US 27 to I-75 Corridor Scoping Study

Jessamine, Fayette and Madison Counties



Jessamine FINAL REPORT

Fayette

Madison

INTERSTATE



Submitted to:



Division of Planning



In Association With: HDR Engineering, Inc. Third Rock Consultants, LLC

H. Powell and Company Cultural Resource Analysts, Inc.

December 2008

US 27 TO I-75 CORRIDOR SCOPING STUDY JESSAMINE, FAYETTE, AND MADISON COUNTIES

SUMMARY OF FINDINGS AND RECOMMENDATIONS

FINAL REPORT

Ітем No. 7-249.00

Prepared for:

Kentucky Transportation Cabinet (KYTC) – Division of Planning Kentucky Transportation Cabinet (KYTC) – District 7





Prepared by: Parsons Brinckerhoff

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Executive Summary – US 27 to I-75 Corridor Scoping Study

Introduction and Study Area

The Kentucky Transportation Cabinet (KYTC) has indentified the need to examine the need for and feasibility of a new highway connector from I-75 to US 27 in the Jessamine, Fayette, and/or Madison County area. The study area is shown on **Figure ES 1** below. The goals and objectives of this study are to examine transportation issues such as safety, access, mobility and travel time, as well as to evaluate long range growth management, environmental and other local and regional issues and concerns with respect to the need for and location of a new connector. In addition the type of roadway facility and project financing/funding options were also examined.



Figure ES 1: Study Area Map

Purpose and Need

The purpose and need statement for this study was developed from issues identified in field reviews, through stakeholder and public input, as well as from deficiencies identified in the Existing and Future Conditions technical analysis. The project purpose was identified as "to determine the need and explore methods to improve safety, connectivity, and regional access within Jessamine, Fayette, and/or Madison Counties between US 27 and I-75". Supporting the project purpose above is the project need. Project needs include improved connectivity, vehicle safety, reduced traffic congestion, travel time reliability / savings, economic development, improved access for truck traffic, and Homeland Security. In accordance with the Transportation Cabinet's policy on Purpose and Need statements, the following goals and objectives were developed to balance environmental and community issues with transportation issues.

- Provide solutions to meet the purpose of the project while avoiding / minimizing / mitigating impacts to farmland, historic resources, the Palisades / Valley View / White Hall Shrine, horse farms, threatened / rare / endangered species, environmental justice communities, as well as other environmental features.
- Consider pedestrian and bicycle facilities in conjunction with alternative improvement options.
- Consider cost-effective solutions to address specific deficiencies.
- Consider noise, water, and air quality concerns, as well as light pollution.

Existing and Future Conditions

Existing and future highway characteristics and geometrics, traffic volumes, truck traffic, speed, levels of service, and crash rates were all evaluated as part of the existing conditions analysis. The key transportation issues identified from this analysis are summarized below:

- Major roadways in the study area, such as US 27, I-75 and Man O' War Boulevard, currently have very high traffic volumes.
- Many roadways in the study area have high historical growth rates, indicating continuing traffic growth.
- Roads such as I-75, US 27 and KY 1980 have high truck percentages.
- Sections of US 27, US 25, KY 1980, KY 1974, KY 169, KY 876, KY 1176, KY 39, and KY 1975 currently operate at a LOS E or F.
- Many sections of Man O' War Boulevard, US 27 and I-75 currently operate at LOS D.
- In 2040, sections along the majority of roadways in the study area will be operating at a LOS E or F.
- The majority of roadways in the study area have segments with a critical crash rate factor greater than one.
- Rear end crashes are the most common type of crash in the study area.
- The Lexington MPO's Regional Bicycle and Pedestrian Master Plan has designated several roadways in the study area for potential bicycle and pedestrian facilities.

Both human and natural environmental overviews were performed as part of the existing conditions analysis. The Environmental Justice (EJ) review showed that there are several areas within the study area with high percentages of minority, low-income and/or elderly populations that were greater than county, state and national levels. Two significant historic districts are located in the area of potential effect (APE) and there are four sites currently listed on the National Register of Historic Places.

Aquatic resources including the Kentucky River and its tributaries, the Kentucky River Palisades as well natural wetlands exist in the study area. There are also threatened, rare and endangered species that live in the study area (Indiana bat, gray bat, running buffalo clover, and the American burying beetle), in addition to two nature preserves. Efforts must be made to mitigate any adverse effects to the natural environment that would be the result of a new connector roadway.

The geotechnical review noted that karst features and shaly units prone to landslides may be encountered in the study area, as well as faulted areas.

Public Involvement

The Public Involvement Program for the US 27 to I-75 Scoping Study was comprised of several key elements designed to encourage participation and obtain feedback from the stakeholders in Fayette, Jessamine and Madison Counties. The key aspects include: meetings with local elected officials, a project work group (PWG), public meetings, agency correspondence and project team meetings.

Meetings were held with locally elected officials and other stakeholders from Fayette, Jessamine, and Madison counties (one in each county). Locally elected officials include State Representatives, County Judge Executives, Mayors, and Metro Council Members. These meetings were held early in the study process to inform them about the study and solicit feedback about study issues.

A Project Work Group (PWG) was developed to provide input on issues and concerns about the project. The PWG includes representatives from KYTC District 7 and Central Office Staff including – KYTC Planning, Pre-Construction and Environmental Analysis, representatives from the Lexington MPO, Bluegrass ADD, federal, state, and local resource agencies, local elected officials from Jessamine, Fayette and Madison counties, chamber of commerce representatives, landowners, homeowners, and other representative citizens of Jessamine, Fayette and Madison counties. Five meetings were held at major study milestones.

Two public meetings were held during the course of this study. The public meetings were held in a traditional open house style format. Key goals for these meetings were to determine if the public was in favor of the project, to gather input on the issues and concerns of the project, to propose alternate corridors and to help choose the best alternate. The first meeting was held in Jessamine County at West Jessamine Middle School towards the beginning of the project to gain public feedback on support of the project and initial potential corridors. The second meeting was held towards the end of the study in Madison County at Eastern Kentucky University to allow the public to provide input on a preferred alternate as well as gain input on facility type and potential funding methods.

An agency mailing was prepared during the initial stages of this study and sent to various local, state, and federal agencies, as well as elected officials, to obtain input in the study process.

Several meetings were also held with the KYTC to discuss project issues including the PWG and public meetings (preparation and results), issues and goals, development of alternates, evaluation of alternates and a meeting to discuss project recommendations.

Alternatives Development and Evaluation

The corridor development process began at the first Public Meeting held on November 20, 2007. The general public was given background information on the study area, then given maps of the study area and asked to draw lines where they would like to see the connector built. In the interest of transparency, no corridors were drawn on the maps prior to the Public Meeting or had been predetermined by the Project Development Team. Approximately 50 – 60 corridors were drawn on the maps by the public.

The corridor evaluation procedure used in this study was a three-step process. The purpose of the three-step process was to refine the list of corridors from all possible corridors, to a short list of promising corridors, and then finally to a recommended corridor.

Level 1 Evaluation – Initial Screening

The initial screening process began with the map of corridors drawn by attendees at the first Public Meeting. Next, the Project Development Team (PDT) met to review all of the corridors drawn by the public and to find common points throughout the study area where people wanted to see a connecter. Based on this procedure, a total of eighteen corridors were retained for further analysis. A no-build scenario was included as a baseline for comparison as well as a viable alternative.

Level 2 Evaluation – Preliminary Analysis

The Level 1 analysis narrowed the 50 to 60 corridors drawn by the public down to eighteen plus the no-build. For the second level of analysis these corridors were evaluated based on system operations, traffic operations, natural environment impacts, human environment impacts and cost. These evaluations were very general and the analysis became more detailed further into the process.

The system operations evaluation took into consideration corridor length, whether or not the corridor crosses the Kentucky River, system safety improvements, study area travel time savings, and connectivity. The traffic operations evaluation looked at 2040 Average Daily Traffic (ADT), 2040 Level of Service (LOS), and the corridor truck percentage. The ADT analysis was performed using the Kentucky Statewide Traffic Model (KYSTM). Each of the eighteen corridors was also evaluated with regard to the number of streams that would be impacted in the corridor, the number and acres of potential wetlands / ponds in the corridors and acres of floodplain that would be impacted. The human environment analysis included the number of known historic sites and known archeological sites in each corridor, and landfills and other potential HAZMAT site impacts. The number of farmland impacts in acres was also evaluated. Environmental justice impacts were considered for each of the corridors. At this level, the construction cost only for each corridor was estimated. From this level of analysis, the six most promising alternative corridors along with the no-build option were retained for the final detailed level of analysis.

Level 3 Evaluation – Detailed Analysis

After the original eighteen corridors were narrowed down to six, the remaining corridors were slightly adjusted to minimize impacts to nationally registered historic sites, residential areas, to reduce the amount of earthwork that would need to be completed and to avoid the lock and dam on the Kentucky River. The Level 3 Evaluation was also based on planning level system operations, traffic operations, natural environment impacts, human environment impacts, and costs and involved a more detailed analysis (than the Level 2 evaluation) of the remaining six corridors and the no-build alternative, after minor adjustments were made. The more detailed evaluation included updating information on system operations, traffic operations, natural environment, human environment and cost. In addition, a revised traffic forecast was prepared in greater detail to more accurately estimate the volume of traffic that would use each of the remaining corridors.

At the Level 3 Evaluation phase, facility type and project funding options were explored. Whether the facility will be two lanes or four, if a multi-use path should be included, as well as if it will be limited or unlimited access, and have grade separated or at-grade intersections was examined. Tolling as a potential funding source for the roadway was also examined at this level.

Recommendations

The recommendation for the US 27 to I-75 Corridor Scoping Study is Alternative Corridor 5-2 shown in **Figure ES 2**, with a western terminus towards the northern end of the Nicholasville Eastern Bypass and the eastern terminus at the existing KY 627 interchange on I-75. This alternative corridor was selected as the recommendation over the other alternative corridors and the no-build option for the following reasons:

- Good connectivity with KY 3055 / KY 627 interchange.
- Most public support of all alternatives.
- No known impacts to Environmental Justice areas.
- Fewer impacts to floodplains and historic sites than the similar Alternative Corridor 4-2.
- Crosses the faults in the area more perpendicular (better) than Alternative Corridor 4-2.
- Has the lowest cost of a two-lane alternative (\$181 \$245 million)

With cost constraints a major concern for this project, a two-lane rural typical section with wide shoulders and alternating passing lanes is recommended for the initial construction phase. Right-of-way should be purchased at the outset of this project for the possibility of a future four-lane section. Funding the project is a challenge given limited current resources, and as such it is proposed based on initial analysis in this document that the roadway will be tolled. The general analysis performed in this report indicated that a two-lane roadway could be paid for within a thirty-year bond period by tolls, assuming \$1.00 for cars and \$2.00 for trucks. Generally, the new highway is expected to have limited access, with an interchange at US 27, I-75, and possibly two others in the middle at major crossings / interchanges.



Figure ES 2: Recommended Alternative Corridor 5-2

Another component of this project is a ten-foot multi-use path in conjunction with the new roadway. Additional study will be required for the path, including consideration of logical termini points, proximity of it to the roadway and the method for crossing the Kentucky River. There has been great demand for a path based on public survey response and discussion at the PWG. However, it was agreed by the PWG and PDT members that while desirable, the inclusion of the path should not limit the advancement of the entire new connector project.

The following design elements are assumed which form the basis for the cost estimate for the recommended alternative.

- Two 12-foot travel lanes (11-foot lanes could be considered as appropriate assuming 11-foot meets design speed criteria)
- 10-foot paved shoulders
- 300-foot right-of-way

For cost estimation purposes, passing lanes were assumed to occur in each of the three project sections, one in each direction, for approximately one mile in length. This equates to six miles of passing lanes, which is almost half of the entire corridor. The current proposal for the recommended new US 27 to I-75 connector begins along the bypass and is therefore dependent on the completion of the bypass prior to construction of the connector. The Kentucky River crossing will require a new bridge, which forms a significant portion of the cost of this project.

		<u>5 1. IVECOI</u>	Interfaced A			Stimate					
	Right-of-Way				Add-Ons						
Base Estimate* (Initial 2-Lane)	(Includes Area Needed for Ultimate 4-Lane and Multi-Use Path)	a Needed e 4-Lane (4 Interchanges)	Total		Add-Ons Multi-Use Path* Passing Lane \$41,000,000 \$22,000,000 \$264,000,000 \$264,000,000						
\$168,000,000	000 000 52	000.000.52	\$22,000,000	\$201.000.000	cost:	\$41,000,000	\$22,000,000				
\$108,000,000	\$7,000,000	\$3,000,000	\$23,000,000	\$201,000,000	total with add-ons:	\$264,0	00,000				
*Includes Design and Construct	tion										

Table ES 1: Recommended Alternative Cost Estimate

Notes:

1) If the Eastern Nicholasville Bypass is not in place prior to the development of this project, the estimate to construct the section of bypass from the proposed intersection with Corridor 5-2 to US 27 (including the interchange at US 27, rightof-way, and utilities) was \$61,000,000 in 2004 dollars. This also assumes a 4-lane section.

While ultimately it would be desired to construct the new facility in one stage, the lack of available funding may make that difficult. Therefore, a recommended phasing schedule is provided below to ensure the highest priority segments are completed first. It was decided that the most logical project sections are:

- 1. US 27 to KY 1981
- 2. KY 1981 to Tates Creek Road
- 3. Tates Creek Road to I-75

The prioritization for these segments is from west to east as indicated by the numbers above. Design could be completed for all segments at the same time with the phasing schedule implemented during construction.

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1.0 INTRODUCTION

The Kentucky Transportation Cabinet (KYTC) initiated the I-75 to US 27 Corridor Scoping Study in July 2007 to examine the need for and feasibility of a new highway connector from I-75 to US 27 in the Jessamine, Fayette, and/or Madison County area. Transportation issues such as safety, access, mobility, and travel time were examined. In addition, long range transportation system, land use, environmental and other local and regional issues and concerns were also evaluated with respect to the need for and location of a new connector. Along with the examination of a new corridor between I-75 and US 27, the study also examined what type of roadway facility and project funding / financing options were applicable to the proposed project.

Members of the project team included: KYTC District 7, KYTC Central Office Division of Planning, the Bluegrass Area Development District (BGADD), and the Lexington Area Metropolitan Planning Organization (LAMPO). KYTC selected the consulting firm of Parsons Brinckerhoff (PB) to lead the study effort. PB is supported by HDR Engineering, Inc., Third Rock Consultants, LLC, Cultural Resource Analysts, Inc., and H. Powell and Company.

1.1 Study Objectives

Based on the initial direction provided by the KYTC, six primary study objectives were developed as summarized below.

- 1. Examine existing traffic, highway, environmental, and geotechnical conditions in the study area;
- 2. Determine where (or if) there are problems or deficiencies;
- 3. Define project purpose and need;
- 4. Develop a range of alternates (including a no-build option) to satisfy the project purpose and need and address the identified problems;
- 5. Evaluate and compare all the proposed alternates, considering public input as well as transportation, community, environmental, and economic benefits and impacts; and
- 6. Recommend an alternate or set of alternates for implementation, if they are warranted and feasible.

While KYTC has the ultimate responsibility for constructing and maintaining safe and efficient highways, KYTC desires to incorporate public and agency input into the evaluation and decision-making process. Therefore, all six of these study objectives were completed in coordination with a comprehensive public and agency involvement program.

1.2 **Project Location and Study Area**

The study area is between I-75 and US 27 in Fayette, Jessamine, and Madison Counties. Refer to Figure 1 for more details. The study area limits on the east and west were based on the project description. Historically scoping and feasibility studies to address connectivity from I-75 to areas west of US 27 have been met with much public opposition.

Figure 1: Study Area



1.3 Study Process

The study process used to evaluate potential alternates consisted of four major elements: 1) Define the purpose and need of the study, 2) Develop alternates, 3) Evaluate the alternates, and 4) Recommend an alternate(s).

The subsequent chapters in this report follow these steps, beginning with the development of the purpose and need for the study. The following five chapters contain the technical analysis and documentation used to confirm the purpose and need and then develop the alternates. These chapters include an analysis of existing and future No-Build highway conditions, a review of related studies, a summary of the human environment, a summary of the natural environment, and a geotechnical overview.

In addition to the technical analysis, public input and feedback was gathered throughout the study process. The framework for including the public in the study process is presented in the section following the technical analysis. Next, the discussion of the alternates development procedure and evaluation is presented. The final stage in the study process was to provide a recommendation, which is also the final section in this report.

2.0 PURPOSE AND NEED

It is important to establish the Purpose and Need for a project during its early stages since it defines the actual reason(s) for doing the study and provides the basis for the development, evaluation, and comparison of all alternates. According to current KYTC policy, there are three parts to a complete Purpose and Need statement: (1) the Purpose, (2) the Need, and (3) Goals and Objectives. The Purpose identifies the problem to be solved by the study and is supported by the Need. Goals and Objectives are other elements of the study that go beyond the transportation issues in the study and should be considered and addressed as part of a successful solution to the problem.

The Purpose and Need statement for this study was developed from issues identified in field reviews, through stakeholder and public input, as well as from deficiencies identified in the Existing and Future Conditions technical analysis. A complete description of these project phases is included in the following chapters of this report.

2.1 Purpose

The purpose of this study is to determine the need and explore methods to improve safety, connectivity, and regional access within Jessamine, Fayette, and/or Madison Counties between US 27 and I-75.

2.2 Need

Supporting the study purpose above is the study need. Extensive input was requested regarding project issues, goals and objectives from several sources. Meetings with local elected officials were held at the beginning of the study in part to solicit input on project issues and goals. A breakout session was performed during the first Project Work Group (PWG) meeting to solicit input regarding issues and goals for the project. Additional input was requested about project issues and goals during the first Public Meeting held on November 20, 2007. Attendees were given the opportunity to voice their thoughts at the meeting by listing issues and goals on available notepads as well as on the survey forms provided. This input, along with the initial technical analysis has shown a documented need exists. The supporting need is discussed below.

Connectivity – There is no direct route centrally located between US 27 and I-75 through Jessamine, Fayette, or Madison Counties. A network of rural roads does provide poor access between the two facilities but deficiencies in this system are discussed below. Additionally, Man O' War Boulevard in Lexington also provides indirect access but there are issues making it a poor connection as well that are also discussed later in this report. As such, there is no easy or convenient way to travel between Nicholasville and Richmond without having to travel through Lexington. Better east-west connectivity would provide increased access to numerous destinations including points north and south on I-75 for traffic to and from US 27, regional industrial

and commercial centers, as well as Asbury College and Eastern Kentucky University. The lack of connectivity is especially apparent when there is a crash or other incident on I-75 which either causes the interstate to be closed, or have a limited number of lanes open. US 25 is available as a parallel alternative route, but shares the Kentucky River crossing with I-75. There is additionally an alternate bridge to I-75 in the vicinity (KY 3055), but it is geometrically substandard and not rated for heavy truck traffic. Minor rural routes through Jessamine and Madison Counties provide poor connectivity between the two facilities. To access I-75 from US 27 via these routes requires using a ferry to cross the Kentucky River. Furthermore, connectivity between US 27 and I-75 was the highest rated highway issue by the public, with the majority of respondents in favor of a new east-west connector.

Vehicle Safety – This was the second highest rated highway issue identified by the public based on survey response forms from the first public meeting. Some of the local roads that are used to travel between US 27 and I-75 have been identified as narrow, curvy, and have sight distance issues. The crash analysis showed that a number of these roadways have high crash rates (critical crash rate factor is greater than one). These highways include KY 1980, KY 1981, and portions of US 27 in downtown Nicholasville, US 25, KY 1974, KY 169, KY 39, KY 1541, KY 876, KY 1156, and Man O' War Boulevard.

Traffic Congestion – In order to go between Nicholasville and Richmond, many people travel through Lexington, thereby having to travel through heavily congested areas, particularly the portion of US 27 north of Nicholasville and along Man O' War Boulevard. Providing a new direct route between US 27 and I-75 could reduce some of the traffic on these heavily traveled roads, thereby improving traffic operations around Lexington. In addition to the congestion around Lexington, some of the other roads used to travel between US 27 and I-75 have poor levels of service (LOS E/F). These include portions of US 27 (north of Nicholasville), US 25, KY 1980, KY 1974, KY 1975, KY 169, KY 39, KY 876, and KY 1156.

Travel Time Reliability – Travel times between US 27 and I-75 are inconsistent due to the unknowns of congestion (particularly on Man O' War Boulevard), incidents, as well as at the Valley View Ferry. Also, a lack of passing lanes / areas on the highways between US 27 and I-75 often slows traffic.

Economic Development – Providing direct access between US 27 and I-75 may lead to economic development in the region, but not necessarily along a new route. Direct interstate access may provide the business community with quicker access to I-75, thereby both retaining current industry and attracting new industry to the area. Economic development directly related to a new highway would be dependent on planning and zoning regulations in each local jurisdiction.

Improved Access for Truck Traffic – There are currently no federal or state designated truck routes between US 27 and I-75. In order to access I-75 from US 27, trucks are routed on New Circle Road through Lexington. However, due to congestion

along US 27 and New Circle Road, trucks may be using alternate routes that are not rated for truck traffic. An east-west connector built to handle truck traffic would greatly improve access and reduce travel time for trucks by eliminating the need to travel through Lexington. This could improve efficiency as well as allow for improved "just in time" service in the region.

Homeland Security – The Clays Ferry Bridge is a major structure over the Kentucky River on I-75. From a Homeland Security perspective, if the Clays Ferry Bridge were to be closed for any period of time for any reason, a critical link in I-75 (a major north-south link between Canada and Miami, Florida and a NAFTA corridor) would be missing. This would impede a major flow of traffic and cause much disruption. The alternative options to cross the river would be to take the Valley View Ferry to the west or go through local or regional roads via Boonesboro to the east. The Valley View Ferry operates as a shuttle across the river but can only accommodate up to three vehicles at a time, thereby leading to long queues waiting to cross the river. Also, heavy trucks would not have this option for crossing the river. An alternate route in the region would also be desirable to provide for increased evacuation routes in the vicinity of the Bluegrass Army Depot, particularly in case of an incident with nerve gas or other chemical agents that are currently stored at the facility. It should be noted that discussions with Homeland Security Personnel at either the Federal or State Level were not a part of this scoping study. The KYTC has not received any commitment of Homeland Security Funds.

2.3 Goals and Objectives

In accordance with the Transportation Cabinet's policy on Purpose and Need statements, the following goals and objectives were developed to balance environmental and community issues with transportation issues.

- Provide solutions to meet the purpose of the project while avoiding / minimizing / mitigating impacts to farmland, historic resources, the Palisades / Valley View / White Hall Shrine areas, horse farms, threatened / rare / endangered species, environmental justice communities, as well as other environmental features.
- Consider pedestrian and bicycle facilities in conjunction with alternative improvement options.
- Consider cost-effective solutions to address specific deficiencies.
- Consider noise, water, and air quality concerns, as well as light pollution.

3.0 **EXISTING AND FUTURE NO-BUILD CONDITIONS**

To determine if there are deficiencies or problems with the existing highway system, a detailed analysis was completed examining the existing highway characteristics and geometrics, traffic volumes, truck traffic, levels of service, travel times, crash rates, and other key issues. The analysis considered current and future traffic conditions assuming no changes to the existing highway. In support of the analysis, highway and traffic data was collected from a variety of sources including:

- KYTC Highway Information System database
- KYTC District 7 data sources
- Study area field reviews
- 24-hours vehicle classification counts
- Various KYTC Division of Planning data sources

3.1 **Existing Highway Characteristics and Geometrics**

Within the study area, the major interstate and US highways include:

- I-75
- US 27
- US 25

Other state maintained roads that were evaluated as part of this study include:

- KY 169
- KY 1974
- KY 1156
- KY 1975
- KY 876
- KY 595
- KY 1541
- KY 1980
- KY 1981
- KY 39
- KY 1984
- KY 3055
- KY 1985

Also, Man O' War Boulevard in Fayette County, owned and maintained by the Lexington-Fayette Urban County Government, was included in the analysis.

A highway characteristics summary is included as **Table 1**. **Figure 2** shows the functional classification for all major study area highways.

Table 1: Stud	y Area Highwa	ay Characteristics	Summary
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Route	Section	County	Begin Milepoint	End Milepoint	Section Length (miles)	Functional Class	Facility Type	Lane Width (feet)	Shoulder Width (feet)	Median Type	Median Width (feet)	% No Passing Zones	Posted Speed Limit (MPH)	HCS Speed Most	Recent ADT	Count Station	Year	Growth Rate	2007 ADT	% Trucks	Year of Truck Data	2040 ADT	2040 % Trucks				
	1	Jessamine	0.0 (South of Nicholasville)	0.23 (Southbrook Drive)	0.23	Rural Minor Arterial		12	8				55		10 200	462	2006	0.9%	10 300			13 800					
	2	Jessamine	0.23 (Southbrook Drive)	0.835 (John C Watts Drive)	0.61			11	1			0%	45-55	55	,			0.070				10,000					
	3	Jessamine	0.835 (John C Watts Drive)	1.075 (Longview Drive)	0.24			11-15	0-1				35-45	45	11,300	A40	2006	0.7%	11,400			14,400					
	4	Jessamine	1.075 (Longview Drive)	1.305 (Edgewood Drive)	0.23			15	0						16,400	A64	2006	0.2%	16,400			17,500					
US 27X	5	Jessamine	1.305 (Edgewood Drive)	1.586 (Natchez Trace)	0.28				-				35	:	21,500	A24	2006	1.3%	21,800			33,400					
(Downtown Nicholasville	6	Jessamine	1.586 (Natchez Trace)	1.88 (Brown Street)	0.29	Urban Minor	2 Lane Undivided Hwy	12		none	0				-					10.3%	2004		16.8%				
	7	Jessamine	1.88 (Brown Street)	2.112 (Chestnut Street)	0.23	Arterial Street		12-18				N/A	25-35	35	20,000	A16	2005	0.5%	20,200			23,800					
	8	Jessamine	2.112 (Chestnut Street)	2.18 (KY 39/KY 29)	0.07			14-16	1				25														
	9	Jessamine	2.18 (KY 39/KY 29)	2.38 (KY 169)	0.20									:	24,700	A32	2005	0.6%	25,000	_		30,500					
	10	Jessamine	2.38 (KY 169)	(Duncan Street)	0.50			13-16	-			35	:	26,000	A07	2004	0.9%	26,700	-		35,900						
	11	Jessamine	2.882 (Duncan Street)	US 27 Bypass)	1.01			12-13	1-3					:	25,800	A81	2004	2.4%	27,700			60,600					
	1	Jessamine	0.0 (Garrard-Jessamine County Line)	1.115 (South of Old Danville Road)	1.12					Concrete Barrier and Raised Mountable	2				19,100	P65	2006	0.3%	19,200			21,200					
	2	Jessamine	1.115 (South of Old Danville Road)	3.826 (Greystone Drive/KY 1268)	2.71	Urban Principal Arterial	4 Lane Divided Highway	12	10	Depressed	16-28	100%	55							-							
	3	Jessamine	3.826 (Greystone Drive/KY 1268)	6.011 (US 27 Bypass)	2.19									:	21,000	538	2005	3.7%	22,600	0.0%	2004	75,000	14 59/				
US 27 (South and North of Downtown)	4	Jessamine	10.827 (US 27 Bypass)	11.016 (South of Old US 27 ROW)	0.19	Urban Principal	4 Lane Divided Highway			Raised Mountable 12-24	100%								0.9 %	2004		14.5 %					
	5	Jessamine	11.016 (South of Old US 27 ROW)	13.695 (Industry Parkway)	2.68	Arterial		12	10				55		37,200	006	2005	2.0%	38,700			74,400					
	6	Jessamine	13.695 (Industry Parkway)	14.807 (KY 1980)	1.11	Rural Principal	4 Lane Undivided Highway			none	0									_							
	7	Jessamine	14.807 (KY 1980)	15.278 (Jessamine-Fayette County Line)	0.47	Arterial						42%		:	35,500	009	2004	1.5%	37,100			60,600					
	8	Fayette	0.0 (Fayette-Jessamine Co. Line)	0.465 (Cobblestone Road)	0.47		4 Lane Undivided Highway	12	10	none	0		55														
	9	Fayette	0.465 (Cobblestone Road)	0.808 (South of Toronto Road)	0.34	Urban Principal Arterial	4 Lane Divided Highway	11-12	1-12	Raised Mountable	15	N/A	55	53,700	C85	2006	3.0%	55,300			146,700	0.0%					
	10	Fayette	0.808 (South of Toronto Road)	0.956 (Man O War)	0.15		4 or 5 Lane Undivided Highway	11-12	•	none	0		45-55														
	1	Madison	87.185 (KY 876)	89.802 (US 25)	2.62	Urban Interstate				Depressed	3				53,700	607	2007	2.4%	53,700			117,500					
	2	Madison	89.802 (US 25)	91.1 (North of US 25)	1.30					Doprocodu	, , , , , , , , , , , , , , , , , , ,																
	3	Madison	91.1 (North of US 25)	92.1 (North of Lexington Access Road)	1.00					Guardrail Barrier	30				55.900	753	2007	3.3%	65.900	16.0%	2004	192.400	26.2%				
	4	Madison	92.1 (North of Lexington Access Road)	94.295 (South of KY 627)	2.20					Depressed	60-200							0.070				,					
	5	Madison	94.295 (South of KY 627)	94.73 (KY 627)	0.44					Concrete Barrier	3																
1-75	6	Madison	94.73 (KY 627)	97.038 (US 25)	2.31	Rural Interstate	6 Lane Divided Highway	12	10	Concrete Barrier or Depressed	3 or 50-100	N/A	65		62,200	757	2007	2.8%	62,200			154,700					
	7	Madison	97.038 (US 25)	97.703 (Madison-Fayette County Line)	0.67					Concrete Barrier	3				35 700	352	2007	3 60/	65 700			211 100					
	8	Fayette	97.703 (Madison-Fayette County Line)	98.516 (US 25)	0.81					-	Concrete Barrier	3			65,700	55,700	333	2007	3.0%	00,700	19.1%	2004	211,100	31.2%			
	9	Fayette	98.516 (US 25)	103.89 (KY 418)	5.37	17										Concrete Barrier or Depressed	3 or 36-87				64,300	P90	2006	1.7%	65,400		
	10	Fayette	103.89 (KY 418)	108.21 (KY 1425 Man-O-War Underpass)	4.32					Concrete Barrier	3				53,100	336	2007	3.0%	53,100			140,800					

Table 1: Stud	y Area Highway	/ Characteristics	Summary (Cont.)
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Route	Section	County	Begin Milepoint	End Milepoint	Section Length (miles)	Functional Class	Facility Type	Lane Width (feet)	Shoulder Width (feet)	Median Type	Median Width (feet)	% No Passing Zones	Posted Speed Limit (MPH)	HCS Speed	ost Recent ADT	Count Station	Year	Growth Rate	2007 ADT	% Trucks	Year of Truck Data	2040 ADT	2040 % Trucks				
	1	Madison	20.255 (I-75 Bridge)	20.342 (North of I-75 Bridge)	0.09		5 Lane Divided Highway	12	10	Raised Non- mountable	4																
	2	Madison	20.342 (North of I-75 Bridge)	20.49 (Keeneland Drive)	0.09		4 Lane Divided Highway	12	2-10	Raised Non- mountable	4	100%															
	3	Madison	20.49 (Keeneland Drive)	20.573 (Brandy Lane)	0.08	Urban Principal Arterial	4 Lane Undivided Highway	12	2				45		13,400	B01	2006	3.0%	13,800	6.9%		36,600	11.3%				
	4	Madison	20.573 (Brandy Lane)	20.771 (Keystone Drive)	0.20			12	2	2																	
	5	Madison	20.771 (Keystone Drive)	20.964 (KY 1156)	0.19							0%															
	6	Madison	20.964 (KY 1156)	21.139 (North of KY 1156)	0.18		2 Lane Undivided Highway			none	0		45-55	45	5 790	780	2005	2.5%	6 100			13 800					
	7	Madison	21.139 (North of KY 1156)	24.076 (Clay Lane)	2.94			11	1			25%	55		0,100		2000	2.070	0,100			,					
	8	Madison	24.076 (Clay Lane)	25.373 (KY 627/KY 3055)	1.30	Rural Major Collector						60%	55		3,470	778	2006	2.4%	3,600	12.4%		7,900	20.3%				
US 25	9	Madison	25.373 (KY 627/KY 3055)	28.161 (KY 2884)	2.79							29%	55		2,620	756	2004	2.4%	2,800			6,100					
	10	Fayette	0 (South Limits of I-75 Interchange)	.366 (North of I-75 NB Ramps)	0.37			12	10																		
	11	Fayette	.366 (North of I-75 NB Ramps)	1.829 (South of Elk Lick Falls Road)	1.46			11	1																		
	12	Fayette	1.829 (South of Elk Lick Falls Road)	2.876 (North of Turner Station Road)	1.05	Rural Minor Arterial	2 Lane Undivided Highway	12	10	none	0	20%	55		3,120	367	2006	0.7%	3,100	10.3%		3,900	16.8%				
	13	Fayette	2.876 (North of Turner Station Road)	4.832 (KY 1975)	1.96			11	10																		
	14	Fayette	4.832 (KY 1975)	8.144 (KY 418)	3.31				10			40%	-		4,310	404 200		1.4%	4,400			7,000					
	15	Fayette	8.144 (KY 418)	9.734 (Man O War Boulevard)	1.59	Urban Principal Arterial	4 Lane Divided Highway	12	0-10	Raised Non- mountable/de	16-34	N/A	45 -55	55	29,600	G32	2005	1.7%	30,600			53,400	0.0%				
	1	Jessamine	3.025	3.68 (West of Leoburton Road)	0.66					pressed			55														
	2	Jessamine	3.68 (West of Leeburton Road)	4.06 (East of Noland Drive)	0.38							45		3,110	008 20	2004	1.7%	3,300			5,800						
	3	Jessamine	4.06	4.69	0.63													35-55	55								
KY 1980	4	Jessamine	(East of Noland Drive) 4.69	(Ashgrove Lane) 5.06	0.37	Rural Major Collector	2 Lane Undivided Highway	8	3	none	0	N/A	35							10.2%	2004		16.7%				
	5	Jessamine	(Asngrove Lane) 5.06 (East of Yourne Drive)	(East of Young Drive) 6.02	0.96									55			001	2005	4.0%	2,500							
	6	Jessamine	6.02 (West of Spurlock Lane)	6.69 (East of Mackey Pike)	0.67									45		2,320							9,100				
	7	Jessamine	6.69 (East of Mackey Pike)	7.451 (Favette County Line)	0.76								55														
	1	Fayette	0.00 (KY 169)	.16 (South of KY 1975)	0.16								35		050			0.00/				4 000					
	2	Fayette	.16 (South of KY 1975)	1.667 (Crawley Lane)	1.51	Rural Minor Arterial									859	359	2006	0.8%	900	14.0%		1,200	22.9%				
	3	Fayette	1.667 (Crawley Lane)	4.228 (Delong Road)	3.04		2 Lane Undivided Highway	a	1	none	0	N/A			1,430	379	2006	1.5%	1,500			2,500					
KY 1974	4	Fayette	4.228 (Delong Road)	4.711 (South of Hickman Creek Bridge)	0.48		2 Lune ondivided highway			none	Ŭ	175	55		6 250	G23	2005	2 1%	6 500	8 7%		12 900					
	5	Fayette	4.711 (South of Hickman Creek Bridge)	5.443 (KY 1980)	0.73	Urban Minor Arterial Street									0,200							,	14.2%				
	6	Fayette	5.443 (KY 1980)	7.782 (Man O War Boulevard)	2.34		2-4 Lane Unidivided Highway	12	8-10	none	0	100%	55		8,990	D90	2004	3.5%	10,000			31,100					
KY 1975	1	Fayette	0.00 (KY 1974)	4.463 (Whites Lane)	4.46	Rural Minor	2 Lane Undivided Highway	8	3	none	0	N/A	55		1,190	357	2004	3.2%	1,300	6.1%	2004	3,700	10.0%				
	2	Fayette	4.463 (Whites Lane)	5.410 (US 25)		Conector							ļ		2,940	368	2006	2.7%	3,000			7,200					
	1	Jessamine	(KY 1541) 2 365	(Marble Creek Lane)	2.37	Bural Minor		7	-				55														
	2	Jessamine	(Marble Creek Lane)	(South of KY 169)	0.94	4 Rural Minor Collector 7 2 Lane Undivided Highway	8							648	262	2006	-0.4%	600	10.3%		600	16.8%					
KY 1981	3	Jessamine	(South of KY 169)	(KY 169)	0.37		3	none	0	N/A	35																
	4	Jessamine	3.668 (KY 169)	3.998 (North of Caveson Way) 6.13	0.30	Rural Local	2 Lane Undivided Highway 9	9	-				55		1,980	259	2004	3.6%	2,200	8.6%		7,100	14.1%				
	5	Jessamine	3.998 (North of Caveson Way)	(KY 1974 @ Fayette County Line)	2.13		-ocal 7	7																			

Table 1: Stud	y Area Highway	/ Characteristics	Summary (Cont.)
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Route	Section	County	Begin Milepoint	End Milepoint	Section Length (miles)	Functional Class	Facility Type	Lane Width (feet)	Shoulder Width (feet)	Median Type	Median Width (feet)	% No Passing Zones	Posted Speed Limit (MPH)	HCS Speed	Most Recent ADT	Count Station	Year	Growth Rate	2007 ADT	% Trucks	Year of Truck Data	2040 ADT	2040 % Trucks												
	1	Madison	0.00 (Newby Road)	.751 (West of Kanatzar Lane)	0.75				1																										
KY 1984	2	Madison	.751 (West of Kanatzar Lane)	1.051 (West of Haden Heights)	0.30	Rural Local	2 Lane Undivided Highway	7	3	none	0	N/A	55		574	796	2004	4.7%	700	8.6%		3,200	14.1%												
	3	Madison	1.051 (West of Haden Heights)	2.06 (KY 169)	1.01				1																										
	1	Madison	1.349 (I-75 Underpass)	2.240 (Goggins Lane)	0.89	Urban Collector									5,190	A82	2004	3.0%	5,700			15,100													
	2	Madison	2.240 (Goggins Lane)	3.082 (Boone Way)	0.84	Street						40%																							
	3	Madison	3.082 (Boone Way)	4.877 (Crutcher Pike)	1.80			10							3,960 7	799	2005	4.0%	4,300			15,700													
	4	Madison	4.877 (Crutcher Pike)	6.184 (KY 1984)	1.31	1			2						1,360	797	2006	1.4%	1,400			2,200													
	5	Madison	6.184 (KX 1984)	8.051 (KX 1985)	1.87	-	2 Lane Undivided Highway							990	795	2004	1.0%	1,000	-		1,400														
	6	Madison	8.051	8.478	0.43	Burel Major		2 Lane Undivided Highway					0%								7.8%	2004		12.7%											
	7	Madison	(KY 1985) 8.478	(Buffalo Road) 11.74	3.26	Collector							55																						
			(Buffalo Road) 11 74	(Ervin Sloan East Road) 11 869		-		8					1		586	794	2005	0.5%	600			700													
	8	Madison	(Ervin Sloan East Road)	(KY 1156 / Carvers Ferry Road)	0.13							N/A																							
	9	Madison	11.869 (KY 1156 / Carvers Ferry Road)	12.511 (Approach to Valley View Ferry)	0.64							N/A			414	786	2006	0.2%	400			400													
KY 169	10	Jessamine	0.00 (Approach to Valley View Ferry)	1.939 (South of Newman Road)	1.94					none	0	10%			549	265	2006	0.9%	600			800													
	11	Jessamine	1.939 (South of Newman Road)	2.030 (North of KX 1974)	0.09							N/A				200		0.070																	
	12	Jessamine	2.030	3.598 (South of Burnside Drive)	1.57	-						10%	35-55	55		1,140 264				-															
	13	Jessamine	3.598 (Ocurth of Durnside Drive)	4.218	0.62	Rural Major Collector		10	3			0% or N/A	35		1,140		2004	2.7%	1,200			2,900													
	14	Jessamine	(South of Burnside Drive) 4.218 (KY 1981)	(KY 1981) 7.733 (Vince Poad / Bethany Poad)	3.52	1						0 - 20%	35-55	55	3,460	291	2006	3.6%	3,600	-		11,600													
	15	Jessamine	7.733	9.482	1.75	-	2 Lane Undivided Highway					10%	45-55	55						5.2%	2004		8.5%												
	16	Jessamine	(Vince Road / Bethany Road) 9.482	9.918	0.44								35-45	45	4,360	290	2006	3.1%	4,500			12,300													
	17	Jessamine	(Locust Heights) 9.918	(North of Glencove Ave) 10.028	0.11	-														11	2-3				35										
	18	lossamino	(North of Glencove Ave) 10.028	(Liberty Street) 10.362	0.33	Urban Minor Arterial Street			t 11-14		11-14		11-14		11-14		2			N/A	25-35	35						-							
	10	Jeesemine	(Liberty Street) 10.362	(Bell Court) 10.458	0.00	-		44	12				25-35	35	3,670	A45	2005	1.7% 3,800				6,600													
	19	Jessamme	(Bell Court) 16.014	(US 27) 17.03	0.10				1-2				25					0.494																	
	1	Madison	(KY 876)	(Dry Branch Road) 20.78	1.02	-	2 Lane Undivided Highway	8							629	587	2004	0.4%	600	-		700	-												
	2	Madison	17.03 (Dry Branch Road)	(North of Sledd Branch Road)	3.75			7																											
	3	Madison	20.78	22.212	1 43										645	808	2005	4.0%	700			2,600													
KY 595		maarson	(North of Sledd Branch Road)	(New Road)	1.40	Rural Local		12	1	none	0	N/A	55							8.6%			14.1%												
	4	Madison	22.212 (New Road)	24.55 (South of Poosey Ridge Road)	2.34		1 Lane Highway																												
	5	Madison	24.55 (South of Poosey Ridge Road)	24.604 (Poosey Ridge Road)	0.05			10							107	800	2006	1.4%	100			200													
	1	Madison	0.00 (KY 595)	2.387 (Bogie Mill Road)	2.39			_	3						643	586	2004	2.8%	700			1,700													
	2	Madison	2.387 (Bogie Mill Boad)	(West of Redwood Drive)	1.60			8	1				55																						
	3	Madison	3.99 (West of Redwood Drive)	4.77	0.78		8	8-9	1-3						1,340	578	2006	0.2%	1,300			1,400													
KY 876	4	Madison	4.77 (Old Pond Wav/Mule Shed	5.15	0.38	Rural Minor Collector	2 Lane Undivided Highway	9		none	0	N/A								10.3%			16.8%												
	5	Madison	Road) 5.15	(West of Curtis Pike) 6.528	1 38		pr 2 Lane Unumided Highway 9	1				45	2,330		576	2004	2.4%	2,500			5,500														
	6	Madicon	(West of Curtis Pike) 6.528	(Willis Branch Road) 6.95	0.42	1		10												1															
	-	wauson	(Willis Branch Road) 6.95	(West of Amberly Way) 7.097	0.42	4		10							12,200	A03	2005	2.3%	12,800			27,100													
	7	Madison	(West of Amberly Way)	(I-75 Ramp)	0.15				6																										

Table 1: Study	Area Highway	Characteristics	Summary (Cont.)
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Route	Section	County	Begin Milepoint	End Milepoint	Section Length (miles)	Functional Class	Facility Type	Lane Width (feet)	Shoulder Width (feet)	Median Type	Median Width (feet)	% No Passing Zones	Posted Speed Limit (MPH)	HCS Speed	Most Recent ADT	Count Station	Year	Growth Rate	2007 ADT	% Trucks	Year of Truck Data	2040 ADT	2040 % Trucks										
	1	Jessamine	0 (KY 39)	3.556 (Kissing Ridge Road)	3.56										90	298	2006	-1.2%	100			100											
KV 1541	2	Jessamine	3.556 (Kissing Ridge Road)	4.500 (North of Pollard Pike)	0.94	Rural Minor 2	2 Lane Undivided Highway	8	3	none	0	N/A	55		446	277	2006	2.5%	500	10.3%		1,100	16.8%										
	3	Jessamine	4.500 (North of Pollard Pike)	7.000 (North of KY 1981)	2.50	Collector					nono					1 240	295	2004	1.9%	1 300	101070		2 400										
	4	Jessamine	7.000 (North of KY 1981)	9.668 (KY 39)	2.67			9							.,				1,000			_,											
	1	Jessamine	0.00 (North Bank of Kentucky River)	0.12 (KY 1541)	0.12	Rural Local									111	281	2006	-3.4%	100			100											
	2	Jessamine	0.12 (KY 1541)	2.454 (KY 1268)	2.33			8																									
	3	Jessamine	2.454 (KY 1268)	3.747 (Big Hickman Creek Bridge)	1.29						0		55																				
	4	Jessamine	3.747 (Big Hickman Creek Bridge)	5.56 (North of Old Sulphur Well Road)	1.81	Rural Minor			3						853	280	2006	1.9%	900	7.4%		1,700											
KY 39	5	Jessamine	5.56 (North of Old Sulphur Well Road)	5.83 (North of Elmfork Road)	0.27	Collector	2 Lane Undivided Highway	Undivided Highway		none		N/A	45								2004		12.1%										
	6	Jessamine	5.83 (North of Elmfork Road)	7.550 (KY 1541)	1.72			10																									
	7	Jessamine	7.550 (KY 1541)	8.38 (South of Ash Drive)	0.83								55										7										
	8	Jessamine	8.38 (South of Ash Drive)	8.548 (Ash Drive)	0.17										3,210	A27	2004	1.5%	3,400			5,600											
	9	Jessamine	8.548 (Ash Drive)	8.875 (Miles Road)	0.33								35						7,600														
	10	Jessamine	8.875 (Miles Road)	9.29 (Hager Lane)	0.42	Urban Minor Arterial Street		9-10	0-3						7 000		0004	0.0%				47 700											
	11	Jessamine	9.29 (Hager Lane)	9.404 (KY 29 / US 27)	0.11			9	0				25		7,020	A13	2004	2.6%			17,700												
	1	Madison	0.00 (US 25)	.64 (South of Secretariat Drive)	0.64	Urban Collector																35		1 670	794	2004	2 49/	1,800			5 400		
	2	Madison	.64 (South of Secretariat Drive)	1.352 (Boone Way)	0.71	Street		8							1,670	701 200	2004	5.476	1,000			5,400											
	3	Madison	1.352 (Boone Way)	4.5 (South of Clay Lane)	3.15		2 Lane Undivided Highway	2 Lane Undivided Highway	2 Lane Undivided Highway								1																
KY 1156	4	Madison	4.5 (South of Clay Lane)	5.68 (South of Kentucky River Road)	1.18					2 Lane Undivided Highway	7	1	none	0	N/A			724 782	782	2005	4.1%	800	5.1%	2004	3,000	8.3%							
	5	Madison	5.68 (South of Kentucky River Road)	6.278 (Kentucky River Road)	0.60	Rural Minor Collector			8					55																			
	6	Madison	6.278 (Kentucky River Road)	8.7 (South of Tate Creek Bridge)	2.42	_								-	_					-						233 784 2	2006	0.8%	200			300	
	7	Madison	8.7 (South of Tate Creek Bridge)	9.376 (KY 169)	0.68				9																								
KY 3055	1	Madison	0.00 (White Hall Shrine Road)	1.54 (South of KY 627/US 25)	1.54	- Rural Local	2 Lane Undivided Highway	11	3	none	0	N/A	55		107	829	2006	-0.4%	100	8.6%		100	14.1%										
	2	Madison	1.54 (South of KY 627/US 25)	1.593 (KY 627/US 25)	0.05				0																								
	1	Madison	(Whitlock Road / Baldwin Road)	85. (East of Whitlock and Baldwin)	0.85			8	1						-																		
KY 1985	2	Madison	.85 (East of Whitlock and Baldwin)	1.399 (West of Tate Creek Bridge)	0.55	Rural Local	2 Lane Undivided Highway	7		none	0	N/A	55		365	793 200	2006	0.6%	400	8.6%		500	14.1%										
	3	Madison	1.399 (West of Tate Creek Bridge)	1.499 (KY 169)	0.10			8	3																								
	1	Fayette	6.561 (Nicholasville Road)	8.566 (Tates Creek Road)	2.01										31,900	G57	2007	2.7%	31,900			77,600											
	2	Fayette	8.566 (Tates Creek Road)	10.285 (Armstrong Mill Road)	1.72										25,600	G78	2005	2.0%	26,600			51,300											
	3	Fayette	10.285 (Armstrong Mill Road)	11.821 (Alumni Drive)	1.54										35,200	F14	2005	3.0%	37,300			98,900											
CS 4524 (Man O' War Blvd)	4	Fayette	11.821 (Alumni Drive)	12.792 (US 25 / Richmond Road)	0.97	Urban Minor Arterial	4 Lane Divided Highway	12	0	Raised Non- mountable	16	N/A	45		44,800 F99	2007	3.4%	44,800	8.7%	[135,900	14.2%											
	5	Fayette	12.792 (US 25 / Richmond Road)	13.454 (Palumbo Drive)	0.66										32,800	,800 D18 20/	2005	2.3%	34,300			73,300											
	6	Fayette	13.454 (Palumbo Drive)	14.254 (KY 1927 / Todds Road)	0.80]									41,600	G73	2007	1.3%	41,600]		63,900											
	7	Fayette	14.254 (KY 1927 / Todds Road)	15.241 (I-75 / KY 1425)	0.99]									39,100	D79	2007	1.1%	39,100			56,100											





Source: KY Transportation Cabinet, KY Office of Geographic Information, KY Infrastructure Authority

3.2 Current and Historical Traffic Volumes

The average daily traffic volumes used for this project included traffic counts from the KYTC CTS database. These counts were conducted during the years of 2004 – 2007.

The counts from 2004 to 2006 were forecasted to a base year of 2007. Growth rates for the study were based upon a historical traffic growth analysis along all study area routes. The analysis utilized traffic counts obtained from the KYTC's 'CTS' traffic count program which includes counts from 1963 to 2007.

The historical counts were entered into a spreadsheet provided by KYTC Division of Planning. The spreadsheet calculates growth rates using both exponential and trend line analyses. The historical growth rates are shown in **Table 1**.

In selecting an appropriate traffic growth rate, several factors were considered including the historical growth, recent traffic volumes, and geography. The growth rates reflect historical trends along each segment, but do not include specific developments that may be constructed within or adjacent to the project area.

Current (2007) average daily traffic volumes are shown in Figure 3.

Truck percentages were determined from the vehicle classification database where available. If truck percentages were not available for a specific roadway section, then a truck percentage was assumed based on the 2004 Traffic Forecasting Report developed by the Kentucky Transportation Cabinet. These truck percentages are shown in **Table 1**.



Figure 3: 2007 Average Daily Traffic Volumes

3.3 **Travel Time Study**

Travel time runs were performed to obtain a baseline comparison for the travel time savings of a new corridor, as well as to compare and calibrate the Kentucky Statewide Traffic Model (KYSTM) for use in determining new connector volumes. Two routes between US 27 and I-75 were chosen to do travel time runs. The first route began on KY 39 at US 27 and ended at US 25 where it crosses over I-75. This route did not involve a river crossing, and took 27 minutes to complete. The second route began on KY 169 where it crosses I-75, and ended on KY 169 at US 27. This path crossed the Kentucky River using the Valley View Ferry and took 35 and one-half minutes. Each run was completed according to guidelines set forth in the Institute of Transportation Engineers Traffic Engineering Handbook. **Table 2** shows travel times for individual segments along each route.

Route	Distance	Time	Avg. Speed
KY 39 @ US 27 to KY 1541	1.84	3:57	28.0
KY 1541 @ KY 39 to KY 1981	2.67	4:24	36.4
KY 1981 @ KY 1541 to Old Railroad Road	1.83	2:54	37.9
KY 1981 @ Old Railroad Road to KY 169	1.74	2:29	42.1
KY 169 @ KY 1981 to KY 1975	2.2	2:52	45.9
KY 1975 @ KY 169 to Jack's Creek Pike	1.65	2:27	40.4
KY 1975 @ Jack's Creek Pike to Crawley Lane	1.26	2:05	36.3
KY 1975 @ Crawley Lane to US 25	2.45	3:22	43.7
US 25 @ KY 1975 to I-75	2.11	2:30	50.6
Total	17.75	27:00	40.5
KY 169 @ I-75 to Crutcher Pike	3.33	3:54	51.2
KY 169 @ Crutcher Pike to KY 1985	3.02	3:59	45.5
KY 169 @ KY 1985 to KY 1156	3.74	5:07	43.9
KY 169 @ KY 1156 to Valley View Ferry	0.71	7:16	5.9
KY 169 @ Valley View Ferry to KY 1974	1.97	3:39	32.4
KY 169 @ KY 1974 to E. Hickman Road	2.99	4:11	42.9
KY 169 @ E. Hickman Road to Bethany Road	2.58	3:24	45.5
KY 169 @ Bethany Road to US 27	2.68	4:07	39.1
Total	21.02	35:37	42.4

Table 2: Travel Time Results

3.4 **Current Level of Service (LOS) Analysis**

3.4.1 Methodology

Two-Lane Highway Analysis

For the two-lane highways (KY 39, KY 169, KY 595, KY 876, KY 1156, KY 1541, KY 1974, KY 1975, KY 1980, KY 1981, KY 1984, KY 1985, KY 3055, and portions of US 25, and US 27), a corridor level of service analysis was prepared using the Highway Capacity Software Plus (HCS+) two-lane road analysis module. This is based on the 2000 Highway Capacity Manual (HCM). For this method, there are two classes of roadways: Class I highways which include higher speed arterials and daily commuter routes, and Class II highways which include lower speed collector roadways and roads primarily designed to provide access. Driver expectations regarding speed and flow are important in determining a highway's class. All state routes were assumed to be major through routes in the study area, and were therefore considered to be Class I highways. Levels of service for Class I highways are based on the estimated average travel speeds and percent time vehicles spend following other vehicles as shown in **Table 3**. Levels of service for Class II highways are defined only in terms of the percent time vehicles spend following other vehicles. Average travel speed is not considered since drivers typically will tolerate lower speeds on a Class II facility because of its function as an access roadway (serving shorter trips and fewer through trips). Refer to the HCM for more details.

	Class I Hi	Class II Highways							
LOS	Percent Time Spent	Average Travel	Percent Time Spent						
	Following	Speed	Following						
А	<u><</u> 35	>55	<u><</u> 40						
В	>35 – 50	>50 – 55	>40 – 55						
С	>50 - 65	>45 - 50	>55 – 70						
D	>65 - 80	>40 – 45	>70 – 85						
E	>80	<u><</u> 40	>85						
F	LOS F applies whenever the flow rate exceeds the capacity								

Table 3: LOS Criteria for Two-Lane Highways

Source: Highway Capacity Manual (2000)

Level of service A represents a free flowing facility with little time spent following another vehicle and plenty of opportunities for passing. following Percent time increases and opportunities to pass and travel speeds decrease with Level of service down to LOS F which represents a congested roadway that is over capacity with no opportunities to pass and low travel spends. LOS D is the threshold for desirable traffic operations in this study, based on guidance from the AASHTO Policy on Geometric Design of Highways and Streets. While there are various roadway types in the study area, including urban and suburban freeways and arterials, as well as rural freeways, (which have a desired LOS of B or C), the majority of roadways fall under the categories of urban and suburban collector and local roads, as well as rural rolling local roads, which have a desired LOS D. It was determined that all roadways should be

Figure 4: Levels of Service



evaluated using the same criteria and that operations below this threshold be noted as undesirable and warrant improvement. For Class I highways, the LOS D threshold corresponds to an average travel speed of >40 miles per hour with \leq 80 percent time spent following another vehicle. Refer to **Figure 4** for a graphical representation of what a LOS D looks like.

Multilane Highway Analysis

To analyze traffic operations for the four-lane or greater highway sections (US 25, US 27 and Man O' War Boulevard), the HCS+ multilane analysis package was used. This is also based on the 2000 HCM methodology. For each section, the estimated travel speed and the resulting levels of service (LOS) were calculated.

Levels of service for multilane highway sections are based on density in terms of passenger cars per mile per lane (pc/mi/ln) as shown in **Table 4**. Density is used to define level of service because it is an indicator of freedom to maneuver within the traffic stream and the proximity to other vehicles. Speed in terms of mean passenger-car speed and volume-to-capacity (v/c) ratios are interrelated with density and can be used to characterize a multilane highway segment.

Table 4: LOS Criteria for Multilane
Highways

L05	Density Range (pc/mi/in)
А	0 – 11
В	> 11 – 18
С	> 18 – 26
D	>26 - 35
Е	> 35 – 45
F	> 45
0	

Source: Highway Capacity Manual (2000)

Similar to the two-lane highway analysis, LOS D is the threshold for desirable traffic operations used in this study. For multilane highways, a LOS D corresponds to a density between 26 and 35 passenger cars per mile per lane. (Refer to the HCM for more specific information.)

Freeway Analysis

To analyze peak hour traffic operations for I-75, the HCS+ freeway analysis package was used, also based on the 2000 HCM. For each section, the estimated travel speed and the resulting levels of service (LOS) were calculated.

Levels of service for freeway sections are based on density in terms of passenger cars per mile per lane (pc/mi/ln) as shown in **Table 5**. Similar to multilane highways, density is used to define level of service because it is an indicator of freedom to maneuver within the traffic stream and the proximity to other vehicles. Speed in terms of mean passenger-car speed and volumeto-capacity (v/c) ratios are interrelated with density and can be used to characterize a freeway segment.

Table 5: LOS Criteria for Freeways

LOS	Density Range (pc/mi/In)					
А	0 - 11					
В	> 11 – 18					
С	> 18 – 26					
D	>26 - 35					
E	> 35 – 45					
F	> 45					
•						



Again, LOS D is the threshold for desirable traffic operations used in this study. For freeways, a LOS D corresponds to a density between 26 and 35 passenger cars per mile per lane. (Refer to the HCM for more specific information.)

3.4.2 Existing Traffic Operating Conditions

The most recent 24-hour KYTC traffic counts were used to evaluate corridor operating conditions. Peak hour traffic volumes for highway segments were estimated based on the average daily traffic volumes for those segments using K-factors (factor based on the 30th highest hour of the year) derived from the KYTC counts. The current lane widths, shoulder widths, percent passing, and other design factors were also used.

The segment levels of service are listed in Table 6 and are shown on Figure 5.

Table 6: 2007 Corridor Levels of Service

Route	Section	Begin Milepoint	End Milepoint	Section Length (miles)	2007 ADT	K-Factor	2007 DHV	Off Peak Direction %	Peak Direction %	Posted Speed Limit (MPH)	% Trucks	Estimated Travel Speed	% Time Spent Following	Density (pc/mi/ln)	LOS
	1	0.0 (South of Nicholasville)	0.23 (Southbrook Drive)	0.23	10,300	0.112	1150	43	57	55	10.3	40.5	77.4	N/A	D
	2	0.23 (Southbrook Drive)	0.835 (John C Watts Drive)	0.61	10,300	0.1	1030	44	56	55	10.3	74.9	74.9	N/A	D
	3	0.835 (John C Watts Drive)	1.075 (Longview Drive)	0.24	11,400	0.1	1140	44	56	45	10.3	77.2	77.2	N/A	D
	4	1.075 (Longview Drive)	1.305 (Edgewood Drive)	0.23	16,400	0.1	1640	44	56	35	10.3				
	5	1.305 (Edgewood Drive)	1.586 (Natchez Trace)	0.28	21,800	0.1	2180	44	56	35	10.3				
US 27X	6	1.586 (Natchez Trace)	1.88 (Brown Street)	0.29	21,800	0.1	2180	44	56	35	10.3				
	7	1.88 (Brown Street)	2.112 (Chestnut Street)	0.23	20,200	0.1	2020	44	56	35	10.3				
	8	2.112 (Chestnut Street)	2.18 (KY 39/KY 29)	0.07	20,200	0.1	2020	44	56	25	10.3				
	9	2.18 (KY 39/KY 29)	2.38 (KY 169)	0.20	25,000	0.1	2500	44	56	25	10.3				
	10	2.38 (KY 169)	2.882 (Duncan Street)	0.50	26,700	0.1	2670	44	56	35	10.3				
	11	2.882 (Duncan Street)	3.89 (US 27 Bypass)	1.01	27,700	0.1	2770	44	56	35	10.3				
	1	0.0 (Garrard-Jessamine County Line)	1.115 (South of Old Danville Road)	1.12	19,200	0.101	1940	44	56	55	8.9	51	N/A	13.4	В
	2	1.115 (South of Old Danville Road)	3.826 (Greystone Drive/KY 1268)	2.71	19,200	0.101	1940	44	56	55	8.9	51	N/A	13.4	В
	3	3.826 (Greystone Drive/KY 1268)	6.011 (US 27 Bypass)	2.19	22,600	0.101	2280	44	56	55	8.9	51	N/A	15.8	В
US 27 (South	4	10.827 (US 27 Bypass)	11.016 (South of Old US 27 ROW)	0.19	38,700	0.101	3910	44	56	55	8.9	51	N/A	27.1	D
Downtown)	5	11.016 (South of Old US 27 ROW)	13.695 (Industry Parkway)	2.68	38,700	0.101	3910	44	56	55	8.9	49.4	N/A	27.9	D
	6	13.695 (Industry Parkway)	14.807 (KY 1980)	1.11	38,700	0.106	4100	40	60	55	8.9	51.3	N/A	28	D
	7	14.807 (KY 1980)	15.278 (Jessamine-Fayette County Line)	0.47	37,100	0.106	3930	40	60	55	8.9	51.4	N/A	26.8	D
	8	0.0 (Fayette-Jessamine Co. Line)	0.956 (Man O War)	0.96	55,300	0.101	5590	44	56	55	6.9	50.1	N/A	N/A	F
	1	87.185 (KY 876)	89.802 (US 25)	2.62	53,700	0.1	5370	44	56	65	16	62	N/A	22.3	С
	2	89.802 (US 25)	91.1 (North of US 25)	1.30	65,900	0.104	6850	43	57	65	16	63.4	N/A	29.2	D
	3	91.1 (North of US 25)	92.1 (North of Lexington Access Road)	1.00	65,900	0.104	6850	43	57	65	16	63.4	N/A	29.2	D
	4	92.1 (North of Lexington Access Road)	94.295 (South of KY 627)	2.20	65,900	0.104	6850	43	57	65	16	63.4	N/A	29.2	D
1.75	5	94.295 (South of KY 627)	94.73 (KY 627)	0.44	65,900	0.104	6850	43	57	65	16	63.4	N/A	29.2	D
1-75	6	94.73 (KY 627)	97.038 (US 25)	2.31	62,200	0.104	6470	43	57	65	19.1	63.8	N/A	28.4	D
	7	97.038 (US 25)	97.703 (Madison-Fayette County Line)	0.67	65,700	0.104	6830	43	57	65	19.1	62.8	N/A	30.4	D
	8	97.703 (Madison-Fayette County Line)	98.516 (US 25)	0.81	65,700	0.104	6830	43	57	65	19.1	62.8	N/A	30.4	D
	9	98.516 (US 25)	103.89 (KY 418)	5.37	65,400	0.104	6800	43	57	65	19.1	62.9	N/A	30.3	D
	10	103.89 (KY 418)	108.21 (KY 1425 Man-O-War Underpass)	4.32	53,100	0.104	5520	43	57	65	19.1	65	N/A	23.8	С
	1	0 (KY 39)	3.556 (Kissing Ridge Road)	3.56	100	0.11	10	43	57	55	10.3	47.7	24.7	N/A	С
KY 1541	2	3.556 (Kissing Ridge Road)	4.500 (North of Pollard Pike)	0.94	500	0.11	60	43	57	55	10.3	45.4	31.3	N/A	с
KT 1341	3	4.500 (North of Pollard Pike)	7.000 (North of KY 1981)	2.50	1,300	0.11	140	43	57	55	10.3	42.4	40.9	N/A	D
	4	7.000 (North of KY 1981)	9.668 (KY 39)	2.67	1,300	0.11	140	43	57	55	10.3	42.4	40.9	N/A	D



Notes: ADT = 2007 Average Daily Traffic (count or estimate) from CTS Traffic Count Information K-Factor = Design Hour Factor obtained from KYTC 2004 Traffic Forecasting Report DHV = 2007 Design Hour Volume (Average Daily Traffic x K-Factor) Speed Limit obtained from Highway Information System % Trucks and Buses obtained from 2004 Vehicle Classification System Database. Roadways where data did not exist were estimated using KYTC 2004 Traffic Forecasting Report, and are italicized. Level of Service (LOS) and % Time Spent Following calculated using Highway Capacity Software Plus. % RVs were obtained from exhibit 12-14 of the HCM. Number of access points per mile were obtained from exhibit 12-4 of the HCM

Number of access points per mile were obtained from exhibit 12-4 of the HCM.

*45 mph was used as the posted speed since that is the lowest value HCS + accepts for two-lane highway analysis. ** Lane widths less than 9 ft were entered in as 9 ft since that is the HCS+ minimum.

Sources: Highway Information System Database, KYTC 2004 Traffic Forecasting Report, KYTC Vehicle Classification Database

Table 6: 2007 Corridor Levels of Service (cont.)

Route	Section	Begin Milepoint	End Milepoint	Section Length (miles)	2007 ADT	K-Factor	2007 DHV	Off Peak Direction %	Peak Direction %	Posted Speed Limit (MPH)	% Trucks	Estimated Travel Speed (MPH)	% T F
	1	20.255 (I-75 Bridge)	20.342 (North of I-75 Bridge)	0.09	13,800	0.101	1390	44	56	45	6.9	45	
	2	20.342 (North of I-75 Bridge)	20.49 (Keeneland Drive)	0.09	13,800	0.101	1390	44	56	45	6.9	45	
	3	20.49 (Keeneland Drive)	20.573 (Brandy Lane)	0.08	13,800	0.101	1390	44	56	45	6.9	45	
	4	20.573 (Brandy Lane)	20.771 (Keystone Drive)	0.20	13,800	0.101	1390	44	56	45	6.9	24.1	
	5	20.771 (Keystone Drive)	20.964 (KY 1156)	0.19	13,800	0.101	1390	44	56	45	6.9	22	
	6	20.964 (KY 1156)	21.139 (North of KY 1156)	0.18	6,100	0.101	620	44	56	45	6.9	27.1	
	7	21.139 (North of KY 1156)	24.076 (Clay Lane)	2.94	6,100	0.115	700	36	64	55	12.4	38.7	
US 25	8	24.076 (Clay Lane)	25.373 (KY 627/KY 3055)	1.30	3,600	0.115	410	36	64	55	12.4	41.5	
	9	25.373 (KY 627/KY 3055)	28.161 (KY 2884)	2.79	2,800	0.115	320	36	64	55	12.4	41.3	
	10	0 (South Limits of I-75 Interchange)	.366 (North of I-75 NB Ramps)	0.37	3,100	0.112	350	43	57	55	10.3	45.6	
	11	.366 (North of I-75 NB Ramps)	1.829 (South of Elk Lick Falls Road)	1.46	3,100	0.112	350	43	57	55	10.3	40.9	
	12	1.829 (South of Elk Lick Falls Road)	2.876 (North of Turner Station Road)	1.05	3,100	0.112	350	43	57	55	10.3	45.6	
	13	2.876 (North of Turner Station Road)	4.832 (KY 1975)	1.96	3,100	0.112	350	43	57	55	10.3	45.2	
	14	4.832 (KY 1975)	8.144 (KY 418)	3.31	4,400	0.112	490	43	57	55	10.3	44.7	
	15	8.144 (KY 418)	9.734 (Man O War Boulevard)	1.59	30,600	0.101	3090	44	56	55	6.9	53	
	1	3.025 (US 27)	3.68 (West of Leeburton Road)	0.66	3,300	0.115	380	36	64	55	10.2	40.1	
	2	3.68 (West of Leeburton Road)	4.06 (East of Noland Drive)	0.38	3,300	0.115	380	36	64	45	10.2	30.1	
	3	4.06 (East of Noland Drive)	4.69 (Ashgrove Lane)	0.63	3,300	0.115	380	36	64	55	10.2	40.1	
KY 1980	4	4.69 (Ashgrove Lane)	5.06 (East of Young Drive)	0.37	2,500	0.115	290	36	64	35	10.2		
	5	5.06 (East of Young Drive)	6.02 (West of Spurlock Lane)	0.96	2,500	0.115	290	36	64	55	10.2	39.9	
	6	6.02 (West of Spurlock Lane)	6.69 (East of Mackey Pike)	0.67	2,500	0.115	290	36	64	45	10.2	29.9	
	7	6.69 (East of Mackey Pike)	7.451 (Fayette County Line)	0.76	2,500	0.115	290	36	64	55	10.2	39.9	
	1	0.00 (KY 169)	.16 (South of KY 1975)	0.16	900	0.112	100	43	57	35	14		
	2	.16 (South of KY 1975)	1.667 (Crawley Lane)	1.51	900	0.112	100	43	57	55	14	41.7	
KY 4074	3	1.667 (Crawley Lane)	4.228 (Delong Road)	3.04	1,500	0.112	170	43	57	55	14	39.9	
KT 1974	4	4.228 (Delong Road)	4.711 (South of Hickman Creek Bridge)	0.48	6,500	0.1	650	44	56	55	8.7	35.1	
	5	4.711 (South of Hickman Creek Bridge)	5.443 (KY 1980)	0.73	6,500	0.1	650	44	56	55	8.7	35.1	
	6	5.443 (KY 1980)	7.782 (Man O War Boulevard)	2.34	10,000	0.1	1000	44	56	55	8.7	45	
	1	0.00 (KY 1541)	2.365 (Marble Creek Lane)	2.37	600	0.11	70	43	57	55	10.3	44.9	
	2	2.365 (Marble Creek Lane)	3.30 (South of KY 169)	0.94	600	0.11	70	43	57	55	10.3	44.9	
KY 1981	3	3.30 (South of KY 169)	3.668 (KY 169)	0.37	600	0.11	70	43	57	35	10.3		
	4	3.668 (KY 169)	3.998 (North of Caveson Way)	0.30	2,200	0.11	240	43	57	55	8.6	40.4	
	5	3.998 (North of Caveson Way)	6.13 (KY 1974 @ Fayette County Line)	2.13	2,200	0.11	240	43	57	55	8.6	40.4	



Notes: ADT = 2007 Average Daily Traffic (count or estimate) from CTS Traffic Count Information K-Factor = Design Hour Factor obtained from KYTC 2004 Traffic Forecasting Report DHV = 2007 Design Hour Volume (Average Daily Traffic x K-Factor) Speed Limit obtained from Highway Information System % Trucks and Buses obtained from 2004 Vehicle Classification System Database. Roadways where data did not exist were estimated using KYTC 2004 Traffic Forecasting Report, and are italicized. Level of Service (LOS) and % Time Spent Following calculated using Highway Capacity Software Plus. % RVs were obtained from exhibit 12-14 of the HCM.

Number of access points per mile were obtained from exhibit 12-4 of the HCM.

*45 mph was used as the posted speed since that is the lowest value HCS + accepts for two-lane highway analysis. ** Lane widths less than 9 ft were entered in as 9 ft since that is the HCS+ minimum.

Sources: Highway Information System Database, KYTC 2004 Traffic Forecasting Report, KYTC Vehicle Classification Database

ne Spent lowing	Density (pc/mi/ln)	LOS
N/A	10.6	Α
N/A	10.6	Α
N/A	10.6	А
82	N/A	D
82	N/A	D
64.9	N/A	С
67.2	N/A	E
52.8	N/A	D
56.9	N/A	D
59	N/A	с
59	N/A	D
59	N/A	с
59	N/A	с
50.4	N/A	D
N/A	20.8	С
56.4	N/A	D
56.4	N/A	E
56.4	N/A	D
55.4	N/A	E
55.4	N/A	E
55.4	N/A	E
36.6	N/A	D
44.8	N/A	E
66	N/A	E
66	N/A	E
N/A	8.1	А
32.6	N/A	D
32.6	N/A	D
51.4	N/A	D
51.4	N/A	D


Table 6: 2007 Corridor Levels of Service (cont.)

