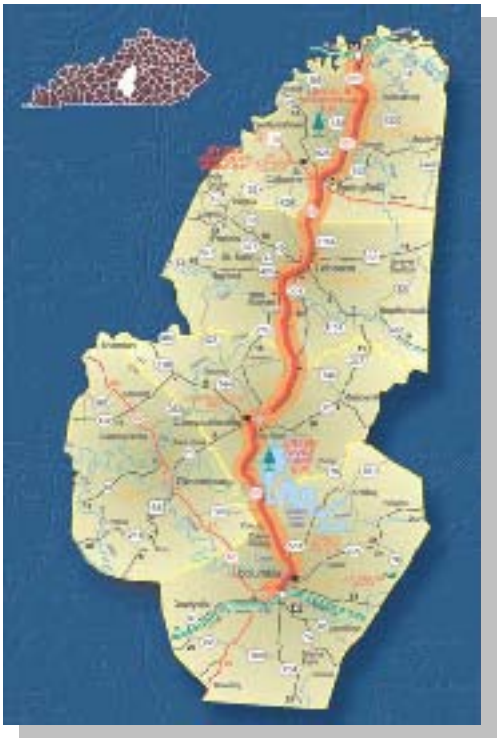
KENTUCKY TRANSPORTATION CABINET

Heartland Parkway Alternatives Planning Study

From the Louie B. Nunn Cumberland Parkway
To the Martha Layne Collins Blue Grass Parkway

Adair, Green, Taylor, Marion, and Washington Counties

ITEM NO. 4-132.00



Final

February 2005

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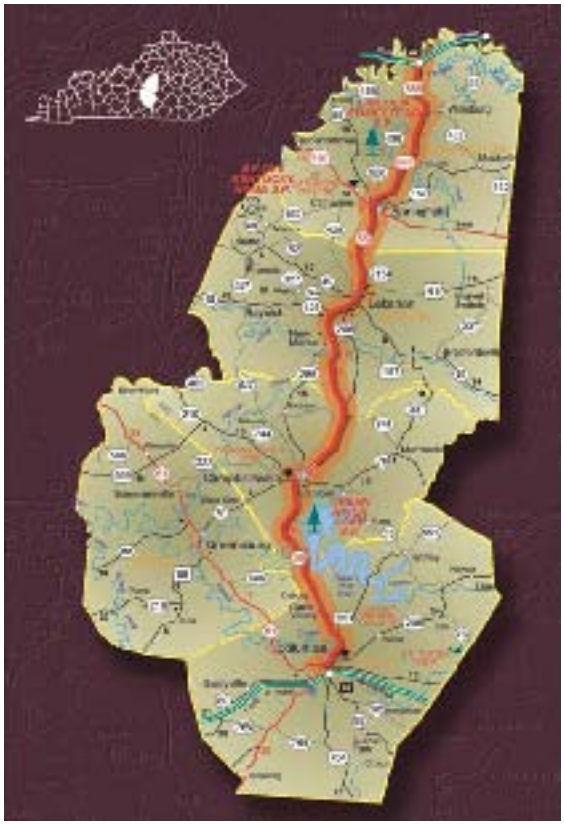
EXECUTIVE SUMMARY
ALTERNATIVES PLANNING STUDY
Heartland Parkway
Adair, Green, Marion, Taylor, and Washington Counties
From The Louie B. Nunn Cumberland Parkway
To The Martha Layne Collins Blue Grass Parkway
ITEM NO. 04-132.00

The Heartland Parkway project is defined in the Kentucky Transportation Cabinet's Six-Year Highway Plan (FY 2003-2008) to perform corridor analysis for the location of the "Heartland Parkway" from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway. The project is identified as Item No. 4-132.00.



Existing Roadway Conditions

The existing routes are predominantly two-lane rural arterial routes, with some four-lane curb and gutter sections in the urbanized areas. Lane widths vary from ten to twelve feet, and shoulder widths vary from two to twelve feet, and have varied composition. There are sections with partial control of access, while the remainder is access by permit. This access by permit has contributed to congestion and a reduced level of service.

Currently, two of the four communities along the existing corridor have bypass projects in the design or right of way phase. Each of the planned bypasses "T" into existing routes. This will not allow free-flow movement normally associated with a parkway facility. There are no scheduled plans for a bypass in Campbellsville, the most populous of the affected communities. Springfield is already bypassed by the location of KY 55 and KY 555.

