- C. Report Review – Power Point
 - I. Early Coordination and Public Involvement
 - II. Operational Considerations
 - III. Mainline Geometry / Typical Sections
 - IV. Bridges and Overpasses
 - V. Interchanges and Ramps
 - VI. Potential Improvement Alternatives and Development Costs
 - VII. Recommendations
 - VIII. Appendices
- D. Questions / Discussions
- E. Final Steps / Completion
 - I. I-69 Project Development Analysis Tool
 - II. Public Meeting Summary
 - III. Final Submittal
- F. Coordination with ongoing projects
- G. Adjourn

IDT MEETING

I-69 STRATEGIC CORRIDOR PLANNING STUDY

Overview of Existing Conditions of Julian M. Carroll (Purchase) Parkway and I-24

July 26, 2011

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IDT MEETING

I-69 STRATEGIC CORRIDOR PLANNING STUDY

Overview of Existing Conditions of Julian M. Carroll (Purchase) Parkway and I-24

July 26, 2011

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IDT MEETING

I-69 STRATEGIC CORRIDOR PLANNING STUDY

Overview of Existing Conditions of Julian M. Carroll (Purchase) Parkway and I-24

July 26, 2011

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34. _____	_____	_____	_____

FOLLOW UP TO IDT MEETING REPORT
I-69 Strategic Planning Study – Fulton to Eddyville
AUGUST 24, 2011

A follow up meeting to the Interdisciplinary Team Meeting for this project was held on August 24, 2011 at the Transportation Cabinet Central Office in Frankfort, Kentucky. The purpose of this meeting was to review edits made to the draft report, previously reviewed at the IDT meeting on July 26, 2011. The edits were distributed to the project team.

Attendees were:

Kevin Damron	KYTC – Central Office	Kevin.Damron@ky.gov
Ted Merryman	KYTC – Central Office	Edward.merryman@ky.gov
David Martin	KYTC – Central Office	Charles.martin@ky.gov
Bill Gulick	KYTC – Central Office	Bgulick@ky.gov
Steve Ross	KYTC – Central Office	Steve.ross@ky.gov
Jill Asher	KYTC – Central Office	Jill.asher@ky.gov
David Lindeman	Palmer Engineering	Dlindeman@palmernet.com
Gary Sharpe	Palmer Engineering	Gsharpe@palmernet.com
Will Conkin	Palmer Engineering	Wconkin@palmernet.com

Attendees via *Video Teleconference* from the District 1 Office in Paducah were:

Jim LeFevre	KYTC – District 1	James.LeFevre@ky.gov
Mike McGregor	KYTC – District 1	Mike.mcgregor@ky.gov
Jessica Herring	KYTC – District 1	
Stacey Courtney	Purchase ADD	

Gary Sharpe opened the meeting with a brief discussion of the status of the project and draft report. The purpose of the meeting was to review edits made to the draft report based on comments during and following the IDT meeting held on July 26, 2011. During the review of these edits, the following discussions occurred referring to the content and recommendations of the report. Other minor editorial changes (not mentioned in this summary) were made during the meeting.

Design Exception / Design Variance: In the report, design variances were more clearly defined. There are two categories for design variances discussed in the report--a design feature that (1) varies from the current AASHTO criteria but not part of the *13 controlling criteria* or (2) a design feature that varies from common practice but not part of the *13 controlling criteria*.

Superelevation Crash Analysis: A crash analysis was done on the Purchase Parkway horizontal curves with a superelevation greater than 8%. There was one horizontal curve (MP 47.417) with a critical crash rate factor greater than one. The crashes were reviewed by the project team. The project team agreed that the crash history did not appear to be directly related to superelevation. Therefore improvements to the superelevation at this location will not be recommended in the report.