Route	Section	Begin Milepoint	End Milepoint	Section Length (miles)	2007 ADT	K-Factor	2007 DHV	Off Peak Direction %	Peak Direction %	Posted Speed Limit (MPH)	% Trucks	Estimated Travel Speed (MPH)	% Time Spent Following	Density (pc/mi/ln)	LOS
	1	1.349 (I-75 Underpass)	2.240 (Goggins Lane)	0.89	5,700	0.12	680	42	58	55	7.8	38.2	65.5	N/A	E
	2	2.240 (Goggins Lane)	3.082 (Boone Way)	0.84	4,300	0.12	520	42	58	55	7.8	39.3	61.1	N/A	E
	3	3.082 (Boone Way)	4.877 (Crutcher Pike)	1.80	4,300	0.115	490	36	64	55	7.8	41.4	60.3	N/A	D
	4	4.877 (Crutcher Pike)	6.184 (KY 1984)	1.31	1,400	0.115	160	36	64	55	7.8	43.1	43.8	N/A	D
	5	6.184 (KY 1984)	8.051 (KY 1985)	1.87	1,000	0.115	120	36	64	55	7.8	44	39.8	N/A	D
	6	8.051 (KY 1985)	8.478 (Buffalo Road)	0.43	600	0.115	70	36	64	55	7.8	45	34.5	N/A	с
	7	8.478 (Buffalo Road)	11.74 (Ervin Sloan East Road)	3.26	600	0.115	70	36	64	55	7.8	43.4	34.5	N/A	D
	8	11.74 (Ervin Sloan East Road)	11.869 (KY 1156 / Carvers Ferry Road)	0.13	600	0.115	70	36	64	55	7.8	43.4	34.5	N/A	D
	9	11.869 (KY 1156 / Carvers Ferry Road)	12.511 (Approach to Valley View Ferry)	0.64	400	0.115	50	36	64	55	7.8	44.3	32.2	N/A	D
KY 169	10	0.00 (Approach to Valley View Ferry)	1.939 (South of Newman Road)	1.94	600	0.115	70	36	64	55	5.2	46.5	34	N/A	С
	11	1.939 (South of Newman Road)	2.030 (North of KY 1974)	0.09	600	0.115	70	36	64	55	5.2	46.2	34.2	N/A	с
	12	2.030 (North of KY 1974)	3.598 (South of Burnside Drive)	1.57	1,200	0.115	140	36	64	55	5.2	44.1	41.3	N/A	D
	13	3.598 (South of Burnside Drive)	4.218 (KY 1981)	0.62	1,200	0.115	140	36	64	35	5.2				
	14	4.218 (KY 1981)	7.733 (Vince Road / Bethany Road)	3.52	3,600	0.115	410	36	64	55	5.2	41.6	56.8	N/A	D
	15	7.733 (Vince Road / Bethany Road)	9.482 (Locust Heights)	1.75	4,500	0.115	520	36	64	55	5.2	40.7	62.2	N/A	D
	16	9.482 (Locust Heights)	9.918 (North of Glencove Ave)	0.44	4,500	0.1	450	44	56	45	5.2	29.6	59.9	N/A	E
	17 18	9.918 (North of Glencove Ave)	10.028 (Liberty Street)	0.11	4,500	0.1	450	44	56	35	5.2				
		10.028 (Liberty Street)	10.362 (Bell Court)	0.33	3,800	0.1	380	44	56	35	5.2				
	19	10.362 (Bell Court)	10.458 (US 27)	0.10	3,800	0.1	380	44	56	25	5.2				
	1	0.00 (KY 595)	2.387 (Bogie Mill Road)	2.39	700	0.11	80	43	57	55	10.3	44.5	33.8	N/A	D
	2	2.387 (Bogie Mill Road)	3.99 (West of Redwood Drive)	1.60	1,300	0.11	140	43	57	55	10.3	40.8	40.9	N/A	D
	3	3.99 (West of Redwood Drive)	4.77 (Old Pond Way/Mule Shed Road)	0.78	1,300	0.11	140	43	57	45	10.3	32.4	40.9	N/A	E
KY 876	4	4.77 (Old Pond Way/Mule Shed Road)	5.15 (West of Curtis Pike)	0.38	2,500	0.11	280	43	57	45	10.3	28.4	54.9	N/A	E
	5	5.15 (West of Curtis Pike)	6.528 (Willis Branch Road)	1.38	2,500	0.11	280	43	57	45	10.3	29.5	54.9	N/A	E
	6	6.528 (Willis Branch Road)	6.95 (West of Amberly Way)	0.42	12,800	0.11	1410	43	57	45	10.3	23.1	82.3	N/A	E
	7	6.95 (West of Amberly Way)	7.097 (I-75 Ramp)	0.15	12,800	0.11	1410	43	57	45	10.3	27.3	82.3	N/A	E
	1	0.00 (US 25)	.64 (South of Secretariat Drive)	0.64	1,800	0.12	220	42	58	35	5.1				
	2	.64 (South of Secretariat Drive)	1.352 (Boone Way)	0.71	1,800	0.12	220	42	58	55	5.1	37.3	48.6	N/A	E
	3	1.352 (Boone Way)	4.5 (South of Clay Lane)	3.15	800	0.11	90	43	57	55	5.1	42.7	34.6	N/A	D
KY 1156	4	4.5 (South of Clay Lane)	5.68 (South of Kentucky River Road)	1.18	800	0.11	90	43	57	55	5.1	42.7	34.6	N/A	D
	5	5.68 (South of Kentucky River Road)	6.278 (Kentucky River Road)	0.60	800	0.11	90	43	57	55	5.1	42.7	34.6	N/A	D
	6	6.278 (Kentucky River Road)	8.7 (South of Tate Creek Bridge)	2.42	200	0.11	20	43	57	55	5.1	45.7	25.9	N/A	С
	7	8.7 (South of Tate Creek Bridge)	9.376 (KY 169)	0.68	200	0.11	20	43	57	55	5.1	45.7	25.9	N/A	С



Notes: ADT = 2007 Average Daily Traffic (count or estimate) from CTS Traffic Count Information K-Factor = Design Hour Factor obtained from KYTC 2004 Traffic Forecasting Report DHV = 2007 Design Hour Volume (Average Daily Traffic x K-Factor) Speed Limit obtained from Highway Information System % Trucks and Buses obtained from 2004 Vehicle Classification System Database. Roadways where data did not exist were estimated using KYTC 2004 Traffic Forecasting Report, and are italicized. Level of Service (LOS) and % Time Spent Following calculated using Highway Capacity Software Plus. % RVs were obtained from exhibit 12-14 of the HCM. Number of access points per mile were obtained from exhibit 12-4 of the HCM.

Number of access points per mile were obtained from exhibit 12-4 of the HCM.

*45 mph was used as the posted speed since that is the lowest value HCS + accepts for two-lane highway analysis. ** Lane widths less than 9 ft were entered in as 9 ft since that is the HCS+ minimum.



Table 6: 200	7 Corridor	Levels o	of Service	(cont.)
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Route	Section	Begin Milepoint	End Milepoint	Section Length (miles)	2007 ADT	K-Factor	2007 DHV	Off Peak Direction %	Peak Direction %	Posted Speed Limit (MPH)	% Trucks	Estimated Travel Speed (MPH)	% Time Spent Following	Density (pc/mi/ln)	LOS
	1	0.00 (North Bank of Kentucky River)	0.12 (KY 1541)	0.12	100	0.11	10	43	57	55	7.4	47.7	24.7	N/A	с
	2	0.12 (KY 1541)	2.454 (KY 1268)	2.33	100	0.11	10	43	57	55	7.4	47.7	24.7	N/A	С
	3	2.454 (KY 1268)	3.747 (Big Hickman Creek Bridge)	1.29	900	0.11	100	43	57	55	7.4	43.7	36	N/A	D
	4	3.747 (Big Hickman Creek Bridge)	5.56 (North of Old Sulphur Well Road)	1.81	900	0.11	100	43	57	55	7.4	44.8	36	N/A	D
	5	5.56 (North of Old Sulphur Well Road)	5.83 (North of Elmfork Road)	0.27	900	0.11	100	43	57	45	7.4	34.8	36	N/A	E
KY 39	6	5.83 (North of Elmfork Road)	7.550 (KY 1541)	1.72	900	0.11	100	43	57	55	7.4	44.8	36	N/A	D
	7	7.550 (KY 1541)	8.38 (South of Ash Drive)	0.83	3,400	0.11	370	43	57	55	7.4	41.3	60.7	N/A	D
	8	8.38 (South of Ash Drive)	8.548 (Ash Drive)	0.17	3,400	0.11	370	43	57	35	7.4				
	9	8.548 (Ash Drive)	8.875 (Miles Road)	0.33	3,400	0.1	340	44	56	35	7.4				
	10	8.875 (Miles Road)	9.29 (Hager Lane)	0.42	7,600	0.1	760	44	56	35	7.4				
	11	9.29 (Hager Lane)	9.404 (KY 29 / US 27)	0.11	7,600	0.1	760	44	56	25	7.4				
	1	6.561 (Nicholasville Road)	8.566 (Tates Creek Road)	2.01	31,900	0.1	3190	44	56	45	8.7	45	N/A	23.2	С
	2	8.566 (Tates Creek Road)	10.285 (Armstrong Mill Road)	1.72	26,600	0.1	2660	44	56	45	8.7	45	N/A	19.4	с
CS 4524	3	10.285 (Armstrong Mill Road)	11.821 (Alumni Drive)	1.54	37,300	0.1	3730	44	56	45	8.7	45	N/A	27.2	D
(Man O' War	4	11.821 (Alumni Drive)	12.792 (US 25 / Richmond Road)	0.97	44,800	0.1	4480	44	56	45	8.7	45	N/A	32.7	D
Blvd)	5	12.792 (US 25 / Richmond Road)	13.454 (Palumbo Drive)	0.66	34,300	0.1	3430	44	56	45	8.7	45	N/A	25	С
	6	13.454 (Palumbo Drive)	14.254 (KY 1927 / Todds Road)	0.80	41,600	0.1	4160	44	56	45	8.7	45	N/A	30.3	D
	7	14.254 (KY 1927 / Todds Road)	15.241 (I-75 / KY 1425)	0.99	39,100	0.1	3910	44	56	45	8.7	45	N/A	25.6	С
	1	16.014 (KY 876)	17.03 (Dry Branch Road)	1.02	600	0.11	70	43	57	55	8.6	43.4	32.5	N/A	D
	2	17.03 (Dry Branch Road)	20.78 (North of Sledd Branch Road)	3.75	700	0.11	80	43	57	55	8.6	42.9	33.7	N/A	D
KY 595	3	20.78 (North of Sledd Branch Road)	22.212 (New Road)	1.43	700	0.11	80	43	57	55	8.6	45.1	33.7	N/A	С
	4	22.212 (New Road)	24.55 (South of Poosey Ridge Road)	2.34	100	0.11	10	43	57	55	8.6	48.3	24.7	N/A	С
	5	24.55 (South of Poosey Ridge Road)	24.604 (Poosey Ridge Road)	0.05	100	0.11	10	43	57	55	8.6	47.2	24.7	N/A	С
	1	0.00 (Newby Road)	.751 (West of Kanatzar Lane)	0.75	700	0.11	80	43	57	55	8.6	42.9	33.7	N/A	D
KY 1984	2	.751 (West of Kanatzar Lane)	1.051 (West of Haden Heights)	0.30	700	0.11	80	43	57	55	8.6	44.5	33.7	N/A	D
	3	1.051 (West of Haden Heights)	2.06 (KY 169)	1.01	700	0.11	80	43	57	55	8.6	42.9	33.7	N/A	D
	1	0.00 (Whitlock Road / Baldwin Road)	.85 (East of Whitlock and Baldwin)	0.85	400	0.11	40	43	57	55	8.6	44.8	28.6	N/A	D
KY 1985	2	.85 (East of Whitlock and Baldwin)	1.399 (West of Tate Creek Bridge)	0.55	400	0.11	40	43	57	55	8.6	44.8	28.6	N/A	D
	3	1.399 (West of Tate Creek Bridge)	1.499 (KY 169)	0.10	400	0.11	40	43	57	55	8.6	46.4	28.6	N/A	с
	1	0.00 (White Hall Shrine Road)	1.54 (South of KY 627/US 25)	1.54	100	0.11	10	43	57	55	8.6	49.5	24.7	N/A	С
KT 3035	2	1.54 (South of KY 627/US 25)	1.593 (KY 627/US 25)	0.05	100	0.11	10	43	57	55	8.6	47.8	24.7	N/A	С
KY 4075	1	0.00 (KY 1974)	4.463 (Whites Lane)	4.46	1,300	0.11	140	43	57	55	6.1	42.6	40.5	N/A	D
19/5	2	4.463 (Whites Lane)	5.410 (US 25)	0.95	3,000	0.11	330	43	57	55	6.1	39.7	57.8	N/A	E



Notes: ADT = 2007 Average Daily Traffic (count or estimate) from CTS Traffic Count Information K-Factor = Design Hour Factor obtained from KYTC 2004 Traffic Forecasting Report DHV = 2007 Design Hour Volume (Average Daily Traffic x K-Factor) Speed Limit obtained from Highway Information System % Trucks and Buses obtained from 2004 Vehicle Classification System Database. Roadways where data did not exist were estimated using KYTC 2004 Traffic Forecasting Report, and are italicized. Level of Service (LOS) and % Time Spent Following calculated using Highway Capacity Software Plus. % RVs were obtained from exhibit 12-14 of the HCM.

Number of access points per mile were obtained from exhibit 12-4 of the HCM.

*45 mph was used as the posted speed since that is the lowest value HCS + accepts for two-lane highway analysis. ** Lane widths less than 9 ft were entered in as 9 ft since that is the HCS+ minimum.



Source: KY Transportation Cabinet, KY Office of Geographic Information, KY Infrastructure Authority

3.5 Future No-Build Traffic Operating Conditions

Traffic forecasts for each of the study segments were developed for the No-Build scenario for a future year of 2040. The methodology and findings for the future No-Build traffic forecasts are summarized below. For a more detailed explanation of the traffic forecast methodology, refer to **Appendix A** where the complete Traffic Forecast Methodology Report is included.

Traffic Forecast Methodology

To forecast traffic to 2040 volumes, historical growth rates were applied to the various roads in the study area. Each road was divided into segments based on the locations of count stations. A different growth rate based on the historical trends of the count stations was applied to each segment of road. In some cases, there were several roadway segments per count station; therefore, the same growth rate was applied to those segments.

There were some roadway segments that had unusually high growth rates based on historical trends. The historic counts were reviewed for these segments and there were generally three reasons for high historic growth rates. The first is that there was one year with a count that seemed erroneous, either being too high or low. If it seemed apparent that a miscount had occurred, that count was removed and the historical growth rate recalculated. The second reason for an unusually high growth rate is a major event on the roadway occurred, such as a development or widening of the road. If there is a point where traffic growth drastically spiked and continued from that point forward, it was assumed that a major event happened, and traffic growth was calculated based only on counts taken after the major event. The third reason for an unusually high growth rate is very low volumes on the roadway. On some roadways volumes were very low; therefore the growth rates were very high. For example, a roadway had an ADT of less than 100, and in ten years it grew to over 600. This would give a very high historic growth rate; however, because the roadway is small and rural, it is not likely to continue to grow at that rate for the next thirty years. Several roadways like this exist in the study area, and their growth rates were adjusted to be more in line with the growth rates of other similar roads.

Future No-Build Traffic Volumes

The 2040 future year No-Build traffic volumes were calculated by applying historic growth rates, as discussed above, to the various segments of roadway. The historic growth rates and 2040 no-build traffic volumes are shown in **Table 1**.

2040 Highway Level of Service and Delay

Table 7 displays the levels of service for each of the highway sections for the year 2040. **Figure 6** shows the level of service for each highway on a map.

Table 7: 2040 Corridor Levels of Service

Route	Section	Begin Milepoint	End Milepoint	Section Length (miles)	2040 ADT	K-Factor	2040 DHV	Off Peak Direction %	Peak Direction %	Posted Speed Limit (MPH)	% Trucks	Estimated Travel Speed	% Time Spent Following	Density (pc/mi/ln)	LOS
	1	0.0 (South of Nicholasville)	0.23 (Southbrook Drive)	0.23	13,800	0.112	1550	43	57	55	10.3	37.2	84.5	N/A	E
	2	0.23 (Southbrook Drive)	0.835 (John C Watts Drive)	0.61	13,800	0.1	1380	44	56	55	10.3	32	81.8	N/A	D
	3	0.835 (John C Watts Drive)	1.075 (Longview Drive)	0.24	14,400	0.1	1440	44	56	45	10.3	21.5	82.8	N/A	D
	4	1.075 (Longview Drive)	1.305 (Edgewood Drive)	0.23	17,500	0.1	1750	44	56	35	10.3				
	5	1.305 (Edgewood Drive)	1.586 (Natchez Trace)	0.28	33,400	0.1	3340	44	56	35	10.3				
US 27X	6	1.586 (Natchez Trace)	1.88 (Brown Street)	0.29	33,400	0.1	3340	44	56	35	10.3				
	7	1.88 (Brown Street)	2.112 (Chestnut Street)	0.23	23,800	0.1	2380	44	56	35	10.3				
	8	2.112 (Chestnut Street)	2.18 (KY 39/KY 29)	0.07	23,800	0.1	2380	44	56	25	10.3				
	9	2.18 (KY 39/KY 29)	2.38 (KY 169)	0.20	30,500	0.1	3050	44	56	25	10.3				
	10	2.38 (KY 169)	2.882 (Duncan Street)	0.50	35,900	0.1	3590	44	56	35	10.3				
	11	2.882 (Duncan Street)	3.89 (US 27 Bypass)	1.01	60,600	0.1	6060	44	56	35	10.3				
	1	0.0 (Garrard-Jessamine County Line)	1.115 (South of Old Danville Road)	1.12	21,200	0.101	2140	44	56	55	8.9	51	N/A	14.8	В
	2	1.115 (South of Old Danville Road)	3.826 (Greystone Drive/KY 1268)	2.71	21,200	0.101	2140	44	56	55	8.9	51	N/A	14.8	В
	3	3.826 (Greystone Drive/KY 1268)	6.011 (US 27 Bypass)	2.19	75,000	0.101	7580	44	56	55	8.9	51	N/A	N/A	F
US 27 (South	4	10.827 (US 27 Bypass)	11.016 (South of Old US 27 ROW)	0.19	74,400	0.101	7510	44	56	55	8.9	51	N/A	N/A	F
Downtown)	5	11.016 (South of Old US 27 ROW)	13.695 (Industry Parkway)	2.68	74,400	0.101	7510	44	56	55	8.9	49.4	N/A	N/A	F
	6	13.695 (Industry Parkway)	14.807 (KY 1980)	1.11	74,400	0.106	7890	40	60	55	8.9	51.4	N/A	N/A	F
	7	14.807 (KY 1980)	15.278 (Jessamine-Fayette County Line)	0.47	60,600	0.106	6420	40	60	55	8.9	51.4	N/A	N/A	F
	8	0.0 (Fayette-Jessamine Co. Line)	0.956 (Man O War)	0.96	146,700	0.101	14820	44	56	55	6.9	50.1	N/A	N/A	F
	1	87.185 (KY 876)	89.802 (US 25)	2.62	117,500	0.1	11750	44	56	65	16	67	N/A	N/A	F
	2	89.802 (US 25)	91.1 (North of US 25)	1.30	192,400	0.104	20010	43	57	65	16	70	N/A	N/A	F
	3	91.1 (North of US 25)	92.1 (North of Lexington Access Road)	1.00	192,400	0.104	20010	43	57	65	16	70	N/A	N/A	F
	4	92.1 (North of Lexington Access Road)	94.295 (South of KY 627)	2.20	192,400	0.104	20010	43	57	65	16	70	N/A	N/A	F
1-75	5	94.295 (South of KY 627)	94.73 (KY 627)	0.44	192,400	0.104	20010	43	57	65	16	70	N/A	N/A	F
1-75	6	94.73 (KY 627)	97.038 (US 25)	2.31	154,700	0.104	16090	43	57	65	19.1	70	N/A	N/A	F
	7	97.038 (US 25)	97.703 (Madison-Fayette County Line)	0.67	211,100	0.104	21950	43	57	65	19.1	70	N/A	N/A	F
	8	97.703 (Madison-Fayette County Line)	98.516 (US 25)	0.81	211,100	0.104	21950	43	57	65	19.1	70	N/A	N/A	F
	9	98.516 (US 25)	103.89 (KY 418)	5.37	114,100	0.104	11870	43	57	65	19.1	70	N/A	N/A	F
	10	103.89 (KY 418)	108.21 (KY 1425 Man-O-War Underpass)	4.32	140,800	0.104	14640	43	57	65	19.1	70	N/A	N/A	F
	1	0 (KY 39)	3.556 (Kissing Ridge Road)	3.56	100	0.11	10	43	57	55	10.3	47.7	24.7	N/A	С
KY 1541	2	3.556 (Kissing Ridge Road)	4.500 (North of Pollard Pike)	0.94	1,100	0.11	120	43	57	55	10.3	42.9	38.6	N/A	D
K1 1341	3	4.500 (North of Pollard Pike)	7.000 (North of KY 1981)	2.50	2,400	0.11	260	43	57	55	10.3	40.2	53.3	N/A	D
	4	7.000 (North of KY 1981)	9.668 (KY 39)	2.67	2,400	0.11	260	43	57	55	10.3	40.2	53.3	N/A	D

LOS E - F
LOS D
LOS A - C
Speed <45, Not Analyzed
Speed <45, Not Analyzed

Notes: ADT = 2040 Average Daily Traffic forecasted from 2007 ADT based on historical growth. K-Factor = Design Hour Factor obtained from KYTC 2004 Traffic Forecasting Report DHV = 2007 Design Hour Volume (Average Daily Traffic x K-Factor) Speed Limit obtained from Highway Information System % Trucks and Buses obtained from 2004 Vehicle Classification System Database. Roadways where data did not exist were estimated using KYTC 2004 Traffic Forecasting Report, and are italicized. Level of Service (LOS) and % Time Spent Following calculated using Highway Capacity Software Plus. % RVs were obtained from exhibit 12-14 of the HCM. Number of access points per mile were obtained from exhibit 12-4 of the HCM.

*45 mph was used as the posted speed since that is the lowest value HCS + accepts for two-lane highway analysis. ** Lane widths less than 9 ft were entered in as 9 ft since that is the HCS+ minimum.

Table 7: 2040 Corridor Levels of Service (cont.)

Route	Section	Begin Milepoint	End Milepoint	Section Length (miles)	2040 ADT	K-Factor	2040 DHV	Off Peak Direction %	Peak Direction %	Posted Speed Limit (MPH)	% Trucks	Estimated Travel Speed (MPH)	% Time Spent Following	Density (pc/mi/ln)	LOS
	1	20.255 (I-75 Bridge)	20.342 (North of I-75 Bridge)	0.09	36,600	0.101	3700	44	56	45	6.9	45	N/A	28.2	D
	2	20.342 (North of I-75 Bridge)	20.49 (Keeneland Drive)	0.09	36,600	0.101	3700	44	56	45	6.9	45	N/A	28.2	D
	3	20.49 (Keeneland Drive)	20.573 (Brandy Lane)	0.08	36,600	0.101	3700	44	56	45	6.9	45	N/A	28.2	D
	4	20.573 (Brandy Lane)	20.771 (Keystone Drive)	0.20	36,600	0.101	3700	44	56	45	6.9	N/A	99.4	N/A	F
	5	20.771 (Keystone Drive)	20.964 (KY 1156)	0.19	36,600	0.101	3700	44	56	45	6.9	N/A	99.4	N/A	F
	6	20.964 (KY 1156)	21.139 (North of KY 1156)	0.18	13,800	0.101	1390	44	56	45	6.9	22	82	N/A	D
	7	21.139 (North of KY 1156)	24.076 (Clay Lane)	2.94	13,800	0.115	1590	36	64	55	12.4	32.2	84.6	N/A	E
US 25	8	24.076 (Clay Lane)	25.373 (KY 627/KY 3055)	1.30	7,900	0.115	910	36	64	55	12.4	38.3	71.5	N/A	E
	9	25.373 (KY 627/KY 3055)	28.161 (KY 2884)	2.79	6,100	0.115	700	36	64	55	12.4	38.7	67.1	N/A	E
	10	0 (South Limits of I-75 Interchange)	.366 (North of I-75 NB Ramps)	0.37	3,900	0.112	440	43	57	55	10.3	45	59.1	N/A	с
	11	.366 (North of I-75 NB Ramps)	1.829 (South of Elk Lick Falls Road)	1.46	3,900	0.112	440	43	57	55	10.3	40.3	59.1	N/A	D
	12	1.829 (South of Elk Lick Falls Road)	2.876 (North of Turner Station Road)	1.05	3,900	0.112	440	43	57	55	10.3	45	59.1	N/A	с
	13	2.876 (North of Turner Station Road)	4.832 (KY 1975)	1.96	3,900	0.112	440	43	57	55	10.3	44.6	59.1	N/A	D
	14	4.832 (KY 1975)	8.144 (KY 418)	3.31	7,000	0.112	780	43	57	55	10.3	42.6	69.4	N/A	D
	15	8.144 (KY 418)	9.734 (Man O War Boulevard)	1.59	53,400	0.101	5390	44	56	55	6.9	53	N/A	38.1	E
	1	3.025 (US 27)	3.68 (West of Leeburton Road)	0.66	5,800	0.115	670	36	64	55	10.2	38.4	66.6	N/A	E
	2	3.68 (West of Leeburton Road)	4.06 (East of Noland Drive)	0.38	5,800	0.115	670	36	64	45	10.2	28.4	66.6	N/A	E
	3	4.06 (East of Noland Drive)	4.69 (Ashgrove Lane)	0.63	5,800	0.115	670	36	64	55	10.2	38.4	66.6	N/A	E
KY 1980	4	4.69 (Ashgrove Lane)	5.06 (East of Young Drive)	0.37	9,100	0.115	1050	36	64	35	10.2				
	5	5.06 (East of Young Drive)	6.02 (West of Spurlock Lane)	0.96	9,100	0.115	1050	36	64	55	10.2	36.4	75.3	N/A	E
	6	6.02 (West of Spurlock Lane)	6.69 (East of Mackey Pike)	0.67	9,100	0.115	1050	36	64	45	10.2	26.4	75.3	N/A	E
	7	6.69 (East of Mackey Pike)	7.451 (Fayette County Line)	0.76	9,100	0.115	1050	36	64	55	10.2	36.4	75.3	N/A	E
	1	0.00 (KY 169)	.16 (South of KY 1975)	0.16	1,200	0.112	130	43	57	35	14				
	2	.16 (South of KY 1975)	1.667 (Crawley Lane)	1.51	1,200	0.112	130	43	57	55	14	40.9	40.2	N/A	D
KY 1974	3	1.667 (Crawley Lane)	4.228 (Delong Road)	3.04	2,500	0.112	280	43	57	55	14	38.3	55.5	N/A	E
	4	4.228 (Delong Road)	4.711 (South of Hickman Creek Bridge)	0.48	12,900	0.1	1290	44	56	55	8.7	31	80	N/A	E
	5	4.711 (South of Hickman Creek Bridge)	5.443 (KY 1980)	0.73	12,900	0.1	1290	44	56	55	8.7	31	80	N/A	E
	6	5.443 (KY 1980)	7.782 (Man O War Boulevard)	2.34	31,100	0.1	3110	44	56	55	8.7	45	N/A	25.3	с
	1	0.00 (KY 1541)	2.365 (Marble Creek Lane)	2.37	600	0.11	70	43	57	55	10.3	44.9	32.6	N/A	D
	2	2.365 (Marble Creek Lane)	3.30 (South of KY 169)	0.94	600	0.11	70	43	57	55	10.3	44.9	32.6	N/A	D
KY 1981	3	3.30 (South of KY 169)	3.668 (KY 169)	0.37	500	0.11	60	43	57	35	10.3				
	4	3.668 (KY 169)	3.998 (North of Caveson Way)	0.30	7,100	0.11	780	43	57	55	8.6	37.7	70.6	N/A	E
	5	3.998 (North of Caveson Way)	6.13 (KY 1974 @ Fayette County Line)	2.13	7,100	0.11	780	43	57	55	8.6	37.7	70.6	N/A	E



Notes: ADT = 2040 Average Daily Traffic forecasted from 2007 ADT based on historical growth. K-Factor = Design Hour Factor obtained from KYTC 2004 Traffic Forecasting Report DHV = 2007 Design Hour Volume (Average Daily Traffic x K-Factor) Speed Limit obtained from Highway Information System % Trucks and Buses obtained from 2004 Vehicle Classification System Database. Roadways where data did not exist were estimated using KYTC 2004 Traffic Forecasting Report, and are italicized. Level of Service (LOS) and % Time Spent Following calculated using Highway Capacity Software Plus. % RVs were obtained from exhibit 12-14 of the HCM. Number of access points per mile were obtained from exhibit 12-4 of the HCM.

*45 mph was used as the posted speed since that is the lowest value HCS + accepts for two-lane highway analysis.
** Lane widths less than 9 ft were entered in as 9 ft since that is the HCS+ minimum.

Route	Section	Begin Milepoint	End Milepoint	Section Length (miles)	2040 ADT	K-Factor	2040 DHV	Off Peak Direction %	Peak Direction %	Posted Speed Limit (MPH)	% Trucks	Estimated Travel Speed (MPH)	% Time Spent Following	Density (pc/mi/ln)	LOS
	1	1.349 (I-75 Underpass)	2.240 (Goggins Lane)	0.89	15,100	0.12	1810	42	58	55	7.8	29.6	87.1	N/A	E
-	2	2.240 (Goggins Lane)	3.082 (Boone Way)	0.84	15,700	0.12	1880	42	58	55	7.8	29	87.9	N/A	E
	3	3.082 (Boone Way)	4.877 (Crutcher Pike)	1.80	15,700	0.115	1810	36	64	55	7.8	331.6	87.1	N/A	E
	4	4.877 (Crutcher Pike)	6.184 (KY 1984)	1.31	2,200	0.115	250	36	64	55	7.8	41.5	51.9	N/A	D
	5	6.184 (KY 1984)	8.051 (KY 1985)	1.87	1,400	0.115	160	36	64	55	7.8	43.1	43.8	N/A	D
	6	8.051 (KY 1985)	8.478 (Buffalo Road)	0.43	700	0.115	80	36	64	55	7.8	44.6	35.6	N/A	D
	7	8.478 (Buffalo Road)	11.74 (Ervin Sloan East Road)	3.26	700	0.115	80	36	64	55	7.8	43	35.6	N/A	D
	8	11.74 (Ervin Sloan East Road)	11.869 (KY 1156 / Carvers Ferry Road)	0.13	700	0.115	80	36	64	55	7.8	43	35.6	N/A	D
	9	11.869 (KY 1156 / Carvers Ferry Road)	12.511 (Approach to Valley View Ferry)	0.64	400	0.115	50	36	64	55	7.8	44.3	32.2	N/A	D
KY 169	10	0.00 (Approach to Valley View Ferry)	1.939 (South of Newman Road)	1.94	800	0.115	90	36	64	55	5.2	45.7	36.2	N/A	с
	11	1.939 (South of Newman Road)	2.030 (North of KY 1974)	0.09	800	0.115	90	36	64	55	5.2	45.4	36.4	N/A	с
	12	2.030 (North of KY 1974)	3.598 (South of Burnside Drive)	1.57	2,900	0.115	330	36	64	55	5.2	41.1	57.1	N/A	D
	13	3.598 (South of Burnside Drive)	4.218 (KY 1981)	0.62	2,900	0.115	330	36	64	35	5.2				
	14	4.218 (KY 1981)	7.733 (Vince Road / Bethany Road)	3.52	11,600	0.115	1330	36	64	55	5.2	35.8	80.5	N/A	E
	15	7.733 (Vince Road / Bethany Road)	9.482 (Locust Heights)	1.75	12,300	0.115	1410	36	64	55	5.2	35	82.2	N/A	E
	16	9.482 (Locust Heights)	9.918 (North of Glencove Ave)	0.44	12,300	0.1	1230	44	56	45	5.2	25.1	78.8	N/A	E
	17	9.918 (North of Glencove Ave)	10.028 (Liberty Street)	0.11	12,300	0.1	1230	44	56	35	5.2				
	18	10.028 (Liberty Street)	10.362 (Bell Court)	0.33	6,600	0.1	660	44	56	35	5.2				
	19	10.362 (Bell Court)	10.458 (US 27)	0.10	6,600	0.1	660	44	56	25	5.2				
	1	0.00 (KY 595)	2.387 (Bogie Mill Road)	2.39	1,700	0.11	190	43	57	55	10.3	41.2	46.4	N/A	D
	2	2.387 (Bogie Mill Road)	3.99 (West of Redwood Drive)	1.60	1,400	0.11	150	43	57	55	10.3	40.6	42	N/A	D
	3	3.99 (West of Redwood Drive)	4.77 (Old Pond Way/Mule Shed Road)	0.78	1,400	0.11	150	43	57	45	10.3	32.2	42	N/A	E
KY 876	4	4.77 (Old Pond Way/Mule Shed Road)	5.15 (West of Curtis Pike)	0.38	5,500	0.11	610	43	57	45	10.3	27.3	64.8	N/A	E
	5	5.15 (West of Curtis Pike)	6.528 (Willis Branch Road)	1.38	5,500	0.11	610	43	57	45	10.3	28.4	64.8	N/A	E
	6	6.528 (Willis Branch Road)	6.95 (West of Amberly Way)	0.42	27,100	0.11	2980	43	57	45	10.3	N/A	96.9	N/A	F
	7	6.95 (West of Amberly Way)	7.097 (I-75 Ramp)	0.15	27,100	0.11	2980	43	57	45	10.3	N/A	96.9	N/A	F
	1	0.00 (US 25)	.64 (South of Secretariat Drive)	0.64	5,400	0.12	650	42	58	35	5.1				
	2	.64 (South of Secretariat Drive)	1.352 (Boone Way)	0.71	5,400	0.12	650	42	58	55	5.1	35.2	65.3	N/A	E
	3	1.352 (Boone Way)	4.5 (South of Clay Lane)	3.15	3,000	0.11	330	43	57	55	5.1	38.2	57.6	N/A	E
KY 1156	4	4.5 (South of Clav Lane)	5.68 (South of Kentucky River Road)	1.18	3,000	0.11	330	43	57	55	5.1	38.2	57.6	N/A	E
KY 1156 -	5	5.68 (South of Kentucky River Road)	6.278 (Kentucky River Road)	0.60	3,000	0.11	330	43	57	55	5.1	38.2	57.6	N/A	E
	6	6.278 (Kentucky River Road)	8.7 (South of Tate Creek Bridge)	2.42	300	0.11	30	43	57	55	5.1	45.3	27.2	N/A	с
	7	8.7 (South of Tate Creek Bridge)	9.376 (KY 169)	0.68	300	0.11	30	43	57	55	5.1	45.3	27.2	N/A	С



Notes: ADT = 2040 Average Daily Traffic forecasted from 2007 ADT based on historical growth. K-Factor = Design Hour Factor obtained from KYTC 2004 Traffic Forecasting Report DHV = 2007 Design Hour Volume (Average Daily Traffic x K-Factor) Speed Limit obtained from Highway Information System % Trucks and Buses obtained from 2004 Vehicle Classification System Database. Roadways where data did not exist were estimated using KYTC 2004 Traffic Forecasting Report, and are italicized. Level of Service (LOS) and % Time Spent Following calculated using Highway Capacity Software Plus. % Trucks are robained from exhibit 12-14 of the HCM. Number of access points per mile were obtained from exhibit 12-4 of the HCM.

Number of access points per mile were obtained from exhibit 12-4 of the HCM.

*45 mph was used as the posted speed since that is the lowest value HCS + accepts for two-lane highway analysis.
** Lane widths less than 9 ft were entered in as 9 ft since that is the HCS+ minimum.

Table 7: 2040 Corridor	Levels of	f Service	(cont.)
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Route	Section	Begin Milepoint	End Milepoint	Section Length (miles)	2040 ADT	K-Factor	2040 DHV	Off Peak Direction %	Peak Direction %	Posted Speed Limit (MPH)	% Trucks	Estimated Travel Speed (MPH)	% Time Spent Following	Density (pc/mi/ln)	LOS
	1	0.00 (North Bank of Kentucky River)	0.12 (KY 1541)	0.12	100	0.11	10	43	57	55	7.4	47.7	24.7	N/A	с
	2	0.12 (KY 1541)	2.454 (KY 1268)	2.33	100	0.11	10	43	57	55	7.4	47.7	24.7	N/A	С
	3	2.454 (KY 1268)	3.747 (Big Hickman Creek Bridge)	1.29	1,700	0.11	190	43	57	55	7.4	41.4	46	N/A	D
	4	3.747 (Big Hickman Creek Bridge)	5.56 (North of Old Sulphur Well Road)	1.81	1,700	0.11	190	43	57	55	7.4	42.5	46	N/A	D
	5	5.56 (North of Old Sulphur Well Road)	5.83 (North of Elmfork Road)	0.27	1,700	0.11	190	43	57	45	7.4	32.5	46	N/A	E
KY 39	6	5.83 (North of Elmfork Road)	7.550 (KY 1541)	1.72	1,700	0.11	190	43	57	55	7.4	42.5	46	N/A	D
	7	7.550 (KY 1541)	8.38 (South of Ash Drive)	0.83	5,600	0.11	620	43	57	55	7.4	40	64.9	N/A	D
	8	8.38 (South of Ash Drive)	8.548 (Ash Drive)	0.17	5,600	0.11	620	43	57	35	7.4				
	9	8.548 (Ach Drive)	8.875 (Miles Boad)	0.33	5,600	0.1	560	44	56	35	7.4				
	10	8.875 (Miles Road)	9.29 (Hager Lane)	0.42	17,700	0.1	1770	44	56	35	7.4				
	11	9.29 (Hagor Lano)	9.404 (KX 29 / US 27)	0.11	17,700	0.1	1770	44	56	25	7.4				
	1	6.561 (Nicholasville Road)	8.566 (Tates Creek Road)	2.01	77,600	0.1	7760	44	56	45	8.7	45	N/A	N/A	F
	2	8.566 (Tates Creek Road)	10.285 (Armstrong Mill Road)	1.72	51,300	0.1	5130	44	56	45	8.7	45	N/A	38.4	Е
CS 4524	3	10.285 (Armstrong Mill Road)	11.821 (Alumni Drive)	1.54	98,900	0.1	9890	44	56	45	8.7	45	N/A	N/A	F
(Man O'	4	11.821 (Alumni Drive)	12.792 (US 25 / Richmond Road)	0.97	135,900	0.1	13590	44	56	45	8.7	45	N/A	N/A	F
Blvd)	5	12.792 (US 25 / Richmond Road)	13.454 (Palumbo Drive)	0.66	73,300	0.1	7330	44	56	45	8.7	45	N/A	N/A	F
	6	13.454 (Palumbo Drive)	14.254 (KY 1927 / Todds Road)	0.80	63,900	0.1	6390	44	56	45	8.7	45	N/A	N/A	F
	7	14.254 (KY 1927 / Todds Road)	15.241 (I-75 / KY 1425)	0.99	56,100	0.1	5610	44	56	45	8.7	45	N/A	43.1	E
	1	16.014 (KY 876)	17.03 (Dry Branch Road)	1.02	700	0.11	80	43	57	55	8.6	42.9	33.7	N/A	D
	2	17.03 (Dry Branch Road)	20.78 (North of Sledd Branch Road)	3.75	2,600	0.11	290	43	57	55	8.6	38.4	55.5	N/A	Е
KY 595	3	20.78 (North of Sledd Branch Road)	22.212 (New Road)	1.43	2,600	0.11	290	43	57	55	8.6	40.6	55.5	N/A	D
	4	22.212 (New Road)	24.55 (South of Poosev Ridge Road)	2.34	200	0.11	20	43	57	55	8.6	47.9	26	N/A	с
	5	24.55 (South of Poosev Ridge Road)	24.604 (Poosev Ridge Road)	0.05	200	0.11	20	43	57	55	8.6	46.8	26	N/A	с
	1	0.00 (Newby Road)	.751 (West of Kanatzar Lane)	0.75	3,200	0.11	350	43	57	55	8.6	38.7	59.7	N/A	E
KY 1984	2	.751 (West of Kanatzar Lane)	1.051 (West of Haden Heights)	0.30	3,200	0.11	350	43	57	55	8.6	40.3	59.7	N/A	D
	3	1.051 (West of Haden Heights)	2.06 (KY 169)	1.01	3,200	0.11	350	43	57	55	8.6	38.7	59.7	N/A	E
	1	0.00 (Whitlock Road / Baldwin Road)	.85 (East of Whitlock and Baldwin)	0.85	500	0.11	60	43	57	55	8.6	43.8	31.2	N/A	D
KY 1985	2	.85 (Fast of Whitlock and Baldwin)	1.399 (West of Tate Creek Bridge)	0.55	500	0.11	60	43	57	55	8.6	43.8	31.2	N/A	D
	3	(West of Tate Creek Bridge)	1.499 (KY 169)	0.10	500	0.11	60	43	57	55	8.6	45.4	31.2	N/A	с
10/	1	0.00 (White Hall Shrine Road)	1.54 (South of KY 627/US 25)	1.54	100	0.11	10	43	57	55	8.6	49.5	24.7	N/A	С
KY 3055	2	1.54 (South of KY 627/US 25)	1.593 (KY 627/US 25)	0.05	100	0.11	10	43	57	55	8.6	47.8	24.7	N/A	с
	1	0.00 (KY 1974)	4.463 (Whites Lane)	4.46	3,700	0.11	410	43	57	55	6.1	40	57.9	N/A	Е
KY 1975	2	4.463 (Whites Lane)	5.410 (US 25)	0.95	7,200	0.11	790	43	57	55	6.1	37.7	70.5	N/A	E



Notes: ADT = 2040 Average Daily Traffic forecasted from 2007 ADT based on historical growth. K-Factor = Design Hour Factor obtained from KYTC 2004 Traffic Forecasting Report DHV = 2007 Design Hour Volume (Average Daily Traffic x K-Factor) Speed Limit obtained from Highway Information System % Trucks and Buses obtained from 2004 Vehicle Classification System Database. Roadways where data did not exist were estimated using KYTC 2004 Traffic Forecasting Report, and are italicized. Level of Service (LOS) and % Time Spent Following calculated using Highway Capacity Software Plus. % RVs were obtained from exhibit 12-14 of the HCM.

*45 mph was used as the posted speed since that is the lowest value HCS + accepts for two-lane highway analysis. ** Lane widths less than 9 ft were entered in as 9 ft since that is the HCS+ minimum.



Figure 6: 2040 Corridor Levels of Service

3.6 Crash Analysis

Crash Analysis Methodology

The Kentucky Transportation Cabinet provided crash data for a three-year period from January 1, 2004 through December 31, 2006. **Figure 7** shows the locations of these crashes by crash type (fatality, injury or property damage only).

Crash rates were computed for specific segments of each major study area highway using the methodology provided in the crash analysis report periodically published by the Kentucky Transportation Center (KTC)¹. The section crash rates are based on the number of crashes on a specified section, the average daily traffic on the roadway, the time frame of analysis, and the length of the section. They are expressed in terms of crashes per 100 million vehicle-miles. A section's crash rate was then compared to a statewide critical crash rate² derived from critical crash rate tables for highway sections in the KTC crash report (Appendix D of KTC crash report). This comparison is expressed as a ratio of the section crash rate to the critical crash rate and is referred to as the critical crash rate factor. Sections with a critical crash rate factor greater than one indicate that it is more likely a crash will occur at this location than other similar locations throughout the state, and there is a potential improvement to the location that can make it safer.

The section crash rate is also compared directly to the statewide average crash rate presented in the KTC crash report. The statewide averages consider all crashes for a specified period that are listed in the Collision Report Analysis for Safer Highways (CRASH) database maintained by the Kentucky State Police and stratified by functional classification (Table B-2 in KTC crash report). Section rates that exceed the statewide average crash rate but not the critical crash rate may be problem areas, but they are not statistically proven to be higher crash areas. Therefore, this second comparison is used to identify a second tier of highway sections that may have crash problems and could be considered for safety improvements if warranted based on further analysis.

Section Crash Analysis

For the major roadways within the study area, many of the observed section crash rates exceed the critical crash rate for that roadway type. The critical crash rate factors range from 0.08 to 8.90. US 27 through downtown Nicholasville, most of Man O' War Boulevard, US 25 north of the Kentucky River and many state roads between US 27 and I-75 have sections whose critical crash rate exceeds the statewide critical rate. There are many other sections along US 27, I-75 and state highways in between the two that are not confirmed high crash rate sections (i.e. they do no exceed the critical crash rate), but their current crash rates exceed the statewide average crash rate.

¹ <u>Analysis of Traffic Crash Data in Kentucky (2002 – 2006)</u>, Kentucky Transportation Center Research Report KTC-07-26/KSP2-07-1F.

 $^{^{2}}$ The critical crash rate is the threshold above which an analyst can be statistically certain (at a 99.5% confidence level) that the section crash rate exceeds the average crash rate for a similar roadway and is not mistakenly shown as higher than the average due to randomly occurring crashes.

Table 8 shows the crash statistics for the segments analyzed and Figure 8 shows the segments on a map.



Source: KY Transportation Cabinet, KY Office of Geographic Information, KY Infrastructure Authority

Table 8: Crash Rates by Segment

Route	Section	Begin Milepoint	End Milepoint	Total Crashes	Average Daily Traffic	Section Length (miles)	Exposure "M" (100 or 1 MVM)	Statewide Average Crash Rate	Section Crash Rate	Statewide Critical Crash Rate	Critical Crash Rate Factor
116 272	1	0.000 (South of Nicholasville)	1.075 (Longview Drive)	37	10,540	1.075	0.124	242	298	360	0.83
(Downtown Nicholasville)	2	1.076 (Longview Drive)	2.180 (KY 39/KY 29)	126	20,220	1.104	0.244	242	515	332	1.55
	3	2.181 (KY 39/KY 29)	3.890 (US 27 Bypass)	323	27,090	1.709	0.507	242	637	311	2.05
	1	0.000 (Garrard-Jessamine Co Line)	3.826 (Greystone Drive/KY 1268)	159	19,200	3.826	0.804	100	198	317	0.62
US 27 (South and	2	3.827 (Greystone Drive/KY 1268)	6.011 (US 27 Bypass-South End)	61	24,600	2.184	0.588	100	104	321	0.32
US 27 (South and North of Downtown	3	10.827 (US 27 Bypass-North End)	13.695 (Industry Parkway)	374	38,700	2.868	1.215	100	308	486	0.63
	4	13.696 (Industry Parkway)	15.278 (Jessamine-Fayette Co Line)	102	38,220	1.582	0.662	92	154	286	0.54
	5	0.000 (Jessamine-Fayette Co Line)	0.956 (Man O War Blvd)	206	55,300	0.956	0.579	100	356	501	0.71
	1	87.185 (KY 876)	89.802 (US 25)	90	53,700	2.617	1.539	75	58	111	0.53
	2	89.803 (US 25)	94.730 (KY 627)	181	65,900	4.927	3.555	42	51	61	0.83
1-75	3	94.731 (KY 627)	97.038 (US 25)	97	62,200	2.307	1.571	42	62	65	0.95
1-75	4	97.039 (US 25)	98.516 (US 25)	47	65,700	1.477	1.063	42	44	69	0.64
	5	98.517 (US 25)	103.890 (KY 418)	146	65,400	5.373	3.848	42	38	61	0.62
	6	103.891 (KY 418)	108.21 (KY 1425/Man O War Blvd)	137	53,100	4.319	2.511	42	55	62	0.88

Critical Crash Rate Factor >1, Section Crash Rate Exceeds Statewide Critical Rate (High Crash Rate Section)

Critical Crash Rate Factor <1, Section Crash Rate Exceeds Statewide Average Rate

Critical Crash Rate Factor <1, Section Crash Rate Lower Than Statewide Average Rate

Notes:

Analysis Period: 3 Years (2004 to 2006)

Crash rates are expressed in crashes per 100 MVM (100 million vehicle miles traveled)

Exposure (M) = [(ADT) x (365) x (Time Frame of Analysis (Years)) x (Section Length)] / 100,000,000 Section Crash Rate = Total Crashes / Exposure

Critical Crash Rate Factor = Section Crash Rate / Statewide Critical Crash Rate

ADT = Average Daily Traffic, MVM = Million Vehicle Miles

Sources: Crash data for 2004 to 2006 from KYTC Data

Route	Section	Begin Milepoint	End Milepoint	Total Crashes	Average Daily Traffic	Section Length (miles)	Exposure "M" (100 or 1 MVM)	Statewide Average Crash Rate	Section Crash Rate	Statewide Critical Crash Rate	Critical Crash Rate Factor
	1	20.255 (I-75 Bridge)	20.964 (KY 1156)	112	13,800	0.709	0.107	297	1045	368	2.84
	2	20.965 (KY 1156)	24.076 (Clay Lane)	35	6,300	3.111	0.215	206	163	303	0.54
	3	24.077 (Clay Lane)	25.373 (KY 627/KY 3055)	14	3,600	1.296	0.051	206	274	377	0.73
118.25	4	25.374 (KY 627/KY 3055)	28.161 (KY 2328)	16	2,800	2.787	0.085	206	187	346	0.54
03 25	5	0.000 (South Limits of I-75)	2.876 (North of Turner Station Rd)	54	3,100	2.876	0.098	177	553	338	1.64
	6	2.877 (North of Turner Station Rd)	4.832 (KY 1975)	24	3,100	1.955	0.066	177	362	354	1.02
	7	4.833 (KY 1975)	8.144 (KY 418)	447	4,400	3.311	0.160	177	2802	315	8.90
	8	8.144 (KY 418)	9.734 (Man O War Blvd)	183	30,600	1.590	0.533	297	343	325	1.06
	1	3.025 (US 27)	4.690 (Ashgrove Lane)	43	3,300	1.665	0.060	206	715	365	1.96
KY 1980	2	4.691 (Ashgrove Lane)	6.690 (East of Mackey Pike)	33	2,500	1.999	0.055	206	603	368	1.64
	3	6.691 (East of Mackey Pike)	7.451 (Fayette County Line)	21	2,500	0.760	0.021	206	1009	470	2.15
	1	0.000 (KY 169)	1.667 (Crawley Lane)	14	900	1.667	0.016	177	852	504	1.69
KV 1074	2	1.668 (Crawley Lane)	4.228 (Delong Road)	20	1,500	2.56	0.042	177	476	400	1.19
KT 1974	3	4.229 (Delong Road)	5.443 (KY 1980)	8	6,500	1.214	0.086	242	93	393	0.24
	4	5.443 (KY 1980)	7.782 (Man O War Boulevard)	88	10,300	2.339	0.264	242	334	531	0.63

Critical Crash Rate Factor >1, Section Crash Rate Exceeds Statewide Critical Rate (High Crash Rate Section)

Critical Crash Rate Factor <1, Section Crash Rate Exceeds Statewide Average Rate

Critical Crash Rate Factor <1, Section Crash Rate Lower Than Statewide Average Rate

Analysis Period: 3 Years (2004 to 2006) Crash rates are expressed in crashes per 100 MVM (100 million vehicle miles traveled)

Exposure (M) = [(ADT) x (365) x (Time Frame of Analysis (Years)) x (Section Length)] / 100,000,000

Section Crash Rate = Total Crashes / Exposure

Critical Crash Rate Factor = Section Crash Rate / Statewide Critical Crash Rate

ADT = Average Daily Traffic, MVM = Million Vehicle Miles

Sources: Crash data for 2004 to 2006 from KYTC Data

Notes:

Route	Section	Begin Milepoint	End Milepoint	Total Crashes	Average Daily Traffic	Section Length (miles)	Exposure "M" (100 or 1 MVM)	Statewide Average Crash Rate	Section Crash Rate	Statewide Critical Crash Rate	Critical Crash Rate Factor
KY 1981	1	0.000 (KY 1541)	3.668 (KY 169)	22	600	3.668	0.024	224	913	463	1.97
	2	3.669 (KY 169)	6.130 (KY 1974 @ Fayette Co Line)	61	2,200	2.461	0.059	189	1029	368	2.80
	1	1.349 (I-75 Underpass)	3.082 (Boone Way)	28	5,110	1.733	0.097	106	289	374	0.77
	2	3.083 (Boone Way)	4.877 (Crutcher Pike)	9	4,500	1.794	0.088	206	102	339	0.30
KY 169	3	4.878 (Crutcher Pike)	6.184 (KY 1984)	8	1,400	1.306	0.020	206	400	472	0.85
	4	6.185 (KY 1984)	8.051 (KY 1985)	4	1,000	1.866	0.020	206	196	461	0.42
	5	8.052 (KY 1985)	11.869 (KY 1156)	16	600	3.817	0.025	206	638	458	1.39
	6	11.870 (KY 1156)	12.511 (Approach to Valley View)	1	400	0.641	0.003	206	356	964	0.37
	7	0.000 (Approach to Valley View)	2.030 (North of KY 1974)	10	600	2.03	0.013	206	750	526	1.43
	8	2.031 (North of KY 1974)	4.218 (KY 1981)	18	1,200	2.187	0.029	206	626	426	1.47
	9	4.219 (KY 1981)	7.733 (Vince Rd/Bethany Rd)	43	3,600	3.514	0.139	206	310	321	0.97
	10	7.734 (Vince Rd/Bethany Rd)	9.482 (Locust Heights)	21	4,500	1.748	0.086	206	244	341	0.71
	11	9.483 (Locust Heights)	10.458 (US 27)	35	4,190	0.975	0.045	242	782	431	1.82

Critical Crash Rate Factor >1, Section Crash Rate Exceeds Statewide Critical Rate (High Crash Rate Section) Critical Crash Rate Factor <1, Section Crash Rate Exceeds Statewide Average Rate

Critical Crash Rate Factor <1, Section Crash Rate Lower Than Statewide Average Rate

Notes:

Analysis Period: 3 Years (2004 to 2006)

Crash rates are expressed in crashes per 100 MVM (100 million vehicle miles traveled)

Exposure (M) = [(ADT) x (365) x (Time Frame of Analysis (Years)) x (Section Length)] / 100,000,000

Section Crash Rate = Total Crashes / Exposure

Critical Crash Rate Factor = Section Crash Rate / Statewide Critical Crash Rate ADT = Average Daily Traffic, MVM = Million Vehicle Miles

Sources:

Crash data for 2004 to 2006 from KYTC Data

Route	Section	Begin Milepoint	End Milepoint	Total Crashes	Average Daily Traffic	Section Length (miles)	Exposure "M" (100 or 1 MVM)	Statewide Average Crash Rate	Section Crash Rate	Statewide Critical Crash Rate	Critical Crash Rate Factor
KV 1075	1	0.000 (KY 1974)	4.463 (Whites Lane)	18	1,500	4.463	0.073	224	246	351	0.70
	2	4.464 (Whites Lane)	5.410 (US 25)	1	3,100	0.946	0.032	224	31	412	0.08
	1	0.000 (N. Bank of Kentucky River)	2.454 (KY 1268)	14	100	2.454	0.003	224	5210	966	5.39
KY 39	2	2.455 (KY 1268)	7.550 (KY 1541)	24	900	5.095	0.050	224	478	376	1.27
	3	7.551 (KY 1541)	8.875 (Miles Road)	11	3,400	1.324	0.049	224	223	380	0.59
	4	8.876 (Miles Road)	9.404 (KY 29/US 27)	36	7,600	0.528	0.044	242	819	426	1.92
	1	0.000 (KY 39)	3.556 (Kissing Ridge Road)	4	100	3.556	0.004	224	1027	848	1.21
KY 1541	2	3.557 (Kissing Ridge Road)	4.500 (North of Pollard Pike)	6	500	0.943	0.005	224	1162	720	1.61
	3	4.501 (North of Pollard Pike)	9.668 (KY 39)	19	1,300	5.167	0.074	224	258	348	0.74
KV 505	1	16.014 (KY 876)	22.212 (New Road)	4	850	6.198	0.058	189	69	372	0.19
11 355	2	22.213 (New Road)	24.604 (Poosey Ridge Road)	2	100	2.391	0.003	189	764	1058	0.72

Critical Crash Rate Factor >1, Section Crash Rate Exceeds Statewide Critical Rate (High Crash Rate Section)

Critical Crash Rate Factor <1, Section Crash Rate Exceeds Statewide Average Rate

Critical Crash Rate Factor <1, Section Crash Rate Lower Than Statewide Average Rate

Notes:

Analysis Period: 3 Years (2004 to 2006) Crash rates are expressed in crashes per 100 MVM (100 million vehicle miles traveled) Exposure (M) = [(ADT) x (365) x (Time Frame of Analysis (Years)) x (Section Length)] / 100,000,000 Section Crash Rate = Total Crashes / Exposure Critical Crash Rate Factor = Section Crash Rate / Statewide Critical Crash Rate ADT = Average Daily Traffic, MVM = Million Vehicle Miles

Sources:

Crash data for 2004 to 2006 from KYTC Data Statewide Rates from KTC Research Report KTC-07-26/KSP2-07-1F, Analysis of Traffic Crash Data in Kentucky (2002 - 2006)

Route	Section	Begin Milepoint	End Milepoint	Total Crashes	Average Daily Traffic	Section Length (miles)	Exposure "M" (100 or 1 MVM)	Statewide Average Crash Rate	Section Crash Rate	Statewide Critical Crash Rate	Critical Crash Rate Factor
KY 876	1	0.000 (KY 595)	2.387 (Bogie Mill Road)	31	700	2.387	0.018	224	1694	494	3.43
	2	2.388 (Bogie Mill Road)	4.770 (Old Pond Way/Mule Shed)	22	1,300	2.382	0.034	224	649	413	1.57
	3	4.771 (Old Pond Way/Mule Shed)	6.528 (Willis Branch Road)	26	2,500	1.757	0.048	224	541	382	1.42
	4	6.529 (Willis Branch Road)	7.097 (I-75 Ramp)	16	12,800	0.568	0.080	224	201	359	0.56
	1	0.000 (US 25)	1.352 (Boone Way)	5	1,800	1.352	0.027	106	188	502	0.37
KY 1156	2	1.353 (Boone Way)	6.278 (Kentucky River Road)	24	800	4.925	0.043	224	556	391	1.42
	3	6.279 (Kentucky River Road)	9.376 (KY 169)	4	200	3.097	0.007	224	590	743	0.79
	1	6.561 (Nicholasville Road)	8.566 (Tates Creek Road)	267	31,900	2.01	0.700	242	381	317	1.20
	2	8.566 (Tates Creek Road)	10.285 (Armstrong Mill Road)	108	25,600	1.72	0.482	242	224	327	0.69
Man O War	3	10.285 (Armstrong Mill Road)	11.821 (Alumni Drive)	298	35,200	1.54	0.592	242	503	323	1.56
Man O war	4	11.821 (Alumni Drive)	12.792 (US 25 / Richmond Road)	224	44,800	0.97	0.476	242	470	326	1.44
	5	12.792 (US 25 / Richmond Road)	13.454 (Palumbo Drive)	238	32,800	0.66	0.238	242	1001	350	2.86
	6	13.454 (Palumbo Drive)	15.241 (I-75 / KY 1425)	608	40,350	1.790	0.791	242	769	316	2.43

Critical Crash Rate Factor >1, Section Crash Rate Exceeds Statewide Critical Rate (High Crash Rate Section) Critical Crash Rate Factor <1, Section Crash Rate Exceeds Statewide Average Rate Critical Crash Rate Factor <1, Section Crash Rate Lower Than Statewide Average Rate

Notes:

Analysis Period: 3 Years (2004 to 2006)

Crash rates are expressed in crashes per 100 MVM (100 million vehicle miles traveled)

Exposure (M) = [(ADT) x (365) x (Time Frame of Analysis (Years)) x (Section Length)] / 100,000,000

Section Crash Rate = Total Crashes / Exposure

Critical Crash Rate Factor = Section Crash Rate / Statewide Critical Crash Rate ADT = Average Daily Traffic, MVM = Million Vehicle Miles

Sources:

Crash data for 2004 to 2006 from KYTC Data



Figure 8: Crash Rates by Segment

Crash Report Analysis

Because of the number of crashes within the primary study area, an additional crash analysis was conducted to look at severity and crash type.

A breakdown of the crash severity for the entire area is provided below.

<u>Severity</u>	Number of Crashes	Percentage
Property Damage Only	4,318	76.8%
Injury	1,267	22.6%
Fatality	34	<u>0.6%</u>
, ,	5.619	100%

The majority of crashes were property damage only (PDO) crashes (4,318). Over onefifth of the crashes involved at least one injury, and thirty-four fatal crashes occurred between 2004 and 2006. Of the thirty-four crashes that involved a fatality, fourteen were angle crashes, thirteen were single vehicle crashes, five were head on crashes, one was an opposing left turn crash and one was a sideswipe in the opposite direction crash. The weather was not a contributing factor in the majority of the crashes.

A review of all crash types for the study area was performed to determine the most frequent type. **Figure 9** shows the results.



Figure 9: Crash Types (2004 – 2006)

The majority of crashes were rear end crashes (approximately 49%), although there were also a significant number of angle, sideswipe, and single vehicle crashes.

3.7 Multimodal Facilities (Pedestrian, Bicycle, and Transit)

Currently, limited transit facilities exist in the study area. In Fayette County, bus service is offered through LEXTRAN. Within the study area there are three major routes:

- 1. Route 34: Centre Parkway Hamburg Pavillion (serves the northeastern portion of the study area)
- 2. Route 36: South Side Connector (serves the northwestern portion of the study area)
- 3. Brown Route No. 2: Newtown Tates Creek in Fayette County (serves the north central portion of the study area)

The other two counties do not offer regularly scheduled public transit service. Discussions are currently being made to address the extension of LEXTRAN service into some portions of North Jessamine County, but no definite plans have been executed.

It is KYTC's policy to consider provision of bicycle and pedestrian facilities as appropriate. Currently, the Lexington Area Metropolitan Planning Organization (MPO) has a regional Bicycle and Pedestrian Master Plan that includes some portions of Fayette and Jessamine Counties in the study area. The plan describes a "complete streets" plan that states that roadways designated as "complete streets" should be able to accommodate bicycles and pedestrians. Roadways within the study area that are part of the complete streets plan include US 27, Man O' War Boulevard, KY 1974, US 27, and portions of KY 169, KY 39, and KY 1980. The Master Plan also outlines a greenway trails program. As part of this plan, there is a proposed off-road trail that would extend from US 27 to the Kentucky River ending at Tates Creek Road in Fayette County. There are also various commuter and recreational bike routes throughout the study area. Commuter bike routes exist along US 27, KY 1980, KY 39 and US 25. Recreational bike routes exist on KY 39, KY 1541, KY 1981, KY 169, KY 1974, KY 1975, and KY 1156. Due to the rural and scenic nature of the study area, bicycling along the low-volume rural roads is very popular. The area also has potential to attract bicycle tourism.

3.8 Existing and Future No-Build Traffic and Highway Conditions Summary

Based on the existing transportation conditions analysis, there appear to be a number of key transportation issues in the study area. These include the following:

- Major roadways in the study area, such as US 27, I-75 and Man O' War Boulevard, currently have very high traffic volumes.
- Many roadways in the study area have high historical growth rates, indicating continuing traffic growth.

- Roads such as I-75, US 27 and KY 1980 have high truck percentages.
- Sections of US 27, US 25, KY 1980, KY 1974, KY 169, KY 876, KY 1176, KY 39, and KY 1975 currently operate at a LOS E or F.
- Many sections of Man O' War Boulevard, US 27 and I-75 currently operate at LOS D.
- In 2040, sections along the majority of roadways in the study area will be operating at a LOS E or F.
- The majority of roadways in the study area have segments with a critical crash rate factor greater than one.
- Rear end crashes are the most common type of crash in the study area.
- The Lexington Area MPO's Regional Bicycle and Pedestrian Master Plan has designated several roadways in the study area for potential bicycle and pedestrian facilities.

4.0 **REVIEW OF PREVIOUS REPORTS / PLANS**

4.1 **Review of Transportation Reports**

A review of previous transportation studies and reports for the study area is necessary to better understand the problems and possible solutions that have already been identified or studied. In this case, there are several previous reports relevant to the current planning study. They include the following:

- Scoping Study for US 27/I-75 Connector in Garrard and Madison Counties
- Jessamine County I-75 Connector
- Northeast Jessamine Transportation Study
- Man O' War Boulevard Traffic Study
- Community-Wide Congestion Management Study Update

Scoping Study for US 27/I-75 Connector in Garrard and Madison Counties

An initial evaluation of a connector between US 27 and I-75 was completed in June 2000 by Bernardin, Lochmueller, and Associates, Inc. (BLA). The study completed by BLA, while similar in concept, had a different study area. This study was scoped to look at cross-country alternates between US 27 and I-75 south of the Kentucky River and north of the existing KY 52. No routes were evaluated through Jessamine County or north of the river.

The purpose and need for proposed improvements in this study was to improve safety and operations, traffic flow, accessibility and connectivity in the transportation systems of Garrard and Madison Counties. This resulted in the development of eight "build" corridors and three preliminary KY 52 reconstruction options in addition to a "no-build" alternative. The "build" corridors included:

- Alternate 1 from KY 152 to KY 627
- Alternate 2 from KY 34 to KY 627
- Alternate 3 from KY 152 to Duncannon Road
- Alternate 4 from KY 34 to Duncannon Road
- Alternate 5 from KY 152 to KY 876
- Alternate 6 from KY 34 to KY 876
- Alternate 7 from KY 152 to US 25
- Alternate 8 from KY 34 to US 25

In order to determine how much traffic might use each alternate, the Kentucky Statewide Traffic Model (KySTM) was used to create a subarea model for this study area. The base year of the model was 1995 with the year 2025 used as the long-range forecast horizon year. Generally there was little difference between the cross-country corridors with a forecasted volume of traffic up to 5,000 vehicles per day in the year 2025 between US 27 and I-75.

In addition to traffic volumes, the evaluation criteria used in the BLA study included:

Transportation Considerations

- Daily Traffic Volume Served
- Travel Time Savings Over the "no-build" Alternate
- Accessibility
- Congestion Relief
- Congestion Contribution

Environmental Considerations

- Socioeconomic Impacts Associated with Residential and Business Displacements
- Affected Historic Structures
- Affected Archaeological Sites
- Floodplains
- Wetlands
- Threatened, Endangered and Special Concern Species (TES)
- Prime Farmland
- Underground Storage Tanks and Hazardous Material Sites
- Air Quality
- Noise Impacts

Agency Considerations

- Construction Costs
- Right-of-Way Costs

Due to adverse environmental impacts and adverse traffic impacts, Alternates 5 - 8 were eliminated. A public information meting was held to obtain comments about the "build" alternates, the "no-build", and the KY 52 reconstruction alternates. At the meeting, there was significant opposition for the construction of a connector road from US 27 through western Madison County to any area along I-75 between Boonsboro Road (KY 627) and Duncannon Road. This included a petition with 1,050 signatures submitted by Madison County Tomorrow opposing the project. Ultimately, the study recommendation was for the reconstruction of KY 52 even though the number of possible/potential displacements is significantly higher. It was preferred from the standpoint of cost-effectiveness and implementation timing.

Jessamine County I-75 Connector

The Jessamine County I-75 Connector study was prepared by Wilbur Smith Associates in July 2005 for the Jessamine County Joint Transportation Task Force to obtain funds to study the feasibility of a connector roadway between US 27 in Nicholasville and I-75. The request specifies looking at a connector from US 27 in Nicholasville to I-75 near the Clays Ferry Bridge, with one termini north of the bridge and one south. The northern corridor would not require a bridge crossing over the Kentucky River while the southern route would. The initial funding request was for \$495,000 to complete an Alternatives

Study for the project to be administered by the Kentucky Transportation Cabinet (KYTC). At the time of this request, this project was not in the state or MPO Transportation Improvement Plan (TIP), but has been in and out of the MPO plan due to the controversial nature of the project.

In order to request funding, several project objectives were developed. These include:

- Better define the project purpose and need;
- Identify and evaluate potential improvement location and alternatives;
- Make recommendations for future improvements;
- Afford an opportunity for public and agency input so that project needs, improvement alternatives, and potential issues and concerns can be clearly defined and addressed at the earliest stage of project development;
- Identify potential environmental issues; and
- Help expedite the project development process.

According to the request, the preliminary project purposes are:

- Promote Homeland Security initiatives and goals by providing relief and protection from potential problems that may result from any major impacts to I-75 and the Clays Ferry Bridge, a critical asset and key infrastructure on the national transportation system;
- Improve connectivity and increase system capacity while reducing congestion on portions of the National Highway System (NHS) and the National Truck Network (NN); and
- Support economic growth in Jessamine County and adjacent counties by reducing travel time from Nicholasville to I-75 through improved connectivity and reduced congestion.

The need for the project (which supports the project purposes) includes a number of identified issues / deficiencies. One issue is the heavy truck traffic on I-75 (approximately 25 to 30 percent of the vehicle composition is trucks). In addition to the heavy truck volumes, overall congestion is an issue with the I-75 corridor in Kentucky which is expected to be at or above its theoretical capacity by the year 2020. From a connectivity standpoint, between Mt. Vernon and Lexington (a distance of about 40 miles) there is no adequate highway connecting I-75 and US 27. Based on initial travel time estimates, a new connector could save up to twenty minutes from Nicholasville for southbound trucks and other motorists on I-75. Protection of "critical assets and key infrastructure" is also a key issue for this project, particularly the Clays Ferry Bridge. Should the Clays Ferry Bridge be damaged due to hostile acts or earthquake damage, a connecter would provide direct access to US 27, which is the closest crossing over the Kentucky River.

In addition to the \$495,000 required to complete the planning study, it is estimated that the project would cost \$135 million to \$190 million depending on the terrain, corridor length, project termini, and the need for a new bridge over the Kentucky River.

Northeast Jessamine Transportation Study

The Northeast Jessamine Transportation Study was prepared by Jordan Jones and Goulding in June 2003 for the Kentucky Transportation Cabinet. The primary objective of the study was to evaluate and address the growth and development in the US 27 corridor area in northeastern Jessamine County, particularly related to the Brannon Crossing Centre development. The aspects of the Northeast Jessamine Transportation Study that relate to this study include a discussion of development impacts to US 27 between Nicholasville and Fayette County and proposed recommendations to mitigate those impacts.

The study concluded that the Brannon Crossing Centre was the primary development that will impact traffic volumes and operations on US 27 in the near future. Since the time of the study, partial build-out of the development has occurred. The initial estimate of generated trips by the development at full-build out was up to 106,000 additional trips. The majority of these trips would access US 27 which (at the time of the study) was determined to operate at or near capacity during the peak hour even without the additional trips. The widening of US 27 to six lanes was specified in the Lexington Area Metropolitan Planning Organization's (MPO) Year 2025 Transportation Plan; however funds for the project were not committed at that point. Based on further analysis, US 27 will continue to operate at or near capacity even with the widening project as any additional capacity will be consumed by the increased traffic volumes. The study recommended that widening US 27 to eight lanes may be required given projected development pressures and that changes in access control may be recommended from access by permit to full access control with grade separations and interchanges at cross roads.

Man O' War Boulevard Traffic Study

The Man O' War Boulevard Traffic Study prepared by ENTRAN was completed in August 2007 for the Lexington-Fayette Urban County Government and the Lexington Area Metropolitan Planning Organization. The purposes of the study were to evaluate one of Lexington's most heavily-traveled and perceived congested roadways, Man O' War Boulevard, and identify and recommend improvements to locations with recurring traffic congestion and safety deficiencies. In particular, vehicular safety was determined to be an issue with almost all intersections identified as high crash rate locations. The majority of crash types were rear-end crashes. A level of service analysis was prepared to assess the existing conditions along Man O' War Boulevard, with the results consistent with levels of service calculated as part of this study. The result showed that traffic operations along Man O' War Boulevard, from a corridor perspective, are at or just below a good level of service. The intersections have operational deficiencies, thereby causing traffic congestion. Some improvement options identified in the report to address the identified deficiencies include:

- Extending turn lanes
- Upgrading traffic signals and signage
- A single point urban interchange (SPUI) at the Nicholasville Road and Man O' War Boulevard intersection

- Roundabouts along Man O' War Boulevard at the Armstrong Mill Road, Crosby Drive, and Rapid Run Drive intersections
- Widen Man O' War Boulevard to six lanes, three in each direction

At the time of this report, the improvement recommendations were not included in any list with the exception of the widening of Man O' War Boulevard. This is currently (as of this report) included in the Lexington Area MPO 2030 Long Range Transportation Plan (LRTP) and in the current Unscheduled Projects List.

Community-Wide Congestion Management Study Update

The Community-Wide Congestion Management Study Update, also prepared by ENTRAN for the Lexington-Fayette Urban County Government and the Lexington Area Metropolitan Planning Organization, and was completed in August 2007. This study is an update to the 2004 Congestion Management Study. Study objectives included:

- Updating decision matrices developed in 2004 that served as analytical tools of the project evaluation process;
- Expanding the geographic extent of the project evaluation process to include routes not addressed in the 2004 study;
- Reviewing and updating recommended improvements from the 2004 study;
- Developing additional recommended congestion mitigation projects and strategies; and,
- Providing recommendations for future enhancement of the congestion management process.

Three routes that are relevant to the US 27 / I-75 corridor study that are evaluated in this report include Man O' War Boulevard, Nicholasville Road (US 27), and Tates Creek Road (KY 1974). To assess the current conditions of these roads, evaluation criteria included the Travel Rate Index (TRI), Level of Service (LOS), and the Crash Rate and Critical Crash Rate Factor.

Currently during the AM peak period, US 27 from the Bypass in Jessamine County north to Man O' War Boulevard, and much of Man O' War Boulevard between US 27 and US 25 operate at a LOS F. Man O' War Boulevard from US 25 to I-75 operates at LOS E. US 25 from Man O' War Boulevard to KY 418 operates at a LOS D, and a small amount of Man O' War Boulevard just east of Tates Creek Road operates at LOS C or better. During the PM peak period all of Man O' War Boulevard between US 27 and I-75, as well as US 27 between Man O' War Boulevard and the bypass operates at LOS F. Only US 25 from Man O' War Boulevard to KY 418 operates at LOS C or better. There are currently sections of US 27, and most of Man O' War Boulevard that have critical crash rate factors greater than one, making it a high crash rate area.

Along Man O' War Boulevard, projects in the 2030 Long-Range Transportation Plan include widening Man O' War Boulevard to six travel lanes. A project included in the 2006 Congestion Management Study involves the construction of refuge areas / breakdown lanes outside the existing curb along Man O' War Boulevard, to keep traffic flowing in the event of a crash or breakdown.

For US 27, projects in the 2030 Long-Range Transportation Plan include widening US 27 from 4 lanes to 6 lanes between Man O' War Boulevard and the bypass. A new East Nicholasville Bypass is currently part of the Lexington MPO TIP. A recommended project from this report is the development of an access management plan for US 27 from the bypass to the Fayette County line.

