I-64 Interchange and New Connector Jefferson and Shelby Counties Item Number: 05-8200.00

Final Report March 2008

Alternatives Planning Study



Prepared for:

KENTUCKY TRANSPORTATION CABINET DIVISION OF PLANNING

Kentucky Transportation Cabinet



155





Prepared by:

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Qk4 815 West Market Street Suite 300 Louisville, Kentucky 40202 I-64 Interchange and New Connector Alternatives Planning Study FINAL REPORT

New I-64 Interchange

between I-265 (Gene Snyder Freeway) and KY 1848 (Simpsonville)

with a Connector Road

between KY 155/KY 148 (Taylorsville Road) and US 60 (Shelbyville Road)

JEFFERSON and SHELBY COUNTIES, KENTUCKY

Item No.: 5-8200.00

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KENTUCKY TRANSPORTATION CABINET DIVISION OF PLANNING



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March 2008

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EXECUTIVE SUMMARY

This Alternatives Planning Study investigates a new I-64 interchange in the vicinity of Gilliland Road in eastern Jefferson County, along with a new or improved north-south connector road between KY 155/KY 148 (Taylorsville Road) and US 60 (Shelbyville Road). The study analyzes the project's feasibility and defines the extent of improvements best suited to meet the current and future needs of this area between I-265 (Gene Snyder Freeway) in Jefferson County to the west and KY 1848 (Simpsonville) in Shelby County to the east. (See Figure S-1.)

The area has experienced significant growth in recent years, rapidly transitioning from rural residential to residential suburban neighbor-hoods. Continued rapid growth and development are expected in and surrounding the study area.

In light of existing and anticipated growth, local and regional access via the interstate system and local roadway network is gaining importance. At present, I-64 bisects the study area and I-265 is to the west; however, there is no access to I-64 between I-265 and KY 1848, a distance of about 9 miles. This distance creates one of the longer gaps between interchanges on Kentucky's rural interstate system.

The development of the area now accentuates this lack of access. Road users crowd existing highways. Limited access to I-64 has contributed to ever increasing traffic volumes on US 60 and KY 155/KY 148. The existing highways, interchanges, and intersections service a region much larger than the study area, and have met or exceeded their original design capacity.

The Alternatives Planning Study was developed using a project study team approach consisting of representatives from the Transportation Cabinet Central Office and District 5; Kentuckiana Regional

Planning and Development Agency (KIPDA); and Qk4 (consultant). Public involvement activities included project team meetings, resource agency coordination, key person interviews, public information meetings, and website information.

Project Goals and Issues

The Project Team developed the following project goals:

- 1) Congestion Mitigation
- 2) Connectivity of the Road and Interstate Network
- 3) Future Planning
- 4) Safety Improvements
- 5) Environmental Preservation
- 6) Proactive and Joint Planning



Figure S-1: Study Area

Traffic congestion overshadowed all other issues identified by local officials and citizens, and was regarded as an already serious problem likely to worsen in the future. Closely associated with traffic congestion was the lack of interstate connectivity that results in bottle-necks on the existing road network, especially on US 60 between Eastwood and I-265, the US 60/I-265 interchange, and I-265 between I-64 and US 60.

Within the center of the study area, the road network consists mainly of very narrow two-lane rural roads with no shoulders, winding through rolling terrain, providing few travel options and very limited connectivity. While local citizens expressed a strong desire to preserve the area's rural character and minimize impacts to existing property, they considered the lack of connectivity and interstate access a hindrance to fully accessing destinations, opportunities, and services available in Jefferson and Shelby Counties. Improving connectivity would play an important role in terms of serving the region's future growth and development; projected traffic demands; and access to emergency services, jobs, health care, education, retail, and other travel destinations in the region.

Local officials and the public generally viewed a new I-64 interchange and connector road as needed to add capacity, alleviate congestion, and improve safety for the traveling public. Statistically, both an

interstate and a divided facility (such as the proposed connector) are safer than the rural roads. Therefore, safety would be improved by constructing the connector to shift traffic from the existing rural, substandard roads to the interstate.

Alternative Analysis

In addition to the Do-Nothing Alternative, several Build Alternatives were considered. Transportation System Management (TSM), Operational Improvements, Spot Improvements, and Transit Options were not examined in detail since none would address the goal of improved connectivity with the interstate network. The Build Alternatives include a full interchange with I-64 and a connector road to the north and south.

Many connector road alternative locations were considered and three corridors emerged that contained one or more alternatives: (1) Eastern Corridor containing several alignments near the Shelby County line, (2) Western Corridor containing several alignments linking Eastwood and Fisherville, and (3) Southwest to the Northeast Corridor containing a single alignment crossing diagonally through the study area. Regardless of location, the traffic analysis shows that an ultimate four-lane connector road would be needed to serve existing and future traffic.

Operational Analysis

An operational analysis was conducted to address the eight policy points of an FHWA Interchange Justification Study (IJS). This analysis verifies that a new interchange in eastern Jefferson County would generally satisfy the policy points, provide a benefit to the traveling public, and mitigate conditions at the existing interstate interchanges.

Recommendations

The state's Six-Year Highway Plan FY 2007-2012 includes funding for preliminary engineering and environmental documentation for this project.

This Alternatives Planning Study concludes that a new interchange and connector road would reduce congestion and improve safety on the area highway network, especially on US 60 between Eastwood and I-265 and on I-265 between US 60 and I-64.

Based on the results of this study, it is recommended that a new interchange with I-64 in eastern Jefferson County and a north-south connector road be advanced into the preliminary engineering and environmental analysis stage, during which feasible Build Alternatives and the No-Build Alternative would be explored in greater detail.

<u>The location of the connector road</u> should be within the Western Corridor, which links the community of Fisherville in the south and Eastwood in the north. This corridor is recommended because it would serve existing and future travel needs more effectively than a corridor farther east. The exact alignment of the road would be determined after detailed environmental and alternatives analyses.

<u>Regarding the design of the connector road</u>, an urban typical section should be considered north of I-64 and a rural typical section should be considered south of I-64. Bicycle and pedestrian facilities would be an asset to the new road, the local communities, and the visitors to the existing and planned park facilities in the area. Likewise, creative design elements should be considered to allow the road to serve as a gateway to the Floyds Fork Park area and associated community and land use changes north and south of I-64.

<u>Public involvement</u> in this project increased significantly as the project developed. Therefore, it is recommended that an extensive public involvement plan be implemented in future project stages. During the planning process, the following entities have demonstrated a keen interest in being involved: community groups in Eastwood; state and local elected officials; Floyds Fork preservation interest groups; 21st Century Parks (the non-profit group implementing the Floyds Fork Greenway Plan); local government agencies including Metro Parks, Metro Public Works, Metro Planning and Design Services, and KIPDA; and the citizens who live in the area.

1.0 INTRODUCTION

1.1 Where Is the I-64 Interchange Study Area?

The interchange study area is located in eastern Jefferson County and in the western edge of Shelby County. Jefferson is the most populated county in Kentucky, with an estimated population of 701,500 in 2006. Eastern Louisville Metro is the fastest growing area in the county, and the study area is under intense pressure for land use changes. Shelby County had a 2006 population estimate of 39,717. I-64

bisects the study area, US 60 (Shelbyville Road) forms the



Figure 1: Location Map

northern boundary, and KY 155/KY 148 (Taylorsville Road) forms the southern boundary. Eastwood is an unincorporated community along US 60 and Fisherville is an unincorporated community along KY 148. Figures 1 and 2 show the location of the project study area.

The proposed new I-64 interchange between I-265 (Exit 19) and KY 1848 (Exit 28, Simpsonville) would be in the vicinity of Gilliland Road overpass (Mile Post [MP] 21.4). No other access to I-64 exists between I-265 and KY 1848, a distance of about 9 miles. This is one of the longer gaps in access to an interstate highway anywhere in the state. The proposed north-south connector road would extend from US 60 south through the new I-64 interchange to KY 155/KY 148. US 60 and KY 155/KY 148 are separated by about 3.2 miles in the study area vicinity. Several large-



scale, residential developments are either already present, under active development, or planned along US 60.

1.2 What Is the Purpose of the Study?

The alternatives study purpose is to investigate the feasibility of, and evaluate general alternative locations for, constructing a new I-64 interchange in eastern Jefferson County or western Shelby County.

The study's intent is to identify, collect, and study critical information concerning the project study area, a proposed interchange, and feasible alternative corridors. This will enable KYTC to make decisions regarding the future of this proposed project, and allow future project development stages to be based on this information and public involvement efforts.

1.3 What Is the Planning Process?

The first step of the study process was to identify, collect, and analyze critical study information concerning the project study area, including land use, environmental resources, roads, travel patterns and volumes, and issues. Next was the identification of project goals and objectives (illustrated on Figure 3) based on discussions with elected officials, stakeholders, and the public. These goals and issues then framed the development of alternatives, which then were screened based on a variety of variables and information.

A crucial role in the planning process was coordination with various stakeholder entities (illustrated on Figure 4). This activity included several meetings with the KYTC/FHWA project team, coordination with Louisville Metro, Shelby County, and KIPDA. Also critical were interviews with various elected officials and local governmental leaders, as well as two public informational meetings, and coordination with federal and state environmental resource agencies. The objectives of the two public meetings were first to identify the problems and issues of the corridor, and then to



Figure 3: Study Process

provide input on alternative locations for an interchange and connector road. The information from the first set of meetings and the resource agency coordination was used to identify options presented in the second set of meetings, and the information from the second set of meetings greatly influenced the recommendations herein.



Figure 4: Coordination

1.4 What Is the History of the Project?

The proposal for a new I-64 interchange east of I-265 in Jefferson County was first identified in 1969 as part of the first long-range transportation plan prepared for the Louisville area. Following is a list of the various local plans and their inclusion of the proposed project:

 January 1969 – Metropolitan Louisville Transportation Report — Vogt, Ivers and Associates (a scan of the plan map is shown in Figure 5): "The two recommended new interchanges west and east of Jefferson Freeway (now the Gene Snyder Freeway) reflect the expectation of rapid growth in this area. The recommended interchange at Blankenbaker Road will serve anticipated industrial growth between Jeffersontown and I-64. The proposed Echo Trail interchange will be a very needed addition to the system because it provides local service access for anticipated growth

resulting from the Ford Motor Company development north of I-64 near the county line. Of equal value is the service provided to the large potential residential area east of Floyd's Fork and south of Kentucky Route 155. This area has exceptional potential for planned residential development on a major scale. When this occurs, the justification for the Echo Trail Interchange will be evident." (Page 5-5).



- December 1978 (Revised September 1981) Louisville Metropolitan Transportation Study Update — KIPDA: Interchange deferred until after 2000.
- September 1999 *Horizon 2020 Transportation Plan Update Number II* KIPDA: Project is added to the Plan's "Illustrative List" as an amendment by the Kentucky Transportation Cabinet.
- 1999 Jefferson County Thoroughfare Plan. Project is identified as a long-term project. (See Appendix E.)
- October 2002 Horizon 2025 Regional Mobility Plan KIPDA: Project is included in Plan as "New interchange and connector road from KY 148 to US 60 (Shelbyville Rd.) with interchange on I-64. Corridor would be in vicinity of Gilliland Rd."
- November 2005 Horizon 2030 The Long-Range Transportation Plan for the Louisville (KY-IN) Metropolitan Planning Area — KIPDA: Project is included in the Plan as described above. (See Appendix E.)

In 2005 study funds were included in the addendum, dated May 6, 2005, to the Fiscal Year 2005-2010 Six-Year Highway Plan (SYP), approved 2005; and again in the FY 2007-2012 SYP, approved May 2006. No specific alternative locations or operational analysis have been initiated until this Alternatives Planning Study.

2.0 WHAT ARE THE PROJECT GOALS AND ISSUES?

The six project goals were developed through discussions with KYTC officials, key persons/local officials interviews, public comments, resource agency comments, on-site visits, traffic records and other studies, and project team meetings. Traffic congestion from a lack of the roadway connectivity was consistently the top identified issue and concern.

Following are the project goals:

- 1) <u>Mitigate Congestion</u>: Reduce congestion of US 60, KY 155/KY 148, and the I-265 interchanges with US 60, I-64, and KY 155.
- <u>Connectivity of the Road and Interstate Network</u>: Improve the local road network and its connectivity to the interstate network to provide travel options for local people seeking access to the employment, educational, health care, retail, and other travel destinations.
- 3) <u>Plan for the Future</u>: Provide a facility that is capable of serving recent growth and sustaining current and projected (year 2030) traffic demands.
- 4) <u>Improve Safety</u>: Provide a facility that meets current design standards, and diverts traffic from the substandard roads to the interstate network. Statistically, both a divided facility (such as the proposed connector) and an interstate have lower crash rates than rural surface streets.
- 5) <u>Environmental Preservation</u>: Identify alternative locations that avoid or minimize impacts to community resources, natural resources, and historic properties and districts.
- 6) <u>Proactive and Joint Planning</u>: Provide a roadway network consistent with local and regional land use, community, and transportation plans, and identify a preferred alternative corridor local officials can preserve from development or other land use changes in the study area.

These goals are described in further detail in Appendix B.

3.0 WHAT ARE THE EXISTING CONDITIONS?

3.1 What Are the Roadway Characteristics?

The road network in the study area includes significantly more capacity for east-west travel than for north-south travel. I-64 is a four-lane facility with full access control. US 60, KY 155, and KY 148 are major arterials that provide east-west travel. North-south travel, however, is by way of the following substandard two-lane rural roads: Eastwood-Fisherville Road (KY 1531), Clark Station Road, and Echo Trail. Each of these follows the hilly topography and has poor horizontal and vertical sight distances, narrow pavement ranging from 18 to 22 feet wide, no shoulders, no passing opportunities, utilities often located adjacent to the travel lanes, and residences offset at various distances.

The existing roadway network is limited, served mainly by the east-west roadways consisting of one interstate (with no access from the study area) and the two state highways located along the study area's north and south boundaries. Other roads present are minor local/rural 2-lane roads, winding through the hilly terrain. Roadways and interchanges surrounding the study area are routinely congested with traffic, especially to the west at the Gene Snyder Freeway.

East-west travel is virtually non-existent, except for KY 155/KY 148 and US 60. In the western part of the study area, two waterways—Floyds Fork and Long Run—run generally north-south, acting as natural barriers and further limiting local travel options. For a detailed discussion of

study area roadways and their characteristics, refer to Appendix C, which includes Tables C.1 and C.2 (*Existing Highway Systems*, and *Geometric and Traffic Characteristics of Existing Highways*). The shaded boxes in Table C.2 indicate those roadway sections having narrower widths than those set by current design standards, which call for 12-foot-wide driving lanes and 8-foot-wide shoulders. Also, refer to the color photographs in Appendix D illustrating typical examples of existing roadway sections.

3.2 What Other Highway Projects Are Proposed in the Area?

There are several other KYTC highway projects and KIPDA planned highway projects within or surrounding the study area. In addition, the community of Eastwood has a neighborhood plan and a transportation plan. Selections from the Eastwood plans are included in Appendix E.

Other KYTC highway projects listed in the Six-Year Highway Plan FY 2007-2012 are identified below and illustrated on Exhibit 1 in Appendix A. Each of these is also included in both KIPDA's Long-Range Plan and Transportation Improvement Plan (TIP).

- 05-21.00, Gene Snyder Freeway. Reconstruct the I-265/I-64 interchange. The first phase would be a flyover ramp from northbound I-265 to westbound I-64. Other stages would include a total of four flyover ramps.
- 05-41.00, Gene Snyder Freeway. Reconstruct the I-265/US 60 interchange to enhance capacity and safety. This would include a double or triple-left turn from I-265 northbound to US 60 westbound.
- 05-65.00 and 65.01, I-64, Jefferson and Shelby Counties. Widen I-64 to 6-lanes from near the Gene Snyder Freeway to the KY 53 interchange at Shelbyville. This project was scheduled to be under construction in 2007, but has yet to be authorized.
- 05-208.00, US 60. Extend left-turn lane on US 60 at I-265 to improve safety.
- 05-266.00, Gene Snyder Freeway. Reconstruct the I-265/KY 155 interchange to include dual-left turns from I-265 southbound to KY 155 eastbound, as recommended by KIPDA's interchange study to improve safety.
- 05-348.00, KY 1848, Shelby County. Widen KY 1848 to five lanes from the I-64 interchange to US 60 at Simpsonville.

In KIPDA's *Horizon 2030, The Long-Range Transportation Plan for the Louisville (KY-IN) Metropolitan Planning Area*, adopted November 29, 2005, by the Transportation Policy Committee, the KIPDA Transportation Planning Division identified the following roadway projects in the study area as regional priorities:

- KIPDA ID # 958, I-265 (Gene Snyder Freeway). Widen I-265 from four to six lanes from I-64 to I-71, approximately 9.25 miles.
- KIPDA ID # 959, I-265 (Gene Snyder Freeway). Widen I-265 from four to six lanes from US 31E to I-64, approximately 8 miles.
- KIPDA ID # 411, KY 1531 (Johnson Road north of US 60). Relocate and reconstruct KY 1531 as a two-lane road (no additional lanes) with improved geometry from US 60 to Aiken Road.
- KIPDA ID # 953, US 60 (Shelbyville Road). Widen US 60 from two to three lanes (third lane will be a center left turn lane) from Spring Drive to Clark Station Road, approximately 2 miles, to enhance safety and reduce congestion.
- KIPDA ID # 956, KY 155 (Taylorsville Road). Widen KY 155 from two to three lanes (third lane will be a center left turn lane) from I-265 to KY 148, approximately 2 miles, to reduce congestion.

- KIPDA ID # 277, English Station Road. Reconstruct as a two-lane road (no additional lanes) from Poplar Lane to Christian Academy.
- KIPDA ID # 1323, Flat Rock Road. Reconstruct Flat Rock Road as a two-lane (no additional lanes) from US 60 to Aiken Road.

3.3 What Are the Traffic Volumes and Levels of Service?

Existing and forecasted traffic volumes (year 2006 and 2030) were provided by KYTC, Division of Planning. Below is a summary table of the existing and future No-Build traffic volumes for the study area roads. These volumes and the 2006 level of service (LOS) are illustrated on Exhibit 5 in Appendix A. As can be seen, traffic volumes are already high on I-64, I-265, US 60, and KY 155 and are expected to increase substantially in the future. Appendix C, Tables C.1 and C.2 provide roadway information, including traffic data on the major roads within the study area.

LOS is commonly used to evaluate and describe roadway functions. It is defined as a qualitative measure of operational conditions, and the motorists' perception of those conditions. The conditions are usually defined in terms such as speed, travel time, maneuverability, delay, and comfort and convenience. The letters "A" through "F" designate the six levels of service. LOS A represents the best operating conditions (*i.e.*, free flow conditions), while LOS F defines the worst (*i.e.*, severe congestion).

Assumptions made for the future traffic and LOS analyses include the proposed roadway projects listed in Section 3.2, above, including widening to six lanes I-64 and I-265 by the year 2030.

				Existing / No-Build			
Begin		End		ADT		LOS	
MP	Begin Route	MP	End Route	2006	2030	2006	2030
I-64							
18.9	I-265 (Gene Snyder)	27.6	KY 1848 Interchange	50,000	92,000	D	E
I-265							
23.1	KY 155	25.5	I-64	34,000	58,000	С	С
25.5	I-64	26.8	US 60	49,000	84,000	С	E
US 60							
12.0	I-265 Ramp	13.0	Wickfield Dr	28,000	58,000	С	F
13.0	Wickfield Dr	14.6	Spring Dr	15,000	29,400	Α	С
14.6	Spring Dr	14.7	KY 2841 (Eastwood Cutoff Rd)	15,000	29,400	E	F
14.7	KY 2841	17.4	Jefferson-Shelby C/L	9,000	20,500	D	E
0.0	Jefferson-Shelby C/L	3.0	KY 1848	5,200	10,600	С	D
KY 1531							
5.6	KY 148	8.1	vicinity I-64 underpass	500	2,300	Α	В
8.1	vicinity I-64 underpass	9.1	US 60	500	1,100	Α	Α
KY 155							
0.0	Jefferson-Spencer C/L	4.3	KY 148	15,100	48,700	E	D*
4.3	KY 148	6.1	I-265 Underpass	16,000	57,800	Е	F
KY 148							
0.0	KY155	3.3	Jefferson-Shelby C/L	2,000	6,500	С	D

Table 1: Existing and Future Traffic and LOS Characteristics of Existing Highways

Source: KYTC, Division of Planning, LOS provided by Qk4.

* - This LOS is based on an assumption that KY 155 will be widened to four lanes even though this project is not identified in the KIPDA Long-Range Plan or the KYTC Six-Year Highway Plan.

3.4 What Does the Crash Data Show?

Crash data is always an important factor in the analysis conducted for a transportation planning project. The data can identify not only where crashes are occurring, but also why. The crash data analyzed for this study was from January 2001 through December 2005. The detailed crash data for the study area is included in Appendix F, along with a description of the methodology for analyzing the data. Exhibit 2 in Appendix A provides a graphic presentation of the crashes.

The data identified the following high crash areas: US 60 through Eastwood, US 60 at the I-265 interchange, and I-64 at the I-265 interchange. Several fatalities and high crash spots have been recorded along I-64. The two I-265 high crash interchanges and the mainline of I-64 are programmed reconstruction projects by KYTC, as described above, and the reconstruction of US 60 through Eastwood is identified as a project in KIPDA's Long-Range Plan. These reconstructions would address any substandard geometrics that could possibly contribute to the crash causes. The data also shows that "potential high crash areas" exist along KY148 through Fisherville and KY 1531 (Eastwood-Fisherville Road).

3.5 What Bicycle and Pedestrian Facilities Are in the Area?

At present, no pedestrian or designated bicycle facilities are located within the study area limits. However, an off-road bicycle and pedestrian project is being implemented in the study area along Floyds Fork. This will be a 27-mile-long, multi-use trail linking parks along Floyds Fork. The linear park corridor is located between US 31E (Bardstown Road) in the south and US 60 in the north. Floyds Fork meanders generally north-south through eastern Jefferson County. Floyds Fork crosses through the southwest corner of the study area and then parallels the western side of the study area. Floyds Fork and the associated trail will be a major consideration in the selection of a location for a connector road.

It should be noted that Louisville Metro Council recently adopted a "Complete Streets Policy" that states pedestrian, bicycle, and vehicle traffic should be planned for with any new roadway or roadway reconstruction within Jefferson County.

Public as well as agency comments requested that bicycle and pedestrian facilities be considered for incorporation into the proposed design of a new connector roadway. These facilities are viewed as important features of the locally identified vision for the area—a vision that includes the Floyds Fork Park and Trail System as well as continued residential growth.

3.6 What Railroads Are in the Area?

There are two railroad corridors that cross the study area east-west. The Norfolk-Southern (NS) railroad is located in the south, north of and parallel to KY 155/KY 148 throughout the study area. The CSX railroad is located in the north, south of and parallel to US 60 between Eastwood and Shelby County. At Eastwood the CSX railroad tunnels under the community and roadways, as shown in the aerial photograph and picture, Figure 6, below.



Figure 6: Railroad Cut and Tunnel (above) and Aerial Photograph of Tunnel Location (right)



3.7 What Are the Key Environmental Issues to be Considered?

The environmental setting of the study area is complex and important to any future decisions when considering a new road and interchange with I-64. Key issues related to the location analysis for the proposed project are listed herein. Exhibit 1, illustrates the key elements of the environmental overview and Appendix G includes a more complete description of each of the elements of the environmental overview that were investigated as part of this study.

This section identifies environmental issues likely to affect the location of alignment options. It summarizes the results of several environmental investigations, which are based primarily upon literature, archival, database, and map research. Limited fieldwork was conducted, consisting mainly of windshield surveys to confirm known sites and identify previously unknown sites.

Land Use, Existing and Future: Land use in the study area over the last few years has been transitioning from rural residential/agricultural/undeveloped to suburban residential. For example, during the course of this highway planning process several single-family neighborhoods have been proposed, approved, and developed. They are located both within the interior of the study area and along US 60 and KY 155. More intense land use, including multi-family developments and a commercial area, have been proposed and approved within the larger Eastwood area along US 60.

Within the interior of the study area (i.e., excluding the US 60 and KY 155/KY 148 corridors), existing land uses are primarily single-family residential subdivision; rural residential on scattered sites; and a combination of open, undeveloped agricultural land and forest. Some crop and pastureland is present and there is one small industrial area off English Station Road in Fisherville, just north of KY 148 and the NS railroad. The Floyds Fork and Long Run floodplains and the land use in the east, within and near Shelby County, account for the majority of the less intensive, rural land uses. The planned Floyds Fork Park and Trail System has included deed restrictions that acquired land will remain in parkland use in perpetuity.

It is anticipated by Louisville Metro that the land use in the Jefferson County portion of the study area will continue the trend of rapid suburban development based on the existing zoning, which is mostly R4 (approximately four houses per acre), the recent expansion of the sewer service in the area, especially, the expansion of the Floyds Fork Wastewater Treatment Plant

located just south of I-64, and the amenities from the planned Floyd's Fork Park area. The proposed connector road and the interchange, which has been in local plans for many years, are also contributing elements in the forecasted growth, as well as necessary elements to manage the growth. According to local officials, future land use in Shelby County is anticipated to remain rural within and adjacent to the study area. Shelby County's plan is for future growth to be concentrated around existing urbanized areas, such as Shelbyville and Simpsonville.

<u>Parkland</u>: Existing and future parks are important features of the local vision for this study area. Three publicly owned park sites in or near the study area were identified:

- Eastwood Park (about 5 acres) is located south of Eastwood Cutoff Road on the east side of Eastwood.
- William F. Miles Park (about 130 acres) borders outside the study area's northwestern boundary, and is located south of US 60, between Floyds Fork and the study area.
- Floyds Fork Park (about 102 acres) is located outside the study area boundaries, west of the southwest corner, and south of Old Taylorsville Road.

In May 2006, Louisville Metro and non-profit organizations (21st Century Parks and Future Fund) began acquiring hundreds of acres for future parkland development along Floyds Fork between US 60 and US 31E. Most, but not all, of this corridor is outside but adjacent to the study area boundaries. Some parts of the land acquired and planned to be acquired are within the study area and could cause Section 4(f) involvement for the proposed project.

<u>Cultural Historic Resources</u>: Historic resources are always an important consideration in the planning of highway corridors. Section 4(f) of the 1966 Department of Transportation Act includes historic properties (i.e., properties listed or eligible for listing on the National Register of Historic Places [NRHP]) among the resources that must be avoided if a prudent and feasible alternative exists. The National Historic Preservation Act of 1966 requires federal agencies to take into account the effect of an undertaking upon historic properties. This involves making a "reasonable and good faith effort" to identify and evaluate historic properties, to document the effects upon these properties, and to determine measures to mitigate any adverse effects.

An overview of historic resources in the study area was conducted by a KYTC-qualified consultant. The overview consisted of a literature search and windshield survey of the study area. Six NRHP-listed resources were identified in the study area, five of which are located in Jefferson County and one in Shelby County. Also identified were two potential historic districts: 12 contributing properties and 1 NRHP-listed site in Fisherville, and 23 contributing properties in Eastwood. The survey also identified 12 potentially eligible individual resources located outside the potential historic district boundaries.

The potential Fisherville district is located in the southwest portion of the study area, along Old Taylorsville Road, and consists of residential dwellings and commercial sites. The potential Eastwood district is located in the northwest portion of the study area, south of Shelbyville Road (US 60), along Eastwood Cutoff Road. It consists of residential dwellings, churches, and commercial sites. Additional individual sites are located to the east along Shelbyville Road and the railroad tracks. Several other individual sites are clustered around the vicinity of the I-64 crossings of Gilliland Road and Fisherville-Eastwood Road. The remaining individual sites are south of I-64, scattered throughout the study area. Preliminary NRHP boundaries for individual sites and districts follow the property lines on record at the respective PVA offices.

<u>Streams</u>: Perennial streams include Floyds Fork and Long Run, and their tributaries South Long Run, Shakes Run, and Brush Run. Floyds Fork and Long Run flow from north to south in

the study area's western portion, whereas the tributaries flow from east to west in the eastern portion. Approximately 57 intermittent streams were identified, the majority of which are in the study area's eastern portion and tributary to the perennial streams.

Approximately 13 ephemeral streams were identified, with most channels serving as drainage ways that flow into intermittent or perennial streams. A more detailed field survey would likely identify additional intermittent and ephemeral channels within the study area.

<u>Floodplains</u>: Flood Insurance Rate Maps (FIRM) developed by the Federal Emergency Management Agency (FEMA) were consulted. Jefferson County FIRM maps encompassing the project area are map numbers 21111C0115D, 21111C0185D (include Floyds Fork), 21111C0120D, and 21111C0205D (include Long Run), all with an effective date of February 2, 1994. The Shelby County FIRM map encompassing the project area is map number 2102090004B. The flood hazard boundary map was revised in July 15, 1977, and converted by letter to FIRM effective September 1, 2001.

Approximately 1,080 acres of the study area are located within the 100-year floodplains of Floyds Fork, Long Run, Shakes Run, Brush Run and other streams.

<u>Wetlands</u>: National Wetland Inventory (NWI) map reconnaissance revealed numerous wetlands and open water (ponds/lakes) within the study area, totaling about 90 acres. Most are small ponds used for livestock or aesthetic purposes. About 25 acres are permanently flooded wetlands within the Floyds Fork floodplain located in the study area's southwestern portion. Windshield surveys located several small areas of emergent and forested wetlands.

No field investigations were conducted, nor were size and jurisdictional status determined. More intensive field surveys would be required to confirm and delineate NWI map wetlands, as well as identify any wetlands not appearing on the maps, and to determine jurisdictional status.

<u>Threatened and Endangered Species (TES)</u>: The following databases for TES were reviewed: The U.S. Fish and Wildlife Service (USFWS), the Kentucky Department of Fish and Wildlife Resources (KDFWR), and the Kentucky State Nature Preserves Commission (KSNPC). Table G.1, in Appendix G, Environmental Overview, provides a list of protected species identified by the federal and state agencies as potentially occurring in the study area. In all, 16 species were identified as potentially occurring or known to occur in Jefferson or Shelby Counties.

Per Section 7 of the Endangered Species Act (ESA), additional coordination with the USFWS will be required, as will field surveys to confirm the presence or absence of species and suitable habitat and to ascertain potential impacts and mitigation requirements.

<u>Hazardous Materials</u>: Data was collected from numerous sources, including federal and state databases, and a windshield survey was conducted within the study area. The database search and survey identified seven possible contamination sites (see Table G.2 in Appendix G). Most of these sites involve current or former fuel distribution facilities, and/or vehicle/equipment storage and maintenance facilities, and have similar potential contamination concerns (*e.g.*, underground storage tanks [USTs], fuel spills/leaks, soil contamination, waste petroleum products, heavy metals, miscellaneous debris piles, etc.).

<u>Air Quality</u>: Jefferson County is located within the Louisville Interstate Air Quality Control Region. The study area is designated as a Non-Attainment Area for PM_{2.5}, per the 1990 Clean Air Act Amendments. Transportation control measures are not likely to be required for the project. The project is listed on page 114 of KIPDA's *FY 2006-FY 2008 Transportation Improvement Program*, adopted in November 2005, and on page 10-135 of KIPDA's *Horizon 2030 Long-Range Transportation Plan*, adopted in November 2005. Further advancement of

this project would require more detailed analysis and interagency review. If implemented, the project is not expected to adversely impact air quality in the region.

<u>Traffic Noise</u>: Highway traffic noise, or unwanted sound, is one of the most common citizen complaints regarding highways. Inducing a new road in a rural and transitioning area will generate concern over highway noise. Although several options exist for addressing noise impacts, none are more effective than noise barriers, and even they have limited effectiveness. Barriers can only be effective if no openings exist, as noise will bend and infiltrate openings. Therefore, noise barriers can only be installed along roadways that either have full access control or have a significant stretch of roadway that has no driveway openings or intersecting roads. Other noise mitigation measures that should be considered include quiet pavements, horizontal and vertical alignment shifts, and the acquisition of property along the roadway to create a buffer zone. Louisville Metro has a noise policy that restricts the placement of residential developments within a buffer of interstate facilities. Although the new road would not be an interstate facility, similar restrictions could be considered by local jurisdictions.

<u>Environmental Justice</u>: KIPDA prepared the Environmental Justice Community Impact Assessment for the proposed interchange project. The report concluded: "... the community impact assessment did not uncover any significant concentrations of Environmental Justice populations, i.e., race, ethnicity, minorities, and low-income persons, elderly, or persons with disabilities within the study area." The report is provided in Appendix H.

<u>Geotechnical Overview</u>: The KYTC Division of Structural Design, Geotechnical Branch, and the University of Kentucky, Kentucky Geological Survey, provided comments about the geotechnical nature of the study area as it relates to the project (see Appendix M). Neither agency anticipated any geotechnical problems associated with the project.

4.0 WHAT ARE THE CABINET, AGENCY, AND PUBLIC COMMENTS?

4.1 The KYTC Project Team

The I-64 Alternatives Planning Study Project Team met five times during the course of the study. The Project Team consists of FHWA-KY Division, KYTC Central Office and District-5 staff, KIPDA, and the consultant team. Each meeting was held at KYTC District 5 offices in Louisville and was documented with meeting minutes (see Appendix I). A brief summary of the major topics discussed at each meeting follows:

- 1. February 6, 2006. At this initial meeting, the scope of work was defined and the anticipated tasks that would be accomplished during the planning study were identified.
- 2. July 18, 2006. The project activity to date was reviewed in terms of the scope of work and status of study. Team members reviewed the environmental footprint/overview results, the traffic and crash information, and the key person interview results/comments. The team identified a preliminary set of project goals. Preparation for the first public informational meeting was discussed.
- March 26, 2007. The project was reviewed in terms of the latest traffic information and forecasts, and select screening criteria for the numerous alternatives. Team members reviewed the public meeting comments/responses, and the resource agency's comments/responses. Preparations for the next Project Team meeting and public informational meeting were discussed.
- 4. May 21, 2007. The project was reviewed in terms of the project status and corridor recommendations. The project team discussed the alternative corridors to carry forward for further consideration and those to eliminate from further consideration. Also reviewed were the typical section and operational analysis approaches. Preparations for the next public informational meeting and project team meeting were discussed.

5. October 1, 2007. The comments from the second public informational meeting were reviewed, as well as the recommendations to be included in this planning document. The traffic forecasts, interchange operational analysis, and cost estimates were also reviewed.

4.2 Key–Person Interviews

Seventeen Jefferson and Shelby County officials were interviewed in May – July 2006 by six Project Team members. Each interview included discussion of the overall project, as well as specific issues related to traffic, the environment, land use, and other topics of note/concern within the study area. The team documented each response and summarized the key the information received. That summary can be found in Appendix J.

4.3 Public Informational Meetings

Public information meetings were held August 29, 2006, at the Highview Baptist Church, East Campus, and June 26, 2007, at the same location. Appendix K provides the public information meeting comments summaries, and Appendix L includes newspaper articles about the public meetings. A Public Involvement Summary Notebook for each public meeting is on file with KYTC.

<u>Public Information Meeting #1</u>: The August 29, 2006 meeting was conducted to inform the public of the proposed alternatives planning study for a new I-64 interchange with a connector road, and to receive input concerning issues to consider and problems to correct. Citizens were provided a handout consisting of a project fact sheet, draft project goals, and an aerial photograph of the project study area.

Sixty-nine (69) people attended the meeting and 20 comment forms were submitted or returned. On the survey/comment form, most attendees answered "yes" to the question, "Do you think new access to I-64 is needed in eastern Jefferson County?" Traffic congestion was identified as the greatest problem in the area, and relief of traffic congestion was cited as the primary objective of the project. The Floyds Fork watershed/corridor was identified as the most important area to protect.

While attendees were generally supportive of a new I-64 interchange with a connector road, comments were received both favoring and opposing the project. Those favoring a new I-64 interchange with a connector road (the majority opinion) primarily envisioned it as a means to reduce "bottlenecks" at the existing interchanges, enhance the community's ability to attract people and employers with more convenient access to main roads, and improve emergency response times and safety. Those opposed to a new I-64 interchange with a connector road were mostly concerned about creating more sprawled development/growth and disturbing the rural character of the community.

<u>Public Information Meeting #2</u>: The June 26, 2007 meeting was conducted to inform the public to provide the citizens with the broad range of alternative locations for the interchange and the connector road. Corridors were identified as either "recommended to be carried forward" or "not recommended to be carried forward." Comments received included concern over the alignments and recommendations, support for the project regardless of its location, and opposition to the project in total.

In summary, there were 89 attendees and 44 filled out comment forms. 34 of the comments were in support of the overall project but differed in preference to the location options. The public generally commented on the alignments that are recommended to be carried forward. Of those comments, more favored alternatives in the eastern part of the study area (alternative

Segments 27, 28, 10, etc.) than in the western part (alternative Segments 1, 2, 4, etc.).¹ Few comments addressed the alignment options that were not recommended to be carried forward. Several comments noted other roadway improvements that need to be made regardless of the alternative selected, including improvement to Eastwood-Fisherville Road, US 60 and KY 155.

4.4 Resource Agency Coordination

In August 2006, eighty local, state, and federal agencies were contacted to obtain their input regarding the study area and any possible I-64 interchange improvements. The mailing identified the study corridor but not the alternative alignments. Twenty (20) responses were received, many of which noted "no comments or concerns," or recommended use of Best Management Practices (BMPs). Only project-specific or substantive comments are summarized below. Appendix M contains the full text of all responses received.

Louisville Metro Planning and Design Services: PDS stated its general support for a connector road between Shelbyville and Taylorsville Roads. The letter referenced the Eastwood Neighborhood Plan and the Quest Transportation Study recommendations, stated the importance of existing and new traffic to the economic stability of the Eastwood Village Center, and noted a desire to retain the Center's "pedestrian oriented character." Concerned that development around the Taylorsville Road connection could result in the need for additional transportation improvements, the agency recommended the project's potential consequences in this regard be studied. The agency also noted that PDS will initiate a study of the rural character of southwest Jefferson County.

<u>Transit Authority of River City (TARC)</u>: The agency stated that increased roadway connectivity and additional pedestrian and bike infrastructure could lead to growth in TARC ridership. Therefore, the interchange project and connector road would be best served by park-and-ride lots that could be tied into express bus service and carpools in the area.

<u>Simpsonville Rural Fire Protection District</u>: This project will provide the Eastwood Fire Department a quicker response route to I-64 and another exit to divert traffic onto when an accident occurs on I-64. The District noted it will shorten the bottleneck area from Simpsonville and Middletown when accidents occur on I-64. It also stated that the concrete median barriers proposed on the widened I-64 will make it difficult to reach the opposite side of the road. The District indicated the proposed interchange will help solve that problem but the connector road could increase the potential for more accidents in that location.

<u>Kentucky Department of Fish and Wildlife Services</u>: The gray bat, Indiana bat, sharp-shinned hawk, Bachman's sparrow, Henslow's sparrow, great blue heron, little blue heron, dark-eyed junco, clubshell, pied-billed grebe, Bewick's wren, and barn owl are listed species that could occur in the project area. Specific BMPs were identified for project area construction, wetlands and stream mitigation, and the need for future coordination with USACE was noted.

<u>Kentucky State Police, Post 4</u>: The proposed interchange will be beneficial to the community and for the motoring public that travels I-64.

<u>University of Kentucky, Kentucky Geological Survey (KGS)</u>: KGS noted the project area has karst features such as sinkholes, unconsolidated sediments and rock units, and recommended testing to identify potential impacts and areas best avoided. KGS also stated there is no potential for landslides, no prior mining activities, no fault potential, and only minimal potential for earthquake ground motion.

¹ Section 5.0 of this study describes the corridors and alternative segment alignments within each. In addition, the section discusses the alternatives recommended to be carried forward and those not recommended for further consideration.

<u>Commerce Cabinet, Department of Parks</u>: The agency stated that the proposed interchange and connector road will improve access to Taylorsville Lake State Park.

5.0 WHAT ARE THE ALTERNATIVE OPTIONS AND RECOMMENDATIONS?

The following alternatives concept options were developed and evaluated against the goals and objectives formulated as part of this study process. Three general concepts were identified:

- Do Nothing
- Transportation System Management (TSM), Spot Improvements, and Transit Alternatives
- New Interchange and Connector Road

5.1 Do-Nothing Alternative

This alternative involves no action to construct a new interchange or a connector road. The Do-Nothing Alternative would include routine roadway maintenance (*e.g.*, resurfacing, restriping, patching, etc.) and other committed projects with the KYTC Six-Year Highway Plan and local planning efforts. In the short-term, the Do-Nothing Alternative is the least expensive improvement option, since no funds would be expended for right-of-way acquisition, displacement of residences or businesses, utility relocations, or improvement construction. There would also be no construction period traffic disruptions, or construction-induced environmental impacts.

However, the Do-Nothing Alternative should not be construed as a continuation of the status quo. Traffic volumes and characteristics, and development inside and outside the project area will change. Normal growth in the area would contribute to increases in traffic volumes and a worsening of existing conditions. Traffic from existing and future development, as well as through traffic, would continue to use the existing roadways, with forecasts predicating substantial growth. The Do-Nothing Alternative would leave the area with a deficient transportation network that progressively deteriorates as traffic demands increase. Additional traffic congestion and an increased potential for crashes could be expected. This alternative was presented and discussed by the Project Team members, who concluded it was not in the public's best interests. The long-term benefits from implementing a proposed build alternative are expected to be substantially greater than any negative factors associated with the construction and operation. The Do-Nothing Alternative was not recommended because it did not address the project goals, namely that of mitigating congestion and improving connectivity to the existing interstate network.

5.2 TSM, Spot Improvements, and Transit Alternatives

Transportation System Management (TSM) and Spot Improvements alternatives involve relatively low-cost options. TSM options generally refer to such activities/features as signing, striping, traffic lights, and simple roadway improvements such as removing vegetation to improve visibility or improving the radius of a street corner. Spot Improvements include concepts such as reconstructing relatively short substandard curves, hills, intersections, etc. to address a safety concern, and then reconnecting with the existing roadway. Transit options could include higher cost activities/features ranging from the addition of High Occupancy Vehicle (HOV) lanes and park-and-ride lots to the construction of light rail/commuter train facilities.

Although such alternative concepts could be implemented in the area, none would address the top goals of mitigating congestion, connectivity of the road and interstate network, and safety by shifting traffic to facilities that are statistically safer than the existing rural road network. A thorough analysis of the statistical crash rates for different types of roadways is included in

Appendix B, Project Goals. Therefore, the low-costs TSM and Spot Improvements were not studied in detail as part of this planning effort.

Improvement of transit services would also not meet the goal of improving the connectivity to the interstate network. However, comments from TARC noted that increased roadway connectivity and additional pedestrian and bike infrastructure would be expected to increase TARC ridership, and that a new interchange and connector road would be best served by park-and-ride lots that could be tied into express bus service and carpools in the area.

5.3 New Interchange and Connector Road Build Alternatives

A new interchange with I-64 and a new connector linking KY 155/KY 148, I-64, and US 60 would meet the key objectives of improving congestion on the existing roads by...

- Providing a new network connection.
- Improving the connectivity of the road network to the interstate network.
- Improving safety by providing a facility built to current design standards that would shift traffic to the statistically safer interstate network.

Therefore, a majority effort of this study was focused on alternative locations for this alternative concept.

Based on the future traffic volumes, safety goals, and design considerations for the proposed road, the Project Team recommends that a four-lane divided facility be constructed within the roadway corridor. A four-lane divided facility can handle more traffic than other types of facilities, is statistically safer, and can be designed to manage access points. North of I-64, because of the land use and community setting, an urban typical section with curb and gutters is recommended. South of the I-64, because of the existing rural setting and future Floyds Fork park plan, a rural typical section is recommended. Both the urban and rural typical sections are illustrated on Figures 7a and 7b, below, and both were used as the basis for the cost estimations.



Figure 7a: Proposed Urban Typical Section North of I-64



Figure 7b: Proposed Rural Typical Section South of I-64

5.3.1 Broad Range of Alternative Locations

The alternative location process began at the first public meeting on August 29, 2006. At this meeting, maps of the area were provided on the tables in a workshop format. On these maps were the existing conditions, including streams, floodplains, wetlands, subdivisions, other land use, historic sites and districts, parks, topography, etc., that should be taken into account when trying to identify a new road corridor. After a short presentation about the project, the people in attendance were invited to draw possible alternative locations on the maps. After the meeting, the engineering team modified those alignments to meet design criteria, and then the Project Team identified other potential alignments. In this manner, the alternative location process began with a comprehensive, broad-range set of options, as shown on the map, Figure 8, below.

As the map shows, many of the proposed alignments intersect, thereby creating numerous combinations of options. To address the complex alternative naming process, each individual segment was given a number. This process produced 28 individual segments that could be combined to form a broad range of end-to-end alternatives extending from KY 155/KY 148 north to US 60. This approach provides the flexibility to eliminate an undesirable segment(s) and then connect to an intersecting segment(s) to maintain an alignment that has a locational advantage.

The broad range of alternative locations was screened in this planning study based on their ability to meet the project goals, their environmental and community impacts, and their cost.

5.3.2 Alternative Screening Process

Alternative screening for highway projects is typically a three step process. This Alternatives Planning Study includes two of those three steps. The first step was to identify the alternative concept that should be advanced—TSM/Spot Improvement/Transit or Build Alternative in a New Corridor. After the selection of a New Corridor, the second step was to reduce a comprehensive set of location options to a short list of options. The subsections that follow describe the key issues examined that allowed the Project Team to complete the second phase of the screening process. The key issues include traffic, environmental and community impacts, and costs.

The final step of the alternatives screening process will be during the preliminary engineering and environmental documentation stage, when the short list of alternatives will be studied in greater detail, in accordance with the National Environmental Policy Act (NEPA). This third stage will conclude with either the selection of a specific alignment location as the Build Alternative, or conclude that the Do-Nothing Alternative is the best option.



Figure 8: Alignments Within the Three Corridors

5.3.2.1 Traffic Analysis for Broad Range of Alternatives

Because alleviation of traffic congestion is one of the primary project goals, the broad range of alternative locations was first analyzed to determine their effects on travel patterns on the area roadway. The KYTC, Division of Planning prepared a traffic model for the study area road network, including the I-64/KY 1848 interchange in Simpsonville, and the following three interchanges with I-265: US 60, I-64, and KY 155. The report can be found in Appendix N. The larger area was studied to address the effect of a new interchange on the existing interchanges. The study has been used in the Interchange operational analysis conducted for this study (see Section 6.0, herein).

For purposes of the traffic analysis, the alignment segments were grouped by proximity according to their locations in the study area. Three distinct corridors emerged: Western Corridor segments linked the Eastwood and Fisherville communities, Eastern Corridor segments were near the Jefferson-Shelby County line, and a diagonal corridor crossed from the southwest (near Fisherville) to the northeastern (US 60 east of Long Run). The KYTC traffic model was calibrated for the known existing conditions and updated with build-out socioeconomic conditions. A representative "end-to-end" (i.e., US 60 Shelbyville Road to KY 155/148 Taylorsville Road) alignment was selected within each corridor. Year 2030 forecasts were then generated for the Do-Nothing Alternative and the end-to-end alignment alternatives.

The traffic analysis shows that Western Corridor alternative would attract more traffic from the existing roads to I-64 via the new interchange than the alternative in the Eastern or the Southwest-to-Northeast Corridor. North of I-64, for the year 2030, the Western Corridor alternative would attract 28,200 vehicles per day (vpd) between US 60 and I-64, compared to 11,400 vpd for Southwest-to-Northeast Corridor alternative and 13,000 vpd for Eastern Corridor alternative. South of I-64, for the year 2030, the Western Corridor alternative would attract between 5,400 and 13,600 vpd, compared to 5,400 to 9,100 for the Southwest-to-Northeast Corridor alternative.

These trips would be attracted from the existing surface streets to the new road and I-64, most notably from US 60 between Eastwood and I-265 and I-265 between US 60 and I-64 — the two sections of the existing road network that would experience the most benefit (i.e., reduction in congestion) from the proposed new connector road and interstate connection. The converse of this benefit is the addition of traffic to I-64 between the new corridor and I-265.

It is important to note that the traffic forecasts for Southwest-to-Northeast Corridor show an increase of traffic volumes on KY 1531 (Eastwood-Fisherville Road) over the current volume of 500 vpd and No-Build volume of 1,100 to 8,000 vpd. The increase would occur because traffic would take KY 1531 from Eastwood, cross over I-64, and then turn onto the new alignment to access I-64. This undesirable traffic pattern is one reason this corridor option is not recommended to be advanced.