Superelevation: The report was edited to according to the KYTC policy and AASHTO recommendations for superelevation on freeways and expressways. According to the AASHTO Policy on Geometric Design of Highways and Streets, current edition (commonly referred to as the Green Book), the maximum superelevation rate is controlled by climate conditions, terrain conditions, type of area, and frequency of slow-moving vehicles that may be affected by high superelevation rates. A specific maximum superelevation is not recommended for an Interstate facility by AASHTO. It is left to the user agencies to make specific policy decisions concerning allowable rates of superelevation. The KYTC policy references the Green Book for freeway geometric design. The Green Book provides superelevation rate tables for 4%, 6%, 8%, 10%, and 12% maximum superelevations.

Referencing the Federal Highway Administration *Mitigation Strategies for Design Exceptions*, "A formal design exception is required if the State's superelevation policy cannot be met in design of any curve on the NHS." This document advises, "A design exception is also required if a superelevation rate is proposed that is different from the published rate per the State's policy for that curve, regardless of whether the curve is a controlling one (minimum radius for a design speed) or not." From review of as-built plans and field inspections, it appears that the Purchase Parkway was constructed on the basis of 10% maximum superelevation. Since the Purchase Parkway appears to have been constructed with a maximum superelevation of 10% which is compliant with AASHTO and KYTC policies and there no apparent crash histories related to superelevation, a design exception for superelevation does not appear warranted.

Crash Analysis: In the draft report, segments of the Purchase Parkway and I-24 that have a critical crash rate factor between 0.9 and 0.99 were defined as Potential High Crash Segments. The term "Potential" was considered misleading and was removed from the report. The report will identify these segments as crash segments having a critical crash rate factor between 0.9 and 0.99.

Mayfield Bypass: The project team discussed evaluating the Mayfield Bypass as an urban interstate. The project team reviewed the existing roadway geometry/cross section and determined it was designed with the intention to serve the City of Mayfield as an urban expressway. The interchanges are spaced at one mile or farther. The traffic volumes are significantly higher along the Mayfield Bypass than the rural sections of the Purchase Parkway to the north and south of Mayfield. The crash analysis shows the Mayfield Bypass operates safer than most of the Purchase Parkway. According to KYTC, the Mayfield Bypass is functionally classified as an Urban Freeway & Expressway. Based on this information, the Mayfield Bypass is currently performing as an urban expressway and should be evaluated as an urban interstate. It was also mentioned that currently the legal speed limit along the Mayfield Bypass is signed 70 mph. Once the Mayfield Bypass is designated I-69, KYTC would take the appropriate steps to insure the legal speed limit is changed from 70 mph to 50 mph. The report will be edited to only compare the Mayfield Bypass to urban interstate criteria (50 mph design speed).

Potential Alternatives: During the IDT meeting (July 24, 2011) the project team decided to present four potential alternatives with a range of improvements. With additional discussion, the project team decided to present just three alternatives in the report. The following alternatives are presented in the report.

1. **No Build** – This alternate would leave a gap in the nationally proposed I-69 route. However, the Purchase Parkway would provide the connectivity for the I-69 traffic to travel from Tennessee to I-24.
2. **Necessary Upgrades and Spot Safety Improvements** – Key safety and operational concerns would be addressed. Design exceptions or variances would be obtained for the existing conditions that do not meet current AASHTO or KYTC guidelines that are deemed appropriate by the KYTC and the FHWA.
3. **Fully Compliant Reconstruction** – This alternate would involve improvements within existing right of way or with minimum right of acquisitions necessary for making the existing Purchase Parkway meet minimum AASHTO criteria for interstate routes.