Along Tates Creek Road, there are no current projects in the 2030 Long-Range Transportation Plan, or from the Congestion Management Study, that affect Tates Creek Road south of Man O' War Boulevard in the US 27 / I-75 corridor study area.

4.2 Review of Comprehensive Plans

2007 Lexington-Fayette Urban County Government Comprehensive Plan

The LFUCG Comprehensive Plan refers to the Year 2030 Transportation as the document that lists specific transportation projects for Fayette County. Transportation projects occurring in the study area include the widening of Man O' War Boulevard from Winchester Road to Nicholasville Road, which is listed in the 2030 Plan as a Federal Aid Project, and the widening of US 27 from New Circle Road to the Nicholasville Bypass as well as the widening of KY 1974 from Malabu Drive to Man O' War Boulevard which is listed in the plan as projects without a dedicated funding source. There is no mention of a connector between US 27 and I-75 in the plan, however a new corridor would likely meet the goals for future transportation systems listed in the report.

2004 Jessamine County / City of Wilmore Comprehensive Plan

A new corridor from US 27 to I-75 is consistent with the goals stated in Jessamine County's Comprehensive Plan of expanding infrastructure to meet current / future needs and providing for an efficient transportation system throughout the County. This project was included in the 2003-2004 Unscheduled Needs List. It was listed as a priority project in the Comprehensive Plan, and noted that it should be designed and constructed to have the least impact on residential / agricultural properties. The plan also shows a shared use trail / bike route along KY 1541 to KY 1981 as part of the 2004 Concept Greenway / Trail Plan.

Madison County, Kentucky 2005 Comprehensive Plan

The Madison County, Kentucky 2005 Comprehensive Plan lists two issues that are relevant to this study. The plan indicates that special attention should be paid to the impact of growth and development in Northern Madison County (from Exit 95 – Boonesboro Road to Exit 97 – Clays Ferry along I-75) as this area is shifting from being mostly agricultural and rural to urban. The plan also notes the need to upgrade certain county roads as well as state and federal highways to accommodate the large-scale increases in traffic volumes within the next 15 to 20 years.

The Comprehensive Plan recommends a North Madison Development Park in the vicinity of the I-75 / KY 627 interchange, as well as reconstruction of that interchange. It also indicates that there will be significant traffic growth along the northern section of US 25 from the Clays Ferry interchange to KY 1156, due mostly to residential and commercial growth. Because this growth occurs within the study area, it could have an impact or be impacted by a new corridor.

Reconstruction of the KY 627 and I-75 interchange is currently on the unscheduled needs list. If this interchange is chosen as the eastern terminus, this project would need to be coordinated with the new connector.

Reconstruction of KY 169 from Goggins Lane to the US 25X (Main Street) is on the sixyear highway plan. This is a Priority I project under the Recommended Long Range Transportation Improvements for the Madison County area. Widening US 25 from KY 1156 to Exit 97 near the Fayette County line is a Priority II project and widening I-75 to eight lanes from the Fayette County line to the Rockcastle County line is a Priority III project. While these projects would not directly affect a new corridor, they could encourage development or foster additional traffic growth in the area.

Madison County Land Use and Official Zoning Maps

According to the land use and zoning maps, most of the study area is agricultural land use, however, there are several areas zoned for single family residential, multifamily residential, general commercial, neighborhood commercial, and public / semi-public use.

5.0 HUMAN ENVIRONMENT OVERVIEW

An overview was conducted to determine the general characteristics of the human environment in the study area. The analysis addresses: general socioeconomic characteristics, environmental justice, land use characteristics, and cultural / historic and archeological characteristics. **Figure 10** shows human environmental characteristics. The following sections summarize the overview findings.

5.1 Socioeconomic Profile

Population Growth – **Table 9** shows population data from the 1990 and 2000 Census, for Fayette, Jessamine and Madison counties. The 2030 population projections are also shown.

	1990	2000	2030	% Growth (1990-2000)	% Growth (2000-2030)
Fayette County	225,366	260,512	331,212	15.60%	27.10%
Jessamine County	30,508	39,041	59,489	28.00%	52.40%
Madison County	57,508	70,872	104,419	23.20%	47.30%

Table 9: Study Area Populations

Source: Kentucky State Data Center

The 2000 census shows the city of Nicholasville having a population of 19,680, and the city of Richmond having a population of 27,152. Based on population growth, the study area is growing rapidly and is expected to continue to grow at a significant pace in the future.

Minority Populations – According to the 2000 Census, minority populations in Fayette County represented 19.0% of all residents. In Jessamine County, minority population represented a total of 5.6% of residents. In Madison County, minority residents represented 7.0% of all residents. As a comparison, the total minority population percentage of the entire Commonwealth of Kentucky is 9.9%.

Low – Income Populations – In 2000, approximately 12.9% of the Fayette County population was below the poverty line. In Jessamine County, approximately 10.5% was below the poverty line. In Madison County, 16.5% were below the poverty line. Fayette and Jessamine Counties are below the statewide average of 15.8%, while Madison County exceeds it.

Age of Population – Fayette, Jessamine and Madison Counties have a lower percentage of residents age 60 and over, 13.3%, 13.0% and 13.3% respectively compared to the statewide average of 17.0%.

Local Economy – In 2000, Fayette County's unemployment rate was 3.7%, which is higher than the 2000 unemployment rate for Kentucky of 3.5%, and lower than the rate for the U.S., 4.0%. Jessamine and Madison Counties are below both the Kentucky and US unemployment rates at 2.9% and 3.2% respectively.

The highest percentage of employees in all jurisdictions is in the field of management, professional and related occupations. This is accounted for by the service-based economy. Sales and office occupations also account for a high percentage of the local workforce. Manufacturing is also important in the study area. Large employers in the area include: McLane Cumberland, Valvoline, and Sherwin Williams Automotive Finishes Corp. **Tables 10, 11** and **12**, show employment by major industry for Fayette, Jessamine and Madison counties. **Table 13** shows major manufacturers located within the study area.

Figure 10: Human Environmental Characteristics



Table 10: Fayette County Employment by Major Industry (2006)

Fayette County	Employment	Percent
Agriculture, Forestry, Fishing and		
Hunting	2,219	1.3
Mining	311	0.2
Construction	8,475	4.9
Manufacturing	14,641	8.5
Trade, Transportation, and Utilities	33,437	19.4
Information	3,964	2.3
Financial Activities	9,055	5.3
Services	70,781	41.1
Public Administration	6,875	4.0
Other	207	0.1
All Industries	172,139	100.0

Source: Kentucky Economic Development Information System

Table 11: Jessamine County Employment by Major Industry (2006)

Jessamine County	Employment	Percent
Agriculture, Forestry, Fishing and		
Hunting	No data	No data
Mining	No data	No data
Construction	1,331	8.9
Manufacturing	2,921	19.4
Trade, Transportation, and Utilities	3,466	23.0
Information	111	0.7
Financial Activities	413	2.7
Services	3,703	24.6
Public Administration	556	3.7
Other	20	0.1
All Industries	15,039	100.0

Source: Kentucky Economic Development Information System

Table 12: Madison County Employment by Major Industry (2006)

Madison County	Employment	Percent
Agriculture, Forestry, Fishing and		
Hunting	No data	No data
Mining	No data	No data
Construction	926	3.0
Manufacturing	5,485	18.0
Trade, Transportation, and Utilities	5,242	17.2
Information	802	2.6
Financial Activities	758	2.5
Services	10,131	33.2
Public Administration	1,836	6.0
Other	20	0.1
All Industries	30,481	100.0

Source: Kentucky Economic Development Information System

Firm	Product(s)/Service(s)	Employees	Year Est.
ACS	Provide business processing solutions	74	2001
Adcom Wire Co.	High carbon spring wire, bright plating	100	1968
Alltech Inc.	Natural animal feed additives and brewing & distilling products - Corporate headquarters	250	1980
Amcor PET Packaging	Plastic custom bottles, food and customer care products	139	1982
Atlantis Plastics Inc	Flexible packaging stretch film	79	1984
B & H Tool Works Inc	A full service tooling, machining, stamping, and fabrication job shop. Capabilities include CNC, EDM, and laser machining. Progressive and hand transfer stamping capabilities.	118	1978
Classic Rattan Inc	Rattan & wicker furniture	38	1978
Creative Draperies Inc	Draperies & bedspreads	35	1969
Custom Wiring Inc	Wiring harnesses & electrical sub assemblies	37	1978
Donaldson Co In	Industrial air pollution control devices	250	1979
Hospital Specialty Co	Sanitary napkins, adult disposable	190	1979
Jackson Plastics Inc	Plastic injection molding	180	1995
Kokoku Rubber Inc	Rubber syringe stoppers, automobile part. Auto, medical pharma, business machines and electronics. Seals, gaskets, O-rings for automotive.	165	1988
Lockmasters Inc	Designs and markets educational products, lock, parts, and tools for the security industry / wholesale distribution	33	1981
McKechnie Vehicle	Plastic injection molding - automotive	290	1979
Mcl ane Cumberland	Food distribution center	620	1995
Meade Concrete Products Inc	Manufacture and retail concrete blocks and other building materials	36	1991
Rock Tenn Corp	Paperboard folding boxes	230	1970
Sargent & Greenleaf Inc	High security locks	150	1974
Sherwin Williams Automotive Finishes Corp	Automotive coatings & finishes	198	1976
Sherwin Williams Automotive Finishes Corp	Distribution of automotive coatings	65	1995
TEBCO of Kentucky Inc	Truck bodies & related equipment	55	1991
Uncle Charlie's Meats	Meat processing & packaging and distribution	63	1957
Valvoline Co.	Administrative offices and lab	858	1980

Table 13: Major Manufacturers in the Study Area

Source: Kentucky Economic Development Information System

Commuting – Approximately 86.0% of employed Fayette County residents work in the county, with the remaining 14.0% commuting to other nearby counties. In 2000, the average travel time to work was 19.3 minutes. In 1990, the average travel time to work was 17.5 minutes. The increase in time from 1990 to 2000 represents an increase of 10.3%. The dominant mode in both 1990 and 2000 was the single occupant vehicle (SOV) which accounted for 91.1% and 90%, respectively. Approximately 46.2% of employed Jessamine County residents work in the county, with the remaining 53.8% commuting to nearby counties; with most workers commuting to Fayette County. In 2000 the average travel time to work was 24.1 minutes, which is an increase of 11.1% over the 1990 average travel time to work of 21.7 minutes. Approximately 69.8% of Madison County residents work in the county, with the remaining 30.2% commuting to nearby counties. Again, Fayette County is the destination for many commuters in Madison County. In 2000 the average travel time to work was 23.5 minutes, a 19.9% increase from the 1990 average travel time of 19.6 minutes.

Community Facilities and Development Patterns – The majority of the study area is rural, bounded by development to the north from Lexington, in the east from Richmond, and in the west by Nicholasville. Most of the residential neighborhoods are located in the northern portion of the study area, along Man O' War Boulevard and I-75. Of particular concern is the Old Richmond Road Neighborhood. This is an old, established neighborhood that has been considered in the past for historic preservation. It is located in the northeastern portion of the study area as well.

There are also several areas in Fayette County that are included in the Fayette County Purchase of Development Rights Program (PDR). The PDR Program is an Agricultural Easement Program by the local government to protect the landscape from urban sprawl. Several agricultural, equine, and other farms are included and are protected by conservation easements. These areas should be avoided to all extents possible.

5.2 Environmental Justice

The Environmental Justice (EJ) assessment examined potential disproportionate adverse community impacts on selected groups (minority, low-income and elderly) within the defined project study area for the proposed transportation improvement(s) in the region between US 27 and I-75 in Fayette, Jessamine and Madison counties. A summary of the assessment is provided below. For a more in-depth analysis, refer to **Appendix B** which contains the entire report.

The purpose of the assessment was 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 focused on identifying, through a demographic analysis, the extent to which EJ 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.

The preliminary analysis showed that there are several locations within the study area with higher than average minority, low-income, and elderly persons. However, in Fayette County all census block groups with these characteristics are north of Man O' War Boulevard and will likely not be impacted by an alternative corridor. Near KY 39, just east of US 27 in Jessamine County, there is a block group with a high minority and low-income population. In Madison County, there is a high low-income population in the western part of the study area.

5.3 Underground Storage Tanks and Hazardous Materials

There are many potential underground storage tanks (UST) near Wilmore, Richmond, Nicholasville, and along Man O' War Boulevard on the south side of Lexington. There is also a possibility for USTs to be found at county stores and automobile repair facilities. There are potentially 507 UST sites in the study area. There is also the potential for oil, gas and water wells. 568 water wells and 19 oil and gas wells have been identified, although many have been abandoned. Three landfills are located in the study area, one near Wilmore, one near Richmond, and the last near Jacks Creek Pike in Fayette County. Hazardous materials and waste activities can be expected along US 27 in Nicholasville and near Richmond, and will likely be associated with industrial facilities.

5.4 Previously Documented Cultural Historic and Archeological Sites

A records search and informant interviews were performed by H. Powell and Company to determine the existence of any known cultural resources in the study area. **Figure 11** shows historical resources within the study area. Sixty-six recorded individually listed National Register sites were found within the area of potential effect (APE) of the project. Many of these, however, are not located between US 27 and I-75. Some of the significant cultural historic sites found within the project area are listed below:

- Cleveland-Rogers Complex;
- Waveland State Historic Site;
- Bonne Station State Historic Site;
- White Hall State Historic Site;
- Henry Pettit Mill;
- The Venable; and

• Butler's Tavern.

Two significant historic districts are located within the APE. These include the Boone Creek Historic District and Camp Nelson.

Based on the informant interviews conducted at the public information meeting on November 20, 2007, there are many other potential cultural historic sites, including residences, schools, cemeteries, mills, quarries, tunnels, bridges, warehouses, ferry crossings, Civil War fortifications, caves, prehistoric earthen mounds, prehistoric burials and prehistoric sites of indeterminate nature. Most of these sites are grouped around the towns of Union Mills, Logana and Valley View.

If adverse impacts to historic resources are identified during future project development phases, Section 106 initiation would begin once the environmental documentation and design of any future project started. Should a proposed corridor require the use of historic resources, then a Section 4(f) evaluation will be necessary.

As for archeological sites, there are two hundred and sixty-six archaeological sites that have been identified. Of those sites, two are considered eligible, six have been determined eligible, one is currently nominated and four are currently listed in the National Register of Historic Places (NRHP). The eligibility of one hundred and forty five sites has not yet been assessed.

There are nineteen sites previously recorded within the APE that are site types that typically qualify for preservation in place. These include three cave sites, eight earth mounds, three military, one mound complex, one non-mound earthwork, one open habitation with mounds, and two stone mounds.

For additional information about the cultural historic and archeological overview, refer to the full report included in **Appendix C**.
Figure 11: Historic Resources



6.0 NATURAL ENVIRONMENT OVERVIEW

An environmental overview was conducted by Third Rock Consultants, LLC to determine the characteristics of the natural environment in the study area. Resources addressed in this section include: aquatic resources, threatened, rare, and endangered species, air quality, traffic noise, and floodplains. Below is a summary of key points from the overview. **Figure 12** shows the natural environment features in the study area. Refer to **Appendix C** for the entire document.

6.1 Aquatic Resources

The Kentucky River and its tributaries run through the middle of the study area. The tributaries include Tate Creek, South Elkhorn Creek, Silver Creek, Jessamine Creek, Boone Creek, Hickman Creek, Paint Lick Creek and Hines Creek. Hines Creek has been designated as an exceptional water and reference reach by the Kentucky Division of Water. The Kentucky River Palisades, which are a unique formation of steep gorges where many nature preserves have been established, also run through the study area.

Natural wetlands occur in the study area, including two large reservoirs and many small farm ponds. Most of the potential naturally occurring wetlands are along South Elkhorn Creek, Silver Creek and Paint Lick Creek.

Any new stream crossings or changes to existing stream crossings may require United States Army Corps of Engineers Section 404 and Kentucky Division of Water Section 401 permits. Impacts to streams or wetlands may need to be mitigated. Also, the study area lies within an active karst area where water quality and endangered species habitat will need to be taken into consideration.

6.2 Threatened, Rare, and Endangered Species

Threatened, rare, and endangered species in the study area include the Indiana bat (Myotis sodalis), gray bat (Myotis grisescens), running buffalo clover (Trifolium stoloniferum), and the American burying beetle (Nicrophorus americanus).

Two nature preserves are also located in the study area, the Raven Run Nature Sanctuary and the Floracliff State Nature Preserve.

6.3 Air Quality

The study area is part of the Bluegrass Interstate Air Quality Control Region. All counties within the study area are currently designated in attainment for all transportation related air pollutants. If any portion of the roadway passes through Fayette County, the PM_{2.5} National Ambient Air Quality Standard should be considered.

6.4 **Traffic Noise**

Potential sensitive noise receptors in the study area include the Raven Run and Floracliff State Nature Preserve, and the White Hall and Boone Station State Historic Sites. There are also numerous churches, schools, and cemeteries in the study area. However most are concentrated around the cities of Wilmore, Nicholasville, Richmond and southern Lexington / Fayette County.

6.5 Floodplains

Floodplains in the study area occur along existing rivers and creeks, including the Kentucky River, Jessamine Creek, Hickman Creek, Silver Creek, Tate Creek and Boone Creek. The floodplains generally do not extend outside of the river and creek beds.

Figure 12: Natural Environmental Features



7.0 GEOTECHNICAL OVERVIEW

Based on comments received from the Kentucky Geological Survey, there are several geological features within the study area. It should be noted that the study area might encounter karst features such as sinkholes and caves, as well as shaly units prone to landslides, unconsolidated sediments in drainage areas, and terrace deposits on hilltops along the Kentucky River. It is also possible that faulted areas will be encountered. A map is included along with the Geologic Survey's response in **Appendix D**. Drainage problems could occur if water seeps along the faulted area. Mineralization could also be found within the faulted and fractured areas, as well as contrasting rock types on opposite sides of faulted areas. Rocks suitable for construction stone are possible within the study area.

For additional information about geologic features / concerns, refer to the letter provided by the Kentucky Geological Survey attached in **Appendix D** as part of the public involvement / agency coordination for this study.

8.0 PUBLIC INVOLVEMENT

The Public Involvement Program for the US 27 to I-75 Scoping Study was comprised of several key elements designed to encourage participation and obtain feedback from the stakeholders in Fayette, Jessamine and Madison Counties. The key aspects include: meetings with local elected officials, formation and regular meetings of a project work group (PWG), public meetings, and agency correspondence. The process and methods for public involvement are outlined in this chapter. The results and feedback from implementation of the Public Involvement Program are provided throughout the entire report, particularly in the development and evaluation of alternates. Copies of the public involvement meeting summaries are included in **Appendix E** for reference including summaries of the input received at the public meetings.

Locally Elected Officials and Other Stakeholders – Meetings were held with locally elected officials and other stakeholders from Fayette, Jessamine, and Madison Counties. Locally elected officials included County Judge Executives, Mayors, and other officials who represented or spoke for the jurisdiction or agency. Three meetings were held in each of the counties; Fayette, Jessamine and Madison. Brief summaries of each meeting are given below, and meeting minutes are provided in **Appendix E**.

- Fayette County A meeting with Don Kelly, the Public Works Director for the Lexington Fayette Urban County Government (LFUCG) was held on August 17, 2007. Mr. Kelly is knowledgeable about the project and the transportation conditions of south Lexington. He is supportive of a study, but will withhold judgment on recommendations. He feels that a new roadway would relieve congestion from Man 'O War Boulevard and New Circle Road.
- Jessamine County A meeting with Neal Cassity, the Judge Executive of Jessamine County, Russ Meyer, the Mayor of Nicholasville, and Nancy Stone of the Jessamine County Chamber of Commerce was held on August 28, 2007. Judge Cassity, Mayor Meyer and Ms. Stone are all very knowledgeable about the project and the transportation conditions of the region. The Jessamine County Transportation Task Force, headed by Nancy Stone, was the agency that received the initial grant money to fund this project. This is an incredibly important project to the County.
- Madison County A meeting with Connie Lawson, the Mayor of Richmond, and Kent Clark, the Judge Executive of Madison County was held on August 7, 2007. Ms. Lawson and Mr. Clark are both supportive of the proposed connector project. They feel that it is needed in order to relieve traffic on I-75 during a crash, construction, or other type of incident. It would also provide an alternate to the Clays Ferry Bridge, and would provide more direct access to the interstate system for Jessamine County residents and businesses. In addition, it would be beneficial for evacuation during an incident at the Bluegrass Army Depot.

Project Work Group Meetings – A Project Work Group (PWG) was developed to provide input on issues and concerns about the project at key decision points throughout the study. The PWG includes representatives from KYTC District 7 and Central Office Staff including – KYTC Planning, Pre-Construction, Environmental Analysis, representatives from the Lexington MPO, Bluegrass ADD, federal, state, and local resource agencies, local elected officials from Jessamine. Favette and Madison Counties, chamber of commerce representatives, landowners, homeowners, and other representative citizens of Jessamine, Fayette and Madison Counties. A list of PWG members is included in **Appendix E** along with meeting minutes for all PWG meetings. Five meetings were held at major study milestones. Each of the meetings is described in more detail below.

- PWG Meeting #1 The first PWG meeting was held on October 30, 2007 at the Bluegrass Area Development District conference room. This was a kick-off meeting with the purpose of convening the PWG, providing background information, and obtaining input on study issues and goals.
- PWG Meeting #2 The purpose of the second PWG meeting, held on February 25, 2008, was to update the members on project progress to date including presenting the DRAFT project purpose and need, a summary of the comments received at the first public meeting, initial TransCad Model results of "test" corridors, and the initial fatal flaw screening and evaluation of the alternate corridors for the US 27 to I-75 Corridor Scoping Study. The PWG was shown what was done to narrow the 50 to 60 corridors drawn at the public meeting down to 18, and comments were received. The PWG agreed that a more detailed analysis needed to be performed for all 18 alternatives as well as the no-build before any remaining corridors could be eliminated.
- PWG Meeting #3 The purpose of the third PWG meeting was to review the project purpose and need and narrow down the list of potential alternative corridors to the most promising based on the provided evaluation matrix. An evaluation matrix that examined each corridor with respect to system operations, traffic operations, natural environment, human environment and cost was presented. Based on these criteria, discussion amongst the PWG followed, and the set of 18 corridors was narrowed to 6, in addition to the no-build alternative.
- PWG Meeting #4 The purpose of the fourth PWG meeting was to present the • PWG with the Level 3 Analysis of the remaining six corridors and the no-build option, and to obtain feedback before the information was presented at the next public meeting. The analysis was discussed and it was decided what information would be best to present at the public meeting.
- PWG Meeting #5 The purpose of the fifth PWG meeting was to discuss the results of the second public meeting with the PWG, as well as present to them the Project Development Team's preferred corridor. The PWG agreed on the preferred corridor and provided comments with respect to treatment of access. preference of a two versus four lane roadway, multi-use path considerations and tolling. This was the final PWG meeting, however the PWG was told they would be given the opportunity to review the draft report and provide comments.

Public Meetings – Two public meetings were held during the course of this study. The public meetings were held in a traditional open house style format. Key goals for these meetings were to determine if the public was in favor of the project, to gather input on the issues and concerns of the project, to propose alternate corridors and to help choose the best corridor. Each of these meetings is described in more detail below.

- Public Meeting #1 This meeting was held on November 20, 2007 in the cafeteria of the West Jessamine Middle School in Jessamine County. The purpose of the first public information meeting was to inform the public of the study, present the existing conditions documentation, gather input on the project issues and goals, determine if the public was for or against the project, and begin the process of alternate development. Five stations were set up around the cafeteria and were staffed with KYTC, Bluegrass ADD, Lexington MPO, PB, HDR, H. Powell and Company, and Third Rock personnel. The five stations included study background information, existing highway system conditions, existing environmental information, inputs on issues, goals and corridors, and written and oral recorded comments. A survey was given to each attendee when they signed in. In addition to the 144 surveys returned either at the meeting or afterwards, participants were also able to provide feedback by writing their issues and goals for the project on large sheets of paper provided, drawing corridors on large maps where they would like to see the road built, and by having their comments recorded by a court reporter. A summary of this informational event and the resulting survey information is provided in Appendix E.
- Public Meeting #2 The second public meeting was held on June 16, 2008 on the campus of Eastern Kentucky University in Richmond, Kentucky. The purpose of the meeting was to present to the public the work completed thus far including project purpose and need, identification / development of potential corridors, and the evaluation process. Through an iterative evaluation process, the number of potential corridors was narrowed down to six prior to this meeting. These six final corridors (along with the no-build option) were shown to the public to request feedback as to which should be the preferred alternative. Additional input was also requested as to the number of lanes, treatment of access, bicycle / pedestrian considerations, and tolling as a potential funding source. This open house was somewhat unique in that in order to encourage attendees to visit the individual project stations and fill out a comment form, three \$50 gas cards were given away. This was fairly successful as out of the 77 people who signed in at the meeting, 58 completed and returned a survey. A summary of this informational event and the resulting survey information is provided in **Appendix** Ε.

Agency Correspondence – An agency mailing was prepared during the initial stages of this study and sent to various local, state, and federal regulatory agencies, as well as elected officials, to obtain input in the study process. The list of respondents includes:

- The United States Department of Military Affairs
- Kentucky Airport Zoning Commission

- Kentucky Division of Forestry
- Kentucky Vehicle Enforcement
- University of Kentucky Geological Survey
- Kentucky Department for Environmental Protection Division for Air Quality
- Kentucky Department of Natural Resources Division of Conservation
- Kentucky Cabinet for Health and Family Services Facilities Management Division
- Kentucky Department of Fish and Wildlife Resources Commerce Cabinet
- Kentucky Transportation Cabinet Office of Special Programs
- City of Nicholasville
- Nicholasville Police Department
- Lexington Division of Police
- Nicholasville Mayor Russell Meyer
- Jessamine County Judge Executive
- Jessamine County Clerk Jessamine County EMS Chief
- Nicholasville Fire Department
- State Representative Robert R. Damron
- State Representative Bill Farmer
- State Senator Tom Buford
- Kentucky Division of Waste Management

A letter describing the project was sent to the above agencies and representatives, along with the website where they could find public meeting materials. Some agencies sent back letters, while others returned the survey forms used at the public meeting. From the letters received, several of the agencies listed above had concerns regarding the project.

- The Airport Zoning Commission stated that a permit from the state and the Federal Aviation Administration would be needed if any temporary or permanent structures exceed restrictions given in their response.
- The Kentucky Division of Forestry encouraged the inclusion of wildlife-friendly passage accommodations.
- The Division of Air Quality listed Kentucky Division for Air Quality Regulations that apply to the project, as well as requirements of the Clean Air Act. They also recommended investigating applicable local government regulations.
- The Kentucky Department for Environmental Protection Division for Air Quality response stated that the project must meet the conformity requirements of the Clean Air Act as amended and the transportation planning provision of Title 23 and Title 49 of United States Code.
- The Kentucky Geologic Survey stated that the study area would encounter several geologic features, such as:
 - Karst features (sinkholes and caves);
 - Shaly units that are highly susceptible to slumping when wet;
 - Unconsolidated sediments in drainage areas and terrace deposits on hilltops;

- Rock units that would be suitable as construction stone; and
- Faulted areas where water seepage along the faults could cause drainage problems, mineralization could be found in the faulted and fractured areas, and contrasting rock types could be found on opposite sides of the faulted areas.

The Geologic Survey said that the potential for an earthquake in the study area is very low.

- The Kentucky Department for Environmental Protection Division of Conservation identified an agricultural district in the northwest area of Madison County, and stated that impacts to this soil should be mitigated. Concerns of controlling erosion and sediments during and after earth disturbing activities were expressed, and it was suggested that best management practices (BMPs) be utilized to prevent non-point source water pollution. It was also requested that the study include the issue of loss of farmland.
- Based on comments provided by the Kentucky Department of Fish and Wildlife Resources Commerce Cabinet, the federally endangered gray bat, *Myotis grisescens*, and Indiana bat, *Myotis sodalist* are known to occur within close proximity to the project area. Any impact to trees during construction should be completed within a specific time frame to avoid any harm to the bats.
- Also from the Department of Fish and Wildlife Resources, impacts to streams should preferably be mitigated on site, however, if that is not possible, several Kentucky River tributaries were identified as stream restoration sites.
- The Kentucky Division of Waste Management received no comments from Hazardous Waste Permitting. There are also no Hazardous Waste Treatment Storage Sites. A list of superfund sites in the study area as well as a list of Underground Storage Tank sites were sent, and are included in **Appendix D**, along with the e-mail responses.

Based on the survey forms received from state representatives, senators and other public agencies, it seems that the majority of agencies and elected officials are in favor of a new connector road or do not see a compelling reason why one should not be pursued. Reasons that most people want the connector include reduced traffic congestion, improved connectivity, economic development, and improved safety.

A copy of the recipient list and responses can be found in **Appendix D** for reference.

Project Team Meetings – Several meetings were also held with the KYTC and the consultant team to discuss project issues including the PWG and public meetings (preparation and results), issues and goals, development of alternates, evaluation of alternates and a meeting to discuss project recommendations. The meeting minutes from these meetings are included in **Appendix E** for reference.

9.0 ALTERNATIVES DEVELOPMENT

The corridor development process began at the first Public Meeting held on November 20, 2007. The general public was given background information on the study area, purpose and need, and goals and objectives. They were also given information regarding current traffic volumes, levels of service, truck volumes, crash rates, environmental features, and archeological and historic features in the study area. They were then given a map of the study area and asked to draw lines where they would like to see the connector built. **Figure 13** shows the map of all the corridors drawn by the public. This map served as the beginning of the corridor evaluation process and contains 50 to 60 distinct corridors.

Figure 13: Corridors Drawn by the Public



10.0 EVALUATION METHODOLOGY

The evaluation procedure used in this study is a three-step process. The purpose of the three-step process is to refine the list of alternatives (corridors) from all possible alternatives, to a short list of promising alternatives, and then finally to a recommended alternative. The evaluation process uses increasingly detailed analysis methods to complete the screening and to refine the alternatives remaining after each round of analysis. The goal is to study and further develop only feasible alternatives that best meet the project's goals, while not spending extensive effort on those that are unworkable or do not meet the project's goals.

Initially, a few important details were identified for a broad array of possible alternatives. As the analysis progressed, the range and depth of information increased and the number of alternatives being studied decreased as shown in **Figure 14**.



Figure 14: Three-Level Evaluation Process

Preferred Alternative(s)

During Level 1, much of the analysis was based on qualitative or comparative information. The principal goals at this level were to determine if an alternative was feasible (physically, financially, environmentally and socio-politically) and generally how it compared to the other alternatives. During the next two levels, the amount of qualitative data and analysis increased substantially (i.e. traffic forecasts, cost estimates, potential numbers of impacted wetlands, etc.) allowing for more detailed and definitive comparisons. The goal of the final Level 3 analysis was to select a recommendation. The following three report sections present a summary of each of the three analysis levels.

11.0 LEVEL 1 EVALUATION – INITIAL SCREENING

The initial screening process began with the map of corridors drawn by attendees at the November 20, 2007 Public Meeting. On January 16, 2008, the Project Development Team (PDT) met to review all of the corridors drawn by the public and to find common points throughout the study area where people wanted to see a connecter. This procedure enabled the group to decide on a set of 2,000 foot wide corridors to be further evaluated. Some criteria used by the PDT in addition to common points are noted below.

- Lines drawn outside the three county study area boundary were eliminated from consideration.
- Corridors in the southernmost study area toward Richmond were eliminated as there is not much traffic / transportation utility for them.
- Corridors with an eastern termini south of Richmond were eliminated. The Scoping Study for US 27/I-75 Connector in Garrard and Madison Counties discussed in Chapter 4 addresses connectivity issues associated with this portion of Madison County.
- Due to cost, corridors that crossed the river more than once were removed.
- Corridors through 'listed' properties were removed.
- The northernmost corridors were removed due to known developments, including PDR sites.
- Diagonal routes were eliminated due to the length, which would drive up the costs and decrease travel time savings and utility.
- Common intersection points were noted. These areas were shaded on the wall map. Corridors drawn by the PDT included all these points.

Based on these criteria, a total of eighteen corridors were retained for further analysis in Level 2. Figure 15 shows these eighteen corridors. In addition to the eighteen corridors, a no-build scenario was included as a baseline for comparison as well as a viable alternative.

Figure 15: Level 2 Corridors



12.0 LEVEL 2 EVALUATION – PRELIMINARY ANALYSIS

12.1 Level 2 Evaluation Summary

The Level 1 analysis narrowed the 50 to 60 corridors drawn by the public down to eighteen plus the no-build. For the second level of analysis these corridors were evaluated based on system operations, traffic operations, natural environment impacts, human environment impacts and cost.

System Operations Evaluation

The system operations evaluation took into consideration corridor length, whether or not the corridor crosses the Kentucky River, potential transportation system safety improvements, study area travel time savings, and connectivity. The transportation system safety evaluation gave each corridor a ranking of low, medium or high, indicating how many high crash rate sections from which the corridor is likely to divert traffic. If the corridor is likely to divert traffic from 10 to 13 high crash rate sections, it was considered to have low system safety. If the number of crash rate sections was 14 or 15, it was given medium system safety. If traffic is likely to be diverted from more than 16 high crash rate sections, the corridor was considered to have a high system safety improvement. The study area travel time savings was calculated based on the difference in vehicle hours of travel (VHT) from the no-build scenario. All corridors provided some travel time savings. Connectivity stated whether or not the corridor would connect to another roadway at its western terminus at US 27 and/or its eastern terminus at I-75.

Traffic Operations Evaluation

The traffic operations evaluation looked at 2040 Average Daily Traffic (ADT), 2040 Level of Service (LOS), and the corridor truck percentage. The ADT analysis was performed using the Kentucky Statewide Model (KYSTM). Each corridor was coded into the model, and then the model was run to determine the ADT along the corridor. A one percent per year growth rate was used to forecast the ADT from the model to the 2040 ADT. The ADTs of US 27, I-75 and Man O' War Boulevard were found using the model for the no-build scenario. The volumes of US 27, I-75 and Man O' War Boulevard for each corridor scenario were then compared to the no-build scenario and a range of traffic increase and / or decrease was given. A range of LOS for various segments along US 27, I-75, and Man O' War Boulevard was given for the no-build as well as each of the eighteen corridor scenarios. LOS was also calculated for each of the corridors. A range of truck percentages along each corridor was also calculated from the model.

Natural Environment Evaluation

Each of the eighteen corridors and the no-build option was evaluated with regards to the number of streams that would be impacted in the corridor, the number and acres of potential wetlands / ponds in the corridors and acres of floodplain that would be impacted. A GIS dataset was used to detail this evaluation.

Human Environment Evaluation

The human environment analysis included the number of known historic sites and known archeological sites in each corridor, and landfills and other potential HAZMAT site impacts. The number of farmland impacts in acres was also evaluated. Environmental justice impacts were considered for each of the corridors. For most of these criteria, a GIS dataset was used to detail this evaluation.

Cost Evaluation

The cost for each corridor was estimated. A typical section was assumed for a 4-lane divided facility. These estimates were for construction only and did not include design, right-of-way, utilities or mitigation costs. The estimates were for planning level purposes and are in 2008 constant dollars.

Other Criteria

In addition to the criteria listed above, other criteria were evaluated but left off of the evaluation matrix because they did not differentiate one corridor from another. The PDT as well as the PWG was made aware of this situation and chose to focus on only the above criteria that did make a difference in the evaluation. These dropped criteria are listed below:

- Number of interchanges (2);
- Threatened / rare / endangered species;
- Wildlife management / conservation areas;
- Quarries / mines;
- Park or recreation facilities; and,
- Underground storage tanks (USTs).

12.2 Level 2 Corridor Analysis

The eighteen corridors and no-build scenario were put into an evaluation matrix with the criteria listed above. **Table 14** shows the evaluation matrix for all of the corridors. The eighteen corridors are labeled according to their beginning and ending points. For example, Corridor 2-1 begins at the second point in the west and ends at the first point in the east. The colors on the table help to indicate relative performance in a category. Cells that are shaded green generally indicate good performance in a category while cells shaded red indicates poor performance in a category.

Corridor 1-1

Corridor 1-1 begins in the west at US 27 just south of KY 1980, and ends at I-75 in the east, just west of Boone Creek Rural Historic District. It has a relatively short length with no Kentucky River crossing, low system safety benefits, low travel time savings and limited connectivity. The ADT is high on the connector, and traffic volumes are lowered on some segments of Man O' War Boulevard. LOS on one segment of Man O' War Boulevard is improved from LOS E to D as a result. There are a low number of streams and potential wetlands and ponds impacted, as well as a low number of known historic sites impacted. There are a high number of farmland acres impacted, and possible

minority and elderly community impacts. The cost of this corridor is \$233 million, one of the least expensive build options.

Corridor 2-1

Corridor 2-1 begins in the west at the US 27 / KY 3375 intersection and extends east to I-75 west of Boone Creek Rural Historic District. It has a relatively short length with no bridge crossing, and low system safety benefits. It connects to KY 3375 at the western terminus. The ADT on the connector is high, and it significantly lowers traffic volumes on some segments of Man O' War Boulevard, improving LOS on one segment of Man O' War Boulevard from LOS E to D. Corridor 2-1 has a low number of potential wetlands and ponds impacted, as well as a low number of impacts to known historic sites, and landfills / HAZMAT sites. There are, however, a high number of archeological sites and farmland impacts. This alternative has a cost estimate of \$235 million, one of the lower estimates.

Corridor 3-1

Corridor 3-1 begins at US 27 just north of the US 27 / Northern US 27 Bypass intersection. It extends to I-75 west of Boone Creek Rural Historic District. It has a relatively short length and no Kentucky River crossing. It does, however, have high system safety benefits. It connects to the US 27 eastern and western bypasses at the western terminus. The connector has a relatively high ADT and significantly lowers traffic volumes on some segments of Man O' War Boulevard, improving the LOS on one segment of Man O' War Boulevard from LOS E to D. This corridor has a low number of streams impacted; however there are high farmland impacts as well as potential low-income and elderly community impacts. The cost estimate is \$234 million.

Corridor 4-1

Corridor 4-1 beings at the Eastern Nicholasville Bypass / KY 169 intersection and extends east to I-75 west of Boone Creek Rural Historic District. It has the shortest length of all the corridors, no Kentucky River crossing, and low travel time savings. It connects to KY 169 at the western terminus. The addition of this corridor significantly lowers traffic volumes on some segments of Man O' War Boulevard, and improves LOS on one segment of Man O' War Boulevard from LOS E to D. There are a low number of potential wetlands and ponds impacted, as well as the lowest number of impacts to known historic sites. There are, however, potential low-income community impacts. This alternative has the lowest cost estimate at \$211 million.

Table 14: Level 2 Evaluation Matrix

	System Operations						Traffic Operations								
Alternative Corridors	Length	Bridge	System Safety Improvement	Study Area Travel Time	Connectivity		2040 <i>A</i>	2040 Average Daily Traffic (Low to High)				0 Level of S	Service (ran	ige)	
		Length	(Yes / No)	g (Low, Medium, b) High)	Savings (vehicle hours of travel)	US 27 (West)	l-75 (East)	Connector	US 27	I-75	Man O' War Blvd	Connector	US 27	I-75	Man O' War Blvd
0	0.00	No	Low	0	None	None	N/A	13,800 - 146,700	114,100 - 192,400	51,300 - 135,900	N/A	B-F	F	E-F	N/A
1-1	10.05	No	Low	118	None	None	15,600 - 21,500	5% less to 3% more	8% less to 4% more	14% less to 7% more	A-B	B-F	F	D-F	11.8% to 12.7%
2-1	10.02	No	Low	244	KY 3375	None	12,100 - 19,500	5% less to 2% more	14% less to 4% more	16% less to 1% less	A-B	B-F	F	D-F	12.2% to 14.3%
3-1	10.73	No	High	195	US 27 Eastern / Western Bypass	None	12,600 - 18,400	7% less to 8% more	5% less to 5% more	17% less to 1% less	A-B	B-F	F	D-F	13.1% to 14.6%
4-1	9.84	No	Medium	124	KY 169	None	14,300 - 15,300	8% less to no change	5% less to 4% more	18% less to 1% less	А	B-F	F	D-F	15.1% to 16.9%
4-2	12.92	Yes	Medium	394	KY 169	KY 3055, KY 627	13,600 - 15,600	8% less to 12% more	9% less to 2% more	9% less to no change	А	B-F	F	E-F	12.8% to 14.7%
4-3	13.14	Yes	Medium	76	KY 169	None	13,300 - 16,900	9% less to 6% more	11% less to no change	9% less to no change	A-B	B-F	F	E-F	13.5% to 15.0%
4-4	13.72	Yes	Medium	455	KY 169	None	15,600 - 19,200	7% less to 12% more	11% less to 3% more	9% less to no change	A-B	B-F	F	E-F	10.4% to 12.5%
5-2	12.83	Yes	Medium	351	None	KY 3055, KY 627	12,900 - 14,600	9% less to 21% more	8% less to 1% more	9% less to no change	А	B-F	F	E-F	12.7% to 16.6%
5-3	13.13	Yes	Medium	440	None	None	13,600 - 16,000	10% less to 22% more	9% less to 2% more	9% less to no change	А	B-F	F	E-F	13.8% to 14.7%
5-4	13.67	Yes	Medium	427	None	None	14,500 - 17,500	11% less to 21% more	9% less to 3% more	9% less to no change	A-B	B-F	F	E-F	11.7% to 13.7%
6-2	13.29	Yes	Low	265	None	KY 3055, KY 627	11,800 - 12,700	9% less to 21% more	8% less to 2% more	9% less to no change	А	B-F	F	E-F	13.4% to 16.8%
6-3	13.55	Yes	Low	341	None	None	11,700 - 12,900	10% less to 22% more	8% less to 2% more	9% less to no change	А	B-F	F	E-F	13.2% to 16.5%
6-4	14.07	Yes	Low	138	None	None	12,000 - 13,400	10% less to 21% more	9% less to 3% more	10% less to no change	А	B-F	F	E-F	13.1% to 15.7%
7-2	14.10	Yes	High	330	US 27 Eastern / Western Bypass	KY 3055, KY 627	7,400 - 13,000	9% less to 4% more	8% less to 1% more	9% less to no change	А	B-F	F	E-F	13.5% to 16.9%
7-3	14.34	Yes	High	319	US 27 Eastern / Western Bypass	None	5,500 - 13,200	9% less to 3% more	8% less to 2% more	9% less to no change	А	B-F	F	E-F	13.1% to 22.6%
7-4 (North)	14.88	Yes	High	360	US 27 Eastern / Western Bypass	None	7,400 - 14,200	10% less to 3% more	9% less to 2% more	9% less to no change	А	B-F	F	E-F	14.2% to 16.3%
7-4 (South)	14.65	Yes	High	307	US 27 Eastern / Western Bypass	None	8,200 - 13,700	4% less to 21% more	9% less to 2% more	9% less to no change	А	B-F	F	E-F	15.1% to 19.8%
7-5	15.44	Yes	High	171	US 27 Eastern / Western Bypass	US 25 / Richmond Bypass	8,200 - 14,000	4% less to 21% more	9% less to 2% more	9% less to no change	А	B-F	F	E-F	13.7% to 17.5%

		Natural Environment			Cost (in 2008 Constant Dollars)				
Alternative Corridors	No. of Streams Impacted in Corridor	Potential Wetlands / Ponds in Corridor #'s (Acres)	Floodplains Impacts (Acres)	No. of Known Historic Sites in Corridor	No. of Known Archeological Sites in Corridor	Environmental Justice Impacts	Farmland Impacts (Acres)	Landfills and Other Potential HAZMAT Site Impacts	Initial Estimated Cost in Millions (Does not include Design, ROW, Utilities, & Mitigation)
0	0	0(0)	0	0	0	None	0	0	0
1-1	16	60(38)	124	7	2	Possible Minority and Elderly impacts	903	1	233
2-1	20	56(36)	124	8	4	None	948	0	235
3-1	16	71(32)	59	11	2	Low-Income and Elderly impacts	948	2	234
4-1	20	46(24)	62	4	1	Low-income impacts	885	2	211
4-2	23	76(71)	137	23	0	Low-income impacts	716	5	341
4-3	25	89(65)	137	23	1	Low-income impacts	740	3	342
4-4	26	87(69)	137	22	0	Low-income impacts	813	1	356
5-2	24	88(75)	88	19	0	None	654	5	336
5-3	25	101(68)	88	19	1	None	678	3	339
5-4	25	99(73)	88	18	0	None	751	1	352
6-2	26	102(83)	50	11	1	None	612	4	332
6-3	23	111(75)	50	9	2	None	624	2	352
6-4	23	107(78)	50	8	1	None	698	0	372
7-2	28	104(86)	61	15	3	None	697	4	341
7-3	28	113(78)	61	13	4	None	709	2	361
7-4 (North)	27	109(82)	61	12	3	None	782	0	380
7-4 (South)	32	77(61)	66	17	2	None	621	2	377
7-5	33	109(71)	66	18	3	Minority, Low-income and Elderly impacts	612	4	409

Table 14: Level 2 Evaluation Matrix (cont.)

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Corridor 4-2

Corridor 4-2 beings at the Eastern Nicholasville Bypass / KY 169 intersection and extends to the I-75 / KY 627 interchange. This alternative crosses the Kentucky River, and connects to KY 169 at the western terminus and KY 3055 and KY 627 at the eastern terminus. The addition of the corridor would lower traffic volumes on some segments of Man O' War Boulevard, but there is no change in LOS. This alternative would impact a high amount of floodplains in addition to known historic sites and landfills / HAZMAT sites. However, there are no archeological sites within the corridor. It would also impact potential low-income populations. This alternative's cost estimate is \$341 million.

Corridor 4-3

Corridor 4-3 begins at the Eastern Nicholasville Bypass / KY 169 intersection and extends east to I-75 just south of the KY 627 interchange. This corridor does cross the Kentucky River; however it has the lowest travel time savings of the build alternatives. It connects to KY 169 at the western terminus. The addition of the corridor lowers traffic volumes on some segments of Man O' War Boulevard, but does not result in a change in LOS. Within the corridor there are high floodplain impacts, as well as the highest number of known historic sites. Potential for low-income populations do exist in the corridor and they may be impacted. The cost is estimated to be \$342 million.

Corridor 4-4

Corridor 4-4 begins at the Eastern Nicholasville Bypass / KY 169 intersection and extends east to I-75 near Northridge Way. It crosses the Kentucky River and connects to KY 169 at the western terminus. This corridor has the highest study area travel time savings. The KYSTM model shows a high ADT on the connector, in addition to lower traffic volumes on some segments of Man O' War Boulevard. There is no change in LOS on US 27, Man O' War Boulevard or I-75 as a result of the connector. There are a large amount of floodplain impacts, as well as a high number of impacts to known historic sites. There are no archeological sites in the corridor, but there are potential low-income populations. Construction costs are estimated at \$356 million.

Corridor 5-2

Corridor 5-2 begins at the Eastern Nicholasville Bypass between KY 169 and KY 39. It crosses the Kentucky River and connects to KY 3055 and KY 627 at the eastern terminus. This corridor lowers traffic volumes on some segments of Man O' War Boulevard, but there is no change in LOS. The corridor has an average impact to streams, wetlands and ponds, and floodplains compared with the other alternatives. There are no archeological sites within the corridor but there are a high number of landfills / HAZMAT sites. This alternative's cost estimate is \$336 million.

Corridor 5-3

Corridor 5-3 begins at the Eastern Nicholasville Bypass between KY 169 and KY 39. It crosses the Kentucky River and ends just south of the I-75 / KY 627 interchange. There is no connectivity to other roads at either terminus. There are lower traffic volumes on some segments of Man O' War Boulevard, but no change in LOS. This corridor would

have a high number of potential wetlands and ponds impacted. The estimated cost is \$339 million.

Corridor 5-4

Corridor 5-4 begins at the Eastern Nicholasville Bypass between KY 169 and KY 39 and extends to I-75 near Northridge Way. It crosses the Kentucky River but there is no connectivity at either terminus. It has a relatively high ADT on the connector, and lowers traffic volumes on some segments of Man O' War Boulevard. There is no change in LOS on US 27, Man O' War Boulevard or I-75. Impacts to streams, wetlands and ponds, and floodplains are average compared to other corridors. There are no known archeological sites in the corridor. The estimated cost is \$352 million.

Corridor 6-2

Corridor 6-2 begins at the Eastern Nicholasville Bypass south of KY 39 and extends to the I-75 / KY 627 interchange. It crosses the Kentucky River, but has low system safety benefits. It connects to KY 3055 and KY 627 at the eastern terminus. The addition of the corridor results in lower traffic volumes on some segments of Man O' War Boulevard, but no change in LOS. The corridor causes a high number of impacts to potential wetlands and ponds, but has the lowest floodplains impacts, as well as the lowest farmland impacts. This corridor has a cost estimate of \$332 million.

Corridor 6-3

Corridor 6-3 begins at the Eastern Nicholasville Bypass south of KY 39 and ends at I-75 south of the KY 627 interchange. It crosses the Kentucky River, but has low system safety benefits, and no connectivity. There are lower traffic volumes on some segments of Man O' War Boulevard, but no change in LOS. This corridor has high impacts to potential wetlands and ponds, but the lowest floodplains impacts. There are also a low number of known historic sites in the corridor and farmland impacts. Construction costs are estimated at \$352 million.

Corridor 6-4

Corridor 6-4 begins at the Eastern Nicholasville Bypass south of KY 39 and ends at I-75 near Northridge Way. It crosses the Kentucky River and has low system safety benefits. There is no connectivity at either terminus. The corridor does lower traffic volumes on some segments of Man O' War Boulevard, but there is no change in LOS. There would be high impacts to potential wetlands and ponds, but the lowest floodplains impacts. There are a low number of impacts to known historic sites, and no landfill or HAZMAT sites within the corridor. Construction costs are estimated to be \$372 million.

Corridor 7-2

Corridor 7-2 begins at the Eastern Nicholasville Bypass at the southern connection to US 27 and extends to the I-75 / KY 627 interchange. It crosses the Kentucky River and has high system safety benefits. It connects to the US 27 eastern and western bypasses at the western terminus and KY 3055 and KY 627 at the eastern terminus. There is a relatively low ADT on the connector, but the addition of the connector still lowers traffic volumes on some segments of Man O' War Boulevard. There is no

change in LOS along US 27, I-75 or Man O' War Boulevard. There are a high number of streams and potential wetlands and ponds impacted. This corridor's cost estimate is \$341 million.

Corridor 7-3

Corridor 7-3 begins at the Eastern Nicholasville Bypass at the southern connection to US 27 and ends at I-75 south of the KY 627 interchange. It crosses the Kentucky River, has high system safety benefits, and connects to the US 27 eastern and western bypasses at the western terminus. The connector has the lowest ADT, but still lowers traffic volumes on some segments of Man O' War Boulevard. There is no change in LOS. There are a high number of streams and potential wetlands and ponds impacted, as well as a high number of archeological sites within the corridor. The construction cost estimate of this alternative is \$361 million.

Corridor 7-4 (North)

Corridor 7-4 (North) begins at the Eastern Nicholasville Bypass at the southern connection to US 27, and ends at I-75 near Northridge Way. It has a relatively long length, crosses the Kentucky River, has high system safety benefits, and connects to the US 27 eastern and western bypasses at the western terminus. The connector has a low ADT but still lowers traffic volumes on some segments of Man O' War Boulevard. There is no change in LOS. There are a high number of potential wetlands and ponds impacted, but there are no landfills or HAZMAT sites impacted. This alternative's cost estimate is \$380 million.

Corridor 7-4 (South)

Corridor 7-4 (South) begins at the Eastern Nicholasville Bypass at the southern connection to US 27 and ends at I-75 near Northridge Way similar to Corridor 7-4 (North) but takes a southerly route between the two points. It has a relatively long length, crosses the Kentucky River, has high system safety benefits, and connects to the US 27 eastern and western bypasses at the western terminus. The connector has a low ADT but still lowers traffic volumes on some segments of Man O' War Boulevard. There is no change in LOS. It has a high number of impacts to streams, and average impacts to potential wetlands and ponds, and floodplains compared to other alternatives. It also has low farmland impacts. This alternative's cost estimate is \$377 million.

Corridor 7-5

Corridor 7-5 begins at the Eastern Nicholasville Bypass at the southern connection to US 27 and ends at the I-75 / Northern Richmond Bypass interchange. It is the longest of all of the alternatives at 15.44 miles. It crosses the Kentucky River, has high system safety benefits, and connects to the US 27 eastern and western bypasses at the western terminus and to the US 25 / Richmond bypass at the eastern terminus. The connector has a low ADT but still lowers traffic volumes on some segments of Man O' War Boulevard. There is no change in LOS. The corridor has the highest number of streams potentially impacted. There are also potential minority, low-income and elderly

community impacts within the corridor. There low amounts of farmland impacted, however this alternative has the highest estimated construction cost at \$409 million.

12.3 Level 2 Analysis Results

By looking at the termini points, considering connectivity and impacts as outlined in the matrices and discussed previously, the number of corridors were reduced from eighteen to six, not including the No-Build option. It remained as the baseline comparison as well as a viable alternative. The remaining alternative corridors include all corridors that go through points 4, 5, and 6 on US 27 and points 2 and 4 on I-75 (alternative corridors 4-2, 4-4, 5-2, 5-4, 6-2, and 6-4). The corridors that were removed from consideration are listed below along with a summary of the reasons for dismissal.

Alternative Corridor 1-1, 2-1, 4-1: These corridors are located in the northern most portion of the study area, which could lead to significant farmland and residential impacts. In addition, these alternative corridors would go through existing established neighborhoods leading to much community disruption. Alternatives 1-1 and 4-1 could have potential environmental justice impacts, while all three alternatives may impact known archeological sites.

While connectivity east and west of the project study area was not a major element of the scope of work, it should be noted that there is no existing connectivity within this corridor. Furthermore, a Kentucky River crossing is not included in these alternatives; therefore while they would lead to a lower cost, they lose the added benefit for an additional river crossing to provide an alternative route to I-75 were there to be an incident (either traffic or security related) that would render the Clays Ferry Bridge inaccessible. It may be that with an additional river crossing, federal funding through Homeland Security monies could be secured for this project. It should be noted though, that that no discussion with Homeland Security at the State or Federal level was a part of this scoping study. An additional bridge would also enhance the availability of evacuation routes in case of an incident at the Bluegrass Army Depot, further strengthening the argument of the necessity of an additional bridge.

With regard to traffic, there is the perception that a northern route through Fayette County could become another bypass of Lexington, catering to commuter traffic and furthering the congestion on US 27 and perhaps accelerating urban sprawl. The travel time savings is lower for these alternative corridors than others further south with a river crossing. From a safety perspective, the initial qualitative analysis showed that these corridors would have a low to medium improvement for system safety. Generally, as the purpose of this project is to improve safety, connectivity and regional access, these alternative corridors fail to satisfy these criteria and were therefore dismissed from further consideration.

Alternative Corridor 3-1: This alternative corridor has similar benefits and impacts as Alternative Corridors 1-1, 2-1, and 4-1 with regard to environmental justice, residential and farmland impacts, connectivity, Homeland Security, commuter traffic, and travel

time savings. There is a benefit from this corridor, however, since from a safety perspective, the initial qualitative analysis showed that this corridor would have a high improvement for system safety. Generally, with the purpose of this project being to improve safety, connectivity and regional access, this alternative corridor may improve safety but fails to satisfy the other two criteria and was therefore dismissed from further consideration.

Alternative Corridor 4-3: Based on the matrix, there are numerous impacts that provide justification for dismissing this corridor from further study including the highest number of potentially impacted acres of floodplains and known historic sites, as well as potential impacts to low-income Environmental Justice communities. Also, there is limited system connectivity opportunities. In addition, a new interchange at this location may be too close to the existing interchange at KY 627. From a travel time savings perspective, this alternative corridor has the lowest vehicle hours of travel savings in the study area.

Alternative Corridor 5-3: From an environmental perspective, there are a high number of known historic sites and stream impacts along this corridor. There is also no existing transportation system connectivity opportunities. In addition, a new interchange at this location may be too close to the existing interchange at KY 627. This alternative corridor does not warrant further study as there are other more viable alternative corridors based on connectivity.

Alternative Corridor 6-3: Within this corridor there are a high number of potential wetlands and ponds that could be impacted, although there are fewer acres of farmland that could be potentially impacted. There is limited transportation system connectivity opportunities. In addition, a new interchange at this location may be too close to the existing interchange at KY 627. From a safety perspective, this alternative corridor rates low with regard to the potential for system safety improvement. Considering that it does not satisfy the project purpose of improving safety, connectivity and regional access, it was dismissed from further consideration.

Alternative Corridor 7-2: This corridor is located in the southern portion of the study area away from the majority of the residential areas. However, based on the traffic analysis, corridors with a western terminus as far south as terminus 7 attracted significantly less traffic onto the new connector. This would make it difficult to justify spending the amount of money it would take to build the corridor.

Alternative Corridor 7-3: Within this corridor there are a high number of known archeological sites, and there is no transportation system connectivity opportunities. In addition, a new interchange at this location may be too close to the existing interchange at KY 627. Furthermore, similar to Alternative Corridor 7-2, corridors with a western terminus as far south as terminus 7 on US 27 attracted significantly less traffic to the connector, making it difficult to justify the cost.

Alternative Corridor 7-4 (North) and 7-4 (South): These alternatives have a high number of streams that could be impacted within the corridors. In addition there is little transportation system connectivity opportunities. With the western terminus point at 7 on US 27, these alternative corridors have similar issues as Alternative Corridors 7-2 and 7-3 and were therefore dismissed from further consideration.

Alternative Corridor 7-5: The eastern terminus of this corridor is on I-75 at the Richmond Bypass. Currently this area is heavily developed which would make construction of this alternative difficult. Furthermore, this is the longest corridor, has the highest cost, and may affect potential minority, low-income, and elderly communities. Based on the traffic analysis, corridors with a western terminus as far south as terminus 7 on US 27 attracted significantly less traffic to the connector, which would make it difficult to justify spending the amount of money it would take to build the corridor. For all of these reasons, this alternative corridor was dismissed from further consideration.

13.0 LEVEL 3 EVALUATION – DETAILED ANALYSIS

13.1 Alternative Corridor Revisions

After the original eighteen corridors were narrowed down to six, the remaining corridors were adjusted slightly to minimize impacts to nationally registered historic sites, residential areas, to reduce the amount of earthwork that would need to be completed and to avoid the lock and dam on the Kentucky River. **Figure 16** shows the refined six remaining corridors.

13.2 2040 Alternative Corridor Traffic Forecasts

In the Level 2 Analysis, 2040 traffic volumes could not be calculated using historical growth rates because the corridor is a new roadway. However at that level of detail, the actual 2040 number was not as important as were the relative comparisons of traffic volumes amongst the different alternative corridors. Therefore a one percent per year growth rate was applied to each of the corridors. For the Level 3 Analysis, a more realistic growth rate must be applied so the corridor volumes could not only be comparable to one another, but also provide a more realistic idea of how much traffic would actually use the corridor. This is necessary so the PDT can be able to identify what type of facility and the number of lanes that would be needed, as well as determine if usage would justify the cost.

A meeting was held with project team members as well as several representatives from the KYTC Central Office Planning Division to discuss an appropriate method to determine the 2040 volumes for the new connector. PB was confident with the 2003 volumes obtained from the KYSTM, however the KYSTM is not able to forecast to future years. The Lexington MPO travel demand model is able to forecast to future years, however this model only includes Fayette and Jessamine counties. Because all six alternative corridors terminate in Madison County, the corridors could not be coded into the model and forecasted to a future year. The inability to find a growth rate for the corridors resulted in the decision to find an overall growth rate for the study area and apply it to the new connectors. This method posed additional problems, however, because many of the roadways in the study area have very high historical growth rates and cannot realistically continue to grow at those rates due to capacity constraints. The KYTC Central Office has developed a new "hybrid" growth rate that is a middle point between exponential and linear historical growth. This growth rate has not been widely used yet, but it is appropriate for this study because it constrains growth. It was decided that this growth rate would be used for roadways in Madison County, and that an average of the KYTC growth rate and the growth rates calculated based on the Lexington MPO travel model would be used to get a growth rate for roadways in Fayette and Jessamine counties. A weighted average of the growth rates of major roadways in the study area was calculated to provide an overall study area growth rate. This number was calculated to be 2.24% per year and was applied to each new connector to determine 2040 ADTs.

Figure 16: Level 3 Corridors



13.3 Typical Sections

Several types of facilities were considered for this project. Eventually, a four-lane facility may likely be desirable. However, depending on when a new connector is built, a two-lane facility may initially be adequate. If it is determined that this is the case, right-of-way for a four-lane facility could be bought, so that widening would be possible in the future. There has also been discussion of the need for a multi-use path to accommodate bicyclists and pedestrians. **Figures 17, 18, 19 and 20** show four typical sections that could be used for the new connector. These include a two-lane facility with right-of-way for an eventual four-lane facility, a four-lane facility, a two-lane facility with right-of-way for a four-lane facility with the addition of a multi-use path along one side, and a four-lane facility with a multi-use path on one side.



Figure 17: Two-Lane Typical Section



Figure 18: Four-Lane Typical Section



Figure 19: Two-Lane Typical Section with Multi-Use Path

Figure 20: Four-Lane Typical Section with Multi-Use Path



To determine if a two-lane facility is appropriate for initial construction, capacity constraints of the roadway must be determined. According to the 2000 Highway Capacity Manual (HCM), two-lane roadways have a two-way capacity of 3,200 passenger cars per hour (pc/h). At capacity, the LOS is E, with operating conditions unpredictable. The level of service for a two-lane roadway is largely dependent on the percent time spent following. Therefore, as the traffic volume for both directions increases, or if there is a high percentage of no-passing zones, the level of service decreases. Because of the hilly terrain of the study area, as well as the large percentage of trucks that would use a potential connector, this roadway is likely to have a higher percent of time spent following than would a roadway of equal traffic volume with a less hilly terrain and lower truck percentage.

The Highway Capacity Software Plus (HCS Plus) software package was used to determine the year that a LOS E or below would be reached for this roadway. The

corridor volumes used for this analysis were based on the 2003 traffic volumes from the KYSTM, inflated by the study area growth rate of 2.24% per year. Based on the highway capacity analysis, a two-lane roadway will fail when the ADT for one segment reaches 13,970 vehicles. **Table 15** shows the year at which one segment of the two-lane roadway will reach that volume for each of the six alternatives.

Corridor	Failure Year
4-2	2015
4-4	2008
5-2	2017
5-4	2013
6-2	2022
6-4	2022

Table 15: Year at which a Two-Lane Roadway Fails

Based on this analysis, all of the corridors fail before the design year of 2040. Alternative corridors 6-2 and 6-4 would take the longest to reach failure, but failure occurs in the year 2022 which is still eighteen years prior to the design year.

Other issues that should be considered when deciding on whether to construct initially a two-lane versus a four-lane roadway include:

- Additional costs of the second phase of construction when the road is ultimately widened to four lanes.
- Delay that will be caused by future construction.
- If tolls are used to fund the roadway, people may not pay a toll if the roadway does not operate under free flow conditions.

While initially a four-lane road looks more desirable given the operational characteristics of the two-lane road and the other considerations, cost also plays a role in the selection of the preferred alternative. Additional analysis is provided later in this report on the discussion of funding prior to the final recommendation.

13.4 Level 3 Evaluation Summary

The Level 3 Evaluation involved a more detailed analysis of the remaining six corridors and the no-build alternative, after minor adjustments were made. The more detailed evaluation included updating information on system operations, traffic operations, natural environment, human environment and cost.

System Operations

The remaining corridors were re-evaluated with respect to system safety improvements, study area travel time savings and connectivity.

Traffic Operations

The ADT of each corridor was revised based on the method described in Section 13.2. Using the new ADT volumes, HCS+ was used to determine the level of service in 2040 if the new connector is a two-lane unlimited access facility, a four-lane unlimited access facility or a four-lane limited access facility. HCS+ does not evaluate two-lane unlimited access facilities; however it will likely perform only slightly better than a two-lane unlimited access roadway, as level of service for two-lane facilities is largely impacted by passing ability. While a limited access roadway would eliminate delays due to intersections, it would not greatly improve passing ability and opportunity. Traffic operations along US 27, I-75 and Man O' War Boulevard were compared among each of the alternatives using ADTs from the KYSTM. A range of LOS for various segments along US 27, I-75, Man O' War Boulevard was given for the no-build as well as each of the six corridor scenarios. Each new corridor's truck percentage was also calculated.

Natural Environment

The number of streams impacted in the corridor, potential wetlands / ponds in the corridors and floodplain impacts were all re-evaluated for the adjusted corridors.

Human Environment

The number of known historic and archeological sites in the corridor, environmental justice impacts, farmland impacts and landfills and other potential HAZMAT site impacts were all re-evaluated for the adjusted corridors.

<u>Cost</u>

Right-of-way and utilities costs were estimated in 2008 dollars for each corridor. Cost estimates were derived for base two-lane and four-lane roadways for each corridor. Costs were also calculated to add a 10-foot multi-use path to each corridor, as well as to add two interchanges to make each corridor limited access. Total costs were estimated for two and four-lane roadways with at-grade intersections, with at-grade intersections and a multi-use path, limited access roadways with no multi-use path, and limited access roadways with a multi-use path.

13.5 Level 3 Corridor Analysis

The remaining six corridors were put into an evaluation matrix (using the previously described evaluation criteria) along with the no-build scenario. **Table 16** shows the evaluation matrix.

No-Build

The no-build alternative does not significantly improve system safety or provide any travel time savings, nor does it have any connectivity. Traffic volumes along US 27, I-75 and Man O' War Boulevard are higher than what the roadways can accommodate along most sections. Connector ADT, LOS and truck percentage cannot be calculated because there is no connector in this scenario. This alternative has no impacts to the human or natural environment and has no costs associated with it beyond those that are anticipated from the individual Existing and Committed projects.

Table 16: Level 3 Evaluation Matrix

Alternative Corridors	System Operations						Traffic Operations								
	Length	System Safety Improvement (Low, Medium, High)	Study Area Travel Time	Conne	ctivity	2040 Average Daily Traffic (Low to High)				2040 C	2040 Connector Level of Service (range)				
			vehicle hours of travel)	US 27 (West)	l-75 (East)	Connector	US 27	I-75	Man O' War Blvd	2 Lane Unlimited Access	2 Lane Limited Access	4 Lane Unlimited Access	4 Lane Limited Access	(range)	
0	0.00	Low	0	None	None	N/A	13,800 - 146,700	114,100 - 192,400	51,300 - 135,900	N/A	N/A	N/A	N/A	N/A	
4-2	12.92	Medium	482	KY 169	KY 3055, KY 627	20,000 - 24,000	8% less to 12% more	9% less to 2% more	9% less to no change	E-F	-	В	В	14.8% - 16.2%	
4-4	13.72	Medium	395	KY 169	None	23,000 - 28,000	7% less to 12% more	11% less to 3% more	9% less to no change	E-F	-	B-C	B-C	10.9% - 13.3%	
5-2	12.83	Medium	368	None	KY 3055, KY 627	20,000 - 23,000	9% less to 21% more	8% less to 1% more	9% less to no change	E	-	В	В	14.7% - 15.85	
5-4	13.67	Medium	271	None	None	21,000 - 25,000	11% less to 21% more	9% less to 3% more	9% less to no change	E-F	-	В	В	12.5% - 13.9%	
6-2	13.29	Low	276	None	KY 3055, KY 627	18,000 - 20,000	9% less to 21% more	8% less to 2% more	9% less to no change	E	-	В	В	15.8% - 16.8%	
6-4	14.07	Low	134	None	None	17,000 - 21,000	10% less to 21% more	9% less to 3% more	10% less to no change	E	-	В	В	14.1% - 15.4%	

Alternative Corridors		Natural Environment		Human Environment							
	No. of Streams Impacted in Corridor	Potential Wetlands / Ponds in Corridor #'s (Acres)	Floodplains Impacts (Acres)	No. of Known Historic Sites in Corridor	No. of Known Archeological Sites in Corridor	Environmental Justice Impacts	Farmland Impacts (Acres)	Landfills and Other Potential HAZMAT Site Impacts			
0	0	0(0)	0	0	0	None	0	0			
4-2	25	44(45)	81	17	2	Low-income impacts	645	4			
4-4	25	52(39)	81	17	1	Low-income impacts	759	0			
5-2	23	48(47)	72	15	2	None	654	4			
5-4	20	54(41)	72	15	1	None	769	0			
6-2	27	59(61)	59	6	4	None	586	4			
6-4	22	59(54)	59	4	3	None	688	0			

Table 16: Level 3 Evaluation Matrix (cont.)

	Cost (in 2008 Dollars)										
Alternative Corridors			Design and Construction Cost								
	Right-of-Way Cost	Utilities Cost	2-Lane (base estimate)	4-Lane (base estimate)	Additional Cost for 10' Multi-use Path	Additional Cost for Limited Access					
0	0	0	0	0	0	0					
4-2	\$13,000,000	\$3,000,000	\$169,000,000	\$300,000,000	\$23,000,000	\$41,000,000					
4-4	\$14,000,000	\$3,000,000	\$175,000,000	\$314,000,000	\$25,000,000	\$41,000,000					
5-2	\$10,000,000	\$3,000,000	\$168,000,000	\$297,000,000	\$23,000,000	\$41,000,000					
5-4	\$12,000,000	\$3,000,000	\$175,000,000	\$311,000,000	\$24,000,000	\$41,000,000					
6-2	\$10,000,000	\$4,000,000	\$172,000,000	\$287,000,000	\$22,000,000	\$41,000,000					
6-4	\$11,000,000	\$4,000,000	\$178,000,000	\$318,000,000	\$25,000,000	\$41,000,000					

Table 16: Level 3 Evaluation Matrix (cont.)
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Table 16: Level 3 Evaluation Matrix (cont.)

Alternative Corridors	Total Cost (in 2008 Dollars) Does Not Include Mitigation Costs												
	2-Lane, at-grade	2-Lane, at-grade2-Lane, timited Access2-Lane, Limited Access, 10' Path4-Lane, at-grade4-Lane, at-grade, 10' Path4-Lane, Limited Access4-Lane, Limited Access010' Path10' Path10' Path10' Path10' Path10' Path10' Path											
0	0	0	0	0	0	0	0	0					
4-2	\$185,000,000	\$208,000,000	\$226,000,000	\$249,000,000	\$316,000,000	\$339,000,000	\$357,000,000	\$380,000,000					
4-4	\$192,000,000	\$217,000,000	\$233,000,000	\$258,000,000	\$331,000,000	\$356,000,000	\$372,000,000	\$397,000,000					
5-2	\$181,000,000	\$204,000,000	\$222,000,000	\$245,000,000	\$310,000,000	\$333,000,000	\$351,000,000	\$374,000,000					
5-4	\$190,000,000	\$214,000,000	\$231,000,000	\$255,000,000	\$326,000,000	\$350,000,000	\$367,000,000	\$391,000,000					
6-2	\$186,000,000	\$208,000,000	\$227,000,000	\$249,000,000	\$301,000,000	\$323,000,000	\$342,000,000	\$364,000,000					
6-4	\$193,000,000	\$218,000,000	\$234,000,000	\$259,000,000	\$333,000,000	\$358,000,000	\$374,000,000	\$399,000,000					

Corridor 4-2

Corridor 4-2 has a length of approximately 13 miles, and provides medium system safety improvements. It provides the highest study area travel time savings of all of the corridors, and the best connectivity, connecting to KY 169 in the west and KY 3055 and KY 627 in the east. It has an ADT between 20,000 and 24,000, and provides a LOS E-F in 2040 for a two-lane unlimited access road and a LOS B for a four-lane limited or unlimited access roadway. The addition of the corridor would lower traffic volumes on some segments of Man O' War Boulevard, but there is no change in LOS for US 27, Man O' War Boulevard and I-75. This corridor has the most impacts to floodplains, known historic sites and landfills and other potential HAZMAT sites. There is also the potential for impacts to low-income populations. Cost estimates for this alternative range from \$185 to \$381 million dollars, depending on the type of facility.

Corridor 4-4

Corridor 4-4 is approximately 14 miles long and connects to KY 169 at the western terminus. It has medium system safety improvements and the second highest study area travel time savings. It has the highest ADT of all of the alternatives, ranging from 23,000 to 28,000 vehicles per day. It provides a LOS E-F for a two-lane unlimited access facility and LOS B-C for a four-lane limited or unlimited access roadway. The corridor does lower traffic volumes on some segments of Man O' War Boulevard, however there is no change in LOS on US 27, Man O' War Boulevard or I-75. In addition, this alternative also has the most impacts to floodplains and known historic sites. There is the potential for impact to low-income populations. This corridor has the highest right-of-way costs, with total cost estimates ranging from \$192 to \$397 million dollars.

Corridor 5-2

Corridor 5-2 is approximately 13 miles long, has medium system safety improvements and the third highest study area travel time savings. This corridor connects to KY 3055 and KY 627 at the eastern terminus. It has an ADT of 20,000 to 23,000 vehicles and provides a LOS E for a two-lane unlimited access road and LOS B for four-lane limited and unlimited access roads. This corridor lowers traffic volumes on some segments of Man O' War Boulevard, but there is no change in LOS for US 27, Man O' War Boulevard and I-75. This corridor has the highest number of landfill and other potential HAZMAT site impacts, but no environmental justice impacts. The cost estimates for this alternative range from \$181 to \$374 million dollars, which are the lowest costs for the two-lane alternatives.