	Western Corridor (the range is attributed to different southern termini options)	Southwest-to- Northeast Corridor	Eastern Corridor
New Corridor			
From US 60 to I-64	28,200	11,400	13,000
From KY 155/KY 148 to I-64	5,400 to 13,600	5,400 to 9,100	3,700
From KY 155 to KY 148	N/A	5900	N/A
<u>Change</u> in forecasted (2030) volumes from the No-Build (<i>i.e.</i> , volume of traffic to be shifted to/from the existing it			
US 60			
From I-265 to Beckley Station Road	(19,000)	(5,000 to 7,000)	(2,000)
From Beckley Station Road to Eastwood	(16,000 to 17,000)	(4,000 to 6,000)	(3,000)
From Eastwood to Flat Rock Road	0 to 1,000	(2,000 to 5,000)	(4,000)
From Flat Rock Road to KY 1848 (Veechdale Road)	(3,900)	(600 to 1,400)	(1,600)
KY 155			
From Spencer County to KY 148 (Taylorsville Lake Road)	(3,600 to 7,200)	(1,800 to 4,300)	(1,800)
From KY 148 to I-265	2,900 to (2,600)	1,300 to (1,300)	300
KY 148			
From KY 155 to New Corridor	2,600 to (3,900)	1,300 to (2,300)	(300)
From New Corridor to Shelby County	200	200	(400)
KY 1848			
From I-64 to US 60	(2,300 to 2,600)	(5,500)	(5,500)
KY 1531 (Eastwood-Fisherville Road)			
From US 60 to New Corridor	0 to (200)	6,800	(200)
From US 60 to KY 148	0 to (500)	(900 to 1,800)	(500)
I-265 (Gene Snyder Freeway)			
From KY 155 to I-64	(14,000 to 15,000)	(5,000 to 7,000)	(3,000)
From I-64 to US 60	0 to (3,400)	0 to (1,700)	0 to (1,700)
I-64			
From I-265 to New Interchange	18,000 to 20,000	11,000 to 13,000	6,000
From KY 1848 to New Interchange	1,800	0	0 to (1,800)

Table 2: Year 2030 Traffic Forecast Summary With Build Alternative

Note: Red text in parentheses (#,###) indicates a negative change in future traffic volumes; i.e., the number of vehicles projected to be diverted from the existing road as a result of the project.

5.3.2.2 Environmental and Community Impacts

In addition to the changes in traffic patterns, the alternative evaluation process has also included consideration of impacts to the natural environment, communities, and cost to implement the roadway.

<u>Environmental</u>: The key environmental considerations include Long Run, Floyds Fork, Brush Run, Shakes Run, and the associated floodplains; historic sites, including isolated sites and the potential historic districts of Eastwood and Fisherville; wildlife habitat, including Threatened and Endangered Species habitat; and view sheds.

The Western Corridor alignment Segments 26 and 29 would result in an interchange located at or near the I-64 bridge over Long Run. This would potentially require the relocation of that stream and could have direct and indirect impacts resulting from the interchange ramps. Nearly the entire interchange would be located within the floodplain of Long Run. This is one reason these segments are not recommended to be carried forward.

The Floyds Fork corridor, including the floodplain, has been avoided as much as possible, but a crossing would be required by Segment 1, which would connect with KY 155 at the existing KY 155/KY 148 intersection. The Segment 1 crossing would also encounter a notable topographical change between the cliffs south of Floyds Fork and the floodplain to the north.

Each NRHP-eligible/potentially eligible historic site and district would need to be avoided if prudent and feasible alternatives exist. This is the primary reason no alternatives recommended to be carried forward bisect the potential historic districts of Eastwood and Fisherville.

Section 4(f) properties are protected from federally-funded highway projects if they can be avoided by prudent and feasible alternatives. Publicly owned parklands are among the resources that are considered to be Section 4(f) properties. Floyds Fork Park, south of KY 155 and east of the study area, would be considered a Section 4(f) property as would Miles Park, north of I-64 and also east of the project area. Because these Jefferson County-owned parks are outside the study area, they would not be directly impacted by any alternatives currently under consideration. The city-owned Eastwood Park is within the Western Corridor and, because it is publicly owned, it would be a Section 4(f) resource. As such, it has been avoided by alignments developed for this study.

The alignments of Segments 4 and 5 in the Western Corridor encounter land that has been acquired by 21st Century Parks—the non-profit organization managing the acquisition of land for a linear park and trail along Floyds Fork. The organization submitted a letter noting general lack of opposition to the project overall, but also expressing concern about several of the alternative alignments being considered. The letter (see Appendix M) included a resolution stating that the corporation "unanimously opposes...Routes Numbers 1, 2, 3, 4, and 5," which are in the Western Corridor (see Exhibits 6 and 7, Appendix A). Segments 1, 2, and 3, also in the Western Corridor, would not use any parkland; however, the segments are adjacent to the lands being acquired for the park and trail system. Because it is expected that 21st Century Parks will retain ownership and management of the parkland as it is acquired, rather than put it in public ownership, the land would not be a Section 4(f) resource.

These segments are recommended to be carried forward because of the traffic benefit they would provide. It is recommended that close coordination with 21st Century Parks occur during future stages of project development.

<u>Community</u>: Community resources include the town centers of Eastwood and Fisherville, the number existing and planned residential subdivisions in the corridor, fire and EMS service, churches and parkland, the Floyds Fork Greenway Corridor, and farming (including equine) operations.

Existing subdivisions occupy more than 60 percent of the land in the study area. Avoiding bisecting existing platted subdivisions was a priority when identifying the original set of alternative corridors and screening the broad range of options. As Exhibits 6 and 7 show, alignments that bisected existing subdivisions (e.g., Segment 17, which bisected Ashmore Woods) are not recommended to be carried forward. Other segments that have been eliminated because of community/residential subdivision impacts are Segments 26, 29, 16, and 13. Derbyshire Estates and the recently approved but not yet constructed Shakes Run are in the middle of the study area. Avoidance of these subdivisions is the reason no alignment segments were located in the area.

5.3.3 Alternative Screening Recommendations

After consideration of the traffic forecasts and travel patterns, environmental and community considerations, and costs, the following are the recommendations from the alternatives screening process:

Build Alternative Segments Not Recommended to Be Carried Forward

- Eastern Corridor, Segments 19-25: Segments in this corridor would not best meet the primary goal of reducing congestion on the existing roadways, especially the I-265/US 60 interchange. The lack of a notable benefit to traffic is especially true in the south, between KY 148 and I-64. This corridor is also not recommended because it would require bridging the CSX railroad track south of US 60.
- The Southwest-to-Northeast Corridor, Segment 12: This corridor, which has only one segment, is not recommended to be carried forward because it too would not best meet the primary goal of the project. In addition, this corridor would result in a significant amount of traffic being added to KY 1531 as a cut-through from Eastwood. This corridor would also require bridging the CSX railroad track.

Build Alternative Segments Recommended to Be Carried Forward

The Western Corridor, Segments 1-10, 14, 2 and 28: Segments in this corridor would best meet the primary goal of reducing congestion on the existing roadways. The alignments that could be formed using various segment combinations would link the community centers of Eastwood and Fisherville and best serve the traveling public. In addition, no alignment in this corridor would require a costly bridge over the CSX railroad. While bridging the railroad could be required on the east side of Eastwood, east of the railroad tunnel, the bridge could be located where the railroad is at a significant cut in the topography, thereby reducing the cost by eliminating the need for a 30-foot-high structure.

Preliminary cost estimates (2007 dollars) have been prepared for alternatives recommended for further study (see Appendix O). To provide a meaningful comparison of costs that would be associated with the total project rather than just the individual segments, eight end-to-end alternatives were developed using all feasible combinations of segments within the corridor. The estimates include the costs associated with construction of the roadway (including bridges, drainage structures, the I-64 interchange, etc.); right-of-way acquisition; utilities relocations; and design and environmental tasks. The total preliminary costs ranged from approximately \$48.8 million to \$61.9 million. In general, the amount of excavation/embankment work and the number of major structures (most notably bridges) were the primary causes of the range of costs.

There are special considerations that must be taken into account with placing an alignment in this corridor, including:

- Continued coordination with:
 - The residents and leaders of Eastwood and Fisherville and other residents in the corridor.
 - □ State and Louisville Metro elected officials.
 - State and local agencies, including Louisville Metro Public Works, Metro Parks, and Planning and Design Services. This is especially important when

considering future land use changes and proposed subdivisions that could develop in the path of a possible alignment location.

- Developers proposing land use changes in the area.
- Stakeholders involved in the Floyds Fork linear park and trail project, including Louisville Metro Parks and 21st Century Parks.
- □ CSX and NS railroad companies.
- Consideration of the impacts to and use of the 21st Century Floyds Fork linear park and trail system. This includes direct impacts and indirect impacts, as well as visual impacts, i.e., employing contest sensitive design to create a "parkway" that visually and operationally is a linear extension of the park system.
- Topographical constraints and designs of the roadway near Fisherville: specifically, the bridging of the railroad; and the topographic constraints of the river valley including the tributaries and the grade variances between the floodplain, cliffs, and hilly terrain.

In summary, it is the recommendation of this Alternatives Planning Study that the Western Corridor segment alignments be carried forward into the next stage of the project development, which would include preliminary engineering, environmental documentation, and a full Interchange Justification Study (IJS). The objective of this stage will be to conduct a complete alternatives analysis to identify the location and design of a selected alternative. The Do-Nothing Alternative will also be carried forward to provide a basis for comparing build alternatives, even though the Do-Nothing Alternative would not meet the project goals.

The alternatives "recommended to be carried forward" and "not recommended to be carried forward" are illustrated on Figure 9, below, and on Exhibits 6 and 7. A map illustrating the traffic volumes and levels of service for the recommended corridor is included as Exhibit 5. This exhibit includes traffic data for the "worst case" scenario for increasing traffic volumes on I-64. This data was used in the operational analysis described in Section 6.0, below.

The traffic analysis that was completed for this project was prepared by KYTC because the study area extended into Shelby County, which is outside the KIPDA traffic model area. For the next stage, because the recommended corridor of alternatives is within Jefferson County, it is recommended the traffic modeling be conducted by KIPDA and that the model include updated programmed transportation projects and updated socioeconomic variables.

The current Six-Year Highway Plan includes funding for preliminary engineering and environmental analysis, only. There is as yet no committed funding for future stages such as right-of-way acquisition, utility relocation, and construction. Additional funds would need to be identified in the Six-Year Highway Plan for these stages.

Should the Project Team agree to implement the project in construction phases, it is recommended that the interchange and the northern segment be constructed first, as it is shorter and would attract more traffic and provide more traffic benefit than the southern section.



Figure 9: Short-List / Screened Broad Range of Alternative Alignments (Yellow Advanced, Gray Eliminated)

6.0 WHAT DOES THE PRELIMINARY INTERCHANGE JUSTIFICATION STUDY INDICATE?

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) contains requirements for planning a proposed interchange to the existing Interstate Highway system. These requirements are implemented in FHWA policy and through Federal regulation located in 23 CFR part 450. The policy for *Additional Interchanges to the Interstate System* contains eight points that must be taken into consideration. This section discusses each policy point that would be addressed in greater detail in a full Interchange Justification Study (IJS) that would be required by FHWA prior to approval of funding for the new interchange.

Policy Statement No. 1: Existing Facilities Capability

"It is demonstrated that the existing interchanges and/or local roads and streets in the corridor can neither provide the necessary access, nor be improved to satisfactorily accommodate the design-year traffic demands while at the same time providing the access intended by the proposal. "

The existing interstate interchanges with surface streets in the area are: I-265/US 60 (Exit 27, Middletown) in the northwest, I-265/KY 155 (Exit 23, Taylorsville Road) in the southwest, and I-64/KY 1848 (Exit 28, Simpsonville) in the east in Shelby County. The spacing of these interchanges prohibits them from being able to provide interstate access to/from the study area. Further, they are either at or projected to be at capacity, and limited improvements to them are proposed. The improvements were included in the traffic model, and they still fail to provide for the access and interstate connection needs for eastern Jefferson County.

The existing north-south local roads in the study area include Eastwood-Fisherville Road (KY 1531) and Gilliland Road/Echo Trail and Clark Station Road. These three local north-south roads are substandard and could not be improved to handle the local north-south travel in the area. The width of these roads ranges from 18 to 22 feet, and they follow the topography, with very poor sight distance and geometrics. Further, a new interchange would not be able to connect to these substandard roads; therefore, a new connector north to US 60 and south to KY 155 or KY 148 would be necessary.

Policy Statement No. 2: Transportation System Management

"All reasonable alternatives for design options, location and transportation system management type improvements (such as ramp metering, mass transit, and HOV facilities) have been assessed and provided for, if currently justified, or provisions are included for accommodating such facilities if a future need is identified."

In Section 4.0, above, the various design options, including TSM and Spot Improvements, are described. None of these types of low-cost options would provide the relief to the current network and interchanges that would be provided by a new interstate interchange on I-64 in far eastern Jefferson County. No mass transit (TARC) service is currently provided for in the study area. In this area, all service is west of I-265. Coordination with TARC indicated that improved access to I-64 with additional pedestrian and bicycle infrastructure would anticipate a growth in TARC ridership. HOV lanes are not provided in any Louisville area interstates. I-64 is currently proposed to be widened from four to six general purpose lanes, but provisions for HOV lanes are not included.

Policy Statement No. 3: Operational Analysis

"The proposed access point does not have a significant adverse impact on the safety and operation of the Interstate facility based on an analysis of current and future traffic. The operational analysis for existing conditions shall, particularly in urbanized areas, include an analysis of sections of Interstate to and including at least the first interchange on either side. Crossroads and other roads and streets shall be included in the analysis to the extent necessary to assure their ability to collect and distribute traffic to and from the interchange with new or revised access point."

The traffic operational analysis has been performed for the proposed interchange, and it included the mainlines of I-64, I-265, US 60, KY 155, KY 148, and the surface streets in the area. It also included the following interchanges: I-64 Exit 28, KY 1848 at Simpsonville; I-64 Exit 19, at I-265; and I-265/US 60 at Middletown. It should be noted that the traffic forecasts provided different traffic volumes for different locations of the interchange and connector road; therefore, the operational analysis was based on the option that would attract the most traffic to I-64 (*i.e.*, the "worst case" scenario for I-64 and the proposed interchange, and the "best case scenario" for the surface streets). The traffic data for the analysis is illustrated on Exhibit 5.

In general, the analysis for this alternative indicates the proposed interchange would provide improved operations to the I-265/US 60, I-265/KY 155, and I-64/I-265 interchanges. Regarding the mainlines, the proposed interchange would provide improved operations to US 60, I-265, and KY 155. On I-64, the 2030 volumes would increase between the connector and I-265 by approximately 20,000 vpd as compared to the No-Build option. These additional vehicles would be attracted from US 60, KY 155 and I-265. This shift in traffic from these roads to I-64 via the new connector would cause a reduction in LOS from E to F on this section of I-64. This is based on the existing planned widening on I-64 to a six-lane facility. The addition of auxiliary lanes along I-64 is one option that could address this concern. East of the new connector there would be a negligible increase of approximately 2,000 vpd with the LOS remaining at E for both the No-Build and the Build options.

The merge, diverge, and weave analysis are illustrated in Appendix P. This analysis is conducted for the peak-hour conditions, based on and reflective of the traffic volumes discussed above. In general, because of the long spacing of the interchange, the merge, diverge, and weave analysis illustrates that the movements would operate in a safe and efficient manner.

Regarding crossroads and surface streets, the analysis indicates that a new four-lane facility would be needed to collect and distribute traffic north and south from I-64 to US 60 and KY 155/KY 148, respectively. The existing surface streets are not designed to handle the proposed volumes of traffic. The connector road has been included as part of this project.

Policy Statement No. 4: Access Connections and Design

"The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" for special purposes access for transit vehicles, for HOVs or into park and ride lots may be considered on a case-by-case basis. The proposed access will be designed to meet or exceed standards for Federal-aid projects on the Interstate system."

The proposed interchange would connect to a new public road, which would terminate at US 60 and KY 155 or KY 148. The interchange would be a full interchange, and would be designed to meet or exceed current design standards for Federal-aid projects on the Interstate System.

Policy Statement No. 5: Transportation and Land Use Plans

"The proposal considers and is consistent with local and regional land use and transportation plans."

The proposed interchange was identified in the first metropolitan transportation plan published in 1969. In various forms it has been included in local and regional plans since, including the current KIPDA Transportation Improvement Plan (TIP) and Long-Rang Plan, local thoroughfare plans, and the State Six-Year Highway Plan. Select pages from these plans are included in Appendix E.

Policy Statement No. 6: Comprehensive Interstate Network Study

"In areas where the potential exists for future multiple interchange additions, all request for new or revised access are supported by a comprehensive Interstate network study with recommendations that address all proposed and desired access within the context of a longterm plan."

The proposed interchange is the only new interchange proposed for I-64 in either Jefferson or Shelby County. However, on I-265 there is currently a proposal for a new interchange at Rehl Road, which is located approximately at milepost (MP) 24, between the interchanges with KY 155 to the south and I-64 to the north. The planning for the interchange at MP 24 is relatively new (as compared to the I-64 interchange proposed herein). The traffic model will be prepared by KIPDA and coordinated with the proposed I-64 interchange to ensure a coordinated study of the interstate network.

Future traffic analysis for both of these planned new interchanges will undergo a full IJS and NEPA analysis, which will involve coordination with Louisville Metro, KIPDA, KYTC, and FHWA. Coordination among these agencies also will be required for the development of the traffic model and traffic assumptions in future stages of this project.

Policy Statement No. 7: Coordination with Transportation System Improvements

"The request for a new or revised access generated by new or expanded development demonstrates appropriate coordination between the development and related or otherwise required transportation system improvements."

The proposed interchange and connector road project is not generated by any specific new or expanded development; rather, the need for these facilities is the result of past, current, for foreseeable residential and neighborhood-related commercial development throughout the study area. There are currently several proposed residential subdivision developments in the study area. Coordination with the developers has occurred as part of this planning study and, in certain cases, the developers have agreed to consider preserving rights-of-way in case the connector road should traverse their properties. These developments are not dependent on the proposed interchange or connector road. Further, any preserved corridors would not preclude or influence a comprehensive alternatives analysis during NEPA documentation and decision-making process.

Under a separate planning effort, Louisville Metro is currently preparing a transportation thoroughfare plan as part of the Floyds Fork Linear Park Plan. The large study area for that project encompasses the proposed interstate and connector road study area. This thoroughfare plan considers the proposed interchange and connector road as a "committed project," and identifies other long-term east-west and north-south corridors need to generate a comprehensive roadway network in eastern Jefferson County. It should be noted that the interchange and connector road, as well as the corridors identified in the thoroughfare plan, have separate and independent utility.

Policy Statement No. 8: Status of Planning and NEPA

"The request for new or revised access contains information relative to the planning requirements and the status of the environmental processing of the proposal."

One goal of the planning process and planning objectives, herein, was to obtain, analyze and document information that would expedite the NEPA process and IJS requirements of the FHWA, should this project be advanced. The planning level analysis herein concludes the interchange would be beneficial to area traffic and not harmful to the interstate network. Regarding the NEPA process, no significant impacts are anticipated with the recommended interchange; therefore, either a Categorical Exclusion or an Environmental Assessment/Finding of No Significant Impact (rather than an Environmental Impact Statement) should be appropriate.








Terminology Key NR: Building or district which is either listed on the National Register or previously determined eligible. NRP: Building or district when compared to others on the National Register appear to meet criteria A, B or C. Survey: Buildings which would be documented in a baseline study, but, on the surface, appear to have no National Register potential.

Lincob

64

Lineolis Hid

Note: Archaeology sites not shown due to the sensitive nature of the data.



STRE



Exhibit 3 **USGS** Topographic Environmental Footprint I-64 Interchange Study Jefferson and Shelby Counties, Kentucky

1,250

2,500 Feet

KYTC Item No. 5-8200





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Exhibit 3 **USGS** Topographic Environmental Footprint I-64 Interchange Study Jefferson and Shelby Counties, Kentucky

1,250

2,500 Feet

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Appendix B

I-64 Interchange and New Connector Alternatives Study Project Goals

The project goals were developed through discussions with KYTC officials, key persons/local officials interviews, public comments, resource agency comments, on-site visits, traffic records and other studies, and project team meetings. Traffic congestion from a lack of the roadway connectivity was consistently the top identified issue and concern.

Following are the project goals:

- 1) Mitigate Congestion
- 2) Connectivity of the Road and Interstate Network
- 3) Plan for the Future
- 4) Improve Safety
- 5) Environmental Preservation
- 6) Proactive and Joint Planning

These project goals are addressed below.

1) <u>Mitigate Congestion</u>

The goal is to reduce congestion of US 60, KY 155/KY 148, and the I-265 interchanges with US 60, I-64, and KY 155. Existing traffic congestion concerns (and the anticipated future increases) emerged as a key project issue among those interviewed and others familiar with the area roadways. The study area and the region surrounding it has been actively growing and developing for many years, with a corresponding increase in traffic volume. Existing highways and interchanges are at or near their capacity, and backups are common. Public officials expressed a growing concern that the ever-increasing traffic volumes will soon adversely impact roadway and interchange functionality even more, thereby generating additional congestion concerns. A new I-64 interchange with a connector road would provide additional capacity to the existing road network. The increased capacity and interstate access would relieve some of the pressure on the existing roadways and interchanges, thereby improving their effectiveness to service the region.

2) <u>Connectivity of the Road and Interstate Network</u>

The goal is to improve the local road network and its connectivity to the interstate network to provide travel options for local people seeking access to the employment, educational, health care, retail, and other travel destination. Improving the local road network servicing the area, and its interstate access, is a key goal of the proposed project, and was strongly endorsed by local officials and others familiar with existing conditions. There is no access to the existing I-64 interstate for approximately 9-miles between I-265 and KY 1848. This is one of the larger gaps in access to an interstate highway anywhere in the state. The study area is situated at approximately the midpoint of this length, near the periphery of a rapidly growing region of eastern Jefferson County. The study area and surrounding area, especially to the

west, is projected to continue its rapid growth and development. Commuters using the existing road network are provided limited options for east-west travel; north-south travel options are even more restricted. Specifically, bottlenecks occur at the existing I-265/KY 155 (Taylorsville Road) interchange and the I-265/US 60 (Shelbyville Road) interchange. These are the only two nearby points of access to the interstate network for the study area and beyond. These two interchanges and approach roads are already heavily congested, with backups routinely occurring. These interchanges and intersections service a region much larger than the study area, and have met or exceeded their original design capacity. A new I-64 interchange and connector road would add additional capacity, taking pressure off these existing facilities.

While local citizens expressed a strong desire to preserve the area's rural character and minimize impacts to existing property and resources, the lack of connectivity and interstate access was also considered a hindrance to meeting the travel needs of the area. Improving connectivity would play an important role in serving not only the existing transportation needs but also the region's future growth and development, projected traffic demands, and access to emergency services, jobs, health care, education, retail, and other travel designations in the region. Local officials and the public generally viewed a new I-64 interchange and connector road as necessary to add additional capacity and take pressure off the existing facilities.

Louisville and Shelbyville are regional economic activity, employment, health care, and educational centers. I-64 is the major interstate connector between Louisville Metro and Shelbyville, and to other destinations beyond; while US 60 and KY 155/KY 148 are the major state and county connector roads. Commuters in and surrounding the study area have limited opportunities for other north-south, and east-west travel. Consequently, all three roadways attract a substantial amount of commuter, employee, and commercial traffic from throughout Jefferson County and Shelby County.. Because I-64 cannot be accessed between I-265 and KY 1848, traffic proceeds along the local road network toward the I-64 interchanges, creating a funneling effect and generating heavy traffic congestion on major roads and at the interchanges. A new I-64 interchange and connector road would provide an additional access point to I-64, relieve traffic congestion pressure on local major roadways and interstate interchanges, thereby, improving local commuters' access to the opportunities available in the urban activity centers.

3) Plan for the Future

The goal is to provide a facility that is capable of serving recent growth, and sustaining current and projected (year 2030) traffic demands. The study area, and much of the area surrounding it, has experienced, and is expected to continue to experience, continual growth. Multiple subdivisions are already established in the north, with others are under construction or planned throughout the area. At least two new major subdivisions are planned for the heart of the study area. Many existing parcels are for sale, and the area is already zoned for R4 (approximately 4 single family dwellings per acre). Located outside the study area to the east and west, especially in the north along the Shelbyville Road corridor, multiple residential subdivisions are already well established, rapidly expanding, and more are planned. Louisville Metro, along with several non-profit organizations, are acquiring thousands of acres of land along Floyds Fork to construct a multi-mile, multi-use recreational area that will extend between US 31E and US 60. This effort is changing the landscape, and generating a significant amount of interest in residential development along this corridor. Traffic forecasts

indicate traffic will continually increase through the year 2030 on every major and minor road in the area.

4) Improve Safety

This goal is to provide a facility that meets current design standards, which is used to divert traffic from the substandard roads to the interstate network. Statistically, both the proposed connector and the interstate have lower crash rates than rural surface streets. Another element of improved safety is the improvement of emergency response times, both on I-64 and the land uses in the study area.

The sub-standard geometrics of existing roadways is also a major safety concern, especially as the area continues to develop. As the area develops and traffic increases, then driver and public safety are expected to decrease, while emergency response times/access are expected to increase. Except for the major roads (*i.e.*, I-64, US 60, KY 155/KY 148), other existing roads are very narrow two-lane rural roads with no shoulders, winding through rolling terrain with sharp turns/curves and steep grades. These roads do not meet current design standards, and have poor vertical and horizontal geometrics. The driver's sight distance is frequently limited or obstructed by terrain features such as hills and curves, and other restrictions.

<u>Crash statistics</u> from the "Analysis of Traffic Crash Data in Kentucky (1998-2002) and (2002-2006);" by the Kentucky Transportation Center shows, as can be seen in Table B.1, that interstates and parkways have lower crash rates than other types of facilities. Therefore, any of the Build Alternatives are expected to result in lower crash rates over the Do Nothing alternative. Further, Table B.2 shows that the higher the functional classification in rural areas the lower the crash rate.

Highway Type	Rural (1998-2002)	Rural (2002-2006)	Urban (1998-2002)	Urban (2002-2006)
Interstate	49	52	91	94
Parkway	58	63	105	111
Four-Lane Divided	124	116	295	277
Four-Lane Undivided	267	245	484	445
Two-Lane	248	230	290	263
All	172	160	247	236

Table B.1: Statewide Crash Rates by Highway Type Classification

Highway Type	1998-2002	2002-2006
Rural Interstate	39	42
Rural Principal Arterial	102	92
Rural Minor Arterial	191	177
Rural Major Collector	213	206
Rural Minor Collector	218	224

Rural Local	175	189
Urban Interstate	73	75
Urban Freeway	80	100
Urban Principal Arterial	327	297
Urban Minor Arterial	270	242
Urban Collector	130	106
Urban Local	190	230

Because the crash rates on freeways are lower than other functional class facilities, the greater the amount of total travel on these facilities the greater the improvement in safety. Table 7 shows that the western corridor of build alternatives attracts the most traffic to I-64 from lower functional class facilities. Thus, the western corridor of alignments would be the most effective in improving safety.

Because the shift of traffic to interstates is not a conclusive performance measure in demonstrating an improvement in safety over the No Build Condition, geometric features of the Build Alternatives compared to the No Build Condition must be examined relative to their effectiveness in improving safety. Median width and access control have been correlated to crash rates as shown in Table B.3. Based on this data, the introduction of a median and an increase in the median width results in lower crash rates. While a facility with full access control (i.e., I-64) has the lowest crash rate, the introduction of partial access control for the proposed connector road would be expected to result in a 25 percent to 35 percent reduction in the crash rate over the existing conditions.

Median Type (rural multi-lane roads)	1998-2002	2002-2006
Undivided	163	143
Divided, median less than 30 feet, no median barrier	102	103
Divided, median greater than 30 feet, no median barrier	51	61
Access Control	1998-2002	2002-2006
Full	70	75
Partial	222	183
None	293	271

Table B.3: Statewide Crash Rates by Median Type and Access Control

<u>Emergency response</u> is also a safety issue for two different areas: I-64 itself and the land uses in the area, especially south of I-64. Fire and emergency response service in the study area and on I-64 is currently jointly provided by the Eastwood and Simpsonville Fire Departments under a mutual aid agreement. Access to crashes/incidents on I-64, and to properties south of I-64, is very limited. Response to I-64 crashes can only be accomplished through using US 60 and relatively long, circuitous routes via the interchanges at I-265 or KY 1848, and then driving additional miles to the incident site. Depending upon whether the incident is located on the eastbound or westbound I-64

side, and prevailing weather conditions, additional travel time by the responding unit may be required to reach the incident site. Emergency incidents occurring during peak traffic congestion events (*e.g.*, morning or evening commuter traffic, or I-64 traffic diversions onto US 60) render a timely and rapid emergency response very difficult. The return trip to the department's home station usually requires driving to the next interchange to exit I-64 and then re-enter in the opposite direction (round trips of 20-25 miles are common). Additionally, this nine-mile stretch of I-64 itself has few crossing points and thus acts as a barrier to hinder north-south travel. A new I-64 interchange in the study area would provide emergency response crews convenient and rapid access to I-64 incidents, drastically reducing both distance traveled and response time. Additionally, a new interchange and connector road would also improve access to properties located south of I-64. Emergency response to these locations within the study area is hampered by limited access points, sub-standard roadways, limited connectivity, and circuitous routes.

5) Environmental Preservation

This goal is in regard to identifying alternative locations that avoid or minimize impacts to community resources, natural resources, and historic properties and districts. Historic cultural resources in the area are considered significant links to the past and represent a rich cultural heritage. Discussions with local officials and citizens indicated a desire to preserve these areas and the traditions they represent. Local officials and citizens also expressed a desire to avoid or minimize impacting established residential neighborhoods and communities. Efforts will be made to avoid community impacts, and to minimize property impacts in general by following property lines to the maximum extent possible. Natural resources are also recognized as valuable commodities, important not only to the communities themselves, but to the health of the natural environment. State and federal guidelines will be followed to minimize impacts to the natural resources.

6) <u>Proactive and Joint Planning</u>

This goal is in regard to providing a roadway network consistent with local and regional land use, community, and transportation plans, and identifying a preferred alternative corridor local officials can preserve before development and land use changes occur in the study area.

Local, county, and regional land use plans and transportation plans were consulted in the development of this alternatives planning study. Elected officials at various government levels, as well as county planning and design representatives, were consulted to ensure the alternatives planning study was complementary to future plans.

The proposed new interchange and connector road is situated in a rapidly developing area, which, in turn, has generated the need for the project. The area is developing so rapidly that, in order to minimize residential and property impacts, facilitate an optimal alignment, and balance future associated expenses, it is important to identify and preserve a preferred alternative corridor early on. Identifying and preserving a preferred corridor now will permit development to continue in a fashion harmonious with a future interchange and connector road, which would ultimately be less disruptive to area residents. Several elected officials also remarked about the need for a sense of urgency to identify and preserve a preferred alternative corridor to avoid "missing opportunities" to reduce costs and minimize impacts, while simultaneously serving the public good by providing an essential road network.

Appendix C Roadway Characteristics

<u>Overview</u>

The existing roadway network is limited, served mainly by the east-west roadways consisting of one interstate (with no access from the study area) and the two state highways located along the study area's north and south boundaries. Floyds Fork and Long Run are effective natural barriers in the western portion preventing east-west travel. Other roads present are minor local/rural 2-lane roads, winding through the hilly terrain, providing limited access to the major roads leading to the employment, education, health care, and economic activity centers in Louisville Metro and Shelbyville. Other area roadways and interchanges surrounding the study area are routinely congested with traffic, and emergency response times and access are a growing concern.

A map reconnaissance and windshield survey of the project study area reveals it to be bracketed on the north and south by primary roadways running east-to-west, specifically KY 155/KY 148 (Taylorsville Road), I-64, and US 60 (Shelbyville Road). The only north-south "through connector road" is KY 1531 (named Eastwood-Fisherville Road south of US 60), a narrow and winding 2-lane rural secondary road. All other roadways within the study area are narrow rural local roads, generally serving residential dwellings, and north-south travel is limited to connecting a series of roads together. East-west travel is virtually non-existent, except for KY 155/KY 148 and US 60. Two waterways run generally north-south in the study area's western side - Floyds Fork and Long Run - which tend to act as natural barriers and further limit local travel options. For the following discussion of study area roadways and their characteristics, refer to Tables C.1 and C.2 (Existing Highway Systems, and Geometric and Traffic Characteristics of Existing Highways). The shaded boxes in Table C.2 indicate those roadway sections with widths less than the current design standards of 12-foot wide driving lanes and 8-foot wide shoulders. Refer to Exhibits 1 and 2, Environmental Footprint, in Appendix A, and the color photographs in illustrating typical examples of existing roadway sections.

Existing Major Roads

I-64. According to the KYTC Highway Information System (HIS) database, the existing I-64 through the study area is a 4-lane divided highway with fully controlled-access, a depressed 54-foot wide median, 12-foot wide lanes, paved shoulders (10-feet wide, right, outer side), an average right-of-way width of 200-feet in Jefferson County, 300-feet in Shelby County, and a posted speed limit of 65 miles per hour (mph). There is no access to I-64 within the study area. The roadway is identified as a *Rural Interstate* on the Functional Classification System, and a *State Primary (Interstate)* on the state's system. It is part of the National Highway System and the Defense Highway Network, and a federally designated truck route with a weight classification of "AAA" (80,000 pounds gross weight). Regionally, I-64 is a major interstate highway and a major transportation roadway within the Louisville Metro Urbanized Area, and the major east-west roadway through Shelby County. I-64 is the major connector between Louisville, Frankfort, Lexington, and Ashland, each a major population and economic activity center.

I-64, under KYTC item number 5-65.00, is programmed for reconstruction and widening from I-265 (Gene Snyder Freeway) to KY 53 (Shelbyville). The proposed highway project would widen the I-64 mainline to the inside from four lanes to six lanes to meet current design standards. The typical section consists of three 12-foot wide lanes, 12-foot wide outside shoulders (10-feet paved), and a 30-foot wide paved median with a centerline

concrete barrier wall. The project widens the I-64 mainline primarily within its existing right-of-way. The purpose for the project is to increase the capacity of the highway to meet existing and projected traffic demands, and to provide a safe and efficient transportation solution along the I-64 corridor. The needs for the project are to relieve congestion along I-64, and the interchanges; to reduce crash rates and improve safety; and to provide a roadway meeting current safety design standards. The project would serve the recent and planned growth eastern Jefferson County and Shelby County are experiencing.

The I-64 roadway under study has existing (*i.e.*, year 2006) Average Daily Traffic (ADT) volumes of about 50,000 vehicles per day (vpd), which are projected to increase to about 92,000 vpd by the year 2030. This represents a projected traffic volume increase of about 84 percent along I-64 by the year 2030. Other study area highways are projected to experience even larger percent increases in traffic volumes.

- <u>US 60 (Shelbyville Road)</u> is the northern east-west roadway in the study area, and considered a major highway through Jefferson and Shelby Counties. Within the study area, US 60 is a 2-lane undivided highway traversing rolling terrain with 11-foot wide lanes, a 45 mph speed limit (changing to 55 mph just west of the Shelby County line), and 4-foot wide shoulders. Passing sight distance is unavailable for most of the study area, and ranges from 0 to 34-percent near the county line. US 60 is a State Primary (Other) system, functionally classified as a *Rural Minor Arterial*, with an "AAA" truck weight class rating. It is not listed on the National Truck Network or the National Highway System.
- KY 155/KY 148 (Taylorsville Road) is considered a major highway through Jefferson and • Spencer Counties, and composes the southern east-west roadway in the study area. KY 155 enters Jefferson County from the south (Spencer County), intersecting KY 148 at MP 4.257 in the southwest corner of the study area, and continues west into Jefferson County. KY 148 begins at its intersection with KY 155 (MP 0.000) and continues east into Shelby County. Within the study area, KY 155 is a 2-lane undivided highway traversing rolling terrain with 11-foot wide lanes, a 55 mph speed limit, 4-foot wide shoulders, and an 8-percent passing sight distance. KY 148 makes up the majority of Taylorsville Road in the study area, and is a 2-lane undivided highway traversing rolling terrain with 10-foot wide lanes in Jefferson County, 9-foot wide lanes in Shelby County, a 55 mph speed limit, 3-foot wide shoulders, and an undetermined passing sight distance. KY 155 is a State Secondary system, functionally classified as an Urban Principal Arterial, with an "AAA" truck weight class rating. It is a state designated route on the National Truck Network, and not listed on the National Highway System. KY 148 is a Rural Secondary system, functionally classified as an Urban Collector Street and Rural Minor Collector, with an "A" truck weight class rating. It is not listed on the National Truck Network or the National Highway System.
- <u>KY 1531 (Eastwood-Fisherville Road)</u> is the only "direct" north-south roadway in the study area, and winds through the natural terrain. KY 1531 enters Jefferson County from the south, intersecting KY 155 about MP 5.6. Within the study area, KY 1531 is a 2-lane undivided highway traversing rolling terrain with mostly 9-foot wide lanes (it enters the study area as 10-foot wide lanes, and exits as 8-foot wide lanes), a posted 55 mph speed limit (although driving conditions limit 25 to 35 MPH), 1 to 3-foot wide shoulders, and an undetermined passing sight distance. KY 1531 is a Rural Secondary system, functionally classified as a *Rural Local*, with an "A" truck weight class rating. It is not listed on the National Truck Network or the National Highway System.

Table C.1 Existing Highway Systems

Begin MP	Begin Route	End MP	End Route	State System	National Truck Network	National Highway System	Functional Classification	Truck Weigh Class
-64		1						
18.888	I-265 Underpass (Gene Snyder)	23.974	Jefferson-Shelby C/L	State Primary (Interstate)	Yes	Yes	Rural Interstate	AAA
23.974	Jefferson-Shelby C/L	27.569	KY 1848 Interchange	State Primary (Interstate)	Yes	Yes	Rural Interstate	AAA
JS 60. SI	helbyville Road		*					
11.970	1-265 Ramp	12.185	n/a	State Primary (Other)	No	No	Urban Principal Arterial	AAA
12.185	n/a	12.980	Wickfield Dr	State Primary (Other)	No	No	Urban Principal Arterial	AAA
12.980	Wickfield Dr	13.415	n/a	State Primary (Other)	No	No	Urban Principal Arterial	AAA
13.415	n/a	13.557	Floyds Fork Bridge	State Primary (Other)	No	No	Urban Principal Arterial	AAA
13.557	Floyds Fork Bridge	14.600	Spring Dr	State Primary (Other)	No	No	Rural Minor Arterial	AAA
14.600	Spring Dr	14.718	KY 2841 (Eastwood Cutoff Rd)	State Primary (Other)	No	No	Rural Minor Arterial	AAA
14.718	KY 2841 (Eastwood Cutoff Rd)	15.210	n/a	State Primary (Other)	No	No	Rural Minor Arterial	AAA
15.210	n/a	15.500	Ash Run Rd	State Primary (Other)	No	No	Rural Minor Arterial	AAA
15.500	Ash Run Rd	17.375	Jefferson-Shelby C/L	State Primary (Other)	No	No	Rural Minor Arterial	AAA
0.000	Jefferson-Shelby C/L	2.500	n/a	State Primary (Other)	No	No	Rural Minor Arterial	AAA
2.500	n/a	2.750	n/a (Simpsonville)	State Primary (Other)	No	No	Rural Minor Arterial	AAA
2.750	n/a (Simpsonville)	3.500	Meadow Ridge	State Primary (Other)	No	No	Rural Minor Arterial	AAA
3.500	Meadow Ridge	3.850	n/a	State Primary (Other)	No	No	Rural Minor Arterial	AAA
3.850	n/a	6.600	Joyes Station Rd	State Primary (Other)	No	No	Rural Minor Arterial	AAA
6.600	Joyes Station Rd	8.200	n/a	State Primary (Other)	No	No	Rural Minor Arterial	AAA
and the second second	Eastwood-Fisherville Road			, .				
0.000	Bullitt-Jefferson C/L	5.720	east of KY 155/KY 148	Rural Secondary	No	No	Rural Local	Α
5.720	north of KY 155/KY 148	8.120	vic I-64 underpass	Rural Secondary	No	No	Rural Local	A
8.120	vic I-64 underpass	9.120	US 60	Rural Secondary	No	No	Rural Local	A
9.120	US 60	10.120	Johnson Farm Rd	Rural Secondary	No	No	Rural Local	A
10.120	Johnson Farm Rd	12.656	Jefferson-Shelby C/L	Rural Secondary	No	No	Rural Local	A
	Taylorsville Road/Taylorsville Lake							
0.000	Jefferson-Spencer C/L	2.757	n/a	State Secondary	Yes ¹	No	Rural Minor Arterial	AAA
2.757	n/a	4.069	Old Taylorsville Rd	State Secondary	Yes ¹	No	Rural Minor Arterial	AAA
4.069	Old Taylorsville Rd	4.257	KY 148	State Secondary	Yes ¹	No	Urban Principal Arterial	AAA
4.257	KY 148	5.727	n/a	State Secondary	Yes ¹	No	Urban Principal Arterial	AAA
5.727	n/a	5.737	n/a	State Secondary	Yes ¹	No	Urban Principal Arterial	AAA
5.737	n/a	5.781	east of Harrods Old Trce	State Secondary	Yes ¹	No	Urban Principal Arterial	AAA
5.781	east of Harrods Old Trce	5.990	I-265 EB on ramp	State Primary (Other)	Yes ¹	No	Urban Principal Arterial	AAA
5.990	I-265 EB on ramp	6.279	Hopewell Rd	State Primary (Other)	Yes1	No	Urban Principal Arterial	AAA
and the second second	Taylorsville Road/Finchville Road			(
0.000	KY155	1.070	Old Taylorsville Rd	Rural Secondary	No	No	Urban Collector Street	A
1.070	Old Taylorsville Rd	1.178	KY 1531 (Eastwood-Fisherville Rd)	Rural Secondary	No	No	Rural Minor Collector	A
1.178	KY 1531 (Eastwood-Fisherville Rd)	3.333	Jefferson-Shelby C/L	Rural Secondary	No	No	Rural Minor Collector	A
1.170	Jefferson-Shelby C/L	0.837	Veechdale Rd	Rural Secondary	No	No	Rural Minor Collector	A

Source: KYTC Highway Information System (HIS)

¹ State designated truck route from Spencer County line to I-265.

				Lane	Shoulder	% Passing	Speed					ADT		Composite	Composit
Begin MP	End MP	Length (miles)	No. of Lanes	Width (feet) ¹	Width (feet) ¹	Sight Distance ²	Limit (mph)	Roadway Type	Terrain Type	Pavement Type	2006	2030	percent increase	Adequacy Rating ³	Adequacy Percentile
-64		-						7							
18.888	23.974	5.09	4	12	10	**	65	Divided	rolling	High Flexible	50,000	92,000	84.0%	77.25	7.57
23.974	27.569	3.60	4	12	10	**	65	Divided	rolling	Flexible over Rigid	50,000	92,000	84.0%	70.25	3.64
US 60, 5	Shelbyvi	lle Road													
11.970	12.185	0.22	4	12	12	***	45	Undivided	rolling	Flexible over Rigid	28,000	58,000	107.1%	52.50	21.92
12.185	12.980	0.80	4	12	4	**	45	Undivided	rolling	Flexible over Rigid	28,000	58,000	107.1%	79.50	70.55
12.980	13.415	0.43	4	12	4	**	50	Undivided	rolling	Flexible over Rigid	15,000	29,400	96.0%	79.50	70.55
13.415	14.600	1.19	4	12	4	**	50	Divided	rolling	Flexible over Rigid	15,000	29,400	96.0%	93.00	87.23
14.600	14.718	0.12	3	12	4	**	45	Divided	rolling	Flexible over Rigid	15,000	29,400	96.0%	93.00	87.23
14.718	15.210	0.49	2	11	4	**	45	Undivided	rolling	Flexible over Rigid	9,000	20,500	127.8%	71.00	24.83
15.210	15.500	0.29	2	11	4	**	45	Undivided	rolling	Flexible over Rigid	9,000	20,500	127.8%	71.00	24.83
15.500	17.375	1.88	2	11	4	0	55	Undivided	rolling	Flexible over Rigid	9,000	20,500	127.8%	88.00	75.40
0.000	2.500	2.50	2	11	4	34	55	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
2.500	2.750	0.25	2	11	4	34	45	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
2.750	3.500	0.75	2	11	8	34	45	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
3.500	3.850	0.35	2	11	4	34	45	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
3.850	6.600	2.75	2	11	4	34	55	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
6.600	8.200	1.60	2	11	8	34	55	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
(Y 153		ood-Fisher													
0.000	5.720	5.72	2	10	5	**	55	Undivided	rolling	Mixed Bituminous	500	2,300	360.0%	**	**
5.720	8.120	2.40	2	9	2	**	55	Undivided	rolling	Mixed Bituminous	500	2,300	360.0%	**	**
8.120	9.120	1.00	2	9	3	**	55	Undivided	rolling	Mixed Bituminous	500	1,100	120.0%	**	**
9.120	10.120	1.00	2	8	1	**	55	Undivided	rolling	Mixed Bituminous	500	1,100	120.0%	**	**
10.120	12.656	2.54	2	8	5	**	55	Undivided	rolling	Mixed Bituminous	500	1,100	120.0%	**	**
(Y 155,			Taylorsvill	e Lake Ro	ad										
0.000	2.757	2.76	2	11	10	73	55	Undivided	rolling	High Flexible	15,100	48,700	222.5%	95.00	100.0
2.757	4.069	1.31	2	11	10	79	55	Undivided	rolling	High Flexible	15,100	48,700	222.5%	93.00	87.23
4.069	4.257	0.19	2	11	10	**	55	Undivided	rolling	High Flexible	15,100	48,700	222.5%	70.65	56.14
4.257	5.727	1.47	2	11	4	8	55	Undivided	rolling	High Flexible	16,000	57,800	261.3%	57.15	28.14
5.727	5.737	0.01	2	11	12	8	55	Divided	rolling	High Flexible	16,000	57,800	261.3%	80.10	72.48
5.737	5.781	0.04	4	11	12	8	55	Divided	rolling	High Flexible	16,000	57,800	261.3%	80.10	72.48
5.781	6.279	0.50	4	12	12	**	55	Divided	rolling	High Flexible	16,000	57,800	261.3%	80.10	72.48
			Fisherville												
0.000	1.070	1.07	2	10	3	**	55	Undivided	rolling	Mixed Bituminous	2,000	6,500	225.0%	79.00	83.98
1.070	1.178	0.11	2	10	3	**	55	Undivided	rolling	Mixed Bituminous	2,000	6,500	225.0%	**	**
1.178	3.333	2.16	2	10	3	**	55	Undivided	rolling	Mixed Bituminous	1,300	2,700	107.7%	**	**
0.000	0.837	0.84	2	9	3	**	55	Undivided	rolling	Mixed Bituminous	1,300	2,700	107.7%	**	**

Table C.2 Geometric and Traffic Characteristics of Existing Highways

Source: KYTC Highway Information System (HIS). ** Information not available.

¹ Lane and shoulder widths that do not meet current design standards (i.e., less than 12-foot-wide driving lanes and 8-foot-wide shoulders), and unacceptable Level of Service (LOS) ratings (i.e., D, E, F) are shaded.

² Percent Passing Sight Distance - the percent of segment length (estimated to the nearest 10%), which has available passing sight distance (as measured from the driver's eye to the road surface) of at least 1,500 feet. This information is only available for Kentucky maintained roads classified as State Primary or State Secondary.

³ Composite Adequacy Rating is a method being developed by KYTC to assess a roadway's condition and prioritize highway improvements. The ratings are calculated by individual functional class and based upon three roadway components (safety, service, and condition) with each component comprised of several measures. The rating scores 100 as a perfect, or near perfect, highway. The Composite Adequacy Percentile ranks a particular roadway section compared to other Kentucky roads in the same functional class into a percentile. For example, a road section with a composite adequacy percentile of 75.0 means that 25% of the roads are rated better. Composite adequacy data is from the April 10, 2007 update.

Appendix D Photographs of Study Area



Photo 1 US 60 East Bound near Eastwood Cutoff



Photo 2 US 60 East Bound at Eastwood Cutoff



Photo 3 US 60 EB at Eastwood Cutoff



Photo 4 US 60 West bound at Eastwood Cutoff



Photo 5 US 60 West bound at Eastwood Cutoff



Photo 6 US 60 West bound at KY 1531 in Eastwood



Photo 7 US 60 West Bound at KY 1531



Photo 8 KY 1531 at US 60 looking south in Eastwod.