Traffic Considerations

Traffic forecasts were completed for each of the three different improvement options, including models with and without the completion of I-66, as well as, a No-Build option.

A new corridor offers some distinct advantages: 1) continuous flow of traffic, which is particularly good for truck traffic; 2) significant reduction in the percent of trucks remaining on the existing routes; and 3) minimal maintenance of traffic during construction. However, traffic bottlenecks and poor geometric conditions will continue to plague the existing routes, and with a 3-4% anticipated growth rate, the level of service on existing routes will continue to decline. Many segments will be in the E-F range by Year 2030.

Improvements along the existing corridor will address deficient conditions, while keeping the flow of traffic near the communities served. Bypasses for Lebanon and Columbia are already in different stages of the design and right of way phases. Truck traffic is expected to reach the 21-31% range in many areas by Year 2030.

Environmental Overview

Field surveys, record searches and contacts with resource agencies, government representatives and the general public have identified environmental issues and sensitive areas. Potential impacts to the human and natural environment will be considered as the project moves into future phases.

- The project area hosts many natural, scenic and sensitive areas including the Green River Lake State Park, Lincoln Homestead State Park, Green River Bioreserve, Tebbs Bend Battlefield and Green County caves.

- These scenic areas potentially are home to several federally listed endangered or threatened species such as the Indiana bat, gray bat, bald eagle, Eggert's sunflower and several species of mussels.

- The project corridors cross numerous streams, which will require widening of bridges, extending culverts, or constructing new structures. Construction impacts on streams and floodplains will need to be evaluated and if appropriate, mitigated.

- Both project corridors will cross the Green River, which is classified as outstanding state resource water, and Russell Creek, which is classified as exceptional water. Erosion and sedimentation controls will be necessary to minimize impacts to these streams.

- Wetlands could be affected by future project phases and all reasonable efforts will be made to avoid or minimize impacts.

- The project corridors contain 64 historic sites that are listed or are potentially eligible for listing on the National Register of Historic Places. The project area also has a high potential for containing unrecorded prehistoric or historic

archaeological sites. Historic and archaeological surveys will need to be conducted to determine/confirm the presence of historic or archaeological sites and potential to avoid or minimize project impacts.

- If historic sites (e.g., Tebbs Bend Battlefield) or recreation areas (e.g., Green River State Park) are impacted, a Section 4(f) evaluation will be necessary.

- A new or improved roadway will enhance regional access for travelers, workers, tourists, and transporters of raw materials, finished products and agricultural products. Beneficial impacts of future phases include anticipated opportunities for industry, tourism, higher education and agricultural activities.

- Only low numbers of residential or commercial relocations are expected in future design phases.

- As the predominant land use in the project area is agricultural, potential impacts to farmlands rated as prime, unique, or of statewide importance must be considered. Agricultural districts are present in the study area, and if avoidance is not feasible, coordination with the local conservation district is required.

- Several service stations, automobile repair shops, and auto salvage yards occur in the project corridors and could have potential hazardous materials and underground storage tank sites. Further consideration will be necessary to confirm the presence of these sites and reasonable efforts will be made to assess avoidance and mitigation options.

Public Involvement Activities

Throughout the course of this study, local officials, resource agencies, interest groups, and the public provided input on potential improvement options for the Heartland Parkway. Comments were obtained from local meetings, questionnaires, and other written correspondence. There were several concerns identified through this process and were expressed by local officials and the public as follows:

A new corridor would bypass the communities that it is intended to serve. It would have a negative impact on economic development and tourism.

A new corridor would destroy too much farmland.

In order to improve economic development, better access to and through the region is needed. Also, access to other parkway and interstate highways will facilitate the delivery of goods.

Bypasses are needed for each community.

A four-lane divided highway with partial control of access built along the existing corridor routes is preferred. It should utilize as much existing right of way and other planned improvements as possible.

Avoid historic and culturally sensitive sites.

Project Goals

The preliminary goals established through this study include: 1) improve regional access for economic development, existing industry, truck access, tourism, higher education, and agricultural economy; 2) improve safety; 3) improve highway capacity in certain locations; 4) decrease delays through the communities; and, 5) improve emergency response times.

The project goals can be achieved through a new or reconstructed parkway-type highway between the Louie B. Nunn Cumberland Parkway and the Martha Layne Collins Blue Grass Parkway.

Corridor Development

The identified project corridors evolved from meetings with the project team and public involvement activities throughout the course of this alternatives study. Input from local officials, resource agencies, interest groups, and the public were considered in the corridor development process.