Necessary Upgrades and Spot Safety Improvements: Discussion of the alternative resulted in the following recommendations and edits:

- **Mainline Structures (Widen Deficient Bridges):** The project team chose to seek a design exception for the deficient bridges. All of the deficient bridges are longer than 200 feet and have a horizontal lateral clearance 30 feet. The minimum horizontal lateral clearance for a mainline bridge on an interstate over 200 feet in length is 31 feet. Based on the crash analyses, it is not apparent that the crash history is directly related to narrow bridge width. Therefore, it is not recommended to widen the deficient bridges by one foot, but seek a design exception for lateral horizontal clearance for the deficient mainline bridges.
- **Mainline Structures (Upgrade Guardrail/Approaches/Railings):** The project team decided that the bridge railing/barriers will be retrofitted rather than replaced. The cost of attaching thrie-beam guardrail to the existing barrier will be used in the estimate for retrofitting the existing barrier. This retrofit meets current crash worthy standards.
- **I-24 and Purchase Parkway Interchange:** The project team reviewed the previous interchange options presented in the draft report. Additional interchange options were presented based on comments during the IDT meeting. Also presented to the team were projected 2040 ramp design hourly volumes with I-69 and without I-69 traffic for the existing interchange configuration. These volumes were calculated from a 2007 ramp traffic count. Based on the ramp traffic volumes and capacity of the interchange, the project team recommends to improve the eastbound I-24 to southbound I-69 ramp and construct a new southbound I-69 flyover ramp from westbound I-24. The following existing ramps will be eliminated with this recommendation:
 - Westbound I-24 to northbound Purchase Parkway ramp
 - Westbound I-24 to southbound Purchase Parkway loop ramp
 - Eastbound I-24 to northbound Purchase Parkway loop ramp.

The existing northbound Purchase Parkway to eastbound I-24 ramp will serve as the I-69 northbound movement. This ramp will accommodate the projected I-69

traffic in the near future. It is recommended to improve the ramp to meet interstate criteria once traffic volumes exceed capacity. It also is recommended to construct a new northbound I-69 to westbound I-24 flyover ramp once the traffic volumes exceed the existing loop ramp capacity.

Previous Toll Plazas: The interchanges located at Exit 14 and Exit 43 will be referenced as previous toll plazas versus flopped diamond.

Regional and Local Opportunities: It was decided to eliminate narrative referencing impacts to employment opportunities or specific locations as a result of designating the Purchase Parkway as I-69.

Cost Estimate: It should be noted in the report that the cost estimate for the presented alternatives does not include connecting Segment of Independent Utility (SIU) 6 to SIU 7 (Exits 0, 1, 2 at the Tennessee/Kentucky border) or to SIU 5 (I-24 at the Western Kentucky Parkway).

Prepared By: Will Conkin, PE, PTOE
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AGENDA
Follow Up to IDT Meeting
I-69 Strategic Corridor Planning Study
Overview of Existing Conditions of Julian M. Carroll (Purchase) Parkway and I-24
Fulton to Eddyville
Fulton/Hickman/Graves/Marshall/Livingston/Lyon Counties
Central Office, Frankfort
August 24, 2011

A. Introductions

B. Opening Comments

I. Purpose of Meeting

C. Report Review - Updates

I. Chapter I – Project Introduction

- **13 Controlling Criteria (1-5)**

II. Chapter IV – Mainline Geometry/Typical Section

- **Superelevation Rate (4-7); Mayfield Bypass Design Speed (4-8)**

III. Chapter V – Bridges and Overpasses

- **Minimum Bridge Width (5-1); Bridge Side Railing/Barrier (5-2)**

IV. Chapter VI – Interchanges and Ramps

- **Superelevation Rate (6-8); Interchange Control of Access (6-11)**

V. Chapter VII – Key Findings of Existing Conditions Overview

- **AASHTO Minimum Guidelines (7-1); Superelevation (7-10, 7-11); Lateral Clearance (7-10); Narrow Bridge Crash Analysis (7-13); Interchange Control of Access (7-14)**

VI. Chapter VIII – Potential Improvement Alternatives and Development Costs

- **Interchange Alternatives**

VII. Chapter IX – Recommendations

VIII. Appendix G – Project Meeting Minutes

IX. Crash Analysis

D. Questions / Discussions

E. Adjourn

FOLLOW UP TO IDT MEETING
 I-69 STRATEGIC CORRIDOR PLANNING STUDY
 Overview of Existing Conditions of Julian M. Carroll (Purchase) Parkway and I-24
 AUGUST 24, 2011

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