Photo 9 Eastwood Cutoff East bound at KY 1531



Photo 10 Eastwood Cutoff West bound at KY 1531



Photo 11 KY 1531 South bound at Eastwood Cutoff



Photo 12 Gilliland Road North bound bridge over I-64



Photo 13 Gilliland Road South bound South of I-64



Photo 14 I-64 East bound from Gilliland Road bridge



Photo 15 I-64 West bound from Gilliland Road bridge



Photo 16 Industrial property West bound English Station Road at KY 148 in Fisherville



Photo 17

Typical terrain South west English Station Road at KY 148



Photo 18

Industrial prop on South bound English Station Road at KY



Photo 19 English Station Road North bound near KY 148



Photo 20 KY 148 West bound near KY 155



Photo 21 Railroad parallel to KY 148 West bound near KY 155



Photo 22 KY 148 East bound at English Station Road



Photo 23 KY 148 West bound at KY 155



Photo 24 KY 155 South bound at KY 148



Photo 25 KY 148 East bound at KY 155



Photo 26 KY 1531 Routt Road, South bound at KY 155



Photo 27 KY 1531 North bound at KY 155 vic Sec 27



Photo 28 KY 148 West bound at KY 1531



<u>Photo 29</u> KY 148 West bound at Floyds Fork Bridge



Photo 30 KY 148 East bound at KY 1531



Photo 31 KY 1531 North bound at KY 148



Photo 32 KY 1531 South bound at KY 148



Photo 33 KY 148 West bound at KY 1531





Photo 34 KY 1531 North bound at Fisherville Woods Dr.

Photo 35 KY 1531 North bound

Photo 36 KY 1531 North bound



Photo 37 KY 1531 South bound near Eastwood



Photo 38 Gilliland Road South bound at Eastwood Cutoff



Photo 39 Gilliland Road South bound vic Section 6



Photo 40 Gilliland Road North bound vic Muir Chapel





KIPDA ID # 390

Project Type: ROADWAY CAPACITY

Description: New interchange & connector road from KY 148 to US 60 (Shelbyville Road) with interchange on I-64. Corridor would be in vicinity of Gilliland Road.

Purpose: Provide access to I-64 and KY 1848 in Shelby County.

Primary Contact Agency: Kentucky Transportation Cabinet County: Jefferson State ID #: Project Cost: \$25,000,000 Estimated Open to Public Year: 2015

Regional Priority: NO Included in AQ Analysis/Regionally Significant: YES Subject to CMS Review: YES Within 1/4 Mile or on a Freight Corridor: YES Within 1/4 Mile or on a Bicycle & Pedestrian Priority Corridor: NO Includes Bicycle Facilities: NO Includes Pedestrian Facilities: NO



NEW	NEW I-64 INTERCHANGE & U.S. 60 CONNECTOR
Background	The U.S. 60 corridor east of Middletown is currently experiencing heavy development pressure, which is expected to intensify over the next several years. Even with the major improvements to the U.S. 60/I-265 and I-64/I-265 interchanges currently being studied by the Kentucky Transportation Cabinet, those facilities and U.S. 60 are expected to operate at poor levels of service in 2020. A new I-64 interchange and U.S. 60 connector would relieve traffic demand in that corridor by providing a direct link to I-64 from developments along U.S. 60, Flat Rock Road, Long Run Road and the Crestwood/Pewee Valley area. Future improvements would link to Aiken Road on the north and Taylorsville Road on the south.
Proposed Construction	Construct a new interchange at the Gililand Road overpass on 1-64 and reconstruct Gililand Road to U.S. 60 as a two (2) lane collector. The intersection at U.S. 60 should be re-aligned to the west. Future phases would re-construct Johnson Road to a two (2) lane collector from U.S. 60 to Aiken Road. Gililand Road, south of 1-64, would be re-constructed as a two (2) lane collector to Taylorsville Road.
	(An alternate location for the new interchange would be Beckley Station Road.) A study should be completed immediately to determine the most feasible location for the interchange and preserve the needed right of way.
Vicinity Map	
Priority	
 Short Term Medium Term Long Term 	
	Jefferson County Priority List of Projects

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Prepared by HNTB Corporation

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NEW 1-64 INTERCHANGE & U.S. 60 CONNECTOR CONTINUED

Funding

YEAR	PHASE	FUNDING	COST
		Interchange	Connector -
Future	Design	\$1,000,000	\$250,000
Future	ROW	\$4,000,000	\$ 1,000,000
Fucure	Utilities.	\$2,000,000	6500,000
, Future	Construction	<u>313,000,000 53,250,000</u>	53,250,000

Prepared by FINTB Corporation

Jefferson County Priority List of Projects

Land Use

FIGURE 4





EASTWOOD NEIGHBORHOOD PLAN 15



Mobility Recommendations

Recommendation	Implementation Responsibility	Timeframe		
Cornerstone 2020/LDC				
•Develop a bicycle and pedestrian master plan to identify future bicycle, pedestrian, and multi- use corridors, including opportunities to connect with the proposed county loop along Floyds Fork	Louisville Metro Planning Commission	Medium		
•Require sidewalks for all development within the Village Center to promote walking as a viable alternative	Louisville Metro Planning Commission	Short		
•Promote greenway trails to provide pedestrian access for all development within the Outlying Village	Louisville Metro Planning Commission	Short		
Infrastructure/Capital Improvement				
•Expand the existing road network, adding streets and alleys, to encourage lot patterns ap- propriate to the Village form	Louisville Metro Planning Commission	Medium-Long		
•Improve U.S. 60 to three lanes to support future village center development	Kentucky Transportation Cabinet			
Policy-Programmatic				
•Locate any future I-64 interchange east of East- wood to protect the village character	Kentucky Transportation Cabinet			
•Adopt typical sections to guide future roadway improvements	Kentucky Transportation Cabinet; Louisville Metro Public Works Department	Short		
•Improve transit facilities to serve the Eastwood Village Center	TARC	Medium		


APPENDIX

EASTWOOD LANDUSE

Eastwood Neighborhood Plan



APPENDIX

EASTWOOD ZONING

Eastwood Neighborhood Plan



FINAL RECOMMENDATIONS

NEW J-64 INTER THANGE

While the Eastwood Neighborhood Plan recommends that any new interchange at I-64 be located east of Eastwood, it is this reports recommendation that an Interchange at Eastwood – Fisherville Road may be beneficial to the Village development.

With an Interchange at Eastwood – Fisherville Road and land use plans that prescribe where new commercial development can occur, the new traffic volumes will provide incentive for commercial development within the Village Center that will serve both residents and visitors to the area. New connector roadways outlined in following sections are also recommended to allow strictly pass through traffic to bypass the Village Center so that the Village character can be retained.

Eastwood - Fisherville Road

. . .

The Kentucky Transportation Cabinet has funded a study to look at locations for a new Interchange on I-64 east of the Snyder Freeway (I-265) and one alternative to be evaluated is Eastwood - Fisherville Road. If this location is selected, it will require its upgrade to a three to five-lane facility from I-64 north to Shelbyville Road. Due to the existing topography in the area, the right of way dimension may be well over the 130' needed for the typical section. The roadway access should be partially controlled with access points no closer than 600 – 700' apart.

An alternative alignment of Eastwood – Fisherville Road should also be considered, curving the existing alignment to the east to intersect the Outer Collector connecting back to the Eastwood Cut Off Road.

Residential development adjacent to Eastwood - Fisherville can take the form of more dense, multi-family type developments, giving the community a more extensive choice in housing types.

New Outer Tonnector Loop Road

The existing roadway network outside the Village Center needs to establish additional collector level streets to foster development in a way that supports the neighborhood plan. With the possible introduction of traffic off a new I-64 Interchange, there also needs to be alternative routes around the Village Center to allow strictly through traffic to access the Interstate system.

The large tract properties south of the Village Center must introduce a new east - west connection that will collect future development traffic and route it to Eastwood-Fisherville or Gilliland Road. At a point east of Eastwood-Fisherville Road, this new connector road should either curve to the north, or intersect a new north-south connector that would intersect the Eastwood Cut-Off Road at a point just west of the new Eastwood-Lockhart multi-family development. This new north-south connection will extend across the Eastwood Cut-Off Road and intersect Shelbyville Road at a point across from the new Glen Lakes Subdivision Section 5 and 6.

At Gilliland Road, the new east-west connector road should continue west and north, intersecting Shelbyville Road at a point just west of the Village. This connection will provide for future development within the western portion of Eastwood, and will also provide a by-pass for traffic entering or leaving the Interstate system via Eastwood – Fisherville Road.

Extension of this western connection at US 60 northwardly to intersect Johnson Road was evaluated, however grades in the area appear too steep to allow any reasonable grade with which to make that connection (an approximate 11% + grade would be the minimum possible). Any extension would have to have a structure and cross over the railroad to provide new access into the furthest northwest section of Eastwood.

Consistent with other corridors within the area, this connection will function as a minor collector requiring an 80' right of way to allow for development of the roadway section and such amenities as bike and pedestrian paths.

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Appendix F Crash Data Analysis Methodology

2.4 Crash Analysis

Safety on project study area roadways was analyzed using crash analysis. Crash analysis is an analysis tool for finding roadway sections with abnormally high crash rates and, therefore, sections with potentially correctable hazards to traffic safety. Historical crash data from the fiveyear period January 2001 - December 2005 was used to identify study area roadway sections with abnormally high crash rates, thus indicating a possible need for safety improvements. Only crashes with a valid mile-point listing were considered in the analysis. Crash analysis procedures involve assigning reported crashes to roadway locations by mile-point. Crashes are normally classified by severity into one of three categories: fatal, injury, or property damage only (PDO). Then, the average crash rate for roadway sections of various lengths is determined. Generally, the analysis procedure includes analyzing the entire roadway length under study, followed by analyzing successively smaller roadway sections, especially those containing higher concentrations of crashes. Roadway sections are classified as either spots or segments depending on their length - sections less than 0.30 miles are classified as a spot location, and sections over 0.30 miles are classified as a segment. Roadway section crash rates were normalized for comparison by either hundred-million-vehicle-miles traveled (HMVM) for seaments, or millions-of-vehicles (MV) for spots. Using the average crash rate, the critical crash rate is obtained from Kentucky Transportation Research Center's (KTRC) Analysis of Traffic Crash Data in Kentucky (2000-2004). The critical crash rate is the maximum crash rate expected to occur on a roadway section, given the statewide average crash rate for that functional road class, the average daily traffic (ADT) volume, and the roadway section length. The ratio of these two rates (*i.e.*, the actual annual crash rate to the critical crash rate) produces a critical rate factor (CRF), or a measure of crash frequency for each segment or spot location. If the roadway section's actual crash rate exceeds the critical rate (*i.e.*, the CRF is greater than 1.0), then that section is classified as a high crash location. In other words, if the CRF exceeds 1.0, then that highway section has more crashes than is statistically probable in the absence of an unsafe condition or conditions. If the CRF is between 0.90 and 1.0, then that section is considered a potentially high crash location, with the potential increasing as 1.0 is approached.

Table E.1, *Crash Analysis Summary*, provides a summary of the crash analysis. The study area crash analysis contains the detailed crash analysis for the primary roadways in the project study area. The *Traffic and Crash Locations Exhibit* provides a graphic presentation of the crashes. The analysis considered an area somewhat larger than the actual study area boundaries, reflecting the fact that a new interstate interchange would affect traffic conditions at key locations outside the study area. The analysis identified several high and potentially high crash locations, as indicated by the different colored shading.

Table F.1 Crash Analysis Summary

								Cras	shes					Rates pe	er HMVM			Critical
Begin MP	End MP	Length (miles)	ADT (veh/day)	Number Lanes	Rural / Urban	Functional Class Rate	Fatal	Injury	PDO	Total	MV	HMVM	Fatal	Injury	PDO	Total	Critical Rate	Rate Factor ¹
Interstate	-64																	
18.000	24.000	6.000	61,100	4	R	54.00	3	112	172	287	111.508	6.690	0.45	16.74	25.71	42.90	61.39	0.70
23.800	25.100	1.300	52,600	4	R	54.00	1	23	20	44	95.995	1.248	0.80	18.43	16.03	35.26	71.35	0.49
		at mp 18.88																
18.700	19.000	0.300	52,600	4	R	0.16	0	8	36	44	95.995	0.288	0.00	0.08	0.38	0.46	0.27	1.70
18.800	19.100	0.300	52,600	4	R	0.16	0	9	49	58	95.995	0.288	0.00	0.09	0.51	0.60	0.27	2.23
18.900	19.200	0.300	52,600	4	R	0.16	1	12	32	45	95.995	0.288	0.01	0.13	0.33	0.47	0.27	1.73
19.000	19.300	0.300	52,600	4	R	0.16	1	12	22	35	95.995	0.288	0.01	0.13	0.23	0.36	0.27	1.35
	1531 (Eastwo	ood Fishervil	· · ·	bass at mp 2	2.00 and Loi	ng Run Creek Bri	dge at m	22.067										
22.000	22.300	0.300	52,600	4	R	0.16	0	10	17	27	95.995	0.288	0.00	0.10	0.18	0.28	0.27	1.04
I-265 (Gen	e Snyder Fr	eewav)						•				•	•	•	•			
22.000	28.000	6.000	57,900	4	U	92.00	4	95	171	270	105.668	6.340	0.63	14.98	26.97	42.59	94.41	0.45
vicinity I-64	overpass at	mp 25.454													•			
25.300	25.600	0.300	67,000	4	U	0.28	1	17	27	45	122.275	0.367	0.01	0.14	0.22	0.37	0.41	0.90
US 60 (She	elbyville Ro	ad)			-							•			•			
10.000	17.400	7.400	19,400	4	U	278.00	6	218	261	485	35.405	2.620	2.29	83.21	99.62	185.12	285.23	0.65
0.000	1.600	1.600	5,970	2	R	239.00	0	9	22	31	10.8953	0.174	0.00	51.63	126.20	177.83	251.11	0.71
vicinity I-26	5 overpass a		,			•								•	•			
11.800	12.100	0.300	31,200	4	U	0.84	0	26	40	66	56.94	0.171	0.00	0.46	0.70	1.16	1.16	1.00
11.900	12.200	0.300	31,200	4	U	0.84	0	28	42	70	56.94	0.171	0.00	0.49	0.74	1.23	1.16	1.06
12.000	12.300	0.300	31,200	4	U	0.84	0	30	31	61	56.94	0.171	0.00	0.53	0.54	1.07	1.16	0.92
vicinity Beck	kley Station I	Road at mp 1	2.895															
12.700	13.000	0.300	15,500	4	U	0.84	1	27	8	36	28.2875	0.085	0.04	0.95	0.28	1.27	1.30	0.98
12.800	13.100	0.300	15,500	4	U	0.84	1	20	12	33	28.2875	0.085	0.04	0.71	0.42	1.17	1.30	0.90
vicinity KY	1531 (Eastw	ood Fishervi	lle Rd) at mp	14.904														
14.800	15.100	0.300	8,800	2	R	0.72	2	8	11	21	16.06	0.048	0.12	0.50	0.68	1.31	1.30	1.01
KY 155 (Ta	aylorsville R	load/Taylors	ville Lake R	oad)										•	•			
3.000	7.000	4.000	15,100	2	U	258.00	1	53	60	114	27.5575	1.102	0.91	48.08	54.43	103.42	265.90	0.39
vicinity I-26	5 overpass a	it mp 6.058											•	•	•			
6.000	6.300	0.300	15,300	4	U	0.77	0	15	18	33	27.9225	0.084	0.00	0.54	0.64	1.18	1.22	0.97
KY 148 (Ta	avlorsville R	load/Finchvi	lle Road)				•	•					•	•	•	•		
0.000	3.400	3.400	9,300	2	R	239.00	0	8	8	16	16.9725	0.577	0.00	13.86	13.86	27.73	248.70	0.11
0.000	1.000	1.000	1,300	2	R	239.00	0	3	3	6	2.3725	0.024	0.00	126.45	126.45	252.90	265.07	0.95
		isherville Ro	,			•	,											
5.000	13.000	8.000	1,350	2	R	239.00	0	12	10	22	2.46375	0.197	0.00	60.88	50.74	111.62	264.57	0.42
		ood Cutoff) a		_														
8.900	9.200	0.300	470	2	R	0.72	0	1	2	3	0.85775	0.003	0.00	1.17	2.33	3.50	3.66	0.95
Source: k	YTC Highwa	av Information	System (HIS) Researc	h period is Ja	nuary 2001 to Dec	cember 20	05								•		

Source: KYTC Highway Information System (HIS). Research period is January 2001 to December 2005.

¹ Critical Rate Factors that are statistically high (i.e., equal to or greater than 1.00) are shaded.

High crash locations

Potentially high crash locations

									Cra	shes					Rates pe	er HMVM			Critical
Road	Begin MP	End MP	Length (miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	Fatal	Injury	PDO	Total	M∨	HM∨M	Fatal	Injury	PDO	Total	Critical Rate	Rate Factor
	Jefferso	n County																	
	18.000	24.000	6.000	61,100	4	R	54.00	3	112	172	287	111.508	6.690	0.45	16.74	25.71	42.90	61.39	0.70
	18.000	18.300	0.300	85,100	6	U	0.28	0	17	14	31	155.3075	0.466	0.00	0.11	0.09	0.20	0.39	0.51
	18.100	18.400	0.300	85,100	6	U	0.28	0	7	4	11	155.3075	0.466	0.00	0.05	0.03	0.07	0.39	0.18
	18.200	18.500	0.300	85,100	6	U	0.28	0	1	5	6	155.3075	0.466	0.00	0.01	0.03	0.04	0.39	0.10
	18.300	18.600	0.300	85,100	6	U	0.28	0	0	9	9	155.3075	0.466	0.00	0.00	0.06	0.06	0.39	0.15
	18.400	18.700	0.300	85,100	6	U	0.28	0	3	8	11	155.3075	0.466	0.00	0.02	0.05	0.07	0.39	0.18
	18.500	18.800	0.300	85,100	6	U	0.28	0	5	9	14	155.3075	0.466	0.00	0.03	0.06	0.09	0.39	0.23
	18.600	18.900	0.300	85,100	6	U	0.28	0	8	25	33	155.3075	0.466	0.00	0.05	0.16	0.21	0.39	0.54
		nderpass at mp																	
	18.700	19.000	0.300	52,600	4	R	0.16	0	8	36	44	95.995	0.288	0.00	0.08	0.38	0.46	0.27	1.70
	18.800	19.100	0.300	52,600	4	R	0.16	0	9	49	58	95.995	0.288	0.00	0.09	0.51	0.60	0.27	2.23
	18.900	19.200	0.300	52,600	4	R	0.16	1	12	32	45	95.995	0.288	0.01	0.13	0.33	0.47	0.27	1.73
	19.000	19.300	0.300	52,600	4	R	0.16	1	12	22	35	95.995	0.288	0.01	0.13	0.23	0.36	0.27	1.35
	19.100	19.400	0.300	52,600	4	R	0.16	1	13	6	20	95.995	0.288	0.01	0.14	0.06	0.21	0.27	0.77
	19.200	19.500	0.300	52,600	4	R	0.16	0	7	5	12	95.995	0.288	0.00	0.07	0.05	0.13	0.27	0.46
	19.300	19.600	0.300	52,600	4	R	0.16	0	4	4	8	95.995	0.288	0.00	0.04	0.04	0.08	0.27	0.31
	19.400	19.700	0.300	52,600	4	R	0.16	0	4	6	10	95.995	0.288	0.00	0.04	0.06	0.10	0.27	0.39
	19.500	19.800	0.300	52,600	4	R	0.16	0	5	4	9	95.995	0.288	0.00	0.05	0.04	0.09	0.27	0.35
I-64	19.600	19.900	0.300	52,600	4	R	0.16	0	5	5	10	95.995	0.288	0.00	0.05	0.05	0.10	0.27	0.39
<u> </u>	19.700	20.000	0.300	52,600	4	R	0.16	0	3	6	9	95.995	0.288	0.00	0.03	0.06	0.09	0.27	0.35
	19.800	20.100	0.300	52,600	4	R	0.16	0	10	11	21	95.995	0.288	0.00	0.10	0.11	0.22	0.27	0.81
	19.900	20.200	0.300	52,600	4	R	0.16	0	11	9 7	20 16	95.995	0.288	0.00	0.11	0.09	0.21	0.27	0.77
	20.000 20.100	20.300 20.400	0.300	52,600 52,600	4	R R	0.16 0.16	0	9 2		5	95.995 95.995	0.288	0.00	0.09	0.07	0.17 0.05	0.27 0.27	0.62
	20.100	20.400	0.300	52,600	4	R	0.16	0	2	3	3 4	95.995	0.288	0.00	0.02	0.03	0.05	0.27	0.19
	20.200	20.500	0.300	52,600	4	R	0.16	0	1	4	4 5	95.995	0.288	0.00	0.01	0.03	0.04	0.27	0.15
	20.300	20.000	0.300	52,600	4	R	0.16	0	5	2	7	95.995	0.288	0.00	0.01	0.04	0.03	0.27	0.19
	20.400	20.700	0.300	52,600	4	R	0.10	0	6	3	9	95.995	0.288	0.00	0.05	0.02	0.07	0.27	0.27
	20.600	20.900	0.300	52,600	4	R	0.10	0	8	4	12	95.995	0.288	0.00	0.08	0.03	0.03	0.27	0.46
	20.700	21.000	0.300	52,600	4	R	0.10	0	3	5	8	95.995	0.288	0.00	0.03	0.04	0.08	0.27	0.31
	20.800	21.100	0.300	52,600	4	R	0.16	0	7	7	14	95,995	0.288	0.00	0.07	0.07	0.15	0.27	0.54
	20.900	21.200	0.300	52,600	4	R	0.16	0	5	5	10	95.995	0.288	0.00	0.05	0.05	0.10	0.27	0.39
	21.000	21.300	0.300	52,600	4	R	0.16	0	6	5	11	95.995	0.288	0.00	0.06	0.05	0.11	0.27	0.42
	21.100	21.400	0.300	52,600	4	R	0.16	0	1	3	4	95.995	0.288	0.00	0.00	0.03	0.04	0.27	0.15
1	21.200	21.500	0.300	52,600	4	R	0.16	0	4	3	7	95.995	0.288	0.00	0.04	0.03	0.07	0.27	0.27
1	21.300	21.600	0.300	52,600	4	R	0.16	0	5	3	8	95.995	0.288	0.00	0.05	0.03	0.08	0.27	0.31
1	21.400	21.700	0.300	52,600	4	R	0.16	0	7	5	12	95.995	0.288	0.00	0.07	0.05	0.13	0.27	0.46
1	21.500	21.800	0.300	52,600	4	R	0.16	0	4	4	8	95.995	0.288	0.00	0.04	0.04	0.08	0.27	0.31
1	21.600	21.900	0.300	52,600	4	R	0.16	0	2	5	7	95.995	0.288	0.00	0.02	0.05	0.07	0.27	0.27
1	21.700	22.000	0.300	52,600	4	R	0.16	0	0	3	3	95.995	0.288	0.00	0.00	0.03	0.03	0.27	0.12

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52,600 4 R 0.16 0 22.400 22.700 0.300 52,600 4 R 0.16 0 22.400 22.700 0.300 52,600 4 R 0.16 1 22.600 22.800 0.300 52,600 4 R 0.16 1 22.800 23.200 0.300 52,600 4 R 0.16 1 | MP MP (miles) ADT Lanes Urban Class Rate Fatal Injury vicinity KY 1531 (Eastwood Fisherville Rd) underpass at mp 22:00 and Long Run Creek Bridge at mp 22:067 21.800 22.100 0.300 52,600 4 R 0.16 0 4 21.900 22.200 0.300 52,600 4 R 0.16 0 14 22.000 22.300 0.300 52,600 4 R 0.16 0 88 22.000 22.600 0.300 52,600 4 R 0.16 0 12 22.400 22.700 0.300 52,600 4 R 0.16 0 11 22.600 0.300 52,600 4 R 0.16 0 11 22.600 23.000 0.300 52,600 4 R 0.16 1 22 22.800 0.300 52,600 4 R 0.16 1 22 23.000 < | MP (miles) ADT Lanes Urban Class Rate Fala Injury PDO vicinity KY 1531 (Eastwood Fsherville Rd) underpass at mp 22 00 and Long Run Creek Bridge at mp 22 00 0 0 4 15 21.900 22.200 0.300 52,600 4 R 0.16 0 4 15 22.000 22.200 0.300 52,600 4 R 0.16 0 4 17 22.100 22.400 0.300 52,600 4 R 0.16 0 8 7 22.200 22.500 0.300 52,600 4 R 0.16 0 1 4 22.400 22.700 0.300 52,600 4 R 0.16 0 1 4 22.600 22.800 0.300 52,600 4 R 0.16 1 3 1 22.700 23.000 0.300 52,600 4 R 0.16 1 3 </th <th>MP (miles) ADT Lanes Urban Class Rate Fatal Injury PDO Total vicinity KY 1531 (Eastwood Fisherville R8) underpass at mp 22.00 and Long Run Creek Bridge at mp 22.087 0.300 52,600 4 R 0.16 0 4 18 190 21.900 22.200 0.300 52,600 4 R 0.16 0 4 18 22 22.000 22.300 0.300 52,600 4 R 0.16 0 8 3 11 22.200 22.400 0.300 52,600 4 R 0.16 0 2 4 6 22.300 22.600 0.300 52,600 4 R 0.16 0 1 4 5 22.600 22.900 0.300 52,600 4 R 0.16 1 3 1 5 22.600 23.000 0.300 52,600 4 R 0.16 1 2 7</th> <th>MP MP (miles) ADT Lanes Urban Class Rate Fata Injury PDO Total MV vicinity K1331<(Eastwood Fisherville Rd) underpass at mp 2200 Run Creek Bridge at mp 22067 7 1900 22.200 0.300 52,600 4 R 0.16 0 4 18 22 95.995 22.000 22.200 0.300 52,600 4 R 0.16 0 4 18 22 95.995 22.000 22.300 0.300 52,600 4 R 0.16 0 8 3 11 95.995 22.200 22.500 0.300 52,600 4 R 0.16 0 1 5 6 95.995 22.400 22.600 3.00 52,600 4 R 0.16 1 4 8 13 95.995 22.500 22.800 0.300 52,600 4 R 0.16 1 4 8 13<th>MP MP (miles) ADT Lanes Urban Class Rade Fatal Injury PDO Total MV HMVM uicinity K1301 (Exatwod Fisherulle Raj underpass at mp 2200 and Long Run Creek Bridge at mp 22.067 22.1000 2.3000 52.600 4 R 0.16 0 4 18 2.2 95.995 0.288 22.1000 22.300 0.300 52.600 4 R 0.16 0 4 18 2.2 95.995 0.288 22.100 22.400 0.300 52.600 4 R 0.16 0 8 7 15 95.995 0.288 22.200 22.600 0.300 52.600 4 R 0.16 0 1 4 6 95.995 0.288 22.400 22.700 0.300 52.600 4 R 0.16 1 4 5 95.995 0.288 22.600 23.000 0.300 52.600 4 R 0.16</th><th>MP MP (mies) ADT Lanes Urban Class Rate Felal Injury PDO Total MV HMVM Felal wichnly NTS1 (Eastwood Fisherville Rd) undepress at mp 2200 and Lorg Run Creek Bridge at mp 220 br? 95.995 0.288 0.000 21.900 22.200 0.300 52,600 4 R 0.16 0 4 18 22 95.995 0.288 0.000 22.000 22.300 0.300 52,600 4 R 0.16 0 10 17 27 95.995 0.288 0.000 22.100 22.400 0.300 52,600 4 R 0.16 0 1 5 6 95.995 0.288 0.000 22.400 22.400 0.300 52,600 4 R 0.16 1 4 5 95.995 0.288 0.001 22.600 23.000 0.300 52,600 4</th><th>MP MP (miles) ADT Lanes Uthan Class Rate Fatal Injury PDO Total MV HMM Fatal Injury vicinity N131 Eisateod Fiberwilk R31 inservises at m22000 cost cost vicinity N131 Eisateod Fiberwilk R31 max vicinity N131 Eisateod Fiberwilk R31 vicinity R31 Eisateod Fiberwilk R31 v</th><th>MP (miles) AD⁻ Lanes Upun Class Rate Feld Injury PDO Total MV HMVM Feld Injury PDO winny KY 1531 (Estender Fehrelle Rd) undegas at m 2200 and Long Run Creek Bindler at m22067</th><th>MP (miles) ADT Lenes Uthan Class Rate Fetal Injury PDO Total MV HMMM Fetal Injury PDO Total sicinity KY 1531 (Eastwood Fisherike Rity undergas at mp 2200 and Long Rath Cerek Rath Cerek Rath Cerek Rath Cerek Spesso 0.288 0.00 0.04 0.16 0.23 21.000 23.200 0.300 52.600 4 R 0.16 0 4 11 95.995 0.288 0.00 0.10 10.8 0.28 22.000 23.00 0.300 52.600 4 R 0.16 0 8 3 11 95.995 0.288 0.00 0.08 0.07 0.16 22.000 23.00 52.600 4 R 0.16 0 1 4 5 95.995 0.288 0.00 0.00 0.00 0.02 0.04 0.05 22.000 0.300 52.600 4 R 0.16 1</th><th>MP (miles) AD Lanes Uthan Class Rate Field Injury PO0 Total MV HMVM Field Injury PD0 Total Rate vicinity KV 1531 (Eastwood Fishende Rd) undepass at #2200 and Long Run Ceek Bridge at m 22.007 22.000 0.300 52.600 4 R 0.16 0 4 18 19 95.995 0.288 0.00 0.04 0.10 0.23 0.27 22.000 0.300 52.600 4 R 0.16 0
 4 18 59.995 0.288 0.00 0.04 0.10 0.18 0.27 22.000 0.300 52.600 4 R 0.16 0 8 7 15 95.995 0.288 0.00 0.08 0.03 0.11 0.27 22.000 0.300 52.600 4 R 0.16 0 1 4 5 95.995 0.288 0.00 0.00 0.00 0.00 0.00 0.00</th></th> | MP (miles) ADT Lanes Urban Class Rate Fatal Injury PDO Total vicinity KY 1531 (Eastwood Fisherville R8) underpass at mp 22.00 and Long Run Creek Bridge at mp 22.087 0.300 52,600 4 R 0.16 0 4 18 190 21.900 22.200 0.300 52,600 4 R 0.16 0 4 18 22 22.000 22.300 0.300 52,600 4 R 0.16 0 8 3 11 22.200 22.400 0.300 52,600 4 R 0.16 0 2 4 6 22.300 22.600 0.300 52,600 4 R 0.16 0 1 4 5 22.600 22.900 0.300 52,600 4 R 0.16 1 3 1 5 22.600 23.000 0.300 52,600 4 R 0.16 1 2 7 | MP MP (miles) ADT Lanes Urban Class Rate Fata Injury PDO Total MV vicinity K1331<(Eastwood Fisherville Rd) underpass at mp 2200 Run Creek Bridge at mp 22067 7 1900 22.200 0.300 52,600 4 R 0.16 0 4 18 22 95.995 22.000 22.200 0.300 52,600 4 R 0.16 0 4 18 22 95.995 22.000 22.300 0.300 52,600 4 R 0.16 0 8 3 11 95.995 22.200 22.500 0.300 52,600 4 R 0.16 0 1 5 6 95.995 22.400 22.600 3.00 52,600 4 R 0.16 1 4 8 13 95.995 22.500 22.800 0.300 52,600 4 R 0.16 1 4 8 13 <th>MP MP (miles) ADT Lanes Urban Class Rade Fatal Injury PDO Total MV HMVM uicinity K1301 (Exatwod Fisherulle Raj underpass at mp 2200 and Long Run Creek Bridge at mp 22.067 22.1000 2.3000 52.600 4 R 0.16 0 4 18 2.2 95.995 0.288 22.1000 22.300 0.300 52.600 4 R 0.16 0 4 18 2.2 95.995 0.288 22.100 22.400 0.300 52.600 4 R 0.16 0 8 7 15 95.995 0.288 22.200 22.600 0.300 52.600 4 R 0.16 0 1 4 6 95.995 0.288 22.400 22.700 0.300 52.600 4 R 0.16 1 4 5 95.995 0.288 22.600 23.000 0.300 52.600 4 R 0.16</th> <th>MP MP (mies) ADT Lanes Urban Class Rate Felal Injury PDO Total MV HMVM Felal wichnly NTS1 (Eastwood Fisherville Rd) undepress at mp 2200 and Lorg Run Creek Bridge at mp 220 br? 95.995 0.288 0.000 21.900 22.200 0.300 52,600 4 R 0.16 0 4 18 22 95.995 0.288 0.000 22.000 22.300 0.300 52,600 4 R 0.16 0 10 17 27 95.995 0.288 0.000 22.100 22.400 0.300 52,600 4 R 0.16 0 1 5 6 95.995 0.288 0.000 22.400 22.400 0.300 52,600 4 R 0.16 1 4 5 95.995 0.288 0.001 22.600 23.000 0.300 52,600 4</th> <th>MP MP (miles) ADT Lanes Uthan Class Rate Fatal Injury PDO Total MV HMM Fatal Injury vicinity N131 Eisateod Fiberwilk R31 inservises at m22000 cost cost vicinity N131 Eisateod Fiberwilk R31 max vicinity N131 Eisateod Fiberwilk R31 vicinity R31 Eisateod Fiberwilk R31 v</th> <th>MP (miles) AD⁻ Lanes Upun Class Rate Feld Injury PDO Total MV HMVM Feld Injury PDO winny KY 1531 (Estender Fehrelle Rd) undegas at m 2200 and Long Run Creek Bindler at m22067</th> <th>MP (miles) ADT Lenes Uthan Class Rate Fetal Injury PDO Total MV HMMM Fetal Injury PDO Total sicinity KY 1531 (Eastwood Fisherike Rity undergas at mp 2200 and Long Rath Cerek Rath Cerek Rath Cerek Rath Cerek Spesso 0.288 0.00 0.04 0.16 0.23 21.000 23.200 0.300 52.600 4 R 0.16 0 4 11 95.995 0.288 0.00 0.10 10.8 0.28 22.000 23.00 0.300 52.600 4 R 0.16 0 8 3 11 95.995 0.288 0.00 0.08 0.07 0.16 22.000 23.00 52.600 4 R 0.16 0 1 4 5 95.995 0.288 0.00 0.00 0.00 0.02 0.04 0.05 22.000 0.300 52.600 4 R 0.16 1</th> <th>MP (miles) AD Lanes Uthan Class Rate Field Injury PO0 Total MV HMVM Field Injury PD0 Total Rate vicinity KV 1531 (Eastwood Fishende Rd) undepass at #2200 and Long Run Ceek Bridge at m 22.007 22.000 0.300 52.600 4 R 0.16 0 4 18 19 95.995 0.288 0.00 0.04 0.10 0.23 0.27 22.000 0.300 52.600 4 R 0.16 0 4 18 59.995 0.288 0.00 0.04 0.10 0.18 0.27 22.000 0.300 52.600 4 R 0.16 0 8 7 15 95.995 0.288 0.00 0.08 0.03 0.11 0.27 22.000 0.300 52.600 4 R 0.16 0 1 4 5 95.995 0.288 0.00 0.00 0.00 0.00 0.00 0.00</th> | MP MP (miles) ADT Lanes Urban Class Rade Fatal Injury PDO Total MV HMVM uicinity K1301 (Exatwod Fisherulle Raj underpass at mp 2200 and Long Run Creek Bridge at mp 22.067 22.1000 2.3000 52.600 4 R 0.16 0 4 18 2.2 95.995 0.288 22.1000 22.300 0.300 52.600 4 R 0.16 0 4 18 2.2 95.995 0.288 22.100 22.400 0.300 52.600 4 R 0.16 0 8 7 15 95.995 0.288 22.200 22.600 0.300 52.600 4 R 0.16 0 1 4 6 95.995 0.288 22.400 22.700 0.300 52.600 4 R 0.16 1 4 5 95.995 0.288 22.600 23.000 0.300 52.600 4 R 0.16 | MP MP (mies) ADT Lanes Urban Class Rate Felal Injury PDO Total MV HMVM Felal wichnly NTS1 (Eastwood Fisherville Rd) undepress at mp 2200 and Lorg Run Creek Bridge at mp 220 br? 95.995 0.288 0.000 21.900 22.200 0.300 52,600 4 R 0.16 0 4 18
22 95.995 0.288 0.000 22.000 22.300 0.300 52,600 4 R 0.16 0 10 17 27 95.995 0.288 0.000 22.100 22.400 0.300 52,600 4 R 0.16 0 1 5 6 95.995 0.288 0.000 22.400 22.400 0.300 52,600 4 R 0.16 1 4 5 95.995 0.288 0.001 22.600 23.000 0.300 52,600 4 | MP MP (miles) ADT Lanes Uthan Class Rate Fatal Injury PDO Total MV HMM Fatal Injury vicinity N131 Eisateod Fiberwilk R31 inservises at m22000 cost cost vicinity N131 Eisateod Fiberwilk R31 max vicinity N131 Eisateod Fiberwilk R31 vicinity R31 Eisateod Fiberwilk R31 v | MP (miles) AD ⁻ Lanes Upun Class Rate Feld Injury PDO Total MV HMVM Feld Injury PDO winny KY 1531 (Estender Fehrelle Rd) undegas at m 2200 and Long Run Creek Bindler at m22067 | MP (miles) ADT Lenes Uthan Class Rate Fetal Injury PDO Total MV HMMM Fetal Injury PDO Total sicinity KY 1531 (Eastwood Fisherike Rity undergas at mp 2200 and Long Rath Cerek Rath Cerek Rath Cerek Rath Cerek Spesso 0.288 0.00 0.04 0.16 0.23 21.000 23.200 0.300 52.600 4 R 0.16 0 4 11 95.995 0.288 0.00 0.10 10.8 0.28 22.000 23.00 0.300 52.600 4 R 0.16 0 8 3 11 95.995 0.288 0.00 0.08 0.07 0.16 22.000 23.00 52.600 4 R 0.16 0 1 4 5 95.995 0.288 0.00 0.00 0.00 0.02 0.04 0.05 22.000 0.300 52.600 4 R 0.16 1 | MP (miles) AD Lanes Uthan Class Rate Field Injury PO0 Total MV HMVM Field Injury PD0 Total Rate vicinity KV 1531 (Eastwood Fishende Rd) undepass at #2200 and Long Run Ceek Bridge at m 22.007 22.000 0.300 52.600 4 R 0.16 0 4 18 19 95.995 0.288 0.00 0.04 0.10 0.23 0.27 22.000 0.300 52.600 4 R 0.16 0 4 18 59.995 0.288 0.00 0.04 0.10 0.18 0.27 22.000 0.300 52.600 4 R 0.16 0 8 7 15 95.995 0.288 0.00 0.08 0.03 0.11 0.27 22.000 0.300 52.600 4 R 0.16 0 1 4 5 95.995 0.288 0.00 0.00 0.00 0.00 0.00 0.00 |

									Cras	shes					Rates pe	er HMVM			Critical
Road	Begin MP	End MP	Length (miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	Fatal	Injury	PDO	Total	M∨	НМ∨М	Fatal	Injury	PDO	Total	Critical Rate	Rate Factor
	22.000	28.000	6.000	57,900	4	U	92.00	4	95	171	270	105.668	6.340	0.63	14.98	26.97	42.59	94.41	0.45
	22.000	22.300	0.300	53,000	4	U	0.28	0	1	3	4	96.725	0.290	0.00	0.01	0.03	0.04	0.42	0.10
	22.100	22.400	0.300	53,000	4	U	0.28	0	0	2	2	96.725	0.290	0.00	0.00	0.02	0.02	0.42	0.05
	22.200	22.500	0.300	53,000	4	U	0.28	0	1	1	2	96.725	0.290	0.00	0.01	0.01	0.02	0.42	0.05
	22.300	22.600	0.300	53,000	4	U	0.28	0	1	1	2	96.725	0.290	0.00	0.01	0.01	0.02	0.42	0.05
	22.400	22.700	0.300	53,000	4	U	0.28	0	2	1	3	96.725	0.290	0.00	0.02	0.01	0.03	0.42	0.07
	22.500	22.800	0.300	53,000	4	U	0.28	0	2	2	4	96.725	0.290	0.00	0.02	0.02	0.04	0.42	0.10
	22.600	22.900	0.300	53,000	4	U	0.28	0	2	2	4	96.725	0.290	0.00	0.02	0.02	0.04	0.42	0.10
	22.700	23.000	0.300	53,000	4	U	0.28	0	1	4	5	96.725	0.290	0.00	0.01	0.04	0.05	0.42	0.12
	22.800	23.100	0.300	53,000	4	U	0.28	0	4	11	15	96.725	0.290	0.00	0.04	0.11	0.16	0.42	0.37
	-	o (Taylorsville R	· ·																
	22.900	23.200	0.300	60,000	4	U	0.28	0	6	11	17	109.5	0.329	0.00	0.05	0.10	0.16	0.41	0.37
	23.000	23.300	0.300	60,000	4	U	0.28	0	8	12	20	109.5	0.329	0.00	0.07	0.11	0.18	0.41	0.44
	23.100	23.400	0.300	60,000	4	U	0.28	0	4	6	10	109.5	0.329	0.00	0.04	0.05	0.09	0.41	0.22
	23.200	23.500	0.300	60,000	4	U	0.28	0	12	6	18	109.5	0.329	0.00	0.11	0.05	0.16	0.41	0.40
	23.300	23.600	0.300	60,000	4	U	0.28	0	10	6	16	109.5	0.329	0.00	0.09	0.05	0.15	0.41	0.35
	23.400	23.700	0.300	60,000	4	U	0.28	0	10	6	16	109.5	0.329	0.00	0.09	0.05	0.15	0.41	0.35
	23.500	23.800	0.300	60,000	4	U	0.28	0	0	12	12 15	109.5	0.329 0.329	0.00	0.00	0.11 0.12	0.11	0.41	0.26
	23.600 23.700	23.900	0.300	60,000	4	UU	0.28	0 2	2	13	15	109.5		0.00	0.02		0.14	0.41	0.33
ю	23.700	24.000	0.300	60,000 60,000	4	U	0.28	2	2	13 13	17	109.5 109.5	0.329 0.329	0.02	0.02	0.12	0.16 0.16	0.41	0.37
I-265	23.800	24.100 24.200	0.300	60,000	4	U	0.20	2	3 1	9	10	109.5	0.329	0.02	0.03	0.12	0.10	0.41	0.40
N	23.900	24.200	0.300	60,000	4	U	0.28	0	4	10	14	109.5	0.329	0.02	0.01	0.00	0.11	0.41	0.20
I	24.000	24.400	0.300	60,000	4	U	0.20	0	4	4	8	109.5	0.329	0.00	0.04	0.03	0.13	0.41	0.18
	24.100	24.500	0.300	60,000	4	U	0.20	0	4	5	9	109.5	0.329	0.00	0.04	0.04	0.08	0.41	0.20
	24.300	24.600	0.300	67,000	4	U	0.28	0	1	4	5	122.275	0.367	0.00	0.01	0.03	0.04	0.41	0.10
	24.400	24,700	0.300	67.000	4	U	0.28	0	0	3	3	122.275	0.367	0.00	0.00	0.02	0.02	0.41	0.06
	24.500	24.800	0.300	67,000	4	U	0.28	0	0	3	3	122.275	0.367	0.00	0.00	0.02	0.02	0.41	0.06
	24.600	24.900	0.300	67,000	4	U	0.28	0	1	7	8	122.275	0.367	0.00	0.01	0.06	0.07	0.41	0.16
	24.700	25.000	0.300	67,000	4	U	0.28	0	1	14	15	122.275	0.367	0.00	0.01	0.11	0.12	0.41	0.30
	24.800	25.100	0.300	67,000	4	U	0.28	0	3	25	28	122.275	0.367	0.00	0.02	0.20	0.23	0.41	0.56
	24.900	25.200	0.300	67,000	4	U	0.28	0	4	21	25	122.275	0.367	0.00	0.03	0.17	0.20	0.41	0.50
	25.000	25.300	0.300	67,000	4	U	0.28	0	7	18	25	122.275	0.367	0.00	0.06	0.15	0.20	0.41	0.50
	25.100	25.400	0.300	67,000	4	U	0.28	0	8	9	17	122.275	0.367	0.00	0.07	0.07	0.14	0.41	0.34
	vicinity I-64 ov	erpass at mp 2	5.454																
	25.200	25.500	0.300	67,000	4	U	0.28	1	18	25	44	122.275	0.367	0.01	0.15	0.20	0.36	0.41	0.88
	25.300	25.600	0.300	67,000	4	U	0.28	1	17	27	45	122.275	0.367	0.01	0.14	0.22	0.37	0.41	0.90
	25.400	25.700	0.300	67,000	4	U	0.28	1	15	25	41	122.275	0.367	0.01	0.12	0.20	0.34	0.41	0.82
	25.500	25.800	0.300	67,000	4	U	0.28	0	3	8	11	122.275	0.367	0.00	0.02	0.07	0.09	0.41	0.22
	25.600	25.900	0.300	67,000	4	U	0.28	1	4	5	10	122.275	0.367	0.01	0.03	0.04	0.08	0.41	0.20
	25.700	26.000	0.300	67,000	4	U	0.28	1	5	7	13	122.275	0.367	0.01	0.04	0.06	0.11	0.41	0.26
	25.800	26.100	0.300	67,000	4	UU	0.28	1	9 9	11	21	122.275	0.367	0.01	0.07	0.09	0.17	0.41	0.42
I	25.900	26.200	0.300	67,000	4	U	0.28	0	9	9	18	122.275	0.367	0.00	0.07	0.07	0.15	0.41	0.36

									Cras	shes					Rates pe	er HMVM		0.11	Critical
Road	Begin MP	End MP	Length (miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	Fatal	Injury	PDO	Total	M∨	HM∨M	Fatal	Injury	PDO	Total	Critical Rate	Rate Factor
	26.000	26.300	0.300	67,000	4	U	0.28	0	7	7	14	122.275	0.367	0.00	0.06	0.06	0.11	0.41	0.28
	26.100	26.400	0.300	67,000	4	U	0.28	0	5	4	9	122.275	0.367	0.00	0.04	0.03	0.07	0.41	0.18
	26.200	26.500	0.300	67,000	4	U	0.28	0	7	6	13	122.275	0.367	0.00	0.06	0.05	0.11	0.41	0.26
	26.300	26.600	0.300	67,000	4	U	0.28	0	7	6	13	122.275	0.367	0.00	0.06	0.05	0.11	0.41	0.26
	26.400	26.700	0.300	67,000	4	U	0.28	0	5	4	9	122.275	0.367	0.00	0.04	0.03	0.07	0.41	0.18
	26.500	26.800	0.300	67,000	4	U	0.28	0	8	17	25	122.275	0.367	0.00	0.07	0.14	0.20	0.41	0.50
	vicinity US 60	(Shelbyville Ro	l) at mp 26.795	j					_										
	26.600	26.900	0.300	55,000	4	U	0.28	0	9	22	31	100.375	0.301	0.00	0.09	0.22	0.31	0.42	0.73
35	26.700	27.000	0.300	55,000	4	U	0.28	0	9	25	34	100.375	0.301	0.00	0.09	0.25	0.34	0.42	0.80
26	26.800	27.100	0.300	55,000	4	U	0.28	0	4	18	22	100.375	0.301	0.00	0.04	0.18	0.22	0.42	0.52
<u> </u>	26.900	27.200	0.300	55,000	4	U	0.28	0	7	12	19	100.375	0.301	0.00	0.07	0.12	0.19	0.42	0.45
	27.000	27.300	0.300	55,000	4	U	0.28	0	7	9	16	100.375	0.301	0.00	0.07	0.09	0.16	0.42	0.38
	27.100	27.400	0.300	55,000	4	U	0.28	0	5	0	5	100.375	0.301	0.00	0.05	0.00	0.05	0.42	0.12
	27.200	27.500	0.300	55,000	4	U	0.28	0	1	0	1	100.375	0.301	0.00	0.01	0.00	0.01	0.42	0.02
	27.300	27.600	0.300	55,000	4	U	0.28	0	1	0	1	100.375	0.301	0.00	0.01	0.00	0.01	0.42	0.02
	27.400	27.700	0.300	55,000	4	U	0.28	0	0	1	1	100.375	0.301	0.00	0.00	0.01	0.01	0.42	0.02
	27.500	27.800	0.300	55,000	4	U	0.28	0	1	1	2	100.375	0.301	0.00	0.01	0.01	0.02	0.42	0.05
	27.600	27.900	0.300	55,000	4	U	0.28	0	1	1	2	100.375	0.301	0.00	0.01	0.01	0.02	0.42	0.05
	27.700	28.000	0.300	55,000	4	U	0.28	0	2	0	2	100.375	0.301	0.00	0.02	0.00	0.02	0.42	0.05