Corridor 5-4

Corridor 5-4 is approximately 14 miles long and has medium system safety improvements and average travel time savings. It has no connectivity at either terminus. The ADT is between 21,000 and 25,000 vehicles per day, and the LOS is E to F for a two-lane unlimited access road and B for a four-lane limited or unlimited access road. The corridor lowers traffic volumes on some segments of Man O' War Boulevard, but there is no change in LOS on US 27, Man O' War Boulevard or I-75. This alternative impacts the lowest number of streams, known archeological sites, and

landfills and other potential HAZMAT sites. The cost estimates for this alternative range from \$189 to \$391 million dollars.

Corridor 6-2

Corridor 6-2 is approximately 13 miles long, has low system safety improvements and average travel time savings. It connects to KY 3055 and KY 627 at the eastern terminus. It has one of the lowest ADTs of all the alternatives, ranging from 18,000 to 20,000 vehicles. It has LOS E for a two-lane unlimited access roadway and LOS B for a four-lane limited or unlimited access roadway. The addition of the corridor results in lower traffic volumes on some segments of Man O' War Boulevard, but no change in LOS for US 27, Man O' War Boulevard and I-75. This alternative impacts the highest number of streams, potential wetlands / ponds, known archeological sites, and landfills and other potential HAZMAT sites. However, it impacts the lowest amount of floodplains and farmland, and has no environmental justice impacts. The corridor has the highest utilities costs but the lowest overall costs for the four-lane roadway scenarios. The cost estimates range from \$185 to \$363 million dollars.

Corridor 6-4

Corridor 6-4 is the longest remaining corridor at approximately 14 miles. It has low system safety improvements and the lowest study area travel time savings. It has no connectivity and one of the lowest ADTs with 17,000 to 21,000 vehicles per day. It has LOS E for a two-lane unlimited access roadway and LOS B for a four-lane limited or unlimited access road. The corridor does lower traffic volumes on some segments of Man O' War Boulevard, but there is no change in LOS for US 27, Man O' War Boulevard and I-75. It has one of the highest impacts to potential wetlands / ponds, but the lowest impacts to floodplains, known historic sites, and landfills and other potential HAZMAT sites. There are no environmental justice impacts. This alternative has the highest utilities cost and overall roadway costs, regardless of scenario. Estimates range from \$193 to \$399 million dollars.

14.0 TOLL FUNDING SOURCES

14.1 Toll Information

Tolling is an option for funding roadway projects, including helping cover maintenance and operating costs as well as some of the initial construction costs. Across the United States, tolls average \$0.05 to \$0.13 per mile, although tolls are generally higher for commercial vehicles depending on the number of axles. Tolls are also usually higher for bridges and tunnels. Usually, as the price of the toll increases, fewer cars choose to use the roadway. Many states in the US currently have tolls. Below is a map (**Figure 21**) showing states that currently have toll roads (as indicated by the green shading).



Figure 21: Map of States that Currently have Toll Facilities

Kentucky does not currently have any toll roads; however, it has tolled roadways in the past and is currently investigating tolls as a method of financing the Louisville – Southern Indiana Ohio River Bridges project. A brief overview study on tolling was performed for this project. The analysis found that travel time savings for passenger vehicles is equivalent to \$9.60 per hour, and \$33.00 per hour for trucks. Vehicle operating savings were found to equal \$0.16 per mile for passenger cars and \$0.65 per

mile for trucks. The annual cost of operating a toll road, not including customer service center operations, was found to be \$655,600. The study also used travel demand modeling to determine how toll road usage would be affected by increasing toll prices. **Figures 22** and **23** shows the effects of toll price on ADT for two of the bridges being studied. These figures show that the sharpest decline in ADT occurs when the toll is raised from \$1.00 to \$2.00.





Source: Louisville-Southern Indiana Ohio River Bridges Project Preliminary Traffic and Revenue Options Study. Wilbur Smith Associates.

East End Bridge 70000 60000 50000 40000 ADT 30000 20000 10000 0 -No Toll \$0.50 \$1.00 \$2.00 \$3.00 Cost

Figure 23: Effect of Toll Pricing on ADT of East End Bridge

Source: Louisville-Southern Indiana Ohio River Bridges Project Preliminary Traffic and Revenue Options Study. Wilbur Smith Associates.

A review of toll pricing was performed for roadways across the United States. Data was primarily compiled from Toll Facilities in the United States: Bridges – Roads – Tunnels – Ferries, a document prepared by the Federal Highway Administration (FHWA). The roadways shown were selected as the most comparable data on existing facilities with similar lengths. Two tables are presented summarizing this data, one for entire tolled roadways and one for bridges only (**Table 17** and **Table 18**).

Table 17: Representative Toll Pricing in t	the US for Entire Roadways
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State	Length (mi.)	Road Type	Min Pass Fee	Max Pass Fee	Min Truck Fee	Max Truck Fee
New York	5	Rural Minor Collector	\$9.00			
New York	5.6	Urban Freeway	\$0.32	\$23.05	\$0.67	\$93.85
New York	5.9	Rural Local	\$6.00			
Colorado	6.6	Urban Interstate	\$0.50	\$3.25	\$18.00	\$18.00
South Carolina	7.5	Rural Principal Arterial	\$0.50	\$1.00		
California	10	Urban Freeway	\$1.15	\$9.25	\$1.15	\$9.25
Texas	10.42	Urban Principal Arterial	\$1.00	\$1.25	\$6.25	
Texas	10.58	Urban Principal Arterial	\$1.00	\$1.25	\$6.25	
Texas	11	Urban Freeway	\$2.00		\$12.50	
New York	15	Urban Interstate	\$1.13	\$2.50	\$2.61	\$8.25
Oklahoma	17.3	Rural Minor Arterial	\$1.00		\$1.00	\$2.00
New York	17.9	Rural Interstate	\$0.32	\$23.05	\$0.67	\$93.85
Texas	21.7	Urban Principal Arterial	\$2.00	\$2.50	\$12.50	
Utah	22.5	Rural Principal Arterial	\$2.00		\$8.00	
Ohio	22.5	Rural Interstate	\$1.00		\$1.50	\$3.25
Oklahoma	25	Rural Interstate	\$4.00		\$16.00	

Source: Toll Facilities in the United States: Bridges - Roads - Tunnels – Ferries. December 2007. Publication No: FHWA-PL-07-029

State	Length (mi.)	Road Type	Min Pass Fee	Max Pass Fee	Min Truck Fee	Max Truck Fee
Minnesota - North Dakota	0.1	Non-interstate	\$0.63	\$0.75	\$0.63	\$0.75
Illinois - Iowa	0.19	Non-interstate	\$0.50		\$0.50	
New York	0.2	Non-interstate	\$2.00	\$4.00	\$2.00	\$12.00
New York - Canada	0.2	Non-interstate	\$3.00		\$3.00	\$55.00
Texas - Mexico	0.2	Non-interstate	\$2.00	\$7.00	\$7.00	\$20.00
Texas - Mexico	0.2	Non-interstate	\$2.50	\$6.00	\$8.00	\$20.00
Texas - Mexico	0.2	Non-interstate	\$1.65			
Texas - Mexico	0.26	Non-interstate	\$2.50		\$7.00	\$19.00
Texas - Mexico	0.3	Non-interstate	\$1.65			
Alabama	0.39	Non-interstate	\$1.50		\$3.50	\$5.00
New York	0.4	Non-interstate	\$1.00	\$2.25	\$3.60	\$27.00
Texas - Mexico	0.4	Non-interstate	\$2.50			
Illinois - Indiana	0.5	Non-interstate	\$1.00		\$1.50	\$3.00
New York - Canada	0.5	Non-interstate	\$3.00		\$3.00	\$55.00
Texas - Mexico	0.5	Non-interstate	\$1.65			
Alabama	0.59	Non-interstate	\$1.25		\$2.50	\$3.25
Illinois - Iowa	0.6	Non-interstate	\$1.00		\$4.00	\$10.00
New York	0.6	Non-interstate	\$0.30	\$1.00	\$2.50	\$9.00
Alabama	0.62	Non-interstate	\$1.50		\$3.50	\$5.00
New York	0.7	Non-interstate	\$0.30	\$1.00	\$2.50	\$9.00
New York	0.7	Non-interstate	\$1.75	\$2.25	\$3.60	\$27.00
New York - Canada	0.7	Non-interstate	\$2.70	\$3.00	\$5.40	\$13.00
New York	0.8	Non-interstate	\$1.00	\$2.25	\$3.60	\$27.00
Illinois - Indiana	0.9	Non-interstate	\$0.50		\$0.70	\$1.70
Interstate Bridges	1 to 5		\$0.30	\$6.00	\$1.43	\$108.00
Interstate Bridges	>5		\$0.40	\$4.00	\$1.15	\$53.44

Table 18: Representative	Toll Pricing in th	e US for Bridges
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Source: Toll Facilities in the United States: Bridges - Roads - Tunnels – Ferries. December 2007. Publication No: FHWA-PL-07-029

The following table (**Table 19**) shows the length of time it would take to pay for the given alternative / scenario combination. Assumptions used in this calculation include:

- 2040 ADT numbers
- Maximum percentage of trucks assumed per alternative
- Reduction in ADT due to tolling as derived from the Ohio River Bridges Study
- \$1.00 fee for cars; \$2.00 for trucks
- Inflation is not taken into consideration

Table 19: Number of Years with a Toll to Pay for Roadway

		Number of Years to Pay for Given Scenario											
Alternative Corridors	2-Lane, at-grade	2-Lane, at-grade, 10' Path	2-Lane, Limited Access	2-Lane, Limited Access, 10' Path	4-Lane, at-grade	4-Lane, at-grade, 10' Path	4-Lane, Limited Access	4-Lane, Limited Access, 10' Path					
0	0	0	0	0	0	0	0	0					
4-2	25	29	31	34	44	47	49	52					
4-4	23	26	28	31	39	42	44	47					
5-2	26	29	32	35	44	48	50	54					
5-4	25	28	31	34	43	46	49	52					
6-2	30	34	37	41	49	53	56	60					
6-4	31	35	37	41	53	57	59	63					

As shown by this table, it is possible to pay for the new route during a 30-year bond period. However, this means the roadway would have to be constructed as a two-lane facility. The maximum number of years to pay for the highest cost alternative (6-4 with 4-lanes, limited access, and a 10-foot path) would be 63 years using tolls.

From this review of available toll information, several conclusions can be drawn:

- Tolling would decrease the amount of traffic that would use the proposed connector road.
- The majority of states surrounding Kentucky have toll roads.
- Based on similar roadways, tolls between \$1 and \$2 may be appropriate at the present time, however these prices may increase once the road is actually constructed.
- Tolls will likely be different for cars and vehicles with more than two axles, and • tolls may increase according to the number of axles.
- Tolling the bridge over the Kentucky River only does not seem to be costeffective.
- Tolling could pay for the project or a large portion thereof.
- A more complete toll study will need to be performed at a later date if this is considered for one of the build alternatives during any further project development phases.

14.2 Project Privatization

Project privatization is a method of funding road projects that involves selling a toll road to a private company for a fixed number of years, in exchange for a large upfront payment. The benefits of this method are that it provides a large sum of money that allows for initial investment in capital costs of other roadway projects. Projects that have been funded by this method in the United States in the last few years have involved toll roads being sold for between \$1 and \$4 billion. Once the toll road has been sold the private company becomes responsible for maintenance of the roadway as well as toll operations. While project privatization does provide a very large amount of money initially and relieves the public of having to maintain and operate the road, there are some drawbacks to this method of funding. The first is that the public does not receive the full value of the tolls. While a large sum of money is received upfront, private companies would not invest in the roadway if they could not make a profit. The profit they make is money that could have been put back into roadway funds. Secondly, control of the roadway is lost. Many contracts include non-compete clauses that state that competing roadways cannot be built. The private company is not concerned about the transportation system as a whole, only that people are using the particular toll road. While project privatization does provide a large initial payoff, contracts must be carefully negotiated with performance based specifications to ensure that the public's best interest is served.

15.0 RECOMMENDATION

The recommendation for the US 27 to I-75 Corridor Scoping Study is Alternative Corridor 5-2, shown in **Figure 24**. This alternative corridor was selected as the recommendation over the other alternative corridors and the no-build option for the following reasons:

- Good connectivity with KY 3055 / KY 627 interchange.
- Most public support of all alternatives.
- No known impacts to Environmental Justice areas.
- Fewer impacts to floodplains and historic sites than the similar Alternative Corridor 4-2.
- Crosses the faults in the area more perpendicular (better) than Alternative Corridor 4-2.
- Has the lowest cost of a two-lane alternative (\$181 \$245 million)



Figure 24: Recommended Alternative Corridor 5-2

Generally, it was agreed upon by the project development team and the project work group that the terminus point on I-75 at the KY 3055 / KY 627 (Boonesboro exit) makes the most sense as there is currently an interchange at this location and provides good potential for regional connectivity beyond I-75. In the west, it was decided that a connection to the proposed Eastern Nicholasville Bypass would be more advantageous on the northern side of Nicholasville as opposed to the southern side. The northern locations (Locations 4 and 5) are expected to attract more traffic and thus increase the potential revenue, utilizing tolling as a funding mechanism. When comparing locations 4 and 5, location 5 had more advantages, assuming the Eastern Nicholasville Bypass is

built. If the bypass is not constructed prior to the further development of this project, shifting the western termini point to Location 4 may be beneficial to connect to US 27 in the shortest path possible, although this may add to the projects costs.

With cost constraints a major concern for this project, a two-lane rural typical section with wide shoulders and alternating passing lanes is recommended for the initial construction phase. Right-of-way should be purchased at the outset of this project for the possibility of a future four-lane section. While analysis has shown that traffic operations of a two-lane section will fail by the year 2017, the failure is related to the lack of passing opportunities. By providing alternating passing lanes, the traffic operations of the highway should remain at an adequate level beyond 2017.

Funding the project is a challenge given limited current resources, and as such it is proposed based on initial analysis in this document that the roadway will be tolled. The general analysis performed in this report indicated that a two-lane roadway could be paid for within a thirty-year bond period by tolls, assuming \$1.00 for cars and \$2.00 for trucks. This revenue might actually be higher in reality as it is likely trucks will be charged a higher price. Currently, Kentucky does not have any toll roads in operation. However, they do have a toll authority in place which could be a sufficient enabling mechanism to manage the collection system and take on the legal authority for project development, construction and operations. Generally, the new highway is expected to have limited access, with an interchange at US 27, I-75, and possibly two others in the middle at major crossings / interchanges. Limiting access is important to keep the route free-flowing as much as possible. It was also discussed that in order to keep the facility functioning as a true connector, that development should occur along frontage roads that tie into the major crossings and not the connector itself. The exact location of the interchanges and tolling collection logistics and methodology will require additional study beyond this project.

Another component of this project is a ten-foot multi-use path in conjunction with the new roadway. Additional study will be required for the path, including consideration of logical termini points, proximity of it to the roadway and the method for crossing the Kentucky River. It may be possible to deviate from the new highway corridor and use portions of the Rhiney B abandoned railroad bed, including a river crossing on the old alignment. These decisions are to be made in a future design phase of the project. Overall, there has been great demand for a path based on public survey response and discussion at the PWG. However, it was agreed by the PWG and PDT members that while desirable, the inclusion of the path should not limit the advancement of the entire new connector project.

15.1 Design Elements

The following design elements are assumed which form the basis for the cost estimate for the recommended alternative.

- Two 12-foot travel lanes (11-foot lanes could be considered as appropriate assuming 11-foot meets design speed criteria)
- 10-foot paved shoulders
- 300-foot right-of-way

For cost estimation purposes, passing lanes were assumed to occur in each of the three project sections, one in each direction, for approximately one mile in length. This equates to six miles of passing lanes, which is almost half of the entire corridor. The exact location and length of the passing lanes will be determined during the design phase of this project.

The right-of-way estimate was adjusted from the previous estimates as refinements have been made to each of the corridors and a more definitive typical section has been recommended. The estimate is wide enough to encompass an eventual four-lane typical section as well as a 10-foot multi-use path with sufficient buffer between the roadway and the path. Additional width is included for clear zone, with additional area included to compensate for the unknowns of cut and fill and slope requirements. Overall, the right-of-way estimate is conservative and can be refined during the design phase.

15.2 Design Issues

Of particular concern for this project is the western terminus with the proposed Eastern Nicholasville Bypass as well as the Kentucky River crossing. At the time of this report, the Eastern Nicholasville Bypass is in the Six Year Highway Plan and has design plans in the works for future construction. However, the actual completion of the project is uncertain. The current proposal for the recommended new US 27 to I-75 connector begins along the bypass and is therefore dependent on the completion of the bypass prior to construction of the connector. If the bypass is not completed, revisions to the design will need to be made to adjust the connection to US 27 just north of Nicholasville. The cost estimates provided below show the additional cost expected under this scenario in the footnote.

The Kentucky River crossing will require a new bridge, which forms a significant portion of the cost of this project. The bridge will go through an environmentally sensitive area (the Palisades), and care must be taken to ensure the least invasive river crossing is proposed. The intent of the project would be to showcase the Palisades and provide a tourism opportunity. It is expected that the Valley View Ferry will continue in operation and the new bridge should also be placed in such a location as to not impact the view shed or operations of the ferry. These are all considerations that will need to be taken into account during the future design phases of the project.

15.3 Cost Estimate

Final 2008 planning level cost estimates have been developed for the recommended alternative, based on the design elements discussed in the previous section (**Table 20**).

The estimated construction costs, right-of-way, utility, and design are included. Mitigation costs were not prepared at this time. These cost estimates, in 2008 dollars, are for planning purposes only and are subject to further refinement during the design phase.

Deer Fellmetet	Right-of-Way		Limited Access*			Add-Ons	
(Initial 2-Lane)	(Includes Area Needed for Ultimate 4-Lane and Multi-Use Path)	Utilities Limited Access (4 Interchanges) Total Path) \$3,000,000 \$23,000,000 \$201,000,000		Multi-Use Path*	Passing Lanes*		
\$168,000,000	\$7,000,000	\$3,000,000	\$22,000,000	\$201.000.000	cost:	\$41,000,000	\$22,000,000
\$100,000,000	φ7,000,000	43,000,000	\$23,000,000	\$201,000,000	total with add-ons:	\$264,0	00,000
*Includes Design and Construct	lion						

Table 20: Recommended Alternative Cost Estimate

1) If the Eastern Nicholasville Bypass is not in place prior to the development of this project, the estimate to construct the section of bypass from the proposed intersection with Corridor 5-2 to US 27 (including the interchange at US 27, rightof-way, and utilities) was \$61,000,000 in 2004 dollars. This also assumes a 4-lane section.

The costs in **Table 20** are presented such that depending on funding, specific components can be included as part of the total package or taken off to keep the project within a specific budget. Overall, for a limited access two-lane roadway with a multi-use path and passing lanes (including right-of-way and utilities) the total cost in 2008 dollars is \$264 million.

15.4 Right-of-Way and Utility Relocation Impact Assessment

General right-of-way impacts were assessed as part of the planning and evaluation stage for this project by the KYTC District 7 office. Revisions were made for the recommended Alternative Corridor 5-2 based on the estimated right-of-way required for the recommended typical section. With right-of-way for a future four-lane highway and a multi-use path on one side, an estimated 300 feet of right-of-way was determined. Using this estimate and the KYTC's cost per acre for right-of-way purchase as determined earlier in this study, a new right-of-way cost was developed specific to this alternative. With this estimate, right-of-way costs would be approximately \$7 million. This estimate (in 2008 dollars) can be used for planning purposes, but is subject to refinement during the design phase.

General utility relocation costs were also developed by the KYTC District 7 office. Given the general planning level of this document, these costs seemed to be adequate for this recommendation and as such were included in the final recommendation cost unadjusted.

15.5 Project Phasing

While ultimately it would be desired to construct the new facility in one stage, the lack of available funding may make that difficult. Therefore, a recommended phasing schedule is provided below to ensure the highest priority segments are completed first. It was decided that the most logical project sections are:

- 1. US 27 to KY 1981
- 2. KY 1981 to KY 169
- 3. KY 169 to I-75

The prioritization for these segments is from west to east as indicated by the numbers above. Design could be completed for all segments at the same time with the phasing schedule implemented during construction.

15.6 Multimodal Facilities

There is strong support for a multi-use trail to be built next to the roadway. The cost of the trail is estimated at \$23 million dollars, in 2008 US dollars. Several potential alternative funding options have been discussed and further study of these options should be conducted. One option is to charge a toll for bicyclists using the path. Another option is to finance the construction of the path using tourism dollars. The current administration is looking for locations for new ATV, equestrian, mountain biking and hiking trails to promote "adventure tourism" in Kentucky. In an article in the Lexington Herald Leader on September 17, 2008 the columnist wrote about a weeklong bicycle tour he participates in every summer in a different part of rural Virginia. According to the article over 2,000 people from across the country participate and hundreds of thousands of dollars are brought into the economy. The preferred alternative would cross the Kentucky River and provide remarkable views of the Palisades, making a multi-use path in this location a potential for increased tourism and economic development to the area. With tourism funding as well as the option of collecting tolls from users of the path, it is recommended that a multi-use path be included in the design of the roadway, and creative funding mechanisms be used to pay for construction.

15.7 Intelligent Transportation Systems (ITS)

The role of Intelligent Transportation Systems (ITS) on this project is most applicable to toll demand management. If warranted, based on further study, a dynamic demand responsive system to price the roadway and collect tolls could be implemented. Such systems are currently in place in Southern California and are gaining in popularity as a way to manage congestion. The idea is fundamentally based on adjusting pricing depending on the time of day and vehicular volume. Generally higher tolls are charged during the peak hours with lower tolls charged during off-peak times. This methodology has the potential to increase revenue for paying for the roadway and alleviating congestion on portions of US 27 and I-75. Consistent travel times can also be managed for the new connector roadway, and this information passed on to motorists thereby improving travel time reliability.

15.8 Commitment Action Plan

KYTC is committed to incorporating appropriate pedestrian and bicycle facilities into all proposed highway projects. KYTC is also committed to working with KTC / SHPO as

the project progresses to avoid, to the greatest extent possible, impacts to any identified existing and / or National Register eligible properties.

15.9 Next Steps / Implementation

Upon conclusion of this study, the next step would be to have the project recommendation listed in the next Six Year Highway Plan. Prioritization of roadway projects in the Commonwealth typically begin in the Spring of each year (the next opportunity is Spring 2009) for the next plan, therefore all representatives with input on the ranking of projects should be notified of this project, along with its proposed funding scenario.

While the KYTC is limited in its ability to purchase and reserve right-of-way for future unfunded projects, Jessamine and Madison County may be free to investigate ways to restrict development in the area of the proposed corridor through their own planning and zoning processes. This may assist in relieving future right-of-way costs.

Prior to purchase of right-of-way, final design plans will need to be completed as well as possibly additional environmental analysis to comply with the National Environmental Policy Act (NEPA). Funding sources will be a deterministic factor in the level of effort required prior to the purchase of right-of-way and ultimately project construction.

APPENDIX A:

TRAFFIC FORECAST METHODOLOGY REPORT

Traffic Forecast Methodology Report US 27 to I-75 Corridor Scoping Study Item No. 7-249.00

The purpose of this document is to outline the methodology for traffic forecasts for the US 27 to I-75 scoping study in Fayette, Jessamine and Madison Counties for the Kentucky Transportation Cabinet (KYTC). Roadways included in the traffic forecast are: US 27, I-75, US 25, KY 1980, KY 1974, KY 1975, KY 1981, KY 1984, KY 169, KY 595, KY 1541, KY 39, KY 876, KY 1156, KY 3055, KY 1985, and Man O' War Boulevard. Also included is the build alternatives from US 27 to I-75.

Traffic Volumes

The average daily traffic volumes used for this project were the most recent 24 hour traffic counts provided by the KYTC. The counts provided by the KYTC were conducted from 2004 to 2007. The counts from 2004 to 2006 were forecasted to a base year of 2007. Growth rates for this study are based upon a historical traffic growth analysis along all study area routes. The analysis utilized traffic counts obtained from the KYTC's 'CTS' traffic count program which includes counts from 1963 to 2007.

Growth Rate

The historical counts were entered into a spreadsheet provided by KYTC. The spreadsheet calculates growth rates using both exponential and trend line analyses. In selecting an appropriate traffic growth rate, several factors were considered including the historical growth, recent traffic volumes, and geography.

Truck Percentages

Truck percentages were determined from the vehicle classification database where available. If truck percentages were not available for a specific roadway section, then a truck percentage was assumed based on the 2004 Traffic Forecasting Report developed by the Kentucky Transportation Cabinet. Truck percentages were assumed to grow at a rate of 1.5% per year.

Population

Population data was obtained from the Kentucky State Data Center for Fayette, Jessamine and Madison Counties and Kentucky. **Table 1** displays the historical population growth while **Table 2** displays population projections.

Area	1970	1980	1990	2000	% Growth (1990-2000)
Kentucky	3,220,711	3,660,334	3,686,892	4,041,769	9.70%
Fayette County	174,323	204,165	225,366	260,512	15.60%
Jessamine County	17,430	26,146	30,508	39,041	28.00%
Madison County	42,730	53,352	57,508	70,872	23.20%

 Table 1: Historical Population Growth

Source: Kentucky State Data Center

Area	2000	2010	2020	2030	% Growth (2000-2030)	% Growth per year
Kentucky	4,041,769	4,326,490	4,660,703	4,912,621	21.50%	0.65%
Fayette County	260,512	281,613	310,262	331,212	27.10%	0.80%
Jessamine County	39,041	47,328	54,469	59,489	52.40%	1.45%
Madison County	70.872	83.859	95,965	104.419	47.30%	1.30%

Table 2: Population Forecasts

Source: Kentucky State Data Center

As shown in **Table 1**, the populations of Fayette, Jessamine and Madison Counties all increased at a greater rate than the overall rate for the state of Kentucky. All three counties are expected to continue to grow at rates higher than the state average, with Jessamine County experiencing over 50% growth over 30 years, and Madison County is close to this rate. The equivalent growth rates per year are 0.8% per year in Fayette County and 1.01% per year in Jessamine and Madison Counties. The average growth rate per year for the state of Kentucky is 0.65% per year.

Future No-Build Traffic Volumes

Traffic was forecasted to the future year 2040. This year was selected as the future design year by the project team given current budgetary constraints. To forecast traffic to 2040 volumes, historical growth rates were applied to the various roads in the study area. Each road was divided into segments based on appropriate breaks such as the locations of count stations, functional class changes, changes in the number of lanes and other roadway characteristics. A different growth rate based on the historical trends of the count stations was applied to each segment of road. In some cases, there were several roadway segments per count station; therefore, the same growth rate was applied to those segments.

There were some roadway segments that had unusually high growth rates based on historical trends. The historical counts were reviewed for these segments and there were generally three reasons for high historical growth rates.

The first is that there was one year with a count that seemed out of place, either being too high or low. If it seemed apparent that a miscount had occurred, that count was removed and the historical growth rate recalculated.

The second reason for an unusually high growth rate is a major event on the roadway occurred, such as a development or widening of the road. If there was a point where growth drastically spiked and continued from that point forward, it was assumed that a major event happened, and growth was calculated based only on counts taken after the major event.

The third reason for an unusually high growth rate is very low volumes on the roadway. On some roadways volumes were very low; therefore the growth rates were very high. For example, a roadway had an ADT of less than 100, and in ten years it grew to over 600. This would give a very high historical growth rate; however, because the roadway is small and rural, it is not likely to continue to grow at that rate for the next thirty years. Several roadways like this exist in the study area, and their growth rates were manually adjusted to be more in line with the growth rates of other similar roads.

Table 3 shows the various segments of roadway that were forecasted, the most recent KYTC 24 hour counts, the 2007 base year ADT, the 2007 truck percentage, the growth rate, the 2040 forecasted ADT and the 2040 truck percentage.

Build Scenarios

The Kentucky Statewide Traffic Model (KYSTM) was used to predict traffic diversion with the construction of a new route for a select group of alternatives as defined by the Level 3 analysis. It should be noted, the model was not used to forecast to the year 2040.

The methodology used to determine the ADT of a new corridor is different from the methodology used to forecast the 2040 no-build scenario. With many high historical growth rates, it was determined that capacity constraints may limit this growth in the future. Therefore a more realistic growth rate was needed for the refined analysis to determine build volumes as traffic volumes will help determine the need for a new connector. The methodology used to determine the build 2040 ADTs is discussed below.

Forecasting the new connector traffic volumes from the model output to the year 2040 was a difficult task. Because the corridor is a new roadway, there are no historical growth rates. Also, as mentioned above, the KYSTM does not forecast to future years. Therefore, a meeting was held with project team members as well as several representatives from the KYTC Central Office planning division to discuss an appropriate method to determine the 2040 volumes for the new connector. PB was confident with the 2003 volumes obtained from the KYSTM, however the KYSTM is not able to forecast to future years. The Lexington MPO travel demand model is able to forecast to future years, however this model only includes Fayette and Jessamine Counties. As some alternative corridors terminate in Madison County, the corridors could not be coded into the model and forecasted to a future year. The inability to find a growth rate for the corridors resulted in the decision to find an overall growth rate for the study area and apply it to the new connectors. This method posed additional problems, however, because many of the roadways in the study area have very high historical growth rates and cannot realistically continue to grow at those rates due to capacity constraints. The KYTC Central Office has developed a new "hybrid" growth rate that is a middle point between exponential and linear historical growth. This growth rate has not been widely used yet, but it is appropriate for this study because it constrains growth. It was decided that this growth rate would be used for roadways in Madison County, and that an average of the KYTC growth rate and the growth rates calculated based on the Lexington MPO travel model would be used to get a growth rate for roadways in Fayette and Jessamine Counties. A weighted average of the growth rates of major roadways in the study area was calculated to provide an overall study area growth rate. This number was calculated to be 2.24% per year and was applied to each new connector to determine 2040 ADTs.

Truck percentages were output from the KYSTM in addition to traffic volumes along the corridor. The 2003 truck percentages were grown at a rate of 0.5% per year. The low growth rate was chosen because truck percentages were already high along the corridor and it is unlikely that they will increase to the level that a 1.5% growth rate indicated. **Tables 4** and **5** show the 2003 and 2040 corridor volumes, as well as the truck percentages.

Route	Section	County	Begin Milepoint	End Milepoint	Most Recent ADT	Count Station	Year	Growth Rate	2007 ADT	2007 % Trucks	Year of Truck Data	2040 ADT	2040 % Trucks	
	1	Jessamine	0.0 (South of Nicholasville)	0.23 (Southbrook Drive) 0.835	10,200	A62	2006	0.9%	10,300		- Duite	13800		
	2	Jessamine	(Southbrook Drive)	(John C Watts Drive)									-	
	3	Jessamine	(John C Watts Drive)	(Longview Drive)	11,300	A40	2006	0.7%	11,400			14400		
	4	Jessamine	1.075 (Longview Drive)	1.305 (Edgewood Drive)	16,400	A64	2006	0.2%	16,400			17500	-	
115 272	5	Jessamine	1.305 (Edgewood Drive)	1.586 (Natchez Trace)	21 500	A24	2006	1 3%	21 800			33400		
(Downtown	6	Jessamine	1.586 (Natchez Trace)	1.88 (Brown Street)	21,500	A24	2000	1.3 %	21,800	10.3%	2004	33400	16.8%	
NICHOIASVIIIE	7	Jessamine	1.88 (Brown Street)	2.112 (Chestnut Street)										
	8	Jessamine	2.112 (Chartert Street)	2.18	20,000	A16	2005	0.5%	20,200			23800		
	9	Jessamine	2.18	2.38	24,700	A32	2005	0.6%	25.000			30500		
	10	lossomino	(KY 39/KY 29) 2.38	(KY 169) 2.882	26.000	407	2004	0.0%	26 700			25000		
	10	Jessamine	(KY 169) 2.882	(Duncan Street) 3.89	20,000	AU7	2004	0.9%	20,700			32900	-	
	11	Jessamine	(Duncan Street)	(US 27 Bypass)	25,800	A81	2004	2.4%	27,700			60600		
	1	Jessamine	0.0 (Garrard-Jessamine County Line)	1.115 (South of Old Danville Road)	19,100	P65	2006	0.3%	19,200			21200		
	2	Jessamine	1.115 (South of Old Danville Road)	3.826 (Greystone Drive/KY 1268)										
	3	Jessamine	3.826 (Greystone Drive/KY 1268)	6.011 (US 27 Bypass)	21,000	538	2005	3.7%	22,600			75000	44.50	
US 27 (South	4	Jessamine	10.827 (US 27 Bypass)	11.016 (South of Old US 27 ROW)						8.9%	2004		14.5%	
and North of	5	Jessamine	11.016 (South of Old US 27 ROW)	13.695 (Industry Parkway)	37,200	006	2005	2.0%	38,700			74400		
Downtown)	6	Jessamine	13.695 (Industry Parkway)	14.807 (KY 1980)										
	7	Jessamine	14.807 (KY 1980)	15.278 (Jessamine-Fayette County Line)	35,500	009	2004	1.5%	37,100			60600		
	8	Fayette	0.0 (Fayette-Jessamine Co. Line)	0.465 (Cobblestone Road)										
	9	Fayette	0.465 (Cobblestone Road)	0.808 (South of Toronto Road)	53,700	C85	2006	3.0%	55,300	6.9%		146700	11.3%	
	10	Favette	0.808	0.956										
	4	Madican	(South of Toronto Road) 87.185	(Man O War) 89.802	E2 700	607	2007	2.49/	E2 700			117500		
		Mauison	(KY 876) 89.802	(US 25) 91.1	55,700	007	2007	2.4 %	53,700			117500		
-	2	Madison	(US 25)	(North of US 25)	-									
	3	Madison	91.1 (North of US 25)	(North of Lexington Access						16.0%	2004		26.2%	
			92.1	Road)	65,900	753	2007	3.3%	65,900			192400	20.276	
	4	Madison	(North of Lexington Access Road)	94.295 (South of KY 627)										
	5	Madison	94.295	94.73										
			(South of KT 627)	(K1 627) 97 038										
I-75	6	Madison	(KY 627)	(US 25)	62,200	757	2007	2.8%	62,200			154700		
	7	Madison	97.038 (US 25)	97.703 (Madison-Fayette County Line)						1				
	8	Fayette	97.703 (Madison-Fayette County Line)	98.516 (US 25)	65,700	353	2007	3.6%	65,700 19.1%	19.1%	2004	211100	31.2%	
	9	Fayette	98.516 (US 25)	103.89 (KY 418)	64,300	P90	2006	1.7%	65,400			114100		
	10	Fayette	103.89 (KY 418)	108.21 (KY 1425 Man-O-War	53,100	336	2007	3.0%	53,100			140800		
	1	Madison	20.255 (I-75 Bridge)	20.342 (North of I-75 Bridge)				3.0%						
	2	Madison	20.342 (North of I-75 Bridge)	20.49 (Keeneland Drive)				3.0%						
	3	Madison	20.49 (Keeneland Drive)	20.573	13,400	B01	2006	3 0%	13,800			36600		
	4	Madison	20.573	20.771	-			3.0%		6.9%			11.3%	
	-	Madicon	(Brandy Lane) 20.771	(Keystone Drive) 20.964	-			3.0%						
	3	Mauison	(Keystone Drive) 20.964	(KY 1156) 21,139				3.0%						
	6	Madison	(KY 1156)	(North of KY 1156)	5,790	780	2005	2.5%	6,100			13800		
	7	Madison	(North of KY 1156)	(Clay Lane)				2.5%						
	8	Madison	24.076 (Clay Lane)	25.373 (KY 627/KY 3055)	3,470	778	2006	2.4%	3,600	12.4%		7900	20.3%	
US 25	9	Madison	25.373 (KY 627/KY 3055)	28.161 (KY 2884)	2,620	756	2004	2.4%	2,800			6100		
	10	Fayette	0 (South Limits of I-75 Interchange)	.366 (North of I-75 NB Ramps)										
	11	Fayette	.366 (North of I-75 NB Ramps)	1.829 (South of Elk Lick Falls Road)								-		
	12	Fayette	1.829 (South of Elk Lick Falls Road)	2.876 (North of Turner Station Road)	3,120	367 2006 404 2006	367 2006 404 2006	2006	j 0.7% 3, ⁻	3,100	10.3%		3900	16.8%
	13	Fayette	2.876 (North of Turner Station Road)	4.832 (KY 1975)										
	14	Fayette	4.832	8.144 (KY 449)	4,310			06 1.4%	6 4,400			7000	-	
	15	Fayette	8.144 (KY 418)	9.734 (Man O War Boulevard)	29,600	G32	2005	1.7%	30,600	6.9%		53400	11.3%	
1			. ,								1			

Table 3: Forecast Data

*Truck percentages in italics were found based on the 2004 Traffic Forecasting Report

			2.025	2.02									
	1	Jessamine	3.025 (US 27)	3.68 (West of Leeburton Road)									
			3.68	4.06	3.110	008	2004	1.7%	3.300			5800	
	2	Jessamine	(West of Leeburton Road)	(East of Noland Drive)									
	3	Jessamine	4.06	4.69									
KY 1980	4	Jessamine	(East of Noland Drive) 4.69	5.06						10.2%	2004		16.7%
	-		(Ashgrove Lane) 5.06	(East of Young Drive) 6.02									
	5	Jessamine	(East of Young Drive)	(West of Spurlock Lane)	2,320	001	2005	4.0%	2,500			9100	
	6	Jessamine	(West of Spurlock Lane)	(East of Mackey Pike)									
	7	Jessamine	6.69 (East of Mackey Pike)	7.451 (Favette County Line)									
	1	Fayette	0.00	.16 (South of KX 1075)									
	2	Favette	.16	1.667	859	359	2006	0.8%	900	14.0%		1200	22.9%
	-		(South of KY 1975) 1.667	(Crawley Lane) 4.228						141070			22.070
	3	Fayette	(Crawley Lane)	(Delong Road)	1,430	379	2006	1.5%	1,500			2500	
KY 1974	4	Fayette	4.228 (Dalara Basal)	4.711 (South of Hickman Creek									
			(Delong Road)	Bridge)	6,250	G23	2005	2.1%	6,500			12900	
	5	Fayette	4.711 (South of History Creat Bridge)	5.443						8.7%			14.2%
		-	(South of Hickman Creek Bridge)	(KT 1960)									
	6	Fayette	(KY 1980)	(Man O War Boulevard)	8,990	D90	2004	3.5%	10,000			31100	
101 1075	1	Fayette	0.00 (KY 1974)	4.463 (Whites Lane)	1,190	357	2004	3.2%	1,300			3700	10.00/
KY 1975	2	Fayette	4.463	5.410	2,940	368	2006	2.7%	3,000	6.1%	2004	7200	10.0%
	1	Jessamine	0.00	2.365									
			(KY 1541) 2.365	(Marble Creek Lane) 3.30						40.00/			10.00
	2	Jessamine	(Marble Creek Lane)	(South of KY 169)	648	262	2006	-0.4%	600	10.3%		500	16.8%
KY 1981	3	Jessamine	3.30 (South of KY 169)	3.668 (KY 169)									
	4	Jessamine	3.668 (KY 169)	3.998 (North of Caveson Wav)									
			3.998	6.13	1,980	259	2004	3.6%	2,200	8.6%		7100	14.1%
	5	Jessamine	(North of Caveson Way)	(KY 1974 @ Fayette County Line)									
	1	Madison	0.00	.751									
KV 1084		Madiana	(Newby Road) .751	(West of Kanatzar Lane) 1.051	574	706	2004	4 79/	700	9.6%		2200	14.19/
KT 1904	- 2	Madison	(West of Kanatzar Lane)	(West of Haden Heights)	574	790	2004	4.7 %	700	0.0%	<u> </u>	3200	14.176
	3	Madison	(West of Haden Heights)	(KY 169)									
	1	Madison	1.349 (I-75 Underpass)	2.240 (Goggins Lane)	5,190	A82	2004	3.0%	5,700			15100	
_	2	Madison	2.240 (Goggins Lane)	3.082 (Boone Way)		700							
	3	Madison	3.082	4.877	3,960	799	2005	4.0%	4,300			15700	
	-	Madiana	(Boone Way) 4.877	(Crutcher Pike) 6.184	4.000	707	2000	4.49/	4 400			2200	+
	4	Madison	(Crutcher Pike) 6 184	(KY 1984) 8 051	1,360	/9/	2006	1.4%	1,400			2200	-
	5	Madison	(KY 1984)	(KY 1985)	990	795	2004	1.0%	1,000	7.8%	2004	1400	12.7%
	6	Madison	8.051 (KY 1985)	8.478 (Buffalo Road)						1.070	2004		
	7	Madison	8.478 (Buffalo Road)	11.74 (Ervin Sloan East Road)	586	70.4	2005	0.5%	600			700	
			11.74	11.869			2000	0.070					
	8	Madison	(Ervin Sloan East Road)	(KY 1156 / Carvers Ferry Road)									
		Madiana	11.869	12.511		700	2000	0.0%	400			400	
	9	Madison	(KY 1156 / Carvers Ferry Road)	(Approach to Valley View Ferry)	414	/00	2006	0.2%	400			400	
	10	lessamine	0.00	1.939									
KY 169	10	Jessamme	(Approach to Valley View Ferry)	(South of Newman Road)	549	265	2006	0.9%	600			800	
	11	Jessamine	1.939 (South of Newman Road)	2.030 (North of KY 1974)									
			2.030	3.598									
	12	Jessamine	(North of KY 1974)	(South of Burnside Drive)	1,140	264	2004	2.7%	1,200			2900	
	13	Jessamine	3.598 (South of Burnside Drive)	4.218 (KY 1981)									
	14	Jessamine	4.218	7.733	3,460	291	2006	3.6%	3,600	1		11600	t
			(KY 1981)	(vince Road / Bethany Road)	.,					5.2%	2004		8.5%
	15	Jessamine	7.733 (Vince Road / Bethany Road)	9.482 (Locust Heights)									
			9.482	9.918	4,360	290	2006	3.1%	4,500			12300	
	16	Jessamine	(Locust Heights)	(North of Glencove Ave)					-				
	17	Jessamine	9.918 (North of Glencove Ave)	10.028 (Liberty Street)									
	18	Jessamine	10.028	10.362		1		1	İ	1			İ
	<u> </u>		(Liberty Street) 10.362	(Bell Court) 10.458	3,670	A45	2005	1.7%	3,800			6600	
	19	Jessamine	(Bell Court)	(US 27)									
	1	Madison	16.014 (KV 976)	17.03 (Dry Branch Bood)	629	587	2004	0.4%	600			700	
	<u> </u>		17.02	20.78		1					<u> </u>		ł
	2	Madison	(Dry Branch Road)	(North of Sledd Proper Booth									
			20 78	22,212	645	808	2005	4.0%	700		<u> </u>	2600	
KY 595	3	Madison	(North of Sledd Branch Road)	(New Road)						8.6%			14.1%
			22,212	24 55		1			1	1			t
	4	Madison	(New Road)	(South of Poosey Ridge Rd)				1.4% 100			200		
	_		24.55	24.604	107	800	2006	1.4%	100			200	
	5	Madison	(South of Poosey Ridge Rd)	(Poosey Ridge Road)		800	2006	1.475 100					

Table 3: Forecast Data (cont.)

*Truck percentages in italics were found based on the 2004 Traffic Forecasting Report

	1	Jessamine	0 (KY 39)	3.556 (Kissing Ridge Road)	90	298	2006	-1.2%	100			100	
	2	Jessamine	3.556 (Kissing Ridge Road)	4.500 (North of Pollard Pike)	446	277	2006	2.5%	500			1100	Ť
KY 1541	3	Jessamine	4.500 (North of Pollard Pike)	7.000 (North of KY 1981)						10.3%			16.8%
	4	Jessamine	7.000 (North of KX 1981)	9.668 (KY 39)	1,240	295	2004	1.9%	1,300			2400	
	1	Jessamine	0.00	0.12 (KY 1541)									
	2	Jessamine	(North Bank of Kentucky River) 0.12	2.454	111	281	2006	-3.4%	100			100	
			(KY 1541) 2.454	(KY 1268) 3.747									
	3	Jessamine	(KY 1268)	(Big Hickman Creek Bridge)									
	4	Jessamine	3.747 (Big Hickman Creek Bridge)	5.56 (North of Old Sulphur Well Road)	853	280	2006	1.9%	900			1700	
KY 39	5	Jessamine	5.56 (North of Old Sulphur Well Road)	5.83 (North of Elmfork Road)						7.4%	2004		12.1%
	6	Jessamine	5.83 (North of Elmfork Road)	7.550 (KY 1541)									
	7	Jessamine	7.550 (KY 1541)	8.38 (South of Ash Drive)									
	8	Jessamine	8.38 (South of Ash Drive)	8.548 (Ash Drive)	3,210	A27	2004	1.5%	3,400			5600	
	9	Jessamine	8.548 (Ash Drive)	8.875 (Miles Road)									
	10	Jessamine	8.875 (Miles Road)	9.29 (Hager Lane)	7 000		2004	0.0%	7 000			47700	Ī
	11	Jessamine	9.29 (Hager Lane)	9.404 (KY 29 / US 27)	7,020	AIS	2004	2.0%	7,600			17700	
	1	Madison	0.00 (KY 595)	2.387 (Bogie Mill Road)	643	586	2004	2.8%	700			1700	
	2	Madison	2.387 (Bogie Mill Road)	3.99 (West of Redwood Drive)		_							
	3	Madison	3.99 (West of Redwood Drive)	4.77 (Old Pond Way/Mule Shed Road	1,340	578	2006	0.2%	1,300			1400	
KY 876	4	Madison	4.77	5.15 (West of Curtis Pike)	0.000	570			0.500	10.3%		5500	16.8%
	5	Madison	(Old Pond Way/Mule Sned Road) 5.15 (West of Curtis Pike)	6.528 (Willis Branch Road)	2,330	5/6	2004	2.4%	2,500			5500	
	6	Madison	6.528 (Willis Branch Road)	6.95 (West of Amberly Way)									Ť
	7	Madison	6.95 (West of Amberly Way)	7.097 (I-75 Ramp)	12,200	A03	2005	2.3%	12,800			27100	
	1	Madison	0.00	.64									
			(US 25)	(South of Secretariat Drive)	1,670	781	2004	3.4%	1,800			5400	
	2	Madison	(South of Secretariat Drive)	(Boone Way)									ł
	3	Madison	(Boone Way)	4.5 (South of Clay Lane)									
KY 1156	4	Madison	4.5 (South of Clay Lane)	(South of Kentucky River Road)	724	782	2005	4.1%	800	5.1%	2004	3000	8.3%
	5	Madison	5.68	6.278									
			(South of Kentucky River Road) 6.278	(Kentucky River Road) 8.7						-			ł
	6	Madison	(Kentucky River Road)	(South of Tate Creek Bridge)	233	784	2006	0.8%	200			300	
	7	Madison	8.7 (South of Tate Creek Bridge)	9.376 (KY 169)									
KX 2055	1	Madison	0.00 (White Hall Shrine Road)	1.54 (South of KY 627/US 25)	107	820	2006	0.4%	100	9.6%		100	14.19/
11 3033	2	Madison	1.54 (South of KY 627/US 25)	1.593 (KY 627/US 25)	107	023	2000	-0.4%	100	0.078		100	14.170
	1	Madison	0.00	.85									
			(Whitlock Road / Baldwin Road) .85	(East of Whitlock and Baldwin) 1.399									
KT 1985	2	Madison	(East of Whitlock and Baldwin)	(West of Tate Creek Bridge)	365	793	2006	0.6%	400	8.6%		500	14.1%
	3	Madison	1.399 (West of Tate Creek Bridge)	1.499 (KY 169)									
	1	Fayette	6.561 (Nicholasville Road)	8.566 (Tates Creek Road)	31,900	G57	2007	2.7%	31,900			77,600	
	2	Fayette	8.566 (Tates Creek Road)	10.285 (Armstrong Mill Road)	25,600	G78	2005	2.0%	26,600			51,300	ļ
	3	Fayette	10.285 (Armstrong Mill Road)	11.821 (Alumni Drive)	35,200	F14	2005	3.0%	37,300]		98,900	
CS 4524 (Man O' War Blvd)	4	Fayette	11.821 (Alumni Drive)	12.792 (US 25 / Richmond Road)	44,800	F99	2007	3.4%	44,800	8.7%		135,900	14.2%
	5	Fayette	12.792 (US 25 / Richmond Road)	13.454 (Palumbo Drive)	32,800	D18	2005	2.3%	34,300	1		73,300	Ī
	6	Fayette	13.454 (Palumbo Drive)	14.254 (KY 1927 / Todds Road)	41,600	G73	2007	1.3%	41,600	1		63,900	† I
	7	Fayette	14.254 (KY 1927 / Todds Road)	15.241 (I-75 / KY 1425)	39,100	D79	2007	1.1%	39,100	1		56,100	1

Table 3: Forecast Data (cont.)

*Truck percentages in italics were found based on the 2004 Traffic Forecasting Report

Alternative	Segment 1		Segment 2		Segment 3	
	Volume	Truck %	Volume	Truck %	Volume	Truck %
4-2	9000	15.90%	11000	14.80%	9000	16.20%
4-4	11000	13.30%	12000	12.10%	10000	10.90%
5-2	9000	14.70%	10000	14.80%	9000	15.80%
5-4	10000	13.90%	11000	13.60%	9000	12.50%
6-2	9000	15.80%	9000	16.20%	8000	16.80%
6-4	9000	15.30%	9000	15.40%	8000	14.10%

Table 4: 2003 Corridor Volumes and Truck Percentages

Table 5: 2040 Corridor Volumes and Truck Percentages

Alternative	Segment 1		Segment 2		Segment 3	
	Volume	Truck %	Volume	Truck %	Volume	Truck %
4-2	21000	19.10%	24000	17.80%	20000	19.50%
4-4	24000	16.00%	28000	14.60%	23000	13.10%
5-2	21000	17.70%	23000	17.80%	20000	19.00%
5-4	22000	16.70%	25000	16.40%	21000	15.00%
6-2	20000	19.00%	20000	19.50%	18000	20.20%
6-4	20000	18.40%	21000	18.50%	17000	17.00%

APPENDIX B:

ENVIRONMENTAL JUSTICE COMMUNITY IMPACT ASSESSMENT

Environmental Justice Community Impact Assessment

US 27 to I-75 Corridor Scoping Study Jessamine, Fayette and Madison Counties Item No. 7-249.00

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1.0 Introduction

The intent of this document is to assess the community demographics and characteristics in the study area for the US 27 to I-75 Corridor Scoping Study that includes a southern portion of Fayette County, Jessamine County east of US 68, and Madison County north of Richmond and west of I-75.

This document was compiled using data from the 2000 U.S. Census Bureau and the Kentucky State Data Center. The information contained within will assist the Kentucky Transportation Cabinet (KYTC) in making decisions pertaining to the study that will comply with Executive Order 12898, which states that any "disproportionately high and adverse human health or environmental affects of its programs, policies, and activities on minority populations and low-income populations" should be identified and addressed as appropriate.

2.0 What is Environmental Justice?

Environmental Justice (EJ) is defined by the U.S. Environmental Protection Agency as:

"The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including racial, ethnic, or socio-economic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local and tribal programs and policies."

For a racial, ethnic or socio-economic group to bear a disproportionate share of the negative environmental consequences means that:

- 1. The minority or low-income group predominately bears the adverse effects, or
- 2. The adverse effects suffered by the minority and/or low-income populations are appreciably more severe or greater in magnitude than the adverse effects that non-minority and non-low-income population suffer.

2.1 Definitions

Low-income and minority populations are defined by the USDOT Order 5610.2 on EJ, issued in the April 15, 1997 Federal Register.

Low-Income – a person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

Minority – a person who is (1) Black (a person having origins in any black racial groups of Africa); (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); (3) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or (4) American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).

Low-Income Population – any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons who will be similarly affected by a proposed DOT program, policy or activity.

Minority Population – 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 DOT program, policy or activity.

While elderly populations are not mentioned in EO 12898 or USDOT Order 5610.2, the USDOT does recommended that they be considered when evaluating EJ, in accordance with EJ, Title VI of the Civil Rights Act of 1964 and the Kentucky Transportation Cabinet's advocacy of inclusive public involvement and equal treatment of all persons.

3.0 Methodology

The Kentucky Transportation Cabinet's document "Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies" was used as the methodology for preparing this report.

Data was collected using the U.S. Census Bureau's 2000 Census and the Kentucky State Data Center. Percentages for minorities, low-income, and elderly populations were compared to the following:

- Adjacent and nearby census tracts and block groups;
- County;
- State; and,
- U.S.

A target population may exist if the percentage exceeds that of the general populations or other appropriate unit of analysis as evidenced through the data analysis.

4.0 Census Data Analysis

The U.S. Census Bureau defines geographical units as:

Census Tract (CT) – A small relatively, permanent statistical subdivision of a county delineated by a local group of census data users for the purpose of presenting data. CT boundaries normally follow visible features, but may follow governmental unit boundaries and other non-visible features in some instances; the boundary of a state or county is always a census tract boundary. They are designed to be relatively homogeneous unites with respect to populations characteristics, economic status, and living condition, and average 4,000 inhabitants.

Block Group (BG) – A combination of census blocks that is a subdivision of a census tract. A BG consists of all census blocks whose numbers begin with the same digit in a given census tract. It is the smallest geographic entity for which the decennial census tabulates and publishes sample data.

Census Block (CB) – The smallest geographic unit for which the Census Bureau tabulates 100-percent data. Many blocks correspond to individual city blocks bounded by streets, but blocks -- especially in rural areas - may include many square miles and may have some boundaries that are not streets.

The study area is made up of portions of 3 counties in Central Kentucky. There are nineteen census tracts and thirty-eight census block groups. **Table B1** shows the population of these areas.

Detailed tables with information on minority, low-income and elderly populations can be found in the **Appendix**.

4.1 Population by Persons of Minority Origin

The black percentage of Fayette County is 13.48. Tracts 3404 and 4001 have higher black percentages of 20.60 and 19.56 respectively. These tracts correspond to a high black population concentration around Tates Creek Elementary, Middle and High Schools, as well as either side of Armstrong Mill Road north of Man O' War Boulevard. Jessamine County has a black percentage of 3.13. Tract 60502 has a higher percentage at 8.73. This population is concentrated on either side of KY 39, just east of US 27. Madison County's black percentage is 4.44; however none of the census tracts in the study area have a higher percentage.

Fayette County has a Hispanic percentage of 3.29. There are no census tracts in the study area with a higher Hispanic percentage than the average for Fayette County. Jessamine County has a Hispanic percentage of 1.31. Census Tracts 60102 and 60502 have slightly higher Hispanic percentages of 1.65 and 2.11. Madison County's Hispanic percentage is 0.97, with Tracts 107 and 108 having slightly higher percentages of 1.54 and 1.29 respectively. In all counties there are no obvious areas of concern.

Kentucky	4,041,769	Jessamine County	39,041	
-		Tract 60102	5,445	
Fayette County	260,512	Block Group 1	4,270	
Tract 3402	4,509	Block Group 2	1,175	
Block Group 1	2,490	Tract 602	4,182	
Block Group 2	2,019	Block Group 1	1,114	
Tract 3404	4,136	Block Group 2	1,264	
Block Group 1	2,098	Block Group 3	1,021	
Block Group 2	1,269	Block Group 4	783	
Block Group 3	769	Tract 603	2,258	
Tract 3405	6,118	Block Group 1	1,403	
Block Group 1	2,260	Block Group 2	855	
Block Group 2	2,336	Tract 60502	4,465	
Block Group 2	1,522	Block Group 1	1,385	
Tract 4001	6,057	Block Group 2	1,139	
Block Group 1	2,340	Block Group 3	1,941	
Block Group 2	3,717	Madison County	70,872	
Tract 4004	5,035	Tract 101	6,753	
Block Group 1	3,381	Block Group 1	1,216	
Block Group 2	1,652	Tract 107	6,362	
Tract 4102	8,904	Block Group 1	3,718	
Block Group 1	3,890	Block Group 2	2,644	
Block Group 2	1,939	Tract 108	3,959	
Block Group 2	3,075	Block Group 1	1,285	
		Block Group 2	1,596	
Study Area	62,646	Block Group 3	1,061	

Table B1: Population of Study Area

The Asian population of Fayette County is 2.49 percent. Census Tracts 3402, 3407, 3502, 4001, 4003, 4004 and 4102 all have higher Asian percentages, although there are no areas of particular concern, as all are just slightly higher than the overall county percentage. None of the study area tracts in Jessamine County have a higher Asian percentage than the county average, which is 0.60%. Tract 107 in Madison County has a 1.67 percent Asian population, which is higher than county population of 0.74 percent.

Fayette County's American Indian population is 0.19 percent. Tracts 3042, 3404, 3405, 4001, and 4101 all have percentages higher than the county average; however, there is no indication of any areas of concern. The American Indian population of Jessamine County is 0.2 percent, and Tract 60502 is the only area with a higher than average percentage. There are no tracts in Madison County with higher American Indian percentages than the county average of 0.28. There are no American Indian percentages in the study area greater than 1 percent; therefore this is not an area of concern.

Figures B1 and B2 show minority populations by census block groups and census blocks. These figures show that Corridor 7-5 would have an impact on

minority populations in Madison County, near the location it would intersect with I-75.

4.2 Population by Poverty Level

In the state of Kentucky, 15.37 percent are living below the poverty level. Fayette and Jessamine Counties have lower poverty levels of 12.27 and 10.00 percent respectively. The percentage in Madison County is higher than the state at 15.45 percent.

Within Fayette County there are three census tracts with poverty levels higher than the county percentage. Tract 3404 has 15.88 percent, Tract 3502 has 20.20 percent, and Tract 4001 has 13.97 percent below the poverty level. Within Tract 3404, Block Group 1 has a very high percentage of 24.98 below the poverty level. This is the area including and surrounding Tates Creek Elementary, Middle and High Schools. Tract 3502 only has 1 block group, so it is unknown if there is a concentration of persons below the poverty level in that tract. Within Tract 4001, 17.14 percent are below the poverty line in Block Group 1. This is the area west of Armstrong Mill Road and north of Man O' War Boulevard.

Within Jessamine County, Tracts 602 and 60502 have higher percentages below the poverty level than the county, at 12.94 and 10.68 percent respectively. Block Groups 1 and 3 in Tract 602 have 18.58 and 17.04 percent living below the poverty line. This includes a large area in northeastern portion of the county. Block Group 2 in Tract 60502 has 16.86 percent of the population below the poverty line. This is the area surrounding KY 39 just east of US 27. In addition, although the percentage of the population below the poverty line in Tract 603 is not higher than Jessamine County's percentage, Block Group 2 has a high percentage of the population below the poverty line at 15.09. This block group is on the eastern edge of the county, in the heart of the study area.



Figure B1: Minority Population by Census Block Group

Note: Density shown as persons per square mile.



Figure B2: Minority Population by Census Block

Note: Density shown as persons per square mile.

Figure B3 shows the density of the population below the poverty line in the study area by census block group. Several of the possible corridors run through census block groups with low-income population densities of 100 to 250 people per square mile, which should be monitored if those corridors are chosen.





Note: Density shown as persons per square mile.

4.3 Population by Person 65 and Over

The state of Kentucky has an elderly population of age 65 and above of 12.49 percent. The elderly populations of Fayette, Jessamine and Madison Counties are all lower than the state population, at 9.98, 9.50 and 9.78 percent, respectively.

Census tract 3404 in Fayette County has an elderly population of 12.74, which is higher than the Fayette County population, but very close to the state population. Within this tract, block groups 1 and 2 have elderly populations of 12.01 and 18.52 percent. These include the areas around Tates Creek Elementary, Middle and High Schools, as well as the Gainesway neighborhood, east of Tates Creek Road and just south of New Circle Road.

Census tracts 60102 and 602 in Jessamine County have elderly populations slightly higher than the county's percentage, at 9.88 and 10.09. There are no specific areas that are particularly high. The northeast portion of the county in general seems to have a slightly higher elderly population.

In Madison County, census tract 108 has an elderly population slightly higher than the county's, at 11.42 percent. All of the block groups in this tract have similar elderly populations. As with Jessamine County, it does not seem that there are specific areas that are particularly high, but that the western portion of the county has a slightly higher elderly population.

Figures B4 and **B5** show the population density of elderly persons in the study area by census block group and census block. There are several census blocks and census block groups that potential corridors go through with higher elderly populations. These mostly occur at the endpoints of the corridors, and will need to be analyzed further once a corridor is chosen.



Figure B4: Elderly Population by Census Block Group

Note: Density shown as persons per square mile.


Figure B5: Elderly Population by Census Block

Note: Density shown as persons per square mile.

5.0 Conclusion

A careful analysis of the study area shows several locations within the study area with higher than average minority, low-income and elderly populations. Census tract 3404 has a high percentage of minority, low-income and elderly persons. This census tract, however, is in Fayette County, north of Man O' War Boulevard, which is part of the study area, but no proposed corridors will go through this area. All census block groups in Fayette County that had high minority, low-income and elderly populations were north of Man O' War, and therefore are not locations where a corridor is being considered.

Tract 60502 in Jessamine County, particularly block group 2, surrounding KY 39 just east of US 27, had a high minority and low-income population. This is within the area where a corridor could be located. In Madison County there is a high low-income population in census block group 3 of tract 108, which is the western portion of the county, where a corridor could be located. These areas in Jessamine and Madison Counties should be monitored and taken into consideration when determining the possible locations of corridors. It will be important to consider demographic and/or socioeconomic changes that would be a result of this project.

Of all of the proposed corridors being considered, Corridor 7-5 is the only one that could potentially impact minority populations. The minority population occurs at the very end of the corridor where it ties in to I-75. There is a low-income population that occurs at the very west end of Corridors 3-1, 4-1, 4-3, 4-3, and 4-4. Because there is not data for low-income groups at the census block level, the effect these corridors have on any population will depend on where the corridors end in Nicholasville, and field visits will need to be performed to determine if there are any areas of concern. Corridor 7-5 will go through a low-income population at the very east end of the corridor where it ties into I-75. Elderly populations are more common in the study area. Corridor 1 may go through an elderly population at the Fayette – Jessamine County border. While corridors 3-1 and 4-1 through 4-4 run through a census block group with a higher elderly population, the census blocks reveal that those populations do not occur within the actual corridors. There is an elderly population at the east end of Corridor 7-5 where it ties into I-75. At this location there are elderly, low-income and minority populations. These should be noted if Corridor 7-5 is one of the final corridors for consideration.

Appendix

Census Data Tables and Maps

		% of		% of		% of		% of	American	% of		% of	Total
	White	Population	Black	Population	Hispanic	Population	Asian	Population	Indian	Population	Other	Population	Population
Kentucky	3,640,899	90.08	295,994	7.32	59,939	1.48	29,744	0.74	8,616	0.21	66,516	1.65	4,041,769
Fayette County	211,120	81.04	35,116	13.48	8,561	3.29	6,490	2.49	507	0.19	3,165	1.21	260,512
Tract 3402	3,643	80.79	520	11.53	58	1.29	156	3.46	18	0.40	31	0.69	4,509
Tract 3404	3,084	74.56	853	20.60	99	2.39	55	1.33	14	0.34	33	0.80	4,136
Tract 3405	5,058	82.67	747	12.21	137	2.24	101	1.65	16	0.26	74	1.21	6,118
Tract 3406	6,147	86.19	666	9.34	112	1.57	94	1.32	11	0.15	63	0.88	7,132
Tract 3407	2,434	82.79	328	11.16	71	2.41	104	3.54	4	0.14	23	0.78	2,940
Tract 3501	2,843	86.86	269	8.22	91	2.78	60	1.83	6	0.18	55	1.68	3,273
Tract 3502	5,615	83.84	717	10.71	91	1.36	180	2.69	5	0.07	35	0.52	6,697
Tract 4001	4,520	74.62	1,185	19.56	96	1.58	176	2.91	13	0.21	26	0.43	6,057
Tract 4003	4,592	88.05	281	5.39	75	1.44	243	4.66	5	0.10	30	0.58	5,215
Tract 4004	4,702	93.39	98	1.95	76	1.51	158	3.14	4	0.08	15	0.30	5,035
Tract 4101	4,878	87.94	472	8.51	63	1.14	70	1.26	12	0.22	19	0.34	5,547
Tract 4102	8,035	90.24	307	3.45	12	0.13	396	4.45	4	0.04	59	0.66	8,904
Jessamine County	36,871	94.44	1,222	3.13	512	1.31	236	0.60	80	0.20	185	0.47	39,041
Tract 60102	5,147	94.53	168	3.09	90	1.65	12	0.22	11	0.20	39	0.72	5,445
Tract 602	4,050	96.84	35	0.84	49	1.17	13	0.31	7	0.17	18	0.43	4,182
Tract 603	2,210	97.87	24	1.06	5	0.22	1	0.04	1	0.04	1	0.04	2,258
Tract 60502	3,963	88.76	390	8.73	94	2.11	27	0.60	11	0.25	30	0.67	4,465
Madison County	65,918	93.01	3,150	4.44	685	0.97	525	0.74	196	0.28	240	0.34	70,872
Tract 101	6,591	97.60	57	0.84	43	0.64	13	0.19	19	0.28	21	0.31	6,753
Tract 107	5,858	92.08	246	3.87	98	1.54	106	1.67	12	0.19	22	0.35	6,362
Tract 108	3,874	97.85	38	0.96	51	1.29	4	0.10	8	0.20	18	0.45	3,959

Population by Race – Census Tracts

Census	Block		% of		% of		% of		% of	American	% of		% of	Total
Tract	Group	White	Population	Black	Population	Hispanic	Population	Asian	Population	Indian	Population	Other	Population	Population
Tract 3402	All	3,643	80.79	520	11.53	58	1.29	156	3.46	18	0.40	31	0.69	4,509
	1	1,899	76.27	370	14.86	32	1.29	107	4.30	11	0.44	18	0.72	2490
	2	1,744	86.38	150	7.43	26	1.29	49	2.43	7	0.35	13	0.64	2019
Tract 3404	All	3,084	74.56	853	20.60	99	2.39	55	1.33	14	0.34	33	0.80	4,136
	1	1,347	64.20	609	29.03	41	1.95	40	1.91	10	0.48	16	0.76	2098
	2	1,209	95.27	33	2.60	26	2.05	7	0.55	1	0.08	12	0.95	1269
	3	528	68.66	211	27.44	32	4.16	8	1.04	3	0.39	5	0.65	769
Tract 3405	All	5,058	82.67	747	12.21	137	2.24	101	1.65	16	0.26	74	1.21	6,118
	1	1,871	82.79	274	12.12	41	1.81	33	1.46	5	0.22	19	0.84	2260
	2	2,014	86.22	217	9.29	43	1.84	43	1.84	9	0.39	20	0.86	2336
	3	1,173	77.07	256	16.82	53	3.48	25	1.64	2	0.13	35	2.30	1522
Tract 4001	All	4,520	74.62	1,185	19.56	96	1.58	176	2.91	13	0.21	26	0.43	6,057
	1	1,624	69.40	632	27.01	43	1.84	12	0.51	4	0.17	6	0.26	2340
	2	2,896	77.91	553	14.88	53	1.43	164	4.41	9	0.24	20	0.54	3717
Tract 4004	All	4,702	93.39	98	1.95	76	1.51	158	3.14	4	0.08	15	0.30	5,035
	1	3,100	91.69	80	2.37	49	1.45	143	4.23	4	0.12	6	0.18	3381
	2	1,602	96.97	18	1.09	27	1.63	15	0.91	0	0.00	9	0.54	1652
Tract 4102	All	8,035	90.24	307	3.45	129	1.45	396	4.45	4	0.04	59	0.66	8,904
	1	3,456	88.84	141	3.62	87	2.24	203	5.22	3	0.08	41	1.05	3890
	2	1,717	88.55	98	5.05	15	0.77	82	4.23	1	0.05	3	0.15	1939
	3	2,862	93.07	68	2.21	27	0.88	111	3.61	0	0.00	15	0.49	3075
Tract 60102	All	5,147	94.53	168	3.09	90	1.65	12	0.22	11	0.20	39	0.72	5,445
	1	4071	95.34	89	2.08	73	1.71	12	0.28	9	0.21	34	0.80	4270
	2	1076	91.57	79	6.72	17	1.45	0	0.00	2	0.17	5	0.43	1175
Tract 602	All	4,050	96.84	35	0.84	49	1.17	13	0.31	7	0.17	18	0.43	4,182
	1	1085	97.40	13	1.17	19	1.71	3	0.27	2	0.18	9	0.81	1114
	2	1219	96.44	9	0.71	18	1.42	4	0.32	4	0.32	2	0.16	1264
	3	984	96.38	9	0.88	7	0.69	3	0.29	1	0.10	7	0.69	1021
	4	762	97.32	4	0.51	5	0.64	3	0.38	0	0.00	0	0.00	783
Tract 603	All	2,210	97.87	24	1.06	5	0.22	1	0.04	1	0.04	1	0.04	2,258
	1	1365	97.29	23	1.64	3	0.21	0	0.00	1	0.07	1	0.07	1403
	2	845	98.83	1	0.12	2	0.23	1	0.12	0	0.00	0	0.00	855
Tract 60502	All	3,963	88.76	390	8.73	94	2.11	27	0.60	11	0.25	30	0.67	4,465
	1	1317	95.09	38	2.74	19	1.37	6	0.43	6	0.43	0	0.00	1385
	2	886	77.79	232	20.37	18	1.58	3	0.26	3	0.26	8	0.70	1139
	3	1760	90.67	120	6.18	57	2.94	11	0.57	2	0.10	22	1.13	1941
Tract 101	All	6,591	97.60	57	0.84	43	0.64	13	0.19	19	0.28	21	0.31	6,753
	1	1185	97.45	12	0.99	8	0.66	2	0.16	7	0.58	7	0.58	1216
Tract 107	All	5,858	92.08	246	3.87	98	1.54	106	1.67	12	0.19	22	0.35	6,362
	1	3360	90.37	159	4.28	74	1.99	63	1.69	10	0.27	21	0.56	3718
	2	2498	94.48	87	3.29	24	0.91	35	1.32	2	0.08	1	0.04	2644
Tract 108	All	3,874	97.85	38	0.96	51	1.29	4	0.10	8	0.20	18	0.45	3,959
	1	1270	98.83	10	0.78	9	0.70	1	0.08	3	0.23	1	0.08	1285
	2	1560	97.74	19	1.19	17	1.07	3	0.19	5	0.31	9	0.56	1596
	3	1044	98.40	9	0.85	25	2.36	0	0.00	0	0.00	8	0.75	1061

Population by Race – Census Block Groups

	Population Below	Percent of	Age	% of Total	Age	% of Total	Age	% of Total
	Poverty Level	Population	0-17	Population	18-64	Population	65-Over	Population
United States	33,899,812	12.05	11,746,258	4.17	18,865,180	6.70	3,287,774	1.17
Kentucky	621,096	15.37	203,547	5.03	350,072	8.66	67,477	1.67
Fayette County	31,963	12.27	8,039	3.09	21,810	8.37	2,114	0.81
Tract 3402	416	9.23	88	1.95	316	7.01	12	0.27
Tract 3404	657	15.88	210	5.08	343	8.29	104	2.51
Tract 3405	532	8.70	94	1.54	429	7.01	9	0.15
Tract 3406	366	5.13	124	1.74	229	3.21	13	0.18
Tract 3407	251	8.54	98	3.33	153	5.20	0	0.00
Tract 3501	208	6.36	63	1.92	129	3.94	16	0.49
Tract 3502	1,353	20.20	233	3.48	1,085	16.20	35	0.52
Tract 4001	846	13.97	301	4.97	492	8.12	53	0.88
Tract 4003	254	4.87	7	0.13	247	4.74	0	0.00
Tract 4004	164	3.26	48	0.95	110	2.19	6	0.12
Tract 4101	419	7.55	169	3.05	235	4.24	15	0.27
Tract 4102	314	3.53	137	1.54	169	1.90	8	0.09
Jessamine County	3,904	10.00	1,417	3.63	2,150	5.51	337	0.86
Tract 60102	470	8.63	159	2.92	235	4.32	76	1.40
Tract 602	541	12.94	218	5.21	303	7.25	20	0.48
Tract 603	191	8.46	38	1.68	109	4.83	44	1.95
Tract 60502	477	10.68	192	4.30	258	5.78	27	0.60
Madison County	10,952	15.45	2,777	3.92	7,062	9.96	1,113	1.57
Tract 101	566	8.38	393	5.82	173	2.56	55	0.81
Tract 107	543	8.54	114	1.79	387	6.08	42	0.66
Tract 108	497	12.55	90	2.27	348	8.79	59	1.49

Population below Poverty Level – Census Tracts

·	Block	Population Below	Percent of	Age	% of Total	Age	% of Total	Age	% of Total
Census Tract	Group	Poverty Level	Population	0-17	Population	18-64	Population	65-Over	Population
Tract 3402	All	416	9.23	88	1.95	316	7.01	12	0.27
	1	273	10.96	80	3.21	191	7.67	2	0.08
	2	143	7.08	8	0.40	125	6.19	10	0.50
Tract 3404	All	657	15.88	210	5.08	343	8.29	104	2.51
	1	524	24.98	166	7.91	271	12.92	87	4.15
	2	61	4.81	13	1.02	31	2.44	17	1.34
	3	72	9.36	31	4.03	41	5.33	0	0.00
Tract 3405	All	532	8.70	94	1.54	429	7.01	9	0.15
	1	327	14.47	83	3.67	235	10.40	9	0.40
	2	81	3.47	7	0.30	74	3.17	0	0.00
	3	124	8.15	6	0.39	118	7.75	0	0.00
Tract 4001	All	846	13.97	301	4.97	492	8.12	53	0.88
	1	401	17.14	165	7.05	203	8.68	33	1.41
	2	445	11.97	136	3.66	289	7.78	20	0.54
Tract 4004	All	164	3.26	48	0.95	110	2.19	6	0.12
	1	22	0.65	8	0.24	14	0.41	0	0.00
	2	142	8.60	40	2.42	96	5.81	6	0.36
Tract 4102	All	314	3.53	137	1.54	169	1.90	8	0.09
	1	167	4.29	68	1.75	91	2.34	8	0.21
	2	62	3.20	26	1.34	36	1.86	0	0.00
	3	85	2.76	43	1.40	42	1.37	0	0.00
Tract 60102	All	470	8.63	159	2.92	235	4.32	76	1.40
	1	383	8.97	131	3.07	181	4.24	71	1.66
	2	87	7.40	28	2.38	54	4.60	5	0.43
Tract 602	All	541	12.94	218	5.21	303	7.25	20	0.48
	1	207	18.58	76	6.82	111	9.96	20	1.80
	2	127	10.05	39	3.09	88	6.96	0	0.00
	3	174	17.04	98	9.60	76	7.44	0	0.00
	4	33	4.21	5	0.64	28	3.58	0	0.00
Tract 603	All	191	8.46	38	1.68	109	4.83	44	1.95
	1	62	4.42	18	1.28	38	2.71	6	0.43
	2	129	15.09	23	2.69	68	7.95	38	4.44
Tract 60502	All	477	10.68	192	4.30	258	5.78	27	0.60
	1	164	11.84	80	5.78	78	5.63	6	0.43
	2	192	16.86	66	5.79	116	10.18	10	0.88
	3	121	6.23	46	2.37	64	3.30	11	0.57
Tract 101	All	566	8.38	393	5.82	173	2.56	55	0.81
	1	75	6.17	15	1.23	53	4.36	7	0.58
Tract 107	All	543	8.54	114	1.79	387	6.08	42	0.66
	1	474	12.75	114	3.07	350	9.41	10	0.27
	2	69	2.61	0	0.00	37	1.40	32	1.21
Tract 108	All	497	12.55	90	2.27	348	8.79	59	1.49
	1	163	12.68	47	3.66	92	7.16	24	1.87
	2	42	2.63	5	0.31	30	1.88	7	0.44
	3	292	27.52	38	3.58	226	21.30	28	2.64

Population below Poverty Level – Census Block Groups

	Age	% of Total	Age	% of Total	Age	% of Total	Total
	0-17	Population	18-64	Population	65-Over	Population	Population
United States	72,293,812	25.69	174,136,341	61.88	34,991,753	12.43	281,510,483
Kentucky	994,818	24.61	2,542,158	62.90	504,793	12.49	4,041,769
Fayette County	55,395	21.26	179,119	68.76	25,998	9.98	260,512
Tract 3402	859	19.05	3,474	77.05	176	3.90	4,509
Tract 3404	1,078	26.06	2,531	61.19	527	12.74	4,136
Tract 3405	1,471	24.04	4,230	69.14	417	6.82	6,118
Tract 3406	2,011	28.20	4,899	68.69	222	3.11	7,132
Tract 3407	611	20.78	2,233	75.95	96	3.27	2,940
Tract 3501	749	22.88	2,218	67.77	306	9.35	3,273
Tract 3502	962	14.36	5,281	78.86	454	6.78	6,697
Tract 4001	1,549	25.57	4,226	69.77	282	4.66	6,057
Tract 4003	950	18.22	3,836	73.56	429	8.23	5,215
Tract 4004	1,590	31.58	3,156	62.68	289	5.74	5,035
Tract 4101	1,321	23.81	3,671	66.18	555	10.01	5,547
Tract 4102	2,908	32.66	5,646	63.41	350	3.93	8,904
Jessamine County	10,253	26.26	25,080	64.24	3,708	9.50	39,041
Tract 60102	1,463	26.87	3,444	63.25	538	9.88	5,445
Tract 602	1,066	25.49	2,694	64.42	422	10.09	4,182
Tract 603	580	25.69	1,479	65.50	199	8.81	2,258
Tract 60502	1,328	29.74	2,855	63.94	282	6.32	4,465
Madison County	15,476	21.84	48,467	68.39	6,929	9.78	70,872
Tract 101	1,816	26.89	4,477	66.30	460	6.81	6,753
Tract 107	1,538	24.17	4,406	69.25	418	6.57	6,362
Tract 108	939	23.72	2,568	64.86	452	11.42	3,959

Elderly Population – Census Tracts

		Age	% of Total	Age	% of Total	Age	% of Total	
Census Tract	BIOCK Group	0-17	Population	18-64	Population	65-Over	Population	Total Population
Tract 3402	All	859	19.05	3,474	77.05	176	3.90	4,509
	1	500	20.08	1922	77.19	68	2.73	2,490
	2	359	17.78	1552	76.87	108	5.35	2,019
Tract 3404	All	1,078	26.06	2,531	61.19	527	12.74	4,136
	1	610	29.08	1236	58.91	252	12.01	2,098
	2	231	18.20	803	63.28	235	18.52	1,269
	3	237	30.82	492	63.98	40	5.20	769
Tract 3405	All	1,471	24.04	4,230	69.14	417	6.82	6,118
	1	495	21.90	1607	71.11	158	6.99	2,260
	2	566	24.23	1626	69.61	144	6.16	2,336
	3	410	26.94	997	65.51	115	7.56	1,522
Tract 4001	All	1,549	25.57	4,226	69.77	282	4.66	6,057
	1	753	32.18	1495	63.89	92	3.93	2,340
	2	796	21.42	2731	73.47	190	5.11	3,717
Tract 4004	All	1,590	31.58	3,156	62.68	289	5.74	5,035
	1	1,204	35.61	2056	60.81	121	3.58	3,381
	2	384	23.24	1100	66.59	168	10.17	1,652
Tract 4102	All	2,908	32.66	5,646	63.41	350	3.93	8,904
	1	1,305	33.55	2449	62.96	136	3.50	3,890
	2	604	31.15	1245	64.21	90	4.64	1,939
	3	999	32.49	1952	63.48	124	4.03	3,075
Tract 60102	All	1,463	26.87	3,444	63.25	538	9.88	5,445
	1	1,180	27.63	2649	62.04	441	10.33	4,270
	2	283	24.09	795	67.66	97	8.26	1,175
Tract 602	All	1,066	25.49	2,694	64.42	422	10.09	4,182
	1	283	25.40	738	66.25	93	8.35	1,114
	2	369	29.19	773	61.16	122	9.65	1,264
	3	243	23.80	660	64.64	118	11.56	1,021
	4	171	21.84	523	66.79	89	11.37	783
Tract 603	All	580	25.69	1,479	65.50	199	8.81	2,258
	1	356	25.37	918	65.43	129	9.19	1,403
	2	224	26.20	561	65.61	70	8.19	855
Tract 60502	All	1,328	29.74	2,855	63.94	282	6.32	4,465
	1	458	33.07	851	61.44	76	5.49	1,385
	2	321	28.18	744	65.32	74	6.50	1,139
	3	549	28.28	1260	64.91	132	6.80	1,941
Tract 101	All	304	25.00	821	67.52	91	7.48	1,216
	1	304	25.00	821	67.52	91	7.48	1,216
Tract 107	All	1,538	24.17	4,406	69.25	418	6.57	6,362
	1	839	22.57	2660	71.54	219	5.89	3,718
	2	699	26.44	1746	66.04	199	7.53	2,644
Tract 108	All	939	23.72	2,568	64.86	452	11.42	3,959
	1	296	23.04	830	64.59	159	12.37	1,285
	2	390	24.44	1044	65.41	162	10.15	1,596
	3	236	22.24	694	65.41	131	12.35	1,061

Elderly Population – Census Block Groups

APPENDIX C:

ENVIRONMENTAL OVERVIEW

Environmental Overview

Feasibility Study for New Route Between US 27 and I-75 Fayette, Jessamine, and Madison Counties, Kentucky KYTC Item No. 7-249.00

> Prepared for Kentucky Transportation Cabinet March 20, 2008

Prepared by Rebecca Colvin Third Rock Consultants, LLC 2526 Regency Road Lexington, KY 40503 859.977.2000 www.thirdrockconsultants.com



Environmental Overview

Feasibility Study for New Route Between US 27 and I-75 Fayette, Jessamine, and Madison Counties, Kentucky Item 7-249.00

for

Kentucky Transportation Cabinet 200 Mero Street Frankfort, KY 40622

March 20, 2008

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Environmental Analysis & Restoration

Executive Summary

The Kentucky Transportation Cabinet is undertaking a feasibility study for a new route between US 27 and I-75 in central Kentucky. The study area being examined for this new route includes portions of three Kentucky counties: Jessamine, Fayette, and Madison counties.