					,	,		,						_					
									Cra	shes					Rates pe	er HMVM			Critical
	Begin	End	Length	Average	Number	Rural /	Functional								r tatoo pt			Critical	Rate
Road	MP	MP	(miles)	ADT	Lanes	Urban	Class Rate	Fatal	Injury	PDO	Total	MV	HM∨M	Fatal	Injury	PDO	Total	Rate	Factor
	lefferso	n County																	
	10.000	17.400	7.400	19,400	4	U	278.00	6	218	261	485	35.405	2.620	2.29	83.21	99.62	185.12	285.23	0.65
	10.000			,	4	U	0.84	0			34	59.86	0.180	0.00		0.35			0.49
		10.300 een Road at m	0.300	32,800	4	0	0.04	U	13	21	34	59.00	0.100	0.00	0.22	0.55	0.57	1.15	0.49
				00.000	4		0.04	0	00	40	74	50.00	0.400	0.00	0.07	0.00	4.40	4.45	4.00
	10.100	10.400	0.300	32,800	4	U	0.84	0	22	49	71	59.86	0.180	0.00	0.37	0.82	1.19	1.15	1.03
	10.200	10.500	0.300	32,800	4	U	0.84	0	25	55	80	59.86	0.180	0.00	0.42	0.92	1.34	1.15	1.16
	10.300	10.600	0.300	32,800	4	U	0.84	0	31	61	92	59.86	0.180	0.00	0.52	1.02	1.54	1.15	1.33
	10.400	10.700	0.300	32,800	4	U	0.84	0	12	23	35	59.86	0.180	0.00	0.20	0.38	0.58	1.15	0.51
	10.500	10.800	0.300	32,800	4	U	0.84	0	21	27	48	59.86	0.180	0.00	0.35	0.45	0.80	1.15	0.70
	10.600	10.900	0.300	32,800	4	U	0.84	0	16	19	35	59.86	0.180	0.00	0.27	0.32	0.58	1.15	0.51
	10.700	11.000	0.300	32,800	4	U	0.84	0	19	18	37	59.86	0.180	0.00	0.32	0.30	0.62	1.15	0.54
	10.800	11.100	0.300	32,800	4	U	0.84	0	17	10	27	59.86	0.180	0.00	0.28	0.17	0.45	1.15	0.39
	10.900	11.200	0.300	25,600	4	U	0.84	0	16	10	26	46.72	0.140	0.00	0.34	0.21	0.56	1.20	0.47
	11.000	11.300	0.300	25,600	4	U	0.84	1	19	21	41	46.72	0.140	0.02	0.41	0.45	0.88	1.20	0.73
	11.100	11.400	0.300	25,600	4	U	0.84	1	6	18	25	46.72	0.140	0.02	0.13	0.39	0.54	1.20	0.45
	11.200	11.500	0.300	25,600	4	U	0.84	1	10	22	33	46.72	0.140	0.02	0.21	0.47	0.71	1.20	0.59
	11.300	11.600	0.300	25,600	4	U	0.84	0	5	13	18	46.72	0.140	0.00	0.11	0.28	0.39	1.20	0.32
	11.400	11.700	0.300	25,600	4	U	0.84	0	6	15	21	46.72	0.140	0.00	0.13	0.32	0.45	1.20	0.38
	11.500	11.800	0.300	25,600	4	U	0.84	0	5	10	15	46.72	0.140	0.00	0.11	0.21	0.32	1.20	0.27
	11.600	11.900	0.300	25,600	4	U	0.84	0	5	9	14	46.72	0.140	0.00	0.11	0.19	0.30	1.20	0.25
60	11.700	12.000	0.300	25,600	4	U	0.84	0	9	18	27	46.72	0.140	0.00	0.19	0.39	0.58	1.20	0.48
9		verpass at mp																	
S	11.800	12.100	0.300	31,200	4	U	0.84	0	26	40	66	56.94	0.171	0.00	0.46	0.70	1.16	1.16	1.00
	11.900	12.200	0.300	31,200	4	U	0.84	0	28	42	70	56.94	0.171	0.00	0.49	0.74	1.23	1.16	1.06
	12.000	12.300	0.300	31,200	4	U	0.84	0	30	31	61	56.94	0.171	0.00	0.53	0.54	1.07	1.16	0.92
	12.100	12.400	0.300	31,200	4	U	0.84	0	10	11	21	56.94	0.171	0.00	0.18	0.19	0.37	1.16	0.32
	12.200	12.500	0.300	31,200	4	U	0.84	0	7	5	12	56.94	0.171	0.00	0.12	0.09	0.21	1.16	0.18
	12.300	12.600	0.300	31,200	4	U	0.84	0	5	7	12	56.94	0.171	0.00	0.09	0.12	0.21	1.16	0.18
	12.400	12.700	0.300	31,200	4	U	0.84	0	5	6	11	56.94	0.171	0.00	0.09	0.12	0.19	1.16	0.17
	12.500	12.800	0.300	31,200	4	U	0.84	0	14	7	21	56.94	0.171	0.00	0.25	0.12	0.37	1.16	0.32
	12.600	12.900	0.300	31,200	4	U	0.84	1	20	9	30	56.94	0.171	0.02	0.35	0.12	0.53	1.16	0.45
		y Station Road		51,200	7	0	0.04		20	3	50	50.54	0.171	0.02	0.00	0.10	0.00	1.10	0.45
	12.700	13.000	0.300	15,500	4	U	0.84	1	27	8	36	28.2875	0.085	0.04	0.95	0.28	1.27	1.30	0.98
	12.700	13.100	0.300	15,500	4	U	0.84	1	20	0 12	33	28.2875	0.085	0.04	0.95	0.20	1.27	1.30	0.98
	12.800	13.200	0.300	15,500	4	U	0.84	0	 9	5	- 33 - 14	28.2875	0.085	0.04	0.71	0.42	0.49	1.30	
						U		0											0.38
	13.000	13.300	0.300	15,500	4	U U	0.84	0 1	2	6	8	28.2875	0.085	0.00	0.07	0.21	0.28	1.30	0.22
	13.100	13.400	0.300	15,500	4	-	0.84		7	2	10	28.2875	0.085	0.04	0.25	0.07	0.35	1.30	0.27
	13.200	13.500	0.300	15,500	4	U	0.84	1	9	2	12	28.2875	0.085	0.04	0.32	0.07	0.42	1.30	0.33
	13.300	13.600	0.300	15,500	4	U	0.84	1	10	6	17	28.2875	0.085	0.04	0.35	0.21	0.60	1.30	0.46
	13.400	13.700	0.300	15,500	4	R	0.36	0	3	5	8	28.2875	0.085	0.00	0.11	0.18	0.28	0.67	0.42
	13.500	13.800	0.300	15,500	4	R	0.36	0	2	5	7	28.2875	0.085	0.00	0.07	0.18	0.25	0.67	0.37
	13.600	13.900	0.300	15,500	4	R	0.36	0	1	1	2	28.2875	0.085	0.00	0.04	0.04	0.07	0.67	0.11
	13.700	14.000	0.300	15,500	4	R	0.36	0	1	2	3	28.2875	0.085	0.00	0.04	0.07	0.11	0.67	0.16
	13.800	14.100	0.300	15,500	4	R	0.36	0	3	4	7	28.2875	0.085	0.00	0.11	0.14	0.25	0.67	0.37

Appendix C, Crash Analysis, New I-64 Interchange with a Connector Road Study Area

						-		-											Oritical
	Rogin	End	Longth	Average	Number	Rural /	Functional		Cra	shes					Rates pe	er HMVM		Critical	Critical Rate
Road	Begin MP	MP	Length (miles)	Average	Number		Class Rate	Fatal	Injury	PDO	Total	M∨	HMVM	Fatal	Injury	PDO	Total		
Ruau			(miles)	ADT	Lanes	Urban												Rate	Factor
	13.900	14.200	0.300	15,500	4	R	0.36	0	11	3	14	28.2875	0.085	0.00	0.39	0.11	0.49	0.67	0.74
	14.000	14.300	0.300	15,500	4	R	0.36	0	11	2	13	28.2875	0.085	0.00	0.39	0.07	0.46	0.67	0.69
	14.100	14.400	0.300	15,500	4	R	0.36	0	11	0	11	28.2875	0.085	0.00	0.39	0.00	0.39	0.67	0.58
	14.200	14.500	0.300	15,500	4	R	0.36	0	4	0	4	28.2875	0.085	0.00	0.14	0.00	0.14	0.67	0.21
	14.300	14.600	0.300	15,500	4	R	0.36	0	9	1	10	28.2875	0.085	0.00	0.32	0.04	0.35	0.67	0.53
	14.400	14.700	0.300	15,500	4	R	0.36	0	6	4	10	28.2875	0.085	0.00	0.21	0.14	0.35	0.67	0.53
	14.500	14.800	0.300	8,800	2	R	0.72	0	5	5	10	16.06	0.048	0.00	0.31	0.31	0.62	1.30	0.48
	14.600	14.900	0.300	8,800	2	R	0.72	1	2	4	7	16.06	0.048	0.06	0.12	0.25	0.44	1.30	0.34
		31 (Eastwood I	-	-	-		0.70	_	-			10.00	0.040	0.40	0.01	0.00		1.00	
	14.700	15.000	0.300	8,800	2	R	0.72	2	5	10	17	16.06	0.048	0.12	0.31	0.62	1.06	1.30	0.82
	14.800	15.100	0.300	8,800	2	R	0.72	2	8	11	21	16.06	0.048	0.12	0.50	0.68	1.31	1.30	1.01
	14.900	15.200	0.300	8,800	2	R	0.72	1	6	11	18	16.06	0.048	0.06	0.37	0.68	1.12	1.30	0.86
	15.000	15.300	0.300	8,800	2	R	0.72	0	3	5	8	16.06	0.048	0.00	0.19	0.31	0.50	1.30	0.38
	15.100	15.400	0.300	8,800	2	R	0.72	0	2	3	5	16.06	0.048	0.00	0.12	0.19	0.31	1.30	0.24
	15.200	15.500	0.300	8,800	2	R	0.72	0	8	5	13	16.06	0.048	0.00	0.50	0.31	0.81	1.30	0.62
	15.300	15.600	0.300	8,800	2	R	0.72	0	0	3	3	16.06	0.048	0.00	0.00	0.19	0.19	1.30	0.14
	15.400	15.700	0.300	8,800	2	R	0.72	0	6	4	10	16.06	0.048	0.00	0.37	0.25	0.62	1.30	0.48
	15.500	15.800	0.300	8,800	2	R	0.72	0	1	2	3	16.06	0.048	0.00	0.06	0.12	0.19	1.30	0.14
	15.600	15.900	0.300	8,800	2	R	0.72	0	12	3	15	16.06	0.048	0.00	0.75	0.19	0.93	1.30	0.72
	15.700	16.000	0.300	8,800	2	R	0.72	0	4	2	6	16.06	0.048	0.00	0.25	0.12	0.37	1.30	0.29
60	15.800	16.100	0.300	8,800	2	R	0.72	0	4	3	7	16.06	0.048	0.00	0.25	0.19	0.44	1.30	0.34
	15.900	16.200	0.300	8,800	2	R	0.72	0	1	4	5	16.06	0.048	0.00	0.06	0.25	0.31	1.30	0.24
NS	16.000	16.300	0.300	8,800	2	R	0.72	0	1	6	7	16.06	0.048	0.00	0.06	0.37	0.44	1.30	0.34
	16.100	16.400	0.300	8,800	2	R	0.72	0	1	6	7	16.06	0.048	0.00	0.06	0.37	0.44	1.30	0.34
	16.200	16.500	0.300	8,800	2	R	0.72	0	1	6	7	16.06	0.048	0.00	0.06	0.37	0.44	1.30	0.34
	16.300	16.600	0.300	8,800	2	R	0.72	0	1	4	5	16.06	0.048	0.00	0.06	0.25	0.31	1.30	0.24
	16.400	16.700	0.300	8,800	2	R	0.72	0	0	3	3	16.06	0.048	0.00	0.00	0.19	0.19	1.30	0.14
	16.500	16.800	0.300	8,800	2	R	0.72	0	0	0	0	16.06	0.048	0.00	0.00	0.00	0.00	1.30	0.00
	16.600	16.900	0.300	8,800	2	R	0.72	0	1	0	1	16.06	0.048	0.00	0.06	0.00	0.06	1.30	0.05
	16.700	17.000	0.300	8,800	2	R	0.72	0	1	0	1	16.06	0.048	0.00	0.06	0.00	0.06	1.30	0.05
	16.800	17.100	0.300	8,800	2	R	0.72	1	3	1	5	16.06	0.048	0.06	0.19	0.06	0.31	1.30	0.24
	16.900	17.200	0.300	8,800	2	R	0.72	1	2	1	4	16.06	0.048	0.06	0.12	0.06	0.25	1.30	0.19
	17.000	17.300	0.300	8,800	2	R	0.72	1	2	2	5	16.06	0.048	0.06	0.12	0.12	0.31	1.30	0.24
	17.100	17.400	0.300	8,800	2	R	0.72	0	1	1	2	16.06	0.048	0.00	0.06	0.06	0.12	1.30	0.10
	Shelby C		4 6		_							40.00-00				100.00	499.00		
	0.000	1.600	1.600	5,970	2	R	239.00	0	9	22	31	10.8953	0.174	0.00	51.63	126.20	177.83	251.11	0.71
	0.000	0.300	0.300	5,970	2	R	0.72	0	2	8		10.89525	0.033	0.00	0.18	0.73	0.92	1.43	0.64
	0.100	0.400	0.300	5,970	2	R	0.72	0	0	3	3	10.89525	0.033	0.00	0.00	0.28	0.28	1.43	0.19
	0.200	0.500	0.300	5,970	2	R	0.72	0	0	4	4	10.89525	0.033	0.00	0.00	0.37	0.37	1.43	0.26
	0.300	0.600	0.300	5,970	2	R	0.72	0	0	5	5	10.89525	0.033	0.00	0.00	0.46	0.46	1.43	0.32
	0.400	0.700	0.300	5,970	2	R	0.72	0	0	6	6	10.89525	0.033	0.00	0.00	0.55	0.55	1.43	0.39
	0.500	0.800	0.300	5,970	2	R	0.72	0	2	4	6	10.89525	0.033	0.00	0.18	0.37	0.55	1.43	0.39
	0.600	0.900	0.300	5,970	2	R	0.72	0	2	3	5	10.89525	0.033	0.00	0.18	0.28	0.46	1.43	0.32
	0.700	1.000	0.300	5,970	2	R	0.72	0	2	2	4	10.89525	0.033	0.00	0.18	0.18	0.37	1.43	0.26

Appendix C, Crash Analysis, New I-64 Interchange with a Connector Road Study Area

	Derrie	Fred	Longeth	0	Marchan	Durall	Emotional		Cras	shes					Rates pe	er HM∨M		0-25-0-1	Critical
Road	Begin MP	End MP	Length (miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	Fatal	Injury	PDO	Total	M∨	HM∨M	Fatal	Injury	PDO	Total	Critical Rate	Rate Factor
	0.800	1.100	0.300	5,970	2	R	0.72	0	1	1	2	10.89525	0.033	0.00	0.09	0.09	0.18	1.43	0.13
0	0.900	1.200	0.300	5,970	2	R	0.72	0	1	4	5	10.89525	0.033	0.00	0.09	0.37	0.46	1.43	0.32
9	1.000	1.300	0.300	5,970	2	R	0.72	0	1	4	5	10.89525	0.033	0.00	0.09	0.37	0.46	1.43	0.32
S	1.100	1.400	0.300	5,970	2	R	0.72	0	1	4	5	10.89525	0.033	0.00	0.09	0.37	0.46	1.43	0.32
	1.200	1.500	0.300	5,970	2	R	0.72	0	1	1	2	10.89525	0.033	0.00	0.09	0.09	0.18	1.43	0.13
	1.300	1.600	0.300	5,970	2	R	0.72	0	4	2	6	10.89525	0.033	0.00	0.37	0.18	0.55	1.43	0.39

									Cra	shes					Rates pe	er HMVM			Critical
Road	Begin MP	End MP	Length (miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	Fatal	Injury	PDO	Total	M∨	НМ∨М	Fatal	Injury	PDO	Total	Critical Rate	Rate Factor
	3.000	7.000	4.000	15,100	2	U	258.00	1	53	60	114	27.5575	1.102	0.91	48.08	54.43	103.42	265.90	0.39
	3.000	3.300	0.300	13,700	2	R	0.72	0	2	1	3	25.0025	0.075	0.00	0.08	0.04	0.12	1.18	0.10
	3.100	3.400	0.300	13,700	2	R	0.72	0	0	0	0	25.0025	0.075	0.00	0.00	0.00	0.00	1.18	0.00
	3.200	3.500	0.300	13,700	2	R	0.72	0	0	1	1	25.0025	0.075	0.00	0.00	0.04	0.04	1.18	0.03
	3.300	3.600	0.300	13,700	2	R	0.72	0	0	6	6	25.0025	0.075	0.00	0.00	0.24	0.24	1.18	0.20
	3.400	3.700	0.300	13,700	2	R	0.72	0	0	6	6	25.0025	0.075	0.00	0.00	0.24	0.24	1.18	0.20
	3.500	3.800	0.300	13,700	2	R	0.72	0	0	6	6	25.0025	0.075	0.00	0.00	0.24	0.24	1.18	0.20
	3.600	3.900	0.300	13,700	2	R	0.72	0	0	2	2	25.0025	0.075	0.00	0.00	0.08	0.08	1.18	0.07
	3.700	4.000	0.300	13,700	2	R	0.72	0	2	2	4	25.0025	0.075	0.00	80.0	0.08	0.16	1.18	0.14
	3.800	4.100	0.300	13,700	2	R	0.72	1	4	3	8	25.0025	0.075	0.04	0.16	0.12	0.32	1.18	0.27
	3.900	4.200	0.300	13,700	2	U	0.77	1	4	3	8	25.0025	0.075	0.04	0.16	0.12	0.32	1.24	0.26
	vicinity KY 148																		
	4.000	4.300	0.300	13,700	2	U	0.77	1	6	6	13	25.0025	0.075	0.04	0.24	0.24	0.52	1.24	0.42
	4.100	4.400	0.300	17,000	2	U	0.77	0	6	4	10	31.025	0.093	0.00	0.19	0.13	0.32	1.19	0.27
	4.200	4.500	0.300	17,000	2	U	0.77	0	6	4	10	31.025	0.093	0.00	0.19	0.13	0.32	1.19	0.27
	4.300	4.600	0.300	17,000	2	U	0.77	0	2	2	4	31.025	0.093	0.00	0.06	0.06	0.13	1.19	0.11
	4.400	4.700	0.300	17,000	2	U	0.77	0	0	4	4	31.025	0.093	0.00	0.00	0.13	0.13	1.19	0.11
	4.500	4.800	0.300	17,000	2	U	0.77	0	0	4	4	31.025	0.093	0.00	0.00	0.13	0.13	1.19	0.11
55	4.600 4.700	4.900 5.000	0.300	17,000	2	UU	0.77 0.77	0	0	5	5 6	31.025 31.025	0.093	0.00	0.00	0.16	0.16	1.19 1.19	0.14
1	4.700	5.000	0.300	17,000 17,000	2	U	0.77	0	2	6 7	9	31.025	0.093	0.00	0.00	0.19	0.19	1.19	0.16 0.24
	4.800	5.100	0.300	17,000	2	U	0.77	0	2	6	9 14	31.025	0.093	0.00	0.06	0.23	0.29	1.19	0.24
Υ	5.000	5.300	0.300	17,000	2	U	0.77	0	8	4	14	31.025	0.093	0.00	0.26	0.19	0.45	1.19	0.30
-	5.100	5.400	0.300	17,000	2	U	0.77	0	7	4	11	31.025	0.093	0.00	0.20	0.13	0.35	1.19	0.32
	5.200	5.500	0.300	17,000	2	U	0.77	0	1	3	4	31.025	0.093	0.00	0.23	0.10	0.00	1.19	0.11
	5.300	5.600	0.300	17,000	2	U	0.77	0	1	2	3	31.025	0.093	0.00	0.03	0.06	0.10	1.19	0.08
	5.400	5.700	0.300	17,000	2	U	0.77	0	0	0	0	31.025	0.093	0.00	0.00	0.00	0.00	1.19	0.00
	5.500	5.800	0.300	17,000	4	U	0.77	0	0	0	0	31.025	0.093	0.00	0.00	0.00	0.00	1.19	0.00
	5.600	5.900	0.300	17,000	4	U	0.77	0	0	0	0	31.025	0.093	0.00	0.00	0.00	0.00	1.19	0.00
	5.700	6.000	0.300	17,000	4	U	0.77	0	0	0	0	31.025	0.093	0.00	0.00	0.00	0.00	1.19	0.00
	5.800	6.100	0.300	17,000	4	U	0.77	0	7	9	16	31.025	0.093	0.00	0.23	0.29	0.52	1.19	0.43
	5.900	6.200	0.300	15,300	4	U	0.77	0	8	11	19	27.9225	0.084	0.00	0.29	0.39	0.68	1.22	0.56
	vicinity I-265 o	verpass at mp	6.058									•							
	6.000	6.300	0.300	15,300	4	U	0.77	0	15	18	33	27.9225	0.084	0.00	0.54	0.64	1.18	1.22	0.97
	6.100	6.400	0.300	15,300	2	U	0.77	0	11	9	20	27.9225	0.084	0.00	0.39	0.32	0.72	1.22	0.59
	6.200	6.500	0.300	15,300	2	U	0.77	0	10	7	17	27.9225	0.084	0.00	0.36	0.25	0.61	1.22	0.50
	6.300	6.600	0.300	15,300	2	U	0.77	0	3	1	4	27.9225	0.084	0.00	0.11	0.04	0.14	1.22	0.12
	6.400	6.700	0.300	15,300	2	U	0.77	0	0	1	1	27.9225	0.084	0.00	0.00	0.04	0.04	1.22	0.03
	6.500	6.800	0.300	15,300	2	U	0.77	0	0	1	1	27.9225	0.084	0.00	0.00	0.04	0.04	1.22	0.03
	6.600	6.900	0.300	15,300	2	U	0.77	0	11	7	18	27.9225	0.084	0.00	0.39	0.25	0.64	1.22	0.53
	6.700	7.000	0.300	13,900	2	U	0.77	0	11	9	20	25.3675	0.076	0.00	0.43	0.35	0.79	1.24	0.64

		J			,	j /													
									Cra	shes					Rates pe	er HMVM		0.111.1	Critical
D	Begin	End	Ŭ,	Average	Number	Rural /	Functional	Estal	Iniuna	PDO	Total			Fotol	Iniuna	DDO	Total	Critical	Rate
Road	MP	MP	(miles)	ADT	Lanes	Urban	Class Rate	Fatal	injury	PDU	Total	MV	HMVM	Fatal	Injury	PDO	Total	Rate	Factor
	Jefferson	County																	
	0.000	3.400	3.400	9,300	2	R	239.00	0	8	8	16	16.9725	0.577	0.00	13.86	13.86	27.73	248.70	0.11
	0.000	0.300	0.300	4,100	2	U	0.72	0	2	2	4	7.4825	0.022	0.00	0.27	0.27	0.53	1.59	0.34
	0.100	0.400	0.300	4,100	2	U	0.72	0	2	2	4	7.4825	0.022	0.00	0.27	0.27	0.53	1.59	0.34
	0.200	0.500	0.300	4,100	2	U	0.72	0	2	2	4	7.4825	0.022	0.00	0.27	0.27	0.53	1.59	0.34
	0.300	0.600	0.300	4,100	2	U	0.72	0	0	1	1	7.4825	0.022	0.00	0.00	0.13	0.13	1.59	0.08
	0.400	0.700	0.300	4,100	2	U	0.72	0	0	0	0	7.4825	0.022	0.00	0.00	0.00	0.00	1.59	0.00
	0.500	0.800	0.300	4,100	2	U	0.72	0	0	0	0	7.4825	0.022	0.00	0.00	0.00	0.00	1.59	0.00
	0.600	0.900	0.300	4,100	2	U	0.72	0	0	2	2	7.4825	0.022	0.00	0.00	0.27	0.27	1.59	0.17
	0.700	1.000	0.300	4,100	2	U	0.72	0	1	2	3	7.4825	0.022	0.00	0.13	0.27	0.40	1.59	0.25
	0.800	1.100	0.300	4,100	2	R	0.72	0	2	3	5	7.4825	0.022	0.00	0.27	0.40	0.67	1.59	0.42
	0.900	1.200	0.300	4,100	2	R	0.72	0	2	1	3	7.4825	0.022	0.00	0.27	0.13	0.40	1.59	0.25
	1.000	1.300	0.300	4,100	2	R	0.72	0	1	1	2	7.4825	0.022	0.00	0.13	0.13	0.27	1.59	0.17
	1.100	1.400	0.300	4,100	2	R	0.72	0	0	0	0	7.4825	0.022	0.00	0.00	0.00	0.00	1.59	0.00
	1.200	1.500	0.300	4,100	2	R	0.72	0	1	0	1	7.4825	0.022	0.00	0.13	0.00	0.13	1.59	0.08
	1.300	1.600	0.300	4,100	2	R	0.72	0	2	0	2	7.4825	0.022	0.00	0.27	0.00	0.27	1.59	0.17
	1.400	1.700	0.300	4,100	2	R	0.72	0	3	0	3	7.4825	0.022	0.00	0.40	0.00	0.40	1.59	0.25
	1.500	1.800	0.300	4,100	2	R	0.72	0	2	0	2	7.4825	0.022	0.00	0.27	0.00	0.27	1.59	0.17
	1.600	1.900	0.300	2,100	2	R	0.72	0	1	1	2	3.8325	0.011	0.00	0.26	0.26	0.52	1.97	0.27
8	1.700	2.000	0.300	2,100	2	R	0.72	0	0	1	1	3.8325	0.011	0.00	0.00	0.26	0.26	1.97	0.13
148	1.800 1.900	2.100 2.200	0.300	2,100 2,100	2	R R	0.72 0.72	0	0	1 0	0	3.8325 3.8325	0.011	0.00	0.00	0.26	0.26	1.97 1.97	0.13
	2.000	2.200	0.300	2,100	2	R	0.72	0	0	0	0	3.8325	0.011	0.00	0.00	0.00	0.00	1.97	0.00
۲	2.000	2.400	0.300	2,100	2	R	0.72	0	0	0	0	3.8325	0.011	0.00	0.00	0.00	0.00	1.97	0.00
X	2.200	2.500	0.300	2,100	2	R	0.72	0	0	0	0	3.8325	0.011	0.00	0.00	0.00	0.00	1.97	0.00
	2.300	2.600	0.300	2,100	2	R	0.72	0	1	0	1	3.8325	0.011	0.00	0.26	0.00	0.26	1.97	0.13
	2.400	2.700	0.300	2,100	2	R	0.72	0	1	0	1	3.8325	0.011	0.00	0.20	0.00	0.26	1.97	0.13
	2.500	2.800	0.300	2,100	2	R	0.72	0	1	0	1	3.8325	0.011	0.00	0.26	0.00	0.26	1.97	0.13
	2.600	2.900	0.300	2,100	2	R	0.72	0	0	0	0	3.8325	0.011	0.00	0.00	0.00	0.00	1.97	0.00
	2.700	3.000	0.300	2,100	2	R	0.72	0	0	0	0	3.8325	0.011	0.00	0.00	0.00	0.00	1.97	0.00
	2.800	3.100	0.300	2,100	2	R	0.72	0	0	0	0	3.8325	0.011	0.00	0.00	0.00	0.00	1.97	0.00
	2.900	3.200	0.300	2,100	2	R	0.72	0	0	0	0	3.8325	0.011	0.00	0.00	0.00	0.00	1.97	0.00
	3.000	3.300	0.300	2,100	2	R	0.72	0	0	0	0	3.8325	0.011	0.00	0.00	0.00	0.00	1.97	0.00
	2.500	2.800	0.300	2,100	2	R	0.72	0	0	1	1	3.8325	0.011	0.00	0.00	0.26	0.26	1.97	0.13
	Shelby C	ounty							•			•							·
	0.000	1.000	1.000	1,300	2	R	239.00	0	3	3	6	2.3725	0.024	0.00	126.45	126.45	252.90	265.07	0.95
	0.000	0.300	0.300	1,300	2	R	0.72	0	1	2	3	2.3725	0.007	0.00	0.42	0.84	1.26	2.35	0.54
	0.100	0.400	0.300	1,300	2	R	0.72	0	1	2	3	2.3725	0.007	0.00	0.42	0.84	1.26	2.35	0.54
	0.200	0.500	0.300	1,300	2	R	0.72	0	0	1	1	2.3725	0.007	0.00	0.00	0.42	0.42	2.35	0.18
	0.300	0.600	0.300	1,300	2	R	0.72	0	0	0	0	2.3725	0.007	0.00	0.00	0.00	0.00	2.35	0.00
	0.400	0.700	0.300	1,300	2	R	0.72	0	0	0	0	2.3725	0.007	0.00	0.00	0.00	0.00	2.35	0.00
	0.500	0.800	0.300	1,300	2	R	0.72	0	0	0	0	2.3725	0.007	0.00	0.00	0.00	0.00	2.35	0.00
	0.600	0.900	0.300	1,300	2	R	0.72	0	2	0	2	2.3725	0.007	0.00	0.84	0.00	0.84	2.35	0.36
	0.700	1.000	0.300	1,300	2	R	0.72	0	2	1	3	2.3725	0.007	0.00	0.84	0.42	1.26	2.35	0.54
-			New I C4 Inte		Compostor Do													Dama 0 of	

Appendix C, Crash Analysis, New I-64 Interchange with a Connector Road Study Area

		J			,	, ,	Crush An		0	-1					Deter	- 1 18 45 /8 4			Critical
	Begin	End	Length	Average	Number	Rural /	Functional		Cra	shes					Rates pe	er HMVM		Critical	Rate
Road	MP	MP	(miles)	ADT	Lanes	Urban	Class Rate	Fatal	Injury	PDO	Total	MV	HM∨M	Fatal	Injury	PDO	Total	Rate	Factor
	5.000	13.000	8.000	1,350	2	R	239.00	0	12	10	22	2.46375	0.197	0.00	60.88	50.74		264.57	0.42
	5.000	5.300	0.300	2,500	2	R	0.72	0	0	1	1	4.5625	0.014	0.00	0.00	0.22	0.22	1.85	0.12
	5.100	5.400	0.300	2,500	2	R	0.72	0	0	0	0	4.5625	0.014	0.00	0.00	0.00	0.00	1.85	0.00
	5.200	5.500	0.300	2,500	2	R	0.72	0	0	1	1	4.5625	0.014	0.00	0.00	0.22	0.22	1.85	0.12
	5.300	5.600	0.300	2,500	2	R	0.72	0	0	1	1	4.5625	0.014	0.00	0.00	0.22	0.22	1.85	0.12
		B (Taylorsville F																	
	5.400	5.700	0.300	630	2	R	0.72	0	0	1	1	1.14975	0.003	0.00	0.00	0.87	0.87	3.19	0.27
	5.500	5.800	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
		d overpass at m					0.70		_			4 4 4 9 7 5	0.000	0.00	0.00	0.00	0.00	0.40	0.00
	5.600	5.900	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	5.700	6.000	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	5.800	6.100	0.300	630 630	2	R	0.72	0		0	3	1.14975	0.003	0.00	2.61	0.00	2.61	3.19	0.82
	5.900	6.200	0.300	630	2	R	0.72	0	3	0	3	1.14975	0.003	0.00	2.61	0.00	2.61	3.19	0.82
	6.000	6.300	0.300	630 630	2	R R	0.72	0	<u> </u>	0	<u> </u>	1.14975	0.003	0.00	2.61	0.00	2.61	3.19	0.82
	6.100 6.200	6.400 6.500	0.300	630 630	2	R	0.72	0	0	0	0	1.14975 1.14975	0.003	0.00	0.00	0.00	0.00	3.19 3.19	0.00
	6.300	6.600	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	6.400	6.700	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
_	6.500	6.800	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
31	6.600	6.900	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
ù	6.700	7.000	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
~	6.800	7.100	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
Σ	6.900	7.200	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	7.000	7.300	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	7.100	7.400	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	7.200	7.500	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	7.300	7.600	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	7.400	7.700	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	7.500	7.800	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	7.600	7.900	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	7.700	8.000	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
		iderpass at mp																	
	7.800	8.100	0.300	630	2	R	0.72	0	3	0	3	1.14975	0.003	0.00	2.61	0.00	2.61	3.19	0.82
	7.900	8.200	0.300	630	2	R	0.72	0	3	0	3	1.14975	0.003	0.00	2.61	0.00	2.61	3.19	0.82
	8.000	8.300	0.300	630	2	R	0.72	0	3	0	3	1.14975	0.003	0.00	2.61	0.00	2.61	3.19	0.82
	8.100	8.400	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	8.200	8.500	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	8.300	8.600	0.300	630	2	R	0.72	0	0	0	0	1.14975	0.003	0.00	0.00	0.00	0.00	3.19	0.00
	8.400	8.700	0.300	630	2	R	0.72	0	1	0	1	1.14975	0.003	0.00	0.87	0.00	0.87	3.19	0.27
	8.500	8.800	0.300	630	2	R	0.72	0	1	0	1	1.14975	0.003	0.00	0.87	0.00	0.87	3.19	0.27
	8.600	8.900	0.300	630	2	R	0.72	0	1	0	1	1.14975	0.003	0.00	0.87	0.00	0.87	3.19	0.27
	8.700	9.000	0.300	630	2	R	0.72	0	1	0	1	1.14975	0.003	0.00	0.87	0.00	0.87	3.19	0.27

									Cra	shes					Rates pe	er HMVM		0	Critical
Road	Begin MP	End MP	Length (miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	Fatal	Injury	PDO	Total	M∨	НМ∨М	Fatal	Injury	PDO	Total	Critical Rate	Rate Factor
	vicinity KY 284	1 (Eastwood C	Cutoff) at mp 9.	011 and US 60	(Shelbyville Ro	l) at mp 9.12													
	8.800	9.100	0.300	630	2	R	0.72	0	1	2	3	1.14975	0.003	0.00	0.87	1.74	2.61	3.19	0.82
	8.900	9.200	0.300	470	2	R	0.72	0	1	2	3	0.85775	0.003	0.00	1.17	2.33	3.50	3.66	0.95
	9.000	9.300	0.300	470	2	R	0.72	0	0	2	2	0.85775	0.003	0.00	0.00	2.33	2.33	3.66	0.64
	9.100	9.400	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	9.200	9.500	0.300	470	2	R	0.72	0	0	1	1	0.85775	0.003	0.00	0.00	1.17	1.17	3.66	0.32
	9.300	9.600	0.300	470	2	R	0.72	0	1	1	2	0.85775	0.003	0.00	1.17	1.17	2.33	3.66	0.64
	9.400	9.700	0.300	470	2	R	0.72	0	1	1	2	0.85775	0.003	0.00	1.17	1.17	2.33	3.66	0.64
	9.500	9.800	0.300	470	2	R	0.72	0	1	0	1	0.85775	0.003	0.00	1.17	0.00	1.17	3.66	0.32
	9.600	9.900	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	9.700	10.000	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	9.800	10.100	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	9.900	10.200	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	10.000	10.300	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	10.100	10.400	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	10.200	10.500	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	10.300	10.600	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
531	10.400	10.700	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
ы С	10.500	10.800	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
~	10.600	10.900	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
►	10.700	11.000	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
Κ	10.800	11.100	0.300	470	2	R	0.72	0	0	2	2	0.85775	0.003	0.00	0.00	2.33	2.33	3.66	0.64
_	10.900	11.200	0.300	470	2	R	0.72	0	0	2	2	0.85775	0.003	0.00	0.00	2.33	2.33	3.66	0.64
	11.000	11.300	0.300	470	2	R	0.72	0	0	2	2	0.85775	0.003	0.00	0.00	2.33	2.33	3.66	0.64
	11.100	11.400	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	11.200	11.500	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	11.300	11.600	0.300	470	2	R	0.72	0	0	0	0	0.85775	0.003	0.00	0.00	0.00	0.00	3.66	0.00
	11.400	11.700	0.300	470	2	R	0.72	0	1	1	2	0.85775	0.003	0.00	1.17	1.17	2.33	3.66	0.64
	vicinity Aiken R	Road at mp 11.	802				•												
	11.500	11.800	0.300	470	2	R	0.72	0	2	1	3	0.85775	0.003	0.00	2.33	1.17	3.50	3.66	0.95
	11.600	11.900	0.300	2,200	2	R	0.72	0	2	1	3	4.015	0.012	0.00	0.50	0.25	0.75	1.94	0.39
	11.700	12.000	0.300	2,200	2	R	0.72	0	1	1	2	4.015	0.012	0.00	0.25	0.25	0.50	1.94	0.26
	11.800	12.100	0.300	2,200	2	R	0.72	0	0	1	1	4.015	0.012	0.00	0.00	0.25	0.25	1.94	0.13
	11.900	12.200	0.300	2,200	2	R	0.72	0	0	1	1	4.015	0.012	0.00	0.00	0.25	0.25	1.94	0.13
	12.000	12.300	0.300	2,200	2	R	0.72	0	0	0	0	4.015	0.012	0.00	0.00	0.00	0.00	1.94	0.00
	12.100	12.400	0.300	2,200	2	R	0.72	0	0	0	0	4.015	0.012	0.00	0.00	0.00	0.00	1.94	0.00
	12.200	12.500	0.300	2,200	2	R	0.72	0	1	0	1	4.015	0.012	0.00	0.25	0.00	0.25	1.94	0.13
	12.300	12.600	0.300	2,200	2	R	0.72	0	1	1	2	4.015	0.012	0.00	0.25	0.25	0.50	1.94	0.26
	12.400	12.700	0.300	2,200	2	R	0.72	0	1	1	2	4.015	0.012	0.00	0.25	0.25	0.50	1.94	0.26

Source: KYTC Highway Information System (HIS). Research period from January 2001 to December 2005.



High crash locations.

Potentially high crash locations.

Appendix G Environmental Overview

This environmental overview identifies project study area issues likely to require consideration during this and future studies. It summarizes the results of several environmental investigations, based primarily upon literature, archival, known database, and map research. Limited amounts of fieldwork were conducted, consisting mainly of windshield surveys to confirm identified sites, and visually identify previously unknown sites. This environmental overview does not provide a detailed analysis and assessment of any potential impacts. Additional information was collected through correspondence with other state and federal agencies. The study area is about 3.8 miles long (*i.e.*, north-south), and about 3.6 miles wide, as indicated by the highlighted area on Exhibits 1 and 2. Refer to Exhibits 1 and 2 in Appendix A, and Appendix B, color photographs of existing study area features, for the following environmental discussions concerning the study area.

Geographic Characteristics. The study area is located mainly in far eastern Jefferson County, and overlaps into western Shelby County. Jefferson and Shelby Counties are located in north central Kentucky, which is within the Bluegrass Region of the Interior Low Plateau physiographic region, a gently rolling plain of the eastern United States. The project study area lies within the Outer Bluegrass Subregion, which is further characterized by low to moderate topographic relief, with thick to thin soil cover over limestone and dolomite, respectively. Sinkholes may develop in the underlying limestone and shale. The US Department of Agriculture in the Soil Survey for Jefferson County describes the study area soils as gently sloping or sloping on narrow ridges, and strongly sloping or steep, shallow soils over limestone hillsides. Jefferson County has a land area of 385 square miles, and Shelby County has 384 square miles. Gently to moderately sloping dissected uplands landforms (ridges and slopes) characterizes the study area. Wide floodplain and terrace landforms associated with Floyds Fork and its tributaries occur in the western half. Elevation in Jefferson County ranges from 383 to 902 feet above sea level, and Shelby County 550 to 1,188 feet above sea level. Numerous east-to-west flowing small streams and tributaries are present throughout the study area, which feed into the dominant north-to-south flowing water features of Floyds Fork and Long Run Creek. Floyds Fork lies mostly just west of the study area, while Long Run Creek winds through the western half. Elevation within the study area ranges from about 560-780 feet above mean sea level, with the lowest elevations occurring in the vicinity of Floyds Fork and the highest on hill tops. No sinkholes were identified in the study area.

<u>Culturally Sensitive Locations</u>. This preliminary study identified the following culturally sensitive locations in the study area: 5 churches, and 5 cemeteries. No public or private schools, pre-schools, or libraries are located within the study area. The churches are generally situated near the northern and southern study area boundaries: 3 churches along Eastwood Cutoff Road, 1 on Shelbyville Road east of Long Road, and 1 on Old Taylorsville Road in the southwest corner. No hospitals, emergency care facilities, nursing homes, or other heath care facilities are located within the study area. No retirement communities are located within the study area.

Land Use, Existing and Future. Land use in the study area over the last few years has been transitioning from a rural area to a residential suburban area. For example, during the course of this highway planning process single-family neighborhoods have been proposed, approved, and some developed during the study area. They are located both within the interior of the study area and along US 60 and KY 155. More intense land use, including multi-family developments and a commercial area have been proposed and approved within the larger Eastwood area along US 60.

Within the interior of the study area (i.e., excluding the US 60 and KY 155/KY 148 corridors), existing land use mostly sing-family residential subdivision, rural residential homes, and a combination of open, undeveloped rural agricultural and forested land. Some crop and pastureland is present. The Floyds Fork and Long Run floodplains, and the land use in the east, within and near Shelby County, are account for the majority of the less intensive, rural land uses. The planned Floyds Fork park system has, when land is acquired, included deed restrictions that such land will remain in a rural, parkland state for perpetuity. One unique are to note is a small industrial area located off English Station Road in Fisherville, just north of KY 148 and the NS railroad.

It is anticipated by Louisville Metro that the land use in the Jefferson County portion of the study area will continue the trend of rapid suburban development based on the existing zoning, which is mostly R4 (approximately 4 houses per acre), the recent expansion of the sewer service in the area, especially the expansion of the Floyds Fork Treatment Plant located just south of I-64, and the amenities from the planned park lands. The planned connector road and interchange, which has been in local plans for many years, is also a contributing element in the forecasted growth, as well as a necessary element to manage the growth. Future land use in Shelby County, according to local officials, is anticipated to remain rural within and adjacent to the study area. Shelby County's plan is for future growth to be concentrated around existing urbanized areas, such as Shelbyville and Simpsonville.

Scenic Corridors. Several roads within the study area have been designated as "Scenic Corridors" by local ordinances. The Louisville Metro Legislative Council approved ordinances designating Eastwood-Fisherville Road, Clark Station Road, Flat Rock, and Long Run as Scenic Corridors. The 2005 *Eastwood Neighborhood Plan* identified Gilliland Road and Eastwood-Fisherville Road as "Scenic Corridors from I-64 to the Village Center boundary" (*i.e.*, south of Eastwood Cutoff Road). No state-designated scenic corridor are located within the study area.

<u>Parkland</u>. Existing and future parks are an important part of this study area. Three public park sites in or near the study area were identified:

- Eastwood Park (about 5 acres) is located south of Eastwood Cutoff Road on the east side of Eastwood.
- William F. Miles Park (about 130 acres) borders outside the study area's northwestern boundary, and is located south of US 60, between Floyds Fork and the study area.
- Floyds Fork Park (about 102 acres) is located outside the study area boundaries, west of the southwest corner, and south of Old Taylorsville Road.

In May 2006, Louisville Metro and several non-profit organizations (21st Century and Future Fund) began acquiring hundreds of acres for future parkland development along Floyds Fork between US 60 and US 31E. Most, but not all, of this corridor is outside but adjacent to the study area boundaries. Some parts of the land acquired and planned to be acquired are within the study area and could cause Section 4(f) involvement for the proposed project.

Cultural Historic Resources. The historic cultural resources overview identified 6 National Register of Historic Places (NRHP) listed sites in the study area, 5 located in Jefferson County, and 1 in Shelby County: East Cedar Hill Institute (Site AA, JF-235), Robert Fisher House (Site K, JF-250), Robert Hord House (Site AAA, JF-377), Masonic Hall in Fisherville (Site N, JF-245), Frederick-Sturgeon Farm (Site 7, JF-739), and Sturgeon-Gregg House (Site QQ, SH-10). The East Cedar Hill Institute and the Masonic Hall have been torn down, but the

properties remain NRHP listed. The NRHP sites are listed below, and identified on the exhibits as National Register properties. (A number in parentheses indicates the county site number of a previously identified site.)

A windshield survey and preliminary assessment identified an additional 47 properties that appear potentially eligible to meet NRHP criteria, consisting of: 12 individual historic sites located outside potential historic district boundaries, and 2 potential historic districts. The two potential historic districts are Fisherville Historic district (12 contributing properties and 1 NRHP site) and Eastwood Historic District (23 contributing properties). The potentially eligible sites are listed below, and identified on the exhibits as National Register Potential properties. Preliminary NRHP boundaries for individual sites and districts follow the property lines on record at the respective PVA offices.

As would be expected, the historic properties tend to be concentrated in and around the potential historic districts. The potential Fisherville Historic District is located in the study area's southwest corner, just inside the southern boundary, along Old Taylorsville Road, and consists of residential dwellings and commercial sites. Additional individual sites are located to the east along Taylorsville Road (KY 155/KY 148). The potential Eastwood Historic District is located in the study area's northwest corner, south of Shelbyville Road (US 60), along Eastwood Cutoff Road. It consists of residential dwellings, churches, and commercial sites. Additional individual sites are located to the east along Shelbyville Road and the railroad tracks. Several other individual sites are cluster around the vicinity of the I-64 crossings of Gilliland Road and Fisherville-Eastwood Road. The remaining individual sites are south of I-64, scattered throughout the study area.

An additional 26 sites were surveyed for documentation only (*i.e.*, no apparent NRHP potential; identified on the exhibits as "S" for survey); and 5 sites documented in SHPO surveys apparently have been torn down (*i.e.*, identified as "NA" for not applicable). The historic resource overview is preliminary in nature, and should not be considered a detailed, all-inclusive survey of historic sites in the study area. The study area historic resource survey included buildings visible from public roads only; buildings or structures inaccessible due to locked gates or farm fields were not included in the survey. No buildings were inspected in detail. This preliminary assessment was based primarily on Criterion C, architecture. NRHP eligibility determination will require additional research, photography, physical examination, and evaluation relative to integrity standards established by similar properties in Jefferson and Shelby Counties, and consultation with the SHPO.

Historic Property Survey Results

Site	Individual Historic Sites Property Name/Description	Site	Historic District Sites Property Name/Description
JIC	NRHP Listed	SILE	Fisherville Potential Historic District
AA	East Cedar Hill Institute (JF-235, torn down)	E	Netherton House (JF-252)
K	Fisher House (JF-250)	F	Curry House (JF-251)
AAA	Robert Hord House (JF-377)	G	Bungalow (JF-249)
N	Masonic Hall in Fisherville (JF-245, torn down)	H	Gilliland House (JF-248)
Site 7	Frederick-Sturgeon Farm (JF-739)		Dwelling (JF-247)
QQ	Sturgeon-Gregg House (SH-10)	J	Pound Oak Gallery
		K	Fisher House (JF-250, NR)
	Potentially NRHP eligible	L	T-Plan (JF-246)
W	Concrete Bridges (JF-231)	0	Dwelling (JF-242)
Y	Clark Station (JF-234)	Р	Dwelling (JF-243)
CC	Central Passage House (JF-237)	Q	Country Trading Post (JF-241)
LL	Bungalow	R	Dwelling
MM	Long Run Station (JF-721)	S	Dwelling
PP	John Hume House (JF-382)		
SS	Dave's Market and Deli		Eastwood Potential Historic District
UU	Roadside Grocery (JF-1050)	BBB	Eastwood Christian Church (JF-710)
WW	Long Run/Boston Store (JF-719)	CCC	Eastwood Cemetery (JF-725)
ХХ	Major J.G. Malone House (JF-380)	DDD	Eastwood Methodist Church (JF-711)
Site 3	Muir Chapel (JF-709)	EEE	Barq House (JF-712)
Site 9	Hobbs House (JF-330)	FFF	Dwelling
		GGG	Dwelling
		HHH	Dwelling
			Dwelling
		JJJ	Bungalow (JF-1044)
		KKK	Eastwood Post Office (JF-715)
		LLL	Fire House Grill (JF-716)
		MMM	Interurban Power Station (JF-1043)
		NNN	Pearce House (JF-378)
			Floyd's Defeat Battle Site Marker (JF-714)
		000	Eastwood School (JF-713)
		PPP	Dwelling
		QQQ	Dwelling
		RRR	Bungalow
		SSS	Bungalow
		TTT	Dennis House (JF-729)
		UUU	First Baptist Church (JF-718)
		VVV	Dwelling
		WWW	Dwelling
		XXX	Lambdin House (JF-731)

Archaeological Resources. The archaeological overview identified 7 previous professional phase I archeological surveys conducted in or within a 1.2-mile radius of the study area between 1976 and 2004; and 66 recorded archaeological sites in or within a 1.2-mile radius of the study area. Thirty-eight (38) of those sites are within the study area. Only 3 sites appear recorded in connection with the phase 1 archaeological surveys, and no survey reports are on file for the remaining 63 sites. It appears none of the sites were evaluated for NRHP eligibility. Nearly all the archaeological sites are prehistoric open habitations without mounds; located primarily on floodplains, with some others found on hillsides, dissected uplands, and terraces. The precise locations and current conditions of the sites were not assessed for this study;

therefore, additional archaeological investigation will be needed if a known site is impacted by roadway improvements.

The archaeological overview concluded the site patterns were probably geographically and chronologically biased. Investigations may have only occurred near Floyds Fork and Long Run (*i.e.*, floodplains), and excluded the dissected upland eastern half of the study area. There is almost a complete absence of historic sites, indicating the survey focus may have been on prehistoric sites. Based on the distribution of known archaeological sites, prehistoric sites should be expected throughout the study area on a variety of landforms. Prehistoric sites probably occur in low density in the dissected upland eastern half of the study area; and in higher density in the western half along the floodplains and terraces associated with Floyds Fork and Long Run. Since sites located on floodplains and terraces of major streams are likely to have intact cultural deposits buried under alluvium, and, hence, archaeological integrity, there is high probably sites eligible for NRHP listing will be located in these areas.

The Kentucky Historical Society database contained no information on cemeteries for the study area. A review of historic mapping identified 8 unnamed cemeteries on two maps (years 1937 and 1982), of which 3 are presumed to be the same, resulting in 5 cemeteries in the study area. Two cemeteries are located east of Eastwood, one cemetery north of where KY 1531 crosses Shakes Run, and two cemeteries in Fisherville.

Historic mapping review revealed a high density of structures near the communities along the northern and southern study area boundaries (*i.e.*, Boston, Clark, Fisherville, and Eastwood) and historic sites should be expected in those areas. The oldest communities appear to be Boston and Fisherville, therefore historic sites in these areas probably have the highest probably of NRHP eligibility. Isolated farms/residences indicated on the earliest maps could also have associated archaeological sites eligible for NRHP listing. NRHP listed properties may also have associated archaeological remains eligible for the NRHP.

<u>Aquatic Resources</u>. Topographic maps and a windshield survey of the study area indicate the presence of jurisdictional waters, wetlands, and ponds. Blue-line streams include perennial (water always present), intermittent (water present except in late summer and fall), and ephemeral (water present only during or immediately after precipitation events) streams. (see Section 2.6.5 for wetlands and ponds discussion)

Perennial streams include Floyds Fork and Long Run, and their tributaries South Long Run, Shakes Run, and Brush Run. Floyds Fork and Long Run flow from north to south in the study area's western portion, whereas the tributaries flow from east to west in the eastern portion. About 57 intermittent streams were identified, with the majority in the study area's eastern portion and tributary to the perennial streams.

About 13 ephemeral streams were identified, with most channels serving as drainage ways to or from wetlands and ponds, and flow into intermittent or perennial streams. A more detailed field survey would likely identify additional intermittent and ephemeral channels within the study area.

No aquatic macro-invertebrates, fishes, or water quality sampling was conducted. If construction of a new I-64 interchange with a connector road were implemented, then all streams in the study area may be impacted by sedimentation resulting from roadway construction. Soil from exposed and erodible surfaces may directly enter surface water, temporarily increasing turbidity levels. Surface and ground water may also experience

temporary increases in specific conductance, suspended solids, and nutrients. Streams could experience a loss of riparian vegetation and habitat for aquatic species. Any rechannelization could disturb stream flow and water quality.

Jurisdictional waters, as defined by the United States Army Corps of Engineers (USACE), are located within the study area. Potential ephemeral stream impacts will require assessment prior to submission of a permit packet to USACE. Section 404 and Section 401 permits may be required.

Kentucky Division of Water (KDOW) will require a non-point source pollution control plan, and an erosion control plan. Application of Kentucky Transportation Cabinet's (KYTC) *Specific Specifications for Road and Bridge Construction* and the Federal Highway Administration's (FHWA) Best Management Practices for Erosion and Sediment Control can be used to alleviate most sedimentation problems.

No nationally listed wild and scenic rivers are located within the study area. No other rivers or streams are listed on the Kentucky Wild River System. No "special use" designated waters are located within the study area.

The KDOW implemented a policy change and now regards the location of municipal water supplies and groundwater protection areas as classified information. Therefore, only a limited amount of information is available, which mainly originates from other public information sources. No outstanding resource waters, or municipal/public surface water intakes, were identified in the study area.

According to the KDOW website concerning ground-water resources, public drinking water is supplied to about 99-percent of Jefferson County's residents, and to about 91-percent of Shelby County's residents. Of the Jefferson County residents not serviced by public water, about half use wells and half use other sources; while in Shelby County about one-third of the residents not on public water use wells, and the remainder use other sources. If all proposed public water line extensions are implemented by 2020, then virtually 100-percent of Jefferson County will be served by public water, and over 94-percent of Shelby County.

Jefferson County's water is supplied by the Louisville Water Company, which obtains its water from the Ohio River. Most water is drawn directly from the river, and some water is obtained through riverbank infiltration (RBI) wells located near the river. Louisville Water Company's Wellhead Protection Area (WHPA, *i.e.*, the area surrounding a well that supplies water to the well) is located in northeastern Jefferson County, well outside the study area, and in a different watershed/drainage area. Construction or operation of the proposed project would not present any risk of pollution or contamination to this water supply.

Shelby County is served by six water districts: Shelbyville Municipal Water System, North Shelby Water Company, West Shelby Water District, Henry County Water District No. 2, US 60 East Water District, and Taylorsville Water System. Guist Creek Lake is the drinking water source for the majority of Shelby County, and a designated environmentally sensitive area. Guist Creek Lake is located east of Shelbyville, just north of US 60, and far removed from the study area. Guist Creek Lake is the only known public drinking water source in the area, and classified as a surface water source. No public water wells are present, therefore a Wellhead Protection Area is not required. The West Shelby Water District provides service in the study area and receives water from both the Shelbyville Municipal Water System and the Louisville Water Company. Project implementation is not expected to impact the Shelby County public water supply.

According to information obtained through the Kentucky Geological Survey Groundwater Repository, Spring and Water Well Records Database website, 5 water wells are located within the study, and no springs. Located south of Taylorsville Road, on the same property, are 2 monitoring wells. Three-domestic water wells are listed: 1 south of Taylorsville Road (and just east of the monitoring wells); 1 north of US 60 and east of Long Run Road, just inside the study area boundary; and 1 just southwest of the study area's geographic center.

Flood Insurance Rate Maps (FIRM) developed by the Federal Emergency Management Agency (FEMA) were consulted for information regarding floodplains. Jefferson County FIRM maps encompassing the project area are map numbers 21111C0115D, 21111C0185D (include Floyds Fork), 21111C0120D, and 21111C0205D (include Long Run), with effective dates of February 2, 1994. The Shelby County FIRM map encompassing the project area is map number 2102090004B. The flood hazard boundary map was revised in July 15, 1977, and converted by letter to FIRM effective September 1, 2001.

Approximately 1,081 acres of the study area are located within the 100-year flood plain, with majority of the 100-year flood plains located in the western portion along Floyds Fork (floodplain with water surface elevations determined) and Long Run (floodplain without water surface elevations determined). Potential floodplain encroachment impacts are general in nature, and include loss of riparian vegetation, disturbance of habitat, and the potential for increased sedimentation into the streams.

<u>Wetlands and Ponds</u>. National Wetland Inventory (NWI) map reconnaissance revealed numerous wetlands and open water within the study area, totaling about 90 acres. Most are small ponds used for livestock or aesthetic purposes. About 25 acres are permanently flooded wetlands within the Floyds Fork floodplain located in the study area's southwestern portion. Windshield surveys indicated several small areas of emergent and forested wetland.

No specific field investigations were conducted, nor a determination of size, jurisdictional, or non-jurisdictional wetland made. Farm ponds/open waters may be considered jurisdictional if they have a surface connection to a surface tributary. More intensive field surveys would be required to confirm and delineate NWI map wetlands, as well as identify any wetlands not appearing on the maps, and determine jurisdictional status.

Wetlands should be avoided if possible, or impacts minimized, during project development. If wetlands cannot be avoided and mitigation is required, then an evaluation of potential locations for on-site, in-kind mitigation should be considered. If on-site mitigation cannot be accomplished, then consider using a wetland bank for mitigation.

A specific roadway design is needed before the type of USACE permit required (*i.e.*, Nationwide or Individual) can be determined. The *Nationwide Permit 14, Linear Transportation Crossings,* (NP 14) only authorizes activities with minimal adverse effects on the aquatic environment. An *Individual Permit* (IP) is required if the stream impact is greater than 0.5 acres, or the wetland impact is greater than 0.1 acres; and must include a compensatory mitigation proposal.

The KDOW will probably require a Kentucky Pollutant Discharge Elimination System (KPDES) General Stormwater Permit, a Floodplain Construction Permit if filling within the one-hundredyear floodplain, and a Water Quality Certification. **Terrestrial Resources.** The study area encompasses a mixed landscape of forested and agricultural land. Forested areas, cropland, and pastures dominate the western portion along Floyds Fork and Long Run. The eastern portion consists primarily of forested areas and pastures, with several major drainages flowing from east to west. The plant and animal life is considered typical for the area with no unique populations present.

Threatened and Endangered Species. The US Fish and Wildlife Service (USFWS) website database was researched for federally protected species potentially affected by the project. Database research identified thirteen endangered, one threatened, and no candidate species. One endangered species was a historical reference. The Kentucky Department of Fish and Wildlife Resources (KDFWR) materials were researched to identify threatened or endangered species known to occur in the project vicinity. No known occurrences of federally protected species were identified, however two species of state concern were noted (*i.e.*, dark-eyed junco, great blue heron). Table F.1, *Protected Species in the Study Area*, provides a list of protected species identified by the federal and state agencies as potentially occurring in the study area, along with potential habitat descriptions.

No surveys for protected species were performed. Potential habitat for the least tern and piping plover is believed to not be present in the study area. The cracking pearly mussel is believed extirpated from Kentucky. More detailed field surveys are required to confirm the presence of protected species in the study area, determine the presence or absence of suitable habitat for the species, and ascertain any potential impacts and mitigation requirements. Surveys must be conducted by a qualified biologist who holds the appropriate collection permits. Surveys would not be necessary if sufficient site-specific information was available demonstrating: (1) no potentially suitable habitat exists within the study area or its vicinity; or (2) the species would not be present in the study area or its vicinity due to site-specific factors.

Previous coordination with the USFWS has indicated their belief that habitat for the federally endangered Indiana bat (Myotis sodalis) may exist within the study area. The USFWS position is based upon their knowledge of the species' life history characteristics; that the study area and surrounding area may contain forested habitats within the species' natural range which potentially provide suitable summer roosting and foraging habitat; and caves, rock shelters, and abandoned underground mines in and surrounding the study area could provide suitable winter habitat for Indiana bats. USFWS recommends conducting a thorough search for caves, underground mines, and rock shelters in the study area, and avoiding impacts to those sites pending an assessment of their potential use as Indiana bat habitat by the USFWS. The USFWS recommends removing trees only between October 15 and March 31 to avoid impacting summer roosting Indiana bats. However, if any Indiana bat hibernacula are identified within the project area, or are known to occur within 10-miles of the study area, then the USFWS recommends removing trees only between November 15 and March 31 to avoid impacting the species' "swarming" behavior. Surveys must be conducted by a qualified biologist who holds the appropriate collection permits. Surveys would not be necessary if sufficient site-specific information was available demonstrating: (1) no potentially suitable habitat exists within the study area or its vicinity; or (2) the species would not be present in the study area or its vicinity due to site-specific factors.

Common Name	Scientific Name	Federal Status					
Vascular Plants							
running buffalo clover	Trifolium stoloniferum	E	USFWS & KSNPC – Jefferson & Shelby				
short's goldenrod	Solidago shortii	E	KSNPC – Jefferson				
Insects							
American burying beetle	Nicrophorus americanus	E	USFWS & KSNPC – Jefferson				
Reptiles							
Copperbelly Water Snake Nerodia erythrogaster neglecta		PS: T	KDFWS – Jefferson, Partial Status (PS), dependent on the species range				
Birds							
Interior least tern	Sterna antillarum	E	USFWS, KSNPC, & KDFWS – Jefferson				
Peregrine Falcon	Falco peregrinus	PS: E	KDFWS – Jefferson, Partial Status (PS), dependent on the species range				
piping plover	Charadrius melodus	Т	KDFWS – Jefferson				
Mammals		•					
gray bat	Myotis grisescens	E	USFWS, KSNPC, & KDFWS – Jefferson & Shelby				
Indiana bat	Myotis sodalis	Е	USFWS, KSNPC, & KDFWS – Jefferson USFWS – Shelby				
Mussels							
Clubshell	Pleurobema clava	E	USFWS, KSNPC, & KDFWS – Jefferson				
Fanshell	Cyprogenia stegaria	E	USFWS, KSNPC, & KDFWS – Jefferson				
fat pocketbook	Potamilus capax	E	USFWS, KSNPC, & KDFWS – Jefferson				
Orangefoot pimpleback	Plethobasus cooperianus	Е	USFWS, KSNPC, & KDFWS – Jefferson				
ring pink	Obovaria retusa	E	USFWS, KSNPC, & KDFWS – Jefferson				
pink mucket	Lampsilis abrupta	E	USFWS, KSNPC, & KDFWS – Jefferson				
rough pigtoe	Pleurobema plenum	E	USFWS – Jefferson				

Table G.1: Federally List Species in Jefferson and Shelby Counties

E = endangered; T = threatened

USFWS = U.S. Fish and Wildlife Services, KY Ecological Services Field Office, June 1, 2005

KSNPC = Kentucky State Nature Preserves Commission, Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities for Jefferson County and Shelby County, Kentucky, June 2007 KDFWS = Kentucky Department of Fish and Wildlife Services

<u>Managed Land Areas</u>. Managed land areas are under governmental or private regulatory control, typically to encourage environmental protection or resource procurement. No nature preserves, wildlife management areas, state or national forests are located within the study area.

Farmlands. The respective Jefferson and Shelby County Natural Resources Conservation Service offices (NRCS) provided the available soil survey maps, and identified farmland, in the study area. Both counties have published United States Department of Agriculture (USDA) Soil Survey maps.

Jefferson County has a land area of about 385 square miles (246,457 acres), with 41,061 acres in farms (2002 Agricultural Census, up 5 percent from 1997). Major crops include: pasture (forage and hay), soybeans, corn, sod, and wheat.

Shelby County has a total area of about 384 square miles (245,881 acres), with 201,667 acres in farms (2002 Agricultural Census, down 1 percent from 1997). Major crops include: pasture (forage and hay), soybeans, corn, and wheat.

<u>Hazardous Materials Concerns</u>. Land use in the study area is predominantly rural residential, with agricultural uses, and some commercial facilities in the south. Relevant data was collected from numerous sources, including federal and state databases, and a windshield survey within the study area. The database search and survey identified 7 possible contamination sites (see Table F.2, *Possible Contamination Sites*). Most of these sites involve current or former fuel distribution, and/or vehicle/equipment storage and maintenance facilities, and have similar potential contamination concerns (*e.g.*, underground storage tanks (USTs), fuel spills/leaks, soil contamination, waste petroleum products, heavy metals, miscellaneous debris piles, etc.). Other sources of potential contamination concerns include: pole-mounted electrical transformers (PCBs), open dumping/littering, and aboveground storage tanks (ASTs). Structures with potential asbestos containing building materials (ACBM) were also observed. Any construction activities in and near these sites will require further investigations to determine the risk and extent of any contamination, and may require special procedures and permits.

Site Number	Site Name or Description	Suspected Contaminant or Area of Concern
1	Davenport Trucking 200 Gilliland Rd	Identified in database search, but no business appears to be operating at the site. No obvious signs of an underground storage tank system. Possible soil contamination from UST systems usage in the form of heavy metals, volatile organic compounds, and semi- volatile organic compounds.
2	English Station Road Leaf Collection Facility 2827 S. English Station Rd	Permit approved for beneficial reuse site; no such activity is apparent at the location.
3	Thomas Bridwell Property 2799 English Station Rd	Former UST site (tank removed in 1987). Possible soil contamination from heavy metals, volatile organic compounds, and semi-volatile organic compounds.
4	2820 English Station Rd	Site of two oil/diesel spills in 1996 and 1999. Site is currently owned by Jordan Technologies, Inc.
5	Waste Management of Kentucky, Louisville Hauling East 2827 S. English Station Rd	Former UST site (tanks removed in 2001). Possible soil contamination from current AST systems usage in the form of heavy metals, volatile organic compounds, and semi-volatile organic compounds.
6	Construction Machinery Company and McMillan Landscaping 2911 S. English Station Rd	Construction equipment stored on property. Possible soil contamination from on-site operations in the form of volatile organic compounds, semi-volatile organic compounds, and heavy metals. Soil and rock stockpiles also on property.
7	Not Mapped*	Littering and open dumping along Echo Trail through first mile north of English Station Rd. General household waste, construction/demolition wastes, furniture, and waste tires.
Not Mapped*	Agriculture Operations	Petroleum products, fertilizers, pesticides, herbicides.
Not Mapped*	Power Pole Mounted Electrical Transformers	Polychlorinated Biphenyls (PCB's)
Not Mapped*	Residential Dwellings and Commercial Buildings	Asbestos Containing Building Material (ACBM)

Table G.2 Possible Contamination Sites

* Sites are found at various locations within the study area.

<u>Air Quality</u>. Jefferson County is located within the Louisville Interstate Air Quality Control Region. The study area is designated as a Non-Attainment Area for 8-hour ozone and PM_{2.5}, as per the 1990 Clean Air Act Amendments. Transportation control measures are not likely to be required for the project. The project is listed on page 114 of KIPDA's *FY 2006-FY 2008 Transportation Improvement Program*, adopted November 2005, and on page 10-135 of KIPDA's *Horizon 2030 Long-Range Transportation Plan*, adopted November 2005. Further advancement of this project would require more detailed analysis and interagency review. If implemented, the project is not expected to adversely impact air quality in the region.

Traffic Noise. Highway traffic noise, or unwanted sound, is one of the most common citizen complaints regarding highways. Inducing a new road in a rural and transitioning area will generate concern over highway noise. Although several options existing for addressing noise impacts, none are more effective than noise barriers, and they even have limited effectiveness. Barriers can only be effective if no openings exist, as noise will bend and infiltrate through such openings. Therefore, noise barriers can only be installed along roadways that either have full access control or have a significant stretch of roadway that has no driveway openings or intersecting roads. Other noise mitigation measures that should be considered include quite pavements, horizontal and vertical alignment shifts, and the acquisition of property along the roadway to create a buffer zone. It should be noted that Louisville Metro has a noise policy that restricts that placement of residential developments within a buffer of interstate facilities. Although the new road would not be an interstate facility, similar restrictions could be considered by local jurisdiction.

Other Concerns. In March 2006, the Louisville Metro Planning Commission recommended approval of a zoning change needed for a 283-acre business park east of Jeffersontown, between Tucker Station and Rehl Roads. The property would be rezoned from single-family residential to planned employment center. The general plan is for 26 lots for distribution centers, office buildings, and light industry developed over 10 years or more. The Blankenbaker Station II business park would create an employment and economic activity center west, and outside, of the new I-64 interchange study area. As the business park develops and tenants establish operations, an increasing amount of commercial truck, customer, and employee traffic is anticipated on the road network. The planned business park development includes installation of a four-mile sewer main to the Floyds Fork sewage treatment plant near Eastwood to serve the park, which, in turn, would open up rural areas east of the business park to development, possibly including portions of the study area. The business park developers already have an agreement with the Metropolitan Sewer District to build the sewer main. Local realtors have been quoted as stating it is a desirable area and development would follow the sewers.

Environmental Justice. The Kentuckiana Regional Planning and Development Agency (KIPDA) prepared the Environmental Justice Community Impact Assessment and its related issues/concerns. The environmental justice report concluded: "... the community impact assessment did not uncover any significant concentrations of Environmental Justice populations, elderly, or persons with disabilities within the study area." The complete review is in Appendix I.

The Environmental Justice Community Impact Assessment was based upon US Census Bureau 2000 Census data, field observations, local officials meetings, and interviews with individuals familiar with the area. It focused on identifying the magnitude and location of

potentially impacted Environmental Justice populations based upon race, ethnicity, minorities, and low-income persons. Elderly (*i.e.*, 65 years or older) and disabled populations were also considered as part of the KYTC's standard planning study methodology, as well as a matter of good planning practice. The impact assessment examined 2000 Census data at the census Tract, Block Group, and Block levels. The analysis discovered a misallocation of the group quarters population of the Kentucky Correctional Institution for Women, and reallocated the populations — the Kentucky Correctional Institution for Women and the Whitney Young Job Corps Center, both located in Shelby County and outside the study area boundary — were removed from the analysis to avoid skewing the actual populations studied. Concentrations of minority and low-income populations did not appear to be present within the study area. Elderly persons and person with disabilities were not present in the study area in significantly different proportions from county, state, or national percentages.

The purpose of an environmental justice review is to identify geographic areas containing disproportionately high concentrations of minority, low-income, or elderly households. *Environmental Justice Executive Order 12898: Federal Actions to Address Environmental Justices in Minority Populations and Low-Income Populations* (signed February 11, 1994), directed federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority and low-income populations.

<u>Geotechnical Overview</u>. The KYTC Division of Structural Design, Geotechnical Branch, and the University of Kentucky, Kentucky Geological Survey, provided geotechnical comments for the study area (see Appendix G).

"The Geotechnical Branch does not anticipate any design or construction problems associated with the project." The Geotechnical Branch letter indicates Quaternary Age alluvium underlies the study area, and contains silt, clay, sand, and gravel 0-20-feet thick. The alluvium is found mainly along streams, valleys, and flood plains. Bedrock consists of the Saluda Dolomite Member, Bardstown Member, and the Rowland Member of the Drakes Formation and the Grant Lake Limestone. The Drakes Formation consists of limestone, dolomite, shale, mudstone, and dolomudstone, and covers most of the study area and will probably require cut slopes flatter than normal. Fill slopes constructed from these materials will likely be stable on normal slope angles. The Grant Lake Limestone consists of shaley limestone and shale, occurs as partings and beds up to 1.5-feet thick, and mainly found in the valleys.

Kentucky Geological Survey letter identified the study area as located on the outer edge of the Outer Bluegrass physiographic region, and other information already cited above. In addition, the study area may have karst features (*e.g.*, sinkholes, possible cavernous conditions), and would encounter unconsolidated sediments in drainage areas. No faulted areas, units prone to landslides, or resource conflicts. Inactive or abandoned limestone mines might be in the area. Probable peak ground acceleration due to earthquake ground motion of 0.09g.

Environmental Justice Community Impact Assessment



Scoping Study for a Proposed Interchange on I-64 in the Vicinity of Gilliland Road Jefferson County/Shelby County, Kentucky KYTC Project #05-8200 KIPDA Project #390



December 2006


Environmental Justice Community Impact Assessment

Scoping Study for a Proposed Interchange on I-64 in the Vicinity of Gilliland Road Jefferson County/Shelby County, Kentucky KYTC Project #05-8200 KIPDA Project #390

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This document is published by the Kentuckiana Regional Planning and Development Agency and is prepared with financial assistance from the Federal Transit Administration, the Federal Highway Administration, the Kentucky Transportation Cabinet, the Transit Authority of River City, and local governments in the KIPDA region, in cooperation with the Indiana Department of Transportation. This financial assistance notwithstanding, the contents of this document do not necessarily reflect the official views or policies of the funding agencies.

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INTRODUCTION

This report documents an assessment of potential community impacts on Environmental Justice populations and other selected groups within the defined study area for a proposed interchange on I-64 in the vicinity of the Gilliland Road corridor in eastern Jefferson County/western Shelby County, Kentucky (Figure 1). The assessment has been prepared by the Kentuckiana Regional Planning and Development Agency in support of a Kentucky Transportation Cabinet planning study (Kentucky Six Year Highway Plan project #05-8200) conducted to investigate the feasibility of improving interstate access to a rapidly developing area by constructing an I-64 interchange with a connecting roadway between Taylorsville Road (KY 155/KY 148) and Shelbyville Road (US 60).

PURPOSE

The purpose of this assessment is to:

- assist the Kentucky Transportation Cabinet in carrying out the Division of Planning's mission "... to collect, maintain, analyze and report accurate data for making sound fiscally responsible recommendations regarding the maintenance, operation and improvement of our transportation network";
- fulfill applicable federal Environmental Justice commitments; and
- further the goals and objectives and cooperative nature of the metropolitan transportation planning process.

The assessment is focused on identifying, through a demographic analysis, the extent to which Environmental Justice populations and other groups of concern reside in or near the study area and may be impacted by the proposed project. Subsequent actions (determination of disproportionately high and adverse effects; proposing measures to avoid, minimize, and/or mitigate such effects; and providing specific opportunities for public involvement) may be undertaken, as appropriate, contingent upon the results of the demographic analysis.

BACKGROUND

Environmental Justice is based on the principles of Title VI of the *Civil Rights Act* of 1964, wherein each Federal agency is required to ensure that no person on the grounds of race, color, or national origin, is excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance. In the context of transportation planning, Environmental Justice broadly refers to the goal of identifying and avoiding disproportionate adverse impacts on minority and low-income



Created by KIPDA October 2006 (LAK)

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STUDY AREA BOUNDARY SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD (KYTC #05-8200 KIPDA #390)



individuals and communities. For the purposes of this assessment, Environmental Justice has been addressed through the following:

• **Executive Order 12898:** Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994)

The order reads, in part: "Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

• U.S. Department of Transportation Order 5610.2: Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (April 15, 1997)

The order reads, in part: "Planning and programming activities that have the potential to have a disproportionately high and adverse effect on human health or the environment shall include explicit consideration of the effects on minority populations and low-income populations."

• Federal Highway Administration Order 6640.23: FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (December 2, 1998)

The order reads, in part: "...it is FHWA's continuing policy to identify and prevent discriminatory effects by actively administering its programs, policies and activities to ensure that social impacts to communities and people are recognized early and continually throughout the transportation decision making process—from early planning through implementation."

In the absence of a single Environmental Justice statute or regulation, planners must make use of the numerous orders, policies, and guidance documents that have been developed since the issuance of Executive Order 12898. This assessment attempts to apply current state of the practice procedures to provide the information needed to "… ensure that the interests and well being of minority populations and low-income populations are considered and addressed during the transportation decision making process."

Two additional groups included in this assessment are the elderly and persons with disabilities. The above Environmental Justice orders do not address these additional populations, so they are included in this analysis per the Kentucky Transportation Cabinet document, *Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies*, as a matter of good planning practice.

RESOURCES/REFERENCES

The following federal, state, and local resources have been consulted for information and guidance in conducting this assessment:

- Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies – Kentucky Transportation Cabinet, February 2002.
- Community Assessment and Outreach Program for the Louisville (KY-IN) Metropolitan Planning Area for Title VI/Environmental Justice and Other Communities of Concern – Kentuckiana Regional Planning and Development Agency, July 2006.
- *Environmental Justice/Title VI Plan* Kentuckiana Regional Planning and Development Agency, October 2004.
- Effective Methods for Environmental Justice Assessment National Cooperative Highway Research Program Report 532, September 2004.
- Technical Methods to Support Analysis of Environmental Justice Issues National Cooperative Highway Research Program Project 8-36 (11), April 2002.
- US Census Bureau, 2000 Census, Summary Files 1 and 3

TERMINOLOGY

This assessment makes use of several terms, some of which may be unique to the Environmental Justice process. Their definitions may similarly have specific application limited to these procedures. For example, according to the Federal Highway Administration, the following terms and definitions shall be used:

Minority Persons include persons whose race can be identified as any one or more of the following categories:

- Black—persons having origins in any of the black racial groups of Africa;
- Asian—persons having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- American Indian and Alaskan Native—persons having origins in any of the original people of North America and who maintain cultural identification through tribal affiliation or community recognition; and
- Native Hawaiian or Other Pacific Islander—persons having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Minority populations also include persons of any race or combination of races who identify their ethnicity, culture, or origin as Hispanic. Hispanics are persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin.

Low-Income Persons include persons whose household income is below the US Department of Health and Human Services poverty guidelines (Table 1). For the 2000 census, poverty status was determined for all persons except the institutionalized, military group quarters, persons in college dormitories, and unrelated individuals under 15 years old.

TABLE 1	
Poverty Threshold in 1999, by Size of Family and Number of Related Children	
Under 18 Years Old	

	Weighted	1		F	elated Chil	dren Under	18 Years C	DId		
Size of Family Unit	Average Threshold	None	One	Тwo	Three	Four	Five	Six	Seven	Eight or More
One person (unrelated individual)	\$8,501									
Under 65 years old	\$8,667	\$7,990								
65 years old and over	\$7,990	\$7,990								
Two persons	\$10,869					2				
Householder under 65 years old	\$11,214	\$11,156	\$11,483							
Householder 65 vears old and over	\$10,075	\$10,070	\$11,440							
Three persons	\$13,290	\$13,032	\$13,410	\$13,423		1		1		
Four persons	\$17,029	\$17,184	\$17,465	\$16,895	\$16,954					
Five persons	\$20,127	\$20,723	\$21,024	\$20,380	\$19,882	\$19,578				
Six persons	\$22,727	\$23,835	\$23,930	\$23,436	\$22,964	\$22,261	\$21,845			
Seven persons	\$25,912	\$27,425	\$27,596	\$27,006	\$26,595	\$25,828	\$24,934	\$23,953	-	
Eight persons	\$28,967	\$30,673	\$30,944	\$30,387	\$29,899	\$29,206	\$28,327	\$27,412	\$27,180	
Nine or more persons	\$34,417	\$36,897	\$37,076	\$36,583	\$36,169	\$35,489	\$34,554	\$33,708	\$33,499	\$32,208

Low-Income Population means any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed FHWA program, policy, or activity.

Minority Population means any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy, or activity. Adverse Effects are the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of FHWA programs, policies, or activities.

Disproportionately High and Adverse Effect on Minority and Low-Income Populations means an adverse effect that:

- is predominately borne by a minority population and/or a low-income population; or
- will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or nonlowincome population.

Programs, Policies, and/or Activities means all projects, programs, policies, and activities that affect human health or the environment, and that are undertaken, funded, or approved by FHWA. These include, but are not limited to, permits, licenses, and financial assistance provided by FHWA. Interrelated projects within a system may be considered to be a single project, program, policy, or activity.

The following terms are defined using US Census Bureau terminology and data:

Elderly Persons include persons age 65 and older as of April 1, 2000 (Census Day).

Persons with Disabilities include persons for which any of the 3 following conditions were true as of April 1, 2000 (Census Day):

- they were 5 years old and over and had a sensory, physical, mental, or self-care disability;
- they were 16 years old and over and had a going outside the home disability; or
- they were 16 to 64 years old and had an employment disability.

Census Tracts are small, relatively permanent statistical subdivisions of a county or statistically equivalent entity that are used to provide a stable set of geographic units for the presentation of census data. While tracts generally contain between 1,500 and 8,000 people, with an optimum size of 4,000 people, their spatial size can vary widely depending on the density of settlement. Figure 2 shows the census tracts in and around the study area.

Census Block Groups (BGs) are intermediate-level statistical subdivisions of census tracts that are used for the presentation of census data. Within each tract, they are aggregations of census blocks that have the same first digit of each four-digit identifying block number. Block groups generally contain between 600 and 3,000 persons, with an optimum size of 1,500 persons. Figure 3 shows the census block groups in and around the study area.

Census Blocks are the smallest statistical subdivisions of census tracts that are used for the presentation of census data. They are bounded on all sides by visible features, such as streets, roads, streams, and railroad tracks, and by invisible boundaries, such as city, town, township, and county limits, property lines, and short, imaginary extensions of streets and roads. Blocks are generally small in area, especially in densely settled areas, but may contain many square miles of territory in more sparsely settled areas. Figure 4 shows the census blocks in and around the study area.

ANALYSIS METHODOLOGY

The procedures involved in conducting the community impact assessment for this project centered on the identification of potentially impacted populations. Data from the 2000 census were used to develop demographic profile tables and maps of the locations of the groups of concern. Other community information was used, as available, to identify potentially impacted populations and future points of contact within the study area.

Tables and maps depicting race, ethnicity, minorities, and persons with lowincome are used to indicate the locations and magnitudes of potentially impacted Environmental Justice populations. Elderly and disabled distributions are also represented in tabular and graphic form as part of the Kentucky Transportation Cabinet's standard planning study methodology. This project level assessment utilizes many of the same resources and methodologies as were used in the Louisville (KY-IN) Metropolitan Planning Area (MPA) systems level assessment. The MPA community assessment covered not only the populations mentioned above, but other potentially impacted groups as well as a matter of good planning practice.

Profile tables were developed for each population of interest and for several geographic levels in and around the study area. Tables showing the total number of persons by race, ethnicity, minority status, poverty status, elderly status, and



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Figure 2

STUDY AREA CENSUS TRACT BOUNDARIES SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD (KYTC #05-8200 KIPDA #390)





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Kentuckiana Regional Planning and Development Agency



Figure 4

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STUDY AREA CENSUS BLOCK BOUNDARIES

SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD (KYTC #05-8200 KIPDA #390)

KEPDA Kentuckiana Regional Planning and Development Agency disability status were constructed for several geographic areas, including the United States, Kentucky, and Jefferson and Shelby counties, as well as applicable census tracts, block groups, and blocks. Due to the larger sizes of census tracts and block groups in the vicinity of the study area, only those which actually intersected some portion of the study area were determined to be appropriate for analysis. Also, because of the large number of census blocks present in and around the study area, only those blocks with higher populations of interest are discussed.

The tables were assembled using year 2000 census data. The decennial census data represent the most comprehensive information source available in terms of the number of data variables collected and the number of geographic levels available. Decennial census data is derived from two different sets of questionnaires, the short form and the long form. Short form data, or SF1 data, contains basic demographics and represents a 100% sample of the populous of the United States, while long form data, or SF3 data, contains more detailed social and economic characteristics and is gathered from an approximate 17% sample. The smallest level of geography available from SF1 is the census block, while the smallest level available from SF3 is the block group.

Profile maps were produced for each population variable at the tract, block group, and block levels, as available. ESRI ArcMap software was used to combine 2000 census data with TIGER/Line 2000 census tract, block group, and block boundaries in and around the study area to map locations of the populations of interest.

Most of the census data utilized for the analysis could be used directly from the SF1 and SF3 files and required no adjustments. A misallocation of the group quarters population of the Kentucky Correctional Institution for Women in Shelby County, however, did require a reallocation to the correct census geographies. Digital aerial photography was used to confirm this allocation error. Group quarters population originally allocated to census tract 405.00 block 4005 was reallocated to census tract 405.00 block 1029 (Table 2). The populations of the affected block groups, census tract 405.00 block groups 1 and 4, were adjusted as well. The overall population of tract 405.00 was unaffected by the internal reallocations. These adjustments affected the race, ethnicity, minority, and age variables, as they are based on the total population in an area (they include group quarters as well as persons in households). The adjustments did not affect the low-income or disability status variables, however, as they are based on the non-institutionalized population in an area (they do not include group quarters populations).

TABLE 2 Reallocation of Census 2000 Information Kentucky Correctional Institution for Women

					Race Alone										
						American		Native							
			Group		Black or	Indian and		Hawaiian and		Two or					
		Total	Quarters	Minority	African	Alaska		Other Pacific	Other	More	Hispanic	Elderly			
	Area	Population	Population	Population	American	Native	Asian	Islander	Race	Races	Origin	(Age 65+)			
u	Tract 405.00														
ij	Block Group 1	1719	0	67	21	5	19	0	6	14	9	180			
All ocatio n	Tract 405.00 Block Group 4	0575	050	200	224	0	10	0	20	7	24	475			
A		2575	659	388	334	2	10	0	20	/	34	175			
riginal	Tract 405.00 Block 1029	110	0	1	0	1	0	0	0	0	0	5			
igi	Tract 405.00		0	ı	0	ı	0	0		0	Ŭ				
ō	Block 4005	659	659	254	251	0	3	0	0	0	0	3			
	Tract 405.00														
All ocatio n	Block Group 1	2378	659	321	272	5	22	0	6	14	9	183			
oca	Tract 405.00														
Ā	Block Group 4	1916	0	134	83	2	7	0	20	7	34	172			
-	Tract 405.00														
Ist	Block 1029	769	659	255	251	1	3	0	0	0	0	8			
Adjusted	Tract 405.00 Block 4005	0	0	0	0	0	0	0	0	0	0	0			

Data Source: 2000 Census SF1, Tables P1, P8, P12

COMMUNITY PROFILES

This section provides an examination of the demographic characteristics of the Environmental Justice populations and other selected groups within and surrounding the project study area. These profiles provide a basis for identifying the number and, where appropriate, the geographic location of potentially impacted persons in the communities of concern.

MINORITY PERSONS

According to year 2000 census data, the highest numbers and concentrations of minority persons existed in the census tracts and block groups that intersect the Shelby County portion of the study area. Specifically, census tract 405.00 and tract 405.00 block groups 1 and 3 contained the highest concentrations, with 16%, 13.5%, and 34% of the total population, respectively (Figures 5 and 6, Table 3). These higher concentrations were, in large part, due to the presence of two large group quarters facilities. One is the Kentucky Correctional Institution for Women, which accounted for over 250 minority women in tract 405.00 block group 1, and the other is the Whitney Young Job Corps Center, which added approximately 350 minority men and women dormitory residents to tract 405.00 block group 3.



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Figure 5

MINORITY PERSONS BY CENSUS TRACT--2000 SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD (KYTC #05-8200 KIPDA #390)





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Figure 6 MINORITY PERSONS BY CENSUS BLOCK GROUP 2000 SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD

(KYTC #05-8200 KIPDA #390)

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			Non-Hi	spanic	Hisp	anic	Minority Population		
Area		Total Population	White	Non-White	White	Non-White	Total	%	
United Sta	tes	281,421,906	194,552,774	51,563,314	16,907,852	18,397,966	86,869,132	30.87	
Kentucky		4,041,769	3,608,013	373,817	32,876	27,063	433,756	10.73	
Jefferson (County	693,604	530,056	151,178	6,665	5,705	163,548	23.58	
Shelby County		33,337	28,293	3,539	581	924	5,044	15.13	
	Tract 103.07	1,635	1,525	80	21	9	110	6.73	
and ea	Block Group 1	1,635	1,525	80	21	9	110	6.73	
Pig 8	Tract 116.01	3,085	2,835	191	27	32	250	8.10	
Intersecting the Study Ar	Block Group 1	2,142	1,939	161	18	24	203	9.48	
ers St	Block Group 2	943	896	30	9	8	47	4.98	
the	Tract 116.02	4,940	4,749	165	24	2	191	3.87	
Areas	Block Group 1	926	908	16	0	2	18	1.94	
	Tract 405.00	6,533	5,463	898	40	132	1,070	16.38	
Census Surrou	Block Group 1	2,378	2,057	312	2	7	321	13.50	
S Cel	Block Group 3	1,720	1,135	468	23	94	585	34.01	
	Block Group 4	1,916	1,782	100	15	19	134	6.99	

TABLE 3 Minority Persons—2000 Study Area for a Proposed Interchange on I-64 in the Vicinity of Gilliland Road

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals. Data Source: 2000 Census SF1, Tables P1, P8

By removing the effects of the two group quarters facilities from the analysis, the minority concentrations in each of the study area tracts and block groups become significantly lower than the national average of 31%. For the most part, this is also true when comparing these areas to the statewide average of 11%—an exception being tract 405.00 block group 3, whose average becomes only slightly higher than the Kentucky average. Each of the Jefferson County study area tract and block group minority averages are lower than the county average of 24%. Without the correctional and job corps facility residents, the Shelby County tract and block group average concentrations also become lower than the county average of 15%.

At the block level (Figure 7), the highest numbers and concentrations of minority populations were found in the northwestern portion of the study area. The highest of these were in the range of 21 to 40 persons. Blacks/African-Americans and Hispanics were the most predominant minority group in the study area. Neither the Kentucky Correctional Institution for Women nor the Whitney Young Job Corps Center is located within the study area.

Ethnicity

Table 4 shows ethnicity in the study area based on 2000 census data. The majority of persons in and around the study area were non-Hispanic. With a maximum of 7% Hispanics in tract 405.00 block group 3, none of the tract or block group concentrations came close to the national average of 13%.



Figure 7

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MINORITY PERSONS BY CENSUS BLOCK--2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD (KYTC #05-8200 KIPDA #390)

Kentuckiana Regional Planning and Development Agency

Kentucky, Jefferson County, and most of the study area tracts and block groups exhibited similar Hispanic percentages, ranging from one to two percent. Shelby County's Hispanic population percentage was somewhat higher, at around 5%. The highest tract and block group concentrations occurred there as well, with almost 3% Hispanics in tract 405.00 and close to 7% in tract 405.00 block group 3. Most of the Hispanics in this tract and block group lived in and east of Simpsonville, outside of the study area.

		Total	Non-Hispa	anic	Hispanic		
	Area	Population	Persons	%	Persons	%	
United S	itates	281,421,906	246,116,088	87.45	35,305,818	12.55	
Kentuck	у	4,041,769	3,981,830	98.52	59,939	1.48	
Jefferso	n County	693,604	681,234	98.22	12,370	1.78	
Shelby C	County	33,337	31,832	95.49	1,505	4.51	
	Tract 103.07	1,635	1,605	98.17	30	1.83	
and	Block Group 1	1,635	1,605	98.17	30	1.83	
Intersecting and the Study Area	Tract 116.01	3,085	3,026	98.09	59	1.91	
ecti udy	Block Group 1	2,142	2,100	98.04	42	1.96	
ers st	Block Group 2	943	926	98.20	17	1.80	
	Tract 116.02	4,940	4,914	99.47	26	0.53	
ding	Block Group 1	926	924	99.78	2	0.22	
Census Areas Surrounding	Tract 405.00	6,533	6,361	97.37	172	2.63	
	Block Group 1	2,378	2,369	99.62	9	0.38	
Ce	Block Group 3	1,720	<mark>1</mark> ,603	93.20	117	6.80	
	Block Group 4	1,916	1,882	98.23	34	1.77	

TABLE 4
Persons by Ethnicity—2000
Study Area for a Proposed Interchange on I-64 in the Vicinity of Gilliland Road

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals. Data Source: 2000 Census SF1, Tables P1, P8

Race

Table 5 shows the racial composition of the study area as of the 2000 census. The minority race most often reported by respondents living in and around the study area was black or African American. The next largest minority group was Asian, followed with some variance by other races, two or more races, American Indian and Alaska Native, and Native Hawaiian and other Pacific Islander. This pattern was quite consistent from the national level through to the block group level.

The highest concentrations of blacks/African-Americans were present in tract 405.00 and tract 405.00 block groups 1 and 3—primarily due to the presence of larger black group quarters populations at the Kentucky Correctional Institution for Women and the Whitney Young Job Corps Center. Other, lower

TABLE 5
Persons by Race—2000
Study Area for a Proposed Interchange on I-64 in the Vicinity of Gilliland Road

1				One Race												
		Total	White		Black or Af		American I and Alaska	CON STATE OF	Asian		Native Ha and other Island	Pacific	Other Ra	ice	Two or M Races	
Area		Population	Persons	%	Persons	%	Persons	%	Persons	%	Persons	%	Persons	%	Persons	%
United S	itates	281,421,906	211,460,626	75.14	34,658,190	12.32	2,475,956	0.88	10,242,998	3.64	398,835	0.14	15,359,073	5.46	6,826,228	2.43
Kentuck	y	4,041,769	3,640,889	90.08	295,994	7.32	8,616	0.21	29,744	0.74	1,460	0.04	22,623	0.56	42,443	1.05
lefferso	n County	693,604	536,721	77.38	130,928	18.88	1,523	0.22	9,640	1.39	255	0.04	4,695	0.68	9,842	1.42
Shelby C	County	33,337	28,874	86.61	2,942	8.83	101	0.30	133	0.40	41	0.12	798	2.39	448	1.34
and	Tract 103.07	1,635	1,546	94.56	34	2.08	3	0.18	22	1.35	0	0.00	14	0.86	16	0.98
	Block Group 1	1,635	1,546	94.56	34	2.08	3	0.18	22	1.35	0	0.00	14	0.86	16	0.98
PA	Tract 116.01	3,085	2,862	92.77	125	4.05	1	0.03	52	1.69	0	0.00	25	0.81	20	0.65
Study	Block Group 1	2,142	1,957	91.36	112	5.23	1	0.05	41	1.91	0	0.00	15	0.70	16	0.75
ers	Block Group 2	943	905	95.97	13	1.38	0	0.00	11	1.17	0	0.00	10	1.06	4	0.42
Inte	Tract 116.02	4,940	4,773	96.62	81	1.64	4	0.08	40	0.81	0	0.00	5	0.10	37	0.75
reas	Block Group 1	926	908	98.06	5	0.54	1	0.11	3	0.32	0	0.00	3	0.32	6	0.65
s Al	Tract 405.00	6,533	5,503	84.23	809	12.38	15	0.23	34	0.52	4	0.06	110	1.68	58	0.89
Census A Surround	Block Group 1	2,378	2,059	86.59	272	11.44	5	0.21	22	0.93	0	0.00	6	0.25	14	0.59
Cel	Block Group 3	1,720	1,158	67.33	448	26.05	8	0.47	5	0.29	0	0.00	73	4.24	28	1.63
	Block Group 4	1,916	1,797	93.79	83	4.33	2	0.10	7	0.37	0	0.00	20	1.04	7	0.37

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals. Data Source: 2000 Census SF1, Tables P1, P8 concentrations of African-Americans existed in and east of Simpsonville and west of the study area near Beckley Station Road.

LOW-INCOME PERSONS

According to the 2000 census, 12% of persons in the nation were low-income, having incomes below poverty level (Table 6). Jefferson County mirrored this trend, while Kentucky's percentage was higher than the national trend and Shelby County's was lower. The Jefferson County tracts and block groups in the study area exhibited significantly lower concentrations of low-income persons, ranging from 1% to 7%. The Shelby County study area tracts and block groups, however, tended to have higher concentrations of low-income persons, ranging from 4% to 20% of the population. Tracts 116.02 and 405.00 and tract 405.00 block groups 3 and 4 had the highest numbers of low-income persons (Figures 8 and 9).

Poverty information is not available at the block level, making identification of specific neighborhoods or facilities difficult.

		Total Population for Which Poverty Status	At or Above Poverty Level		Below Poverty Level	
Area		is Determined	Total	%	Total	%
United States		273,882,232	239,982,420	87.62	33,899,812	12.38
Kentucky		3,927,047	3,305,951	84.18	621,096	15.82
Jefferson County		680,882	596,739	87.64	84,143	12.36
Shelby County		32,223	29,025	90.08	3,198	9.92
	Tract 103.07	1,549	1,523	98.32	26	1.68
ling	Block Group 1	1,549	1,523	98.32	26	1.68
Census Areas Intersecting and Surrounding the Study Area	Tract 116.01	3,009	2,958	98.31	51	1.69
	Block Group 1	2,096	2,073	98.90	23	1.10
	Block Group 2	913	885	96.93	28	3.07
	Tract 116.02	4,940	4,821	97.59	119	2.41
	Block Group 1	869	809	93.10	60	6.90
	Tract 405.00	5,876	5,301	90.21	575	9.79
	Block Group 1	1,746	1,668	95.53	78	4.47
	Block Group 3	1,719	1,383	80.45	336	19.55
	Block Group 4	Block Group 4 1,919		92.50	144	7.50

TABLE 6 Low-Income Persons—2000 Study Area for a Proposed Interchange on I-64 in the Vicinity of Gilliland Road

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals. Data Source: 2000 Census SF3, Table P87

ELDERLY PERSONS

Elderly persons, age 65 and older, comprised between 11% and 14% of the year 2000 individual populations of the United States, Kentucky, and Jefferson and Shelby counties (Table 7). Of these areas, Shelby County had the lowest concentration of elderly persons (11%) and Jefferson the highest (14%). Most of



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Figure 8

LOW-INCOME PERSONS BY CENSUS TRACT--2000 SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD (KYTC #05-8200 KIPDA #390)





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Figure 9 LOW-INCOME PERSONS BY CENSUS BLOCK GROUP 2000 SCOPING STUDY FOR A PROPOSED INTERCHANGE



ON I-64 IN THE VICINITY OF GILLILAND ROAD (KYTC #05-8200 KIPDA #390)

the tracts and block groups in and around the study area exhibited lower concentrations of elderly persons, with the majority below 10%. The highest tract and block group elderly percentages occurred in Jefferson County in tract 116.01 block group 2 (10%), tract 116.02 (12%), and in tract 116.02 block group 1 (13%), while the highest elderly populations were found in tracts 116.02 and 405.00 and in tract 405.00 block group 1 (Figures 10 and 11).