As a subconsultant to PB Americas, Inc., Third Rock Consultants, LLC (Third Rock) has been asked to prepare portions of an environmental overview (EO) to highlight potential environmental concerns within the study area. Third Rock's areas of responsibility for the EO include aquatic resources, threatened and endangered species, air quality, traffic noise, and underground storage tanks and hazardous materials.

Third Rock conducted desktop research and a limited field reconnaissance in an effort to identify potential areas of environmental consideration. For Third Rock's areas of responsibility the following considerations were identified.

Numerous aquatic resources are located within the study area. The Kentucky River traverses the entire study, approximately midway, from northeast to southwest. Major tributaries of the Kentucky River include Tate Creek, South Elkhorn Creek, Silver Creek, Jessamine Creek, Boone Creek, Hickman Creek, and Paint Lick Creek. Hine's Creek, a small tributary to the Kentucky River, has been designated an exceptional water and reference reach by the Kentucky Division of Water.

Similarly, numerous wetlands are shown on National Wetland Inventory mapping throughout the study area. The majority of potentially naturally occurring wetlands occur along South Elkhorn, Silver Creek, and Paint Lick Creek with a few additional wetlands scattered relatively evenly throughout the study area.

The Kentucky River Palisades, a series of steep gorges running approximately 100 miles from Clay's Ferry to Frankfort, is included in the study area. Because the palisades are a unique formation in the region, several nature preserves have been established along the Kentucky River to protect habitat.

The study area lies within an active karst area. Water quality and endangered species habitat is a consideration in such areas.

Threatened and endangered species habitat does exist throughout the study area. Species of concern include Indiana bat (*Myotis sodalis*), gray bat (*Myotis grisescens*), and running buffalo clover.

The study area is part of the Bluegrass Intrastate Air Quality Control Region. All counties included in the study area are currently designated in attainment for all transportation related air pollutants. However, if any proposed roadway locations pass through portions of Fayette County, the PM_{2.5} National Ambient Air Quality Standard should be considered.

From a traffic noise impact perspective, numerous sensitive receptors exist in the study area. Nature preserves, state historic sites, along with multiple churches, schools, and cemeteries are potentially sensitive noise receptors. Churches schools, and cemeteries are scattered throughout the study area but are concentrated, along with the residential areas, in the suburban areas in Wilmore, Nicholasville, Richmond, and southern Lexington.

Database information indicates the potential for numerous underground storage tanks and hazardous materials sites throughout the study area with concentrations to be found around the urban areas and along US 27. Sites may include water wells, oil wells, gas wells, and industrial sites among others. Three mapped landfills are also located within the study area. Two landfills are located near the cities of Richmond and Wilmore with the third located along Jacks Creek Pike in Fayette County.

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APPENDIX

APPENDIX A – Natural Resource Agency Information

I. INTRODUCTION

The Kentucky Transportation Cabinet project is a feasibility study for a new route between US 27 and I-75. The study area extends across Jessamine, Fayette, and Madison counties, Kentucky (Exhibit 1, page 11).

Third Rock Consultants, LLC (Third Rock) has been asked to prepare portions of an environmental overview (EO) to highlight potential environmental concerns within the study area. Third Rock's areas of responsibility for the EO include aquatic resources, threatened and endangered species, air quality, traffic noise, and underground storage tanks and hazardous materials. Third Rock prepared its sections using desktop resources supplemented by limited field reconnaissance.

II. ENVIRONMENTAL SETTING

The study area is sizable. Along its westernmost boundary, the study area roughly parallels US 68 to the east from just north of Man O' War Boulevard in Lexington, Fayette County to south of Wilmore in Jessamine County. The easternmost boundary parallels I-75 two to three miles to the east from south of US 60 in Lexington to south of the city of Richmond in Madison County. The northernmost boundary parallels Man O' War Boulevard from US 68 to I-75 within Lexington. The southernmost boundary extends from south of Wilmore, moves in a southeasterly direction, and ends with the area south of the city of Richmond.

The study area is located in the Inner Bluegrass of the Bluegrass Region. This rolling plateau extends south from the Ohio River to Lebanon, Richmond, and Mount Sterling where the topography becomes decidedly more rugged (The Knobs). Elevations in the project area range from approximately 500 feet to 1,300 feet above sea level.



Rolling Farmland

While much of the area is rural, several larger cities including the suburbs of Lexington, all of Nicholasville, and most of Wilmore and Richmond city boundaries are encompassed by the study area boundary. Fayette and Jessamine Counties are well known for raising high quality racehorses. Additional farming in the region includes burley tobacco, corn, barley and wheat. Some small, scattered wooded areas are present especially along southern Jessamine County where steep terrain may inhibit conversion of the land to agricultural use (*e.g.*, along the Kentucky River).

The Inner Bluegrass experiences cold winters and hot, humid summers. January is typically the coldest month, with average maximum and minimum temperatures of 41.1 degrees Fahrenheit (°F) and 24.2°F, respectively; July is usually the hottest month with average maximum and minimum temperatures of 85.9°F and 65.9°F, respectively. Annual precipitation averages approximately 45.31 inches with an annual average growing season of 170 days (>32 degrees, 9 years in 10).

Upper and Middle Ordovician aged members of Lexington Limestone are the predominate rocks outcropping in the study area. Numerous small abandoned limestone quarries are present throughout the area, an indication of the importance of limestone to early settlers for use in buildings and fences. Currently, only one large active quarry exists in the study area (Elk Lick Falls Road between Athens and Clay's Ferry Bridge). Oil and gas pursuits in the area have been minimal with limited testing indicating a low abundance of these resources. Several faults occur in the area, the largest of which occurs along the Kentucky River.



Cave Below Clays Ferry, Kentucky River

The northern half of the study area (north of the Kentucky River) is located in a region with high karst potential. However, further south in the Inner Bluegrass and across the Kentucky River a transitional zone is reached (Outer Bluegrass) and the possibility for karst decreases (though some potential still remains).

III. AQUATIC RESOURCES

The study area is located entirely in the Lower Fork of Kentucky River sub-basin (HUC# 05100205) in the Kentucky River watershed. In addition to the Kentucky River, the study area encompasses several major tributaries of the Kentucky River, including Tate Creek, South Elkhorn Creek, Silver Creek, Jessamine Creek, Boone Creek, Hickman Creek, and Paint Lick Creek (Exhibit 2, page 12). Streams in this region are generally characterized by a bedrock, boulder, and cobble substrate. Distribution of streams is relatively even throughout the study area with three located to the north and three to the south of the Kentucky River. Smaller intermittent and ephemeral streams are also abundant. Hine's Creek, a small tributary to the Kentucky River, may warrant special attention as it has been designated an exceptional water and reference reach by the Kentucky Division of Water (KDOW). As an exceptional water, the creek's guality exceeds that which is necessary to support the propagation of fish, shellfish, wildlife, and recreation in and out of water. As a reference reach, Hine's Creek is part of a representative subpopulation of the least impacted streams in a region. As a reference reach, the creek can be used as a chemical, physical, and biological model to ascertain the level of impairment of similar streams in its bioregion. The creek is located immediately south of the Kentucky River and adjacent to the I-75 bridge crossing.



Tate Creek



Silver Creek



Hickman Creek



Boone Creek

Approximately 28 miles of the Kentucky River lie within the study area. The large perennial river crosses the study area, running northeast to southwest, essentially dividing it in half. Of the 14 locks located on the river, Lock and Dam 9 is located within the study area downstream of Valley View. There are relatively few river crossings in the area due to the Kentucky River Palisades, a series of steep gorges running approximately 100 miles from Clay's Ferry to Frankfort. Additionally, because the palisades are a unique formation in the region, many nature preserves have been established along the Kentucky River to protect this habitat.

Few natural wetlands were observed during a windshield reconnaissance conducted in late July 2007. Excluding the two large reservoirs in the study area (Lexington Reservoir No. 4 to the

north and Taylor Fork Lake to the south) 82 percent of the wetlands exhibited on National Wetland Inventory (NWI) mapping were small farm ponds which may have wetland margins (PUBH or PUBHh) (Exhibit 2, page 12). The majority of potentially naturally occurring wetlands occur along South Elkhorn, Silver Creek and Paint Lick Creek with a few additional wetlands scattered relatively evenly throughout Some naturally occurring the study area. wetlands may be found in poorly drained sinkholes and may not have shown up as wetlands on the NWI mapping. Due to the limited scope of the field reconnaissance and the large study area, the vast majority of these wetlands were not field verified and none were delineated. Only those wetlands labeled as forested, scrub shrub, or emergent on NWI mapping are shown as wetland on Exhibit 2 (page 12.)



Lock and Dam 9, KY River



Valley View Ferry Mid River



Open Wetland

Crossings of the Kentucky River and impacts to Hine's Creek warrant special attention. The palisades found along the Kentucky River in the study area make bridge crossings difficult, as relatively deep gorges may require large, tall bridge crossings. Hine's Creek (located immediately south of the Kentucky River and adjacent to the I-75 bridge crossing) has been designated an exceptional water and a reference reach by the KDOW.

Impacts to aquatic resources are likely for any construction activities in the study area. Any new stream crossings or improvements to existing stream crossings may create temporary impacts or permanent alterations that may require US Army Corps of Engineers Section 404 and Kentucky Division of Water Section 401 permits. Impacts to wetlands are also likely with new construction in the study area. Any wetlands to be impacted by a proposed roadway project should be delineated. Wetlands determined to be jurisdictional will need to be verified by the US Army Corps of Engineers (USACE). Elimination of stream or wetland habitat may require mitigation.

The study area lies within an active karst area. The Kentucky Transportation Cabinet, Division of Environmental Analysis has issued a Policy Paper (Design Memorandum No. 12-05, July 27, 2005), which states that best management practices (BMPs) for karst and significant resource areas must be followed. These BMPs are intended to improve long-term water quality and to protect endangered species such as the Indiana and gray bats, as well as a variety of mussel species.

IV. THREATENED AND ENDANGERED SPECIES

The United States Fish and Wildlife Service (USFWS) lists 4 federally listed species for one or more of the three counties included in the study area. The list includes two mammals, Indiana bat (*Myotis sodalis*) and gray bat (*Myotis*) *grisescens*); one plant species, running buffalo clover (Trifolium stoloniferum); and one insect species, American burying beetle (Nicrophorus All are listed as federally americanus). endangered. Yet, due to an informal agreement between the USFWS and KYTC, no habitat exists for American burying beetle in Fayette County and no surveys are conducted for the species. A review of the Kentucky Department of Fish and Wildlife Resources' (KDFWR) website (2007) indicated the potential for both the Indiana and gray bat, as well as one bird species, peregrine falcon (Falco peregrinus). The peregrine falcon was delisted on August 25, 1999. A review of the Kentucky State Nature Preserves Commission (KSNPC) website (2007) concurred with the listings for the Indiana bat, gray bat, running buffalo clover, and American burying beetle. Species lists generated from agency websites are included in Appendix A.

The Indiana bat (*Myotis sodalis*) formally attained endangered species status on March 11, 1967 (USFWS 1999). A recovery plan was approved March 1, 1999. The historic range for this species consisted of the central and southeastern United States. Within Kentucky, two caves, Bat Cave in Carter County and Coach Cave in Edmonson County, have been designated as critical habitat for the species (USFWS 1976).

Indiana bats hibernate during the winter months in large, cool caves, sinks, and/or mines (hibernacula) where they form tight clusters containing hundreds of individuals. Mines include coal, limestone, as well as other mineral recovery operations. Each spring, the females emerge from these hibernacula and migrate to summer (maternity) habitat consisting of hardwood forests. Maternity colonies are formed in these areas under the exfoliating bark of dead trees or loose bark of living trees. The migration of males is variable. Some males do not migrate. others migrate only a short distance to smaller, warmer caves, and others migrate to the same habitat as females.

Major reasons for the decline in Indiana bat populations include channelization of streams, impoundment of waterways and associated flooding of bottomland forests, deforestation, application of insecticides, destruction or improper gating of winter habitat (*e.g.*, mines, cisterns, and caves), commercialization of caves, and vandalism of cave habitat (Barbour and Davis 1974; USFWS 1999, 2004; Slone and Wethington 2001).

Summer habitat for the Indiana bat is found within the study area. The forests contain significant amounts of mature hardwoods, particularly along the slopes of the Kentucky River, the larger tributaries of the Kentucky River such as Jessamine Creek, Hickman Creek, Paint Lick Creek, Silver Creek, Tate Creek, South Elkhorn Creek, and Boone Creek. Heavily forested areas such as Raven Run Nature Sanctuary and Floracliff State Nature Preserve also provide summer habitat (Exhibit 2, page 12). Rivers and streams, particularly those with enclosed riparian zones, provide foraging corridors for Indiana and gray bats. Winter hibernating habitat for Indiana bat is potentially present in the study area due to karst features.

The gray bat (*Myotis grisescens*) formally attained endangered species status on April 28, 1976. A recovery plan was approved July 8, 1982. It is the largest species of *Myotis* found in the eastern United States. Its historical North American range includes the cave regions of the central and south central United States. Within Kentucky, the species is most common in the cave region of the south central portion of the state.



Indiana Bat Habitat, Forested Slope



Jessamine Creek Bridge at KY 1268

Gray bats occupy caves or cave-like habitats throughout the year and tend to use the same caves each year. Beginning in March, females migrate from cold (42 to 52 °F) hibernacula and enter warm caves (57 to 77 °F) that have deep vertical passages with large rooms and associated stream systems. Such habitats are typically in close proximity to rivers or reservoirs where the bats forage for aquatic insects. Summer maternity colonies contain a few hundred to many thousands of pregnant females. Adult males and non-reproductive females use other caves during the summer that are in close proximity to maternity caves. Mating begins in September as females migrate back to winter hibernacula, followed by males and juveniles. Most gray bats have begun to hibernate by November.

Major reasons for the decline in gray bat populations include channelization of streams, impoundment of waterways and flooding of adjacent hibernacula and/or nursery sites. Deforestation, application of insecticides, destruction or improper gating of caves, commercialization of caves, and vandalism are also contributing factors of the decline in the gray bat populations (Slone and Wethington 2001; USFWS, TESS 2004).

Roosting habitat for the gray bat is present within the study area. Gray bats frequently use the KY 1268 bridge over Hickman Creek as a roosting site (Exhibit 2, page 12). Near this bridge, but located outside of the study area are several known caves with gray bats, located in or near the Jessamine Creek Gorge, Hickman Creek near Camp Nelson, and Dix River area near Herrington Dam. Due to the karst nature of the study area, the existence of other unknown roosting sites is a possibility.



Hickman Creek at KY 1268 Bridge

Running buffalo clover (*Trifolium stoloniferum*) obtained endangered species status on July 6, 1987. Historically, the species was known from northern Arkansas, southern Missouri, eastern Kansas, southern Illinois, central and southern Indiana, central and southern Ohio, central Kentucky and central and northern West Virginia. There is a very limited timeframe in which the plant can be located and identified.



Running Buffalo Clover Habitat

Kentucky has the largest number of populations (66) of any of the states in which it is still known to exist. It is presently known in 14 counties (KSNPC 2007; USFWS 2005). It has been closely identified with both the inner and outer Bluegrass regions, with one known exception: a recent record from the western edge of Jackson County.

buffalo clover historically Runnina was associated with buffalo, buffalo traces and relatively open savannah woodlands. It is typically associated with limestone-based soils. It is dependent on partial shade (often described as filtered sunlight) and periodic disturbance for its continued survival. Disturbance can be soil scouring from run-off or flooding, hoof disturbance by grazing livestock, mowing, and foot, vehicle or logging trails. Plants of this species have also been found on sand and gravel bars of ephemeral streams (Taylor and Campbell 1989). In Kentucky, it is found in both

wooded uplands and on floodplains, the latter predominating. Several discoveries of this species have been made within cemeteries or lawns of historic homes that have been maintained by occasional mowing (Slone and Wethington 2001). Flowering occurs in April and May, with fruit maturing mostly in midsummer.

Running buffalo clover is most often found in areas that have had periodic disturbance over a long period of time. Careful examination of areas such as along old stone fences; roads leading to old historic or abandoned houses; old house sites; log structures; areas around presettlement trees; and family, country cemeteries should be conducted. It has also been found along the banks and gravel bars of small, partially shaded streams.

Some specimens of white clover (*T. repens*) and Alsike clover (*T. hybridum*) that occur in highly disturbed habitats or areas that have been closely mowed or grazed may resemble running buffalo clover in earlier stages of development in the spring. It is difficult to identify with certainty except in a brief period of time just before flowering, during flowering, and a short time after flowering. Therefore, all searches for the occurrence of this species should be made only within these timeframes, which generally occur from late mid-April to mid-June.

The decline in running buffalo clover populations is likely a result of several factors: initial habitat destruction during settlement and subsequent land development, poor dispersal to new habitats from remnant populations, introduction of exotic weed species, excessive grazing and elimination of natural, periodic disturbances such as fire and grazing by native herbivores (bison and deer) (Campbell et al. 1988; Slone and Wethington 2001).

According to the USFWS, running buffalo clover is known from all counties included in the study

area. Partially shaded habitats with some areas that have regular disturbance are located throughout the study area. Upon development of alternatives, a closer examination of the area will need to be performed to look for this species.

Roosting and foraging habitat for Indiana and gray bat is present within the study area. To comply with Section 7 of the Endangered Species Act for Indiana bat, potential impacts to Indiana bat or its habitat may be addressed in one of three ways: (i) a biological assessment may be conducted, (ii) tree cutting may be restricted to the period between Oct. 15 and March 31, or (iii) KYTC may pay for the acquisition of summer maternity habitat (roost trees) under its Programmatic Biological Opinion Agreement with USFWS. Roosting habitat for gray bat and hibernating habitat for Indiana bat may be present due to the extensive karst features in portions of the study area. Upon development of alternatives, closer examination of the area will determine if any caves or sinkholes are present that meet the species' requirement for roosting and/or hibernating.

To comply with Section 7 of the Endangered Species Act, a survey for running buffalo clover may have to be performed. Habitat for running buffalo clover is located throughout the study area. It is probable that alternatives will traverse habitat for this species.

V. AIR QUALITY

The study area is part of the Bluegrass Intrastate Air Quality Control Region. All counties included in the study area are currently designated in attainment for all transportation related air pollutants.

The study area is located in a predominantly rural area; however several large suburbs are included within the study area boundary. The suburbs of Lexington, Nicholasville, and Richmond are all located within the study area (Exhibit 3, page 13). Sensitive receptors for air pollutants in the study area could include outdoor use areas associated with residences, churches, parks, athletic facilities and schools.

Though Fayette County is designated in attainment status, the National Ambient Air Quality Standard (NAAQS) for the PM_{2.5} threeyear average was exceeded for the 2003-2005 data set. Fayette County recorded a three-year average of 15.1 μ g/m3 while three-year average NAAQS is 15.0 μ g/m3. Despite the fact that Fayette County exceeded the three-year average, the county is still currently designated in attainment for PM_{2.5}.

No formal air quality analysis has been performed for this project or its associated study area. Alternatives that may arise from this Feasibility Study are not expected to have a negative impact on the air quality in the study area. Furthermore, it is not expected that any alternative developed by the planning study will negatively affect the attainment status of any county included within the study area. However, should any alternative pass through portions of Fayette County, the PM_{2.5} NAAQS should be considered.

VI. TRAFFIC NOISE

Vehicle tires, engines, and exhaust propagate noise at levels dependent upon the volume, speed, the percentage of trucks, and the slope of the roadway. These traffic noises are measured in decibels in the A-scale (dBA). The A-scale is designed to best approximate the way noise is heard by the human ear. Due to the logarithmic nature of noise measurements, a 3 dBA increase in the noise level represents a doubling in the noise level, but this increase is barely detectible by the human ear. A 10 dBA increase is perceived as a doubling of the noise level. Noise levels decrease in proportion with the square of the distance from the source such that a 4.5 dBA decrease is usually achieved when the distance from the roadway is doubled.

A specific noise analysis was not conducted for the study area, but these noise principles were utilized in combination with noise impact criteria to identify noise sensitive receptors in the study According to the Federal Highway area. Administration Policy, Procedures for Abatement of Highway Traffic Noise and Construction Noise, traffic noise impacts occur when the predicted traffic noise levels approach (are within 1 dBA) or exceed the noise abatement criteria (NAC) or when the predicted traffic noise levels substantially exceed (increase by 10 dBA or more) the existing noise level. The NAC is defined as 67 dBA for residential areas and 72 dBA for commercial areas.

Traffic noise concerns in the study area were identified examination through an of topographical and aerial mapping. The proposed study area consists largely of rural and scattered receptors on variably rolling to hilly topography of the Inner Bluegrass ecoregion. These hills provide topographical barriers noise to propagation. Heavily wooded areas that would decrease traffic noise impacts are rare throughout the study area except along the Kentucky River in southern Jessamine, southeast Fayette, and western Madison counties. Raven Run and Floracliff State Nature Preserve could potentially be noise sensitive receptors in the White Hall and Boone Station State area. Historic Sites could also be potentially sensitive noise receptors. Multiple churches, schools, and cemeteries are scattered throughout the study area but are concentrated, along with the residential areas, in the suburban areas in Wilmore, Nicholasville, Richmond, and southern Lexington (Exhibit 3, page 13). Each of these locations could represent noise sensitive receptors depending on the horizontal alignment.



White Hall State Historic Site

One of the most effective means of reducing overall traffic noise impacts is the selection of horizontal and vertical alignments that minimize impacts. Other noise mitigation methods include purchasing noise buffer zones. traffic management, and noise barriers. Although noise barriers are frequently considered as a noise abatement option, they are usually only feasible in high-density residential areas in close proximity to the alignment. Based on noise propagation principles, traffic noise is not usually a serious problem for receptors more than 500 feet from heavily traveled freeways or more than 100 to 200 feet from lightly traveled roads.

Neither existing nor predicted traffic forecasts are currently available for this project, but it is expected that traffic levels would increase. In future traffic noise analyses, actual and predicted traffic levels could be modeled to predict the impact of any new roadway.

VII. UNDERGROUND STORAGE TANKS / HAZARDOUS MATERIALS

A limited site reconnaissance was conducted on July 31, 2007. The intent of the site reconnaissance was to identify underground storage tank (UST) and hazardous material concerns along major roads within the study area. The UST and hazardous material concerns for this project are similar to that of any other proposed highway development. Active and abandoned UST sites can be expected along any major roadway within the study area. Numerous convenience stores and gas stations with UST potential are located in the developed areas near the cities of Wilmore, Richmond and Nicholasville. The area along Man O' War Boulevard in southern Fayette County also represents potential UST concerns. Furthermore, several country stores and automotive repair facilities are present throughout the study area that could represent UST potential. As alternatives are developed and designed, further investigation would be needed to determine the location of USTs.

The limited field reconnaissance was supplemented by a database search. Multiple databases were utilized, including the Kentucky Division of Waste Management's Statewide UST Database as well as the Environmental Protection Agency's database concerning information about Resource Conservation and Recovery Act Information (RCRA) and Superfund sites.

Hazardous waste information is contained in the Resource Conservation and Recovery Act Information (RCRAInfo) database. RCRAInfo is a national management and inventory system regarding hazardous waste handlers. Facilities or individuals that generate, transport, treat, store, or dispose of hazardous waste are generally required to provide information about their activities to state environmental agencies. Approximately 150 RCRA sites are potentially located within the study area.

Superfund sites are uncontrolled hazardous waste sites identified by the federal government that require cleanup activities. Superfund facilities are listed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database. The database search resulted in the identification of 3 Superfund sites located within the study area. The RCRA and Superfund sites are shown on Exhibit 3, page 13.

Due to the substantial size of the study area, the UST database search resulted in the identification of approximately 500 potential UST sites. The UST sites were identified based on geographic coordinates and address information. The location of UST sites with geographic coordinates are shown on Exhibit 3, page 13. Each UST site may represent multiple tanks.

The presence of oil, gas, and water wells should be expected throughout the entire study area. Information provided by the Kentucky Geological Survey suggests that approximately 568 water wells are potentially located within the study area (Exhibit 3, page 13). Additional information further suggests that at least 19 oil and gas wells are potentially located within the study area (Exhibit 3, page 13). Many of these wells are abandoned and not identifiable in the field. Should any alternative pass through the study area, the possibility of encountering a well is likely.

Three mapped landfills are located within the study area (Exhibit 3, page 13). Two landfills are located near the cities of Richmond and Wilmore. One additional landfill is located on Jacks Creek Pike in Fayette County. Though not conclusive, there is a possibility that historic waste disposal sites or additional landfills are located near any of the small communities within the study area. Once alternatives are developed, additional research should be conducted to examine the possibility of such historic landfills.

Hazardous material and waste activities associated with industrial facilities can be expected throughout the study area. Industrial development is present along US 27 in Jessamine County, near the city of Nicholasville. There is also scattered industrial development near the city of Richmond in Madison County. The majority of the industrial development in Madison and Fayette Counties is located outside of the study area and beyond the area of influence.



Map Document: (P:/2006/7-249_Jessamine_EO06/Mapping/GIS/Exhibit1_Location.mxd) 8/30/2007 -- 2:09:25 PM las





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(<u>http://endangered.fws.gov/recovery/index.html#p</u> <u>lans</u>). April 2007. United States Fish and Wildlife Service. 1991. *American Burying Beetle* (*Nicrophorus americanus*) *Recovery Plan*. Newton Corner, MA. 80 pp.

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Wolcott, Don E. 1970. *Geologic Map of the Buckeye Quadrangle, Central Kentucky.* Kentucky Geologic Survey.

APPENDIX

APPENDIX A – NATURAL RESOURCE AGENCY INFORMATION

Endangered, '									
Group	Species	Common name	Legal* Status	Known** Potential	Special Comments				
Mammals	Myotis sodalis Myotis grisescens	Indiana bat gray bat	E E	K P					
Plants	Physaria lesquerella Trifolium stoloniferum	globe bladderpod running buffalo clover	C E	к к					
Insects	Nicrophorus americanus	American burying beetle	E	к					
NOTES: * Key to notatic **Key to notatic known occurre	NOTES: Key to notations: E = Endangered, T = Threatened, C = Candidate, CH = Critical Habitat *Key to notations: K = Known occurrence record within the county, P = Potential for the species to occur within the county based upon historic range, proximity to known occurrence records, biological, and physiographic characteristics.								

		U.S. Fi	sh & Wildlife	Service		
FISH & WILDLIFE SERVICE		376	1 Georgetowr	n Rd.		
	U.S. Fish & Wi	Idlife Service Fra	nkfort, KY 40	601		
	Kentucky Ecological Ser	vices Field Office Pho	one: 502-695-0	0468		
		Fa	ax: 502-695-10	024		
Endangered.	Threatened, & Candidate					
Species in		_ County, KY				
Group	Species	Common name	Legal*	Known**	Special Comments	
Group	Opecies	Common name	Status	Potential		
Mammals	Myotis grisescens	gray bat	Е	К		
	Myotis sodalis	Indiana bat	E	К		
Plants	Trifolium stoloniferum	running buffalo clover	E	К		
	Physaria lesquerella	globe bladderpod	С	К		
NOTES:						
* Key to notati	ons: E = Endangered. T = Th	reatened. C = Candidate. CH	= Critical Habi	tat		
**Key to potati	$\frac{1}{2}$	record within the county $P = F$	Potential for the	species to occ	wr within the county based upon historic range, provimity to	
known occurre	since records, biological, and r	physiographic characteristics.		species to occ	al within the county based upon historic range, proximity to	
L						

TELLCHIN'S VILLEN	U.S. Fish & Wildlife Service U.S. Fish & Wildlife Service U.S. Fish & Wildlife Service U.S. Fish & Wildlife Service U.S. Fish & Wildlife Service 3761 Georgetown Rd. Frankfort, KY 40601 Phone: 502-695-0468 Fax: 502-695-1024								
Endangered, T Species in	County, KY								
Group	Species	Common name	Legal* Status	Known** Potential	Special Comments				
Mammals	Myotis sodalis	Indiana bat	E	Р					
	Myotis grisescens	gray bat	E	P					
Plants	Trifolium stoloniferum	running buffalo clover	E	ĸ					
	Physaria lesquerella	globe bladderpod	C	K					
Insects	Pseudanopthalmus pholeter	Greater Adams cave beetle	С	к					
	Pseudanopthalmus cataryctos	Lesser Adams cave beetle	С	к					
NOTES									
* Key to notatio	ns: E = Endangered, T = Th	reatened, $C = Candidate, CH$	= Critical Habi	tat	our within the county based upon historic range, provimity to				
known occurrer	nce records, biological, and	physiographic characteristics.							
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Species Information	Species Information Federal Threatened, Endangered, and Candidate Species observations for selected counties						
Maps	Linked life history provided courtesy of <u>NatureServe Explorer</u> .						
WMA Maps	Records may include both recent and historical observations.US Status DefinitionsKentucky Status Definitions						
Download GIS Data	List Federal Threatened, Endangered, and Candidate Species observations in 3						
Links	Selected counties. Selected counties are: FAYETTE, JESSAMINE, MADISON. 7 species are listed.						

Page 1 of 1							
Scientific Name and Life History	Common Name and Pictures	Class	County	US Status	KY Status	WAP	Reference
<u>Myotis</u> grisescens	<u>Gray Myotis</u>	Mammalia	FAYETTE	LE	т	<u>Yes</u>	Reference
<u>Myotis</u> grisescens	<u>Gray Myotis</u>	Mammalia	JESSAMINE	LE	Т	<u>Yes</u>	Reference
<u>Myotis</u> grisescens	<u>Gray Myotis</u>	Mammalia	MADISON	LE	т	<u>Yes</u>	Reference
<u>Myotis sodalis</u>	Indiana Bat	Mammalia	FAYETTE	LE	E	Yes	Reference
<u>Myotis sodalis</u>	Indiana Bat	Mammalia	JESSAMINE	LE	E	Yes	Reference
<u>Falco</u> <u>peregrinus</u>	<u>Peregrine</u> Falcon	Aves	FAYETTE	PS: LE	E	<u>Yes</u>	Reference
<u>Falco</u> peregrinus	<u>Peregrine</u> Falcon	Aves	JESSAMINE	PS: LE	E	<u>Yes</u>	Reference

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Report of

Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities for Fayette County, Kentucky

Kentucky State Nature Preserves Commission 801 Schenkel Lane Frankfort, KY 40601 (502) 573-2886 (phone) (502) 573-2355 (fax)

www.naturepreserves.ky.gov

Kentucky State Nature Preserves Commission Key for County List Report

Within a county, elements are arranged first by taxonomic complexity (plants first, natural communities last), and second by scientific name. A key to status, ranks, and count data fields follows.

STATUS

<u>KSNPC</u>: Kentucky State Nature Preserves Commission status: N or blank = none E = endangered T = threatened S = special concern H = historic X = extirpated

USESA: U.S. Fish and Wildlife Service status:

blank = none C = candidate LT = listed as threatened LE = listed as endangered SOMC = Species of Management Concern

RANKS

GRANK: Estimate of element abundance on a global scale:

	•
G1 = Critically imperiled	GU = Unrankable
G2 = Imperiled	G#? = Inexact rank (e.g. G2?)
G3 = Vulnerable	G#Q = Questionable taxonomy
G4 = Apparently secure	G#T# = Infraspecific taxa (Subspecies and variety abundances are coded with a 'T' suffix; the 'G'
G5 = Secure	portion of the rank then refers to the entire species)
GH = Historic, possibly extinct	GNR = Unranked
GX = Presumed extinct	GNA = Not applicable

SRANK: Estimate of element abundance in Kentucky:

S1 = Critically imperiled	SU = Unrankable	Migratory species may have separate ranks for different
S2 = Imperiled	S#? = Inexact rank (e.g. G2?)	population segments (e.g. S1B, S2N, S4M):
S3 = Vulnerable	S#Q = Questionable taxonomy	S#B = Rank of breeding population
S4 = Apparently secure	S#T# = Infraspecific taxa	S#N = Rank of non-breeding population
S5 = Secure	SNR = Unranked	S#M = Rank of transient population
SH = Historic, possibly extirpated	SNA = Not applicable	
SX = Presumed extirpated		

COUNT DATA FIELDS

OF OCCURRENCES: Number of occurrences of a particular element from a county. Column headings are as follows:

E - currently reported from the county

H - reported from the county but not seen for at least 20 years

F - reported from county & cannot be relocated but for which further inventory is needed

X - known to have extirpated from the county

U - reported from a county but cannot be mapped to a quadrangle or exact location.

The data from which the county report is generated is continually updated. The date on which the report was created is in the report footer. Contact KSNPC for a current copy of the report.

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new species of plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

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Kentucky State Nature Preserves Commission 801 Schenkel Lane Frankfort, KY 40601 (502) 573-2886 (phone) (502) 573-2355 (fax) email: naturepreserves@ky.gov internet: www.naturepreserves.ky.gov

Kentucky State Nature Preserves Commission						# of	Occu	rrenc	es	
County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	Е	Н	F	X	U
Fayette	Vascular Plants	Elymus svensonii	Svenson's Wildrye	S / SOMC	G3 / S3	1	0	0	0	0
Fayette	Vascular Plants	Juglans cinerea	White Walnut	S / SOMC	G3G4 / S3	0	1	0	0	0
Fayette	Vascular Plants	Lesquerella globosa	Globe Bladderpod	E / C	G2 / S1	0	2	1	2	0
Fayette	Vascular Plants	Lonicera prolifera	Grape Honeysuckle	Е /	G5 / S1	0	1	0	0	0
Fayette	Vascular Plants	Malvastrum hispidum	Hispid Falsemallow	Τ/	G3G5 / S2?	2	1	0	0	0
Fayette	Vascular Plants	Oenothera triloba	Stemless Evening-primrose	Τ/	G4 / S1S2	0	1	0	0	0
Fayette	Vascular Plants	Onosmodium hispidissimum	Hairy False Gromwell	Е /	G4G5T4 / S1	1	1	0	0	0
Fayette	Vascular Plants	Prenanthes crepidinea	Nodding Rattlesnake-root	Τ/	G4 / S2	1	0	0	0	0
Fayette	Vascular Plants	Sagina fontinalis	Water Stitchwort	Τ/	G3 / S2	1	0	0	1	0
Fayette	Vascular Plants	Salix amygdaloides	Peach-leaved Willow	Η/	G5 / SH	0	1	0	0	0
Fayette	Vascular Plants	Schizachne purpurascens	Purple Oat	Τ/	G5 / S2	1	0	0	0	0
Fayette	Vascular Plants	Trifolium reflexum	Buffalo Clover	Е /	G3G4 / S1S2	0	1	0	0	0
Fayette	Vascular Plants	Trifolium stoloniferum	Running Buffalo Clover	T / LE	G3 / S2S3	3	1	0	4	0
Fayette	Vascular Plants	Viburnum molle	Softleaf Arrowwood	Τ/	G5 / S3?	1	0	0	0	0
Fayette	Vascular Plants	Viburnum rafinesquianum var. rafinesquianum	Downy Arrowwood	Τ/	G5T4T5 / S2	1	1	0	0	0
Fayette	Vascular Plants	Viola walteri	Walter's Violet	Τ /	G4G5 / S2	1	0	0	0	0
Fayette	Insects	Nehalennia irene	Sedge Sprite	Е /	G5 / S1	0	1	0	0	0
Fayette	Insects	Nicrophorus americanus	American Burying Beetle	H/LE	G2G3 / SH	0	1	0	0	0
Fayette	Insects	Pseudanophthalmus horni	Garman's Cave Beetle	S / SOMC	G3 / S2S3	1	2	2	0	0
Fayette	Insects	Satyrium favonius ontario	Northern Hairstreak	S /	G4T4 / S2	0	1	0	0	0
Fayette	Amphibians	Rana pipiens	Northern Leopard Frog	S /	G5 / S3	0	4	0	1	0
Fayette	Breeding Birds	Ammodramus henslowii	Henslow's Sparrow	S / SOMC	G4 / S3B	1	0	0	0	0
Fayette	Breeding Birds	Chondestes grammacus	Lark Sparrow	Τ/	G5 / S2S3B	1	0	0	0	0
Fayette	Breeding Birds	Cistothorus platensis	Sedge Wren	S /	G5 / S3B	0	1	0	0	0
Fayette	Breeding Birds	Dolichonyx oryzivorus	Bobolink	S /	G5 / S2S3B	1	0	0	0	0
Fayette	Breeding Birds	Nyctanassa violacea	Yellow-crowned Night-heron	Τ/	G5 / S2B	1	2	0	0	0
Fayette	Breeding Birds	Passerculus sandwichensis	Savannah Sparrow	S /	G5 / S2S3B,S2S3	3	0	0	0	0

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky	
Kentucky State Nature Preserves Commission	

Ν

#						# of (# of Occurrences				
County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	Е	Н	F	Х	U	
Fayette	Breeding Birds	Riparia riparia	Bank Swallow	S /	G5 / S3B	1	0	0	0	0	
Fayette	Breeding Birds	Tyto alba	Barn Owl	S /	G5 / S3	1	1	0	0	0	
Fayette	Mammals	Mustela nivalis	Least Weasel	S /	G5 / S2S3	1	0	0	0	0	
Fayette Fayette Cour	Mammals nty Total:	Myotis sodalis	Indiana Bat	E / LE	G2 / S1S2	0 24	1 25	0 3	0 8	0 0	

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky Kentucky State Nature Preserves Commission

Report of

Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities for Jessamine County, Kentucky

Kentucky State Nature Preserves Commission 801 Schenkel Lane Frankfort, KY 40601 (502) 573-2886 (phone) (502) 573-2355 (fax)

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Kentucky State Nature Preserves Commission Key for County List Report

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blank = none C = candidate LT = listed as threatened LE = listed as endangered SOMC = Species of Management Concern

RANKS

GRANK: Estimate of element abundance on a global scale:

	•
G1 = Critically imperiled	GU = Unrankable
G2 = Imperiled	G#? = Inexact rank (e.g. G2?)
G3 = Vulnerable	G#Q = Questionable taxonomy
G4 = Apparently secure	G#T# = Infraspecific taxa (Subspecies and variety abundances are coded with a 'T' suffix; the 'G'
G5 = Secure	portion of the rank then refers to the entire species)
GH = Historic, possibly extinct	GNR = Unranked
GX = Presumed extinct	GNA = Not applicable

SRANK: Estimate of element abundance in Kentucky:

S1 = Critically imperiled	SU = Unrankable	Migratory species may have separate ranks for different
S2 = Imperiled	S#? = Inexact rank (e.g. G2?)	population segments (e.g. S1B, S2N, S4M):
S3 = Vulnerable	S#Q = Questionable taxonomy	S#B = Rank of breeding population
S4 = Apparently secure	S#T# = Infraspecific taxa	S#N = Rank of non-breeding population
S5 = Secure	SNR = Unranked	S#M = Rank of transient population
SH = Historic, possibly extirpated	SNA = Not applicable	
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Remucky State France Freshver Commission						# of Occurrences					
County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	E	Н	F	X	U	
Jessamine	Vascular Plants	Deschampsia cespitosa	Tufted Hairgrass	Е /	G5 / S1S2	2	0	0	0	0	
Jessamine	Vascular Plants	Elymus svensonii	Svenson's Wildrye	S / SOMC	G3 / S3	5	0	0	0	0	
Jessamine	Vascular Plants	Lesquerella globosa	Globe Bladderpod	E / C	G2 / S1	1	3	2	1	0	
Jessamine	Vascular Plants	Malvastrum hispidum	Hispid Falsemallow	Τ/	G3G5 / S2?	0	5	1	0	0	
Jessamine	Vascular Plants	Onosmodium hispidissimum	Hairy False Gromwell	Е /	G4G5T4 / S1	0	1	0	0	0	
Jessamine	Vascular Plants	Paxistima canbyi	Canby's Mountain-lover	T / SOMC	G2 / S2	1	0	0	0	0	
Jessamine	Vascular Plants	Perideridia americana	Eastern Yampah	Τ/	G4 / S2	1	0	1	0	0	
Jessamine	Vascular Plants	Phlox bifida ssp. stellaria	Starry-cleft Phlox	E / SOMC	G5?T3 / S1	5	0	0	0	0	
Jessamine	Vascular Plants	Sagina fontinalis	Water Stitchwort	Τ/	G3 / S2	2	0	1	1	0	
Jessamine	Vascular Plants	Schizachne purpurascens	Purple Oat	Τ/	G5 / S2	5	0	0	0	0	
Jessamine	Vascular Plants	Trifolium stoloniferum	Running Buffalo Clover	T/LE	G3 / S2S3	1	0	0	0	0	
Jessamine	Vascular Plants	Trillium nivale	Snow Trillium	Е /	G4 / S1	2	0	0	0	0	
Jessamine	Vascular Plants	Viburnum molle	Softleaf Arrowwood	Τ/	G5 / S3?	3	1	0	0	0	
Jessamine	Vascular Plants	Viburnum rafinesquianum var. rafinesquianum	Downy Arrowwood	Τ /	G5T4T5 / S2	0	1	0	0	0	
Jessamine	Vascular Plants	Viola septemloba var. egglestonii	Eggleston's Violet	S /	G4 / S3	0	1	0	0	0	
Jessamine	Vascular Plants	Viola walteri	Walter's Violet	Τ /	G4G5 / S2	2	0	0	0	0	
Jessamine	Freshwater Mussels	Fusconaia subrotunda	Longsolid	S /	G3 / S3	1	0	0	0	0	
Jessamine	Freshwater Mussels	Plethobasus cyphyus	Sheepnose	E / C	G3 / S1	1	0	0	0	0	
Jessamine	Insects	Callophrys irus	Frosted Elfin	Τ/	G3 / S1	0	1	0	0	0	
Jessamine	Insects	Pseudanophthalmus abditus	Concealed Cave Beetle	Τ/	G3T3 / S2	0	0	1	0	0	
Jessamine	Insects	Pseudanophthalmus solivagus	A Cave Obligate Beetle	S /	G1G2 / S1S2	0	1	0	0	0	
Jessamine	Amphibians	Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender	S / SOMC	G3G4T3T4 / S3	0	1	0	0	0	
Jessamine	Amphibians	Rana pipiens	Northern Leopard Frog	S /	G5 / S3	0	3	0	1	0	
Jessamine	Breeding Birds	Accipiter striatus	Sharp-shinned Hawk	S /	G5 / S3B,S4N	1	0	0	0	0	
Jessamine	Breeding Birds	Ammodramus henslowii	Henslow's Sparrow	S / SOMC	G4 / S3B	2	0	0	0	0	
Jessamine	Breeding Birds	Anas discors	Blue-winged Teal	Τ/	G5 / S1S2B	1	0	0	0	0	
Jessamine	Breeding Birds	Chondestes grammacus	Lark Sparrow	Τ /	G5 / S2S3B	0	2	0	0	0	

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky Kentucky State Nature Preserves Commission

Data current as of June 2007

Kentucky State Nature Preserves Commission							Occur	rence	es		
County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	Ε	Н	F	X	U	
Jessamine	Breeding Birds	Dolichonyx oryzivorus	Bobolink	S /	G5 / S2S3B	2	0	0	0	0	
Jessamine	Breeding Birds	Tyto alba	Barn Owl	S /	G5 / S3	2	0	0	0	0	
Jessamine	Mammals	Myotis grisescens	Gray Myotis	T / LE	G3 / S2	5	0	0	1	0	
Jessamine	Mammals	Myotis leibii	Eastern Small-footed Myotis	T / SOMC	G3 / S2	1	0	0	0	0	
Jessamine	Mammals	Myotis sodalis	Indiana Bat	E/LE	G2 / S1S2	0	1	0	0	0	
Jessamine	Communities	Calcareous sub-xeric forest		/	GNR / S5	2	0	0	0	0	
Jessamine C	Jessamine County Total: 48 21 6 4 0										

Report of

Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities for Madison County, Kentucky

Kentucky State Nature Preserves Commission 801 Schenkel Lane Frankfort, KY 40601 (502) 573-2886 (phone) (502) 573-2355 (fax)

www.naturepreserves.ky.gov

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G4 = Apparently secure	G#T# = Infraspecific taxa (Subspecies and variety abundances are coded with a 'T' suffix; the 'G'
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GX = Presumed extinct	GNA = Not applicable

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U - reported from a county but cannot be mapped to a quadrangle or exact location.

The data from which the county report is generated is continually updated. The date on which the report was created is in the report footer. Contact KSNPC for a current copy of the report.

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new species of plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

KSNPC appreciates the submission of any endangered species data for Kentucky from field observations. For information on data reporting or other data services provided by KSNPC, please contact the Data Manager at:

Kentucky State Nature Preserves Commission 801 Schenkel Lane Frankfort, KY 40601 (502) 573-2886 (phone) (502) 573-2355 (fax) email: naturepreserves@ky.gov internet: www.naturepreserves.ky.gov

Kentucky L	state Mature Treserves Co				# of	Occu	rrenc	es		
County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	Ε	Н	F	Х	U
Madison	Vascular Plants	Bolboschoenus fluviatilis	River Bulrush	Е /	G5 / S1S2	0	0	0	1	0
Madison	Vascular Plants	Bouteloua curtipendula	Side-oats Grama	S /	G5 / S3?	1	0	0	0	0
Madison	Vascular Plants	Carex hystericina	Porcupine Sedge	Η/	G5 / SH	0	1	0	0	0
Madison	Vascular Plants	Castanea pumila	Allegheny Chinkapin	Τ/	G5 / S2	1	0	0	0	0
Madison	Vascular Plants	Dodecatheon frenchii	French's Shooting Star	S /	G3 / S3	0	0	1	0	0
Madison	Vascular Plants	Dryopteris carthusiana	Spinulose Wood Fern	S /	G5 / S3	0	0	1	0	0
Madison	Vascular Plants	Elodea nuttallii	Western Waterweed	Τ/	G5 / S2?	1	0	0	0	0
Madison	Vascular Plants	Gentiana flavida	Yellow Gentian	E /	G4 / S1S2	1	0	0	0	0
Madison	Vascular Plants	Heteranthera limosa	Blue Mud-plantain	S /	G5 / S2S3	0	0	0	1	0
Madison	Vascular Plants	Juglans cinerea	White Walnut	S / SOMC	G3G4 / S3	0	1	0	0	0
Madison	Vascular Plants	Lesquerella globosa	Globe Bladderpod	E / C	G2 / S1	0	1	1	0	0
Madison	Vascular Plants	Malvastrum hispidum	Hispid Falsemallow	Τ/	G3G5 / S2?	1	0	0	0	0
Madison	Vascular Plants	Oenothera triloba	Stemless Evening-primrose	Τ/	G4 / S1S2	0	1	0	0	0
Madison	Vascular Plants	Paxistima canbyi	Canby's Mountain-lover	T / SOMC	G2 / S2	1	0	0	0	0
Madison	Vascular Plants	Ranunculus ambigens	Waterplantain Spearwort	S /	G4 / S3	0	0	0	1	0
Madison	Vascular Plants	Salix amygdaloides	Peach-leaved Willow	Η/	G5 / SH	0	2	0	0	0
Madison	Vascular Plants	Spiranthes magnicamporum	Great Plains Ladies'-tresses	Τ/	G4 / S2	1	0	0	0	0
Madison	Vascular Plants	Symphoricarpos albus	Snowberry	Е /	G5 / S1	1	0	0	0	0
Madison	Vascular Plants	Trifolium stoloniferum	Running Buffalo Clover	T / LE	G3 / S2S3	26	0	2	15	0
Madison	Vascular Plants	Viburnum molle	Softleaf Arrowwood	Τ/	G5 / S3?	1	0	0	0	0
Madison	Vascular Plants	Viburnum rafinesquianum var. rafinesquianum	Downy Arrowwood	Τ/	G5T4T5 / S2	1	1	0	0	0
Madison	Vascular Plants	Vitis labrusca	Northern Fox Grape	S /	G5 / S2S3	0	1	0	0	0
Madison	Insects	Pseudanophthalmus catoryctos	Lesser Adams Cave Beetle	Е /	G1 / S1	1	0	0	0	0
Madison	Insects	Pseudanophthalmus pholeter	Greater Adams Cave Beetle	Е /	G1 / S1	1	0	0	0	0
Madison	Amphibians	Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender	S / SOMC	G3G4T3T4 / S3	0	1	0	0	0
Madison	Amphibians	Rana pipiens	Northern Leopard Frog	S /	G5 / S3	4	1	0	0	0
Madison	Reptiles	Eumeces anthracinus	Coal Skink	Τ/	G5 / S2	1	0	0	0	0

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky Kentucky State Nature Preserves Commission

Data current as of June 2007

Rentucky 5				# of	Occui	renc	es			
County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	Е	Н	F	Х	U
Madison	Breeding Birds	Aimophila aestivalis	Bachman's Sparrow	E / SOMC	G3 / S1B	0	0	0	2	0
Madison	Breeding Birds	Ammodramus henslowii	Henslow's Sparrow	S / SOMC	G4 / S3B	1	0	0	0	0
Madison	Breeding Birds	Chondestes grammacus	Lark Sparrow	Τ/	G5 / S2S3B	0	1	0	0	0
Madison	Breeding Birds	Thryomanes bewickii	Bewick's Wren	S / SOMC	G5 / S3B	1	0	0	0	0
Madison	Breeding Birds	Tyto alba	Barn Owl	S /	G5 / S3	3	0	0	0	0
Madison	Mammals	Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	S / SOMC	G3G4 / S3	1	0	0	0	0
Madison	Mammals	Mustela nivalis	Least Weasel	S /	G5 / S2S3	3	0	0	0	0
Madison	Mammals	Myotis grisescens	Gray Myotis	T/LE	G3 / S2	0	0	0	1	0
Madison	Mammals	Ursus americanus	American Black Bear	S /	G5 / S2	1	0	0	0	0
Madison	Communities	Appalachian mesophytic forest		/	GNR / S5	2	0	0	0	0
Madison	Communities	Bluegrass mesophytic cane forest		/	GNR / S2	1	0	0	0	0
Madison	Communities	Calcareous mesophytic forest		/	GNR / S5	1	0	0	0	0
Madison	Communities	Limestone prairie		/	GNR / S1					
Madison C	County Total:					57	11	5	21	0

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky Kentucky State Nature Preserves Commission



2526 Regency Road, Suite 180 Lexington, Kentucky 40503

www.thirdrockconsultants.com

Ph: 859-977-2000 Fax: 859-977-2001

APPENDIX D:

AGENCY CORRESPONDENCE

ORGANIZATION CONTACT LIST US 27 TO I-75 CONNECTOR CORRIDOR SCOPING STUDY ITEM NO. 7-249

First Name	Last Name	Title	Organization	City	State
James A.	Anderson	President	American Association of Truckers	Benton	KY
Donald C.	Storm	Adjutant General	Department of Military Affairs	Frankfort	KY
John	Kington	Deputy Commissioner	Department of Parks	Frankfort	KY
George	Crothere	Director, Office of State Archaeology	University of Kentucky Dent of Anthropology		KV
George	Ciouriers	Director, Onice of State Archaeology	Endered Emergence Management Amergence Design IV	Atlanta	
william	Straw	Regional Environmental Officer	Federal Emergency Management Agency, Region IV	Atlanta	GA
Jack	FISN		Kentuckians for Better Transportation	Louisville	K I
Burt	Lauderdale	Executive Director	Kentuckians for The Commonwealth	London	KY
Mark	Birdwhistell	Secretary	Cabinet for Health and Family Services	Frankfort	KY
John	Houlihan		Kentucky Airport Zoning Commission	Frankfort	KY
Bob	Arnold	Executive Director	Kentucky Association of Counties	Frankfort	KY
Dave	Adkisson	President	Kentucky Chamber of Commerce Executives, Inc.	Frankfort	KY
Richie	Farmer	Commissioner	Kentucky Department of Agriculture	Frankfort	KY
Cheryl A.	Taylor	Commissioner	Kentucky Department for Environmental Protection	Frankfort	KY
Jonathan	Gassett	Commissioner	Kentucky Department of Fish and Wildlife Resources	Frankfort	KY
Susan	Bush	Commissioner	Kentucky Department of Nat'l Resources	Frankfort	KY
Stephen A	Coleman	Director	Kentucky Department of Nat'l Resources Division of Conservation	Frankfort	KY
John	Adama	Commissioner	Kentucky Department of Nati. Resources, Division of Conservation	Frankfort	
Doul	Rudins	Director		Fidikiult	
Charan	Fielde		Vision of Mine Reclamation and Enforcement	Frankion	N I
Sharon	Fields	Executive Director	Kentucky Disabilities Coalition	Frankfort	K Y
Jonn	Lyons	Director	Kentucky Division of Air Quality	Frankfort	KY
Leah W.	MacSwords	Director	Kentucky Division of Forestry	Frankfort	KY
Greg	Howard	Commissioner	Kentucky Department of Vehicle Enforcement	Frankfort	KY
R. Bruce	Scott	Director	Kentucky Division of Waste Management	Frankfort	KY
David	Morgan	Director	Kentucky Division of Water	Frankfort	KY
John	Hindman	Secretary	Kentucky Cabinet for Economic Development	Frankfort	KY
John	Bird	Executive Director	Kentucky Forward	Frankfort	KY
Jim	Cobb	State Geologist & Director	University of Kentucky Geological Survey	Lexinaton	KY
Donna M.	Nearv	Executive Director	Kentucky Heritage Council	Frankfort	KY
Kent	Whitworth	Director	Kentucky Historical Society	Frankfort	KY
Miko	Manceot	President/CEO	Kentucky Association of Economic Development	Frankfort	κγ
Sylvia I	Lovely		Kentucky Association of Collonnic Development		KV.
Jornia L.	Lovely		Kontuoky Ledgue Ul Oliles, IIU.	Frankfart	
Jamie	нрке	President/CEO	Kentucky Motor Transport Association	Frankfort	KY
Teresa J.	Hill	Secretary	Kentucky Environmental and Public Protection Cabinet	Frankfort	KY
Donald S.	Dott	Executive Director	Kentucky Nature Preserves	Frankfort	KY
Vickie	Bourne	Executive Director	Kentucky Office of Transportation Delivery	Frankfort	KY
Beecher	Hudson	Executive Director	Kentucky Public Transit Association	Louisville	KY
Marcheta	Sparrow	President	Kentucky Tourism Council	Frankfort	KY
George	Ward	Secretary	Kentucky Commerce Cabinet	Frankfort	KY
Allan	Frank	Director	KYTC, Division of Structural Design	Frankfort	KY
Greta	Smith	Director	KYTC, Division of Construction	Frankfort	KY
David	Waldner	Director	KYTC. Division of Environmental Analysis	Frankfort	KY
Bill	Broyles	Branch Manager	KYTC, Geotech Branch	Frankfort	KY
Duene	Thomas	Diractor	KYTC, Division of Troffic Operations	Frankfort	
Duarie	Marian	Director		Frankion	N I
TOM	Napier	Branch Manager	KYTC, Permits Branch	Frankfort	K Y
liffani	Jackson	Bike - Ped Coordinator	KYTC, Office of Special Programs	Frankfort	KY
Laura	Owens	Secretary	Kentucky Education Cabinet	Frankfort	KY
James	Aldridge	Director	Nature Conservancy - Kentucky Chapter	Lexington	KY
Keith P.	Eiken	Executive Director	Scenic Kentucky	Louisville	KY
William	Arguto	NEPA Team Leader	Environmental Programs Branch	Philadelphia	PA
Ray	Barry	Chapter Chair	Sierra Club	Lexington	KY
Kenneth A.	Westlake	Chief	National Envronmental Policy Act Implementation Section	Chicago	IL
Heinz	Mueller	Attorney	U. S. Environmental Protection Agency, Region 4 Office	Atlanta	GA
Michael D.	Hubbs	State Conservationist	U.S. Dept. of Agriculture, Natural Resources Conservation Service	Lexington	KY
			U.S. Dept. of Health & Human Serv. Center for Disease Control		
Kenneth W	Holt		Emergency And Environmental Health Services Division	Atlanta	GA
	Andrews	Field Supervisor	LIS Dent of the Interior Fish and Wildlife Services	Frankfort	KY
Deger	Wiekust	Pridae Administrates	United States Coast Guard, Prides Press		MO
Roger	vviebusch		onneu States Coast Guard, bhuge Branch	St. LOUIS	
JITT	Burining			vvasnington	
IVIItCh	IVICConnell	United States Senator		vvashington	DC
Thomas M.	Hunter	Executive Director	Appalachian Regional Commission	Washington	DC
William	Howard	Executive Director	Kentucky Association of Riverports, Henderson County Riverport	Henderson	KY
Raymond E.	Midkiff	District Engineer	U. S. Army Corps of Engineers, Louisville District	Louisville	KY
Ben	Chandler	United States Representative - District 6		Washington	DC
			U.S. Department of Housing & Urban Development, Ky. Louisville Field		1
Krista	Mills	Field Office Director	Office	Louisville	KY
Buddv	Yount	Kentucky Division Administrator	Federal Motor Carrier Safety Administration	Frankfort	KY
Bill	Lally	Executive Director	Kentucky Household Goods Carrier Association Inc.	Louisville	KY
Tony	Reck	President & CEO_P& Railway Inc	Kentucky State Bail Association	Paducah	KY
Linda Strita	Murpapa	Executive Director	Kentucky Commission on Human Pichte		KV
	Korr	State Senator 12th District			KV.
Fine Fulgy	Coortest	State Senator 12th Distlict			
EINESTO	Scorsone	State Senator 13th District		Lexington	ικ.Υ
Ed	vvorley	State Senator 34th District		Richmond	KY
Tom	Buford	State Senator 22nd District		Nicholasville	KY
Lonnie	Napier	State Representative 36th District		Lancaster	KY
Don	Pasley	State Representative 73rd District		Winchester	KY
Harry	Moberly Jr.	State Representative 81st District		Richmond	KY
Stan	Lee	State Representative 45th District		Lexington	KY
Susan	Westrom	State Representative 79th District		Lexington	KY
Bill	Farmer	State Representative 88th District		Lexington	KY
Robert R	Damron	State Representative 39th District		Nicholasvilla	KΥ
William Neel	Cassity	lessamine County Judge Executivo		Nicholaevillo	KY
VVIIIaIII NEal	Clark	Medicen County Judge Executive		Dichmort	
rtent	Clark	Initialison County Judge Executive		Richmond	IN I
Sandra M.	varellas	Fayette County Judge Executive		Lexington	ĸΥ

Jim	Newberry	Lexington Mayor		Lexington	KY
Connie	Lawson	Richmond Mayor		Richmond	KY
Russell	Meyer	Nicholasville Mayor		Nicholasville	KY
Harold L.	Rainwater	Wilmore Mayor		Wilmore	KY
Steven	Connelly	Berea Mayor		Berea	KY
Don	Blevins	Fayette County Clerk		Lexington	KY
Marwan	Rayan	Director, Division of Engineering	Lexington Fayette Urban County Government	Lexington	KY
Anthony	Beatty	Chief, Division of Police	Lexington Fayette Urban County Government	Lexington	KY
Robert	Hendricks	Chief, Division of Fire & Emergency Services	Lexington Fayette Urban County Government	Lexington	KY
Stu	Silberman	School Board Superintendent		Lexington	KY
William E.	Gabbard	Madison County Clerk		Richmond	KY
Lee Roy	Brock	Madison County Road Supervisor		Richmond	KY
Raymond E.	Parke	Police Chief		Richmond	KY
Karleen K.	Wortham	Richmond Clerk		Richmond	KY
Gerald	Tatum	Richmond Fire Chief		Richmond	KY
Wanda	Singleton	Richmond Police Chief		Richmond	KY
B. Michael	Caudill	School Board Superintendent		Richmond	KY
Lu S.	Young	School Board Superintendent		Nicholasville	KY
Eva L.	McDaniel	Jessamine County Clerk		Nicholasville	KY
Coleman	Tudor	Jessamine County Road Supervisor		Nicholasville	KY
Wendell	Hatfield	Jessamine County EMS Chief		Nicholasville	KY
Mike	Rupard	Fire Chief		Nicholasville	KY
Roberta	Warren	Nicholasville Clerk		Nicholasville	KY
Barry	Waldrop	Police Chief		Nicholasville	KY
Charles E.	Brumfield	Fire Chief		Nicholasville	KY
Colleen	Brandenburg	Wilmore Clerk		Wilmore	KY
Stephen R.	Boven	Police Chief		Wilmore	KY
Jeff	Anderson	Fire Chief		Wilmore	KY
Randy	Stone	Berea Clerk		Berea	KY
Dwayne	Brumley	Police Chief		Berea	KY
David	Benge	President	Richmond Chamber of Commerce	Richmond	KY
Greg	Powell	President	Berea Chamber of Commerce	Berea	KY
Gina	Greathouse	Senior Vice President	Commerce Lexington	Lexington	KY
Bob	Quick	President / CEO	Commerce Lexington	Lexington	KY
James	Howard	Exec. Director	Richmond Industrial Development Corporation	Richmond	KY
Wayne	Foster	President	Jessamine County Economic Development Authority	Nichlasville	KY
Alecia-Webb	Edgington	Director	Kentucky Office of Homeland Security	Frankfort	KY
Randy	Rigsby	Fire Chief		Berea	KY
		Planning Staff Officer	U.S. Dept. of Agriculture, Forest Service, Daniel Boone Nat'l Forest	Winchester	KY

DATE

«Mailing_Title» «First_Name» «Last_Name»«Suffix» «Title» «Organization» «Address1» «Address2» «City» «State» «Zip»

Dear «Letter_Title» «Last_Name»:

Subject: Corridor Scoping Study Fayette, Jessamine and Madison Counties US 27 to I-75 Connector Item No. 7-249.00

We are requesting your agency's input and comments on a planning study to determine the need, feasibility and impacts of a proposed highway connector from US to 27 to I-75 in the above mentioned counties. The Kentucky Transportation Cabinet (KYTC) has assembled a study team to evaluate the proposed connector which would potentially bring relief from congestion, add to regional and local connectivity and provide improvements for economic development and mobility. The study is currently in the initial data-gathering stage.

We ask that you identify specific issues or concerns of your agency that could affect the potential development of the project. This planning study will include a scoping process for the early identification of potential alternatives (in this case a highway corridor 1,000 to 2,000 foot wide), environmental issues, and impacts related to the proposed project. We believe that early identification of issues or concerns can help us develop highway project alternatives to avoid or minimize negative impacts.

We respectfully ask that you provide us with your comments by November 30, 2007, to ensure timely progress in this planning effort.

During the development of this planning study, comments will be solicited from federal, state, and local agencies, as well as other interested persons and the general public, in accordance with principles set forth in the National Environmental Policy Act (NEPA) of 1969. The Federal Highway Administration is partnering with us in these efforts.

«Mailing_Title» «First_Name» «Last_Name» «Suffix» Page 2 January 29, 2008

Other Transportation Cabinet offices or consultants working on behalf of the Transportation Cabinet may also contact you seeking more detailed data or information to assist them in completing their environmental studies for this phase of the project.

We have enclosed the following project information for your review and comment:

- Project Study Area Map
- Project Frequently Asked Questions (FAQs)

We appreciate any input you can provide concerning this project. Please direct any comments, questions, or requests for additional information to Stuart Goodpaster, Project Manager in the KYTC District 7 Office in Lexington at 859-246-2355 or at <u>Stuart.Goodpaster@ky.gov</u>. Please address all written correspondence to Mr. Stuart Goodpaster, PE, 763 West New Circle Road - Building #2, Lexington, Kentucky 40512-1127.

Sincerely,

Stuart Goodpaster, P.E. Project Manager District 7 Planning

SG/SPD

Enclosures

c: FHWA

Consultant CO Planning Environmental Analysis Highway Design

Goodpaster, Stuart (KYTC-D07)

From:		· ·		Goodpaster, Stuart (KYTC-D07)
Sent:				Thursday, January 10, 2008 11:30 AM
To:				Wilkins, Joe N MR NGKY
Subject:		<i>.</i>	· .	RE: Planning Study, US 27 to Interstate I-75 Connector, Fayette, Jessamine and Madison
-	•	,		Counties

Thank you for you response.

STUART

-----Original Message-----From: Wilkins, Joe N MR NGKY [mailto:joe.wilkins@us.army.mil] Sent: Thursday, January 10, 2008 10:56 AM To: Goodpaster, Stuart (KYTC-D07) Cc: Berthold, Julius L BG(R) NGKY Subject: Planning Study, US 27 to Interstate I-75 Connector, Fayette, Jessamine and Madison Counties

Mr. Goodpaster,

The Department of Military Affairs can not identify any issues or concerns that affect the development of subject project.