		Total	Under Age 65		Age 65+	
Area		Population	Total	%	Total	%
United States		281,421,906	246,430,153	87.57	34,991,753	12.43
Kentucky		4,041,769	3,536,976	87.51	504,793	12.49
Jefferson County		693,604	599,622	86.45	93,982	13.55
Shelby County		33,337	29,747	89.23	3,590	10.77
The loss	Tract 103.07	1,635	1,532	93.70	103	6.30
Census Areas Intersecting and Surrounding the Study Area	Block Group 1	1,635	1,532	93.70	103	6.30
	Tract 116.01	3,085	2,893	93.78	192	6.22
	Block Group 1	2,142		95.52	96	4.48
	Block Group 2	943	847	89.82	96	10.18
	Tract 116.02	4,940	4,370	88.46	570	11.54
	Block Group 1	926	810	87.47	116	12.53
	Tract 405.00	6,533	6,014	92.06	519	7.94
	Block Group 1	2,378	2,195	92.30	183	7.70
	Block Group 3	1,720	1,598	92.91	122	7.09
	Block Group 4	1,916	1744	91.02	172	8.98

TABLE 7
Elderly Persons—2000
Study Area for a Proposed Interchange on I-64 in the Vicinity of Gilliland Road

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals. Data Source: 2000 Census SF1, Table P12

At the block level (Figure 12), the highest elderly populations were found in the northwestern and central portions of the study area. The highest individual block population was 31 persons, with the majority of blocks in the 6 to 10 person range.

PERSONS WITH DISABILITIES

Persons with disabilities comprised 19% of the civilian noninstitutionalized population over the age of five in the United States (Table 8). While the percentages for Kentucky (24%) and Jefferson County (20%) were slightly higher than the national average, the percentage for Shelby County (17%) was a bit lower. Within the study area, and with the exception of one block group, the tract and block group level percentages of persons with disabilities were all lower than the national, state, and county levels. Tract 116.02 block group 1 had the highest percentage of persons with disabilities (22%). The highest numbers of persons with disabilities were located in tracts 116.02 and tracts 405.00 (Figures 13 and 14).



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Figure 10

ELDERLY PERSONS BY CENSUS TRACT--2000 SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD (KYTC #05-8200 KIPDA #390)





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Figure 11

ELDERLY PERSONS BY CENSUS BLOCK GROUP--2000 SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD (KYTC #05-8200 KIPDA #390)





Figure 12

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ELDERLY PERSONS BY CENSUS BLOCK--2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD

(KYTC #05-8200 KIPDA #390)

Kentuckiana Regional Planning and Development Agency



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Figure 13

PERSONS WITH DISABILITIES BY CENSUS TRACT--2000 SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD (KYTC #05-8200 KIPDA #390)





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PERSONS WITH DISABILITIES **BY CENSUS BLOCK GROUP--2000** SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-64 IN THE VICINITY OF GILLILAND ROAD

(KYTC #05-8200 KIPDA #390)

Kentuckiana Regional Planning and Development Agency

		Total Civilian Noninstitutionalized	No Disabilities		One or More Disabilities	
Area		Population Age 5+	Total	%	Total	%
United States		257,167,527	207,421,279	80.66	49,746,248	19.34
Kentucky		3,695,005	2,820,849	76.34	874,156	23.66
Jefferson County		638,762	508,186	79.56	130,576	20.44
Shelby County		29,844	24,640	82.56	5,204	17.44
	Tract 103.07	1,465	1,320	90.10	145	9.90
Census Areas Intersecting and Surrounding the Study Area	Block Group 1	1,465	1320	90.10	145	9.90
	Tract 116.01	2,826	2,542	89.95	284	10.05
	Block Group 1	1,943	1,759	90.53	184	9.47
	Block Group 2	883	783	88.67	100	11.33
	Tract 116.02	4,665	3,953	84.74	712	15.26
	Block Group 1	827	643	77.75	184	22.25
	Tract 405.00	5,482	4,743	86.52	739	13.48
	Block Group 1	1,665	1,414	84.92	251	15.08
	Block Group 3	1,593	1,412	88.64	181	11.36
	Block Group 4	lock Group 4 1,780		86.46	241	13.54

TABLE 8 Persons with Disabilities—2000 Study Area for a Proposed Interchange on I-64 in the Vicinity of Gilliland Road

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals. Data Source: 2000 Census SF3. Table P42

Information about persons with disabilities is not available at the block level, making identification of specific neighborhoods or facilities difficult.

OTHER COMMUNITY INFORMATION

While census profiles provided a great deal of information about the locations and magnitudes of potentially impacted populations in and around the study area, other information was utilized when available.

The Christian Methodist Episcopal (CME) Church, a historically African-American Methodist denomination, was founded by emancipated servants and has traditionally served as a social and spiritual center of many African-American communities in the United States. Most CME churches were established by surrounding communities of freedmen and still serve the descendants of their original founders to this day.

The Muir Chapel, a CME church, is located within the Jefferson County portion of the study area at 813 Gilliland Road. The church was contacted to determine its status as a contact point for any nearby African-American populations. According to Pastor Denise Owens-Davis, the Muir Chapel served an adjacent black community for many years, until 20 to 25 years ago when most of the descendants of the original homeowners left the area. Muir Chapel membership has dwindled since that time. Most of the African-American residents in the area now attend other churches, such as Canaan Missionary Baptist, Highview Baptist, Southeast Christian, and St. Luke Baptist, while Muir's membership now draws from a much larger geographical area.

CONCLUSION

The KIPDA staff assessment of demographic data from the 2000 Census, consideration of information from other sources, and conversations with individuals familiar with the area indicate the following:

- There do not appear to be concentrations of minority populations within the study area;
- There do not appear to be concentrations of low income populations within the study area;
- Elderly persons are not present in significantly different proportions from county, state, or national percentages within the study area; and
- Persons with disabilities are not present in significantly different proportions from county, state, or national percentages within the study area.

Given the level of detail of the available information, the community impact assessment did not uncover any significant concentrations of Environmental Justice populations, elderly, or persons with disabilities within the study area. The information does appear to indicate, however, the presence of these persons within the general resident population in proportions similar to county, state, and national levels. In the absence of defined concentrations of these groups, projectlevel impact determination and mitigation measures and public involvement activities should be tailored to be inclusive of such persons as they exist within the general study area population.



MEETING MINUTES

Project: Item Number Purpose: Place: Meeting Date:	 New I-64 Interchange with a Connector Road, Alternatives Planning Study 05-8200 Project Team Meeting #2 Louisville, Kentucky, District 5 Main Conference Room July 18, 2006 		
Prepared By:	William Crawford		
In Attendance:	John Callihan David Martin Tala Quinio Kevin Dant Bernie Roach Charlie Bird Rob Harris Brian Meade Andrea Clifford Harold Tull Mary Murray David Smith Albert Zimmerman Tom Springer William Crawford	KYTC, D5, Pre-Construction & Design KYTC, CO, Planning KYTC, D5, Design (Project Manager) KYTC, D5, Environmental KYTC, D5, Construction KYTC, D5 KYTC, D5 KYTC, D5, Traffic Operations KYTC, D5, Traffic Operations KYTC, D5, PIO KIPDA FHWA Qk4, President Qk4, Project Engineer Qk4, Transportation Planner	

Ms. Quinio, KYTC, D5, Project Manager, welcomed everyone to the meeting, and requested all attendees introduce themselves. She provided a brief project explanation, and then turned the meeting over to Mr. Smith, who facilitated the project team meeting.

<u>Project Overview</u>. The project is an alternatives planning study investigating the feasibility of constructing a new I-64 interchange between the Gene Snyder Freeway (I-265, Exit 19) and Simpsonville (KY 1848, Exit 28), with a north-south connector road between Taylorsville Road (KY 155/KY 148) and Shelbyville Road (US 60). The I-265 and KY 1848 interchanges are separated by about 9 miles, while US 60 and KY 155/KY 148 are about 3.2 miles apart in the study area. The existing regional roadways and interchanges are heavily congested, and provide very limited north-south and east-west travel opportunities. The study will examine improvement strategies and evaluate alternative corridors to address both current and future needs. A new interchange would provide improved interstate access, and the connector road would improve the local road network.

<u>Meeting Agenda</u>. Mr. Smith explained the purpose of the meeting, and reviewed the agenda items for discussion. The purpose of the meeting was to review the environmental footprint/overview results, the key person interview results, the preliminary project goals, and prepare for the first public information meeting. Large-scale exhibits of the study area were used, including: an aerial photograph with existing and planned developments; environmental overview (*i.e.*, historic sites and districts, surface waters, floodplains, wetlands,

ponds, hazardous materials sites); and traffic, crash, and Levels of Service (LOS) data. Attendees were provided a handout containing the meeting agenda, key person interview list, a summary of interview comments, draft project goals, a draft public meeting comment form, and documents for the first resource agency coordination mailing (project fact sheet, preliminary project goals, and two 11x17 exhibits).

<u>Status of Study</u>. Mr. Crawford reviewed the status of the study. Completed elements include overview studies of: cultural resources (historic and archaeological), ecological assessment (terrestrial, aquatic, threatened and endangered species), traffic (volume, crash, and LOS data), and hazardous materials sites. The only public involvement task completed is the key person interviews. Two Eastwood planning documents were also consulted: *Eastwood Neighborhood Plan*, adopted November 2005, and *Eastwood Village Transportation Planning Study*, draft May 2006. We are now at the preliminary study goals development/review stage, and preparing for the first public information meeting.

<u>Review Environmental Footprint</u>. Mr. Crawford reviewed the study area's environmental footprint using the exhibit and briefly addressing known environmental features, including:

- 5 NRHP sites, but 2 had been torn down (circumstances unknown); 48 potential NR eligible sites consisting of 13 individual properties and 2 potential historic districts. Fisherville historic district consists of 1 NRHP property and 12 contributing properties. Eastwood historic district includes 23 contributing properties.
- 38 archaeological sites from previous surveys, most in the western portion, with no NRHP eligibility evaluations conducted. The overview noted the previous surveys may be geographically and chronologically biased, and more sites could be expected throughout the study area. Sites are most likely to be found in floodplains and terraces of major streams.
- 5 perennial steams, about 57 intermittent streams, and about 37 ephemeral streams. Numerous potential wetlands and small ponds (mostly for livestock and aesthetic uses) are present. Floodplains are associated with the larger streams.
- •13 listed endangered species, with no known occurrences in the area.
- 6 hazmat sites were listed in the database, most located in a light industry land use area in the southwest corner. Potentially could also encounter local dumping sites, PCB's in transformers, asbestos containing building materials, and agricultural chemicals (fertilizers, pesticides).

<u>Review Traffic and Crash Information</u>. Mr. Smith used the exhibit to review the study area's existing and projected traffic volumes, LOS's, and crash analysis. While crash analysis identified several high crash locations, only one is present within the study area boundaries (*i.e.*, vicinity of US 60 and Eastwood-Fisherville Road). Traffic volumes and congestion on roadways within the study area boundaries, as well as outside the study area and existing I-265 interchanges with KY 155, I-64, and US 60 were discussed. It was noted that a limited amount of traffic data is available for the roadways south of I-64. Previous traffic studies conducted in the area probably did not envision the possibility of the project extending to Taylorsville Road. Additional traffic data will be required. Qk4 is to prepare a letter requesting the additional traffic data needed based upon the scope of the current study. Discussions occurred concerning the *Eastwood Village Transportation Planning Study* and its assumption of a potential new interchange location and connector road alternatives. Existing and planned developments in and surrounding the study area were reviewed and discussed. Questions regarding projected demographic growth and potential impact on traffic were made. A commitment to invite representatives from Louisville Metro Public Works, and Planning and Design to the next project team meeting was made.

<u>Review Key Person Interview Comments</u>. Mr. Crawford reviewed the list of people identified for interviews, and a summary of interview comments. Eighteen people were selected for interviews, with 16

Meeting Minutes July 18, 2006 Page 3

completed. Some interviewees included their key staff members in the sessions. He briefly discussed key responses for the 11 talking points/questions. In general, there was consensus among interviewees that traffic congestion is already a serious problem, will only become worse in the future, and a new interchange is needed. Shelby County officials preferred an alternative corridor located inside the Jefferson County line. All expressed an interest in minimizing impacts to residential property, historic resources, natural resources, and preserving the existing rural atmosphere.

<u>Review Draft Project Goals</u>. Mr. Crawford presented the preliminary draft project goals developed from comments and concerns expressed during the previous project team meeting, and key person interviews. The 8 draft goals were generally accepted as stated, with some "wordsmithing" recommendations, and a request to make the second bullet more specific.

<u>Public Information Meeting Requirements</u>. Mr. Springer led the discussion concerning preparing for the first public information meeting. Two meeting are planned, with the first focusing on informing the public of the project and receiving their input. (The second would present alternative solutions for public comment.) The first public meeting should be used to inform the public of the project, educate them on the constraints, and obtain input on their desires for the road network. The large graphic exhibits presented at this meeting were cited as examples to show the public. D5 noted the public generally does not understand "blank map" presentations, and they prefer to see "lines on a map" (even if no alternatives have been identified).

Various alternatives concerning meeting format and time were discussed. It was decided to conduct the meeting from 6:00-8:00 pm, with an expectation people will begin arriving 30-minutes early. The meeting would begin with a single formal presentation at 6:15 pm, no question/answer session, and immediately followed by an open house type format with work groups. The formal presentation would consist of KYTC starting the meeting and welcoming everyone, then turning it over to Qk4 for the formal program. Several locations for the meeting were suggested, with the preferred site being Highview Baptist Church near Beckley Station Road. Other suggestions included Eastwood Christian Church, Eastwood Fire Station (limited parking and meeting space), Christian Academy, and Eastern High School (outside the study area). D5 will drive the area for other potential meeting sites and coordinate for the site itself. Dates for the public meeting were discussed, with a preferred date sometime after public school classes resume. The meetings would be held on Tuesday and Thursday, with the earliest date being late August or early September. D5 will investigate/coordinate meeting dates, accounting for facility availability and advertising lead-times. Qk4 will provide D5 a black and white PDF study area map for the public meeting newspaper ads.

A draft public comment form was presented for review and comment. Initial comments recommended changing the format so the citizen has something to take home with them, and a separate page to submit comments on. The public comment handout will consist of two pages: (1) a double-sided page to keep, with an aerial exhibit of the study area on one side, and an explanation of the project and draft goals on the other side; and (2) a double-sided questionnaire comment form for submission. Other recommended changes included using the Unbridled Spirit logo, KYTC D5's physical address, and including their fax number. Team members were asked to review the draft public comment form and provide any additional comments/suggestions in the next few days.

<u>Resource Agency Coordination/Involvement</u>. Mr. Crawford presented the enclosures proposed for sending with the first of two resource agency coordination mailings. The enclosures consist of a one-page fact sheet briefly explaining the purpose of the study, existing conditions, and a list of project goals; one 11x17 inch environmental footprint exhibit, and one 11x17 inch aerial exhibit. The fact sheet project goals will include the updates/changes discussed above. Central Office had already provided a mailing list database for resource agency coordination letters. Central Office and D5 will coordinate to edit the mailing list and mail the letters. Qk4 will develop and provide the exhibits to attach to the letters.
<u>Follow-up and Next Steps.</u> Mr. Springer concluded the meeting by discussing the next sequence of events in the study. The next step is to hold the first public information meetings. Based upon the public comments, and any resource agency comments received, Qk4 will develop preliminary alternatives for review by project team members. KIPDA is to provide the environmental justice study. Project team meeting #3 will be scheduled to review the alternatives and recommendations.

The meeting adjourned at approximately 3:30 p.m.

END OF MINUTES



MEETING MINUTES

Project:	New I-64 Interchange with a Connector Road, Alternatives Planning Study									
Item Number	05-8200									
Purpose:	Project Team Meeting #3									
Place:	Louisville, Kentucky,	Louisville, Kentucky, District 5 Main Conference Room								
Meeting Date:	March 26, 2007 1:30	March 26, 2007 1:30 pm EST								
Prepared By:	William Crawford									
In Attendance:	Tala Quinio	KYTC, D5, Design (Project Manager)								
	John Callihan	KYTC, D5, Pre-Construction & Design								
	David Martin	KYTC, CO, Planning								
	Scott Thomson	KYTC, CO, Planning								
	Ananias Calvin III	KYTC, CO, Design								
	Kevin Dant	KYTC, D5, Environmental								
	Mary Ann Bond KYTC, D5, Planning									
	Glenda Luster KYTC, D5, Right of Way									
	Jennifer Hall KYTC, D5, Utilities									
	Brian Meade	KYTC, D5, Traffic Operations								
	Andrea Clifford	KYTC, D5, PIO								
	Jeff Schaefer	KYTC, D4								
	Harold Tull	KIPDA								
	Mary Murray	FHWA								
	Bill Hanson	FHWA								
	David Smith	Qk4, President								
	Tom Springer	Qk4, Transportation Planner								
	William Crawford	Qk4, Transportation Planner								

Ms. Quinio, KYTC, D5, Project Manager, welcomed everyone to the meeting, explained the purpose of the proposed project, and the purpose of today's meeting. She requested all attendees introduce themselves. She then turned the meeting over to Mr. Springer, who facilitated the project team meeting.

The proposed project is an alternatives planning study investigating the feasibility of constructing a new I-64 interchange between the Gene Snyder Freeway (I-265, Exit 19) and Simpsonville (KY 1848, Exit 28), with a north-south connector road between Taylorsville Road (KY 155/KY 148) and Shelbyville Road (US 60). The I-265 and KY 1848 interchanges are separated by about 9 miles, while US 60 and KY 155/KY 148 are about 3.2 miles apart in the study area. The existing regional roadways and interchanges are heavily congested, and provide very limited north-south and east-west travel opportunities. The study examines improvement strategies and evaluates alternative corridors to address both current and future needs. A new interchange would provide improved interstate access, and the connector road would improve the local road network.

<u>Project Status.</u> Mr. Springer briefly reviewed the meeting's agenda items and the main purpose for the meeting, which was to review the latest traffic information and forecasts, and select screening criteria for the

numerous alternatives. He briefly reviewed the last project team meeting and events that occurred since that meeting. The meeting was conducted using handouts and a power-point presentation. Attendees were provided a folder containing the meeting agenda, public meeting comment form summary, resource agency response summary, traffic forecast projects for various connector road corridors, typical section design standard, an aerial photo with preliminary alternative corridors, and a survey form for ranking corridor location determinates. A large scale area photo was also available.

<u>Public Involvement.</u> Mr. Crawford used a handout summarizing the first public informational meeting held August 29, 2006, with 69 people signing-in and 20 written comments received. Generally, the public supported the project by a ratio of about 3-4 to 1 (favor vs. oppose), almost unanimously identifying traffic congestion on area roadways and intersections as a serious problem. Sometimes even those opposed acknowledged the heavy traffic congestion and inadequate roadways. Other concerns expressed involved narrow roads, safety, and emergency response times, especially if the area continues to grow and congestion increases. Those opposed frequently cited concerns of continued/increased development in the area, particularly around intersections/interchanges; and potential impacts to environmental resources and existing communities, frequently citing examples well outside the project study area. Areas commonly mentioned to avoid included waterways (especially Floyds Ford) and existing/planned park areas. Suggested new connector road tie-in points to US 60/Shelbyville Road covered almost its full length in the study area. While in the south, the KY 155/KY 148 intersection was the most frequently suggested connection point. Mr. Crawford summarized and reviewed representative written comments from all comments submitted.

<u>Resource Agency Coordination.</u> Mr. Crawford used a handout to review resource agency responses from the first mailing. Requests for comments were mailed to about 80 agencies, and 21 agencies responded. No objections or areas of significant concern to the proposed project were expressed. Several agencies were highly supportive of the project, citing benefits of reduced congestion, improved safety, and community benefits. State Senator Julie Denton and State Representative Ron Crimm both expressed concerns about the increasing traffic congestion, and wanted the project expedited.

<u>Study Area and Alternative Corridors Overview.</u> Mr. Springer briefly reviewed the project study area, its boundaries, roadways, environmental features, and other significant elements. Existing residential and community developments were reviewed, and other planned residential developments. The planned Floyds Fork Greenway development — located immediately west of the study area and a key component of the planned Louisville Metro Greenway Trail — was discussed, and land/property already reserved for the park's future use was reviewed. The planned park development is further encouraging private development in this already rapidly growing area.

Mr. Springer presented the preliminary alternatives developed for consideration by the project team. The alternatives developed represent all alternatives considered practical for the study area. Additionally, the project study area was expanded to the south — for traffic forecasting only — to consider an alternative connecting to KY 155/Taylorsville Lake Road. Because the various alternatives frequently intersect, numerous opportunities exist for combining portions of two or more alternatives into a new alternative. Therefore, to facilitate management and evaluation of all the possible combinations, each alternative was divided into numbered segments between intersection points.

<u>Review Traffic Data and Forecasts</u>. Mr. Springer briefly reviewed the study area's forecasted 2030 no-build and build traffic volumes. Since it was impractical to attempt traffic forecasts for each possible alternative, the study area was divided into logical areas containing "conceptual" alternative corridors for traffic forecast modeling. The conceptual alternatives are modeled to draw traffic from a particular area, simulating other potential alternatives in that particular portion of the study area. The conceptual alternative corridors also have intersection points (nodes), creating segments, which can be combined in varying arrangements. The conceptual alternative corridors are believed to accurately represent future traffic patterns within their portion of the study area.

The "conceptual" corridors are located north and south of I-64, and oriented from west to east in the study area. Corridors in the western portion of the study area are identified with a "W," those in the central portion with a "C," and those in the east with an "E." Corridor segments north of I-64 are identified with the letter "a"; and those south of I-64 with "b," "c," or "d" as the segments progress south from an intersection node. Using this labeling nomenclature, Mr. Springer reviewed the forecasted traffic volumes for the various conceptual alternative corridors throughout the study area.

Mr. Thomson developed the traffic model for the project study area, and performed the detailed traffic modeling forecasts and analysis. Using a series of detailed tables, he reviewed the anticipated traffic volume effects (increases and decreases) on area roadways with implantation of a particular conceptual alternative. He noted that, in general, a growth rate of 3-4% annually is considered normal. However, the Gene Snyder Expressway is experiencing a 5% annual growth rate, the Eastwood area a 7% growth rate, and a 7% growth rate in traffic from Spencer County onto KY 155. The traffic-forecasting model attempts to trend demand over time, and does not incorporate any road capacity changes or other road improvements. He also noted that data indicates a lot of growth (commercial and residential) is occurring outside the project study area boundaries, especially between the Gene Snyder Expressway and the study area. Future roadway improvements cannot be anticipated, but traffic from the developing area will need to flow either north or south to access existing major roadways. Growth curves traditionally demonstrate exponential growth over time. However, the model reveals US 60 has a growth trend which is a fairly flat curve. The Gene Snyder Expressway and KY 155 had an unusual "decreasing curve," which is an indication of excessive congestion and drivers seeking out other routes of travel to avoid the congestion.

<u>Typical Section.</u> Mr. Springer provided as an example a copy of a typical section from the current Land Development Code. The typical section consisted of a four-lane divided roadway, with a median, a bike lane, and sidewalks for pedestrians. Because a new connector road would probably be expected to integrate smoothly and aesthetically with the Floyds Fork Greenway initiative, the ultimate typical section could have a park-like, boulevard, or parkway type appearance.

Mr. Springer briefly discussed the *Eastwood Village Transportation Planning Study*, May 2006, and its assumption/recommendation of a potential new interchange location and connector road alternatives. He used a page from the study showing recommended alternatives in the Eastwood area. No traffic study or traffic volumes were considered in the study. The preliminary alternatives developed for the new I-64 interchange and connector road include similar alignments as those in the Eastwood study.

<u>Range of Alternatives.</u> Mr. Springer discussed the broad range of preliminary alternatives developed, which included those alternatives suggested at the public information meeting. As explained previously, the large number of alternatives developed, and their potential combinations, became impractical to manage as complete alternatives. It was decided instead to evaluate alternative segments rather than complete alternatives. Each segment could potentially be used in more than one complete alternative, and evaluating them individually as "not recommended" or "recommended to carry forward" could facilitate the alternative screening process. During the discussion, a new segment (#28) was identified for consideration, and intended to minimize potential residential and waterway impacts.

<u>Screening Determinants and Criteria.</u> To help in the evaluation process, Mr. Springer asked each project team member to complete a survey sheet, ranking each of 13 items in terms of importance for locating a new interchange and connector road. The results of the survey are attached.

<u>Follow-up and Next Steps.</u> Mr. Springer concluded the meeting by discussing the next sequence of events in the study.

Qk4 will tally the screening determinants and conduct a review of the preliminary alternatives developed, identifying those recommended to be carried forward for review by the entire project team. Qk4 will meet with D5 representatives (target is within two weeks) to discuss and agree upon the alternatives/segments recommended to be carried forward and presented to the entire project team.

Qk4 will forward the results of the alternatives pre-screening with D5 to the other project team members.

Schedule another project team meeting to identify the alternatives/segments to be carried forward and presented to the public for comment.

Schedule the second public information meeting after the full project team identifies the alternatives/segments to be carried forward. It was recommended an exhibit showing all alternatives/segments considered by the project team be shown at the public information meeting to indicate the thoroughness of the alternatives study.

The meeting adjourned at approximately 3:30 p.m.

END OF MINUTES

attachment: Location Determinate Ranking Results

Results Summary of Location Determinate Survey

	Location Determinate Question	Average Score*	Rank
1	Connectivity / Linkages to Existing Arterials and Collectors	4.80	1
2	Connectivity to Town Centers	2.67	12
3	Compatibility with Major Parks Initiative	4.07	5
4	Compatibility with Existing and Planned Subdivisions	3.93	6
5	Attracts High Volumes of Forecasted Traffic	4.13	3
6	Minimizes Costs of Construction	2.90	11
7	Allows for Future East-West Connectivity	2.97	10
8	Relieves Demand on Existing Rural Roads	3.87	7
9	Minimizes Further Demands on Existing Rural Roads	3.87	7
10	Minimizes Right-of-Way Impacts on Existing Residences	4.33	2
11	Minimizes Crossings of Existing Streams and Natural Areas	4.10	4
12	Minimizes Effects to Historic Resources	3.53	9
13	In Concert with Community/Public Input	3.80	8

Individual Responses to Location Determinate Survey

Response Location Determinate Survey														
		- I	- I	. 1										
Sheet	1	2	3	4	5	6	7	8	9	10	11	12	13	Comments
1	5	3	4	4	4	3	3	4	4	4	5	4	4	
2	5	3	4	5	3	1	4	2	3	5	2	4	5	
3	5	4	4	4	4	3	5	3	3	5	5	3	4	
4	5	2	4	3	4	3	2	4	4	3	3	3	3	
5	5	3	4	3	3	4	1	4	4	5	4	3		#1-No Old Henry! Improve existing or new road.#4-With number of homes for sale, will these become reality
6	5	3	4	5	3	2	2	5	4	5	5	2		#1-Do not follow example of Old Henry interchange. #4-Have developers contribute/donate ROW.
7	4	3	4	4	5	4	2	5	5	5	4	3	4	
8	5	2	5	4	3	3	3	4	4	5	5	5	4	
9	5	3	4	4	5	2	3	4	4	4	4	4	3	
10	5	3	4	4	5	2	3	3	3	4	4	4	4	
11	4	1	4	3	3	4	2	4	4	4	4	3		#2-Eastwood connection undesirable. #3-Avoid Floyds Fork. #5-Account for future growth in Shelby Co. Avoid future interchange. #11-Avoid Floyds Fork.
12	5	3	4	4	5	2	3	3	3	4	4	4	4	
13	4	2	4	3	5	3.5	3.5	4	4	3	3.5	3	2	
14	5	3	4	5	5	5	5	5	5	4	5	5	5	
15	5	2	4	4	5	2	3	4	4	5	4	3	4	#4-Avoid existing only.
Sum	72	40	61	59	62	43.5	44.5	58	58	65	61.5	53	57	
Ave Score	4.80	2.67	4.07	3.93	4.13	2.90	2.97	3.87	3.87	4.33	4.10	3.53	3.80	
Ranking	1	12	5	6	3	11	10	7	7	2	4	9	8	

*Scored according to importance, with 1 = not too important, and 5 = very important.



MEETING MINUTES

Project:	New I-64 Interchange with a Connector Road, Alternatives Planning Study									
Item Number	05-8200									
Purpose:	Project Team Meeting #4									
Place:	Louisville, Kentucky, District 5 Main Conference Room									
Meeting Date:	May 21, 2007 09:30 am EST									
Prepared By:	William Crawford									
In Attendance:	Tala Quinio	KYTC, D5, Design (Project Manager)								
	John Callihan	KYTC, D5, Pre-Construction & Design								
	David Martin	KYTC, CO, Planning								
	Jeff Schaefer	KYTC, D5, Environmental								
	Mary Ann Bond	KYTC, D5, Planning								
	Chris Poe	KYTC, D5, Construction								
	Brian Meade	KYTC, D5, Traffic Operations								
	Andrea Clifford	KYTC, D5, PIO								
	Harold Tull	KIPDA								
	Tom Springer	Qk4, Transportation Planner								
	William Crawford	Qk4, Transportation Planner								

Ms. Quinio, KYTC, D5, Project Manager, welcomed everyone to the meeting, explained the purpose of the proposed project, and requested all attendees introduce themselves. She then turned the meeting over to Mr. Springer, who facilitated the project team meeting.

The proposed project is an alternatives planning study investigating the feasibility of constructing a new I-64 interchange between the Gene Snyder Freeway (I-265, Exit 19) and Simpsonville (KY 1848, Exit 28), with a north-south connector road between Taylorsville Road (KY 155/KY 148) and Shelbyville Road (US 60). The I-265 and KY 1848 interchanges are about 9 miles apart, while US 60 and KY 155/KY 148 are about 3.2 miles apart in the study area. The regional roadways and interchanges are heavily congested, and provide very limited north-south and east-west travel opportunities. The study examines improvement strategies and evaluates alternative corridors to address both current and future transportation needs.

Project Status and Area. Mr. Springer identified the main purpose for the meeting, which was to discuss the alternative corridors already developed and agree upon the alternative corridors to carry forward for further consideration, and those not recommended for further consideration. He very briefly reviewed the project status and project area. The alternatives developed represent all alternatives considered practical for the study area. A review of the traffic forecasts resulted in expanding the project study area to the south and creating an alternative segment connecting to KY 155/Taylorsville Lake Road. Because the large number of alternatives frequently intersect, numerous opportunities exist for combining portions of two or more alternative was divided into numbered segments between intersecting points. He noted that D5 and Qk4 representatives had met earlier to "pre-screen" the alternative corridors/segments to identify those recommended to carry forward, and those not recommended.

<u>Ranking Results from Last Project Team Meeting.</u> Mr. Springer reviewed the voting results from the last project team meeting involving thirteen screening determinants and criteria. These rankings were considered in prescreening the alternative corridors to carry forward. The top three considerations were: connectivity/linkages to existing arterials and collectors; minimize right-of-way impacts to existing residences; and attracts high volume of forecasted traffic.

Review Alternative Corridors. Mr. Springer led the discussion concerning which alternative corridors/segments to carry forward for further discussion, and those not recommended. A large-scale aerial photograph exhibit depicting the various alternative corridors and environmental footprint was used. Also provided was a handout of two tables identifying those alternative segments not recommended for further consideration and the reasons why; and those segments recommended to carry forward with the expected advantages and disadvantages of each. Generally, all alternatives in the east were not recommended because they attracted low traffic volumes, compared to the more western alternatives. Each remaining segment was addressed individually. The project team decided to add segment 26 to the not recommended list because of the large number of potential adverse impacts. Segment 26 was considered because it was a recommendation in the Eastwood Village Transportation Planning Study, May 2006. Segment 12 was discussed at some length, with the project team deciding to add it to the not recommended list. Segment 12 attracted less traffic volume than the other segments under consideration; caused the Eastwood-Fisherville Road to attract a notably large traffic volume of drivers taking a "short-cut" to access the new I-64 interchange; potentially had more environmental and engineering constraints associated with it; and created the longest alternative. Segment 13 was added to the not recommended list because it only connects to segment 12. The project team made no other changes to the recommended and not recommended list.

D5 raised the question whether the focus of this alternatives study should be to recommend a series/group of alternative corridors, or recommend one preferred alternative corridor? The choice could have future implications in terms of the NEPA process and developing a preferred alternative; and also for accommodating the public's expectations and perceptions in the public involvement process. The project team decided to defer this question until after the next public information meeting and public comments were received on the alternative corridors recommended to carry forward.

<u>Typical Section.</u> Mr. Springer provided an example typical section graphic developed from the current Louisville Metro Land Development Code. The typical section consisted of a four-lane divided roadway, with a median, bike lanes, sidewalks for pedestrians, and a multi-use path. Because a new connector road is expected to integrate aesthetically with the Floyds Fork Greenway initiative, the typical section was envisioned to have a park-like, or parkway type appearance with vegetation. It was noted the typical section presented had a wide footprint, depicting large vegetated areas and specific boundaries for varying uses. Several changes were requested, including removing the depicted vegetation, removing/adjusting some boundary designations, use ranges instead of exact widths, and modifying the graphic title. Mr. Callihan provided a mark-up copy with specific changes.

<u>Operational Analysis Approach.</u> A general discussion of Interchange Justification Study (IJS) requirements occurred. Recent coordination of D5 and Qk4 with FHWA indicated the spacing between the existing interchanges (*i.e.*, I-265 and KY 1848) is sufficient that any new interchange considered in the study area should be treated as one location for analysis purposes. The operational analysis for the interchange would use the "worse case traffic scenario" (*i.e.*, the highest traffic volume) based upon the traffic projections provided by the KYTC Division of Planning. It was noted that the public information meeting presentation should include addressing the IJS portion of this alternatives study, and that any of the alternative corridors under consideration appear feasible according to IJS requirements.

Meeting Minutes May 21, 2007 Page 3

<u>Public Involvement.</u> Mr. Springer briefly reviewed the draft power point presentation for the public information meeting to solicit project team comments. Scheduling and requirements for the next public information meeting was discussed. Target date for the next public information meeting is June 26, 2007, 6:00 - 8:00 p.m., at Highview Baptist Church. The meeting will include 2 brief presentations at 6:15 and 7:15. It was decided to use one aerial map exhibit format, which shows all alternative corridors considered — those recommended and not recommended for further consideration. However, the exhibit should be revised to more clearly differentiate the recommended and not recommended corridors from each other. It was also recommended to "turn-off" all color-coding on the handout exhibit except for the alternative corridors to make it visually less busy for the public. The draft public information meeting handout — consisting of a fact sheet, study area and alternative corridors exhibit, and a comment form — was reviewed by the project team and found acceptable, except for one addition. It was recommended to add the reasons why some alternative corridors were not recommended for further consideration to the second paragraph of the fact sheet. Qk4 is to prepare a handout sheet for staff members use listing the segments recommended and not recommended for further consideration to that recommended and not recommended for further consideration and the reasons for that recommended for further consideration.

Follow-up and Next Steps. The meeting concluded by discussing the next sequence of events in the study.

D5 will schedule the next public information meeting and inform the project team.

D5 will mail a copy of the public information meeting notice to the appropriate elected officials and key persons interviewed.

Qk4 will prepare and revise as necessary the exhibits and handouts for the next public information meeting, and meet with D5 to review the exhibits and handouts before the public information meeting.

The project team will meet again following the public information meeting. Reviewing the public comments will assist in determining subsequent alternative corridor evaluations and selection of a preferred or recommended alternative corridors.

The final resource agency coordination mailing will occur after the next project team meeting and a decision on which alternative corridor(s) to recommend.

The meeting adjourned at approximately 11:30 a.m.

END OF MINUTES

attachment: revised alternative segments recommendation list

Corridor Segment	Reason Not Recommended for Further Consideration							
11	Segment connects to Segment 17, which was not recommended, and has increased residential impacts.							
12	Traffic modeling analysis indicates segment 12 would attract less traffic than the other, more western alternatives considered (but more than the eastern alternatives). Segment 12 would attract a significant traffic volume from US 60, through Eastwood (an undesirable result), to KY 1531 (Eastwood-Fisherville Rd), connecting with							
13	segment 12 and proceeding to the I-64 interchange. Segments 12 and 13 generate increased environmental concerns with more stream crossings; engineering issues associated with a stream crossing and railroad track crossing south of US 60; potentially more residential and ROW impacts; and is the longest route considered.							
15	Segment creates an interchange on I-64 at the Long Run crossing. It generates increased environmental concerns and engineering issues associated with co-locating the interchange and ramps at a stream crossing.							
16	Segment 16 connects to segment 17, which was not recommended.							
17	Segment 17 provides a connection to US 60 with increased residential impacts through existing subdivision(s).							
18								
19	Traffic analysis modeling indicated that any combination of segments in the study area's eastern portion would							
20	not attract a significant volume of traffic, as compared to the more western segments. Consequently, little to no							
21	congestion relief would be provided to existing interchanges and roadways; nor would these segments provide adequate service to the existing and planned developments in the study area. Some segments had the potential							
22	for increased residential impacts to existing and planned subdivisions when compared to the more western							
23	segments. Additionally, none of the eastern segments offer the potential for a convenient east-west connection to the planned Floyds Fork Greenway Park system.							
24								
25								
26	Segment is similar to proposal in the Eastwood Transportation Planning Study recommendation. Segment 26 impacts the potential Eastwood Historic District and historic properties; introduces a large volume of traffic into the Eastwood Village Form District; effectively bisects the Eastwood community/town/village center; is potentially in conflict with the Eastwood Neighborhood Plan goals and objectives for a village concept development; and contradicts a village center definition.							
29	Segment creates an interchange on I-64 at the Long Run crossing. It generates increased environmental concerns and engineering issues associated with co-locating the interchange and ramps at a stream crossing.							

Segments Not Recommended for Further Consideration

Segments Recommended to Carry Forward

Corridor Segment	Expected Advantages	Expected Disadvantages
1	 Located at the existing KY 155/KY 148 intersection. Traffic modeling analysis indicates it would attract a significant amount of traffic. Provides traffic volume relief to other existing interchanges and roadways. Minimizes residential impacts. Minimizes potential historic district/properties impacts and issues. Compatible with, and conveniently located near, the planned Floyds Fork Greenway Park system. Provides improved access for the industrial properties located to the east. 	 Railroad track is located immediately north of the KY 155/KY 148 intersection on an elevated berm/bank. The required crossing would create additional engineering considerations. Positions connector road in close proximity to the planned Floyds Fork Greenway Park system.
	 KY 155 (Taylorsville Lake Rd) is already improved and carries a significant traffic volume. 	
2	 Traffic modeling analysis indicates it would attract a significant amount of traffic. Located near the planned Floyds Fork Greenway Park system, potentially providing convenient future access. Minimizes residential impacts. 	 Crosses Floyds Forks and the floodplain. Positions connector road in close proximity to the planned Floyds Fork Greenway Park system.
3	 Traffic modeling analysis indicates it would attract a significant amount of traffic. Located slightly further from the planned Floyds Fork Greenway Park system, but near enough to potentially provide convenient future access. No residential impacts. 	 Crosses Floyds Forks and the floodplain. Positions connector road in close proximity to the planned Floyds Fork Greenway Park system.

Segment	Expected Advantages	Expected Disadvantages
	 Traffic modeling analysis indicates it would attract a significant amount of traffic. 	 Positions connector road and interchange in close proximity to the planned Floyds Fork Greenway Park system.
4	 Provides traffic volume relief to other existing interchanges and roadways. Provides convenient connection to US 60 west of Eastwood, similar to US 60 connection proposed in the Eastwood Village Transportation Plan. 	 Non-preferred US 60 connection location stated in the Eastwood Neighborhood Plan.
	 Minimizes residential and commercial impacts. Interchange and connector road located near the planned Floyds Fork Greenway Park system, potentially providing convenient future access at numerous locations. 	
5	 Traffic modeling analysis indicates it would attract a significant amount of traffic. Located near the planned Floyds Fork Greenway Park system, potentially providing convenient future access at numerous locations. 	 Potentially more residential impacts than segment 4. Positions connector road and interchange in close proximity to the planned Floyds Fork Greenway Park system.
6	Connects segments 5 & 8 to segment 7.	
	 Provides convenient connection to US 60 west of Eastwood. Provides traffic volume relief to other existing interchanges and roadways. Avoids potential Eastwood Historic District and properties. Minimizes residential and commercial impacts. Similar to US 60 connection west of Eastwood proposed in the Eastwood Village Transportation Plan. 	 Positions connector road and interchange in close proximity to the planned Floyds Fork Greenway Park system. Non-preferred US 60 connection location stated in the Eastwood Neighborhood Plan.
	 Traffic modeling analysis indicates it would attract a significant amount of traffic. Located slightly further from the planned Floyds Fork Greenway Park system, but near enough to potentially provide convenient future access. No/minimal residential impacts. 	
9	 Traffic modeling analysis indicates it would attract a significant amount of traffic. Located slightly further from the planned Floyds Fork Greenway Park system, but near enough to potentially provide convenient future access. No/minimal residential impacts. Provides option of connecting to US 60 either east or west of Eastwood. 	
10	 Traffic modeling analysis indicates it would attract a significant amount of traffic. Provides traffic volume relief to other existing interchanges and roadways. Avoids potential Eastwood Historic District and properties. Preferred US 60 connection location stated in the Eastwood Neighborhood Plan. 	 Potential increased residential impacts. Requires railroad track crossing south of US 60.
14	 Connects segment 9 to segment 7. Avoids potential Eastwood Historic District and properties. 	
	 Traffic modeling analysis indicates it would attract a significant amount of traffic. Provides traffic volume relief to other existing interchanges and roadways. Provides a centrally located connector road to serve the area's existing and planned development. 	 Involves topographic constraints south of KY 148. Requires crossing KY 148, Brush Run, and the railroad track, all located near each other. Crosses Brush Run. Potential historic property impacts.
27	 Avoids crossing Floyds Fork and the Greenway Park system. Avoids potential Fisherville Historic District and properties. Avoids residential impacts to Fisherville Woods subdivision. Close coordination and cooperation with planned subdivision developer could preserve a connector road corridor, minimizing any potential residential impacts. 	 Potential large number of residential impacts to a planned subdivision development. Requires close coordination and cooperation with the planned subdivision developer.
28	 Traffic modeling analysis indicates it would attract a significant amount of traffic. Provides a centrally located connector road to serve the area's existing and planned development. Minimizes potential residential impacts compared to the 27-13-12 segment combination. 	Crosses Long Run.



MEETING NOTES

Project:	I-64 Interchange in Eastern Jefferson County, Corridor Study							
Item Numbers:	5-8200.00							
Purpose:	Stakeholder Meeting with Metro Parks, Planning and Design, Public Works, and Development Authority to discuss both projects and their association with public parks							
Place:	Metro Parks 1294 Trevillian Way Louisville, Kentucky 40209							
Meeting Date:	October 18, 2006							
Prepared By:	Tom Springer							
In Attendance:	Lisa Hite Bruce Traughber Charles Cash Mohammad Nouri Rick Storm John Callihan Tala Quino Paul Davis Kevin Dant Andrea Clifford David Smith Bill Crawford Tom Springer	Metro Parks Metro Development Authority Metro Planning and Design Metro Public Works KYTC, District-5 KYTC, District-5 KYTC, District-5 KYTC, District-5 KYTC, District-5 Qk4, Inc. Qk4, Inc.						

The meeting included an open discussion of the issues surrounding both interchange planning studies, as follows:

A new I-64 Interchange in eastern Jefferson County has been in the local transportation plans for more than 35 years. The only aspect being advanced at this time is a corridor planning study. The planning study will analyze the needs and issues, and possible locations for a connector road from I-64 north to US 60 and south to KY 155/KY 148. Only funds for Planning and Design are in the current KYTC Six-year Highway Plan. The KYTC is managing the project since it will require Federal Highway Administration involvement in the form of an Interchange Justification Study (IJS) and NEPA environmental document. At present, the Project Team is collecting information regarding opportunities, constraints, and public concerns.

In the study area's south, preliminary traffic data indicates that the greatest traffic need would be for the new connector to extend north from the existing KY 155/KY 148 (Taylorsville Lake Road) intersection. This location would require a crossing of Floyds Fork, and the proposed Floyds Fork Park system at some point north of the road and the railroad.

Metro Parks noted that in addition to acquiring land, they are currently studying various alternative concepts for extending the linear park system across the roadway (KY 155 / KY 148) and the railroad. It was agreed that a mutually-planned corridor could benefit both projects—park connectivity and the needs of the traveling public. Specifically, joint planning could allow the roadway to include multi-use facilities within the corridor to offer transportation options and improved access within and to the proposed park system.

The proposed typical section of the roadway was discussed. It was noted that some sort of access management would likely be in place, but not an interstate-type facility, nor a road with access controlled by permit only. Metro Parks expressed a desire for a Parkway type facility to enhance the park concept and feel.

It was agreed that as both KYTC and Metro Parks continue to advance with their respective plans, they will coordinate with each other and Qk4.

End of Meeting Notes



MEETING MINUTES

Project:	New I-64 Interchange with a Connector Road, Alternatives Planning Study										
Item Number	05-8200										
Purpose:	Project Team Meetin	Project Team Meeting #5									
Place:	Louisville, Kentucky	Louisville, Kentucky, District 5 Main Conference Room									
Meeting Date:	October 1, 2007 10	0:00 am EST									
Prepared By:	Tom Springer										
`	Tala Quinio	KYTC, D5, Design									
	John Callihan	KYTC, D5, Pre-Construction & Design									
	Chris Poe	KYTC, D5, Construction									
	Brian Meade KYTC, D5, Traffic Operations										
	David Martin KYTC, CO, Planning										
	Jim Wilson	KYTC, CO, Planning									
	Bob Farley	KYTC, CO, Design									
	Bill Hanson	FHWA-KY									
	Harold Tull	KIPDA									
	David Smith	Qk4									
	Jeremy Lukat	Qk4									
	Helen White	Qk4									
	Tom Springer	Qk4									

Ms. Quinio, KYTC, D5, Project Manager, welcomed everyone to the meeting. Following introduction she then turned the meeting over to Mr. Springer, who facilitated the project team meeting.

<u>Public Comments.</u> One of the objectives of the meeting was to review the public comments from the June 26, 2007 public information meeting. Each of the comments had been reviewed and taken into consideration. In summary, most of the comments were in support of the overall project, but differed in preference to the location options. At the public meeting, two sets of alignments were presented: alignments not recommended to be carried forward, and those that are. The public generally commented on the alignments that are recommended to be carried forward (i.e., those that link Eastwood and Fisherville). Of those comments, more like the eastern segments (27, 28, 10, etc) than the western segments (1, 2, 4, etc.). Few comments addressed the alignment options that were near the Shelby County line. Several comments noted other roadway improvements that needed to be made regardless of the alternative selected, including improvement to Eastwood-Fisherville Road, US 60 and KY 155.

<u>Traffic Forecast</u>. The results from the traffic model was reviewed. The traffic model addressed three corridors: a western corridor, a southwest to northeast corridor, and an eastern corridor. The model shows that significantly more traffic would use the western corridors than either the central corridor or the eastern corridor. It was noted that should the western corridor be selected, or the No Build, that the traffic volumes warrant other capacity improvements to the roadway network and that such improvement be included in the Planning Study. For example, the western corridor may necessitate the widening of I-64

from six lanes to eight. KY 155 will need to be widened regardless of which alternative is selected, including the No Build. It was also noted that one map that compares the traffic forecasts for each of the corridors be prepared and included in the study.

<u>Operational Analysis</u>. It was stated to the Project Team that the alternative that would attract the most traffic was analyzed for the operational analysis to address a "worst case" scenario. This alternative corridor is the western options, which link Eastwood to Fisherville and is the corridor recommended to be carried forward. The operational analysis to date has included the merge and diverge analysis, including the vehicle density and LOS for the peak hours. The analysis showed that the interchanges to the east and west of the proposed new interchange would not experience an adverse effect if a new interchange was constructed. It was requested that Qk4 do the same analysis for the I-265/US 60 interchange to build the purpose and need for this project.

<u>Cost Estimates.</u> Preliminary cost estimates of the alignments were presented. After initial review, it was agreed that they needed to be revised to included higher cost for the interchange and consider the bridges. Qk4 will also prepare right-of-way and utility cost estimates.

<u>Follow-up and Next Steps.</u> A meeting will be held with Senator Denton and Representative Crimm the following week to discuss the status of the project. (Note: at that meeting, it was requested that a meeting be held with the Eastwood Council to present our preliminary recommendations. This meeting will most likely not occur until November 2007.)

The meeting adjourned at approximately 11:30 a.m.

END OF MINUTES

Appendix I New I-64 Interchange and a Connector Road

Summary of Key Person Interviews

Interviews Conducted May-July 2006

The bulleted items below in bold italic type are the talking points/questions used by the three interview teams to discuss the proposed project with the key persons interviewed. The text following each bulleted item is a summary of the comments received. The following paragraph is the project description provided to each key person interviewed.

A new I-64 interchange is being proposed between the Gene Snyder Freeway (I-265, Exit 19) and Simpsonville (KY 1848, Exit 28) in the vicinity of Gilliland Road, with a connector road extending from Taylorsville Road (KY 155/KY 148) in the south to Shelbyville Road (US 60) in the north. Gilliland Road is a reference point, and not a firm location. The preliminary typical section is a 4-lane divided roadway, probably on new alignment with restricted access; and includes provisions for bike lanes/pedestrian paths.

• Before this meeting, did you know about this proposed project? What did you hear?

Most had at least heard of a project involving a new I-64 interchange, even if it was only mentioned in casual conversation. However, less than half were familiar with this specific study, and few knew of specific details. Some elected officials were very familiar with the project, and had been actively engaged in lobbying with colleagues for it.

• Do you know of any sensitive land uses or environmental sites in the study area we ought to know about (e.g., USTs, abandoned dumps, family cemeteries, former homesteads, etc.)?

Most were unaware of any specific sites. Some mentioned surface waters and wooded areas, the Floyds Fork park corridor, and other parks located outside the study area. One life-long resident suggested an area along Gilliland Road, between Eastwood and I-64, where the west side has property with potential connections to African American history, and the east side a church with African American connections.

• What are the most important transportation issues and/or locations in this area that concern your constituents/your office?

- Traffic congestion, especially on: US 60; the I-265 interchanges at US 60, I-64, and KY 155; US 60 in the vicinity of Christian Academy; and US 60 when I-64 traffic is diverted onto it due to a traffic incident.
- Emergency response access to the interstate, especially if I-64 is widened with a concrete median barrier. [Currently, emergency response access to I-64 is only at the I-265 or KY 1848 interchanges. A median barrier would prevent crossing over to the opposite lanes to render aid, and require traveling to the next interchange to turn around.]
- Access to the major interstates for residents, businesses, and commercial truck traffic. As Bluegrass Industrial Park, other planned business/industrial parks, and subdivisions develop, additional interstate access will become critical.
- Shelby County officials were concerned residents would not be afforded the opportunity to comment on the project.
- Protect the rural character and view sheds of existing roadways, especially in Eastwood village area.
- ^a Use Context Sensitive Design (CSD).
- Maintain the Eastwood village center as pedestrian oriented, and not route a connector road through it.

• A good north-south roadway/corridor between Taylorsville Road and Shelbyville Road. Additional east-west connections may also be needed.

• What do you think of, or have you heard about, traffic conditions on US 60, I-265, KY 1848, and Taylorsville Road (KY 155/KY 148) in the study area?

Heavy traffic congestion on all listed roads and their interchanges is already a concern and a growing problem. Frequent, if not daily, backups occur. US 60 and the interchanges at I-64/I-265 and I-265/US 60 were the most commonly mentioned problem areas. Shelby County officials did not perceive traffic flow on Shelby County roadways to be a problem, but acknowledged it is a problem/concern in Jefferson County.

• Do you think new access to I-64 is needed in east Jefferson County? Why or why not?

Yes. Nine miles between interchanges is too long given the current extent of development. This is a rapidly growing area and will continue to grow. Improved access to the interstate system is needed to facilitate peoples' access to employment, educational, healthcare, and retail centers in Louisville Metro and Shelbyville. Traffic congestion will only increase. Emergency responders need better access to I-64. Several stated the project is already ten years overdue.

• If built, what should the road look like? / What design features should be considered?

- Generally, no particular preference was expressed, other than visually pleasing and economical.
- The proposed preliminary typical section seemed acceptable (*i.e.*, 4-lane, restricted access, with pedestrian and bicycle considerations). A suggestion was made for a 3-lane rural arterial roadway, with a 45-mph speed limit; and enough right-of-way acquired for future improvement to a 5-lane.
- Implement on new alignment, minimizing impacts to existing residential property, with access management to prevent drivers taking short cuts through residential neighborhoods.
- Prefer an interchange design that encourages free flowing traffic movements rather than stop conditions.
- Grass medians require additional maintenance efforts and costs.
- Ensure interchange includes the capability for bicycle/pedestrian travel through the interchange (*i.e.*, good transitioning).
- ^o Consult Louisville Metro's new Streetscape Manual.
- Consider bus stop accommodations (see the Streetscape Manual).

• If this project were built, what are your biggest concerns?

- Generally "none" with implementing the project itself. Funding and timing were the big concerns. Many people interviewed were concerned that any more delay in implementing the project would allow the area to continue developing, resulting in increased property, farm, and/or residential impacts, thereby generating higher implementation costs and potential public opposition.
- Minimize residential dwelling impacts. Follow property lines as much as possible to avoid splitting properties and farms.
- Shelby County officials were concerned that, if the project were implemented in Shelby County it would stimulate residential and commercial growth and development in far western Shelby County. Such growth would be contrary to their comprehensive land use plan and require services (*i.e.*, fire, water, sewer, police) in an area the county is not yet prepared to provide.
- Louisville Metro Planning and Design staff were concerned a change in the land's rural character would occur, and encourage future development. They recommended no commercial property/development be permit in the new interchange area, and identifying village center locations relative to the new connector road.

- Include provisions for traffic to/from new interstate interchange to have access to Eastwood (*i.e.*, encourage commercial activity in the town).
- Shelbyville Road could require major improvements with the increased traffic.

• If no improvements are made, what do you think will happen in the next 10 to 20 years?

The study area and surrounding area will continue to grow and develop, and traffic congestion will become even worse, especially on US 60 and Taylorsville Road. Extreme congestion could occur, jeopardizing the ability of the existing interchanges to function. The roads will become even more unsafe. The project will eventually have to be built. If not implemented now, then the project will subsequently encounter even more delay, which will result in increased property impacts and increased costs. In 10 to 20 years the area will be "completely built out," with potentially a densely populated "Middletown like" area spanning the I-64 corridor, which would have no interstate access.

• What kinds of transit services and facilities should be considered as part of this study? Why or why not?

Most answered none at this time. Car pool/park-n-ride facilities were suggested as a consideration. Some stated transit/TARC service should be implemented on US 60 to Eastwood and any other activity center (*e.g.*, Lake Forest). TARC representatives expressed an interest in the project because a north-south connector road linking Shelbyville and Taylorsville Roads would enable any bus service to use the connector to make a loop route.

• Do you know any other individuals/groups that we should contact about this project?

Drive Smart US 60 Corridor Team KIPDA RTC Doug Yates, President, Eastwood Village Council Deb Godshaw, President, Eastwood Neighborhood Association Eastwood Village Association Derbyshire neighborhood association Heidi Sanner, a property owner south of I-64 MSD Louisville Water Company Spencer County officials

• List the most important goals for this corridor:

- Reduce traffic congestion.
- Improve local access to the interstate and major roadways.
- Improve safety.
- Improve emergency response times.
- Economical roadway/alignment that minimizes property impacts.
- Implement quickly, or preserve an alignment corridor for implementation.

Discussion Notes:

The majority of key persons interviewed preferred the new interchange and connector road be located in Jefferson County. A few initially expressed a preference for the project to be located near Gilliland Road (west side of Eastwood). However, a subsequent examination of the existing constraints near Gilliland Road convinced them a location east of Eastwood and west of the county line was more feasible.

Louisville Metro Planning and Design staff recommended consulting the recent draft of *Eastwood Village Transportation Planning Study*, dated January 2006 by Quest Engineers, Inc.

SUMMARY OF COMMENT FORMS Public Information Meeting New I-64 Interchange with a Connector Road Jefferson and Shelby Counties KYTC Item No. 5-8200

August 29, 2006 Highview Baptist Church (East Campus)

This first public information meeting was conducted to (1) inform the public of the alternatives planning study for a new I-64 interchange with a connector road and the issues associated with it; and (2) to receive their input/comments concerning the need for a new interchange, their transportation concerns, problems to correct, issues to consider, and potential constraints. Citizens were provided a handout consisting of: a project fact sheet with the purpose of the study, draft project goals, and an aerial photograph of the project study area to retain; and a comment form to submit; and the District 5 point of contact for additional information on both.

A staffed information table with a sign-in sheet was present at the entrance, and the handout/comment forms distributed to attendees. The meeting was conducted from 6:00-8:00 pm, with about a 15-minute formal presentation followed by an open house type format with work groups. No formal oral comments were recorded or documented. Several tables were prepared with three exhibits of the study area (aerial photograph, topographical map with the environmental footprint, and traffic, level of service, and crash data). Ten staff members from KYTC and Qk4 were available, stationed at each table to answer questions, elicit comments/discussion, and encourage citizens to annotate on the maps critical areas and potential interchange and connector locations. At the table work groups, much discussion of potential interchange and connector road locations occurred, and a few drew preferences on the exhibits. Any alternatives indicated on the exhibits were incorporated into the alternative corridors considered by the project team. All attendees were asked to complete a comment form and either submit it at the meeting, or return it in the postage-paid envelop provided. Sixty-nine (69) people attended the meeting and signed the sign-in sheet. The pre-printed comment forms were returned by 20 people (one submitted with no name or address), and several other people telephoned or emailed the District 5 office to express their opinion and concerns. Summaries and representative statements of the comments received are presented below, with the number of times stated in parentheses. Text in brackets was inserted for clarity.

1. How did you hear about this public meeting?

Newspaper	7	TV	0	Friend/Family	8	Do Not Recall	1
Letter	0	Radio	0	Elected Official	1		
Flyer	0	Meeting	1	Other	4		

2. Do you feel there are problems with study area roadways that should be addressed with this project? (*i.e.*, I-64, US 60, Taylorsville Road, other north-south or east-west roads)

Yes 16 No 4 (Note: 2 "no" voters also checked "yes" to question #3; indicated a positive benefit to question #4; and, for question #6, one provided a preferred location, the other stated start now.)

If "yes", please describe the problem, any specific locations, and types of improvements you feel are needed. (Use provided map if necessary to clarify your response.)

• "The only solutions for relieving Taylorsville Rd traffic are widening or a direct connection to I-64. The most direct route is on new alignment from the KY 155/KY 148 intersection to I-64. No development currently along such a route." [Person drew 2 possible alignments on map. From about KY 155/KY 148 intersection, due north to I-64 along west bank of Floyds Fork. From just east of C/L, due south to Taylorsville Lake Road/KY 155. Both alignments terminated at I-64, with no connector road north of I-64.]

- Traffic on KY 155/KY 148 "has increased greatly. [If it continues to increase, then] it may come to a standstill." "We need a connector road between US 60 and KY 155."
- Westbound US 60 to southbound I-265 "in morning takes forever."
- Eastbound US 60 at I-265, the two traffic lights need to be timed properly to permit traffic to flow through them.
- I-265 northbound at US 60 exit "backs up past Taylorsville Rd in morning."
- US 60 at Lake Forest "is too heavy with traffic" during Christian Academy school hours.
- "I [travel] from Long Run Rd during rush hour. The amount of traffic is unbelievably heavy." An accident on I-64 diverts traffic onto US 60. "US 60 is too narrow for semi's."
- US 60 and KY 155/KY 148 are too narrow.
- Eastwood-Fisherville Rd [KY 1531] is inadequate to handle traffic. Railroad trestle at south end is one-lane.
- Traffic congestion at I-265 intersections with I-64, US 60, and KY 155.
- "The backup [from Spencer Co traffic on Taylorsville Lake Rd/KY 155] has gone over 2-miles trying to get through the Fisherville light [*i.e.*, KY 155/KY 148 intersection], and it is extremely dangerous for people trying to turn left from KY 148 to KY 155 at the [traffic] light. ...frequently going around drivers on the right shoulder at the light to get around people trying to turn left."
- Wants two new I-64 interchanges: Clark Station and Gilliland Road.
- Existing roads are not wide enough.
- "Shelbyville Road in Eastwood is extremely congested and would benefit from having another on/off ramp to I-64. New subdivisions and businesses continue to go up in area, and being able to move traffic safely onto the interstate is critical."
- "US 60 needs to be four-lane all the way to Shelbyville. ...traffic is getting more congested all the time...."
- Too congested on I-64 ramps to I-265, and US 60 through Eastwood.
- A new I-64 interchange "seems to be logical due to all of the development in this area."
- "This interchange would open up a large rural area of existing substandard roads...." and "...would duplicate the public safety nightmare that the Blakenbaker Pkwy interchange created for our neighborhood."

3. Do you think new access to I-64 is needed in eastern Jefferson County?

Yes 14 No 5 (Note. one "no" voter filled comment section with several sentences stating interchange was badly needed, long overdue, and explained why needed.)

Please explain why or why not.

- Taylorsville Rd needs relief from Spencer County traffic. (3X)
- Yes, to relieve traffic congestion. (7X)
- When accidents on I-64 or I-265 divert traffic onto other roadways, they cause extreme congestion and backups on the smaller roads. (3X)
- It would disperse some of the load off [I-265] intersections with I-64, US 60, and KY 155.
- I take KY 148 [east] to Veechdale Road to access I-64 to avoid congestion at intersections above [*i.e.*, I-265 at I-64, US 60, and KY 155].
- Improve fire and emergency response times, and safety. (2X)
- Relieve traffic on US 60 and at I-265 interchange. (3X)
- Yes. Traffic flow is now at a bottleneck during peak hours ... it is getting worse all the time. ...an interchange would help relieve this problem."
- "...should have been done ten years ago."

- "It will only encourage more sprawled growth...."
- "Would conflict with Greater Louisville Project Report ... weaken our urban core ... population is not growing.... Has Qk4 or state transportation received growth readiness training from state?"
- "Your projected traffic figures are outdated & inaccurate. The study area is <u>not</u> being developed at a rate of 4.84 houses/acre. Current subdivisions are not as dense as you project. Mayor Abramson [and EPA have] funded [studies] of how to maintain rural nature of this area. Much of this land planned for parks & habitat."

4. How would a new interchange with a connector road positively or negatively affect communities in or near the study area?

- "I'm for the development and better access this connector would create."
- It would help reduce traffic congestion on other roads (US 60, KY 155). (3X)
- "Derbyshire [Estates] is very concerned about any increase in traffic on Eastwood-Fisherville Road without major improvements. We have had a resident die on this road, which is too narrow to allow vehicle to safely pass in spots, has poor sight-lines, tight blind curves, and shoulders that drop off. The railroad underpass is narrow, and creates a blind driving situation" [from Board member, Derbyshire Estates Property Owners Assoc.]
- Positively. Get more people and businesses in our end of town if they have better access to main roads. (2X)
- Positive [impact].
- Help make roads safer.
- Improved access and interchange are needed, but limit/restrict/prohibit commercial development around new interchange and intersections. (3X)
- "Residents in the area are already negatively impacted ... because of the lack of insight by Planning & Zoning in Jefferson County." If project implemented, then heavy restrictions on commercial development are needed to prevent creating more Hurstbourne Lane or Blakenbaker interchange areas.
- "...negatively affect the area by creating more sprawled development..." and cause "higher taxes for the county residents..." (2X)
- "It would destroy our rural character...."
- "Negative impact for local planning & zoning Floyds Fork Development Review Overlay."
- "...would open more areas to development. There is way too much now. We need protected areas for wildlife."
- 5. Are there areas or sites in the study area we should avoid (e.g., natural areas or habitats, recreational areas, historic or cultural sites, hazardous materials sites, scenic areas, viewsheds), or any additional environmental issues we need to address? Please identify and explain why.
 - "Build the road and let God sort out the rest."
 - "No, because no consideration is made to the natural areas when they build these huge subdivisions."
 - Eastwood and the Eastwood Village area plan. Minimize any potential traffic problems in Eastwood area.
 - KY 148: floodplain, railroad, waterline, Brush Run Creek.
 - Floyds Fork watershed/corridor. (8X)
 - Cemetery at entrance to Shakes Run.
 - "...devastating impact on the Black Acre Nature Preserve."

• Karst area. Non-point source water pollution runoff into Floyds Fork and tributaries. Habitat for hundreds of species of birds and animals. Slave cemeteries on some farms. Current agricultural activities will be destroyed by noise, traffic, light and air pollution if new interchange built.

6. Additional Comments.

- Great if a connector road between US 60 and KY 155 could be built both west and east of I-265.
- Connector road from KY 155, Taylorsville Lake Road [*i.e.*, KY 155/KY 148 intersection] north through Echo Trail corridor would be easiest and quick to build.
- Locate interchange east of Eastwood (*i.e.*, Hobbs Ln or Clark Station Rd). Respect provisions of Eastwood Village plan to protect village character. Topography and low residential densities near C/L are more attractive. [Person submitted copies of Eastwood plan pages.]
- "The roadway change is already way overdue." "... the traffic problems need to be addressed." "...the I-64 exchange that is so needed."
- "Put the I-64 interchange at Hobbs Station or Gilliland by the firehouse."
- "Extend Taylorsville Lake Road at KY 155/KY 148 across railroad, thru park area of Floyds Fork, to new I-64 exchange."
- Locate interchange further east, around Clark Station Road. Would benefit Shelby County traffic. If interchange at Gilliland Rd, then it would draw heavy trucks, which would drive to Floyds Fork or US 60 at Eastwood.
- Gilliland already improved, and it would be easier to develop into an exchange. (2X)
- Connection from KY 148/KY 155 [intersection traffic] light to Echo Trail would allow Spencer Co residents direct access to I-64 taking pressure off I-265 intersections at Taylorsville Rd [KY 155] and I-64.
- Include Spencer County in planning. [because a lot of traffic from Spencer Co and limited routes into Jefferson County]
- "We need this to go ahead and get started!!!"
- Locate the interchange east of Eastwood.
- Use the Eastwood-Fisherville Road because it "empties into the heart of Eastwood and would provide the best access off Shelbyville Road." "The sooner the better for this project. Eastwood-Fisherville Rd needs to be widened...."
- "A major consideration [for new interchange location] should be made for fire departments and emergency vehicles. ...great need for ... quicker response between Middletown and Simpsonville on I-64...." Suggests new interchange and connector road on county line.
- "More development, including roads, in this area is not good for Louisville Metro ... serving only to deflate property values elsewhere ... more roads will not help fire and rescue teams ... the less development ... the faster and less hindered by traffic their responses will be."
- "Please invite the public, association, to more meetings on this interchange. No connector road route was shown at the public meeting. Sprawl costs...."
- "Shelbyville Rd, I-64, Bardstown Rd, & the Gene Snyder carry through traffic for the area [and] should continue to do so, widening as necessary. We ... do not want urban sprawl.... 2-lane roads with tree canopies are a signature of this area. Busy highway should be kept where they are; we don't want to create new ones."
- "You need a copy of the Floyds Fork Management Plan 1981."

SUMMARY OF COMMENT FORMS Public Information Meeting New I-64 Interchange with a Connector Road Jefferson and Shelby Counties KYTC Item No. 5-8200

June 26, 2007 Highview Baptist Church (East Campus)

This second public information meeting was conducted to (1) inform the public of the alternatives planning study for a new I-64 interchange with a connector road in eastern Jefferson County (2) to receive their input/comments about possible location options. Citizens were provided a handout consisting of a project fact sheet with the purpose of the study, draft project goals, and an aerial photograph of the project study area with proposed alignments and a comment form to submit; and the District 5 point of contact for additional information on both.

A staffed information table with a sign-in sheet was present at the entrance, and the handout/comment forms distributed to attendees. The meeting was conducted from 6:00-8:00 pm, with about a 15-minute formal presentation followed by an open house type format with work groups. Several tables were prepared with an exhibit of the possible build alternative locations. Staff members from KYTC and Qk4 were available, stationed at each table to answer questions, and elicit comments/discussion.

Eighty nine (89) people attended the meeting and signed the sign-in sheet. The pre-printed comment forms were returned by 44 people, and several other people telephoned, faxed, or emailed the District 5 office. Summaries and representative statements of the comments received are presented below, with the number of times stated in parentheses.

In summary, of the alternatives recommended to be carried forward the comments <u>disliked</u> the <u>western</u> options (i.e., "1"/"2" and "7"/"4") 44 to 19 over the eastern options (27, 28, 9 and 10), and they <u>liked</u> the <u>eastern</u> options slightly more then the western options (i.e. 22 comments versus 17).

1. How did you hear about this public meeting?

Newspaper	9	TV	1	Friend/Family 19
Letter	3	Radio	0	Elected Official 9
Flyer	0	Meeting	1	Other 10

2. Do you feel there are problems with study area roadways that this project should address? (*i.e.*, I-64, US 60, Taylorsville Road, other north-south or east-west roads)

Yes 34 No 8

If "yes", please describe the problem, any specific locations, and types of improvements you feel are needed. (Use provided map if necessary to clarify your response.)

- Traffic growth in area due to development (4x)
- Taylorsville Road should be four lanes between I-265 and KY 155 (2x)
- Taylorsville Road from 155 to the Gene Snyder Freeway is a mess of traffic (2x)
- Traffic coming out of Spencer and Shelby Counties utilizing 155 and 148 (2x)
- Fisherville Road is in dire need of repair/reconstruction and cannot handle the influx of vehicles due to ongoing development and expansion in the area (2X)
- I-265 and US 60 Intersection is in desperate need of re-configuration (2x)
- Fisherville Road has poor access for emergency vehicles
- Many of the roads are unsafe, narrow, curvy and unmarked

- US 60 from Eastwood cut-off to County Line Road should be four lanes
- Traffic at the Highway 155 and Highway 148 intersection

3. Do you think new access to I-64 is needed in eastern Jefferson County?

Yes 34 No 10

Please explain why?

- Congestion/Traffic (18x)
- Growth/Development (6x)
- There is no access to I-64 between I-265 and Simpsonville (2x)
- Poor access for emergency vehicles (2x)
- Exit 28 and Gene Snyder Freeway are separate

Please explain why not?

- There is already adequate access (4x)
- Adding another access road would displace whole neighborhoods

4. Which alternative corridor segments/new interchange location do you prefer? Why?

- 27, 28, 9, 10 (16x) More efficient emergency service; Less impact on communities; Less impact on existing development; Preserves the historic community; Alleviates traffic; Repairs Fisherville Road in the process; Preserves Floyd's Fork; Prevents traffic from going thru Eastwood to access main roads
- 1, 2, 4 (10x) Convenient access to the Parks; Least expensive; Helps Spencer county economy; Quickest plan/project to complete; No noise wall/barrier is necessary; Less impact on communities; Avoids shopping center project developing at location 10
- East is where any new Road projects should go (7x) East is where the growth and development is
- 1,3,9,10 (3x) Reduces congestion; Reduces environmental impact on Floyd's Fork; Less impact on community; Direct route to 155; Preserves "Historic Eastwood"; Provides access to areas with limited access providing potential for any future development
- None (3x) Disturbs and destroys a peaceful, rural, two-lane road area
- 1,2,5,6,7 (2x) Most direct alternative; Least expensive; Improved access to Parks; Less impact on communities
- 1,3,8,6,7 Less impact on Floyd's Fork
- 12 (or) 19 Relieves Eastwood's 'bottleneck' traffic
- 1, 2 (or 3), 4 Addresses the most traffic
- 28 -
- 28, 9, 10 Less residential impact; Less impact on Floyd's Fork
- 28, 13, 12 Maintains Eastwood's rural identity
- 25, 18, 19, 20 Less impact on property owners and streams
- 1, 3, 12, 20 Less impact on property owners
- 1, 2 Less impact on Floyd's Fork
- Which ever one can be finished in the shortest amount of time

5. Which alternative corridor segments/new interchange location do you dislike? Why?

- All of the Western Alternatives (8x) Negative impact on Floyd's Fork; Negative impact on residential
- 27, 28 (5x) Expensive; #27 goes off of a 30' cliff at Taylorsville Road; Creates more traffic congestion; Negative impact on personal property; Negative impact on Floyd's Fork

- 1, 2, 3, 4, 5, 6, 7, 8 (5x) Negative impact on Floyd's Fork; Negative impact on the Historic District; No positive impact on traffic
- 1, 2, 4, 5, 6, 7 (3x) Negative impact on Floyd's Fork
- 27, 28, 9, 10 (2x) Negative impact on the community; Longer and full of dangerous curves; No positive impact on traffic
- 1, 2, 4 (2x) Too residential; Negative impact on Floyd's Fork
- 2, 4, 5 (2x) No positive impact on traffic, Does not help limited access communities
- 2, 4, 5, 6, 7 (2x) Divides community; Limits access to Parks and Floyd's Fork
- 9, 10 Negative impact on the Historic District of Eastwood
- 9, 14 Needs to be more direct
- 1, 2, 5, 6, 7 Negative impact on the Historic Districts; Negative impact on the community
- 28, 10, 24 Safety concern for an interchange on a two lane road
- 1, 2, 4, 5, 6 Does not resolve traffic congestion; Negative impact on Floyd's Fork, Fisherville Road repair problems would still need to be addressed with another project; Limits the Eastwood community from the Parks
- 8, 9 Goes right thru personal property
- 27, 28, 9, 14, 10 Most expensive, Forces 155 traffic to make unnecessary turn
- 1, 2, 4, 5 Negative impact on Floyd's Fork
- 8, 6, 7, No positive impact on traffic
- 1, 3, 9, 14, 7 Negative impact on the community; Longer and full of dangerous curves
- 1, 3, 9, 10 Negative impact on the community; Longer and full of dangerous curves
- 27, 28, 9, 14, 7 Negative impact on the community; Longer and full of dangerous curves
- 14, 10 Negative impact on Eastwood Village
- 2, 5, 6 No positive impact on traffic
- 1, 2, 5 Too residential
- 1, 3, 8 Too residential
- 1, 3, 9 Too residential
- 1, 2, 3, 4, 5, 6, 8 Unnecessary destruction to the neighborhoods
- All of the alternatives Destruction to the neighborhoods
- All of the Eastern Alternatives Too far east to help

6. Additional Comments.

- Preserve Floyd's Fork (13x)
- The proposed routes would uproot several households (7x)
- The sooner the better (6x)
- US 60 will have to be widened at Eastwood if more traffic is created by an interchange (6x)
- Poor notification of the Public Meeting/Project (6x)
- Shelbyville Road and Taylorsville Road should be widened as appropriate joining the new interchange road (5x)
- Please keep these roads rural design (no curb and gutter, fully shielded lights) (2x)
- Put flyovers at US 60/ 265, 155/265, this would reduce waiting. 155/148 take out the light and this would move traffic on to the new four lane 155
- Please include walkways, bike paths and crossing lights
- The 148/155 intersection would benefit greatly if it were designed as a true intersection rather than the 'T' design

- Make two left turn lanes or a cloverleaf and six lane freeway north and south between I-64 and US 60
- There is an illegal landfill with unknown toxic waste in the area of 8 and 9
- If Alternative 1 is chosen a bridge over the railroad is preferred over a crossing
- Emergency vehicles response time can be improved by adding Emergency lanes on I-64 and Gene Snyder Freeway
- Someone that lives in the area should design the new interchange

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Looking Back

State looking at new I-64 interchange

By Walt Reichert/Sentinel-News Editor

The Kentucky Transportation Cabinet is looking at the possibility of building a new interchange with I-64 somewhere in eastern Jefferson County or western Shelby County.

Highway officials are holding a meeting Tuesday, Aug. 29 at Highview Baptist Church, 15201 Shelbyville Road in Jefferson County, to get public input on possible locations.

The meeting will last from 6-8 p.m.

Most of the area under consideration for an interchange lies in Jefferson County and starts about one mile east of the Snyder Freeway and extends about a mile into Shelby County.

Plans for an interchange were prompted by residential and commercial growth in the area, said state Highway Department spokesperson Andrea Clifford. Clifford said money for the design phase of the plan is in the state's six-year plan, but no funds have been set aside for construction or purchase of rights-of-way, she said.

"The purpose of the meeting will be just to see where the interchange might possibly go," Clifford said.

County Judge Rob Rothenburger and Magistrate Michael Riggs, who represents the area on fiscal court, have met with transportation officials about the interchange.

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Rothenburger said a new interchange would be good for the county because emergency vehicles would have another entrance in the event of an interstate shutdown. Also factories in Shelby County would have an alternative exit in the event of a shutdown.

"We got a lot of factories delivering to Ford who have to get parts there in time to keep the company rolling," Rothenburger said.

Rothenburger said, however, that the interchange would fit better in Jefferson County rather than Shelby County.

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Sentinel News

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Click here for Sentinel-News Area Info "We have mostly five acre tracts in that area and that's what would be around the interchange," Rothenburger said.



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New I-64 interchange considered

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Eastwood and Fisherville area of eastern Jefferson County.

It is at least 10 years away, if it happens at all. Even so, Cheryl Froula and other area residents sought more information last night at the state Highway Department's first public meeting on the idea.

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AUTO + HOME + LIFE + BUSINESS + A MEMBER SERVICE + WWW KYFB.COM is needed and, if it is, where to put it.

"This is in the earliest stage," Callihan said.

and Taylorsville roads.

"Something is needed to be done about the traffic. But where are they going to put it?" asked Froula, one of about 75 people who gathered at **Highview Baptist** Church's East Campus on Shelbyville Road.

John Callihan, branch manager of preconstruction for the department, said officials hope to complete a preliminary study within a year to determine whether an interchange

An interchange could be placed between a point just west of Gilliland Road to just east of the Shelby County line. It could link to a new road or an existing one, such as Gilliland or Eastwood-Fisherville roads, which connect Shelbyville

The project has received \$250,000 for the initial study, said Tala Quinio, the project manager.

An interchange would help reduce bottlenecks on Shelbyville Road and other spots, said Tom Springer, an engineer with QK4 engineers, which is helping

http://www.courier-journal.com/apps/pbcs.dll/article?AID=/20060830/NEWS01/608300592

New I-64 interchange considered

conduct the study. Traffic on some main roads in the area is expected to double or triple in about 20 years because it's developing fast, he said.

Area residents reacted in different ways to the discussion.

Barbara Sorrell said it's too soon to say how she feels. Wayne Morris said he's afraid tractor-trailers will create traffic hazards on the road leading to the interchange.

Eastwood resident Sarah Snyder fears an interchange would speed up development in the area. She said she hopes the interchange will be east of Eastwood, where it would not affect the area so much. Snyder noted that the Metro Council recently approved a neighborhood plan for Eastwood designed to protect its village character.

Frances Aprile fears an interchange could harm the Floyds Fork watershed. "This whole idea for an interchange is predicated on urban sprawl coming out here," she said.

Reporter Bill Pike can be reached at (502) 582-4243.



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Today is Thursday, August 31, 2006



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New I-64 interchanged proposed

News

By John Shindlebower Wednesday, August 30, 2006 1:17 PM EDT

If it happens in Jefferson County, it's likely to have an impact on Spencer County. That's just the way it is in a county that depends so heavily on the metropolitan area to the west for jobs, retail, services and other necessities.

It's also true when it comes to roads, and a newly proposed interchange off of I-64 in southeastern Jefferson County will no doubt affect life in Spencer County if it becomes a reality.

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road linking U.S. 60, that runs parallel and north of I-64, to the KY 155/KY

148 area that so many Spencer Countians travel each day to work.

Transportation officials are looking at adding the interchange somewhere between Simpsonville and the Gene Snyder, either in Jefferson County or extreme western Shelby County. Most of the proposed options are in Jefferson County.

Spencer County Judge-Executive David Jenkins said he knew the state had been looking at ways to improve the KY 155 corridor and to alleviate the growing traffic congestion, but said he hasn't heard much about the proposed new interchange.

"This would probably be better," said Jenkins, noting that it would likely help take traffic off the Gene Snyder as well and would no doubt improve access into Spencer County.

Such access may also spur business growth along the KY 155 route in Jefferson County, which may eventually spread into Spencer County.

Jenkins said Tuesday's meeting was most likely just an effort to gauge public reaction to the plan and said there may be some significant obstacles facing any such project. He pointed to the presence of the railroad in the area as one potential barrier.





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"From what I understand, railroads have significant power," he said.

Annette King, executive director of the Taylorsville-Spencer County Economic Development Authority, said it's too early to tell just how much impact a new interchange could have on Spencer County.

The meeting held last night included a presentation and displays of possible routes and officials there accepted written and oral comments about the proposal.

Andrea Clifford, a spokesperson for the Transportation Cabinet's District 5 office in Louisville, said money for the planning and design phase of the project is in the current six-year road plan, but funds for the actual construction or the purchase of property rights have not yet been approved.

Those unable to attend last night's meeting have 15 days from the meeting date to submit written comments about the proposal, and they can be sent to the Department of Highways, 977 Phillips Lane, Louisville, KY 40209.













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EASTWOOD/FISHERVILLE PARKWAY

One route would dissect subdivision

By Chris Otts cotts@courier-jourr

cotts@courier-journal.com The Courier-Journal A parkway that would link Taylorsville Road in Fisherville and Shelbyville Road in Eastwood would cut through a proposed 1,100-home subdivision off Taylorsville Lake Road, under one of the route plans.

And no matter how the road gets to Eastwood, residents fear it would bring too much traffic. They say that area of Shelbyville Road is already overtaxed. The parkway's purpose is to

The parkway's purpose is to give drivers in eastern Jefferson County, and Shelby and Spencer counties, a new way to Interstate 64 to ease traffic at the Snyder Freeway's Taylorsville Road and Shelbyville Road interchanges.

It is probably at least 10 years from being built, said Andrea Clifford, a spokeswoman for the

state Highway Department. There are drawbacks with each potential route, which mostly involve private land, said Thomas Springer, a plan-

ner with QK4, a firm working

on the project for the state. In Fisher ville, the road would end either at Taylorsville Road and Taylorsville Lake Road, or at Taylorsville Lake Road and Routt Road.

If the latter location is chosen, the road would be built through Covington by the Park, a proposed1,100-home subdivision.

The subdivision needs a zoning change, and the request will go forward as planned, attorney Bill Bardenwerper said. The developer can't wait on the state to pick a route for the road, nor can he leave an open space for it through the subdivision, Bardenwerper said. "I think right now this is in

that stage where they show 27 different routes and ultimately focus on one or two."

If the parkway comes in at Taylorsville Road and Taylorsville Lake Road, it would have to be built over Floyds Fork. The other location would only hug the east side of Floyds Fork. "Crossing Floyds Fork is a major consideration," Springer said.

Tesherville resident Ed Carter, who lives on Old Routt Road, said it makes more sense to put the road at Taylorsville Road and Taylorsville Lake Road. "If you go the other way you're going to be tearing up a lot of green land."

At the other end, the road would intersect Shelbyville Road on either side of Eastwood, at Gilland Road or between Eastwood Cut Off Road and Chestnut Glen subdivision. That has Eastwood residents

concerned that the road would funnel traffic through their village, said Doug Yates, president of Eastwood Village Council. "Shelbyville Road is already

an obsolete two-lane highway

at that location, he said. The Eastwood Neighborhood Plan, a Metro government document, suggests the road be built east of the village so that traffic from Shelby County doesn't come through Eastwood to get to the Snyder, Metro Councilman Hal Heiner said. But neither location is desirable for Eastwood, he added.

Yates is organizing a Village Council meeting for July 19 and asking the Highway Department to send a representative. He hopes to persuade planners to reconsider putting the road close to the Shelby County line. That's not likely to happen,

close to the Shelby County line. tracks. That's not likely to happen, Springer said. QK4 took those Reporter Chris Ot routes off the table because at (502) 582-4589.






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Environmental Review Process Resource Agencies Responding

Agency	Date	Response
Commonwealth of Kentucky State Senate	9/12/2006	Recommendation on exact location of project. Project should be expedited.
Pederal Avaiation Administration	9/8/2006	No negative effect on air navigation; however if equipment usage exceeds 200' AGL, a permit must be obtained
US Department of Agriculture NRCS	8/28/2006	Concerned with potential impacts that the proposed project might have upon prime farmland soils and additional farmlands of statewide importance. Contact local NRCS representatives.
US Department of the Army Corps of Engineers	9/12/2006	No comments and No objections
Kentucky Depart of Fish and Wildlife Services	6/27/2007	Provided information on federally endangered species that may occur in the area.
Kentucky Geological Survey	8/25/2006	Summarization of any geologic concerns for the study area
Kentucky Commerce Cabinet Department of Parks	8/24/2006	Recognized the information, and positively commented on park access the project would create.
Kentucky Commerce Cabinet for Health and Family Services	8/25/2006	No Negative Impact
KY EPPC Dept. for Natural Resources	9/8/2006	No Negative Impact
0 KY EPPC Division of Waste Management	10/3/2006	Any waste generated must be properly disposed of and any contaminates encountered must be properly addressed
1 KY EPPC Division for Air Quality	10/3/2006	States the Fugitive Emissions Regulation and that open burning is prohibited except under certain circumstances
2 KYTC Airport Zoning Commission	8/25/2006	No negative effect on air navigation; however if equipment usage exceeds 200' AGL, a permit must be obtained
3 KYTC Geotechnical	9/12/2006	Assessment of underlying rock formations and recommendations for the negotiations of the rock formations during construction
4 KYTC Permits	8/28/2006	Recommend the Cabinet classify this project as a partially controlled access facility. Provided a list of issues if the Cabinet does classify this project as a partially controlled access facility.
5 Kentucky State Police	9/11/2006	No Negative Impact
6 Kentucky Vehicle Enforecement	9/7/2006	No Negative Impact
7 KY Louisville Metro Planning and Deisgn Services	9/15/2006	Recommendations regarding the Eastwood Neighborhood Plan.
8 Simpsonville Rural Fire Protection District	9/5/2006	This project is beneficial but safety is always a concern.
9 Transit Authority of River City	9/12/2006	No Negative Impact
21st Century Parks	7/20/2007	Concerns regarding Alternatives



U.S. Department of Transportation Federal Aviation Administration Memphis Airports District Office 2862 Business Park Drive, Building G Memphis, TN 38118-1555

September 8, 2006

Ms Tala E. Quinio, P.E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, KY 40209

Dear Ms Quinio:

Scoping Study, Jefferson County Possible New Interchange on I-64 Item No. 5-8200.00

I am writing in response to your August 17, 2006, letter concerning the subject Scoping Study. The proposed project area does not include any public airports; therefore, we have no comments concerning the proposed project unless construction activities would exceed 200 feet in height above the ground level at the site.

If you have questions please call me at 901-322-8182.

Sincerely,

abrin

Charles L. Harris Assistant Manager



Natural Resources Conservation Service 771 Corporate Drive, Suite 210 Lexington, KY 40503

August 28, 2006

Ms. Tala E. Quinio, P.E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, KY 40209

RE: Item No. 5-8200.00, Jefferson and Shelby Counties, KY

Dear Ms. Quinio:

In regards to the scoping study for a new interchange on I-64 at the vicinity of Gilliland Road and a new connector road linking US 60 (Shelbyville Road) and KY 155/KY 148 (Taylorville Road). The USDA-Natural Resources Conservation Service (NRCS) is concerned with potential impacts that the proposed highway project might have upon prime farmland soils and additional farmlands of statewide importance. If federal dollars are to be used to convert important farmlands from agricultural uses to non-agricultural uses a Form AD-1006 (or Form NRCS-CPA-106 if the project is a corridor type project) must be submitted to the local NRCS office. These forms may be obtained from the local NRCS office and are also available as electronic forms on the web at <u>http://www.nrcs.usda.gov/programs/fppa/pdf_files/AD1006.PDF</u> and <u>http://www.nrcs.usda.gov/programs/fppa/pdf_files/CPA106.pdf</u>.

The NRCS contact person for Jefferson County is:

Mr. Kurt D. Mason District Conservationist- Jefferson County 4233 Bardstown Road Suite 100-A Louisville, KY 40218-3280 Phone: 502-499-1900 Fax: 502-499-1748

The NRCS contact person for Shelby County is: Mr. Randal Rock District Conservationist-Shelby County 90 Howard Drive, Ste 2 Shelbyville, KY 40065-8948 Phone: 502-633-3640 Fax: 502-647-0346

> Helping People Help the Land An Equal Opportunity Provider and Employer

Ms. Tala E. Quinio, P.E.

Mr. Mason and Mr. Rock can help in identifying important farmlands in the proposed project area.

To further assist with the planning efforts, I am enclosing a CD containing ArcView GIS shapefiles of basic soils information for Jefferson and Shelby County. The GIS shapefiles are in UTM projection, nad83, zone 16. The soil database table includes a column for "farmland classification-all components" (farmclac) that identifies prime farmlands and soils of statewide importance. A legend file has been provided (farmland_classif.avl), which may be used with GIS software to more clearly display the soils that are considered prime farmlands and soils of statewide importance.

Sincerely,

Cacting for

DAVID G. SAWYER State Conservationist

Enclosure

cc: Kurt D. Mason, District Conservationist, NRCS, Louisville, KY Randal Rock, District Conservationist, NRCS, Shelbyville, KY



DEPARTMENT OF THE ARMY U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS P.O. BOX 59 LOUISVILLE KY 40201-0059

http://www.lrl.usace.army.mil/

September 12, 2006

Planning, Programs and Project Management Division Plan Formulation Section

Kentucky Transportation Cabinet Ms. Tala E. Quinio, P.E. Project Manager District 5 Design 977 Phillips Lane Louisville KY 40209

Dear Ms. Quinio:

This is in reply to your August 17, 2006, letter regarding a request to our agency to provide input and comments on a scoping study to determine the need and potential impacts for a possible new interchange on I-64 at the vicinity of Gilliland Road.

Louisville District has reviewed the materials provided with your letter. We have no comments and have no objections concerning the project.

Sincerely,

Sharon M. Bond

Sharon M. Bond Chief, Planning Branch Planning, Programs and Project Management Division



KENTUCKY COMMERCE CABINET KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES

Ernie Fletcher Governor

#1 Sportsman's Lane Frankfort, Kentucky 40601 Phone (502) 564-3400 1-800-858-1549 Fax (502) 564-0506 fw.ky.gov

September 13, 2006

George Ward Secretary

Dr. Jonathan W. Gassett Commissioner

Tala Quinio, P. E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, KY 40209

RE: Threatened/endangered species, critical habitat review, and potential environmental impacts associated with the proposed new interchange on I-64 at the vicinity of Gilliland Road in Jefferson County, Kentucky

KYTC Item No. 5-8200.00

Dear Ms. Quinio:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) have received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicates that federal/state threatened and/or endangered fish and wildlife species are known to occur within close proximity to the project area (see attached list). Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

- The Indiana bat utilizes a wide array of habitats, including riparian forests, upland forest, and fencerows for both summer foraging and roosting habitat. Indiana bats typically roost under exfoliating bark, in cavities of dead and live trees, and in snags (i.e., dead trees or dead portions of live trees). Trees in excess of 16 inches diameter at breast height (DBH) are considered optimal for maternity colony roosts, but trees in excess of 9 inches DBH appear to provide suitable maternity roosting habitat. Male Indiana bats have been observed roosting in trees as small as 3 inches DBH. Removal of suitable Indiana bat roost trees due to construction of the proposed project should be completed between October 15 and March 31 in order to avoid impacting summer roosting Indiana bats. However, if any Indiana bat hibernacula are identified on the project area or are known to occur within 10 miles of the project area, we recommend the applicant only remove trees between November 15 and March 31 in order to avoid impacting Indiana bat "swarming" behavior.
- To minimize impacts to aquatic resources and gray bat foraging areas, strict erosion control
 measures should be developed and implemented prior to construction to minimize siltation into
 streams located within the project area. Such erosion control measures may include, but are not
 limited to silt fences, staked straw bales, brush barriers, sediment basins, and diversion ditches.
 Erosion control measures will need to be installed prior to construction and should be inspected
 and repaired regularly as needed.



For more information on how to precede with the threatened/endangered species surveys please contact the US Fish and Wildlife Service Kentucky Field Office at (502) 695-0468.

KDFWR recommends that you contact the appropriate US Army Corps of Engineers office and the Kentucky Division of Water prior to any work within the waterways or wetland habitats of Kentucky. Additionally, KDFWR recommends the following for the portions of the project that impact streams:

- Channel changes located within the project area should incorporate natural stream channel design.
- Use bridges for all intermittent and perennial stream crossings where practicable. If culverts are used, the culvert should be designed to allow the passage of aquatic organisms.
- Culverts should be designed so that degradation upstream and downstream of the culvert does not
 occur.
- Development/excavation during low flow period to minimize disturbances.
- Proper placement of erosion control structures below highly disturbed areas to minimize entry of silt into area streams.
- Replanting of disturbed areas after construction, including stream banks, with native vegetation for soil stabilization and enhancement of fish and wildlife populations. We recommend a 100 foot forested buffer along each stream bank.
- Return all disturbed instream habitat to its original condition upon completion of construction in the area.
- Preservation of any tree canopy overhanging any streams within the project area.

I hope this information proves helpful to you. If you have any questions or require additional information, please call me at (800) 852-0942 Extension 366.

Sincerely,

Doug Damany

Doug Dawson Wildlife Biologist III

Cc: Environmental Section File

State/Federal Threatened/Endangered Species that could be impacted by the proposed project.

Scientific Name	Common Name	Federal Status	KSNPC Status
Accipiter striatus	SHARP-SHINNED HAWK	N	S
Aimophila aestivalis	BACHMAN'S SPARROW	N	E
Ammodramus henslowii	HENSLOW'S SPARROW	N	S
Ardea herodias	GREAT BLUE HERON	N	S
Egretta caerulea	LITTLE BLUE HERON	N	E
Junco hyemalis	DARK-EYED JUNCO	N	S
Myotis grisescens	GRAY MYOTIS	LE	Т
Myotis sodalis	INDIANA BAT	LE	E
Pleurobema clava	CLUBSHELL	LE	E
Podilymbus podiceps	PIED-BILLED GREBE	N	E
Thryomanes bewickii	BEWICK'S WREN	N	S
Tyto alba	BARN OWL	N	S

US Fish & Wildlife Service Status:

N = None

- C = Candidate
- LT = Listed as Threatened
- LE = Listed as Endangered

KY State Nature Preserves Commission Status

N = None

E = Endangered

T = Threatened

S = Special Concern

H = Historic

X = Extirpated

UNIVERSITY OF KENTUCKY

Kentucky Geological Survey Research 228 Mining & Mineral Resources Bldg.

Levington, KY 40506-0107 Phone: (859) 257-5500 Fax: (859) 257-1147 www.uky.edu/kgs

August 25, 2006

Tala E. Quinio, P.E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, Kentucky 40209

Dear Ms. Quinio:

This letter is to summarize any geologic concerns for the scoping study:

Jefferson County

Possible new interchange on I-64 at the vicinity of Gilliland Road and a new connector road linking U.S. 60 (Shelbyville Road) and Ky. 155/Ky. 148 (Taylorsville Road).

Item No. 5-8200.00

Physiographic Region

The study area is located on the outer edge of the Outer Bluegrass physiographic region, which is underlain by limestone, dolomite, siltstone, shale, mudstone, gravel, sand, silt, and clay.

Karst Potential

The study area might encounter karst features such as sinkholes. They are locally common in the upper part of the Saluda Dolomite Member, and at the contact of the Bardstown and Rowland Members, and in the Rowland Member. Sinkholes indicate possible cavernous conditions that may result in engineering problems.

Landslide Potential

The study area would not encounter units that would be prone to landslides.

Unconsolidated Sediments

The study area would encounter unconsolidated sediments in drainage areas.

Resource Conflicts

The study area would not encounter any resource conflicts such as prior ownership of property for quarrying or mining. Some inactive or abandoned limestone mines might be in the area.



Materials Suitability

The study area would encounter rock units that would be suitable for construction stone such as the Saluda Dolomite Member and the Rowland Member. The Saluda Dolomite Member contains ledges that might have high clay content and when exposed to the weather may expand and decompose. Testing of this unit would be recommended.

Fault Potential

The study area would not encounter any faulted areas.

Earthquake Ground Motions

The study area has a probable peak ground acceleration due to earthquake ground motion of 0.09g. There would be a low potential for liquefication or slope failure in the unconsolidated sediments at or near streams caused by earthquake bedrock ground motion.

Sincerely,

Richard A. Smath Geologist



COMMERCE CABINET DEPARTMENT OF PARKS

Ernie Fletcher Governor

Capital Plaza Tower, 11" Floor 500 Mero Street Frankfort, Kentucky 40601-1974 Phone 502-564-2172 Fax 502-564-9015 www.parks.ky.gov



J.T. Miller Commissioner

August 24, 2006

Tala E. Quinio, P.E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, KY 40209

Dear Ms. Quinio:

This letter is in response to your request for input on the possible new interchange on Interstate 64 near Gilliland Road. (Item No. 5-8200.00).