1

Joe N. Wilkins Director, Facilities Division Boone National Guard Center Frankfort, KY 40601-6168 502-607-1535 DSN 667-1535 502-382-7270 (Cell) 502-607-1270 (Fax) Joe.Wilkins@ky.ngb.army.mil

Goodpaster, Stuart (KYTC-D07)

From:Houlihan, John (KYTC)Sent:Monday, January 07, 2008 3:04 PMTo:Goodpaster, Stuart (KYTC-D07)Subject:Project Item No. 7-249.00 US 127 to I-75 Connector

Stuart,

Below is our jurisdiction within the state, I believe the only thing that you all might have is construction cranes that may exceed 200 feet in height above ground level. If anything structure temporary or permanent exceeds any of the below sections you will have to have a permit from the State and the FAA.

Section 1. The commission has zoning jurisdiction over that airspace over and around the public use and military airports within the Commonwealth which lies above the imaginary surface that extends outward and upward at one (1) of the following slopes:

(1) 100 to one (1) for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each public use and military airport with at least one (1) runway 3,200 feet or more in length; or

(2) Fifty (50) to one (1) for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each public use and military airport with its longest runway less than 3,200 feet in actual length.

Section 2. The commission has zoning jurisdiction over the use of land and structures within public use airports within the state.

Section 3. The commission has jurisdiction from the ground upward within the limits of the primary and approach surfaces of each public use and military airport as depicted on Airport Zoning Maps approved by the Kentucky Airport Zoning Commission.

Section 4. The commission has jurisdiction over the airspace of the Commonwealth that exceeds 200 feet in height above ground level.

If you have any questions, let me know.

Kentucky Airport Zoning Commission John Houlihan, Administrator 200 Mero Street Frankfort KY 40622 502.564.9900 Ext. 3854 Fax 502.564.7953 Cell 502.330.3955 www.transportation.ky.gov/aviation/kyzoning.htm

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USDA

Forest Service Daniel Boone National Forest 1700 Bypass Road Winchester, KY 40391 859-745-3100

File Code: 1950-4 Date: DEC **2 1** 2007

Mr. Stuart Goodpaster PE, District 7 Kentucky Transportation Cabinet P.O. Box 11127 Lexington, KY 40512-1127

RECEIVED

JAN - 2 2008

RICT SEVEN XINGTON

Dear Mr. Goodpaster:

Thank you for the opportunity to provide input on projects coming from the Transportation Cabinet. The Study Area is approximately 40 to 60 miles west to northwest of, and outside of the proclamation boundary for the Daniel Boone National Forest. Activities designed to improve transportation in this area are not likely to cause direct impacts to resources or programs on National Forest System lands. However, as much of the area being studied is rural, I encourage you to include wildlife-friendly passage needs as part of the study because ecological integrity occurs at a landscape scale.

Sincerely,

m

JEROME E. PEREZ Forest Supervisor



JUSTICE AND PUBLIC SAFETY CABINET

Steven L. Beshear Governor

Kentucky Vehicle Enforcement Frankfort, Kentucky 40601 J. Michael Brown Secretary

Gregory G. Howard Commissioner

January 7, 2008

Mr. Stuart Goodpaster, PE District 7 PO Box 11127 Lexington, KY 40512-1127

Dear Mr. Goodpaster:

We are in receipt of your letter requesting any input that Kentucky Vehicle Enforcement might have in regards to a corridor scoping study, Fayette, Jessamine, and Madison Counties, US 27 to Interstate I-75 connector, project item no. 7-249.00.

After having my staff research the matter, we do not see any concerns as it relates to our agency. Also, enclosed is the survey that you have asked us to complete and return.

If you need any further information, please do not hesitate to let us know.

Sincerely.

Gregory G. Howard Commissioner Department of Kentucky Vehicle Enforcement

Enclosure

RECEIVED

JAN 11 2008

DEPARTMENT OF HIGHWAYS DISTRICT SEVEN LEXINGTON





US 27 TO I-75 CORRIDOR SCOPING STUDY Public Comment Form



The Kentucky Transportation Cabinet (KYTC) has initiated a study designed to evaluate the need for, and possible location of, a new highway connecting US 27 and I-75 in Jessamine, Fayette, and/or Madison Counties. The study area under consideration is shown below. As part of the study, the KYTC would like your assistance in identifying issues you think should be considered in the study as well as potential corridors to be evaluated. The KYTC would prefer comments in writing so they can be given full consideration in the decision-making process.

All comments are welcome! We appreciate your participation!



Contact Information:
Name: Comm. Gres Howako
Date: January 1, 2008
Address: 125 Holmes Street
3th Floor, Frankford, Ky 40601
Phone: (optional) SOLISUY - 3276
E-Mail: (optional)

THE OBJECTIVE OF THIS FORM IS TO LEARN YOUR VIEWS ON THE ISSUES AND ALTERNATIVES YOU THINK SHOULD BE CONSIDERED BY THIS STUDY. EACH FORM WILL BE READ AND TABULATED BY THE PROJECT TEAM.

1. How important to you are the following highway issues for this study? (circle the appropriate number)

			SCORE		
ISSUE	NOT IMPORTA	NT	IMPORTANT	IMF	VERY PORTANT
Connectivity between US 27 and I-75	1	2	3	4	5
Evacuation Routes for Homeland Security	1	2	3	4	5
Vehicle Safety	1	2	3	4	6
Pedestrian and Bicycle Safety	1	2	3	4	5
Consistent Travel Times	\bigcirc	2	3	4	5
Improved Access for Truck Traffic	1	2	3	4	Ø
Recreational Traffic	1	2	3	4	Ø
Business and Industrial Property Access	1	2	3	4	5
Residential Property Access	1	2	3	❹	5
Community Facility and School Access	1.	2	3	Ô	5
Construction Cost and Phasing	1	2	3	4	5
Other:	1	2	Ø	4	5

2. Please discuss any other <u>highway related issues</u> you would like to have considered in this study.

number of crashes plong 4527

3. How important to you are the following community and environmental issues for this study? (circle the appropriate number)

	SCORE						
ISSUE	NOT IMPORTAN	IT	IMPORTANT	IMP	VERY PORTANT		
Kentucky River Crossing(s)	1	2	3	Ø	5		
Supporting Current Businesses	1	2	3	Ð	5		
New Business Development	1	2	3	Ø	5		
Community Character	1	2	3	4	5		
Property Impacts	1	2	Ø	4	5		
Business Impacts	1	2	3	4	5		
Farmland Impacts	· 1	2	3	4	5		
Low Income, Senior or Minority Populations	1	2	ß	4	5		
Historic Preservation	1	2	ß	′4	5		
Environmental Issues	1	2	යි	4	5		
Other:	1	2		4.	5		
			70				

4. Please list any environmental or community features in the study area which we should be aware of and/or have not identified.

5. Please discuss any other issues you would like to have considered in this study.

6. In your opinion, is a new highway needed to connect US 27 to I-75? (check one)

_____YES _____ NO

7. Why?

<u># i+</u>	appears	there	. 15 e 1	nced for	ra Cor	incetion	between
45274	<u>T-15.</u>	#2:+	would	Should	veliene	Some of	t the
tratfic	conject	m on	45 27	. .		-	

8. If you think a new highway is needed, what are the MOST IMPORTANT goals for the **new highway?** (check all that apply)

	Improve Safety Improve Traffic Flow Improve Highways for Trucks Other:		Economic Develo Improve Access Enhance System Connections	pment Efficiency and
9. Please p It is a high Some good	volume Any of the consest thing.	nents y tratf deve	ou have regardi ic on les <u>lopment</u> should	ng the study. S27 is of to alleviate be a

Please return the completed form to a Project Team Representative or mail it in the provided postage paid envelope to:

> Stuart Goodpaster, P.E. Kentucky Transportation Cabinet District 7 763 West New Circle Road – Building #2 Lexington, KY 40512 Fax: (859) 246-2354





RECEIVED



JAN 16 2008

Kentucky Geological Survey

Research 228 Mining & Mineral Resources Bldg. Lexington, KY 40506-0107 Phone: (859) 257-5500 Fax: (859) 257-1147 www.uky.edu/kgs

January 10, 2008

Stuart Goodpaster, P.E. Planning Branch Manager Kentucky Transportation Cabinet District 7 - Lexington P.O. Box 11127 Lexington, KY 40512-1127

Dear Mr. Goodpaster:

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

Fayette, Jessamine, and Madison Counties U.S. 27 to Interstate I-75 Connector Project Item No. 7-249.00

Physiographic Region

This study area is in the Bluegrass physiographic region, which is underlain by bedrock consisting of limestone, dolomite, siltstone, shaly limestone, shaly dolomite, shaly siltstone, mudstone, shale, silt, clay, sand, and gravel.

7.5-Minute U.S. Geological Survey Topographic and Geologic Quadrangle Maps

The study area is located in the Keene, Wilmore, Nicholasville, Little Hickman, Buckeye, Coletown, Valley View, Kirksville, Clintonville, Ford, Richmond North, and Richmond South quadrangles.

Land-Use Planning Map

For a good geologic (with physical parameters) overview of the area, refer to the county land-use planning map at www.uky.edu/KGS.

On the home page, click on GIS and Maps.

On this page, click on County Land-Use Planning Maps.

On this page, click on the county of interest on the index map. A viewable and downloadable PDF of the land-use county map will be displayed.

Karst Potential

The study area would encounter karst features such as sinkholes and caves. Sinkholes are more pronounced along breaks such as faults and joints.



Landslide Potential

The study area would encounter shaly units that are highly susceptible to slumping when they become wet.

Unconsolidated Sediments

The study area would encounter unconsolidated sediments in drainage areas, and terrace deposits on hilltops along the Kentucky River.

Resource Conflicts

The study area should not encounter any resource conflicts such as prior ownership of property for quarrying or mining.

Materials Suitability

The study area would encounter rock units that would be suitable as construction stone.

Engineering Characteristics of Rock Units

For discussion of characteristics of rock units related to engineering problems for parts of the study area, refer to:

Black, D. B. F., 1967, Geologic map of the Coleman quadrangle, east-central Kentucky: U.S. Geological Survey Geologic Quadrangle Map GQ-644, scale 1:24,000

Johnson, C. G., 1966, Engineering geology of the Lexington and Fayette County, Kentucky: U.S. Geological Survey Open-File Report 66-69, 19p.

(http://pubs.er.usgs.gov/usgspubs/ofr/ofr 6669.html).

The bentonite layer 20 to 25 feet below the top of the Tyrone Limestone creates a perched water table in the area northwest of the Kentucky River Fault Zone, and many perennial springs have developed on top of the bed.

Fault Potential

The study area would encounter faulted areas (refer to enclosed map). Water seepage along faulted areas can cause drainage problems. Mineralization might be found within the faulted and fractured areas. Contrasting rock types might be found on opposite sides of faulted areas.

Earthquake Ground Motions

This planning area has probable peak ground acceleration (PGA) 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, Rich & Kourth

Richard A. Smath Geologist

US 27 / I-75 CONNECTOR STUDY AREA



Steven L. Beshear Governor



Robert D. Vance Secretary

Commonwealth of Kentucky Environmental and Public Protection Cabinet Department for Environmental Protection

Division for Air Quality 803 Schenkel Lane Frankfort, Kentucky 40601-1403 www.air.ky.gov

January 14, 2008

Mr. Stuart Goodpaster, P.E. Project Manager Kentucky Transportation Cabinet – District 7 Office P.O. Box 11127 Lexington, Kentucky 40512-1127 RECEIVED

JAN 18 2008

DEPARTIMENT OF HIGHWAYS DISTRICT SEVEN LEXINGTON

Dear Mr. Goodpaster:

The Division has reviewed the planning study for determining the need, feasibility, and impacts of a highway connector from US 27 to I-75 in Fayette, Jessamine, and Madison Counties, Item Number 7-249.00. The following Kentucky Administrative Regulations apply to this proposed project:

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. 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. Although, vegetative matter accumulated by land clearing is included as a permissible method of disposal, the Division encourages the use of chipping and grinding in order to avoid excessive particulate emissions in the immediate vicinity of the project.

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Mr. Stuart Goodpaster Page 2 January 14, 2008

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.

Every effort should be made to maintain compliance with the preceding regulations and requirements. The Division also suggests an investigation into compliance with applicable regulations in the local governments. If there are any questions relating to this matter, please contact Joe Forgacs at (502) 573-3382 extension 309.

Sincerely John S. Lyons Director

JSL/jmf



ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

Steven L. Beshear Governor

Division of Conservation 375 Versailles Road Frankfort, Kentucky 40601 Phone: (502) 573-3080 Fax: (502) 573-1692 www.conservation.ky.gov

Robert D. Vance Secretary

Stephen A. Coleman Director

January 17, 2008

Mr. Stuart Goodpaster, P.E. Planning Branch Manager District 7 P.O. Box 11127 Lexington, KY 40512-1127

Subject: US 27 to Interstate I-75 Connector Corridor Planning Study

Dear Mr. Goodpaster:

As requested, the Division of Conservation would like to provide the following comments and concerns that may help in the initial data gathering stage for a proposed new connector from US 27 to I-75 in the study area consisting of Jessamine, Fayette, and Madison Counties.

There is one agricultural district, # 076-04, (see enclosed map) certified by the Kentucky Soil and Water Conservation Commission within the northwest study area of Madison County. This agricultural district was established on September 15, 2003 in order to conserve, protect, develop, and improve agricultural land for production of food, fiber, and other agricultural products. Under KRS 262.850(12), state agencies must mitigate any impact their programs may have on land in agricultural districts.

Also in looking at the study area, it is certain that any route finally chosen would result in new road construction. This in turn would lead to a loss of farmland, both prime and farmland of statewide importance. Every year pressure imposed by utility right-of-ways, urban expansion, and new roads reduce the land available for agricultural use in the Commonwealth. Therefore, we would like the issue of loss of farmland addressed in your study.

There are four documents that could be utilized to identify farmland designations: the Soil Survey Fayette County (NRCS 1987), the Soil Survey of Jessamine and Woodford Counties (NRCS 1983), the Soil Survey of Madison County (NRCS 1973) and Important Farmland Soils of Kentucky (NRCS 1981). All documents are available through this office. The soil survey information for all counties can also be downloaded at the following web sites: http://soildatamart.nrcs.usda.gov/ or http://websoilsurvey.nrcs.usda.gov.

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Mr. Stuart Goodpaster, P.E. January 17, 2008 Page Two

One other concern we would like to comment on is the control of erosion and sedimentation during and after earth-disturbing activities, once construction of this project begins. We recommend best management practices (BMPs) be utilized to prevent nonpoint source water pollution. This would protect the water quality and aquatic habitat of the perennial and intermittent streams that this project could impact.

The manual, Best Management Practices for Construction Activities, contains information on the kinds of BMPs most appropriate for this project and is available through the Fayette, Jessamine, or Madison County Conservation Districts, the Kentucky Division of Water, or this office. Also, an electronic version of the Kentucky Erosion Prevention and Sediment Control Field Guide is available online at http://www.water.ky.gov/sw/nps/Publications.htm

We realize that improving Kentucky's highways is vital to the economy and safety of our citizens. We support the Transportation Cabinet's effort in providing the Commonwealth with improved roadways while trying to design, construct, and maintain these roadways with as minimal environmental impact as possible.

We appreciate the opportunity to comment on this project. If you have any questions, please contact this office any time.

Sincerely,

Stephen A Coleman

Stephen A. Coleman, Director Kentucky Division of Conservation

SAC/aeh

Enclosure




JAN - 2 7008

DEPARTMENT OF HIGHWAYS DISTRICT SEVEN LEXINGTON CA



CABINET FOR HEALTH AND FAMILY SERVICES FACILITIES MANAGEMENT DIVISION

Steven L. Beshear Governor 275 E. Main Street, 4E-C Frankfort, KY 40621 (502) 564-6631 Fax: (502) 564-2608 www.chfs.ky.gov

Ellen M. Hesen Acting-Secretary

December 26, 2007

Kentucky Transportation Cabinet Dept. of Highways District 7 Office Mr. Stuart Goodpaster, P.E., Project Manager P.O. Box 11127 Lexington, Ky. 40512-1127

Subject: Corridor Scoping Study US 27 to Interstate 75 Connector

Mr. Goodpaster;

The Kentucky Transportation Cabinet has asked that we identify specific issues or concerns which may affect the development of a road improvement project scope in Fayette, Jessamine and Madison Counties; the project would involve improvements in the US 27 to Interstate 75 Connector. We have reviewed the project study area map, and project frequently ask questions provided by your office.

The Cabinet for Health and Family Services has two offices located within the US 27 to Interstate 75 Connector. These offices are located on US 27 in Nicholasville which serves the community and has 31 staff which sees 350 clients per week.

Thank you for giving consideration to our facilities, staff, and clients.

Sincerely, Robert W. Wright Leased Properties Branch Cc: file





- F- 333 Waller Ave, Lexington, KY 40504-2915
- G- 1165 Centre Pkwy, Lexington, KY 40517-3260



KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES COMMERCE CABINET

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

January 17, 2008

Marcheta Sparrow Secretary

Dr. Jonathan W. Gassett Commissioner

Stuart Goodpaster, P. E. Planning Branch Manager KYTC District 7 Office 763 New Circle Road P. O. Box 11127 Lexington, KY 40512-9984

> Corridor Scoping Study Fayette, Jessamine, and Madison Counties US 27 to I-75 Connector

KYTC Item No. 7-249.00

RECEIVED

JAN 22 2008

DEPARTMENT OF HIGHWAYS DISTRICT SEVEN LEXINGTON

Dear Mr. Goodpaster:

RE:

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 indicate that the federally endangered gray bat, *Myotis grisescens* and Indiana bat, *Myotis sodalis* are known to occur or could occur within close proximity to the project area. 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. 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.
- In areas where bats are known to occur, cave entrances, mine portals, and/or rock shelters that exist within the project area should be surveyed for potential use by such species as gray bats, and Indiana bats. KDFWR recommends avoiding those areas that provide adequate habitat for bats.
- To minimize impacts to aquatic resources and 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 proceed with the federally listed threatened/endangered species please contact the US Fish and Wildlife Service Kentucky Field Office at (502) 695-0468.



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It appears that the proposed project has the potential to impact wetland habitats. KDFWR recommends that you look at the appropriate US Department of Interior National Wetland Inventory Map (NWI) and the appropriate county soil surveys to determine where the proposed project may impact wetlands. Additionally, field verification may be needed to determine the extent and quality of wetland habitats within the project area. Any planning should include measures designed to eliminate and/or reduce impacts to wetland habitats. If impacts cannot be avoided, mitigation should be properly designed and proposed to offset the losses. KDFWR will recommend, at a minimum, a 2:1 mitigation ratio for any permanent loss or degradation of wetland habitats.

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.
- 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.
- To compensate for unavoidable impacts to streams, we recommend that possible stream mitigation sites be identified on-site. If on-site restoration is not feasible we recommend that suitable stream restoration sites be identified within the following Kentucky River tributaries: Jessamine Creek, Hickman Creek, Boone Creek, Tates Creek, & Silver Creek. Restoration of potential mitigation sites should incorporate natural stream channel design along with the restoration of its associated riparian areas.
- 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 a stable 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 Namen

Doug Dawson Wildlife Biologist III

Cc:

Environmental Section File







The Kentucky Transportation Cabinet (KYTC) has initiated a study designed to evaluate the need for, and possible location of, a new highway connecting US 27 and I-75 in Jessamine, Fayette, and/or Madison Counties. The study area under consideration is shown below. As part of the study, the KYTC would like your assistance in identifying issues you think should be considered in the study as well as potential corridors to be evaluated. The KYTC would prefer comments in writing so they can be given full consideration in the decision-making process.

All comments are welcome! We appreciate your participation!

The second secon	
A LAND RULES	Contact Information:
THE THE PARTY OF	Name: <u>City of Nicholasville</u>
	Date:
THE AREA STATES	Address: 517 North Main Street
日的公司了了一个	Nicholasville, KY 40356
BRACE AND	Phone: (optional) (859) 885-1/21
LEX NOT	E-Mail: (optional) gary-goldey@nicholusulle.org
1 1000 EN FRANCE	

THE OBJECTIVE OF THIS FORM IS TO LEARN YOUR VIEWS ON THE ISSUES AND ALTERNATIVES YOU THINK SHOULD BE CONSIDERED BY THIS STUDY. EACH FORM WILL BE READ AND TABULATED BY THE PROJECT TEAM.

1. How important to you are the following highway issues for this study? (circle the appropriate number)

			SCORE		
ISSUE	NOT IMPORTANT		IMPORTANT	IMP	VERY ORTANT
Connectivity between US 27 and I-75	1	2	3	4	5
Evacuation Routes for Homeland Security	1	2	3	4	5
Vehicle Safety	1	2	3	4	5
Pedestrian and Bicycle Safety	1	2	<u>s</u>	4	5
Consistent Travel Times	1	2	3	4	5
Improved Access for Truck Traffic	1	2	3	Q	5
Recreational Traffic	1	2	3	4	5
Business and Industrial Property Access	1	2	3	4	
Residential Property Access	1	2	3	4	5
Community Facility and School Access	1	2	3	4	5
Construction Cost and Phasing	1	2	Ø	4	5
Other:		_4			5
					Ø

JAN 18 2008

DEPARTMENT OF HIGHWAYS DISTRICT SEVEN LEXINGTON 2. Please discuss any other highway related issues you would like to have considered in this study.

The Connector will relieve regional traffic problem. Will help Fayette, Jessamine, Garrard, Lincoln and Boyle Counties.

3. How important to you are the following community and environmental issues for this study? (circle the appropriate number)

	SCORE				
ISSUE	NOT IMPORTANT		IMPORTANT	VERY IMPORTANT	
Kentucky River Crossing(s)	1	2	3	4	(5)
Supporting Current Businesses	1	2	3	4	5
New Business Development	1	2	3	4	Ø
Community Character	1	2	3	Ð	5
Property Impacts	1	2	3	Φ	5
Business Impacts	· 1	2	3	4	5
Farmland Impacts	· 1	2	3	4	5
Low Income, Senior or Minority Populations	1	2	a	4	5
Historic Preservation	1	2	3	Ð	5
Environmental Issues	1	2	0	4	5
Other:	1	2	3	4.	5

- 4. Please list any environmental or community features in the study area which we should be aware of and/or have not identified.
- 5. Please discuss any other issues you would like to have considered in this study.

6. In your opinion, is a new highway needed to connect US 27 to I-75? (check one)

YES NO

7. Why?

trattic and its potential impact on economic The immediate area. Help regional

	Improve Safety	\checkmark	/ Economic Development
\checkmark	Improve Traffic Flow		Improve Access
-	Improve Highways for Trucks	<u></u>	Enhance System Efficiency and Connections
	Other:		

9. Please provide any additional comments you have regarding the study.

Please return the completed form to a Project Team Representative or mail it in the provided postage paid envelope to:

Stuart Goodpaster, P.E. Kentucky Transportation Cabinet District 7 763 West New Circle Road – Building #2 Lexington, KY 40512 Fax: (859) 246-2354









The Kentucky Transportation Cabinet (KYTC) has initiated a study designed to evaluate the need for, and possible location of, a new highway connecting US 27 and I-75 in Jessamine, Fayette, and/or Madison Counties. The study area under consideration is shown below. As part of the study, the KYTC would like your assistance in identifying issues you think should be considered in the study as well as potential corridors to be evaluated. The KYTC would prefer comments in writing so they can be given full consideration in the decision-making process.

All comments are welcome! We appreciate your participation!

Contact Information: Nicholasville Police Name: John Brensern Dept. Date: 12/18/07 Address: 510 N. Mein St. Nicholosville XY Y0356 Phone: (optional) 859885-9944 E-Mail: (optional)
E-Mail: (optional)

THE OBJECTIVE OF THIS FORM IS TO LEARN YOUR VIEWS ON THE ISSUES AND ALTERNATIVES YOU THINK SHOULD BE CONSIDERED BY THIS STUDY. EACH FORM WILL BE READ AND TABULATED BY THE PROJECT TEAM.

1. How important to you are the following highway issues for this study? (circle the appropriate number)

			SCORE		
ISSUE	NOT IMPORTANT IMPORTANT		IMP	VERY	
Connectivity between US 27 and I-75	1	2	3	4	5
Evacuation Routes for Homeland Security	1	2	3	4	5
Vehicle Safety	1	2	3	4	5
Pedestrian and Bicycle Safety	1	2	3	$\underline{(4)}$	5
Consistent Travel Times	1	2	3	4	6
Improved Access for Truck Traffic	1	2	3	4	5
Recreational Traffic	1	2	3	4	(5)
Business and Industrial Property Access	1	2	3	4	5
Residential Property Access	1	2	3	Ø	5
Community Facility and School Access	1	2	3	(4)	5
Construction Cost and Phasing	1	2	(3)	4	5
Other:	1	2	3	4	5

- 2. Please discuss any other <u>highway related issues</u> you would like to have considered in this study.
 - None
 - 3. How important to you are the following community and environmental issues for this study? (circle the appropriate number)

	SCORE				
ISSUE	NOT IMPORTAN	NOT IMPORTANT		VER IMPORTANT IMPORT	
Kentucky River Crossing(s)	1	2	3	4	5
Supporting Current Businesses	1	2	3	4	5
New Business Development	1	2	3	4	65
Community Character	1	2	3	A	5
Property Impacts	1	2	3	<u>A</u>	5
Business Impacts	1	2	3	<u>A</u>	5
Farmland Impacts	· 1	2	3	4	(5)
Low Income, Senior or Minority Populations	1	2	3	A	5
Historic Preservation	1	2	3	4	5
Environmental Issues	1	2	3	4	5
Other:	1	2	3	4.	5

4. Please list any environmental or community features in the study area which we should be aware of and/or have not identified.

5. Please discuss any other issues you would like to have considered in this study.

love

Number of access points to connectme 6. In your opinion, is a new highway needed to connect US 27 to I-75? (check one) YES NO

7. Why? & Sefety issues_ strong

Improve Safety **Economic Development** Improve Access Improve Traffic Flow Enhance System Efficiency and Improve Highways for Trucks Connections Other: 9. Please provide any additional comments you have regarding the study. Lors overdne! _____ Please return the completed form to a Project Team Representative or mail it in the provided postage paid envelope to: Stuart Goodpaster, P.E. Kentucky Transportation Cabinet District 7 763 West New Circle Road – Building #2 Lexington, KY 40512 Fax: (859) 246-2354







The Kentucky Transportation Cabinet (KYTC) has initiated a study designed to evaluate the need for, and possible location of, a new highway connecting US 27 and I-75 in Jessamine, Fayette, and/or Madison Counties. The study area under consideration is shown below. As part of the study, the KYTC would like your assistance in identifying issues you think should be considered in the study as well as potential corridors to be evaluated. The KYTC would prefer comments in writing so they can be given full consideration in the decision-making process.

All comments are welcome! We appreciate your participation!

TRANK AN	Contact Information:
The All All and All an	Name: Capt. Jamos A. July
	Date: 011008
SOM AND	Address: 150 E. Main Street
网络教教学科内	Seringtan Ky 40503
REPART AND	Phone: (optional) 258-3666
HEAD VI	E-Mail: (optional) JTurky @ LFUCG, Con

THE OBJECTIVE OF THIS FORM IS TO LEARN YOUR VIEWS ON THE ISSUES AND ALTERNATIVES YOU THINK SHOULD BE CONSIDERED BY THIS STUDY. EACH FORM WILL BE READ AND TABULATED BY THE PROJECT TEAM.

1. How important to you are the following highway issues for this study? (circle the appropriate number)

			SCORE		
ISSUE	NOT IMPORT	ANT	IMPORTANT	IM	VERY PORTANT
Connectivity between US 27 and I-75	1	2	3	4	5
Evacuation Routes for Homeland Security	1	2	3	4	6
Vehicle Safety	1	2	3	4	(5)
Pedestrian and Bicycle Safety	1	2	3	4	3
Consistent Travel Times	1	2	3	4	5
Improved Access for Truck Traffic	1	2	3	4	5
Recreational Traffic	1	2	3	4	G
Business and Industrial Property Access	1	2	3	4	G
Residential Property Access	1	2	3	4	6
Community Facility and School Access	1.	2	3	4	(5)
Construction Cost and Phasing	1	2	3	4	G
Other:	1	2	3	4	5

2. Please discuss any other <u>highway related issues</u> you would like to have considered in this study.

NONE			. <u>.</u>
NONE			

3. How important to you are the following community and environmental issues for this study? (circle the appropriate number)

	SCORE				
ISSUE	NOT IMPORT	NOT MPORTANT IMPORTANT		VERY NT IMPORTAI	
Kentucky River Crossing(s)	1	2	3	4	6
Supporting Current Businesses	1	2	3	4	6
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Historic Preservation	1	2	3	′4	5
Environmental Issues	1	2	3 -	4	5
Other:	1	2	3	4.	G

4. Please list any environmental or community features in the study area which we should be aware of and/or have not identified.

NONE

5. Please discuss any other issues you would like to have considered in this study.

NONE

6. In your opinion, is a new highway needed to connect US 27 to I-75? (check one)

_ YES ____ NO

7. Why?

dt would	I reduce the Sarge Volumes of hoffin traveling
in and out	of Jaintan accident rates would be reduced
and it wo	uld also reduce the Commute Time
For mate	ust Traveling to and from work an a
daily ba	ses.

Economic Development Improve Safety Improve Traffic Flow **Improve Access** Enhance System Efficiency and Improve Highways for Trucks Connections Other:

9. Please provide any additional comments you have regarding the study.

The Seringtan dunsean of palin has remented the US 27 to interstate 75 Connector place elect and based on the information Can the packet we feel that if this to proceed it would be a new Jevenstan and Central Kentuck

Please return the completed form to a Project Team Representative or mail it in the provided postage paid envelope to:

> Stuart Goodpaster, P.E. Kentucky Transportation Cabinet District 7 763 West New Circle Road – Building #2 Lexington, KY 40512 Fax: (859) 246-2354









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All comments are welcome! We appreciate your participation!

AN AND	Contact Information:
	Name: Matyor Cuss Meyez
REY ALEXTRA	Date: 12/18/07
ESA AND AND	Address: SIF N. MAIN ST
ANALASAM	NiCH 40356
L'ENTER AL	Phone: (optional) 983-0754
	E-Mail: (optional) NUSS_Meyer@ nicholasville
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THE OBJECTIVE OF THIS FORM IS TO LEARN YOUR VIEWS ON THE ISSUES AND ALTERNATIVES YOU THINK SHOULD BE CONSIDERED BY THIS STUDY. EACH FORM WILL BE READ AND TABULATED BY THE PROJECT TEAM.

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Vehicle Safety	1	2	3	4	5
Pedestrian and Bicycle Safety	1	2	3	(4)	5
Consistent Travel Times	1	2	3	4	(5)
Improved Access for Truck Traffic	1	2	3	4	(5)
Recreational Traffic	1	2	3	4	5
Business and Industrial Property Access	1	2	3	4	6
Residential Property Access	1	2	3	(4)	5
Community Facility and School Access	1	2	3	4	5
Construction Cost and Phasing	1	2	3	4	6
Other:	1	2	3	4	5

2. Please discuss any other <u>highway related issues</u> you would like to have considered in this study.

ccess off the I-75 connector Limited

3. How important to you are the following community and environmental issues for this study? (circle the appropriate number)

	SCORE					
ISSUE	NOT IMPORTAN	IT		IMF	VERY PORTANT	
Kentucky River Crossing(s)	1	2	(3)	4	5	
Supporting Current Businesses	1	2	3	4	(5)	
New Business Development	1	2	3	4	5	
Community Character	1	2	3	4	R	
Property Impacts	1	2	3	(d)	5	
Business Impacts	1	2	• 3	(4)	5	
Farmland Impacts	· 1	2	3	4	5	
Low Income, Senior or Minority Populations	1	2	3	4	6	
Historic Preservation	1	2	3	′4	6	
Environmental Issues	. 1	2	3	4	5	
Other:	1	2	3	4.	5	

- 4. Please list any environmental or community features in the study area which we should be aware of and/or have not identified.
- 5. Please discuss any other issues you would like to have considered in this study.

6. In your opinion, is a new highway needed to connect US 27 to I-75? (check one)

TRAFFIC problems thru Lex. limits our entire area and it's economic growth Will also help south end of Lexizton 7. Why? rospule.

Improve Safety	Economic Development
Improve Traffic Flow	Improve Access
Improve Highways for Trucks	Enhance System Efficiency and Connections
Other:	

9. Please provide any additional comments you have regarding the study.

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Please return the completed form to a Project Team Representative or mail it in the provided postage paid envelope to:

> Stuart Goodpaster, P.E. Kentucky Transportation Cabinet District 7 763 West New Circle Road – Building #2 Lexington, KY 40512 Fax: (859) 246-2354









The Kentucky Transportation Cabinet (KYTC) has initiated a study designed to evaluate the need for, and possible location of, a new highway connecting US 27 and I-75 in Jessamine, Fayette, and/or Madison Counties. The study area under consideration is shown below. As part of the study, the KYTC would like your assistance in identifying issues you think should be considered in the study as well as potential corridors to be evaluated. The KYTC would prefer comments in writing so they can be given full consideration in the decision-making process.

All comments are welcome! We appreciate your participation!



THE OBJECTIVE OF THIS FORM IS TO LEARN YOUR VIEWS ON THE ISSUES AND ALTERNATIVES YOU THINK SHOULD BE CONSIDERED BY THIS STUDY. EACH FORM WILL BE READ AND TABULATED BY THE PROJECT TEAM.

1. How important to you are the following highway issues for this study? (circle the appropriate number)

· · · · · · · · · · · · · · · · · · ·	SCORE				
ISSUE	NOT IMPORTANT IMPORTANT		۱ IMP	/ERY ORTANT	
Connectivity between US 27 and I-75	1	2	3	4	6
Evacuation Routes for Homeland Security	1	2	3		5
Vehicle Safety	1	2	3	4	5
Pedestrian and Bicycle Safety	1	2	3	4	5
Consistent Travel Times	1	2	3	4	5
Improved Access for Truck Traffic	1	2	3	4	6
Recreational Traffic	1	2	3	4	5
Business and Industrial Property Access	1	2	3	4	5
Residential Property Access	1	2	3	4	5
Community Facility and School Access	1	2	3	4	5
Construction Cost and Phasing	1	2	3	(4)	5
Other:	1	2	3	4	5
		R		V/C	n.

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DEPARTMENT OF HIGHWAYS DISTRICT SEVEN

- 2. Please discuss any other <u>highway related issues</u> you would like to have considered in this study.
 - 3. How important to you are the following community and environmental issues for this study? (circle the appropriate number)

	SCORE				
ISSUE	NOT IMPORTANT		IMPORTANT	IM	VERY PORTANT
Kentucky River Crossing(s)	1	2	3	4	5
Supporting Current Businesses	1	2	3	4	5
New Business Development	1	2	3.	4	5
Community Character	1	2	3	4	5
Property Impacts	1	2	3	4	5
Business Impacts	1	2	3	. 4	5
Farmland Impacts	· 1	2	3	4	5
Low Income, Senior or Minority Populations	1	2	3	4	5
Historic Preservation	1	2	3	<i>′</i> 4	5
Environmental Issues	1	2	3	4	-5
Other:	1	2	3	4	5

4. Please list any environmental or community features in the study area which we should be aware of and/or have not identified.

5. Please discuss any other issues you would like to have considered in this study.

6. In your opinion, is a new highway needed to connect US 27 to I-75? (check one)

YES _____ NO

7. Why?

Economic Development Improve Safety to Nichol partly Improve Access Improve Traffic Flow Enhance System Efficiency and Improve Highways for Trucks Connections Other:

9. Please provide any additional comments you have regarding the study.

feel the road is very important to the Central KY Region and Nicholosville. The road should be Avery limited press high way with an entrance / exit on I-75 md on us 27 EAST BYPOSS. I would want the read to connect 05 I-75 just north of the class berry Bridge med to the East By Press just north y chrisman Mill Rd. - an on/of ramp at Tates Creek P.14 the only other precess that should be approved. This routing would limit in prot on the county motstill provide for the easy flow trofficer to \$ Fren US Z7.

Please return the completed form to a Project Team Representative or mail it in the provided postage paid envelope to:

> Stuart Goodpaster, P.E. Kentucky Transportation Cabinet District 7 763 West New Circle Road – Building #2 Lexington, KY 40512 *Fax: (859) 246-2354*

ENTUCK







The Kentucky Transportation Cabinet (KYTC) has initiated a study designed to evaluate the need for, and possible location of, a new highway connecting US 27 and I-75 in Jessamine, Fayette, and/or Madison Counties. The study area under consideration is shown below. As part of the study, the KYTC would like your assistance in identifying issues you think should be considered in the study as well as potential corridors to be evaluated. The KYTC would prefer comments in writing so they can be given full consideration in the decision-making process.

All comments are welcome! We appreciate your participation!

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Contact Information:
Name: BillFarmer
Date: 20 Qec M
Address: 3361 Spring Dak Dr
Loginston KY 40517
Phone: (optional) <u>F51 272 1425 (affice</u>)
E-Mail: (optional) bill Oht tax, Gm

THE OBJECTIVE OF THIS FORM IS TO LEARN YOUR VIEWS ON THE ISSUES AND ALTERNATIVES YOU THINK SHOULD BE CONSIDERED BY THIS STUDY. EACH FORM WILL BE READ AND TABULATED BY THE PROJECT TEAM.

1. How important to you are the following highway issues for this study? (circle the appropriate number)

	SCORE				
ISSUE	NOT IMPORTANT IMP		IMPORTANT	IM	VERY PORTANT
Connectivity between US 27 and I-75	1	(2)	3	4	5
Evacuation Routes for Homeland Security	1	2	(3	4	5
Vehicle Safety	1	2	(3)	4	5
Pedestrian and Bicycle Safety	1	(2)	3	4	5
Consistent Travel Times	1	Ð	3	4	5
Improved Access for Truck Traffic	\mathbf{O}	2	3	4	5
Recreational Traffic	1	(2)	3	4	5
Business and Industrial Property Access	1	2	3	4	5
Residential Property Access		2	3	4	5
Community Facility and School Access		2	3	4	5
Construction Cost and Phasing	1	2	3	4	(5)
Other: ENVironmental +Historical	1	2	3	4	(5)
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Improve Safety **Economic Development** Improve Traffic Flow **Improve Access** Enhance System Efficiency and Improve Highways for Trucks Connections Other:

9. Please provide any additional comments you have regarding the study.

please contact the neighborhood associations along the old Richmond Read Coordor! presentative FF-14 d.5-1

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- 2. Please discuss any other highway related issues you would like to have considered in this study.
 - 3. How important to you are the following community and environmental issues for this study? (circle the appropriate number)

	SCORE					
ISSUE	NOT IMPORTANT IMPO		IMPORTANT	IN	VERY IPORTANT	
Kentucky River Crossing(s)		2	3	4	5	
Supporting Current Businesses	1	C)	3	4	5	
New Business Development	1	2	(3)	4	5	
Community Character	1	2	3	4	<u>(</u>)	
Property Impacts	1	2	3	4	(5)	
Business Impacts	1	2	3	4	5	
Farmland Impacts	1	2	3	4	(5)	
Low Income, Senior or Minority Populations	(1)	2	3	4	5	
Historic Preservation	1	2	3	′4	(5)	
Environmental Issues	1	2	3	4.	(5)	
Other:	1	2	3	4.	5	

4. Please list any environmental or community features in the study area which we should be aware of and/or have not identified.

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5. Please discuss any other issues you would like to have considered in this study.

6. In your opinion, is a new highway needed to connect US 27 to I-75? (check one)

YES NO

7. Why?

The problem really appears to be the volume of treffic on US 27 Flowing into Lexington to shop & Work, not access to I-75





The Kentucky Transportation Cabinet (KYTC) has initiated a study designed to evaluate the need for, and possible location of, a new highway connecting US 27 and I-75 in Jessamine, Fayette, and/or Madison Counties. The study area under consideration is shown below. As part of the study, the KYTC would like your assistance in identifying issues you think should be considered in the study as well as potential corridors to be evaluated. The KYTC would prefer comments in writing so they can be given full consideration in the decision-making process.





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1. How important to you are the following highway issues for this study? (circle the appropriate number)

	SCORE				
ISSUE	NOT IMPORTANT IMPORTA		IMPORTANT	IM	VERY PORTANT
Connectivity between US 27 and I-75	1	2	3	4	(5)
Evacuation Routes for Homeland Security	1	2	(3)	4	5
Vehicle Safety	1	2	3	4	(5)
Pedestrian and Bicycle Safety		2	3	4	5
Consistent Travel Times	1	2	3	4	(5)
Improved Access for Truck Traffic	D	2	3	4	6
Recreational Traffic	(A)	2	3	4	5
Business and Industrial Property Access	1	2	3	4	ர
Residential Property Access	1	2	3	4	5
Community Facility and School Access	1.	2)	3	4	5
Construction Cost and Phasing	1	2	3	4	(5)
Other:	1	2	3	4	5

- 2. Please discuss any other highway related issues you would like to have considered in this study.
 - 3. How important to you are the following community and environmental issues for this study? (circle the appropriate number)

	SCORE				
ISSUE	NOT IMPORTANT		IMPORTANT	IM	VERY PORTANT
Kentucky River Crossing(s)	0	2	3	4	5
Supporting Current Businesses	1	2	3	4	6
New Business Development	1	2	3	4	5
Community Character	1	2	Ì	4	5
Property Impacts	1	2	Ó	4	5
Business Impacts	1	2	3	4	5
Farmland Impacts	· 1	2	Ö	4	5
Low Income, Senior or Minority Populations	1	2	Ì	4	5
Historic Preservation	1	2	Ś	′4	5
Environmental Issues	1	(2)	3	4	5
Other:	1	2	3	4.	5

4. Please list any environmental or community features in the study area which we should be aware of and/or have not identified.

5. Please discuss any other issues you would like to have considered in this study.

residents/TRUCKS SAUINGS For A Auge energy (fue will h/ Southern And (< 2 mine SOUTH! -75 TAUPL 6

6. In your opinion, is a new highway needed to connect US 27 to I-75? (check one)

YES NO

7. Why? It will reduce traffic in Fayette Co. on Mew Circle 4 and Richmond Rd. - And MAN-O-WAR.

Improve Safety	Economic Development
Improve Traffic Flow	Improve Access
Improve Highways for Trucks	Enhance System Efficiency and Connections
Other:	

9. Please provide any additional comments you have regarding the study.

/	
Thank you .	
Tom Sume	
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> Stuart Goodpaster, P.E. Kentucky Transportation Cabinet District 7 763 West New Circle Road – Building #2 Lexington, KY 40512 *Fax: (859) 246-2354*





APPENDIX E:

PUBLIC INPUT AND MEETING DOCUMENTATION

US 27 to I-75 Corridor Scoping Study Jessamine, Fayette and Madison Counties Item No. 7 – 249.00 Stakeholder Interview Meeting Minutes 8-7-07 Richmond, Kentucky

Attendees:

Connie Lawson – Mayor of Richmond, KY Kent Clark – Judge Executive, Madison County, KY Stuart Goodpaster – KYTC District 7 Randy Turner – KYTC District 7 Bruce Duncan – Bluegrass ADD Ben Edelen – HDR / Quest Lindsay Walker - PB Shawn Dikes – PB

Meeting Summary:

Ms. Lawson and Mr. Clark are both supportive of the proposed connector project. They feel that it is needed in order to relieve traffic on I-75 during a crash, construction, or other type of incident. It would also provide an alternate to the Clay's Ferry Bridge, and would provide more direct access to the interstate system for Jessamine County residents and businesses. It would also be beneficial for evacuation during an incident at the Bluegrass Army Depot.

As part of this meeting, both Ms. Lawson and Mr. Clark were asked a series of questions developed for this meeting. Below are their combined responses.

Question 1

What is / are the transportation-related issues or problems in the region? Please be as specific as you can.

Improved access to and from I-75 to points further north and south in the immediate area, especially to and from Jessamine County. A new way around the Clay's Ferry Bridge and a better regional detour when there is an incident on I-75. A new and improved evaluation route for an event at the Blue Grass Army Depot.

How important is solving these problems?

(Not Very Important) (Very Important) 1 2 3 4 5 Both the Judge and the Mayor agree that solving the identified transportation issues is VERY IMPORTANT.

Question 3

What conditions or situations contributed to the state of the system today, including the problems mentioned above?

Rapid growth in the last few decades. The push of "bedroom communities" away from Lexington and the continued development and attractiveness of the region have caused new transportation facilities to be needed. Planning has been going on for 10 to 12 years for these new facilities, but the lack of sufficient funds to complete them ALL and a subsequent need to PRIORITIZE have left some needs unmet.

Question 4

What are the possible transportation infrastructure improvements needed in the region (aside from a possible new connector) that would solve problems identified in #1 above?

A multi-use element, such a bike / pedestrian facilities along with other identified projects from the unscheduled needs list are needed in addition to the US 27 to I-75 connector.

Question 5

How well do you think a possible new connector road will solve the problems identified in #1 above?

The proposed connector would be a major help to all the counties involved. It would be a "win – win – win" situation.

Question 6

In your opinion, who will support and who will be against a new connector roadway and why? Please be as specific as you can.

A large portion of local citizens will be supportive. A small, perhaps vocal minority, will be against it. Primarily this group will be landowners and some from environmental groups.

What other aspects (Context Sensitive) of this project can help achieve consensus or make the project a success?

Bike and pedestrian facilities, and, making the new road attractive with as many aesthetic treatments that can be afforded will make the project more attractive and supportable.

Question 8

What do you believe the transportation system in the region should consist of in ten years? Does this change if the connector corridor is not developed?

The unfunded priority projects will be built / completed. These include: the Clark County Connector, a new road connecting Jessamine County to Boonesboro, the Berea Bypass and the new phases of 21.

Question 9

What methods could be used to provide project funding (i.e tolls or project privatization)?

Tolls, a purely private road and public / private partnerships should be explored. There may be resistance in KY to selling the road to a private company. Maybe a private equity firm could help with bonding to get a lower rate than the state.

Question 10

What would the general public response be if a toll was required for use of a new corridor?

There is little opposition to innovative financing, including the use of tolls. Most citizens would gladly pay for the potential travel time savings.

Question 11

What are the community and / or environmental features to avoid if a corridor is needed and feasible? What are possible mitigation options to eliminate possible negative impacts?

Historic and archeological features will be two of the most important environmental aspects of the project.

What types of design features will be important to the community? (Roadway aesthetics, context sensitive design, etc.) $\rm N/A$

Question 13

What is the general understanding / knowledge base about the study, including past project development?

The same group of individuals who have been involved in projects in the past will again be involved.

Question 14

What are the best methods to share information with your constituents / community? (circle one)

Direct mail	Meetings	Local TV	Local Newspaper
Local Radio	Other:		

virget mail would be one of the best were to target interested sitizans.

Direct mail would be one of the best ways to target interested citizens. The Mayor has a list from the recent planning exercise that could be used and a basis for developing a project mailing list.

Question 15

Do you want to be provided with project updates? How often and in what format?

Yes, via email.

Question 16

Do you know of any individuals / leaders of influence in the community that be willing to serve on a Project Work Group and would be willing to attend 2 or more meetings over the course of the next 12 to 15 months?

Dr. Alice Jones from EKU and Ron Marionneaux are potential candidates to include on a Project Work Group.

Are there other issues that we have not covered that you feel would be of great importance?

Both the Judge and the Mayor want to be kept informed and up to date about the project.

US 27 to I-75 Corridor Scoping Study Jessamine, Fayette and Madison Counties Item No. 7 – 249.00 Stakeholder Interview Meeting Minutes 8-17-07 Lexington, Kentucky

Attendees:

Don Kelly – Public Works Directory – LFCUG Stuart Goodpaster – KYTC District 7 Randy Turner – KYTC District 7 Charles Schaub – KYTC CO Planning Bruce Duncan – Bluegrass ADD Ben Edelen – HDR / Quest Scott Walker – PB Shawn Dikes – PB

Meeting Summary:

Mr. Kelly is knowledgeable about the project and the transportation conditions of south Lexington. He is supportive of a study, but will withhold judgment on recommendations. He feels that a new roadway would relieve congestion from Man 'O War and New Circle Road.

As part of this meeting, both Mr. Kelly was asked a series of questions developed for this meeting. Below are his responses.

Question 1

What is / are the transportation-related issues or problems in the region? Please be as specific as you can.

South Lexington is growing rapidly and the transportation system is not keeping up. The UK hospital area, UK campus, Fayette Mall, is all booming. The area needs better access, especially east – west. The Brandon Crossing area is also growing. These areas are placing stress on the transportation system. In some areas, the system is "stressed out" and breakdowns are occurring. The need to develop and grown is necessary, but at the same time, the area wants to preserve the "character elements" that make the region attractive.

How important is solving these problems?

Mr. Kelly thinks it is VERY IMPORTANT to improve the system and solving these problems.

Question 3

What conditions or situations contributed to the state of the system today, including the problems mentioned above?

The region has done a good job of planning. However, it is short on actually implementing the plans. The physical form of Lexington and urban growth boundary limit what physical improvements can be made. There are few parallel, or reliever streets when there is an incident. This is exacerbated by the nature of the radial street pattern. This all creates increased pressure on the infrastructure.

Question 4

What are the possible transportation infrastructure improvements needed in the region (aside from a possible new connector) that would solve problems identified in #1 above?

Add capacity to Man O' War, New Circle Road. Improvements to US 27 have helped south of Lexington. Also need to consider multimodal solutions including transit (rail and bus) options. According to Mr. Kelly, is seems like "we are always chasing....and never ahead of the curve."

Question 5

How well do you think a possible new connector road will solve the problems identified in #1 above?

Good start to provide relief from traffic. Likely positive affects to be only in the short-term as pressure relief. Over the long-haul, will still need upgrades to parts of the regional system. A new connector may stem some of the traffic growth, for a while, especially on the East – West roads.

Question 6

In your opinion, who will support and who will be against a new connector roadway and why? Please be as specific as you can.

Bernard McCarthy is a local guy who is involved. He is employed by the KYTC. He will likely be for it as will others who want to promote development.

Folks who own or are connected to the horse farms will be against it. Others who want to slow or stop growth will also be against it, including farm land owners. The Fayette County Neighborhood Council will also be against it.

What other aspects (Context Sensitive) of this project can help achieve consensus or make the project a success?

Paris Pike is a good example to emulate. The new corridor / roadway needs to closely match with the environment. People don't typically like concrete and steel, they want something else. An eventual design that includes consideration of putting the utilities underground might be more acceptable. Take advantage of natural terrain and make the roadway more curvilinear. Perhaps include scenic viewing areas. Let local landowners have a say in aesthetics.

Question 8

What methods could be used to provide project funding (i.e tolls or project privatization)?

Mr. Kelly doesn't have a strong opinion on this. He feels that Lexington would be a good place to test the feasibility of tolls and other ideas such as congestion priving.

Question 9

What would the general public response be if a toll was required for use of a new corridor?

People generally don't like to pay tolls in KY. The recent toll experience in KY, where tolls were charged and the roads were not maintained perhaps as well as they should have been, have turned people off to tolls. Electronic tolls collection may make it an easier sell. At least people won't be searching for change. The Project Development Team may need to educate the public on the use of and price of tolls in other locations.

Question 10

What are the community and / or environmental features to avoid if a corridor is needed and feasible? What are possible mitigation options to eliminate possible negative impacts?

There are lots of features that people value in the area. Raven Run is an example. The area still has a rural feel in some locations. The new introduction of noise, lights, etc., will be a tough sell. Context sensitive solutions, limited access, noise mitigation, and landscaping will be important measures to incorporate into an eventual design.

Do you know of any individuals / leaders of influence in the community that be willing to serve on a Project Work Group and would be willing to attend 2 or more meetings over the course of the next 12 to 15 months?

Mr. Kelly will think about this and get back to us.

Question 12

What is the general understanding / knowledge base about the study, including past project development?

People won't be surprised by the fact that we are doing a study. They want to see that we are doing something to help relieve traffic. If so, they will support our efforts. They may not like the outcome, but at least they may be in favor of the study. Some will be opposed to anything that may change the landscape.

Question 13

What are the best methods to share information with your constituents / community? (circle one)

Traditional ads in newspapers are the weakest. If the PDT mentions roads, that will get peoples attention. Maybe a banner towed by a plane or an ad at a UK football or basketball game. A Public Service Announcement (PSA) on local radio or TV would be good. Look at an update on the City Cable channel.

Question 14

Do you want to be provided with project updates? How often and in what format?

Yes. Email to Mr. Kelly and the Mayor.

Question 15

Are there other issues that we have not covered that you feel would be of great importance?

Anything close to Fayette County will be controversial. The further it is away from the County and the urban growth boundary, the more it will be supported.

A good location for a meeting might be the Holiday Inn at Athens – Boonesboro or the new school at Athens – Boonesboro.
US 27 to I-75 Corridor Scoping Study Jessamine, Fayette and Madison Counties Item No. 7 – 249.00 Stakeholder Interview Meeting Minutes 8-28-07 Nicholasville, Kentucky

Attendees:

William (Neal) Cassity – Judge Executive Jessamine County Russ Meyer – Mayor of Nicholasville Nancy Stone – Jessamine County Chamber of Commerce Stuart Goodpaster – KYTC District 7 Randy Turner – KYTC District 7 Charles Schaub – KYTC CO Planning Bruce Duncan – Bluegrass ADD Max Conyers – Lexington Area MPO Ben Edelen – HDR / Quest Lindsay Walker – PB Shawn Dikes – PB

Meeting Summary:

Judge Cassity, Mayor Meyer and Ms. Stone are all very knowledgeable about the project and the transportation conditions of the region. The Jessamine County Transportation Task Force, headed by Nancy Stone, was the agency that got the initial grant money to fund this project. This is an incredibly important project to the County.

As part of this meeting, the collective group representing Jessamine County was asked a series of questions developed for this meeting. Below are their collective responses.

Question 1

What is / are the transportation-related issues or problems in the region? Please be as specific as you can.

Homeland security, protection along I-75, movement of supplies, personal, etc. from and to the Blue Grass Army Depot and in and out of the region and Jessamine County are important transportation issues. The regional roadways including I-75 and US 27 are saturated with traffic. Keeping current industry healthy and attracting new ones largely depends on a health transportation system. Large local industries such as McLean and suppliers for Toyota depend on the local and regional system to get supplies and products to customers on time, and increasingly within a short timeframe.

How important is solving these problems?

All three thought that addressing the transportation problems are VERY IMPORTANT.

Question 3

What conditions or situations contributed to the state of the system today, including the problems mentioned above?

Growing traffic on Man O' War, US 27 and earlier opposition to some roadway plans have made the current situation difficult. The post 9-11 world makes homeland security and related issues important which focuses on the transportation system. The growth in travel, especially south of Lexington on roadways that were designed as collectors / feeders for others is causing problems. Preservationist attitudes that prevent new growth and development are hindering changes. Growth south of Jessamine County in Garrad and Boyle counties are also placing a strain on the system.

Question 4

What are the possible transportation infrastructure improvements needed in the region (aside from a possible new connector) that would solve problems identified in #1 above?

Need for new and increased capacity on east – west roadways. Cross county and inter county connectors are needed. Also, good local roadways that provide connections to others of a higher functional class are needed. If the arterials were kept free flowing to move through traffic that would benefit other roadways.

Question 5

How well do you think a possible new connector road will solve the problems identified in #1 above?

The project in question will likely slow the rate of growth in traffic. It will not be a panacea. It will likely relieve some of the truck traffic too. It will definitely aid the counties in the study area. It will improve performance on the regional roadway system and help accommodate past, present and some future growth.

Question 6

In your opinion, who will support and who will be against a new connector roadway and why? Please be as specific as you can.

Attitudes are changing. Some of the environmentalists and no growth people will still be opposed. Industry folks and business people will support it. Raven Run will be against it as will some horse farm folks. Gloria Martin will be against it.

What other aspects (Context Sensitive) of this project can help achieve consensus or make the project a success?

Context Sensitive design is seen as not that big an issue in Jessamine County. Paris Pike was an anomaly according to the group. They don't see the need for extensive treatments as was done for Paris Pike. The setting here is different. Karst topography, rolling terrain and other issues will be important, but not overriding. Landowners adjacent to the corridor will need some input however. As the corridor moves close to Fayette County, context sensitive will be more important.

Question 8

What methods could be used to provide project funding (i.e tolls or project privatization)?

A totally private road may not sit well with people. Public – private partnerships might be OK. As will some other combinations. Maybe the concept of paying for access points might be OK too.

Question 9

What would the general public response be if a toll was required for use of a new corridor?

Industry might be more receptive. The general public may not mind either if they can see a real benefit. Public may be resistant to paying a company for a "free" public service.

Question 10

What are the community and / or environmental features to avoid if a corridor is needed and feasible? What are possible mitigation options to eliminate possible negative impacts?

Raven Run is an area to avoid. The topography of the area and the karst issues will also be important. The fox hunting areas at the Iroquois Hunt Club, Mr Martin's farm and the horse farms are all areas to avoid. The scenic byways and the winery area should be avoided too.

Do you know of any individuals / leaders of influence in the community that be willing to serve on a Project Work Group and would be willing to attend 2 or more meetings over the course of the next 12 to 15 months?

Gloria Martin. Dr. Dan Bowling. Bean Taylor of Taylor Made Farms. There also needs to be someone to represent the US 27 interests. Mary McCarsky (sp??) of McLean. Nancy can get us some names from the Jessamine County Transportation Task Force.

Question 12

What is the general understanding / knowledge base about the study, including past project development?

People won't be surprised by the fact that we are doing a study. They will welcome it. They are frustrated with traffic and realize something needs to be done. They think a potential connector will help. The Transportation Task Force is aware of the study.

Residents of Jessamine County want to try and accommodate some of the growth that is occurring, in Jessamine County and in the adjacent counties as well.

Question 13

What are the best methods to share information with your constituents / community? (circle one)

Nancy has a mailing list that the project can use to get the word out. The local cable TV would be good to use too. The MPO and the ADD have a newsletter. An editorial in the local paper can be arrainged through Nancy.

Question 14

Do you want to be provided with project updates? How often and in what format?

Yes. Both the Judge and the Mayor want to be informed. If we keep Nancy informed, she will inform them.

Are there other issues that we have not covered that you feel would be of great importance?

The East Jessamine High School is a possible site for a public meeting.



PB Meeting Minutes

PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Project Work Group (PWG) Meeting # 1
DATE & TIME:	October 30, 2007 – 1:30 PM
LOCATION:	Bluegrass Area Development District – Conference Room Lexington, Kentucky

ATTENDEES:

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Dan Bowling	Landowner	859-887-8086	bowlingdvm@windstream.net
Carroll McGill	Madison County	859-986-1425	carroll.mcgill@ky.gov
Neal Cassity	Jess. Co. Judge Executive	859-885-4500	ncassity@jessamineco.com
Gregory Bohnett	City of Nicholasville Planning	859-885-9385	Greg_bohnett@nicholasville.org
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MEETING SUMMARY:

The purpose of this first meeting was to convene the Project Work Group (PWG) for the US 27 to I-75 Corridor Scoping Study. Based on input from the Project Development Team and initial meetings with stakeholders / elected officials, a tentative list of Project Work Group (PWG) members was compiled. Invitations to participate in the PWG were sent by the Kentucky Transportation Cabinet (KYTC) – District 7 office. Those who agreed to participate in the PWG were asked to attend this initial kick-off meeting.

Stuart Goodpaster, P.E., the KYTC Project Manager, welcomed everyone to the meeting and began with introductions, including both Project Development Team (PDT) staff and PWG members. He then proceeded to begin to inform the PWG about their role in the project and what is expected of them. There will be a total of four (4) PWG meetings with the opportunity for members to provide input on study issues and goals (which is the objective of this first meeting), alternatives (in this case corridors), and alternatives evaluation. They are also expected to assist the PDT by representing a broad range of stakeholders, gathering community input between meetings, understanding and communicating project information and decisions to the community, and to promote and attend upcoming public meetings. Paul Toussaint, with the University of Kentucky, was asked to facilitate the meeting, especially the discussion related to identification of issues. He went over the ground rules for participation with the PWG members to facilitate the ensuing discussion and work by the group.

Shawn Dikes, the PB Project Manager, was then introduced. He provided some background study information including the study purpose and the study area. The study purpose is to examine the need for and feasibility of a new highway corridor from US 27 to I-75 in Jessamine, Fayette, and / or Madison Counties. It was stressed that this is a planning level study only and no funding exists for future project development beyond this initial study. In addition, the study is only to look at a new corridor between I-75 and US 27 with the emphasis on the recommendation being a corridor (1,000 - 2,000 feet wide) and not an alignment. The no-build option will also be examined as a comparison to proposed corridors.

Other information about the study that was presented included the KYTC project development process, the study schedule, evaluation process, public involvement plan, and the next steps in the study process.

Issues and Goals

Following this initial presentation, the PWG members were split into four pre-assigned groups to discuss and list issues and goals they thought were important to consider as part of this study. The following are the issues and goals that were developed by each group.

<u>Group #1</u>

- Kentucky River crossing
- Safety
- Traffic congestion
- Impacts on US 27 both north and south
- Commuting time travel time reliability
- Is this a critical element in our future transportation network for the region? (Dynamic evolution)

- Access control limited or total access control
- Functional class of road
- Connectivity between cities surrounding Fayette County (Nicholasville to Richmond)
- Additional crossing of Kentucky River
- Public support of project
- Multiple connections
- Quality of life (sustainability, opportunities, travel time)
- Access to interstate for Jessamine County
- Preservation of resources (historic, farmland, environment)

<u>Group #2</u>

- Traffic congestion
- Wishes of landowners
- Funding and time frame
- Connectivity
- Regional affects beyond the study area
- Air quality
- Terrain / palisades
- Historical
- Wetlands
- Future growth
- Economic development
- Wildlife / plantlife
- River crossing / existing or new
- General public
- Truck traffic
- Noise pollution
- Light pollution
- Type of facility (i.e. limited access)
- Destruction of farmland
- The cost and consequences of doing nothing (growth of area in any case)
- Differences of opinion
- Crashes
- Travel time
- Other modes
- Quality of life
- PDR and conservation
- Clays Ferry Bridge
- Toyota satellite plants
- Rural settlements (Coaltown)

<u>Group #3</u>

- Alleviate traffic between Lexington and Nicholasville
- Homeland security Bluegrass Army Depot / KY 52 widening
- Movement of goods out of Jessamine County
- Traffic generated by new facility (secondary impacts)
- New way to access I-75 south out of Jessamine County

- Make connection direct (economic)
- KY River crossing
- Historical impacts (Whitehall and Valley View Ferry)
- Interstate tie-in location
- Widening of road to US 25 from Peytontown (south and east of study area)
- Widening of US 25 along I-75
- Development of northern Madison County
- Should establish corridor now to preserve area
- Plans for future growth (new roadway)
- Should be like a parkway (character and style)
- Type of land use around interchanges (impact to rural environment)
- No bypass corridors
- Need limited access
- Fit to contours of land
- Farmland impacts (Fayette County urban growth limitations)
- Regional spillover of development from Fayette County
- Movement of traffic / alleviation if there is an accident on I-75
- Limit and re-enforce that this study is to look at a connector only between I-75 and US 27
- Use of existing right-of-way

<u>Group #4</u>

- Traffic cars and trucks, especially trucks (25% 30% truck ADT on I-75)
- Congestion in Jessamine County, lack of sufficient truck routes
- Spot congestion lack of connection to I-75 from Jessamine and counties south on I-75, US 27, US 68, and 2-lane roads; people avoid Lexington to get to I-64 / I-75
- Access for all types of trips, not just commuting. Incidents and congestion make people take an alternative route. Try to accommodate local and regional traffic, i.e. system wide solutions. Relieve congestion on roads in Fayette County (Man o' War and New Circle)
- Land use and growth integration / relationship of land use / growth with infrastructure (water, sewer, roads). Consider adjacent land uses, limited access on roadway (access management), and smart growth.
- Environment don't destroy cultural or historic features of the landscape, be sensitive
- Safety Higher access roads safer
- Access Alternate route over KY River; ferry not adequate; alternate for homeland security reasons (Army Ammunitions Plant)
- Economic Development I-75 NAFTA corridor; ways to implement visions / covenants created as part of solutions

Following the break-out session, the PWG re-convened and had an elected spokesperson from each group go over the list of project issues and goals. During the group sessions, Paul Toussaint observed each group and summarized what he heard into four main categories of issues and goals:

- 1) Environment This includes design issues and impacts to the land.
- 2) Sustainability Secondary impacts / quality of life / land use.
- 3) Traffic Operations Congestion (limit / generate / displace it) / relief to sections of the system, especially an alternative for the Clay's Ferry Bridge
- 4) System Level Comments Connectivity / modes / critical elements.

Group Discussion

Prior to adjournment several items were discussed. These include the following:

- There will be four total PWG meetings and two public meetings. The first public meeting will tentatively be held in the Nicholasville area. The second public meeting will be held on the I-75 side of the study area. Questions about facility size and needs were asked. A facility that is sufficiently large enough to accommodate a sizable group (100 to 150 people) with two or three work stations at a minimum is required along with adequate parking. The location also must be ADA accessible and be easy to get to.
- To facilitate this project, the first public meeting will be held in November or December 2007. West Jessamine Middle School has been a good location to host public meetings; however, there is the issue that school is in session and this conflicts with having afternoon sessions for a public meeting. The group was asked to provide input on this. It was generally agreed that the tentative date of November 20, 2007 would be acceptable with the session running from 4:00 to 8:00 PM if acceptable by the school.
- Based on general response, the time of 1:30 was agreed upon as a convenient time for additional PWG meetings. Prior to the next PWG meeting, the PWG is expected to attend the public meeting in order to hear what the public is saying and participate as well. They are also expected to review the information in the project binders distributed at the outset of the meeting and make people aware of the first public meeting.
- Prior to the public meeting, it will be imperative to make people aware and clearly define what we are doing. In addition to corridor alternatives, the study will include a no-build option in the three-county study area. The no-build will include existing and committed projects which includes the Eastern Bypass of Nicholasville since it is part of the existing and committed projects list.

Next Meeting

The next PWG meeting will be held following the upcoming public meeting. The purpose of the meeting will be to review this meeting, discuss public input on the alternatives, and begin the discussion of evaluation measures.

The meeting was adjourned at 3:00 PM.



PB Meeting Minutes

PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Project Work Group (PWG) Meeting # 2
DATE & TIME:	February 25, 2008 – 1:30 PM
LOCATION:	Bluegrass Area Development District – Conference Room Lexington, Kentucky

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MEETING SUMMARY:

The purpose of the second Project Work Group (PWG) meeting was to update the members on project progress to date including presenting the DRAFT project purpose and need, a summary of the comments received at the first public meeting, initial TransCad Model results of "test" corridors, and the initial fatal flaw screening and evaluation for the US 27 to I-75 Corridor Scoping Study.

Stuart Goodpaster, P.E., the KYTC Project Manager, welcomed everyone to the meeting. He thanked everyone for their attendance at this meeting and at the public meeting held on November 20, 2007. The public meeting was well attended with over 240 citizens, officials, and stakeholders.. In addition, many comment forms were returned and the public was given the opportunity to return comment forms following the public meeting via fax and mail, as well as through a website set up by the KYTC. After briefly reviewing the purpose and agenda for this meeting, Stuart turned the meeting over to Shawn Dikes, AICP,, the PB Project Manager.

Project Purpose and Need

Shawn began by introducing the draft project purpose and discussing how it was developed. The draft project purpose is based on input from multiple sources including:

- Meetings with Local Elected Officials
- 1st Project Work Group Meeting
- Input from November 20, 2007 Public Meeting
- Technical Analysis

Based on input from these sources, the draft project purpose was crafted by the project team. It is, "The purpose of this study is to determine the need and explore methods to improve safety, connectivity, and access within Jessamine, Fayette, and/or Madison Counties between US 27 and I-75".

Shawn stressed that this is the draft project purpose and is subject to refinement throughout the study process. It was not expected that the group come to a consensus regarding the project purpose at this meeting, rather it was desired that they provide feedback regarding this initial statement.

The initial comment from the PWG regarding the project purpose was the idea that it would be beneficial to have a broader regional context since there will be potential impacts for this roadway corridor beyond the specified counties in the study area. To incorporate this comment, the project purpose will be revised to include the word "regional" before "access".

Another member asked if other enhancements such as recreation / bicycle / pedestrian considerations are implied in the project purpose or should they be explicitly stated. It was decided that while the project purpose does not specifically discuss these, they are considerations included in the planning process and the project purpose is intended to be broader in scope to encompass the whole project.

The project need was discussed next and included a list of study needs (connectivity, vehicle safety, traffic congestion, consistent travel times, economic development, improved access for truck traffic, and homeland security). There was some confusion regarding what "consistent travel times" actually means. It was decided that it would be more appropriate to change this to "travel time reliability".

Finally, other study goals and objectives were presented. It was mentioned that at the public meeting, attendees were very interested in keeping the Valley View Ferry open even if another river crossing were included as part of this project. They also felt that any new bridge should not go over the ferry. Another comment about the study goals and objectives regarded environmental justice (EJ). One attendee wanted to make sure that EJ was included as part of the environmental features that would be avoided or impacts would be minimized. Shawn assured the group that environmental justice is a specific measure that is being examined.

Summary of First Public Meeting

The next topic of discussion was a review of the first public meeting. Lindsay Walker with PB presented the summary. The meeting was held on November 20, 2007 at the West Jessamine Middle School in Nicholasville, Kentucky (Jessamine County). Overall, attendance was good with 244 citizens signing in. A number of PWG members were among the attendees.

107 completed survey forms were returned at the meeting that evening. 37 more were returned following the meeting via mail / fax / internet. Results from the survey forms were presented. Key points included:

- Connectivity between US 27 and I-75 was the highest rated highway issue.
- A Kentucky River crossing was the highest rated environmental issue.
- The majority of respondents (115) were in favor of a new highway corridor to connect US 27 and I-75. It was mentioned that this could change based on where the meeting was held and pending more detailed corridor locations. The responses were stratified by county and the majority of those in favor of a highway corridor actually had the most to gain from it and lived predominantly in Jessamine County.
- The most common reasons given in support of a highway corridor were to improve connectivity and to relieve traffic congestion.
- Those opposed indicated they were concerned about the expenditure of money (better ways to spend highway money including fixing existing roads), unwanted economic development, and possible negative impacts to farmland and residential areas.
- In the open response questions, several people mentioned improving bicycle and pedestrian access and mobility as part of this project.

Initial TransCad Model Runs

Lindsay also presented the methodology for determining anticipated traffic volumes on a new corridor as well as impacts on existing routes (more/less vehicles) as a result of a new highway. The Kentucky Statewide Travel Demand Model was the model used and TransCad was the software used to run the model. Initial testing of this system was performed to determine if it was sensitive enough to provide reasonable results for use in this study. Very general corridors were coded into the model. These resulted in average volumes per corridor for the base year 2003 (the model year) ranging from 9,500 vehicles per day (vpd) to 12,000 vpd. Projecting this to the year 2030 using a 2% per year growth rate would yield corridor volumes ranging from 16,000 vpd to 20,500 vpd.

Several questions were asked from the PWG regarding the modeling process and results. It was made clear that the model will provide both projected traffic volumes on the new route as well as corresponding impacts to other major study area routes such as US 27, Man O' War Boulevard, New Circle Road and I-75. In addition, the model is primarily used to determine traffic volumes and is not intended to produce an air quality assessment for this study; however, vehicle-miles of travel is an output of the model which can be used to assess air quality changes. Overall, the limits of traffic models were discussed and emphasis placed on their use as a relevance tool. There was also a discussion about the horizon year. Currently, it is 2030, but after some follow-up discussion after the meeting, the project management team determined that 2040 is a more appropriate horizon year.

Corridor Development and Evaluation

An initial set of corridors was developed by the public at the first public meeting. People attending the public workshop were asked to draw a corridor from US 27 to I-75. This resulted in a large number of corridors – approximately 50 to 60. To make this a more feasible set of corridors to work with, an initial set of evaluation criteria was used by the project development team to narrow the number of corridors to approximately twelve. A map showing all the initial corridors as drawn by the public was provided. Helen Powell with H. Powell and Co. mentioned that the historic data shown on the map is strictly a database search. The number and exact location of mapped properties is subject to refinement based on field surveys which would need to be completed in future stages in order for the project to progress. As for the archeological resources, this information is available for evaluation purposes but specific locations of known sites will not be shared in order to protect the resources.

The criteria that was used to get from approximately 50 – 60 corridors down to 12 included:

- Lines drawn outside the study area boundary were removed from consideration.
- Lines drawn in the southernmost study area toward SE Richmond were removed as the traffic / transportation utility is expected to be low and other studies have already recommended improvements.
- Corridors that crossed the river twice (or more) were removed.
- Corridors through 'listed' historic properties were removed.
- Northernmost corridors within Fayette County were removed due to known developments, including PDR sites.
- Diagonal corridors were removed due to length (increased cost and travel times).
- Common intersection points were noted and included in the revised set of corridors.