The Department of Parks is supportive of a new interchange on I-64 in eastern Jefferson County. This interchange and the new connector road will improve access to Taylorsville Lake State Park. We welcome the opportunity to provide testimony in person should the need arise. Thanks for the opportunity to provide input.

Sincerely.

J. T. Miller Commissioner Kentucky State Parks





CABINET FOR HEALTH AND FAMILY SERVICES DIVISION OF FACILITIES MANAGEMENT

Ernie Fletcher Governor 275 EAST MAIN STREET, 4E-C FRANKFORT, KENTUCKY 40621-0001 (502) 564-6631 FAX (502) 564-2608 WWW.KENTUCKY.GOV

Mark D. Birdwhistell Secretary

August 25, 2006

Tala E. Quinio, P.E. Project Manager District 5 Design Kentucky Transportation Cabinet

Subject: Scoping Study Jefferson County Possible New Interchange on I-64 at the vicinity of Gilliland Rd. Item No. 5-8200.00

Dear Mr. Quinio:

This letter is in regards to your request for the Cabinet for Health and Family Services to provide our input as to the proposed new interchange on I-64 at the vicinity of Gilliland Road and a new connector road linking US 60 (Shelbyville Road) and KY 155/KY 148 (Taylorsville Road).

After reviewing the documentation and site map provided, we have determined that there will be no foreseeable negative impact on our Cabinet's services to Jefferson or Shelby County, as we do not currently have any CHFS offices within 10 miles of the proposed interchange.

If you have other questions please contact this office at 502-564-6631.

Sincerely,

usa 13 Mag

Lisa B. Detherage, Director Division of Facilities Management

Cc: File

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ENVIRONMENTAL AND PUBLIC PROTECTION CABINET DEPARTMENT FOR NATURAL RESOURCES

Ernie Fletcher Governor

2 Hudson Hollow Frankfort, Kentucky 40601 Phone (502) 564-6940 Fax (502) 564-5698 www.naturalresources.ky.gov www.kentucky.gov

September 8, 2006

LaJuana S. Wilcher Secretary

> Susan C. Bush Commissioner

Tala E. Quinio, P. E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, Ky 40209

Re: Scoping study Jefferson County Possible new interchange on I-64 at the vicinity of Gilliland Rd. Item No. 5-8200.00

Dear Tala:

Thank you for the opportunity to review and comment on the above referenced proposed highway project.

Personnel from our department's field offices have not identified any specific issues or concerns regarding the proposed project at this time. However, given the dynamic nature of the stone industry and the development of the proposed highway, we would welcome the opportunity to further comment on the project in the future.

If my staff or I may be of any further assistance in this or any other matter, please do not hesitate to contact me at (502) 564-6940.

Sincerely,

Ceili

Keith Smith Assistant Director Department of Natural Resources





ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

Ernie Fletcher Governor

Department for Environmental Protection

Frankfort Office Park 14 Reilly Road Frankfort, Kentucky 40601 www.kentucky.gov LaJuana S. Wilcher Secretary

> Lloyd R. Cress Commissioner

October 3, 2006

Tala E. Quinio, P.E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, KY 40209

Re: Possible New Interchange on I-64 at vicinity of Gilliland Rd. (SERO 2006-8)

Dear Mr. Quinio,

The Environmental and Public Protection Cabinet serves as the state clearinghouse for review of environmental documents generated pursuant to the National Environmental Policy Act (NEPA). Within the Cabinet, the Commissioner's Office in the Department for Environmental Protection coordinates the review for Kentucky state agencies.

The Kentucky agencies listed on the attached sheet have been provided an opportunity to review the above referenced report. Responses were received from the reviewing agencies that were forwarded a copy of the document. Attached are the comments from the Division of Waste Management and the Division for Air Quality.

If you should have any questions, please contact me at (502) 564-2150, ext. 112.

Sincerely,

Larry C. Taylor State Environmental Review Officer

Enclosures



COMMONWEALTH OF KENTUCKY STATE ENVIRONMENTAL REVIEW PROCESS

Project Number: SERO 2006 -8

Scoping Document

Project Title:

Possible New Interchange on I-64 at vicinity of Gilliland Rd.

The following Commonwealth of Kentucky agencies make up the State Environmental Review Process. Their response is listed below. Agencies that did not receive the document for review or did not respond are also noted.

REVIEWING AGENCIES:	RESPONSE:
Division of Water	. No Response Received
Division of Waste Management	.COMMENTS ATTACHED
Division for Air Quality	COMMENTS ATTACHED
Department of Public Health	.No Response Received
Economic Development Cabinet	. No Response Received
Department of Forestry	.No Response Received
Department of Parks	.No Response Received
Department of Agriculture	.No Response Received
Nature Preserves Commisssion	No Response Received
Kentucky Heritage Council	No Response Received
Division of Conservation	No Response Received
Department for Natural Resources	. No Response Received
Department of Fish and Wildlife Resources	No Response Received
Transportation Cabinet	Not Sent for Review
Department for Military Affairs	. No Response Received

Division of Waste Management Comments

ų Ar

Comments on Project # SERO 2006-8

All solid waste generated by this project must be disposed at a permitted facility. If underground storage tanks are encountered they must be properly addressed. If asbestos, lead paint, and/or other contaminants are encountered during this project, they must be properly addressed. Division for Air Quality Comments

MEMORANDUM

TO:	Larry Taylor, Environmental Scientist Commissioner's Office
	Department for Environmental Protection
FROM:	John E. Gowins, Supervisor Evaluation Section Program Planning and Administration Branch Division for Air Quality
DATE:	September 6, 2006

SUBJECT: Scoping Document for Possible New Interchange on I-64 at Vicinity of Gilliland Road, Jefferson County, KY SERO 2006-8

Kentucky Division for Air Quality Regulation **401 KAR 63:010** Fugitive Emissions states that no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Additional requirements include the covering of open bodied trucks, operating outside the work area transporting materials likely to become airborne, and that no one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. Please note the Fugitive Emissions Fact Sheet located at http://www.air.ky.gov/homepage repository/e-Clearinghouse.htm

Kentucky Division for Air Quality Regulation 401 KAR 63:005 states that open burning is prohibited. Open Burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney. However, open burning may be utilized for the expressed purposes listed on the Open Burning Fact Sheet located at

http://www.air.ky.gov/homepage_repository/e-Clearinghouse.htm

Finally, the projects listed in this document must meet the conformity requirements of the Clean Air Act as amended and the transportation planning provisions of Title 23 and Title 49 of United States Code.

The Division also suggests an investigation into compliance with applicable local government regulations.

Quinio, Tala (KYTC-D05)

From: Sent: To: Subject: Houlihan, John (KYTC) Friday, August 25, 2006 2:48 PM Quinio, Tala (KYTC-D05) Scoping Study for Item No. 5-8200.00

Tala Quinio,

I have reviewed the proposed project and found this project area would have no negative impact on air navigation. However, if construction equipment (cranes) exceeds 200 feet above ground level it will require a permit form this office. If you have any questions, let me know.

Thank you.

Kentucky Airport Zoning Commission John Houlihan, Administrator 200 Mero Street Frankfort KY 40622 502.564.9900 Ext. 3854 Fax 502.564.7953 www.transportation.ky.gov/aviation/zoning.htm

Mark your calendar: The 2006 Kentucky Aviation Conference September 13-15 Crowne Plaza (The Campbell House) Lexington, KY www.transportation.ky.gov/aviation

MEMORANDUM

P-008-2006

Tala Quinio, PE
District 5, Louisville
William Broyles, PE
Geotechnical Engineering
Branch Manager
Division of Structural Design
Michael Blevins, PG
Geotechnical Branch
September 12, 2006
Jefferson County
FD04 056 021-022 D
I-64 & Gilliland Rd Interchange
Item # 05-8200.00
Mars # 7826001D
Geotechnical Comments

The Geotechnical Branch has completed a review of the project area and has the following comments:

The project is underlain by Quaternary age Alluvium that contains silt, clay, sand and gravel ranging from 0 to 20 feet thick. The alluvium is found mainly along streams, valleys and flood plains.

Bedrock in the project study area consists of the Saluda Dolomite Member, Bardstown Member and the Rowland Member of the Drakes Formation and the Grant Lake Limestone.

The Drakes Formation consists of Limestone, Dolomite, Shale, Mudstone and Dolomudstone. The Drakes Formation covers most of the project area and will probably require cut slopes flatter than normal. Fill slopes constructed from these materials will likely be stable on normal slope angles. The Grant Lake Limestone consists of a shalely limestone and shale that occurs as partings and beds up to 1.5 feet thick and is mainly found in the valleys.

The Branch does not anticipate any design or construction problems associated with the project.

If there are any questions, please advise.



TRANSPORTATION CABINET Frankfort, Kentucky 40622

www.kentucky.gov

Bill Nighbert Secretary

Marc Williams Commissioner of Highways

MEMORANDUM

TO:	Tala E. Quinio, P.E.
	Project Manager, District 5 Design

- FROM: Cass T. Napier Branch Manager Permits
- DATE: August 28, 2006
- SUBJECT: Jefferson County Scoping Study, I-64 & Gilliland Road Item No. 5-8200.00

The Permits Branch has reviewed the data provided for subject study site and wish to offer the following.

- 1. We recommend the Cabinet classify this project as a partially controlled access facility.
- 2. Assuming the project is partial control access, we encourage all possible access points be set on the plans in accordance with 603 KAR 5:120, even if they are not to be constructed at that time.
- 3. When buying R/W for this and all reconstruction routes, assuming the access control is partial control, new deeds for all adjoining property owners need to be executed to identify the access control even if no new R/W is acquired.
- 4. In addition, we would like to make every effort possible to have the design speed to be the same as anticipated posted speed when the project is complete.
- 5. We would like to see access control fence installed with the project.
- 6. If the proposed roadway is to be on the N. H. S., early notification of the final line and grade is needed. This enables us to monitor outdoor advertising devices prior to road construction being completed.
- Please notify this office if the proposed roadway is to be placed on the National Highway System. This information is needed to assist this office in regulating the installation of any outdoor advertising device.

Thank you for the opportunity to verbalize our concerns. CTN/pm



Bi

Ernie Fletcher Governor



KENTUCKY STATE POLICE

Ernie Fletcher Governor 919 Versailles Road Frankfort, Kentucky 40601 www.kentucky.gov

John (Jack) Adams Commissioner

September 11, 2006

Tala E. Quinio, P.E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, Ky. 40209

Dear Tala Quinio:

I have reviewed the material you provided regarding the scoping study to determine the need for a new interchange on Interstate 64 in the vicinity of Taylorsville Road.

I am of the opinion that the proposed interchange will be beneficial to the community and for the motoring public that travels Interstate 64. I do not see any negative issues or concerns related to this project.

Should you have any questions or if I may be of any further assistance, please do not hesitate to call me.

Sincerely,

In hand ast.

Captain John Ward Kentucky State Police Post 4 P. O. Box 1297 Elizabethtown, Kentucky 42702-1297 270-766-5078





JUSTICE AND PUBLIC SAFETY CABINET

Ernie Fletcher Governor Kentucky Vehicle Enforcement Frankfort, Kentucky 40601 BG Norman E. Arflack Secretary

> Gregory G. Howard Commissioner

September 7, 2006

Ms. Tala E. Quinio, P.E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, KY 40209

Dear Ms. Quinio:

I am in receipt of your letter in regards to the Scoping Study for Jefferson County and a possible new interchange on I-64 at the vicinity of Gilliland Road, item no. 5-8200.00.

I had my staff research the information and we can see no problems that KVE would have with this project.

If you need additional information, please do not hesitate to contact our office.

Sincerely,

Gregory G. Howard Comprissioner Kentucky Vehicle Enforcement





LOUISVILLE, KENTUCKY

LOUISVILLE METRO PLANNING AND DESIGN SERVICES

JERRY E. ABRAMSON MAYOR

September 15, 2006

C. BRUCE TRAUGHBER SECRETARY OF THE CABINET FOR COMMUNITY DEVELOPMENT

Ms. Tala E. Quinio, P.E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, KY 40209

CHARLES C. CASH, JR., AIA DIRECTOR

Re: I-64 Interchange Scoping Study Item No. 5-8200.00

Dear Ms. Quinio:

Planning and Design Services staff has reviewed the possible issue involved in the planning for a new I-64 Interchange near Shelbyville Road and a connector street to Taylorsville Road. The following are our comments:

With regard to the Eastwood Neighborhood Plan and the follow-up transportation study conducted by Quest Engineers, Inc., we have developed the following recommendation:

- 1. Although the Eastwood Neighborhood Plan recommended that any new I-64 interchange be located east of the Village Center in order to limit negative impacts to the pedestrian oriented character of the village center, the Quest Transportation Study recommended that the new interchange be located on Eastwood-Fischerville Road in order to focus the new traffic volumes toward the village center of Eastwood. These new traffic volumes along with the existing traffic volumes along Shelbyville Road are extremely important to the long term economic stability of the Eastwood Village Center. The Quest Study also recommended that new collector roadways as outlined in the study be used to allow strictly pass through traffic to bypass the Village Center so that the pedestrian oriented character of the center can be retained. The design of the connector road must consider and support Village Center development.
- 2. The idea of a connector roadway between Shelbyville Road and Taylorsville Road is an idea generally supported by the Planning and Design Services Department. However, we must acknowledge that this connection to Taylorsville Road will lead to pressures for the location of some type of commercial/mixed use activity center at the intersection with Taylorsville Road. PDS recommends that the scoping study review the potential consequences of a new activity center along Taylorsville Road with regard to future transportation needs. We also recommend that any future studies in this area be coordinated between both our agencies.

In addition, Planning and Design Services will be initiating a study to look at rural character in this area that also should be considered. Lastly, as with all studies of this type, active citizen involvement and their concerns is of the utmost priority. Please don't hesitate to contact me if you have questions or need clarification on these comments.

erely Johammad Nouri, P.E.

Assistant Director of Transportation Services

METRO DEVELOPMENT CENTER 444 SOUTH 5TH STREET, SHITE 300 LOUISVILLE, KENTUCKY 40202-4313 502.574.6230 502.574.8129 FAX

SIMPSONVILLE RURAL FIRE PROTECTION DISTRICT

P.O. Box 376 • 121 Citizens Blvd. Simpsonville, KY 40067 STATION 2 3140 Anderson Lane 722-0402

September 05, 2006

Tala E. Quinio, P.E. District 5 design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, Ky. 40209

Dear Tala,

I have reviewed the information on the study of the potential new interchange in Eastern Jefferson County to I-64. As a public servant to Western Shelby County naturally my major concern is safety.

The state Highway 1531 is the most logical highway to look at, with it running North and South from U.S. 60 to Highway 148. However my concern is this highway is a narrow two lanes with a lot of curves and shoulders that will increase the potentials of more accidents on this road. Especially with more Tractor-Trailer Trucks using this potential connector if built.

Now for the positive side, this will provide Eastwood Fire Department a quicker response to the Interstate 64. This will save them time due to the fact of not having to go to the Interstate 265, then to I-64 then back track to Jefferson/Shelby County Line. This potential interchange will also be another exit to divert traffic onto when an accident happens on I-64. This will also shorten the bottleneck area from Simpsonville and Middletown when accidents occur on I-64. It is also my understanding of concrete barriers going in the median on I-64. If this is the case, then getting to the opposite side of the interstate will really become very difficult. The current interchange of exit 28 to the Gene Snyder is a long haul for Emergency Responders. The shorter response time will one day save a person's life.

In closing, I feel that this interchange will be very beneficial for the Emergency Services of this area. Along with the growth, that is currently happening and the growth that will happen. In the next twenty plus years this interchange will be very much needed.

Thank You for seeking my input on this potential project. Shall you need additional information, please feel free to contact me.

Sincerely,

ones

Walter C. Jones, Fire Chief Simpsonville Rural Fire Protection District

EMERGENCY 911



September 12, 2006

Tala E. Quinio, P.E. District 5 Design Kentucky Transportation Cabinet 977 Phillips Lane Louisville, KY 40209

Subject: Scoping Study Jefferson County Item No. 5-8200.00

Dear Ms. Quinio:

Thank you for the opportunity to discuss the possible changes for the scoping study for a possible new interchange at I-64 and Gilliland Road. While we are not in a position to examine the traffic conditions and need for the proposed interchange, we are supportive of increased roadway connectivity and additional pedestrian and bike infrastructure. We leave the examination of the purpose and need for the interchange to the engineering and planning associates involved with the project.

Currently, we are supportive of increased connectivity in the area and would anticipate a growth in TARC ridership as a result of increased connectivity. In order to properly meet this potential increased demand, the interchange project and connector road would be best served by park and ride lots that could be tied into express bus service and carpools in the area. If any more information is needed concerning your interchange project, feel free to contact Carrie Butler at 502-213-3490.

Thank you once again for your consideration.

Sincerely,

J. Barry Barker

21" Century Parks, Inc. 471 West Main Street, Suite 202 Louisville, KY 40202 502/584-0350

July 20, 2007

Ms. Tala Quinio Project Manager for I-64 Interchange KYTC - District 5 977 Phillips Lane Louisville, KY = 40209

Dear Ms. Quinio,

I am writing to inform you of our board's deep concern over the siting of the proposed 164 interchange and linked road corridors near Gilliland Road in eastern Jefferson County. While we are not opposed to the concept of such an interchange and these road links, and support good transportation planning in eastern Jefferson County, we feel that several of the current routes would have a significant impact on the extensive work and planning that are involved in our parks project. We also wish to emphasize that all transportation, projects in the area of the park should employ high standards of design, commensurate with the goals of our project.

At our board meeting on July 17th, we reviewed the alternatives and passed the following resolution (please see the enclosed attachment, which contains the corridor alternative numbers presented in the resolution):

WHEREAS, the Board of Directors has carefully reviewed and discussed all of the alternative rantes as shown on the current "KYTC Transportation Corridor Alternatives Map for the 1-64 Interchange Project and Eastwood/Fisherville cutoff";

BE IT RESOLVED that the Corporation totanimously opposes the yellow shaded Routes Numbers 1, 2, 3, 4 and 5 as shown on said Map.

The other numbered alternatives, shown in yellow on the enclosed attachment, would be more acceptable to the board. While we have not formed an opiaion on the rejected alternatives shown (those options shaded gray), should any of these alternatives prove viable, we would be happy to comment on those. I would be happy to meet with you to discuss these issues and our position and concerns. We have worked with the Transportation Cabinet on many issues and have deep respect for their work and great confidence in their ability.

If you have any questions, please do not hesitate to contact me at (502) 584-0350, or email me at <u>danjones@21stgenturyparks.org</u>.

Sincerely,

DEPAX

Daniel H. Jones, M本, Ph.D. Chairman and Chiel Executive Officer

ce: Matt Bullock, John Calliban, Mark Adams, Torr. Springer

Attachment



Emie Fletcher Governor TRANSPORTATION CABINET Frankfort, Kentucky 40622

www.kentucky.gov

Bill Nighbert Secretary

Marc Williams Commissioner of Righways

INTRA-DEPARTMENTAL MEMO

- TO: Mait Bullock, P.E. Chief District Engineer District 5 – Louisville
- ATTN: Tala Quino, P.E.
- FROM: Daryl J. Greer, P.E. Director Division of Planning
- DATE: July 10, 2007
- SUBJECT: Jefferson County Traffic Forecast Gilliland Interchange and Connectors Item No. 5-8200.00

In response to your August 29, 2006, request, we are providing the following forecasts on the attached maps and worksheets:

- 2006 and 2030 Average Daily Traffic for 10 courte alternates
- 2006 and 2030 Track Percentages for the specified route.
- 2006 and 2030 Daily and Design Hour Turning Movements for the specified alternate.

If you have any questions, please contact Scott Thomson of this Division at (502) 564-7183.

DJG/JST/RC

Anachmenus

e/ate J. R. Ham Dan Hite Ananias Calvin John Calliban Mary Ann Boud Steve Ross

TF07 054



Executive Summary

Traffic Forecast Report Jefferson County Proposed Gilliland Interchange and Connectors Item No. 5-8200.00



Prepared by: Scott Thomson Division of Planning Kentucky Transportation Cabinet

July 2007

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Commonly Used Abbreviations and their Descriptions

ADT	Average Daily Traffic	Without any adjustment
DHV	Design Hour Volume	30 th highest hour of a <u>year</u>
ESAL	Estimated Single Axle Load	A measure of traffic's impact on roadway
%T	Truck Percentage	The percentage trucks to total volume
FC	Functional Class	Refers to a road's importance
GR	Growth Rate	A value normally compounded annually
PHF	Peak Hour Factor	Considers a 15 minute spike in an hourly count
K-Factor	K-30 th hour Factor	DHV divided by ADT (DHV/ADT)
D-Factor	Directional Factor	Percentage of dominant flow to total
MP	Mile Point	Miles increase easterly and northerly
ATR	Automatic Traffic Recorder	A permanent & continuous recording station
ATR	Automatic Traffic Recorder	A permanent & continuous recording station
KYSTM	Kentucky Statewide Model	A computerized representation of KY roads

KIPDA Kentucky-Indiana Planning Development Agency



Traffic Forecast Executive Summary Jefferson County: Gilliland Interchange Analysis Item No. 05-8200.00

FORECAST SUMMARY

Traffic forecasts were developed to analyze traffic movements along roads in the vicinity of a proposed interchange in Jefferson County, Kentucky. Bounded by I-265 to the west, US 60 to the north, KY 155 to the south, and the Simpsonville interchange to the east, three different locations were studied for a new interchange on I-64. The Gilliland Interchange project analyzed, three general routes (see Figure 2) initially called West (W), Center (C), and East (E). As the project developed, alternate routes were created that blended the original segments into routes that varied from incomplete to complete linkages between US 60 and KY 155. This traffic forecast estimated 2006 and 2030 ADT volumes on the adjacent roads, for each alternative. For alternative #4, ADT and DHV turn movements at the interchange were estimated for alternative #4 as well. ESALs were not requested at this time.

Appendix A references the segment labels shown in Figure 2 and summarizes 2006 or 2030 segment volumes for each alternative. To further clarify each analyzed alternative, the use of color at the top of each column as well as in the lower half of each table corresponds to the final analyzed route link. Yellow routes only considered a link between US 60 and I-64. All other alternatives expanded from one of these initial routes. Appendix B is a continuation of appendix A, but compares the change in the existing road segment volume for each alternate to the segment's no-build volume.

BASE-YEAR VOLUMES

The 2006 base-year traffic volumes for this forecast were developed using historical daily traffic counts at stations maintained by the Kentucky Transportation Cabinet, as well as a statewide traffic demand model (KYSTM). The study area in the KYSTM was calibrated to no more than 20% error; using 34 count stations in or near the area (see Figure 3). Because of its significance, I-64 was modeled within 3% error for the section between Simpsonville and I-265. Overall, the model captured 85% of the total traffic counted at stations within the study area. The difference is due to the limited ability of models to capture very short trips. A model maintained by KIPDA of Jefferson and Oldham County did not include the Simpsonville interchange in Shelby County and therefore, could not be used. Output from the KIDPA model was compared to the KYSTM. The results from the KYSTM better matched ADTs from count station records. For the purpose of this forecast the proposed widening of I-64 was not considered in the base-year.

2030 DESIGN YEAR VOLUMES/ GROWTH FACTORS

The 2030 design year traffic volumes were determined using long term growth factors to assign traffic volumes for each road segment. Once base-year volumes were synthesized for the build scenarios, estimated traffic and truck volumes were then grown to obtain 2030 design year volumes.

KYTC Division of Planning

The KYSTM and KIPDA models were initially considered to estimate future volumes, however the simulated annual growth rates (1.0-2.0%) were much lower than the observed growth rates from the count station data. Based on discussions with Planning and Zoning, this area in Jefferson County is rapidly developing. Further, the Kentucky Data Center predicts that Spencer County will grow at a rate of 3.5% in total. Annual growth rates along KY 155 (Taylorsville Road) are on a 7% trend, suggesting growth in Spencer County to be concentrated adjacent to Louisville. Thus, the final growth rates were based on the historical data trend of each count station. For the purpose of this forecast, future volumes were determined by analyzing each count station and applying a linear or exponential trend to that area. As a result, annualized growth rates for each segment ranged from 2.6 to 6.8%, but with an overall growth rate of less than 3%. The growth rate of each segment is summarized on the tables contained in appendix A and appendix B.

DESIGN HOUR FACTORS

DHVs were taken from data maintained by the Kentucky Transportation Cabinet at various permanent traffic count stations on similar functional class roads. These data were further refined using matrix manipulation and considered the trend toward lower peak hour volumes as a percentage of the ADT. K-factors of 9.5-10.2% were used for AM design hour and 10.9-11.0% for PM design hour.

TRUCK PERCENTAGES

Truck percentages used in this report relied on existing class counts at 24 locations along the main corridors within the study area. From 1992 to 2007, truck percentages along I-64 and I-265 have been declining, so trucks in the area were studied as a function of volume instead. Once volumes were identified, truck movements were analyzed separately to develop count estimates on each of the proposed interchange ramps. In 2006, US 60 carried 9-14% trucks, I-65 carried 15-19%, I-265 carried 11-14% and KY 155 carried 7-13%. The variances in truck percentages were principally due to the presence of car volumes and to a lesser extent variations in truck volume. In the vicinity of the proposed interchange, truck percentages were estimated to be about 15%, except for the connector to KY 155 which was estimated at 10%. Studies of truck traffic in Kentucky indicated a truck percent growth rate of 2.5% for rural interstates; however, the urban interstate rate of 2.0% was used in this forecast due to its proximity to Louisville.

ESALs

ESALs were not requested to be a part of this forecast.

TURN MOVEMENTS

At the direction of the project's consultant, route Wa-Wb-Cc-Cd (Alternative #4) was chosen for the purpose of developing turn movements (see Appendix C). This route developed the greatest volumes, based on the KYSTM simulations.




Figure 3: Count Station Locations



Note: The interchange style here neither depicts the final location nor the type. For illustrative purposes only.

KYTC Division of Planning

Appendix A

Volume Summaries for Route Alternates

				200	6 UNADJU	JSTED AN							
		_	No Build	_	Alternative Build Sceniaros								
				Not stand	West Connector			Center Connector				East Connector	
	Segments	Sta ID	No Build	Alt #1	Alt #2	Alt#3	Alt #4	Alt #5	Alt #6	Alt #7	Alt #8	Alt #9	Alt #10
	B	998	28000	19000	19000	19000	19000	25800	24600	24600	24600	26800	26700
US 60	C	16	15000	6500	6500	6600	6600	12800	11700	11700	11700	13700	13700
00.00	D	119	9000	9200	9300	9400	9400	8100	6800	6800	6800	7400	7300
	E	596	5200	3300	3300	3300	3300	4900	4500	4500	4500	4400	4400
1-64	Н	19	50000	60000	60000	61000	61000	55000	56000	56000	57000	53000	53000
1-04	G	19	50000	51000	51000	51000	51000	50000	50000	50000	50000	50000	49000
Sec. 10	Q	996	16000	16000	15000	14700	14000	16000	15500	15300	14800	16000	15500
KY-148	R	251	2000	2000	2800	2800	800	2000	2400	2400	1300	2000	1900
	S	369	1300	1300	1400	1400	1400	1300	1400	1400	1400	1300	1100
KY-155	T	361	15100	15100	16000	16000	14300	15100	15500	15500	14700	15100	15200
	J	036	49000	41000	41000	41000	40000	46000	46000	46000	45000	47000	47000
1-265	К	D01	34000	34000	34000	33000	32000	34000	34000	34000	33000	34000	33000
	L	D35	27000	27000	27000	27000	27000	27000	27000	27000	27000	27000	27000
KY-1531	N	117	500	500	500	500	400	500	3500	3500	3500	500	400
KY-1531	M	117	500	500	500	500	400	500	300	100	100	500	400
KY-1848	F	522	5000	4300	4300	4300	4200	3700	3300	3300	3300	3300	3300
	Wa	Alt #1		11000	11000	11000	11000	0	0	0	0	0	0
Wa+	WbWc	Alt #2		0	1200	0	0	0	0	0	0	0	0
Wa+	WbCc	Alt #3		0	0	1500	3000	0	0	0	0	0	0
Wa+	WbCcCd	Alt #4		0	0	0	1700	0	0	0	0	0	0
	Ca	Alt #5		0	0	0	0	5500	5000	5000	5000	0	0
Ca+	CbWc	Alt #6		0	0	0	0	0	1200	0	0	0	0
Ca+	CbCc	Alt #7		0	0	0	0	0	0	1200	2000	0	0
Ca+	CbCd	Alt #8		0	0	0	0	0	0	0	1300	0	0
	Ea	Alt #9		0	0	0	0	0	0	0	0	5700	5700
Ea+	Eb	Alt #10		0	0	0	0	0	0	0	0	0	1600

			Table Inc. (1)		203	30 UNADJI	USTED AN								
1.1.1.1	· · · · ·	-	No Build		Alternative Build Sceniaros										
					West Connector				1	Center C	East Connector				
	Segments	Sta ID	No Build	GR %	Alt#1	Alt#2	Alt #3	Alt #4	Alt #5	Alt #6	Alt #7	Alt #8	Alt #9	Alt #10	
	В	998	58000	4.5%	40000	40000	40000	40000	54000	51000	51000	51000	56000	56000	
US 60	С	16	29000	4.0%	13000	13000	13000	13000	25000	23000	23000	23000	27000	27000	
0500	D	119	21000	3.5%	21000	21000	21000	21000	18000	16000	16000	16000	17000	17000	
	E	596	11000	3.0%	6700	6700	6700	6700	10000	9100	9100	9100	8900	8900	
1-64	Н	19	92000	3.5%	110000	110000	112000	112000	101000	103000	103000	105000	98000	98000	
1-04	G	19	92000	3.5%	94000	94000	94000	94000	92000	92000	92000	92000	92000	90000	
-	Q	996	58000	5.5%	58000	54000	53000	51000	58000	56000	55000	53000	58000	56000	
KY-148	R	251	6500	5.0%	6500	9000	9000	2600	6500	7700	7700	4200	6500	6100	
	S	369	2700	4.5%	2700	2900	2900	2900	2700	2900	2900	2900	2700	2300	
KY-155	T	361	49000	5.0%	49000	52000	52000	46000	49000	50000	50000	47000	49000	49000	
	J	036	84000	3.0%	71000	71000	71000	69000	79000	79000	79000	77000	81000	81000	
1-265	K	D01	58000	3.0%	58000	58000	57000	55000	58000	58000	58000	56800	58000	56800	
	L	D35	53000	4.0%	53000	53000	53000	53000	53000	53000	53000	53000	53000	53000	
KY-1531	N	117	1100	3.5%	1100	1100	1100	900	1100	8000	8000	8000	1100	900	
KY-1531	M	117	2300	6.5%	2300	2300	2300	1800	2300	1400	500	500	2300	1800	
KY-1848	F	522	16000	5.0%	14000	14000	14000	14000	12000	11000	11000	11000	11000	11000	
					0	0	0	0	0	0	0	0	0	0	
		-			0	0	0	0	0	0	0	0	0	0	
	Wa	Alt #1	0	4.0%	28200	28200	28200	28200	0	0	0	0	0	0	
Wa+	WbWc	Alt #2	0	6.5%	0	5400	0	0	0	0	0	0	0	0	
Wa+	WbCc	Alt #3	0	6.5%	0	0	6800	13600	0	0	0	0	0	0	
Wa+	WbCcCd	Alt #4	0	6.5%	0	0	0	7700	0	0	0	0	0	0	
	Ca	Alt #5	0	3.5%	0	0	0	0	12600	11400	11400	11400	0	0	
Ca+	CbWc	Alt #6	0	6.5%	0	0	0	0	0	5400	0	0	0	0	
Ca+	CbCc	Alt #7	0	6.5%	0	0	0	0	0	0	5400	9100	0	0	
Ca+	CbCd	Alt #8	0	6.5%	0	0	0	0	0	0	0	5900	0	0	
	Ea	Alt #9	0	3.5%	0	0	0	0	0	0	0	0	13000	13000	
Ea+	Eb	Alt #10	0	3.5%	0	0	0	0	0	0	0	0	0	3700	

Appendix B

Differences in No-Build and Build Alternate Volumes

Segments B C D	Sta ID 998	No Build No Build		West Co		Alt	ternative Bui	Id Sceniard)S				
B C D	998			West Co	and see a second		Alternative Build Sceniaros						
B C D	998			West Connector				Center Connector				East Connector	
C D			Alt #1	Alt#2	Alt#3	Alt #4	Alt #5	Alt #6	Att #7	Alt #8	Alt #9	Alt #10	
D		28000	(9000)	(9000)	(9000)	(9000)	(2200)	(3400)	(3400)	(3400)	(1200)	(1300)	
	16	15000	(8500)	(8500)	(8400)	(8400)	(2200)	(3300)	(3300)	(3300)	(1300)	(1300)	
	119	9000	200	300	400	400	(900)	(2200)	(2200)	(2200)	(1600)	(1700)	
E	596	5200	(1900)	(1900)	(1900)	(1900)	(300)	(700)	(700)	(700)	(800)	(800)	
Н	19	50000	10000	10000	11000	11000	5000	6000	6000	7000	3000	3000	
G	19	50000	1000	1000	1000	1000	0	0	0	0	0	(1000)	
Q	996	16000	0	(1000)	(1300)	(2000)	0	(500)	(700)	(1200)	0	(500)	
R	251	2000	0	800	800	(1200)	0	400	400	(700)	0	(100)	
S	369	1300	0	100	100	100	0	100	100	100	0	(200)	
T	361	15100	0	900	900	(800)	0	400	400	(400)	0	100	
J	036	49000	(8000)	(8000)	(8000)	(9000)	(3000)	(3000)	(3000)	(4000)	(2000)	(2000)	
K	D01	34000	0	0	(1000)	(2000)	0	0	0	(1000)	0	(1000)	
L	D35	27000	0	0	0	0	0	0	0	0	0	0	
N	117	500	0	0	0	(100)	0	3000	3000	3000	0	(100)	
M	117	500	0	0	0	(100)	0	(200)	(400)	(400)	0	(100)	
F	522	5000	(700)	(700)	(700)	(800)	(1300)	(1700)	(1700)	(1700)	(1700)	(1700)	
			11000		11000	11000	0	0	0	0	0	0	
			0	1200	0	0	0	Cont.	0			0	
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/	H G Q R S T J K L N M F Wa WbWc WbWc WbCc	H 19 G 19 Q 996 R 251 S 369 T 361 J 036 K D01 L D35 N 117 M 117 F 522 Wa Alt #1 WbWc Alt #2 WbCc Alt #3 VbCcCd Alt #4 Ca Alt #5 CbWc Alt #6 CbCc Alt #8 Ea Alt #9	H 19 50000 G 19 50000 Q 996 16000 R 251 2000 S 369 1300 T 361 15100 J 036 49000 K D01 34000 L D35 27000 N 117 500 F 522 5000 VbWc Alt #1 0 WbWc Alt #2 0 VbCcc Alt #3 0 VbCcCd Alt #4 0 Ca Alt #5 0 CbWc Alt #6 0 CbCcd Alt #8 0 Ea Alt #9 0	H 19 50000 10000 G 19 50000 1000 Q 996 16000 0 R 251 2000 0 S 369 1300 0 T 361 15100 0 J 036 49000 (8000) K D01 34000 0 L D35 27000 0 N 117 500 0 M 117 500 0 F 522 5000 (700) VbWc Alt #1 0 11000 WbWc Alt #2 0 0 VbCcCd Alt #3 0 0 VbCcCd Alt #4 0 0 Ca Alt #5 0 0 CbWc Alt #6 0 0 CbCc Alt #7 0 0 CbCd Alt #8 0 0 <	H 19 50000 10000 10000 G 19 50000 1000 1000 1000 Q 996 16000 0 (1000) 0 800 R 251 2000 0 800 0 100 100 S 369 1300 0 100 100 100 T 361 15100 0 900 300 0 100 J 036 49000 (8000) (8000) (8000) 0 0 K D01 34000 0 0 0 0 0 K D01 34000 0 0 0 0 0 K D01 34000 0 0 0 0 0 M 117 500 0 0 0 0 0 Wa Alt #1 0 11000 11000 1200 0 0	H 19 50000 10000 10000 11000 G 19 50000 1000 1000 1000 1000 Q 996 16000 0 (1000) (1300) R R 251 2000 0 800 800 800 S 369 1300 0 100 100 100 T 361 15100 0 900 900 900 J O36 49000 (8000) (8000) (8000) (8000) K D01 34000 0 0 0 0 L D35 27000 0 0 0 0 M 117 500 0 0 0 0 Wa Alt #1 0 11000 11000 1000 WbWc Alt #2 0 0 0 0 0 WbWc Alt #3 0 0 0<	H 19 50000 10000 10000 11000 11000 G 19 50000 1000 1000 1000 1000 1000 Q 996 16000 0 (1000) (1300) (2000) R 251 2000 0 800 800 (1200) S 369 1300 0 100 100 100 100 T 361 15100 0 900 900 (800) J O36 49000 (8000) (8000) (8000) (9000) K D01 34000 0 0 0 0 0 0 M 117 500 0 0 0 0 (100) M 117 500 0 0 0 0 0 Wa Alt#1 0 11000 11000 11000 11000 1000 WbWc Alt#2 0<	H 19 50000 10000 10000 11000 11000 5000 G 19 50000 1000 1000 1000 1000 1000 0 Q 996 16000 0 (1000) (1300) (2000) 0 R 251 2000 0 800 800 (1200) 0 S 369 1300 0 100 100 100 0 T 361 15100 0 900 900 (8000) (8000) (3000) J 036 49000 (8000) (8000) (8000) (9000) (3000) K D01 34000 0 0 0 0 0 0 0 M 117 500 0 0 0 0 0 0 0 Wa Alt #1 0 11000 11000 11000 1000 0 0 0 0 </td <td>H 19 50000 10000 10000 11000 11000 5000 6000 G 19 50000 1000 1000 1000 1000 1000 0 0 0 Q 996 16000 0 (1000) (1300) (2000) 0 (500) R 251 2000 0 800 800 (1200) 0 400 S 369 1300 0 100 100 100 0 400 J 036 49000 (8000) (8000) (8000) (9000) (3000) (3000) K D01 34000 0 0 0 0 0 0 0 L D35 27000 0 0 0 0 0 0 0 0 0 M 117 500 0 0 0 0 0 0 0 0 0</td> <td>H 19 50000 10000 10000 11000 11000 5000 6000 <th< td=""><td>H 19 50000 10000 10000 11000 11000 5000 6000 7000 G 19 50000 1000 1000 1000 1000 000 <!--</td--><td>H 19 50000 10000 10000 11000 10000 0 6000 6000 7000 3000 G 19 50000 1000 1000 1000 1000 <</td></td></th<></td>	H 19 50000 10000 10000 11000 11000 5000 6000 G 19 50000 1000 1000 1000 1000 1000 0 0 0 Q 996 16000 0 (1000) (1300) (2000) 0 (500) R 251 2000 0 800 800 (1200) 0 400 S 369 1300 0 100 100 100 0 400 J 036 49000 (8000) (8000) (8000) (9000) (3000) (3000) K D01 34000 0 0 0 0 0 0 0 L D35 27000 0 0 0 0 0 0 0 0 0 M 117 500 0 0 0 0 0 0 0 0 0	H 19 50000 10000 10000 11000 11000 5000 6000 <th< td=""><td>H 19 50000 10000 10000 11000 11000 5000 6000 7000 G 19 50000 1000 1000 1000 1000 000 <!--</td--><td>H 19 50000 10000 10000 11000 10000 0 6000 6000 7000 3000 G 19 50000 1000 1000 1000 1000 <</td></td></th<>	H 19 50000 10000 10000 11000 11000 5000 6000 7000 G 19 50000 1000 1000 1000 1000 000 0 </td <td>H 19 50000 10000 10000 11000 10000 0 6000 6000 7000 3000 G 19 50000 1000 1000 1000 1000 <</td>	H 19 50000 10000 10000 11000 10000 0 6000 6000 7000 3000 G 19 50000 1000 1000 1000 1000 <	

				UNA	ADJUSTED	2030	CHANGES		ME ROUNDE	and the second se					
1.0			No Build		Alternative Build Sceniaros										
		-	Commission and the second			West Co			Center Connector				East Connector		
1	Segments	Sta ID	No Build	GR %	Alt#1	Alt #2	Alt #3	Alt #4	Alt #5	Alt #6	Alt #7	Alt #8	Alt #9	Alt #10	
	В	998	58000	4.5%	(19000)	(19000)	(19000)	(19000)	(5000)	(7000)	(7000)	(7000)	(2000)	(3000	
US 60	С	16	29000	4.0%	(17000)	(17000)	(16000)	(16000)	(4000)	(6000)	(6000)	(6000)	(3000)	(3000	
0500	D	119	21000	3.5%	0	1000	1000	1000	(2000)	(5000)	(5000)	(5000)	(4000)	(4000	
	E	596	11000	3.0%	(3900)	(3900)	(3900)	(3900)	(600)	(1400)	(1400)	(1400)	(1600)	(1600	
1-64	Н	19	92000	3.5%	18000	18000	20000	20000	9000	11000	11000	13000	6000	6000	
1-04	G	19	92000	3.5%	1800	1800	1800	1800	0	0	0	0	0	(1800	
a man and and	Q	996	58000	5.5%	0	(3600)	(4700)	(7200)	0	(1800)	(2500)	(4300)	0	(1800	
KY-148	R	251	6500	5.0%	0	2600	2600	(3900)	0	1300	1300	(2300)	0	(300	
	S	369	2700	4.5%	0	200	200	200	0	200	200	200	0	(400	
KY-155	T	361	49000	5.0%	0	2900	2900	(2600)	0	1300	1300	(1300)	0	300	
	J	036	84000	3.0%	(14000)	(14000)	(14000)	(15000)	(5000)	(5000)	(5000)	(7000)	(3000)	(3000	
1-265	K	D01	58000	3.0%	0	0	(1700)	(3400)	0	0	0	(1700)	0	(1700	
	L	D35	53000	4.0%	0	0	0	0	0	0	0	0	0	0	
KY-1531	N	117	1100	3.5%	0	0	0	(200)	0	6800	6800	6800	0	(200	
KY-1531	М	117	2300	6.5%	0	0	0	(500)	0	(900)	(1800)	(1800)	0	(500	
KY-1848	F	522	16000	5.0%	(2300)	(2300)	(2300)	(2600)	(4200)	(5500)	(5500)	(5500)	(5500)	(5500	
					0	0	0	0	0	0	0	0	0	0	
					0	0	0	0	0	0	0	0	0	0	
	Wa	Alt #1	0	4.0%	28000	28000	28000	28000	0	0	0	0	0	0	
Wa+	WbWc	Alt #2	0	6.5%	0	5000	0	0	0	0	0	0	0	0	
Wa+	WbCc	Alt #3	0	6.5%	0	0	7000	14000	0	0	0	0	0	0	
Wa+	WbCcCd	Alt #4	0	6.5%	0	0	0	8000	0	0	0	0	0	0	
	Ca	Alt #5	0	3.5%	0	0	0	0	13000	11000	11000	11000	0	0	
Ca+	CbWc	Alt #6	0	6.5%	0	0	0	0	0	5000	0	0	0	0	
Ca+	CbCc	Alt #7	0	6.5%	0	0	0	0	0	0	5000	9000	0	0	
Ca+	CbCd	Alt #8	0	6.5%	0	0	0	0	0	0	0	6000	0	0	
	Ea	Alt #9	0	3.5%	0	0	0	0	0	0	0	0	13000	13000	
Ea+	Eb	Alt #10	0	3.5%	0	0	0	0	0	0	0	0	0	4000	
				_											
									=Reduction	in Volume					
									=Increase in						

Appendix C

Interchange Turn Movements



KYTC Division of Planning



KYTC Division of Planning

APPENDIX O

PRELIMINARY COST ESTIMATES (2007 DOLLARS) I-64 INTERCHANGE STUDY WESTERN CORRIDOR OF ALTERNATIVES

Item	Alignment Combination Options											
_	4-2-1	7-6-5-2-1	7-6-8-3-1	7-6-8-28-27	7-14-9-3-1	7-14-9-28-27	10-9-3-1	10-9-28-27				
Clearing and Grubbing	\$99,500	\$103,230	\$104,470	\$129,000	\$112,000	\$136,000	\$111,600	\$134,850				
Mobilization	\$950,000	\$930,000	\$900,000	\$1,000,000	\$1,010,000	\$1,130,000	\$964,000	\$1,136,000				
Demobilization	\$475,000	\$465,000	\$450,000	\$500,000	\$505,000	\$565,000	\$482,000	\$568,000				
Roadway Excavation/Embankment in Place	\$8,000,000	\$7,000,000	\$5,700,000	\$10,250,000	\$9,000,000	\$9,750,000	\$7,500,000	\$10,050,000				
Subgrade (6")	\$583,408	\$606,256	\$612,640	\$757,736	\$658,056	\$798,952	\$651,056	\$791,896				
Fabric for Separation	\$217,196	\$225,687	\$228,063	\$282,090	\$244,989	\$297,440	\$242,372	\$294,809				
Aggregate Base Course (12")	\$1,407,210	\$1,462,230	\$1,477,630	\$1,827,700	\$1,587,250	\$1,927,100	\$1,570,310	\$1,910,090				
Hot-Mix Asphalt	\$1,868,759	\$1,941,773	\$1,962,155	\$2,427,006	\$2,107,731	\$2,559,102	\$2,085,350	\$2,536,334				
Curb & Gutter	\$1,354,000	\$1,406,880	\$1,421,680	\$1,758,480	\$1,527,200	\$1,854,160	\$1,510,880	\$1,837,760				
5' pedestrian sidewalk	\$304,650	\$316,548	\$319,878	\$395,658	\$343,620	\$417,186	\$339,948	\$413,496				
10' multi-use	\$592,375	\$615,510	\$621,985	\$769,335	\$668,150	\$811,195	\$661,010	\$804,020				
Staking	\$237,500	\$232,500	\$225,000	\$250,000	\$252,500	\$282,500	\$241,000	\$284,000				
Minor Drainage	\$337,050	\$349,650	\$353,850	\$436,800	\$380,100	\$460,950	\$378,000	\$456,750				
Major Drainage	\$417,300	\$432,900	\$438,100	\$540,800	\$540,800 \$470,600		\$468,000	\$565,500				
Maintenance of Traffic	\$337,050	\$349,650	\$353,850	\$436,800	\$380,100	\$460,950	\$378,000	\$456,750				
Miscellaneous Roadway Items	\$1,011,150	\$1,048,950	\$1,061,550	\$1,310,400	\$1,140,300	\$1,382,850	\$1,134,000	\$1,370,250				
Erosion Control	\$256,800	\$266,400	\$269,600	\$332,800	\$289,600	\$351,200	\$288,000	\$348,000				
Bridge (Floyds Fork)	\$2,950,000	\$2,950,000	\$2,950,000	\$0	\$2,900,000	\$0	\$2,900,000	\$0				
Bridge (Brush Run)	\$0	\$0	\$0	\$1,300,000	\$0	\$1,300,000	\$0	\$1,300,000				
Bridge (Long Run)	\$0	\$0	\$0	\$2,750,000	\$0	\$2,800,000	\$0	\$2,700,000				
Railroad Crossing (KY 148)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Railroad Crossing (KY 155)	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000				
I-64 interchange	\$9,900,000	\$9,900,000	\$9,900,000	\$9,900,000	\$9,900,000	\$9,900,000	\$9,900,000	\$9,900,000				
Subtotal	\$33,298,947	\$32,603,164	\$31,350,451	\$37,354,605	\$35,477,196	\$39,755,285	\$33,805,525	\$39,858,504				
Contengencies (20%)	\$6,659,789	\$6,520,633	\$6,270,090	\$7,470,921	\$7,095,439	\$7,951,057	\$6,761,105	\$7,971,701				
Construction Sub-Total	\$39,958,736	\$39,123,796	\$37,620,541	\$44,825,526	\$42,572,635	\$47,706,341	\$40,566,630	\$47,830,205				
Right of Way	\$6,000,000	\$7,550,000	\$6,250,000	\$7,700,000	\$6,600,000	\$7,950,000	\$6,450,000	\$7,850,000				
Utilities	\$1,345,000	\$1,645,000	\$1,195,400	\$1,487,500	\$902,500	\$1,405,000	\$887,500	\$1,480,000				
Design & Environmental (10% Const.)	\$4,000,000	\$3,910,000	\$3,760,000	\$4,720,000	\$4,260,000	\$4,770,000	\$4,060,000	\$4,780,000				
Total Preliminary Costs	\$51,303,736	\$52,228,796	\$48,825,941	\$58,733,026	\$54,335,135	\$61,831,341	\$51,964,130	\$61,940,205				