The PWG was then asked to react to this smaller number of potential corridors and provide comments. Comments and questions included the following:

- What criteria will be used for the second level of analysis? The second level will consider a range of criteria including (but not limited to): public input, environmental, human, and traffic impacts, travel time, level of service, and cost. The evaluation criteria will be organized in a matrix format and will be mixture of quantitative as well as qualitative information.
- One member noted that the critical difference between alternatives included those with a bridge (crossing the Kentucky River) and those without a bridge.
- The impact of a 4-lane highway should be considered on future connectivity. However, it was mentioned that we need to be careful not to put a new roadway connector outside the limits of this study area.
- It was mentioned by a PWG member that it would be a huge waste of time and money if we don't look at this in the big picture. We may want to consider an overall qualitative criteria such as "Where does the new roadway corridor connect to?"
- If a new roadway corridor is located north of the river it may draw commuter traffic from Lexington, thereby killing Nicholasville Road.
- There should be grid flexibility; need to look at what could happen if an existing link (such as I-75) is taken out. The traffic model is not really flexible enough to consider "a missing link". However other methods can be used to simulate the same impacts such as implementing a severe time penalty which lowers the speed significantly on a certain link. This could simulate crash related congestion and northbound/southbound lane closures.
- There needs to be a map showing specific locations of the Palisades so it is clear where a bridge should not be located..
- One work group member (Janie-Rice Brothers) requested an electronic PDF copy of the revised corridor map in order to study it further following this meeting. The KYTC through HDR / Quest will provide the requested map.
- With regard to funding, it was discussed that while a bridge crossing would be more costly, it might be possible to make securing funding for an ultimate project easier if a bridge was built for Homeland Security purposes.
- If we want to get rid of northern routes for a new connecter, a public meeting could be held at Hays Elementary. There would be little public support for those corridors at this location.
- Judge Cassity stated for the record that he would like to see the northern routes dismissed from further study and that the new connector should only go through Jessamine and Madison Counties. Caution was advised regarding elimination of corridors without further study.
- One method proposed for evaluating the revised set of corridors would be to go around the room and pick starting and ending points for the corridor and see if there is a consensus amongst the PWG. However, with little background knowledge regarding specific impacts for each corridor, it was decided to wait until the next project work group to begin eliminating corridors when detailed evaluation matrices will be provided to assist with the evaluation.

Jessamine County Judge Neal Cassity moved to remove certain corridors in south Fayette County. Although others also expressed some sentiment to remove these corridors nearest to Fayette County, there is concern that this would have negative consequences for future project development. The group concluded that they would wait on the next level of analysis before eliminating any of the remaining 12 corridors.

Next Meeting

It was decided at this PWG meeting that the next PWG meeting will be held on Tuesday, April 8, 2008 at 1:30 PM. It will be held at the same location to narrow the list of potential corridors to a smaller group (approximately five). The new revised set of potential corridors will then be taken to the public for comment at a public meeting held in late April / early May.

The meeting was adjourned at approximately 3:00 PM.



PB Meeting Minutes

PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Project Work Group (PWG) Meeting # 3
DATE & TIME:	April 8, 2008 – 1:30 PM
LOCATION:	Bluegrass Area Development District – Conference Room Lexington, Kentucky

ATTENDEES:

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ATTENDEES (Cont):

MEETING SUMMARY:

The purpose of the third Project Work Group (PWG) meeting was to review the project purpose and need and to potentially narrow down the list of potential alternative corridors to the most promising based on the provided evaluation matrix.

Stuart Goodpaster, P.E., the KYTC Project Manager, welcomed everyone to the meeting. He thanked everyone for their attendance. He then asked everyone to introduce themselves with the exception of the Project Development Team (PDT) who was wearing identification nametags. Following introductions, Stuart informed the group that at the last PWG meeting, the public corridors were introduced and these were narrowed down to 18 alternative corridors for consideration. Stuart then turned the meeting over to Shawn Dikes, AICP, PB's Project Manager.

Project Purpose and Need

Shawn began by informing the group of where we are in the study process, which is at the alternative corridors evaluation phase. He then went through the purpose and need for the project, highlighting any changes that were made as a result of feedback from the last PWG meeting. These changes include:

- Added the word "regional" before "access" in the project purpose.
- Under the project need, changed "Consistent Travel Times" to "Travel Time Reliability".
- For the study goals and objectives, impacts to Valley View and Environmental Justice Communities were added.

One comment on the project goals and objectives was received from the group at this meeting. It was suggested to add "light pollution" to the list of potential concerns to consider which currently includes noise, water, and air quality. No other comments were made regarding the project purpose and need.

Corridor Screening Criteria, Analysis, and Discussion

To narrow down the number of alternative corridors, an evaluation matrix was created for the existing 18 corridors. The corridors are numbered according to their beginning and ending points (for example a corridor beginning at point 4 and ending at point 2 would be labeled Alternative Corridor 4-2). Each attendee was given a copy of the matrices. The matrix includes the following evaluation criteria:

- System Operations Length, Kentucky River Crossing, System Safety Improvements, Travel Time Savings, and Connectivity
- Traffic Operations 2040 Average Daily Traffic (ADT), 2040 Level of Service (LOS), and Corridor Truck Percentages
- Natural Environment Known impacts to Streams, Wetlands and Ponds, and Floodplains
- Human Environment Known impacts to Historic Sites, Archeological Sites, Environmental Justice, Farmland, and Landfills and HAZMAT sites
- Cost Construction cost not including design, ROW, utilities or mitigation in 2008 dollars

Other evaluation criteria were examined prior to the PWG meeting, however, these criteria were removed from the matrix as they either did not show any differentiation between the alternatives or impacts would not necessarily limit the constructability of the alternative. The evaluation categories that were considered, but removed from this level of analysis included the following:

- Number of Interchanges (2 were assumed in the model testing)
- Threatened and Endangered Species (Habitat Areas)
- Wildlife Management / Conservation Areas
- Habitat and Natural Areas Crossed
- Quarries / Mines
- Park or Recreation Facilities
- Known Underground Storage Tanks (USTs)

After a quick review of the corridor options, the meeting then focused on the evaluation matrix. A few questions were asked regarding the layout and information presented in the matrix. These are included below along with the response.

- 1. The color scheme on the matrix was asked to be explained. It was noted that the green shading indicated relative good performance / low impact in a category while the red shading indicated relative poor performance / high impact in a category.
- 2. It was unclear how System Safety Improvements were defined. It was explained this was a qualitative analysis that assigned either a low, medium, or high improvement rating based on the number of high crash locations a corridor might overlap. If a new corridor did overlap a number of existing high crash locations, the corridor received a "high" rating.
- 3. The Kentucky River crossing was discussed as being potentially both "good" and "bad" and is therefore hard to quantify with regard to shading / ranking. It would be "good" to have an additional river crossing for mobility and an alternative route to the Valley View Ferry and / or the Clays Ferry Bridge. However, the additional cost of constructing a new bridge would be "bad".

- 4. There was concern that the travel time savings for alternative corridors 4-3 and 6-4 were very low. It was explained that the travel time savings were calculated based on a system-wide approach and adjustments may need to be made in the model.
- 5. The question was raised as to the status of the Eastern Nicholasville Bypass. Those familiar with the project stated that the bypass should be completed by the time this project is constructed (assuming it is determined to be feasible). The Eastern Nicholasville Bypass is a committed project based on the Recommended Six-Year Highway Plan.
- 6. There was some confusion as to the difference between 7-4 (North) and 7-4 (South). It was explained that the "North" and "South" distinctions had to be added to the corridor number to distinguish these alternatives as they have the same beginning and ending points but deviate in the middle.
- 7. It was noted that the termini points are critical locations and socioeconomic impacts should be examined at these locations when determining the best location for a new connector.
- Some basic traffic modeling concepts were discussed with regard to how the traffic forecast numbers were obtained from the Kentucky Statewide Traffic Model (KYSTM). An equilibrium assignment was used during assignment.
- 9. There was a question regarding the rationale for the location of some corridors (specifically alternative corridors 1-1, 2-1, 3-1, and 4-1). These corridor locations are based on common points as identified by the Project Development Team utilizing the alternative corridors drawn by the public at the first public meeting.
- 10. Clarification was requested with regard to the average daily traffic volumes (ADTs). The volumes shown are a range along the different road segments and are not in addition to current traffic.

The rest of the discussion regarding the evaluation matrix was devoted to determining which alternative corridors could be removed from further consideration and which alternatives are to be carried forward. It was suggested that elimination not be based on one criterion only. By looking at the termini points, considering connectivity, and impacts as outlined in the matrices, the number of corridors were reduced from eighteen to six, not including the No-Build option. The No-Build option will remain as the baseline comparison as well as a viable alternative. The remaining alternative corridors include all corridors that go through points 4, 5, and 6 on US 27 and points 2 and 4 on I-75 (alternative corridors 4-2, 4-4, 5-2, 5-4, 6-2, and 6-4). The corridors that were removed from consideration are listed below along with a summary of the reasons for dismissal.

Alternative Corridor 1-1, 2-1, 4-1: There is no existing connectivity opportunity beyond I-75 at the eastern terminus. In addition, these alternative corridors would go through existing established neighborhoods leading to community disruption. Furthermore, a Kentucky River crossing is not included in these alternatives; therefore, while they would lead to a lower cost, they lose the added benefit for an additional river crossing to provide an alternative route to I-75 were there to be an incident (either traffic or security related) that would render the Clays Ferry Bridge inaccessible. It may be that with an additional river crossing, federal funding through Homeland Security could be secured for this project. An additional bridge would also enhance the availability of evacuation routes in case of an incident at the Bluegrass Army Depot, further strengthening the argument of the necessity of an additional bridge. With regard to traffic, there is the perception that a northern route through Fayette County could become another bypass of Lexington, catering to commuter traffic and furthering the congestion on US 27. The travel time savings is lower for these alternative corridors than others further south with a river crossing. From a safety perspective, the initial quantitative analysis showed that these corridors would have a low to medium improvement for system safety. Generally, as the purpose of this project

is to improve safety, connectivity and regional access, these alternative corridors fail to satisfy these criteria and were therefore dismissed from further consideration.

Alternative Corridor 3-1: This alternative corridor has similar impacts as alternative corridors 1-1, 2-1, and 4-1 with regard to connectivity, community impacts, Homeland Security, commuter traffic, and travel time savings. There is a benefit from this corridor, however, since from a safety perspective, the initial qualitative analysis showed that this corridor would have a high improvement for system safety. Generally, as the purpose of this project is to improve safety, connectivity and regional access, this alternative corridor may improve safety but does nothing to satisfy the other two criteria and was therefore dismissed from further consideration.

Alternative Corridor 4-3: There is no existing connectivity opportunity beyond I-75 at the eastern terminus. In addition, a new interchange at this location may be too close to the existing interchange at KY 627. From a travel time savings perspective, this alternative corridor has the lowest vehicle hours of travel savings in the study area. Finally, based on the matrix, there are numerous other impacts that provide justification for dismissing it from further study including the highest number of potentially impacted acres of floodplains and known historic sites, as well as potential impacts to low-income communities.

Alternative Corridor 5-3: There is no existing connectivity opportunity beyond US 27 at the western terminus or I-75 at the eastern terminus. In addition, a new interchange at this location may be too close to the existing interchange at KY 627. This alternative corridor does not warrant further study as there are other more viable alternative corridors based on connectivity.

Alternative Corridor 6-3: There is no existing connectivity opportunity beyond US 27 at the western terminus or I-75 at the eastern terminus. In addition, a new interchange at this location may be too close to the existing interchange at KY 627. From a safety perspective, this alternative corridor rates low with regard to the potential for system safety improvement. Considering that it does not satisfy the project purpose of improving safety, connectivity and regional access, it was dismissed from further consideration.

Alternative Corridor 7-2: Based on the traffic analysis, corridors with a western terminus as far south as terminus 7 on US 27 attracted significantly less traffic onto the new connector, which would make it difficult to justify spending the amount of money it would take to build the corridor.

Alternative Corridor 7-3: There is no existing connectivity opportunity beyond I-75 at the eastern terminus. In addition, a new interchange at this location may be too close to the existing interchange at KY 627. Furthermore, similar to Alternative Corridor 7-2, corridors with a western terminus as far south as terminus 7 on US 27 attracted significantly less traffic to the connector, making it difficult to justify the cost.

Alternative Corridor 7-4 (North) and 7-4 (South): There is no existing connectivity opportunity beyond I-75 at the eastern terminus. With the western terminus point as 7 on US 27, these alternative corridors have similar issues as Alternative Corridors 7-2 and 7-3 and were therefore dismissed from further consideration.

Alternative Corridor 7-5: The eastern terminus of this corridor is on I-75 at the Richmond Bypass. Currently this area is heavily developed which would make construction of this alternative difficult. Furthermore, this is the longest corridor, has the highest cost, and may affect potential minority, low-income, and elderly communities. In addition, based on the traffic analysis, corridors with a western terminus as far south as terminus 7 on US 27 attracted significantly less traffic onto the connector, which would make it difficult to justify spending the

amount of money it would take to build the corridor. For all of these reasons this alternative corridor was dismissed from further consideration.

While most of the PWG agreed on the corridors that were taken out, Ben Taylor went on record to say that he believed that taking out all of the connectors that ended at terminus 1 on I-75 (the northern-most eastern terminus) was a bad idea. He believed that a northern route would have more utility for residents of Fayette and Jessamine Counties and would cost less as it does not require a river crossing.

There were several other comments regarding the six remaining alternatives, which are listed below.

- It is unknown how useful this connector will be to people wanting to go north on I-75 and whether people will use a corridor that takes them south before they can go north.
- Currently there is a plan to build 3,000 to 4,000 new homes in Northern Madison County, which could affect any of the eastern termini in Madison County.
- Adding a new interchange at terminus 4 on I-75 could help some of the traffic issues in Richmond at terminus 5 on I-75, and eliminate the urbanization of it.
- The corridors to be carried forward all have a western terminus on a road that currently does not exist (the Eastern Nicholasville Bypass). However, the Eastern Nicholasville Bypass is a committed project in the Recommended Six-Year Highway plan and is planned to be built before the connector.
- The impacts that a connector ending at terminus 2 on I-75 will have on White Hall State Historic Site need to be determined. This interchange will likely need to be rebuilt regardless of whether the connector ends at this location or not.
- The connectors with western termini at 4 and 5 have good connectivity and high traffic flows, making them attractive options.
- Alternative Corridors 4-2 and 4-4 have potential environmental justice impacts.

Next Steps / Meetings

The next steps will be to refine the remaining six corridors and prepare an associated analysis for the next PWG meeting and subsequent public meeting.

There are also other considerations for this project that go beyond the corridor location including what the corridor might look like (i.e. parkway versus interstate), access versus mobility issues, and toll considerations. Prior to the conclusion of this meeting there was an initial discussion of these issues. These points are listed below.

- There was discussion regarding the difference between interstates and parkways. Generally, interstates are designed with higher standards, typically allowing higher speeds. In addition to design speeds, the clear zones, shoulders, and medians are typically wider for interstates. Furthermore, if an interstate facility is considered, that might eliminate bicycle / pedestrian considerations since they are typically not allowed on interstates. Interchange spacing has stricter requirements on interstates than on parkways.
- The PDT team suggested that initially a two-lane road could be built, but right-of-way bought to eventually be able to widen to a four-lane road. The bridge could be built for two lanes but wide enough for a four-lane bridge in the future. Based on the initial traffic analysis, it may not be necessary to build a four lane road initially. The consultant team agreed to continue working with the Kentucky Statewide Traffic Model and make

necessary changes based on comprehensive and land use plans in the area, to gain a better idea of the amount of traffic that would use a connector. Many people were open to the idea of a two-lane AA highway type road depending on the amount of traffic expected. The AA highway is a rural highway located in northern Kentucky with two lanes, similar to the type of highway being proposed. This would lower initial capital costs.

- Controlled access versus limited access was discussed. The main difference between the two is the minimum distance between access points. The need for grade separated interchanges was discussed, although no consensus was reached regarding which was preferred. It was generally agreed that access should be limited, and very few interchanges or intersections would be needed. Access should be enforced by the state, not through local planning and zoning. Tates Creek Road was mentioned as a good access point.
- Where the connector would cross the Kentucky River was also discussed. It was suggested that the Palisades be shown on the map of alternatives so people know which corridors do and do not affect them. Currently the exact locations of Palisades have not been identified, but the consultant team will further explore this in the next round of screening.
- A crossing over existing locks was also suggested, however Shawn explained the implications this would have on permitting, design, cost, etc. It has also been expressed that many people would like the Valley View Ferry to remain in service.
- A discussion of tolling as a method of funding also occurred. It was agreed that research needs to be completed to determine the effects of tolling. It is not likely that tolling will fund the entire project. Research on tolling must be performed to determine the threshold that people would be willing to pay for this road as well as thresholds around the nation. It was asked if the statewide model could take into account toll penalties. The current model does not have this capability, but there may be other ways to determine how much traffic would be deterred by tolls. It was also suggested that the bridge only could be tolled and paid for. The PWG will be provided with more information on tolling for the next meeting.

In addition to determining the type of facility and tolling options, the next steps include scheduling the next PWG meeting. It will take place on May 5, 2008 at 1:30 PM at the same location. Following the next project work group meeting will be a second public meeting to allow the public to provide input on further narrowing the choice of corridors. This meeting will be on the Madison County side of the project area, either at a Madison County School or Eastern Kentucky University. Ideally it will be scheduled for the end of May prior to the end of the school year.

The meeting was adjourned at approximately 3:00 PM.



PB Meeting Minutes

PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Project Work Group (PWG) Meeting # 4
DATE & TIME:	May 5, 2008 – 1:30 PM
LOCATION:	Bluegrass Area Development District – Conference Room Lexington, Kentucky

ATTENDEES:

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MEETING SUMMARY:

The purpose of the fourth Project Work Group (PWG) meeting was to present the PWG with the Level 3 Analysis that has been performed on the remaining alternatives, and to obtain feedback before the information is presented at the next public meeting.

Stuart Goodpaster, P.E., the KYTC Project Manager, welcomed everyone to the meeting. He thanked everyone for their attendance. Stuart gave a brief overview of the project and briefly discussed the location and details of the next upcoming public meeting, before turning the meeting over to Shawn Dikes.

Shawn began by informing the group of where we are in the study process, which is at the alternative corridors evaluation phase. He then summarized what happened at the third PWG meeting. The next topic of discussion was the work that has been completed since the last PWG meeting, including:

- Making minor adjustments to the remaining corridors;
- Developing typical sections;
- Reviewing study area comprehensive plans;
- Investigating the location of the palisades and the impact to Whitehall Shrine;
- Revising corridor traffic volumes;
- Updating and completing more detailed cost estimates;
- Updating the evaluation matrix; and,
- Performing a review of tolling information.

The following comments and questions were brought up during the presentation of this material.

- While discussing the typical sections, a comment was made that supported buying enough right-of-way initially for a shared use path, even if it is not originally planned for, in case it is ever desired in the future.
- It was asked if the Jessamine County Comprehensive Plan was looked at it. It was not because there have been no updates since 2002, and the project was not mentioned in 2002. Also, the remaining corridors tie into the eastern bypass and will not go into Nicholasville. The plan is currently being updated.
- It was noted that the Madison County Plan is being updated and will include plans for bicycle facilities.
- There was a comment regarding the Palisades, that an additional benefit of having a roadway through the Palisades would be that handicapped people who may not otherwise be able to see the Palisades could be able to if a lookout is constructed along the bridge. It was noted that any scenic view from a potential bridge would need to be ADA compliant.

- A brief discussion about the exact location of the Whitehall Historic Site occurred. It was mentioned that while the exact location of the structure is known, land is being bought to have a park; therefore all of the boundaries are unknown. While a roadway near this location could bring the benefit of increased tourism, it could also attract unwanted development.
- While discussing the updated evaluation matrix, is was noted that the no-build scenario is still a viable option and that it should be compared to the build alternatives.
- A comment was made that the traffic impacts of each corridor to US 27, I-75 and Man O' War Boulevard should be included the matrix. They were originally included in the Level 2 evaluation matrix, but removed from the Level 3 evaluation matrix as there was no distinguishable difference between the alternative corridors that would assist in making a decision between corridors. However, there is a difference between the alternative corridors and the no-build; therefore the traffic impacts should be added back into the matrix to highlight this difference.
- It was also noted that corridors with higher truck percentages would take more trucks off of other roadways in the area.
- It was explained that a corridor would not likely cause new trips to occur but would redistribute existing trips.
- There was a brief discussion about LOS on a 2-lane versus a 4-lane typical section. It was explained that percent passing is the main reason (in addition to capacity) that a 2-lane roadway operates worse than a 4-lane roadway with the same traffic volumes. Passing lanes were mentioned as an idea, however determining where those should be is beyond the scope of this project and discussion should resume at a later design phase. PB agreed to determine the point into the future a 2-lane facility would fail.
- A question was asked whether the cost estimates included in the matrix included the cost of a bridge, which they do.
- A comment was made during the discussion of tolls, that with the increase in gas prices, people may save money using the new corridor even if it is tolled.
- The question of whether or not tolling is legal in Kentucky was asked. There are no laws against tolling, and the toll authority still exists.
- The question of whether tolls could be raised in the future was asked. It is possible, however it is difficult to do and usually politically motivated.
- A comment was also made that in some places only one direction is tolled, giving a discount to commuters who use the toll road multiple times per day.

After the presentation of the work that has been performed since the last PWG meeting, Shawn asked if the PWG was comfortable bringing this information to the public. He also asked if anyone thought that any of the remaining six corridors should be eliminated from further consideration. The following comments were made:

- As mentioned above, the LOS and impacts to US 27, I-75 and Man O' War Boulevard will be added back into the matrix.
- The corridors that the public originally drew as well as the eighteen Level 2 corridors will be shown on a map; however the Level 2 matrix will not be shown. Only the Level 3 evaluation matrix will be shown and each of the six remaining corridors will be shown individually.
- The public should be asked about their preferences on tolling, but they do not need all the information that was given to the PWG.
- From Madison County's perspective, people will like corridors that end at KY 627, because many people want to see that interchange fixed. If it is decided that the

eastern terminus should go south of that interchange, then people will not really care where exactly it is.

- The comment was made that the public will be very interested in how the corridors will affect the Palisades and Whitehall. We need to have a better idea of this before the meeting and be prepared to be asked this question.
- It will be helpful to give the public a list of pros and cons of each corridor because they are coming into the meeting not knowing anything. This will cut down on confusion and allow them to make quicker judgments about which corridors they do and do not like.
- When asking questions of the public it would be helpful to give them a scale of 1 to 5 rather than asking yes or no questions.
- We need to be prepared to explain Homeland Security issues related to the impact of constructing a new bridge over the Kentucky River.
- It was asked how we will explain that there is no corridor without a Kentucky River crossing, and no northern route.
 - One person said to mention that a more northern route would turn into a commuter route for southern Fayette County and would cause major congestion on US 27.
 - Ben Edelen said that we need to be prepared with a detailed response as to why corridors ending at location one on I-75 were eliminated.
- It was also mentioned that people in Fayette County thought there would be a meeting in Fayette County and that they may be left out of the loop since the decision to eliminate northern corridors was made without them.
 - The comment was made that there has been no leadership from Fayette County that has stepped forward and wanted the corridor to go through southern Fayette County.
 - It was again noted that there were many reasons for eliminating a northern corridor, however if there is still interest then supporters of a northern corridor through Fayette County can still come to the public meeting in Madison County.
- A comment was made that a good map of the public meeting location using GIS should be made for the next public meeting as it was made for the first. It should include parking information and the exact address.

After this discussion the details of the next public meeting were given, and the meeting adjourned at approximately 3:00 PM.



PB Meeting Minutes

PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Project Work Group (PWG) Meeting #5
DATE & TIME:	September 15, 2008 – 1:30 PM
LOCATION:	Kentucky Transportation Cabinet District 7 – Conference Room Lexington, Kentucky

ATTENDEES:

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MEETING SUMMARY:

The purpose of the fifth (and final) meeting of the Project Work Group (PWG) meeting was to discuss the June 16, 2008 Public Meeting results, discuss the preferred alternative, and make a recommendation, including determination of a 2 versus 4 lane facility, treatment of access, and whether or not to have a bicycle and/or pedestrian path. Overall, the Project Team wanted to make clear the overall process for future phases of project development and that there is no funding mechanism set up beyond this study. The PWG has played a key advisory role during the study process and their thoughts / comments will aid the Project Team in making a final decision.

The meeting began with Stuart Goodpaster, the Kentucky Transportation Cabinet (KYTC) Project Manager, welcoming everyone to the meeting and making some introductory remarks. He then introduced Shawn Dikes, the consultant (PB) project manager. Shawn introduced himself and the PWG made self introductions as well. Shawn went over the agenda and discussed the power point slide show covering the study schedule, study characteristics and study area, the project purpose and need, existing and future conditions overview, and the process that was taken to bring the project to the point where it is at today.

Next, Lindsay Walker discussed the second public meeting and shared the results of the surveys with the PWG. One question that was brought up was why so many people agreed with the purpose and need, but the no-build alternative received the second highest amount of votes. Shawn pointed out that if all of the votes for a build alternative are added up, there is significantly more support for a build alternative than a no-build option. Also, build alternatives ending at the Boonesborough Road interchange received the most votes – alternatives 4-2, 5-2 and 6-2 respectively. The responses also showed that the public was not as concerned about where the roadway would connect to the Eastern Bypass. During the discussion of the second public meeting, it was also pointed out that the support of tolling as a means of funding the roadway showed general support for the connector since the majority of respondents indicated they would be willing to pay some toll for use of the roadway.

After the discussion of the second public meeting, the final six corridors and the level three evaluation matrix were shown to begin discussion of a recommendation. Shawn explained the benefits and drawbacks of recommending a 2-lane road instead of a 4-lane road. The benefits are that a 2-lane road is much less expensive and more likely to receive funding for future phases- either from tolling, public – private partnerships or some other option(s). The drawbacks are that 2-lane roadways lose much of their utility if they do not have adequate passing zones and drivers get stuck behind slower moving vehicles. A LOS analysis was performed to determine at what year the new connector would fail to achieve a good level of service based on 2040 volumes. Most would fail well before the projected design year of 2040. Turning lanes and passing lanes could be added that would help the passing issue and improve LOS, however, these will also increase costs. An analysis was performed to cars and a \$2.00 toll applied to trucks. Eight scenarios were analyzed. A table showing the results of this analysis was included in the presentation.

Next Shawn presented the PWG with the Project Team's preferred alternative, 5-2. He discussed some of the benefits of this alternative and noted that based on the tolling analysis the basic 2-lane version could be paid for with tolling after 26 years and the full build could be paid for in 35 years. It was asked what the difference is between the basic and full build scenarios. The basic roadway means at-grade, unlimited intersections, no multi-use path, no

interchanges and no passing lanes. The full build would be limited access, grade-separated interchanges, and a multi-use path. At this point, no cost estimates were prepared for an upgraded 2-lane alternative with passing lanes. Shawn mentioned that the multi-use path might not be justifiable based on the costs (\$22 - \$25 million), however Carroll McGill noted that he thought that the multi-use path should not be taken out of consideration. This notion was also agreed upon by Lloyd Jordison also representing Madison County.

Overall, cost can be controlled for this project by limiting or expanding the options included with the roadway. The initial cost and tolling analysis has shown that a basic 2-lane alternative can be funded through tolls during a 30-year bond amortization period. Adding in other options such as a multi-use path or upgrading to a 4-lane section will increase the cost, so at a future date it must be determined what is really feasible based on generated toll revenue as well as any supplemental funding.

Next Shawn listed some questions that were open for discussion. The following items were discussed:

- The question was asked whether it is possible to toll a 2-lane facility. Several examples of 2-lane tolled facilities in Kentucky were given. The bridge was listed as a good place to collect tolls. It was also mentioned that it would be difficult to toll an unlimited access facility.
- The importance of passing zones and safety was discussed. Most people agreed that if a 2-lane facility is built it will be important to have adequate passing zones as well as climbing lanes for uphill segments.
- Amos Hubbard brought up the "Super 2" concept which is a 2-lane roadway with adequate shoulders, long turning lanes and climbing lanes. Most people liked this idea.
- The PWG agreed that this roadway is feasible, that Alternative 5-2 should be the preferred alternative, and that it should be 2-lanes and tolled. It was also agreed that right-of-way should be bought for an ultimate build out to 4 lanes.
- The question was asked how this project can get on the Six Year Highway Plan. In order to get this project on the plan, this study will need to be finished and the information from the study will be used to make the argument that this project should become a higher priority on the unscheduled project needs list. Local officials can vote to make the project a higher priority as well. The KYTC district must then recommend this project to the secretary and the secretary must recommend it to the legislature before it can be listed on the Six Year Highway Plan. Next spring is when the next six-year cycle starts. Segmenting the project may be a good way to get it on the plan as well. It does help that the Eastern Nicholasville Bypass is already on the Six Year Highway Plan and the reconstruction of the KY 627 interchange in Madison County is in the design phase.

After this discussion, Shawn went over the next steps of the project. The PWG asked to see the draft copy of the final report. They will be allowed to provide comments but will be required to do so in a short timeframe; like 2 weeks. Shawn briefly listed points that would be made in the recommendation. The report will recommend Alternative 5-2 saying that it satisfies the purpose and need and is feasible. A "Super 2" type roadway will be recommended. The multi-use path was still not decided upon, and Shawn asked the PWG for their thoughts on the multi-use path. The following points were brought up:

• Madison County strongly supports a multi-use path.

- People will not likely use a multi-use path in this location and it would be better in a more urban area where people can use it for recreation.
- As gas prices continue to increase, more and more people will use bicycles as a method of commuting making this path very valuable.
- This could be a destination point for bicyclists and tourists and could bring economic development to the area, as well as open the project up to additional funding sources. A multi-use path could make this project stand out from others.

With all of these points taken into consideration it was agreed that additional study for a multiuse path should be recommended. The additional right-of-way that the study will recommend purchasing should include a path, however, everyone agreed that the cost of the path is high, and that the connector is more important that the multi-use path. Therefore, if the path will cause problems for future funding and will limit the advancement of the project in general, it is not a necessary part of the project. If a path is eventually included, the idea to toll bicyclists was brought up. Most people said they thought that would be fair. Therefore it was agreed that the recommendation in the report would say that there is strong support for a multi-use path, but that it is not essential to this project if funding limits inclusion.

Next, funding options were discussed in more detail. A representative from Madison County noted that there are plans for a large number of new houses between the Boonesborough exit on I-75 and KY 169 and asked if it would be reasonable to ask the developers to pay for a portion of the roadway because they will benefit from it. Max Convers from the Lexington Area MPO said that in Fayette County developers are only asked to pay for local and collector roads and that a major arterial such as this one should not be the responsibility of the developer. The question was asked about what would need to be done legally to be able to have a toll road. Shawn mentioned that a toll authority would need to be created, and that local elected officials should be contacted about getting that into the legislature. Homeland Security funding is also It was decided that various creative funding mechanisms would be still an option. recommended in the report and that the traditional methods of funding cannot be relied upon if this project is to move forward. Even if the funding were available today there are still many steps that need to be taken before this project could be let for construction. Only small amounts of funding are needed to carry the project to the next steps; however, it is important that this report show that there are other non-traditional ways to fund construction and that tolling is supported and would cover much of the cost.

The meeting concluded at 3:30 PM. The PWG will have no future meetings, but will be able to view the full report and provide comments to the Project Team.

Public Workshop #1

Tuesday, November 20, 2007

US 27 to I-75 Corridor Scoping Study Jessamine, Fayette, and Madison Counties

The first public involvement activity for the US 27 to I-75 Corridor Scoping Study was held on November 20, 2007 in Nicholasville, Kentucky. The Kentucky Transportation Cabinet (KYTC), Bluegrass Area Development District (BGADD), PB Americas, Inc. (PB) and their sub consultants Third Rock Consulting (TRC), H. Powell and Company, Inc. (HPAC), and HDR, Inc. had staff present to answer any questions from the public. The purpose of the meeting was to introduce the study to the public, present the existing conditions information (traffic, geometrics, and environmental), and gather feedback regarding study issues and goals and potential corridors to be evaluated.

A total of 244 citizens signed-in at the meeting. The meeting was held in an open house format with no formal presentation. Informational boards were arranged around the room and included the following information:

- Study background information including the study purpose, study area, and the study schedule / process.
- Existing conditions maps including the existing truck network, 2007 traffic volumes, 2007 levels of service, and a crash rate analysis.
- Environmental maps depicting the human and natural environment as well as a cultural/historic map detailing the historic and potentially historic sites within the study area.
- Study area maps for use in drawing potential corridors.

Handouts and survey forms were also available and included the following information:

- A fact sheet explaining the study purpose, process, and schedule as well as how the public can give feedback on the project.
- A survey form with questions about study issues and goals and the need for a new connector between US 27 and I-75.

Summaries of the public comments received are presented on the following pages.

Summary of Responses

Comment forms were available at the public meeting and could be returned either at the meeting or sent via mail or fax following the meeting. The total number of forms returned at the meeting was 107. An additional 37 were returned via mail/fax/internet.

1) How important to you are the following highway issues for this study? (Circle the appropriate number)



Notes:

- One respondent wrote in the following: I-75 is not safe; I-75 no time consistent; I'm for slow scenic routes.
- Another respondent wrote next to Pedestrian and Bicycle Safety: on a 4 lane highway?
- Another respondent wrote next to Vehicle Safety: No better or worse than current.
- Another respondent wrote next to Pedestrian and Bicycle Safety: Not on connector.

Other respondents wrote the following: Environmental Impact on Native Species; Location; Future Growth; Preserving KY River Environment and Habitat; Take as much Traffic as Possible off of the Existing Roads; Should Extend to US 68; Consider Impact to 169 West Traffic (Nich – Versailles); Limited Access; Business and Industry Need Truck Routes to I-75; Another Bridge; Historical and Environmental Impact VS Homeland Safety Issues; Light Rail / Public Transportation; Bike Path; Bicycle Access Incorporated; Affect on Natural Landscape; Maintain Scenic View; Need Dam on River with Bridge on Top of it; Environmental Impacts; Landscape Preservation, Farmland Preservation, Preservation of Crossroad Business in Agricultural Land; Regional Planning; Visual Conservation, 1) Landscaping for function and beauty, 2) Non obtrusive lighting and concrete barriers, railings; Keep quiet for neighborhoods

2) Please discuss any other <u>highway related issues</u> you would like to have considered in this study.

Connectivity:

- Make sure the placement of I-75 to 27 location does not hamper further expansion to I-64 west.
- We need a full outer belt from 75 south to 64 west but you probably want this project safely past the point of no return before a battle over anything beyond tonight's proposal starts.
- Nicholasville Eastern Bypass with connector to I-75.
- It simply needs studied we need alternate high traffic routes to I-75.
- This connector would help traffic from all directions especially if we can avoid Lexington.
- Traffic between Nicholasville and Lexington and access to interstate.
- Direct connection to I-75 very important.
- An eventual connector to I-64. Limited access to the connector with I-75 and I-64 with no at grade crossings or at least purchase the property to add overpasses in the future.
- The connector to I-75 with consideration of later connecting to I-64.

Vehicle Safety:

- The effect on 27 traffic would be improvement in # of vehicles, i.e. less accidents.
- As with the existing bypass in Jessamine County, the amount of intersections this will create, there have been fatalities at all the existing ones we have in place.
- Please make sure this road is as straight and wide and with ample berms on the sides.
- The increased traffic volume and amount of traffic accidents due to increased traffic flow.
- This should not be a stop and go road, if businesses want to build nearby there should be a frontage road so as not to affect the main traffic flow.
- A) Limited access is very important; don't want another Man-O-War Road. B) Duplicate river crossing for homeland security (travel NS on 75).
- Painted lines center and each side on all roadways.
- I would like to see green space between the lanes instead of black top. Trees and grass like Paris Pike this would also provide safety as well as beauty.
- Large enough shoulders to allow for break downs or safe traffic stops by law enforcement.
- Impact of traffic volume and safety to the 169/33 corridor (see attached).

Consistent Travel Times:

- Travel time.
- We would like to see a study of ways to reduce the transit time from Nicholasville to Lexington with a limited access highway / connector.
- Please make this a limited access highway it would greatly help traffic flow and time element. I believe people use Jacks Creek to Richmond Road because there are no stoplights.
- The new road should take the shortest course other than missing historical sites and established homes.

Economic Development:

- Long term economic impacts.
- How would this project impact US 68? Will the connector access this Highway 68? Keep free of commercial development like US 27 has now.
- My concern is residential and business development along this road. This has been proven to be a disaster along New Circle, Man-O-War, and Nicholasville Roads!
- This will help the business of Jessamine County, and should relieve some traffic off 27 in the "red" spots.
- I choose my home area because there was no bridge over the river hoping to avoid too much development!

Traffic Congestion:

- Expansion of 27 with limited access and service roads.
- The increased traffic volume and amount of traffic accidents due to increased traffic flow.
- Improve traffic flow at Man-O-War and US 27 Nicholasville Road. Enforce right lane for heavy truck traffic.
- Prefer a high speed, limited access road with no traffic lights do not reproduce Man-O-War.
- We need more lanes to help traffic flow.
- Not a Man-O-War like corridor with lots of stop lights consistent traffic flow.
- This will help the business of Jessamine County, and should relieve some traffic off 27 in the "red" spots.
- Impact of traffic volume and safety to the 169/33 corridor (see attached).
- This connector must be a limited access to be effective in its goal.
- Traffic between Nicholasville and Lexington and access to interstate.
- This connector would help traffic from all directions especially if we can avoid Lexington.
- Relief on primary arterials between Jessamine (Garrard, Lincoln, Anderson, Woodford) and Fayette – US 27, 68, 60.
- Access Management and a limited number of interchanges (if any).
- Limited traffic entrance and exit ramps --- green space and beautification incorporated --- bicycle/pedestrian use incorporated.
- Please make this a limited access highway it would greatly help traffic flow and time element. I believe people use Jacks Creek to Richmond Road because there are no stoplights.
- Relieve traffic from US 27 north of Nicholasville.
- The effect on 27 traffic would be improvement in # of vehicles, i.e. less accidents.
- Congestion on US 27 between Nicholasville and Lexington.
- Do it right the 1st time with a lot of traffic in mind.
- Need to vastly improve truck and commuter traffic on 27.
- Traffic flow issues how will the new connector effect all the central KY counties?
- The amount of commuter traffic that US 27 will gain from Lexington and interstates using a connector to access southern Fayette County and North Jessamine.
- Simply the lessening of traffic between Lexington and all points south, especially for those who want to access the interstate.
- Due to the amount of traffic already accessing Lexington from the south VIA US 27, it seems illogical to offer another potential way for access coming from the south to get onto this road. Would it not make more sense to use the money to make US 27 and the new Eastern Bypass of Nicholasville controlled access all the way into Lexington. Why not focus on the real traffic issue at hand; there is not a way to get in and out of downtown Lexington with ease. I do not believe there are enough people in Jessamine County trying to go south to warrant this use of money. If there must be another route south out of Lex. Why not follow Tates Creek all the way out to the Interstate.
- Access ramps to the highway with no lights.
- Designed like an interstate with only entrance and exit ramps. No stop lights.
- An eventual connector to I-64. Limited access to the connector with I-75 and I-64 with no at grade crossings or at least purchase the property to add overpasses in the future.

Environmental:

- I hope such an artery does not destroy the natural beauty of the surrounding environment.
- Proximity of connector to prime agricultural soils, environmentally sensitive areas, and historic sites and the efforts made to mitigate negative impacts created by the project.
- I feel it is best to choose a connector route that avoids having to build a new bridge across the Kentucky River both for cost considerations and environmental impact.
- Environmental impact on the Hickman Creek area.
- I don't think we should disturb historical areas; there are other routes to take.
- As I live less than a mile from the new interchange, the increase in vehicle noise has been tremendous. The removal of trees and increase in the traffic volume has detracted from the quiet neighborhood I moved into.
- Use one of the bridges as a dual purpose dam to create a lake/pool for a primary water source and a secondary recreation area.

Multimodal:

- Please consider bike lanes or a paved bike route that parallels the new roads. Separation of bikes and cars on major roads would be nice.
- The opportunity for walking and bicycling paths; limited shopping development along the road.
- Would like to see all new highway construction with bike lanes or roadside paths.
- Please consider bicyclists as well as pedestrians anytime you work on a road.
- We would like to see a multi-use trail or lane built alongside the roadway to accommodate bikers and other recreational activities.
- Bike path for alternate means of transportation.

Improved Access for Truck Traffic:

- Improve traffic flow at Man-O-War and US 27 Nicholasville Road. Enforce right lane for heavy truck traffic.
- Need to vastly improve truck and commuter traffic on 27.
- Need to have alternative crossing on KY River in case I-75 bridge goes down.
- Repair / improve existing roads money much better spent.

Homeland Security:

• A) Limited access is very important; don't want another Man-O-War Road. B) Duplicate river crossing for homeland security (travel NS on 75).

Other:

- Better lane usage for all highways.
- None
- Since Nicholasville will grow, the bypass of Hwy 27 should be considered as well.
- Any new road should match the aesthetic standards of Paris Pike.
- How will it effect the water quality from waste run off.
- None
- Nicholasville Eastern Bypass needs to be built "yesterday".
- Final design east bypass / construction spin I-75 connector off northern section bypass head east to Athens or connect to Madison County Whitehall exit.
- There is more emphasis on protecting southern Fayette County than northern Jessamine.
- Interior roads and conditions that exist in Jessamine County
- South side of county.
- Limited access study on 27N Groggins Ferry to Fayette line.
- Western terminus should consider likelihood of eastern bypass being constructed.
- No issues based on current proposal.
- Consideration of the US 27 Eastern Bypass.
- I am concerned with creating creative and comprehensive commercial and neighborhoods with plenty of greenspace intact all around – a 30/70 or 20/80 split with the majority being greenspace.
- Limited access to US 27 north of Nicholasville.

3) How important to you are the following community and environmental issues for this study? (Circle the appropriate number)



Notes:

- One respondent wrote in the following: Very important that it NOT cross the KY river.
- One respondent wrote in the following: Too great an expense (river crossing) could tank the project.
- One respondent wrote in the following: Kentucky River Crossing(s) (don't)
- One respondent wrote in the following: Kentucky River Crossing(s) Need Another Crossing

Other respondents wrote the following: Water Supply; Greenspace / Park Preservation; Bicycle access incorporated; hiking, biking, walking trail adjoining the new road; Safety; Money Waster; Conservation for People, Replace Dead Landscape

4) Please list any environmental or community features in the study area which we should be aware of and/or have not identified.

- The Riney-B corridor at Valley View along 169 needs to be avoided. Please do not build along 169.
- Stay focused on preserving any and all historical areas that may be possibly impacted.
- Karst caves in southern Jessamine County, endangered wildlife (bats) in southern Jessamine County.
- None
- Route thru Fayette County should not be done enough roads there.
- Try to preserve the beauty of and showcase the landscape of east Jessamine County.
- Water quality during construction.
- The Old Richmond Road Corridor residents have fought against this road coming onto their
 property twice in the past 18 or so years (with success). The issue and expansion of Fayette
 County's urban service boundary are the two main issues our coalition opposes. Please do not
 consider Jacks Creek, Crawley, Spears, Walnut Hill, Evans Mill, Delong, Damar Roads as areas
 to place this connector road.
- If the road is built, keep it as a bypass only.
- The recent Fayette-Jessamine bike-ped plan may identify corridors to avoid consider impact on desired greenspace.
- The preservation of the natural beauty of the river Palisades needs to be top priority. If it is destroyed, it cannot be restored.
- Save the Kentucky horse farms. Florida is still lurking in the background.
- Keep community feel; not overspend to satisfy all special groups.
- There are a lot of mill areas that need to be considered.
- None
- Evacuation route from Richmond and area if nerve gas is released and Clay Ferry Bridge is down.
- There are two camps Woodsmen of the World and Camp Shawano (Wilderness RDGS Council) that are on Neuman Road and the land is bordered by Tates Creek – almost down to Valley View Ferry.
- US 27 needs 3 lanes in each direction!
- Don't think that crossing the river is an option due to environment and cost of the bridge.
- Plan to not cross the river, this could prove to be great for Jessamine and Madison Counties.
- We would love to add a bike trail along the route. There are few safe places to ride bicycles.
- Destruction of watersheds and rural ways of life in southern Fayette County.
- Preservation of the current beautiful land/farmscapes along this route; opportunities to develop the historically significant areas.

- It is always hard when you take land from farms and build roads on it. Unfortunately it is often necessary. Whatever happens, it seems imperative that if there is another road constructed south or east out of Jessamine County it must be Limited Access.
- This area is incredibly beautiful, and will be damaged forever with a connector road.
- I think we should seek to preserve the distinctive rural character of the surrounding environment.
- Many recreation areas close by are under-appreciated, such as the KY palisades at Highbridge, Herrington lake, Riney-B old rail line, arts, crafts, and antiques.
- Should be a divided highway with grassy burms, trees no gravel.
- Environment make the highway follow the river where appropriate so we can enjoy the beauty.
- There is a proposed 4 lane road from Nicholasville Bypass to Spears. Could extend due east to I-75.
- Iroquois Hunt country is in the study area in eastern Fayette County. This is a historic, cultural, and environmental resource worthy of protection.
- Innumerable small farms, scenic byways not marked.
- Do not ruin the KY River Palisades with a new road and bridge crossing!
- Straight roads for long periods are boring and dangerous. Over doing or having of (?) lighting invades visual privacy.
- Sometimes the environmental issues are too loud and not as urgent as some people would make them this connector would far more benefit the common man.
- The increase in the noise from traffic has greatly increased in the Adam's Place neighborhood, not to mention the houses and Caleast. Awareness for bike and the safe usage of bikes on these roads is also a concern. Increased traffic and speeding as always a concern.

5) Please discuss any other issues you would like to have considered in this study.

Connectivity:

- Connection through Woodford County. Why should Jessamine be the only consideration for this beneficial development, regardless of horse farms.
- Will this project effect the Eastern Bypass Project and possible future connector to US 68?
- Madison County needs another way out due to Army Depot and terrorist threats.
- Connect Richmond, KY to Nicholasville.
- Consideration should be given to extending this road from Nicholasville to I-64 in Woodford County.
- Connectivity directly to Richmond.
- The possibility of extending it to also serve US 68.
- The traffic between Nicholasville and Lexington needs to be reduced; access to I-75 from south side of Jessamine near bypass and connect with I-75 at Richmond connector. This will assist with safety concerns and equalize traffic flow.

Vehicle Safety:

- Safety!
- The noise impacts and traffic impacts for the local roads has greatly increased. Safety factors at Caleast and 52 need to be evaluated, and consideration for the safe usage of bicycles.
- The traffic between Nicholasville and Lexington needs to be reduced; access to I-75 from south side of Jessamine near bypass and connect with I-75 at Richmond connector. This will assist with safety concerns and equalize traffic flow.
- Reduce number of accidents / fatalities from too narrow roads and trees!

Traffic Congestion:

- Most economical and relieve traffic in Fayette County.
- Limited access entire length of the road.
- Traffic volume
- Make connector limited access / controlled access interchanges only at major highway crossing; consider toll charge to fund project.
- Need full access control.
- Prefer limited access.
- The traffic between Nicholasville and Lexington needs to be reduced; access to I-75 from south side of Jessamine near bypass and connect with I-75 at Richmond connector. This will assist with safety concerns and equalize traffic flow.
- See above #2. Also, would like to ensure that the new bypass for Nicholasville is limited access with on/off ramps only no traffic lights.
- Reduce traffic on 68 27 Nicholasville and Lexington.

- Limit development of business along road. Slows traffic.
- Restrict access to the highway and no development.
- I still think your money is going to be better spent solving the larger problem of access to downtown Lexington, it seems that this would take a lot of the pressure off of the roads already there.

Economic Development:

- Ways to limit development along corridor.
- This connector is the most important for Jessamine and Garrard County growth in a decade.
- Promote growth and commerce in southern Jessamine County with Richmond to Danville.
- Limit development of business along road. Slows traffic.
- Restrict access to the highway and no development.

Homeland Security:

• Madison County needs another way out due to Army Depot and terrorist threats.

Other:

- Please leave enough shoulder and/or create a bicycle lane for cyclists.
- Please see my oral comments sheet by court reporter.
- Please include alternative transportation (bike/ped) in the project.
- Jessamine County Comprehensive Plan
- Incorporation of this project into a Master Regional Plan.
- Clear improved signage along roadway, wide shoulders and some "pull-offs" to allow tourists to rest and to capture the beauty of the landscapes.
- Please be sensitive.
- Excellent time to start an adjoining trail for other forms of transportation and exercise. This could be huge tourism wise for the area. I am ashamed and disappointed that we are way behind our neighboring states in these kind of trails, in fact we have so few of these trails we rank worse than 45th of 50 states.
- If possible, this connector if deemed necessary to build should be located in areas that are not close to prime agricultural operations or possess prime agricultural soils.
- I live in this area because I enjoy the country environment. I believe too many farms would be impacted. Farmland is already becoming too expensive for new farmers to afford.
- Condemn farm owners land to make this happen.
- Needs of Jessamine County.
- Building of a dam along KY River for water use and recreation.

- Timeline versus population growth i.e. the access is necessary now and later.
- None
- Preservation of existing landscapes / farms which are becoming rare and increasingly valuable as a tourism item.
- Regional planning is needed for the entire Bluegrass area, not just the needs and wants of Jessamine County.
- 1) Landscape, landscape, landscape with as many indigenous trees to Kentucky (red bud, tulip poplar) but have are the majority of foliage evergreen and not the ugly ones. 2) Halien Boxwood allowed to grow naturally staggered and in groups are pretty. 3) Along roadsides plan indigenous day lilies (orange). 4) Financial concerns contact garden clubs and women's fun clubs to help take (?) care.
- The possibility of a dam across the KY River would provide tourism and recreation on the lake as well as a good water supply for the region.
- Why not use either northern Garrard or southern Fayette?
- I believe the southern border of the study north up to Chrisman Mill area should be studied river access for a bridge should be considered in that area.
- I am concerned about the 5 mile radius effect that a highway has on adjacent land. I am especially concerned about Raven Run Nature Sanctuary and the Girl Scout Camp.
- Note, this is not a comprehensive list: 1) Fayette County's Purchase of Development Rights Program; 2) Conservation Easements; 3) Historic Register Properties; 4) Rural Settlements; 5) Small and Large Equine Operations including Champagne Run & Iroquois Hunt Club; 6) several vineyards; 7) three existing retail / ag endeavors (Botanica, Kelley Farms, Jean Farris Winery and Bistro); 8) destruction of the Preservation Area; and 11) Raven Run Nature Sanctuary.
- This is the time we must act. Property values continue to increase.
- None, just do it fairly and appropriately.
- None
- Destination study I do not feel a need study can be done without tracking where the traffic on US 27 is going.
- The aesthetics of the road and bridge must be considered. We do not need another cheap-aspossible project.
- Damming KY River upstream at Dix River.
- Positive impact on housing market in Jessamine County with access to major highway; positive impact on land values (public and private).



6) In your opinion, is a new highway needed to connect US 27 to I-75 (check one)

7) Why?

The following are the responses from the people who checked "Yes"

Connectivity:

- We need to get to I-75 without going through Fayette County. We need it for Homeland Security.
- To ease the traffic on US 27 and provide a quicker access to I-75.
- Ease of access to other communities in the surrounding area.
- Well, as they say, you can't get there from here. Going north to Lexington is the only viable option when going to Jessamine County.
- There is no way for Wilmore and Nicholasville to reach the interstate except winding back roads or busy Lexington streets.
- No good access to I-75 without going back to Lexington or going several miles south.
- Jessamine County needs a corridor of access to I-75 without the congestion and hazards of existing routes.
- Access to interstate for county north of Lexington and south Lexington.
- Alternative access to I-75.
- We need better connections of our roads with more access roads to I-75 which a connector from 27 will provide.

- Connecting Hwy 75 from the south of Nicholasville will enhance the region 1) access, 2) beauty, 3) security, 4) tourism. (South of Nicholasville not north)
- Presently from Jessamine County have to go Man-O-War to Richmond Road in Lexington to get to I-75 (unless you know all the back roads I tend to get lost trying to remember that way!).
- For the reasons that initiated the study as well as providing a connection of Nicholasville to Richmond. Replace ferry with bridge.
- To serve Jessamine County / northern Fayette County and all counties south, giving them ease with a direct route to interstate.
- Access to highway for travel, vacation, business, convenience, progress.
- The lack of reasonable access of Jessamine County to I-75 is overdue.
- Prevent traffic jams on US 27 access to Toyota.
- There is no easy way to get to 75 from Nicholasville. If we want future economic and business development we need to be connected to 75.
- Traffic movement, connectivity between major highways.
- Improve traffic flow on US 27 connect Jessamine, Garrard to I-75.
- We must provide access to I-75 from Jessamine County and western portions of Fayette. It is imperative that we have an alternate route if something ever happened to the Clays Ferry Bridge.
- 1) Alternate routes to south and east of Lexington. 2) Economic impact needed for Jessamine County. 3) We need more ways to "get there from here" (especially for trucks).
- This would play a part in redirecting traffic that would otherwise flow into Lexington and hence, alleviate some traffic woes.
- A safer and quicker way to connect to I-75 from Jessamine County. Would not have to drive through Lexington or south on US 27.
- Southern access to Lexington to pull traffic out of Nicholasville south.
- Need access to I-75 without going into the Lexington / Fayette County.
- 1) Traffic Control; 2) Easier for Jessamine Residents to Access I-75; 3) Development of East Jessamine County.
- It takes a long time to reach this area of Kentucky and makes it difficult to travel there on a regular basis. The connector road would bring faster travel which would allow businesses to open up or for people living in that area to more easily commute to businesses in other areas.
- Improved access and safety.
- Lack of east-west and county to county access in Jessamine and Madison County. Richmond and Nicholasville need direct access to each other to enable vitality in the southern (relative to Lexington) area of Bluegrass.
- To better service business and industry as well as commuters.
- Direct access to 75 instead of traveling thru Lexington's Man-O-War. Economic development for Jessamine County.
- Traffic from Garrard, Lincoln, Mercer, and Boyle Counties traveling to Lexington goes through Nicholasville.

- To provide more direct access to I-75 from a cluster of Central KY counties that does not presently exist; and to assist on alleviating existing and future traffic problems on US 27, and to some extent, US 68.
- Access for Jessamine County to I-75; improved safety.
- I think it needs to be the first phase of an outer loop around Lexington connecting I-75 to US 27 to US 60 (airport / Keeneland) to I-64.

Vehicle Safety:

- Economy, safety, time, and gas savings.
- Jessamine County needs a corridor of access to I-75 without the congestion and hazards of existing routes.
- Ease of access for community and business interests. Improved safety on 27.
- Equalize traffic flow for safety concerns and provide an additional bridge, perhaps you can obtain Homeland Security funding to assist with development.
- With the increased development of this area, this connection will provide much needed relief and safety.
- At present, the way many people take to I-75 goes by our house at the corner of Logana and Union Mill to Jacks Creek and Richmond Road to exit 99 or to Athens. These roads are curvy and not well banked and are dangerous. A new highway would be much safer especially if it has 4 lane and limited access.
- A safer and quicker way to connect to I-75 from Jessamine County. Would not have to drive through Lexington or south on US 27.
- The present routes are dangerous because they are curvy and narrow at best. A safer route can be driven already by going north (Lexington) and south (Nicholasville and Harrodsburg) but it would be shorter and more convenient to go east and west.
- All of the above, travel time, safety, development, and the creation of another water source for central KY.
- Improved access and safety.
- Improve traffic safety, help move products, help local economy. May bring in more businesses.
- Convenience, safety, economic development.
- Access for Jessamine County to I-75; improved safety.
- For faster and safer travel to 75 and reduce traffic on 27.

Consistent Travel Times:

- Economy, safety, time, and gas savings.
- Save travel time improve truck access improve community access to I-75 reduce congestion on US 27 and Man-O-War (and maybe on KY 4).
- My travel to southbound I-75 is very limited we need to reduce the traffic travel time to 75.
- All the issues above make it clear that this connection is important. Evacuation routes, improved truck routes, and consistent travel times are crucial.
- Traffic in Lexington and from Nicholasville to Lexington continues to increase causing increasing time for traffic from Nicholasville and counties south of here to reach I-75 / I-64. This connector is about 5 – 10 vears past due.

- All of the above, travel time, safety, development, and the creation of another water source for central KY.
- It takes a long time to reach this area of Kentucky and makes it difficult to travel there on a regular basis. The connector road would bring faster travel which would allow businesses to open up or for people living in that area to more easily commute to businesses in other areas.
- The present routes are dangerous because they are curvy and narrow at best. A safer route can be driven already by going north (Lexington) and south (Nicholasville and Harrodsburg) but it would be shorter and more convenient to go east and west.
- For faster and safer travel to 75 and reduce traffic on 27.

Economic Development:

- Business community access to I-75 to continue to promote economic development.
- South Jessamine / Garrard need better access to interstate from a business standpoint. This could remove a large number of semis from traveling through Lexington just to get to the interstate. I would guess a few hundred per week.
- 1) Alternate routes to south and east of Lexington. 2) Economic impact needed for Jessamine County. 3) We need more ways to "get there from here" (especially for trucks).
- Ease of access for community and business interests. Improved safety on 27.
- The traffic off US 27 close to Lexington and Man-O-War; develop south Jessamine County.
- Traffic flow and industrial development.
- There is no easy way to get to 75 from Nicholasville. If we want future economic and business development we need to be connected to 75.
- Access to highway for travel, vacation, business, convenience, progress.
- Development and ease of traffic flow.
- To make Nicholasville and surrounding communities more attractive to industry and also for residency.
- Only for those hopping south east and for commerce.
- Economic development, improve congestion.
- Ease traffic congestion; create a more desirable area to live, boost economic growth and property values.
- Economy, safety, time, and gas savings.
- A futuristic approach to traffic and business opportunity rather than waiting until it is too late to accomplish.
- Need to vastly improve truck and commuter traffic on 27! By the time it is finished traffic will be at standstill! Jessamine needs the growth.
- 1) Traffic Control; 2) Easier for Jessamine Residents to Access I-75; 3) Development of East Jessamine County.
- It takes a long time to reach this area of Kentucky and makes it difficult to travel there on a regular basis. The connector road would bring faster travel which would allow businesses to open up or for people living in that area to more easily commute to businesses in other areas.

- Business, homeland security, economic development.
- Growth of this region.
- Direct access to 75 instead of traveling thru Lexington's Man-O-War. Economic development for Jessamine County.
- Traffic congestion, Clays Ferry alternative, economic development.
- It will help on our downtown traffic and bring in new industry.
- Improve traffic safety, help move products, help local economy. May bring in more businesses.
- Convenience, safety, economic development.
- Jessamine County is cut off from major interstate system and I feel that an interstate connector would increase economic development.
- Growth and expansion of business (commercial and industrial) in Jessamine County is needed to maintain growth in Nicholasville.
- Convenience and will improve commerce.
- Lack of east-west and county to county access in Jessamine and Madison County. Richmond and Nicholasville need direct access to each other to enable vitality in the southern (relative to Lexington) area of Bluegrass.
- Access to I-75, I-64 is vital to continue the economic development of Nicholasville. US 27 has become congested to the point that a new highway is desperately needed to divert traffic.

Traffic Congestion:

- The amount of traffic it could save traveling 27 to Lexington thru to I-85 should justify this road.
- For faster and safer travel to 75 and reduce traffic on 27.
- Traffic from Garrard, Lincoln, Mercer, and Boyle Counties traveling to Lexington goes through Nicholasville.
- To provide more direct access to I-75 from a cluster of Central KY counties that does not
 presently exist; and to assist on alleviating existing and future traffic problems on US 27, and to
 some extent, US 68.
- Access to I-75, I-64 is vital to continue the economic development of Nicholasville. US 27 has become congested to the point that a new highway is desperately needed to divert traffic.
- Evacuation routes in addition to the current routes over the KY River at Clays Ferry, Valley View and at Boonesbourgh; Possibly reducing some of the traffic off I-75 between Madison County and Fayette County.
- To facilitate regional traffic congestion. Also to provide an alternative river crossing.
- Traffic congestion, Clays Ferry alternative, economic development.
- To assist truck / tourist traffic helping reduce thru traffic off of already congested roadways.
- To ease the traffic on US 27 and provide a quicker access to I-75.
- To get traffic off of 27 north.
- To lessen congestion on US 27.

- A futuristic approach to traffic and business opportunity rather than waiting until it is too late to accomplish.
- Save travel time improve truck access improve community access to I-75 reduce congestion on US 27 and Man-O-War (and maybe on KY 4).
- My district is growing rapidly at the Boonsboro and Clays Ferry exits. This would give my people another way to escape some of the traffic as well as make business travel between the counties better. A great number of trucks could bypass Lexington with this road.
- 27 is over loaded.
- Relieve the terrible traffic congestion.
- Need to vastly improve truck and commuter traffic on 27! By the time it is finished traffic will be at standstill! Jessamine needs the growth.
- Traffic movement, connectivity between major highways.
- 1) Traffic Control; 2) Easier for Jessamine Residents to Access I-75; 3) Development of East Jessamine County.
- It will help on our downtown traffic and bring in new industry.
- Jessamine County needs a corridor of access to I-75 without the congestion and hazards of existing routes.
- Amount of traffic volume.
- Limit traffic congestion.
- US 27 traffic is total gridlock going into south Lexington.
- Development and ease of traffic flow.
- Improve traffic flow on US 27 connect Jessamine, Garrard to I-75.
- Reduce US 27 and Lexington traffic; industrial access.
- Traffic congestion.
- To help with north and south flow of traffic through Nicholasville.
- Traffic in Lexington and from Nicholasville to Lexington continues to increase causing increasing time for traffic from Nicholasville and counties south of here to reach I-75 / I-64. This connector is about 5 – 10 years past due.
- With the increased development of this area, this connection will provide much needed relief and safety.
- This would play a part in redirecting traffic that would otherwise flow into Lexington and hence, alleviate some traffic woes.
- Increased traffic in Lexington make I-75 access quite slow.
- New Circle and Man-O-War are both full and the population is still growing.
- Reduce congestion accessing I-75 via Lexington, and other back roads leading to I-75, i.e. Jacks Creek to Hwy 25.
- A safer and quicker way to connect to I-75 from Jessamine County. Would not have to drive through Lexington or south on US 27.

- Economic development, improve congestion.
- Southern access to Lexington to pull traffic out of Nicholasville south.
- Ease traffic congestion; create a more desirable area to live, boost economic growth and property values.
- US 27 and Nicholasville suffer from sever gridlock.
- Traffic flow and industrial development.
- The traffic off US 27 close to Lexington and Man-O-War; develop south Jessamine County.
- Prevent traffic jams on US 27 access to Toyota.

Improved Access for Truck Traffic:

- Evacuation route would be overload in the event of emergency with roads the way they are presently. Also importing and exporting products are very important.
- Save travel time improve truck access improve community access to I-75 reduce congestion on US 27 and Man-O-War (and maybe on KY 4).
- To assist truck / tourist traffic helping reduce thru traffic off of already congested roadways.
- My district is growing rapidly at the Boonsboro and Clays Ferry exits. This would give my people another way to escape some of the traffic as well as make business travel between the counties better. A great number of trucks could bypass Lexington with this road.
- Need to vastly improve truck and commuter traffic on 27! By the time it is finished traffic will be at standstill! Jessamine needs the growth.
- Reduce US 27 and Lexington traffic; industrial access.
- All the issues above make it clear that this connection is important. Evacuation routes, improved truck routes, and consistent travel times are crucial.
- South Jessamine / Garrard need better access to interstate from a business standpoint. This could remove a large number of semis from traveling through Lexington just to get to the interstate. I would guess a few hundred per week.
- 1) Alternate routes to south and east of Lexington. 2) Economic impact needed for Jessamine County. 3) We need more ways to "get there from here" (especially for trucks).

Homeland Security:

- Business, homeland security, economic development.
- We need to get to I-75 without going through Fayette County. We need it for Homeland Security.
- The thought of something happening to the Clays Ferry Bridge we definitely need an alternate route.
- National security.
- Alternate river crossing.
- To facilitate regional traffic congestion. Also to provide an alternative river crossing.
- Traffic congestion, Clays Ferry alternative, economic development.

- Evacuation route would be overload in the event of emergency with roads the way they are presently. Also importing and exporting products are very important.
- Wrecks on I-75 there is no way to get across river to the west.
- We really need another bridge across the river.
- Evacuation routes in addition to the current routes over the KY River at Clays Ferry, Valley View and at Boonesbourgh; Possibly reducing some of the traffic off I-75 between Madison County and Fayette County.
- Connecting Hwy 75 from the south of Nicholasville will enhance the region 1) access, 2) beauty, 3) security, 4) tourism. (South of Nicholasville not north)
- All the issues above make it clear that this connection is important. Evacuation routes, improved truck routes, and consistent travel times are crucial.
- Equalize traffic flow for safety concerns and provide an additional bridge, perhaps you can obtain Homeland Security funding to assist with development.
- We must provide access to I-75 from Jessamine County and western portions of Fayette. It is
 imperative that we have an alternate route if something ever happened to the Clays Ferry
 Bridge.
- Increased evacuation routes from Richmond area very important. Opportunity to incorporate a
 much needed bicycle/pedestrian greenway with the creation of a new road. Richmond needs a
 bypass covering the western side of the city. The county roads on the western side of Madison
 County are very curvy and narrow with no shoulders. Bicycle/pedestrian safety needs to
 become a priority.

Other:

- If the Bluegrass Region is going to continue to think and plan regionally and have regional cooperation this is a necessity. This project will help Fayette County as well as Jessamine, Garrard, etc.
- A study is needed and is beginning we don't yet know all the details to know the whys and wherefores.
- For future growth / planning.
- Because it is overdue.
- Jessamine, Garrard, Boyle
- The existing system of roads to and from the interstate and Nicholasville is very sub-standard. Any improved access would do wonders to the viability of the community.

The following are the responses from the people who checked "No"

- I oppose the concept of a connector road from I-75 to US 27 for the following reasons:
 - At present and into the future Jessamine County is guaranteed steady and predictable growth from the development potential that it has. This connector will not enhance that opportunity and will discourage it to a large degree.
 - Jessamine County is severely lacking in local transportation infrastructure to safely support the current traffic and growth that it has. All county roads are in need of widening plus the addition of shoulder space to make passing safer and in a lot of cases actually possible. Many one lane bridges still exist making for dangerous conditions for the greatly increased volume of traffic that is not familiar with these local roads. This connector will not address this need and will only make it far worse into the future due to the increased traffic flow that will be funneled into the county.
 - Due to its' location, Jessamine county has the opportunity to continue to attract "clean" industries such as the medical industry that is growing and flourishing at present. The kind of industry that a connector will possibly attract will not be of the same benefit to the county, plus the sustainability of those industries over the long term is very doubtful considering the nation trend to locate major concerns "out of country". There are apparently large portions of land that are already available along our present interstate system that are underutilized. It does not make sense that industry will suddenly want to locate here once we have this new connector.
 - There is apparent concern that some of our present industry will leave if this connector is not built. I don't follow this concern. The connector was not here when they located here. They are currently meeting their contractual obligations to their customers and any company of a worthy status will continue to find ways to do so. By the time this connector is built, a company with this concern will have already moved on anyway.
 - The integrity and the core values that make people want to move here and live here will be greatly diminished with the addition of this connector into the confines of our small borders. Once again, with the abundant opportunity for growth and development that exists here today and into the future, it seems ridiculous to do anything that will impede that potential.
 - Will add to traffic problems, alter character of county, will not guarantee quality business growth for county.
 - Right now the concern is for safety, security, etc. Actually, this would be a vehicle for development ala New Circle Road. The history of both Fayette and Jessamine development has been one of taking the generated revenue now, let someone else worry about the repercussions down the road.
 - Nicholasville would lose the small community advantages. Most areas in surrounding counties have similar distances to get to I-75.
 - The rate of growth in Jessamine County has been in the highest category for the state for the last 10 years running (without a connector). The explosive rate of growth accompanying a connector will effectively cripple the Lexington base and infrastructure here. The increased traffic will bring US 27 from Nicholasville to Lexington to a standstill. The character of traffic on US 27 will also change to large truck traffic and away from cars increasing the driving hazards.
- We need to limit conversion of Bluegrass to pavement. We have a truly unique landscape here and we need to treat it as our most valuable resource. Our current roads have established growth corridors that are not yet fully developed. We don't need another one yet. Maybe in twenty years, but not yet.

- It can be done by fixing the mess of roads in Fayette County.
- It appears the major problem is the traffic and commuting between Nicholasville and southern Lexington – getting to the Fayette Mall area and on into the UK and downtown area. To me, that is the issue that needs addressing. What percentage of people in Nicholasville / Jessamine County is actually trying to get to I-75? It seems like it would be a minimal percentage as compared to hose just trying to travel to and from Nicholasville and Lexington dealing with 27. Perhaps widening and having service roads seems like a better project to target.
- Existing route is adequate.
- The highway is NOT needed because it would have a negative impact on Jessamine County by developing and opening up for development to much land. It would have a detrimental impact on our quality of life and would overtax our schools and other services.
- It could impact the farmlands and residential areas.
- Jessamine County's uncontrolled growth, lack of adequate comprehensive land use planning, unenlightened public office holders, and local chambers of commerce are Jessamine County problems. Contiguous counties should not be asked to provide support, land, decreased quality of life, environmental degradation, loss of farm land, damage to existing horse and agricultural business for Jessamine County's self-made problems. One only need look at US 27 from the Fayette County line south to verify emphatically why this new highway is not justified.
- Simply put, I think it will put more traffic on an already over-pressured US 27 from Nicholasville all the way north to Campus.
- If we don't find some alternatives to peak oil use, such highways will be moot in several decades.
- Who wants this? And Why? Do they have their own issues or the public permanent good at heart. Lexington mass may have been needed and good idea at one time. Empty ours.
- Existing roads that are scheduled for widening (US 27) can be used to reach I-75 from Jessamine County.
- I live in Madison County and do not travel west for much of anything, and do not know many people that come from that way. All I see a new highway doing is destroying farmland and creating noise.

The following are the responses from the people who did not check either.

- Not sure, am not thoroughly convinced.
- I am a resident of Fayette County and only occasionally have a need to get further south when the traffic is a problem. While I realize roads are necessary evils, larger ones bring more congestion and eventual heartache unless no development is permitted witness the Nicholasville bypass. We also need to be aware that people would also like to be pedestrians and bicyclists as a form of transportation. Don't forget us!
- Only if the connector will relieve the burden of traffic connecting Nicholasville to Lexington.
- I am not convinced that a connector is needed between US 27 and I-75. This is a regional issue and all counties in the region just not the study area need to be consulted as to the economic impacts created by the proposed connector and if this transportation project should have top billing in a list of transportation priorities for the region.

8) If you think a new highway is needed, what are the MOST IMPORTANT goals for the new highway? (check all that apply)



Notes:

• One respondent wrote in the following: Speeders – enforce law first.

Other respondents wrote the following: Homeland Security Issues; Security; Water Source; Least Disruptive to Existing Homes / Businesses; Don't Know that One is, But if it is, Least Cost and Least Environmental Damage; Easier Travel from Nicholasville to Richmond; All of the Above; If built, must enhance the environment of the impacted area.

9) Please provide any additional comments you have regarding the study.

- If a connector road is what is being proposed, then let's have a connector road only. Restricted access imposed on this road would allow it to serve in the capacity as proposed. To allow further development along its route would create a whole new set of problems. With restrictions, traffic congestion could ease, access for trucks improve, security concerns be solved, and Jessamine would not have to bear the brunt of more of Fayette's lack of wisdom in its development. Jessamine has its own character. It is not Fayette. It seems as if folks move to Jessamine, appreciate its simple ways of life, and then want to mold it into the type of community they had just fled from. My gut feeling is that the route has already been chosen the deal has been struck. This request for input is just an attempt at a "feel good" exercise for the residents but more importantly for those dealmakers who feel guilty.
- I would prefer route to bypass Fayette County completely as the impact would seem greatest in southern Fayette County and greatest opposition would be from that area. The route following the old Riney B Railroad (from Irvine to Frankfort) would be the most direct route and right-of-way issues may be the least in that area. Would prefer this project to enhance the East Bypass around Nicholasville and not cause delay in that project.
- Anything that would ease traffic (trucks commercial) on US 27.
- The connection should be a fully control access facility. The corridor should begin on US 27 north of Nicholasville and connect to I-75 north of the river with a new interchange. The only connections to the new route would be at US 27, Tates Creek Road and I-75.
- My main concern is that this is not, or ever, constructed along US 169 (Union Mill Road). I have drawn on the map my route suggestion south of Logana, tying into Easter Bypass and Valley View.
- Appreciate the opportunity to respond.
- Please send some copies of the study area map to share with neighbors who could not attend.
- The Valley View Ferry should be saved due to its historical value as well as the community of Valley View. We now are carrying 300 to 500 vehicles a day and it will only increase in time. We need a bridge! We need another access for this working traffic to eliminate Lexington if they so choose. – Roger Barger, Chairman Valley View Ferry, Magistrate District 2, Madison Court. Note: I need a map like the ones on display (that were drawn on) only smaller, but not as small as the one on the front of this cover!
- Jessamine County's major income is farm related. More farmland lost would not help. Young or new farmers will have a harder time finding land and affording it with more farmland being divided or lost.
- We need the help and attention of the federal highway department. This is a corridor that needs the support of our MPO. Asbury College and Asbury Theological Seminary would benefit from an I-75 connector.
- Time is of the essence. Jessamine County is growing at a pace that ranks it high in Kentucky for growth. Please consider a cost-effective timeline weighing the county's growth and the resultant need for the I-75 connector in this decision.
- The time for action is now the objection of a few can't continue to outweigh the need of the majority.
- Can't wait need now.
- Needed now!

- The longer we wait the more expensive and more difficult this will be.
- Dam could also be a significant source for hydro-electric power (inexpensive green energy).
- I would like to see this project coordinated with our water supply issues. The Kentucky River belongs to central Kentucky. We of central Kentucky should claim it and use it for ourselves. Water will soon be as precious as oil!
- My most important concern is not extending a corridor over to US 68 and the west portion of Jessamine County. Those of us who live in this area have no interest in seeing our area developed like the US 27 corridor. Nicholasville wants this road, not Jessamine County. A northern route would encourage greater development density closer to Lexington, which would preserve more Bluegrass. However, this does nothing to help traffic get from Nicholasville to I-75 south. A southern route would be harder to extend towards Versailles, which I do not want. Please just stay away from Valley View.
- I think that if a connector is needed as decided by the majority of Jessamine County residents if should be as close to Fayette County as possible as this is the highest traffic and shortest route (lowest cost). No bridge is needed over the KY River as the ones in place are adequate.
- Please, no stoplights or non-highway access. Reasons: safety, efficient travel times. I'm less concerned about the cost of a bridge than taking a less than ideal route to avoid building one. An extra bridge might be very important one day, and you'll be our heroes if we build one. A southern route makes the most sense. Those living near Lexington don't feel the inconvenience as much and property nearer Lexington will be more expensive.
- I fully support his feasibility study and sincerely hope the connector comes to fruition. Its obviously much needed and the positives far outweigh the negatives. As stated on the flipside please give consideration to cyclists and recreational users as well.
- Will the road be limited access or not? If limited, where would connectors be?
- When the proposed Eastern Bypass was first announced, my elderly parents were dismayed to learn that the north junction interchange was going to be in their front yard. They spent their last years concerned about losing their home. My mother died in March 2002 and my father in March 2003. It is now November 2007, and not a single acre of right-of-way has been purchased. Someone in Frankfort needs to decide whether or not they are going to build these roads and just quit teasing people.
- The I-75 connector needs to connect with the proposed Eastern Bypass. A route from Nicholasville should go to Madison County via a new Kentucky River bridge. This bridge would be worth its weight in gold should something happen to the Clay's Ferry Bridge. There should also be a corridor from the Jessamine County end of the bridge back to I-75 in Fayette County, so the new bridge could be a direct alternative route to bypass Clay's Ferry.
- I don't want this road to be built to draw more sprawl and more traffic to this corridor. If built, it should be very limited access and be built only if landowners through which it would travel are accepting of it through their farmland.
- I think it is long overdue.
- The area is getting to a point that US 27 can not handle the present traffic!!
- I think the connector should be south of the KY River on US 27. Benefits 1) Less expensive than building another bridge similar to Clays Ferry. 2) Would allow economic development in Garrard and Jessamine. 3) Should study possibility of new dam on KY River to supply all of central KY with water and perhaps a state park in conjunction with the Camp Nelson Park.

- A southern connector may be better in that it could avoid more developed areas especially in southern Fayette and northern Jessamine. Please be careful to avoid parks and wilderness preserves. I desire a high-speed road with minimal slow downs to connect to I-75. It would also be preferred to have a beautiful one, such as the divided roads like Paris Pike or US 60 between Versailles and Frankfort.
- We need something to improve traffic flow and congestion.
- Ideally this should be a limited access road. Traffic movement should be the main design criteria.
- No matter what you decide to do or not do, you will offend someone. The road network that would be the most fair would be the most impossible to build in a democracy. The best that's actually possible is to find something that 51% of the voters are willing to cram down the throats of the other 49%. This road needs to be close enough to take through traffic out of built up areas, but still far enough out in the country that opponents will be spread relatively thin. If there is any doubt about what side is really the majority, hold a referendum.
- My understanding is you are considering two connectors; this one and one to Garrard County. Much better to have a single road avoiding a Kentucky River crossing and meeting 27 just south of the river. This would accommodate traffic both to Nicholasville and Lancaster at much lower cost and less damage to the environment.
- This connector should accomplish 3 goals: 1) Connect US 27 to 75; 2) Connect US 27 to Richmond; 3) Provide an additional bridge across the KY River. Also, I would prefer a New Circle high speed road with limited access to a Man-O-War Road any day of the week.
- There is already an adequate access to I-75 from Nicholasville by traveling 169 Spears Road, Jacks Creek, Old Richmond Road to I-75. I don't think it takes any longer to get to I-75 from Nicholasville than areas of Fayette County.
- Why not connect the interstate farther south into Garrard County just south of the river to the US 27 bridge.
- Follow 169 to old railroad, go straight to river, put in bridge, follow Tates Creek to I-75, with 4 lane road and limited access.
- Central KY has the best farmland in the country and it needs to be preserved as much as possible. Turning the entire area into shopping centers, businesses and housing is not in the best interest of the people long term. We already have smog problems in the summer. Additional traffic will make it worse. There is not enough criteria given to make sound input on this issue.
- Divert traffic away from Fayette County.
- Get as much participation from knowledgeable citizens of the areas being considered. Now is the time to get this done before more areas are developed and there are less areas to go through.
- Would prefer route along 169 in Jessamine County and eliminate the ferry. At a minimum chose a route that will upgrade an existing route 169, Chrisman Mill.
- I agree with this project and feel it is needed.
- This road should be a limited access road. Nothing like our present Man-O-War where you have a red light and have to stop at every intersection. It should be designed to move traffic safely and efficiently. All businesses should be on side roads with one big interchange (not red lights) to service them. A large connector road (169, Catnip Hill) should be improved if it cannot be extended to US 68.

- The route needs to connect Nicholasville and Richmond directly. A 'southern' route that is south
 of Tates Creek would do this. The route should assume a strong flow of traffic from the 169 feed
 on the west side. A good connector will increase traffic flow on 169 from the MLC Parkway and
 I-64 via US 60-33-169. The target physical design should be similar to US 27 south of
 Nicholasville. Not interstate but divided and constant flow (no lights). The regional design
 should be similar to US 460 connecting Versailles, Nicholasville, and Richmond.
- This road needs to be very limited access with an entrance on the Eastern Bypass and on I-75 with an on/off ramp at Tates Creek Pike I do not believe we need a river crossing due to cost and added regulations required from the Corp and other federal agencies (Wild Rivers Act).
- While I recognize that most people in Jessamine County likely would or need a connector to I-75

 I also feel that it should be their land that is used to accomplish that. Fayette County has enough highways through and to it helping all the commuters get to work there. How about public transportation and a hook up with I-75 to the south. Rather than recommend a route I especially do not want anything to destroy Spears and the adjacent camps as well as going anywhere near Raven Run Nature Sanctuary and Floracliff Sanctuary. All treasures that we need to protect and preserve same goes for the Palisades which should have been protected long ago.
- The past roads were built with a short view of the future (Man-O-War). Let's build for the future 20 30 years out.
- Glad you're doing it!!!
- Thank you for asking for input!!
- I pray for the families of those who have lost loved ones on the back roads between I-75 and 27

 there are too many crosses on trees on these byways. I also pray this will occur in my lifetime
 (and that I also will not find one of those trees!).
- Improve highway safety for Jessamine County residents.
- Things to consider:
 - Limited access, but plan for business and residential growth by incorporating "parallel side road for business locations etc.
 - Rout should be off of Nicholasville southern by-pass or new eastern by-pass to go to the Richmond area @ 75, also should be planned for future connection to BG parkway, should cross Kentucky River so that we can divert traffic away from Clays Ferry if needed.
 - Should work with Lexington airport board about moving airport to this area.
- The shopping center at Hamburg Place, at the I-75, Man-O-War intersection draws a lot of traffic. Customers and workers in and at that shopping center from Garrard, Lincoln, Mercer and Boyle Counties and others to the south must travel through Jessamine County along US 27 to Man-O-War. The Fayette Mall also draws traffic. An easier alternative is very much needed.
- I believe in order to be effective; this connector must be sufficiently south of New Circle and Man-O-War to make it a practical alternative, but not so far south that it is an inefficient option for most Jessamine Counties. I believe the likely best point of access is just north of Raven Run. I believe this is an important undertaking but is second in precedence to the construction of the long overdue Eastern Jessamine / Nicholasville Bypass project.
- If DOT and others proceed with this superfluous road plan, you will be met with the mother of all opposition from influential, wealth, and politically connected members of our community. This may be considered as a warning to cease this foolishness.

- I think the Department of Transportation should expedite this project to the highest level. As Central KY grows, the connector road will be a critical link in future planning. This is not a project that can be put off for another 10 years.
- Thanks for this opportunity.
- Thanks for considering other forms of transportation along this proposed route.
- It should go from the bypass interchange north of Nicholasville to an interstate exchange just north of the 2 parks on the eastern end yet south of the city housing developments.
 - 1. No river crossing.
 - 2. No park destruction.
 - 3. Minimum housing destruction.
 - 4. No commercial destruction.
 - 5. Opens both housing and commercial land.
 - 6. Minimum farmland consumed.
 - 7. Keeps traffic out of Nicholasville.
 - 8. Eventually easy cross to 68.
 - 9. Reduces traffic on Man-O-War and Circle 4.
- The highway way should connect south of Nicholasville and connect and the north or south interchange of Richmond. If any major county roads are crossed, then you should be able to enter / leave the highway at those points. This would give more accessibility to the local areas affected by the highway.
- Would cut travel time to I-75 from Jessamine County, thus cutting gasoline usage; Would cut traffic through Fayette County to I-75; Would allow commuting to work in Richmond and attending EKU convenient; Improved truck traffic would help business and industry along with save costs on fuel and time, might encourage new industry growth; Would like the route of connector highway to run from south of Nicholasville (from US 27) to one of the Richmond exits; Another bridge across the KY river is a necessity; Want to see highway design of 4 lane design with grass median and attractive plantings; No stop lights! No pedestrian or bike access!; We need this connector highway ASAP.
- The connector will also reduce fuel consumption and air pollution in this area. It will reduce traffic congestion and improve safety, saving lives. It will help counties south of Nicholasville improve economically, as well as Nicholasville.
- I know that in the end the easiest route with the least amount of cost will probably be the chosen one. I hope against hope that what is surely to be a busy highway will not lower my property values or cause the noise level to increase. Actually we are hoping the road will go somewhere else and the amount of traffic will lessen and we can sleep better at night.
- Possible highway path: from Nicholasville to Richmond.
- I feel the I-75 connector is long overdue and the sooner we get moving on it, the better for all concerned.
- The connector should start south of the US 27 bridge over the Kentucky River.
- Old study was done 10 years ago for proposed route. Is this another big waste of taxpayer money or will it be built? Be sure and publish website when it is up.

- I have sincere concerns about a potential connector going through eastern Fayette County an area with important and vital agricultural operations both equine and others, with extremely sensitive environments, with crucial historic sites and areas worthy of protection, and with established residential areas whose quality of life may be negatively impacted by a highway connector in the area. While I understand Jessamine County's interest in securing the connector for economic "development" purposes the region must soberly ask itself to what actual economic, environmental, and cultural endgame will it lead?
- 1) Please send me a listing of the project team members. 2) Please let me know who will be voting or working toward a conclusion and where / when. 3) Please notify me permanently of the meetings. 4) Would a presentation to the project team be possible?
- Why is the bridge at US 27 and the KY River not being considered for this study? US 27 is being 4-laned from Nicholasville to Somerset. Highways 52 and 150 are also being upgraded for easier access to I-75. Why not use these roads that are already in place or planned for upgrades? Don't destroy more of the Bluegrass so people can save maybe 10 – 15 minutes from a commute to I-75!
- I have one major concern and that involves the location selected for the US 27 to I-75 connector. I live in Equestrian Estates. W. Brannon Road is a collector thru our neighborhood that has become an inappropriate connector. My concern is it will be used even more if the new road is in the north part of the county (near Brannon Road and US 27). We already have large trucks (dump and concrete not working in our subdivision) cutting thru and also semi-trucks (18 wheelers) one even has spent the night like our neighborhood is a truck stop!!! I think it is very important that an appropriate connector for northwest Jessamine County be built in a nonresidential area where traffic could travel at 55 mph. Plans for this type road were on the Jessamine County Comprehensive Plan what happened to it? It started near Delaney Ferry, ran south of Southland Christian and eventually connected into Brannon Road near the RR tracks. This would be a much more appropriate road for all the speeding cars and trucks to use rather than going thru residential areas like W. Brannon Road. Thanks.
- (Not rated here with importance) 1) Keep "necessary" signage to minimum. 2) Keep county feel and townships with least amount of lighting necessary. 3) Careful thing to be done to get the cable, telephone, and electrical lines, etc. out of sight our towns and country areas are lighted within necessary "visual" business however, I am thankful for these inventions I am looking forward to this being solved someday but effectively and technically effective. 4) Landscape within a community of wealthy middle class and poor benefits all. Roads should in working neighborhoods not in creating sprawl. Please no sprawl.
- Nicholasville as we all know is a bedroom community to Lexington with the majority of our workforce traveling north. The counties south of us also contribute to this massive flow of traffic. I feel to relieve a great deal of this pressure the I-75 connector would be very beneficial. We have such limited road infrastructure in this area that locating the connector in Jessamine County would also move some of the traffic south from Fayette County. I would hope that the scenic beauty would be included between the lanes as well as the sides of the road. I also think we need the road for homeland security to have another route from the Clays Ferry Bridge. If there was anyway to include bike paths and walking trails it would be a significant bonus.

Public Workshop #2 Monday, June 16, 2008

US 27 to I-75 Corridor Scoping Study Jessamine, Fayette, and Madison Counties

The second public involvement activity for the US 27 to I-75 Corridor Scoping Study was held on June 16, 2008 in Richmond, Kentucky. The Kentucky Transportation Cabinet (KYTC), Bluegrass Area Development District (BGADD), PB Americas, Inc. (PB) and their sub consultants Third Rock Consulting (TRC), H. Powell and Company, Inc. (HPAC), and HDR, Inc. (the Project Development Team) had staff present to answer questions from the public. The purpose of the meeting was to present to the public the work completed thus far including project purpose and need, identification / development of potential corridors, and the evaluation process. Through an iterative evaluation process, the number of potential corridors was narrowed down to six prior to this meeting. These six final corridors (along with the no-build option) were shown to the public to request feedback as to which should be the preferred alternative. Additional input was also requested as to the number of lanes, treatment of access, bicycle / pedestrian considerations, and tolling as a potential funding source.

A total of 77 citizens signed-in at the meeting. The meeting was held in an open house format with no formal presentation. Informational boards were arranged around the room to illustrate the planning process. They included the following information:

- Welcome / Orientation
- Station 1: Study Background
- Station 2: Purpose and Need
- Station 3: Corridor Development and Evaluation History
- Station 4: Level 3 Corridors
- Station 5: Typical Sections
- Station 6: Funding Options

A Frequently Asked Questions (FAQs) handouts and survey forms were also available and included the following information:

- A fact sheet explaining the study purpose, process, and schedule as well as how the public can give feedback on the project.
- A survey form with specific questions about study issues and goals, the preferred alternative, number of lanes, treatment of access, bicycle and pedestrian considerations, and tolling.

To encourage attendees to visit each of the project stations and fill out their comment forms, three (3) \$50 gas cards were given away. To be eligible to win, attendees had to visit each of the six project stations, receive and place a sticker on the appropriate square on the comment form, fill out the comment form, and return it prior to leaving. At the end of the evening once all comment forms were collected and verified for qualification, three were randomly drawn as winners. The winners were: William C. Bennett, Bill Thurman, and Mendi Goble.

Summaries of the public comments received are presented on the following pages.

Summary of Responses

Comment forms were available at the public meeting and could be returned either at the meeting or sent via mail (postage paid) or fax following the meeting. The total number of forms returned at the meeting was 58. An additional 6 were returned via mail/fax/internet.

Based on responses received from the comment forms, the following are some key points / themes:

- Generally, most respondents agreed with the project purpose, need, and goals and objectives.
- The highest number of respondents (19 out of 60) selected 5-2 as the preferred corridor.
- For those respondents that were in favor of a new roadway, the majority preferred for it to be 4-lane, with few access points at free-flowing over / underpasses with a multi-use path built next to the roadway.
- The majority of respondents would support or would maybe support tolling as an option to fund this roadway.
- If the only way to pay for this roadway was through tolling, the maximum toll that the majority of people indicated they would be willing to pay was \$1.00.

A review of responses to each question is shown in the graphics on the following pages.

1) Do you agree with the project purpose of "To determine the need and explore methods to improve safety, connectivity, and regional access within Jessamine, Fayette, and/or Madison Counties between US 27 and I-75? (Circle one)



If not, what would you like to see changed?

- A done deal.
- Kentucky cannot fiscally involve the citizens of this state to use tax \$ to increase the use of oil, trucks while the US is in such deficit enough already.
- Would like to see it closer to Newby.
- Would like to see from southern end of Nicholasville bypass to follow Tates Creek to I-75.
- Seems like process is driven by a presumed need. Would like to see a more detailed assessment of need.
- Would have liked to see impact to / issues of highways that flow into / from the possible corridor alternatives.
- The choice of corridors should be influenced by other transportation needs / plans within the studied area.
- The width of the right-of-way.
- Width of right-of-way.
- The idea that such a corridor is needed or that can be afforded has not been proven with this study. Go south over 27, above KY River Palisades, historic areas.
- The areas through which the proposed roadway would go are too precious and should be preserved and protected, not decimated.
- Other counties and the larger purpose of "connectivity" need to be addressed. For example, I-64 is not included in the scope of study. I don't understand the purpose.

2) Do you agree with the project needs of improved connectivity, vehicle safety, reduced traffic congestion, travel time reliability/savings, economic development, improved access for truck traffic, and Homeland Security?



Do you think anything needs to be added or removed?

- Done deal
- I think it needs to be with no access for developers to take over and destroy beautiful farmlands and historic resources.
- Remove economic development and prioritize needs.
- Not sure I fully understand how travel time reliability / savings were calculated.
- Re-think safety
- Existing planned / programmed transportation needs must tie to corridor selected.
- No
- This road will not be useful to me but will lead to destruction of a lot of pristine rural territory.
- On the east side there should be a 3.5 connection point (between Alt. 3 and 4).
- No
- Move the road away from KY River Palisades, think of tourism.
- Go further south to connect. The Palisades and the KY River are too precious to even consider building a road that would be so harmful.
- I think the needs are being invented "after" the corridor was in place for some other purpose.

3) Do you agree with the project goals and objectives to:

-Provide solutions to meet the purpose of the project while avoiding/minimizing impacts to farmland, historic resources, the Palisades/Valley View/White Hall Shrine, horse farms, threatened/rare/endangered species, environmental justice communities, as well as other environmental features;

-Consider pedestrian and bicycle facilities in conjunction with alternative improvement options;

-Consider cost-effective solutions to address specific deficiencies; and

-Consider noise, water, and air quality concerns, as well as light pollution.



Do you think anything needs to be added or removed?

- Done deal waste of money
- I am not an expert please get qualified professionals to do any preliminary surveys, testings, social justice reviewers, etc.
- Truly, I would prefer no new road, but for safety and Homeland Security concerns, want the one with least impact environmentally. The one with the least impact to farmland and historic sites, and the Palisades.
- Really like pedestrian and bicycle facilities.
- Cost / benefit analysis
- Should also take into consideration and be planned as a limited access road interstate like corridor.
- No
- If built include bike and ped facilities. Other goals can not be met this road will be destructive to other goals.

- If you are going to flaunt this on the Palisades / Valley, please do it right. If you are going to include the Palisades in these do so with overlooks so tourists can take pictures. They will pay for the road especially during the fall.
- Do we need such a road? There are too many special areas, gas is high, alternative needed to cars, economic situation bad, better if denser cities.
- Objectives are appropriate to a roadway further away from the Bluegrass environs: 2 lanes with limited access, under / over passes with a multi-use path that is a toll road.
- I think the pedestrian / bicycle facilities should be removed. This route should stay focused on congestion, safety, and commerce.



4) Which alternative do you prefer? (Check one)

THE FOLLOWING QUESTIONS WERE ASKED OF THOSE WHO SELECTED ANY ALTERNATIVE EXCEPT THE NO-BUILD.

5) Do you prefer the roadway to be 2-lanes or 4-lanes?



6) What type of access do you prefer for the roadway?



7) How would you like to see major roadways cross the new corridor?



8) Would you like to see a multi-use path built next to the roadway?





9) Would you support tolling this road as an option to help fund it?

10) If tolling was the only way to pay for this roadway, what is the maximum toll you would be willing to pay (in each direction) to use the roadway?





PB Meeting Minutes

PROJECT:	US 27 to I-75 Corridor Scoping Study	
MEETING:	Project Development Team (PDT) Meeting # 1	
DATE & TIME:	July 12, 2007 – 9:30 AM	
LOCATION:	Kentucky Transportation Cabinet District 7 – Conference Room Lexington, Kentucky	

ATTENDEES:

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Shawn Dikes	РВ	502-479-9312	dikes@pbworld.com

MEETING SUMMARY:

The purpose of this first meeting was for the Project Development Team (PDT) to discuss pertinent issues relating to the initial phases of the US 27 to I-75 Corridor Scoping Study.

After self introductions, the meeting began with Stuart Goodpaster, the Kentucky Transportation Cabinet (KYTC) Project Manager, welcoming everyone to the meeting and making some introductory remarks. Stuart stated that this is a high priority corridor under SAFETEA-LU. The money for the study was earmarked by Congress. The first attempt at a similar study faced much opposition (a study completed in 2000 by BLA of which a copy was provided to PB). As a result of that study, US 52 was deemed to be more feasible as an improvement. Those improvements are currently underway. Stuart then turned the meeting over to Shawn Dikes of PB, the Project Manager for the consultant team.
Shawn began by describing the make-up of the team which is led by PB. The team also includes HDR for public involvement and corridor development and analysis, Third Rock Consultants for aquatic and terrestrial ecosystems analysis, Helen Powell for historic evaluation and a sub consultant for archeological work. The geotechnical review work is being done inhouse by the KYTC.

As this is a potentially controversial project, it was reiterated by PB that the study would be conducted in an open / honest manner, being as objective as possible. It is expected that the study will take approximately 12 - 15 months to complete.

Following the brief study introduction, Shawn provided several handout materials including an agenda for the meeting, project contacts list, a project scope with study area map and a Frequently Asked Questions (FAQs) sheet.

Shawn then discussed each of the items on the agenda including:

- 1. Study Purpose
- 2. Major Issues
- 3. Study Area
- 4. Tasks
- 5. Project Work Group
- 6. Immediate Steps

Study Purpose

The purpose of the study is to determine the transportation problem(s) / need(s) in the study area, determine what (if any) alternative corridors are feasible, and test whether or not they solve the identified transportation problems. A No-Build (Do Nothing) option will be used throughout the process to fully compare the effects of any Build option(s).

Shawn remarked that the PB-led consultant team will engage in an open and transparent process for the study. Stakeholders and others in the process need to contribute information and learn from the Project Development Team (PDT) and others. If the team does its job right, the stakeholders and citizens should be able to see how decisions were made. They may not agree with the recommendations(s), but they should not have issues with how the project was completed.

This is a planning level study. It will analyze corridors, probably 1,000 to 2,000 feet wide. The study will not produce detailed drawings or plans. This is also not a NEPA study. While some sort of environmental document may be required later for further project development, the project will not go to that level of detail. All aspects of the project will however be NEPA compliant or compatible, so implementations of the future phases of the project can be expedited more easily and quickly.

Major Issues

Aside from the obvious transportation issues (poor levels of service, safety, trucks / freight, lack of system connectivity, etc.) that will be determined and explored with the Existing Conditions Assessment Section and in the identification of the project's Goals and Objectives, other project issues will be important. Those issues include:

- Land use and economic development these consequences and secondary factors for the project must be recognized and analyzed accordingly. A new transportation facility will influence and change land use pattern and decisions in the region.
- Geotechnical issues faults, soils, and geophysical features of the area are real and will influence corridor locations and affect capital costs. There are 2 major faults in the region. These faults need to be on the constraints map and any corridors proposed should be perpendicular to the fault lines.
- River crossing need to identify suitable place(s) for a river crossing, if one is warranted. This will affect tie in points for the corridor and affect termini.
- Environmental Justice (EJ) communities need to work to identify them and to reach out to them to maximize participation at public meetings. Because of the large study area, impacts for a particular corridor probably will be difficult to determine. The EJ analysis will be done on the last set of only the most feasible corridors.
- Facility type It will be important to decide the type of facility under discussion, either a limited access facility of some other type of facility. Likewise, the location of project termini a southern one and a northern one, will be important to identify. As noted, the location of any river crossing also will be important if one is required.
- Funding Sources Address potential funding sources for future phases of the project, including alternative sources such as a toll road.

Study Area

A study area map was circulated and there was discussion about it. The map was initially developed for two purposes (1) to serve as a basis to collect the initial environmental and related data, and (2) as a basis for determining the full realm of possible corridors.

The shape of the map is from the project description in the KYTC's Six Year Highway Plan and the KYTC Bulletin. It includes the counties of Fayette, Madison and Jessamine and goes just to the east of I-75 and just to the east of US 68. It includes small pieces of other counties such as Garrard. Based on discussions at this meeting, it may be necessary to exclude Garrard County from the project study area as the new KY 52 interchange project is expected to draw people from Boyle and Garrard County, thereby reducing the need of an I-75 connector in this area.

Bruce Duncan remarked that we may want to shrink the study area to guide the development of the corridors. While that is certainly possible, and might be worthwhile, it was noted that the study needs to be careful not to pre-determine the location of any corridors. The PDT can give guidance to the public and other stakeholders during the development of corridors so that only those that are most feasible and prudent are developed.

The east Nicholasville Bypass should be drawn in with a dashed line on the study area map.

At the public meeting where the public will be asked to draw potential corridors on a map, the map along with the exercise at hand will need to be explained – i.e. guidance needs to be provided about interchange spacing on I-75, project termini points, river crossings, etc.

Shawn explained that the study area map could change depending on where the most feasible corridors are located. Also, there may be several "maps", including one for the environmental affects or impacts area, one for defining corridors, and one for understanding traffic flows. As long as they are explained, it is okay to have multiple maps.

Going forward from this meeting it was decided that the initial map along with the above mentioned modification for the east Nicholasville Bypass will be taken to the meetings with elected officials to get their opinion of what the boundaries should be. The purpose of the map is to provide the area in which a corridor could be located connecting US 27 to I-75 with the understanding that the actual impact area from this project would be much larger than the study area shown. As a result, a supplemental impact area could be shown which includes Man O' War Boulevard and New Circle Road in Fayette County.

Tasks

Shawn went over the project scope at a high level of detail. Basically, the study will follow a typical planning process:

- 1. Determine existing conditions / problems in the area
- 2. Determine goals and objectives
- 3. Propose and analyze alternative corridors, using the No–Build option as a baseline for comparison
- 4. Recommend one of more corridors for further development

Shawn pointed out that in the beginning stages of corridor development, virtually all possible options (corridors) are on the table and only a few pieces of information (qualitative) are likely to be known about them. As the screening progresses, the corridors that don't solve identified problems, or that have fatal flaws or too many negative impacts will not be carried forward for further consideration. At the end, only a handful of corridors will remain with substantial quantitative and qualitative information known about them.

Other important tasks include the environmental overview and map development. The map will help guide the development of the corridors as the map will depict environmental features that should be avoided. Traffic modeling is also important for this task and will give an order of magnitude of the amount of traffic that will use the facility. Therefore, choosing the appropriate modeling platform will be important. The KYTC has also asked that some sort of user fee(s) or tolling analysis be part of the evaluation.

Public involvement will be very important for this study. Key aspects of the public involvement component include individual meetings with elected officials from Fayette, Jessamine, and Madison Counties, along with meetings with state elected officials; including State Rep. Bob Damron and State Senator Tom Buford. Other tasks include the development of a Project Work Group (PWG), an advisory project body that will help the PDT make decisions, and interaction with the public. The format for public meetings will likely be an open-house style of meeting, where participants get some information / education materials up front from handouts or a power point slide show, they then will visit stations / boards and will conclude by giving feedback about a specific project element or decision. It is important to have easily understood project materials and to make information available on the KYTC project website. Links can be made available to the Lexington Fayette Urban County Government (LFUCG) and / or Bluegrass Area Development District (BGADD) sites from the KYTC's site and vice versa.

Advertising for the public meetings through the websites and through traditional newspaper ads will be needed. The PDT should also consider the use of portable message signs in the corridor for advertising as well.

Project Work Group

A discussion of the membership of the Project Work Group (PWG) ensued. The PWG is an advisory group, in addition to the PDT, that helps make certain technical recommendations as the project progresses. Ideally, it is a mixture of stakeholders representing various groups and points of view.

There is an optimal number of PWG members, and it is likely around 20 to 25. The PDT wants the PWG to be sure that they know that they are an advisory body. They provide important input into decision making, but they are just one of many stakeholder groups. It is important to get PWG members who are willing to participate and who will attend all the meetings regularly. The PDT will also attend and we discussed the need for PDT members to be neutral about all aspects of the project. (We know PDT members represent various viewpoints, but the role of members of the PDT is to assist the Cabinet in project decision making.)Appropriate meeting locations and times will be determined. Those present then collectively discussed membership on the PWG to include:

- 1. Jessamine County Judge / Executive Neal Cassity
- 2. Madison County Judge / Executive Kent Clark
- 3. Lexington Mayor Jim Newberry
- 4. Nicholasville Mayor Russ Meyer
- 5. Richmond Mayor Connie Lawson
- 6. Wilmore Mayor Harold Rainwater
- 7. Richmond Planning Ron Marionneaux
- 8. Jim Duncan Long Range Planning Manager LFUCG
- 9. Greg Bohnett Director of Nicholasville Planning
- 10. Peter Batey Chairman of the Jessamine County Planning Commission
- 11. Dal Harper Bluegrass ADD
- 12. Steve Austin Bluegrass Tomorrow
- 13. Robert Quick Commerce Lexington
- 14. Nancy Stone Jessamine County Transportation Task Force
- 15. David Whitworth FHWA
- 16. County Extension Agent(s) and/or
- 17. KY Farm Association

Other potential members could be representatives from: the Environmental Protection Agency / KY Sierra Club, KY Division for Air Quality, the State Historic Preservation Office (SHPO), Kentucky Department of Fish and Wildlife, Palisades Recreation group, Landowners Group (John Horn), etc. However, it is expected that these agencies / departments will be used as resources rather than being active members of the PWG.

We hope to identify other members for the PWG during interviews with the elected officials.

There was some discussion about the fact that certain members of the PWG may monopolize the discussion and not engage in a productive discussion with the group. PB has faced this in the past and has provided members with some ground rules to abide by. Another idea is to break the PWG into smaller groups, thereby engaging more people in an active discussion. If necessary, a professional facilitator can be provided to moderate the discussion. Also, only full members of the PWG will be given handout materials and allowed to participate. Other guests are able to attend, but their participation will be limited.

Project Purpose

A few minutes were spent discussing the project's purpose. Ideas to include in an eventual purpose were suggested and included:

- Safety
- Capacity
- Connectivity / access
- Travel time savings
- Homeland security (by providing another crossing of the Kentucky River)
- Truck traffic reduction (particularly on Man O' War and New Circle)
- Economic development (however, this would likely be the least important with regards to a project purpose)

These ideas and other items related to goals and objectives and purpose and need of the study will be asked of the elected officials during the interviews and of the PWG and general public during their respective meetings.

Immediate Steps

Immediate next steps are to:

- 1. Continue work on the existing conditions (traffic, environmental, geotechnical, etc.)
- 2. Develop a questionnaire and setup individual meetings with the locally elected officials, rather than group meetings.
- 3. Determine a date / time / location for the first PWG meeting upon completion of the meetings with elected officials.
- 4. Schedule the first public meeting following the elected officials meetings and the first PWG meeting.
- 5. Develop a project schedule to guide the 12 to 15 month process.
- 6. Revise study area map to include East Nicholasville Bypass and to have major faults depicted on the environmental constraints map(s).

Additional meetings with stakeholders / focus groups such as local fire and police departments, EMS, and schools should be considered. Presentations with the local ADD and MPO should be considered as well to discuss traffic, land use, and tourism issues.

PDT members should also think about ways to incorporate multimodal transit, bicycle / pedestrian and ITS solutions into the project.

At the conclusion of the meeting, Shawn asked for any comments on the FAQs sheets or any of the handouts that were distributed. It was noted that on the FAQ sheet the description of who is conducting the study should be revised to state that the study is being conducted at the direction of a congressional mandate. Any additional comments could be submitted via e-mail following the meeting.



PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Environmental Characteristics Discussion Meeting
DATE & TIME:	October 9, 2007 – 10:30 AM
LOCATION:	Kentucky Transportation Cabinet District 7 – Conference Room Lexington, Kentucky

ATTENDEES:

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MEETING SUMMARY:

The purpose of this meeting was to begin a discussion of environmental data for the US 27 to I-75 Corridor Scoping Study. This includes determining what is available, what to show, and the best format to use for both reporting and meeting purposes.

Cultural/Historic Data

Helen Powell from H. Powell & Co. was at the meeting and briefly presented her findings thus far related to cultural/historic data. Included in the mapping of sites are both sites listed on the National Register for Historic Places (NRHP) as well as previously surveyed sites. Of the previously surveyed sites, the intent of the study is not to predict what might be considered to be of cultural/historic significance but to convey the information of what may be in the study area. In fact, since this was a records search, several sites may not be there.

As for the archeological sites, they will not be mapped or shown to the public as they are not allowed to be published. Initially, the University of Kentucky's Program for Archeological Research was to do the archeological assessment for this study. Due to issues with

contracting, Cultural Resource Analysts (CRA) will be performing the work. They are currently under contract and are proceeding with their portion of the study. The Project Team will use the archeological information as a screening tool in later phases of the project, again taking care not to publish the location(s) of any known site(s).

Overall, it was decided that the public should be shown as much information and detail as possible in order to gain their confidence and allow them to make the best decisions possible when selecting and locating a potential corridor for a new route between I-75 and US 27. It was noted that the GIS mapping from the State Historic Preservation Office (SHPO) may not be completely accurate and the public can help with pointing out any discrepancies.

It was also mentioned at this meeting that there is a potential historic district along Old Richmond Road. It is currently not listed or published, but may become a barrier for any new construction in this area. In order to minimize any adverse impact to this community, it was decided that it may be a good idea to invite someone associated with this district to participate in the Project Work Group meetings as opposed to having a separate presentation for this group of stakeholders.

As for mapping logistics, the following changes were agreed upon for the upcoming Project Work Group meeting as well as the pubic meeting.

- Make source list more prominent.
- Soften the mapping outside the study area boundary.
- Make the map larger than 24x36 if possible; possibly 36 x 48 or even larger.
- Change the yellow points to a different color to "pop" out at the viewer.
- Combine some of the data items (i.e. on the NRHP and eligible)

A cultural/historic section will be included in the upcoming public meeting in addition to an overall Environmental Constraints map depicting this information. The set of maps at the meeting will include site numbers for easy site reference.

Other Environmental Features

Several other environmental features were discussed along with the cultural/historic assessment for this study. These include the following:

- Fault lines can be removed from the mapping being shown to the public. It is common knowledge among the project team that fault lines should not be crossed at a perpendicular angle. All corridors provided by the public will be examined to determine if this occurs.
- Topography will be an issue; therefore a topographic map will be available at the upcoming meetings.
- Additional UST and HAZMAT site information based on a review of the database needs to be shown.
- The eastern bypass of US 27 should be shown since there is the potential to connect the new route to the existing bypass.
- The karst mapping can be combined into one layer.

Project Work Group / Public Meetings

A discussion of the upcoming Project Work Group (PWG) and public meeting ensued. The PWG meeting will be held on October 30, 2007 at the Bluegrass Area Development District's office at 1:30 PM. Letters inviting different stakeholders to participate on the PWG have been sent, and the district office is waiting for the responses.

A brief discussion about scheduling of the first public meeting also occurred. It was determined that the preferred date for the first public meeting would be November 8, 2007 with a secondary date of November 15, 2007. The date selection is pending the availability of the East Jessamine County High School. The cafeteria was determined to be the best place to hold the fist public meeting. The second one will be changed to a different location within the study area to capture as much of the population as possible. Two sessions will be held during the day to accommodate the needs of the public – one from 12:00 (noon) to 3:00 PM, and the second from 5:00 PM to 8:00 PM. The two sessions will allow for a break in the middle of the day and give the Project Team an opportunity to assess how the open house is going thereby improving things for the afternoon/evening session.

A brief presentation will be made at the outset of the meeting, with the opportunity for citizens to visit various stations to learn about the project. Some preliminary stations may include:

- Study Process
- Existing Conditions (Level of Service, Traffic Volumes, and the Crash Analysis)
- Environmental Overview
- Alternate Corridor Screening Process
- Blank Maps to Draw Alternative Corridors
- A Comment Table

A frequently asked questions sheet (FAQ) will also be available as a handout to make sure everyone is well informed about the study.

A court reporter or tape recorder will be available to record any oral comments.

Next Steps

Immediate next steps are to:

- 1. Revise maps to include the changes discussed at the meeting.
- 2. Reserve the East Jessamine County High School for the first public meeting.
- 3. Prepare materials for the Project Work Group Meeting and the public meeting.



PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Project Development Team (PDT) Meeting #3
DATE & TIME:	January 16, 2008 – 10:00 AM
LOCATION:	Kentucky Transportation Cabinet District 7 – Design Conference Room Lexington, Kentucky

ATTENDEES:

NAME	AGENCY/COMPANY	Telephone	Email
Randy Turner	KYTC D-7 Planning	859-246-2355	randy.turner@ky.gov
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Helen Powell	H Powell & Company	859-233-9416	hpowellandco@aol.com
Rebecca Colvin	Third Rock Consultants	859-977-2000	rcolvin@thirdrockconsultants.com
Ben Edelen	HDR / Quest	859-223-3755	ben.edelen@hdrinc.com
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Barbara Michael	PB	502-479-9301	michael@pbworld.com
Shawn Dikes	РВ	502-479-9312	dikes@pbworld.com

MEETING SUMMARY:

The purpose of this third meeting was for the Project Development Team (PDT) to discuss the current project status.

The meeting began with Stuart Goodpaster, the Kentucky Transportation Cabinet (KYTC) Project Manager, welcoming everyone to the meeting and making some introductory remarks. After self introductions of the PDT, Stuart noted that as of this meeting, work had been completed on environmental issues, crash issues, preliminary traffic and capacity analysis, and preliminary modeling. With respect to the first Project Work Group (PWG) meeting, Stuart indicated that the PWG is a cooperative group that has provided insights on both sides of the project issues.

Next, Stuart discussed the November 20th Public Meeting. He indicated that this was a very successful meeting with nearly 240 attendees. The project website has been added to the District 7 website. <u>The public comment form will be removed shortly from the site as sufficient time has elapsed for public comment.</u>

Other key information provided by Stuart includes:

- The agency coordination letters for the project have been sent to the appropriate agencies. To date, information regarding soil types has been provided for all three counties. This data has been sent to HDR / Quest and Ben Edelen will ensure that this data is considered for mapping purposes.
- Stuart gave a presentation on the project at the Regional Planning Council.
- Stuart was contacted by a member of the Fayette Alliance expressing concern regarding the potential roadway and its impact on farmland. Knox Vannagelle will be added to the PWG. A PWG notebook has already been given to her.
- Bob Nunley in District 7 Design was in attendance in order to stay involved through the study process in the event that the project moves forward into design phases.

Stuart turned the meeting over to Shawn Dikes of PB, the Project Manager for the consultant team. The PDT then discussed each of the items on the agenda including:

- 1. Project Update
- 2. Outstanding Environmental Issues
- 3. What We Learned / Heard at the Project Work Group (PWG) and Public Meetings
- 4. Modeling Insights
- 5. Deciphering the Corridors
- 6. Next PWG and Public Meeting
- 7. Other Items

Project Update

Shawn noted that Stuart had covered everything that had occurred to date.

Outstanding Environmental Issues

Helen Powell and Rebecca Colvin indicated that the environmental mapping generated a high amount of activity and interest at the public meeting. Key issues included:

- The Riney B Railroad line was noted as a concern for many attendees due to its potential location as a possible river crossing. The railroad is noted in the book "Ghost Railroads of Kentucky." It was also noted that this location has narrow right-of-way. Some attendees noted its "Rails to Trails" potential. Using this location as a potential crossing would create opposition by those that support "Rails to Trails." The PDT determined that the exact location of the railroad should be avoided; however, there may be potential to use the location as an asset for a possible alignment as a multi-use trail for this or another project.
- Bruce Duncan noted that some attendees suggested that a new river crossing be built on top of a new lock / dam on the Kentucky River. It was suggested that existing dams be added to the mapping for this project. <u>Bruce noted that he could</u> <u>send a GIS map with this information to HDR / Quest</u>. A new dam would create major environmental impacts within the study area. Ben Edelen noted that this

expense would be great in that a temporary bridge would be required for a Maintenance of Traffic perspective.

- Helen noted that other features such as cemeteries, mills, ruins, and other features were noted during the meeting. <u>These will be added to the mapping</u>. It was also noted that all features on the environmental mapping have not been ground verified. Therefore, a disclaimer may need to be added to the mapping.
- George Dean, chairman of the Ferry Authority, was noted as a local historian with a great knowledge of the study area and the operation of the Ferry and points of interest along the Kentucky River. A brochure that he created was provided to the PDT.
- With respect to the existing Valley View ferry, a question was asked as to whether removing the ferry would be a negative. It was noted that most people see the ferry as a positive attribute of the study area. Also, if the ferry were removed, some folks would need access points that a new connector may not be able to provide. Finally, it was suggested that the toll from a new route could be used to off-set operating costs of the ferry.
- Rebecca indicated that nothing substantive was noted at the meeting relative to Third Rock's areas of environmental overview. Interest was limited on issues such as USTs or other common environmental features.
- Existing Boy Scout and Girl Scout camps were identified in the study area.
- The PDR areas need to be included on the project mapping

What We Learned / Heard at the Project Work Group and Public Meetings

The next discussion items included discussion from the Public Meeting. A summary of comments from the public meeting survey was provided to the PDT. Key results were discussed. Discussion items regarding the public meeting included:

- Some people signed in at the meeting but did not fill in a survey.
- The general consensus at the meeting was that the public was in support of a new route; however, this could change once corridors are put on the map.
- The public comment form was translated into Spanish. To date, there were no forms returned in Spanish.
- Blue public meeting notebooks will be prepared for this public meeting. The meeting summaries will be included in an appendix of the Final Report.

Other discussion during this agenda item included:

- James Ballinger asked to what degree decisions / recommendations will be made in the Final Report. It was noted the report will result in one to three potential corridors along with a statement as to the amount of access that should be included.
- Bruce Duncan indicated that new legislation could require that tolls be considered for any new roads being built to interstate standards.
- With respect to bicycle accessibility on a new route, the new route would likely not have bike facilities on it. Instead, off-road multi-use facilities could be considered. In addition, Ben Edelen suggested that as part of a new route, existing routes could be upgraded as part of the construction.
- James Ballinger suggested that if a bicycle river crossing is needed, the Riney B Railroad crossing could be considered.

Next, the Project Purpose and Need was discussed. A handout of the draft Purpose and Need was presented to the PDT. The PDT was asked to provide comments. <u>An electronic version of the document will be send along with meeting minutes of this meeting</u>.

With respect to the first Project Work Group (PWG) meeting, the following items were discussed:

- Paul Toussaint did a great job providing an objective, third party summary of the PWG meeting.
- Most of the PWG showed up at the public meeting.
- An email with the public meeting summary will be send to the PWG; however, the individual comments will be removed.

Modeling Insights

It was decided to next discuss the travel demand modeling tasks completed to date. Shawn Dikes noted a meeting that was held in the September or October that involved some members of the Project Development Team in addition to member of the KYTC Division of Planning. It was decided that the Kentucky Statewide Model (KYSTM) would be the appropriate model to use for this project. This was due to the fact that the entire study area was included in the model and that the model would be sensitive enough to changes in location for any potential corridor.

Scott Walker led the discussion regarding the preliminary model output. He noted that the model runs were conducted as an initial test of the sensitivity of the model. The preliminary results were provided to the PDT. Summaries includes initial volumes on four different alignments in addition to the impact on roadways in the study area including US 27, I-75, and Man O'War Boulevard. Ben Edelen suggested adding New Circle Road to the analysis if the model is sensitive enough to this specific route.

The next steps of the modeling process will involve a more in-depth analysis of the model, including an evaluation of the calibration of the model within the study area. Next, a set of alternatives will be tested in the model and the appropriate results summarized. Results will include traffic volumes, Vehicle-Miles of Travel (VMT) changes, Vehicle-Hours of Travel (VHT) changes, and travel time savings (if any).

Deciphering the Corridors

After a short break, a total of 60 to 70 corridors previously drawn by the public at the November public meeting was displayed and discussed. A map of these corridors was shown in the conference room. Important discussions items / decisions made regarding this initial or "fatal flaw screening" included:

- It was noted that lines drawn outside the three county study area boundary were previously eliminated from consideration.
- In addition, the alignments in the southernmost study area toward Richmond were eliminated as there isn't much traffic / transportation utility for them.
- There was a question regarding how many people actually drew the 60 to 70 corridors. It was noted that approximately 30 to 40 people were responsible. Nearly 20 to 30 people reviewed the maps but had no additional comments or they felt that their ideas for a new corridor were already drawn by other attendees.

- A decision was made not to cross the river more than once, which removed a couple of corridors.
- Corridors through 'listed' properties were removed.
- The northernmost corridors were removed due to known developments, including PDR sites
- It was noted that up to five or six alternates would be modeled in the KYSTM.
- Diagonal routes were eliminated due to the length, which would drive up the costs and decrease travel times.
- Common intersection points were noted. These were area were shaded on the wall map. Corridors drawn by the PDT included all these points.
- It was noted that the original corridors drawn by the public as well as the corridors drawn at this PDT Meeting would be shown to the PWG. However, only the 'screened' corridors would be taken to the next public meeting.

Next Project Work Group Meeting / Public Meeting

The next PWG meeting will be held in mid-to-late February. Bruce Duncan agreed to host the meeting at the Bluegrass ADD. (The meeting was later confirmed for 1:30 on February 25th). The meeting will consist of the following topics:

- Project Purpose and Need discussion
- Public Meeting #1 Summary
- Review of Corridors
- Initial travel demand model results
- Corridor evaluation criteria

Shawn Dikes then noted that there can be up to three (3) additional public meetings for the project, for a total of four (4). The number of meetings was previously expressed as only being two (2) in past discussions, which was erroneous. This leaves flexibility in the Public Information campaign with regard to the number of meetings, locations and topics discussed. It was decided that the next public meeting will be scheduled for the week of March 17th or March 24th and would include a review of the 'screened' corridors. A thirty day advanced notice is preferable for advertising the meeting.

Other Items

Other notes taken from the meeting include:

- A third public meeting will be held to display the final corridor(s) for this project.
- The PDT noted that the final public meeting could become a 5th PWG meeting.
- A group active with Judge Cassity in Nicholasville has been hired to assist and lobby for the project. The group has hired Preston Osbourne to lead this group.

The meeting concluding at 12:15 PM.



PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Project Development Team (PDT) Meeting #4
DATE & TIME:	April 4, 2008 – 9:00 AM
LOCATION:	Kentucky Transportation Cabinet District 7 – Conference Room Lexington, Kentucky

ATTENDEES:

NAME	AGENCY/COMPANY	Telephone	Email
Stuart Goodpaster	KYTC D-7 Planning	859-246-2355	stuart.goodpaster@ky.gov
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MEETING SUMMARY:

The purpose of this fourth meeting Project Development Team (PDT) meeting was to discuss the current project status and prepare for the April 8, 2008 Project Work Group (PWG) meeting.

The meeting began with Stuart Goodpaster, the Kentucky Transportation Cabinet (KYTC) Project Manager, welcoming everyone to the meeting and making some introductory remarks. After self introductions of the PDT, Stuart noted that since the last meeting, a Project Work Group (PWG) Meeting had been held. The meeting included a discussion of project purpose and need as well as potential alternative corridors. A decision to remove any corridors from further study at the time was not made as it was decided there was not enough information to make an appropriate selection of which corridor(s) to eliminate. Therefore, following the meeting, detailed evaluation matrices were developed for each alternate. It is expected that based on these matrices, at the Tuesday, April 8, 2008 meeting, the PWG will be able to reduce the number of corridors under consideration from the current 18 corridors, to a smaller set that can be evaluated and possibly refined.

Some general comments related to the presentation of the matrix include the following:

- Need to add corridor numbers to map for reference. A new corridor numbering system may also be beneficial utilizing a two number system. The western terminus could be assigned a number which would correspond to an eastern terminus, also numbered. For example, the first corridor would be 1-1.
- Try to condense the sheets into only a couple instead of eight. Could create a description legend and then consolidate the new space with information presented currently on a separate sheet.
- It was also determined that some evaluation criteria can be removed as they either do not show a differentiation between alternative corridors, are impacts that could be mitigated, or are impacts that would not inhibit the future development of a corridor. This list includes the # of interchanges, Threatened, Rare and Endangered Species (Habitat Areas), Wildlife Management / Conversation Areas, Habitat and Natural Areas Crossed, Quarries / Mines, Park or Recreation Facility Impacts, and # of Underground Storage Tanks (USTs). All of these categories that were taken off of the matrix will be listed on an additional sheet for the PWG and discussed in the report text to show that potential impacts in these areas were considered, but not considered difference makers in the total evaluation.
- It was decided to not show the column on the matrix for the number and location of interchanges since these were selected primarily for traffic modeling purposes and may not be the optimum or most desirable location for interchanges along each corridor.
- With regard to the Historic Sites and Archeological Sites categories, the word "Known" should be included in the title block as there may be additional sites uncovered during field surveys in subsequent stages of the project. Also, it was suggested to add a note that mitigation costs are not included in the 2008 cost estimates and that the estimates are in 2008 constant dollars at this point.
- To help the PWG determine the magnitude of impacts for each corridor, it was decided that the matrix would be color-coded with green representing the lower ranges and red representing higher ranges; generally for each category. The coloring is used to point out differences among the corridors and to not necessary determine a weighting or value. Not all evaluation categories will be color-coded as it is difficult to assess the impacts in this manner since some corridors "score" similarly in a particular category. This includes the wetlands category.

Most of the upcoming PWG meeting will focus on the evaluation matrix. Ideally, the PWG will be able to select 4 - 5 of the most promising corridors based on this matrix, plus the No Build option. If so, this will allow the PDT to move forward and start thinking about other features of a potential corridor. It is generally understood that there is a tradeoff between access and mobility, so it will need to be determined what the general look of the corridor would be (i.e. bypass, parkway, full-access, etc.). The No-Build option is still a viable option which includes the existing and committed projects in the state highway plans.

Additional feedback regarding the project purpose and need will also be requested as the PWG has had time to consider them since the last PWG meeting. Some general thoughts from the PDT regarding these is that the goals should include preserving as much farmland and historic resources as possible.

It was noted at the meeting that some of the Jessamine County residents in favor of this connector are getting very frustrated with the Fayette County residents that are against a new connector. It is possible that they may go directly to the Governor to get the road built and have it located where they think it should go. This is a concern that the PDT should continue to

monitor during this project but must work independently of to ensure credibility if there are future project development action pas this current study.

Next Steps

Following the upcoming PWG meeting on April 8, 2008, it was suggested that another PWG meeting be held prior to going to the public with a revised set of corridors so that the PWG would have the opportunity to review any modifications before the corridors are shown to the public. Based on feedback from the PWG at the upcoming meeting, the most promising corridors (ideally no more than 4 - 5) will be selected and each will be studied in further detail prior to the next PWG and presentation to the public. This will include analysis such as more detailed cost estimates (potentially ROW and mitigation estimates), traffic impacts, environmental impacts, and community impacts. Project phasing will also be evaluated in the later stages of this project. It was suggested that if the connector will terminate in the east at the existing KY 3055 / KY 627 interchange that upgrades to the interchange may be the ideal first phase of the project.

Depending on how many corridors are selected for further analysis, the next PWG meeting may be held in early May with the public meeting in late May. It would be desirable to have the public meeting before the end of the school year if a meeting was held at a school within the study area. There is the possibility of having one meeting in Richmond and one in Jessamine County. The exact locations will be decided at a later date.

Going forward from the PWG meeting, (unless there is time to discuss during the meeting), it was suggested that the PWG be assigned "homework". At this point in the project they should begin to consider the following: facility type, interchange number and location, toll options, eastern / western project termini, and bridge crossings.

Finally, it was discussed that PB will need a time extension due to the scheduling of meetings to complete the project. This will be submitted to the KYTC Central Office Planning Division.



PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Model Discussion
DATE & TIME:	April 18, 2008 – 1:30 PM
LOCATION:	Kentucky Transportation Cabinet District 7 – Conference Room Lexington, Kentucky

ATTENDEES:

NAME	AGENCY/COMPANY	Telephone	Email
Randy Turner	KYTC D-7 Planning	859-246-2355	randy.turner@ky.gov
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Anne Warnick	РВ	859-245-3877	Warnick@pbworld.com
Shawn Dikes	РВ	502-479-9312	dikes@pbworld.com

MEETING SUMMARY:

The purpose of this meeting was to discuss the use of travel demand models, including the Kentucky Statewide Model (KYSTM), for the US 27 to I-75 Corridor Scoping Study.

At the beginning of the meeting, Scott Thomson provided a summary about the performance of the KYSTM in the study area. He said that the average daily traffic (ADT) assignments from the model were within 1.2% of the ADTs of all of the count stations for the three counties in the study area (Fayette, Jessamine and Madison counties). He also found that in the model, traffic was being under-assigned in downtown Nicholasville and over-assigned on US 27 closer to Man O' War Boulevard and New Circle Road. The model is also over-assigning on I-75 and New Circle Road.

After a brief discussion regarding this summary, Scott Walker began PB's presentation with regards to its use of the model in this study. Scott began with a brief background on the project, as well as the role of the KYSTM in the project. Next he discussed discrepancies between model and count station ADTs. It was noted that the model over-assigned on US 27 near Man O' War Boulevard, and under-assigned on Man O' War Boulevard between US 25 and I-75. The model was fairly accurate along I-75.

Next the model results for the 18 corridors from the Level 2 analysis were shown. Scott Thomson suggested that it might be a good idea to round the ADTs to the nearest thousand so

an inaccurate level of preciseness is not portrayed. It was also noted that one of the corridors that went through Fayette and Jessamine counties was run using the KYSTM as well as the Lexington MPO model. It was noted that the ADTs for the corridor were along the same order of magnitude, giving a confidence in the output from the KYSTM.

Next, Scott Walker discussed the issue of forecasting the corridor ADTs to future years. Key points made with regard to forecasting include:

- It was noted that the KYSTM does not forecast to the future year, and that traditional historical growth methods do not take into account capacity constraints.
- For this project, if traffic continues to grow at its historic rate, the forecasted traffic will far exceed the capacities of many roads in the study area.
- Scott Thomson agreed that the exponential approach of growing traffic, especially to the year 2040 is inappropriate in this case.
- Scott Thomson mentioned that the Central Office Division of Planning has developed a growth rate for every count station using a method that is a hybrid of exponential and linear methods that could possibly be used.

Next, there was a discussion of future traffic trends and the possibility of growth rates slowing in the future. The role of travel demand models to be used for this project to forecast growth was also discussed. The Lexington Area MPO model does forecast to the year 2030; however, the remaining 6 corridors to be studied go through Madison County which is not part of the model.

The KYSTM has an outlying year of 2030, but it does not accurately forecast to that year. It was decided that to determine an appropriate growth rate for this project, a combination of three data sources would be used: 1) the hybrid growth rate developed by the KYTC Central Office, 2) the growth that the Lexington MPO model forecasts, and 3) the growth that the KYSTM model forecasts. Each will be plotted on a graph and equations for best curve fit to those three points will be developed. The curve can then be used to forecast to the year 2040. This method was agreed upon because it is based purely on independent model output and information from the Central Office, and involves little post-processing. While the future year forecasts are important to help determine whether a new roadway is justified, they will also be important for toll analysis.

Using the KYSTM for a possible toll analysis was also discussed. Because the model does not take into consideration dollars, a time to money relationship for tolls must be established. In order for the model to account for tolls, a time penalty may be used that would account for people choosing not to use a road because it is tolled. As the toll increases, the time penalty will increase; however, the exact dollar to minute ratio is unknown and is something that must be carefully determined. It was also suggested that at the next public meeting, the public should be asked a question about whether or not they would be willing to pay a toll to use the roadway, and if so, how much they would pay.

The meeting ended at approximately 3:15 PM.



PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Project Development Team (PDT) Meeting #5
DATE & TIME:	May 30, 2008 – 9:00 AM
LOCATION:	Kentucky Transportation Cabinet District 7 – Conference Room Lexington, Kentucky

ATTENDEES:

NAME	AGENCY/COMPANY	Telephone	Email
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Bob Nunley	KYTC D-7 Design	859-246-2355	robert.nunley@ky.gov
David Martin	KYTC CO Planning	502-564-7183	charles.martin@ky.gov
Bruce Duncan	Bluegrass ADD	859-269-8021	bduncan@bgadd.org
Helen Powell	H Powell & Company	859-233-9416	hpowellandco@aol.com
Rebecca Colvin	Third Rock Consultants	859-977-2000	rcolvin@thirdrockconsultants.com
Ben Edelen	HDR / Quest	859-223-3755	ben.edelen@hdrinc.com
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Amos Hubbard	PB	859-245-3875	hubbarda@pbworld.com
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MEETING SUMMARY:

The purpose of this fifth meeting of the Project Development Team (PDT) meeting was to discuss the current project status and prepare for the June 16, 2008 Public Meeting.

The meeting began with Stuart Goodpaster, the Kentucky Transportation Cabinet (KYTC) Project Manager, welcoming everyone to the meeting and making some introductory remarks. After self introductions of the PDT, Stuart noted that since the last meeting, a Project Work Group (PWG) Meeting had been held. PWG Meeting attendees were asked to narrow down the potential corridor alternatives and ended up reducing the number of alternative corridors from eighteen to six. The next step is to present these six, plus the No-Build Option to the public. Stuart then turned the meeting over to Shawn Dikes, the PB Project Manager, to provide an update of work completed since the last PDT meeting and information relative to preparing for the upcoming Public Meeting.

The first item of discussion was related to the project purpose and need. Up to this point in the project, the purpose and need of the project indicates that there is no connectivity between US 27 and I-75. This is in fact not true as there is Man O' War Boulevard, New Circle Road and several other local routes. The issue is that there are no good connections between US 27 and I-75. Therefore, to make this clear, the purpose and need will be updated to reflect that connectivity needs to be improved between US 27 and I-75.

Next, the presentation of the traffic forecast information to the PWG was discussed. At the last PWG meeting held on May 5, 2008, the presentation of the traffic forecasts may have been overwhelming to those not familiar with this particular technical project aspect. At the meeting, the material was presented such that there was no confusion as to how PB arrived at the volumes of traffic that would potentially use each corridor, but in doing so may have provided to much detail such that the layperson may have been confused or misunderstood the information. It was agreed that it seemed like the right way of presenting the material at the time, but for future reference, less detail would be preferred. For the upcoming public meeting, only traffic volumes will be presented – no background information. If anybody is curious about the process used to determine the numbers they can ask a project representative.

As mentioned previously, at the last PWG meeting, twelve corridors were removed from further consideration. It was discussed at this PDT meeting how to explain to the public how these corridors were eliminated along with the extreme northern and southern corridors. As the project is only supposed to evaluate access and connectivity between US 27 and I-75, regional connectivity will not be emphasized as an evaluation criterion. Instead, focus will be on the traffic / transportation utility of the corridors, on-going projects (such as the Duncannon interchange project) that would improve operations through the study area, and project costs. A Frequently Asked Questions (FAQ) sheet will be developed for the public meeting to provide a specific answer to questions such as "Why are there no extreme northern or southern corridors considered at this stage?"

Finally, the format / materials for the upcoming Public Meeting were discussed.

As there has been a substantial amount of work completed on the project since the last Public Meeting held in November 2007, it was previously decided that it would be desirable to have a giveaway to ensure that attendees visit all of the project stations and encourage them to fill out their comment forms at the meeting. Three fifty dollar gas cards from Speedway were decided to be the giveaway.

Some discussion ensued about the best way to conduct the giveaway and gather feedback from the public. It was suggested that attendees place stickers directly on the boards, voting for which corridor they liked the best. Another suggestion was to use stickers on the comment forms, with attendees collecting one sticker per station. Once all stickers were collected, the comment form would need to be completed and turned in to be eligible. While several people at the meeting were interested in the first method, it was determined that for this meeting it would be more desirable to maintain comment forms for documentation purposes.

For the meeting, the orientation board will be developed to include information about the gas card giveaways. The first station will be dedicated to the study background and will include information about the study area and schedule. The second station is the purpose and need station. The project purpose and need will be revised as discussed earlier at this meeting. The next station is dedicated to alternative development and evaluation. The three-level graphic

showing the evaluation procedure will be included as a board as will boards listing the evaluation criteria for the Level 1 and 2 analyses.

H. Powell and Company is still working on defining the border of White Hall. Helen has the national register boundary, but is still unsure about the area around the site as Madison County has had plans to develop a park in the vicinity. For this public meeting it was determined to be sufficient to show the national register boundary only on the Level 3 figures as this is the only definite boundary known.

As for the Palisades, Third Rock has been working on defining the boundary for this and the exact boundaries are still somewhat unclear. Rebecca Colvin (Third Rock) will work with Eric Ivanovich (HDR / Quest) to show these on the Level 3 maps. It was also decided that it would be advantageous for HDR / Quest to bring a laptop and have it available to zoom in on any particular corridor map for further clarification if requested at the public meeting.

The Level 3 Corridors form the fourth station. On each alternative corridor map, benefits, drawbacks, and other issues will be listed to provide the most pertinent information to assist the public in making a decision.

It was decided at the meeting that two additional stations were necessary, including one depicting typical sections and another dedicated to funding / tolling options.

The last item of discussion was the survey form. The public will have thirty days to return the comment form if they choose to take it with them, thereby making the deadline for responses July 16th, 2008. Generally those in attendance were in agreement with the layout and content of the form. One suggestion was made to move the tolling questions towards the end of the form as they seemed out of place. It was also suggested that photos of example roadways / intersections be included as boards to provide a visual look at various access types. This may provide clarification for these questions on the comment form and enable attendees to make an informed decision. Stuart will check into the feasibility of getting the Cabinet's postage paid stamp on the comment forms such that additional pre-paid envelopes are not necessary.

With plans in place for the upcoming meeting, the PDT meeting adjourned at approximately 10:30 AM.



PROJECT:	US 27 to I-75 Corridor Scoping Study
MEETING:	Project Development Team (PDT) Meeting #6
DATE & TIME:	August 18, 2008 – 10:00 AM
LOCATION:	Kentucky Transportation Cabinet District 7 – Conference Room Lexington, Kentucky

ATTENDEES:

NAME	AGENCY/COMPANY	Telephone	Email
Stuart Goodpaster	KYTC D-7 Planning	859-246-2355	stuart.goodpaster@ky.gov
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David Martin	KYTC CO Planning	502-564-7183	charles.martin@ky.gov
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Helen Powell	H. Powell & Company	859-233-9416	hpowellandco@aol.com
Rebecca Colvin	Third Rock Consultants	859-977-2000	rcolvin@thirdrockconsultants.com
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Amos Hubbard	PB	859-245-3875	hubbarda@pbworld.com
Anne Warnick	PB	859-245-3877	warnick@pbworld.com

MEETING SUMMARY:

The purpose of the sixth meeting of the Project Development Team (PDT) meeting was to discuss the June 16, 2008 Public Meeting, the build vs. no-build options, prepare for the next Project Work Group (PWG) meeting, and discuss the report preparation and the eventual wrap up of the project.

The meeting began with Stuart Goodpaster, the Kentucky Transportation Cabinet (KYTC) Project Manager, welcoming everyone to the meeting and making some introductory remarks. After self introductions of the PDT, Stuart began with an envelope with one of the gas cards that was raffled during the last public meeting. The intended recipient could not be found and the card was returned by the USPS. A different survey was selected from the blue public meeting notebooks and the gas card will be sent to the new winner. Next, Shawn Dikes gave an overview of the second public meeting. Handouts were given that summarized the results of the public comment forms received. Based on the public comment forms, it was concluded that most respondents agreed with the project purpose, need, and goals and objectives. Corridor 5-

2 received the most votes as a preferred corridor. The respondents who were in favor of a new roadway preferred a four lane facility, with limited access, free-flow over/underpasses and a multi-use path next to the roadway. The majority of respondents would support or would maybe support tolling as a funding option. If tolling were necessary to fund this project, the majority of people indicated they would be willing to pay a toll of approximately \$1.00.

Next, several project issues were discussed, including which corridor the PDT prefers, how many lanes the facility should be, how the proposed eastern bypass should be handled, the Whitehall Historic Site, and the Riney B Railroad.

Stuart Goodpaster indicated that he would like to go to the next PWG meeting with a recommendation from the PDT of only one (1) build alternative in addition to the no-build alternative for discussion. Based on public feedback it is clear that an alternative that ends at location 2 on I-75, the Boonesboro Road exit, is desirable. The PDT also agreed that a western terminus as far south as location 6 would lose a lot of utility. Alternatives 4-2 and 5-2 were quickly decided upon as the preferred corridors. Discussion of the benefits and drawbacks of each of these corridors were discussed, and the following points noted.

- Alternative 5-2 crosses the faults in the area more perpendicular (better) than 4-2.
- Alternative 5-2 has no Environmental Justice impacts, and fewer impacts to floodplains and historic sites than 4-2.
- Alternative 4-2 ties into an existing road.
- If the eastern bypass does not get built, less additional road would have to be built to tie 4-2 into US 27.

The last point regarding the proposed eastern bypass brought up the issue of how the eastern bypass should be addressed in this project. The eastern bypass is still controversial, therefore it was suggested that this project not be tied to it. However, both western termini, points 4 and 5, end at the eastern bypass. It was suggested that this project not be contingent upon completion of the eastern bypass, however, it should be noted in the report that the cost estimates were performed assuming that the corridors would end at the bypass, and if a bypass were not built, the cost would rise to build the extra section of roadway to tie the corridor(s) into US 27. It is currently expected that the eastern bypass at the western terminus and the Boonesboro Road interchange at the western terminus will both be constructed before a new connector is built. If this is the case then both of those projects should be designed and constructed in a way that will accommodate a future tie in with the new corridor.

The potential park near the Whitehall Historic Shrine was also discussed. Madison County has not made it clear if a park is to be built around Whitehall and if so, where it will be. If any land has been purchased it will be available in public records, therefore the records should be checked to try and determine the location of the park and if it will affect a proposed corridor. Eric Ivanovich asked if the park was mentioned in the Madison County Comprehensive Plan. Neither Anne Warnick nor Shawn Dikes remembered seeing anything about it, but said they would recheck the document. *(Subsequent checking revealed some information including a map of the proposed park which will be detailed on project mapping and in the analysis.)* Depending on the location of the park, extra environmental analysis may need to be performed. Shawn Dikes mentioned that if this project is carried forward it will most likely have to go through the NEPA process and an EIS or EA would be necessary, and that some of the work we have already done may need to be performed in more detail. The location of the Riney B Railroad was also discussed as it seemed important to many people at the last public meeting. It is still somewhat unclear as to what the exact location of the railroad is, but Eric Ivanovich will bring a map showing its location to the next PWG meeting. Corridors 4-2 and 5-2 are near or encompass the railroad just west and north of the Kentucky River, and it was suggested that the project team explore the possibility of converting the existing rail bed could to a rails to trails program.

Another issue discussed during the meeting was whether the roadway should be a two or four lane facility. David Martin asked if the traffic numbers could justify a four-lane facility. Based on the traffic analysis performed, for most corridors, a two-lane roadway will operate at or below LOS E before 2020. It was explained that the poor LOS comes not from the traffic volumes themselves, but from the inability to pass slower moving vehicles on two-lane roadways. It is likely, given the terrain in the area that there will be few passing zones because of the limited passing sight distance. This also brings up safety concerns of drivers choosing to pass at unsafe times because of the lack of safe passing opportunities. Bruce Duncan mentioned that it would be harder to justify tolling a two-lane facility. While most of the PDT agreed that a four lane facility is most logical, Ben Edelen brought up the point that the current administration is scrutinizing highway design very closely, and are currently trimming many proposed four lane roadways down to two lanes. If there is not a design hourly volume of 1,500 vehicles per lane, it may be more difficult to justifying a four lane roadway. The PDT should not say exclusively that a four lane roadway is needed. It should be recommended at this phase, however as the project progresses a two-lane roadway can be evaluated for safety, percent passing zones, etc., and could be designed if deemed appropriate.

Stuart also mentioned that he, Shawn, Ben and Barbara Michael, PB's principal in charge, would like to speak to some of the decision makers in the central office about the future of this project before the next PWG.

The date for the next PWG meeting was then tentatively scheduled for September 15, 2008 at 1:30 PM at the Bluegrass ADD. The PDT decided that they would present alternative 5-2 and the no-build as the remaining options, however if the PWG wanted to bring alternative 4-2 back to the table for discussion it would still be an option. Whether or not to recommend a build or no-build alternative will also be discussed, as will the number of lanes of the facility. It was noted that the PWG will be used to provide guidance, but that the PDT ultimately reserves the right to make the final recommendation.

Before the meeting wrapped up, the report preparation was briefly discussed. PB will send Stuart, Randy, David and Bruce copies of the draft document as it stands at this point. A copy of the Environmental Justice report will also be sent to Bruce and David.

The meeting adjourned at 11:30 am.



PROJECT:	US 27 to I-75 Corridor Scoping Study	
MEETING:	Project Development Team (PDT) Meeting #7	
DATE & TIME:	September 22, 2008 – 1:30 PM	
LOCATION:	Kentucky Transportation Cabinet District 7 – Conference Room Lexington, Kentucky	

ATTENDEES:

NAME	AGENCY/COMPANY	Telephone	Email
Stuart Goodpaster	KYTC D-7 Planning	859-246-2355	stuart.goodpaster@ky.gov
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Bruce Duncan	Bluegrass ADD	859-269-8021	bduncan@bgadd.org
Ben Edelen	HDR / Quest	859-223-3755	ben.edelen@hdrinc.com
Shawn Dikes	PB	502-479-9312	dikes@pbworld.com
Amos Hubbard	PB	859-245-3875	hubbarda@pbworld.com
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Anne Warnick	PB	859-245-3877	warnick@pbworld.com

MEETING SUMMARY:

The purpose of this meeting with the Project Development Team was to discuss the recommendation for the US 27 to I-75 Corridor Scoping Study, how to present the findings, and the next steps for completing the study.

Stuart Goodpaster, the Kentucky Transportation Cabinet (KYTC) Project Manager, thanked everyone for their attendance and participation on the project. He then turned the meeting over to Shawn Dikes, the PB Project Manager, to discuss the project recommendation.

As presented at the Project Work Group (PWG) meeting held the previous week on September 15, 2008, the following are the project recommendations agreed upon by the PWG members:

- Build Alternative Corridor 5-2
- A "Super 2" 2-lane highway which includes passing lanes and wide shoulders
- Limited access
- A multi-use path to be considered in conjunction with this project so long as it does not preclude the project from progressing
- Right-of-way purchased for an eventual 4-lane highway

Those in attendance from the PDT agreed with these recommendations and further clarified that tolling options should be included in the recommendation as a funding mechanism. Under this

scenario, a limited access facility makes sense, and interchanges should only be included at major highway crossings / intersections. This includes both ends of the project (US 27 and I-75) and likely two other interchanges in between.

The multi-use path is to be included in the overall recommendation with the stipulation that it should not prevent the rest of the project from moving forward. Additional study will be required for the path, including consideration of logical termini points. It may also be possible to deviate from the new highway corridor and use portions of the Rhiney B abandoned railroad bed, including a river crossing on the old alignment. These decisions are to be made in a future design phase of the project.

Once this study is finalized and published, it is desirable to encourage the preservation of the right-of-way given the on-going development pressures in the area. However, as the project is not in the current Six Year Highway Plan, it would be difficult to preserve the area. Even if the project was listed in the Six Year Highway Plan, the right-of-way could only be preserved for two years at a maximum. At this point, the next best step is to try and get it listed on the next Six Year Highway Plan.

The costs of the preferred alternative are only for a 2-lane roadway currently, which will be revised for the final recommendation to include the "Super 2" concept (includes the cost of the passing lanes). The costs also assume that the Eastern Nicholasville Bypass is in place prior to the construction of this connector. There is concern that even though the Eastern Nicholasville Bypass project is listed in the current Six Year Highway Plan, it is possible the project may not be completed. If this is the case, the new connector would have to extend to US 27, incurring additional costs. These additional costs will be portrayed as a footnote to the revised recommended cost estimates.

With uncertainty in the status of the Eastern Nicholasville Bypass, there was some speculation as to what the highest priority project is for Jessamine County. It was noted that both projects are viewed very differently, with the bypass expecting to receive state / federal funding and the connector being funded through tolling, public – private partnership, or another creative financing option.

Project phasing will be presented in the final report to provide a segmented construction approach if required due to funding. It was decided that the most logical project sections are:

- US 27 to KY 1981
- KY 1981 to Tates Creek Road
- Tates Creek Road to I-75

The prioritization for these segments is from west to east. Design could be completed for all segments at the same time with the phasing schedule implemented during construction.

The final discussion at the meeting revolved around schedule for completion of the project. KYTC and Bruce Duncan with the Bluegrass ADD will review the Draft copies of the report they were given at the PWG meeting, providing comments in the next couple of weeks. During that time, PB will work on writing the last chapter of the report on the project recommendation and update the associated cost estimates. A revised draft version will then be made available to the PWG for review. Stuart will send an email to the PWG to determine who would like to review the document and what form they would prefer (electronic or hard copy) and whether or not they want the full report or just the recommendations section. PB will send all hard copies of the

draft report for the PWG to KYTC for distribution and collection. Upon receipt of the comments from the PWG, PB will finalize the report, documenting where changes were made for reference.

The meeting then adjourned at 2:45 PM.