Two corridors, plus the no-build alternative were considered, and developed. One of the two corridors developed was a 4-lane divided highway with access at interchanges only. This corridor, referred to as Option 1 would be on new alignment and would generally parallel the existing routes approximately 2 miles to the west.

The corridor along the existing routes had two options, Options 2 and 3, with different design concepts, and was broken into eight segments, each with logical termini.

The first concept, Option 2, was a 4-lane divided highway with access provided at 1200-foot spacing at grade with median cuts. It would follow the existing routes (KY 55, US 68, KY 555), upgrade the planned bypasses at Lebanon and Columbia to 4 lanes, and propose a new 4-lane bypass at Campbellsville along the southeast side.

The second concept, Option 3, followed the existing routes (KY 55, US 68, KY 555), adding passing bays and rehabilitation of pavement and shoulders. The bypasses at Lebanon and Columbia would be used, as planned, and a new 2-lane bypass would be proposed for Campbellsville along the southeast side.

Estimates were made for each concept by segment, allowing the option of selecting different concept considerations for each segment, based upon funding availability and need.

Recommendations

Based upon an analysis of the project goals, traffic issues along the existing corridor, potential environmental impacts, and stakeholder input, the project team chose Option 2 along the existing routes as the preferred corridor option. Throughout this alternatives study, it has been clear that available funding will be an issue, and that an implementation plan for improvements would need to be prioritized, which would allow construction by segments.

The project team recommended the following priority for construction project phasing for the preferred alternative:

- Priority 1: Segment 1 – KY 61 from the Louie B. Nunn Cumberland Parkway to the Columbia Bypass.
- Priority 2: Segment 2 – Columbia Bypass
- Priority 3: Segment 6 – Lebanon Bypass
- Priority 4: Segment 4 – Campbellsville Bypass
- Priority 5: Segment 3 – KY 55 from Columbia to Campbellsville
- Priority 6: Segment 5 – US 68 from Campbellsville to Lebanon
- Priority 7: Segment 7 – KY 55 from Lebanon to Springfield
- Priority 8: Segment 8 – KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway

Since funding is an issue, some consideration may need to be given to spot improvements in order to address critical traffic concerns on roadway segments that, due to being a lower priority segment, may not receive timely improvements.

Funding

The project addressed in this study was scheduled in the Kentucky Transportation Cabinet's Six-Year Highway Plan (FY 2003-2008), with committed funds in the amount of $625,000. The current Six-Year Highway Plan does not include funds for additional phases for the Heartland Parkway.

Contacts

Comments and/or requests for information regarding this project should be sent to the address listed below:

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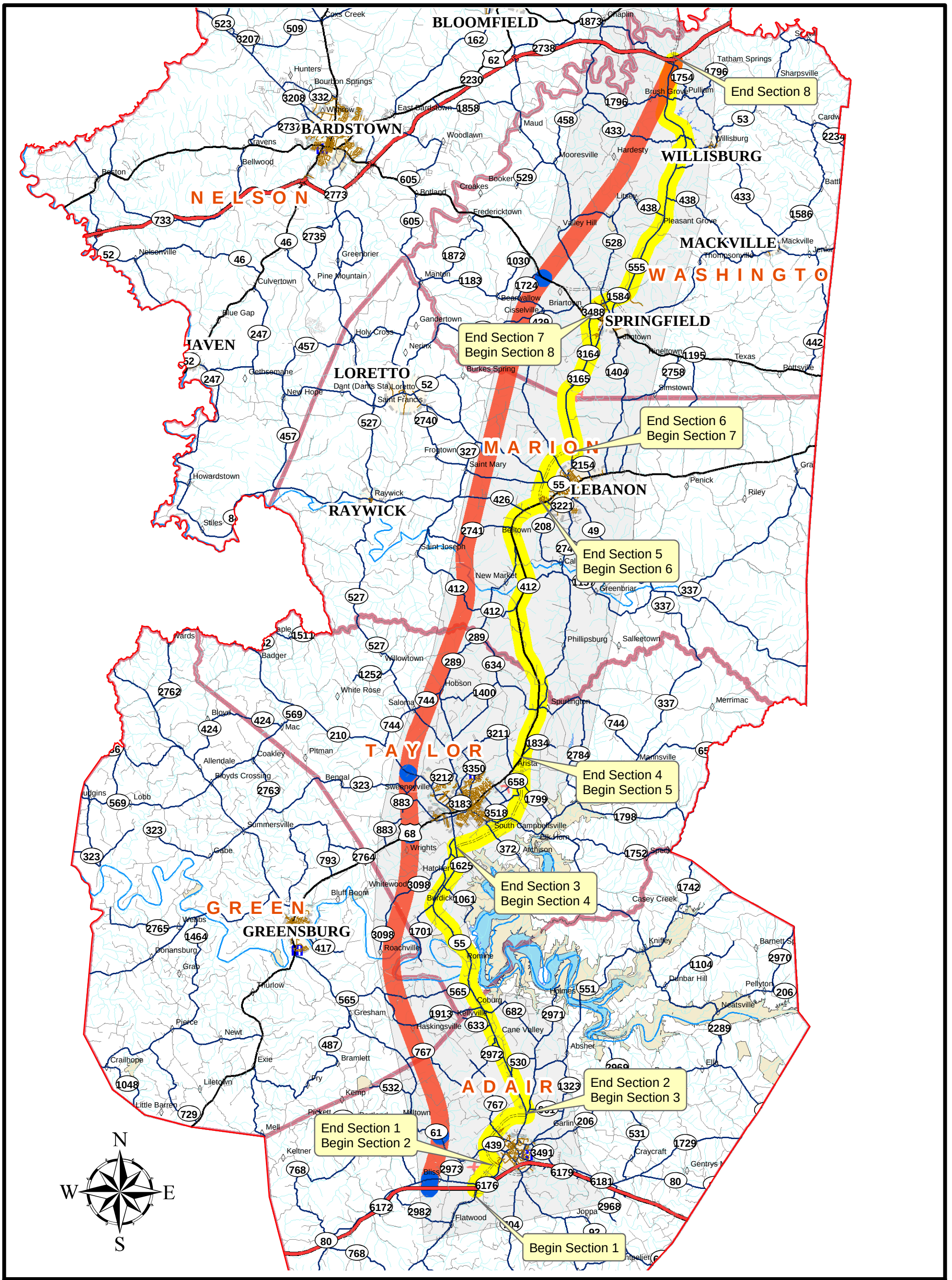

EDUCATION PAYS

KENTUCKY TRANSPORTATION CABINET

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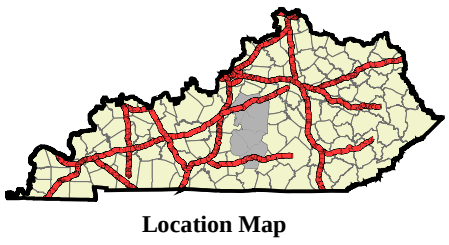
Legend

Corridor Alternates

- Bypass
- Option 1 Parkway
- Option 2, 3 Along Existing Alignment
- Possible Interchange
- Environmental Footprint



Location Map

Corridors

Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY 555
Item No. 4-132.00

Heartland Parkway - Estimated Costs for Priority Segments

Heartland Parkway - Option 1 (Interstate/Parkway Type of Facility)	
Items	**Total**
Estimated Length	60
Design	$41,027,000
Right-of-Way	$73,801,000
Utilities	$16,000,000
Construction	$509,650,000
Contingencies	$76,448,000
Total	$716,926,000

Heartland Parkway - Option 2
(Four-Lane Facility Along Existing Routes)

Items	Segment 1	Segment 2	Segment 3		Segment 4	Segment 5		Segment 6	Segment 7		Segment 8		Total
	Section A **Adair Co.** (KY 61 from L.B.N. C'land Pkwy. to Columbia Bypass)	**Section B** **Adair Co.** **Columbia Bypass**	**Section C** **Adair Co.** (KY 55 from Columbia Bypass to Taylor Co. Line)	**Section D** **Taylor Co.** (KY 55 to Campbells-ville Bypass)	**Section E** **Taylor Co.** **Campbellsville Bypass**	**Section F** **Taylor Co.** (US 68 from Campbells-ville Bypass to Marion Co. Line)	**Section G** **Marion Co.** (US 68 to Lebanon Bypass)	**Section H** **Marion Co.** **Lebanon Bypass**	**Section I** **Marion Co.** (KY 55 from Lebanon Bypass to Wash. Co. Line)	**Section J** **Washington Co.** (KY 55 to KY 555)	**Section K** **Washington Co.** (KY 555 to MP 8.284)	**Section L** **Washington Co.** (KY 555 MP 8.284 to M.L.C. Blue Grass Pkwy.)	
Section Length	2.1	4.16	6.356	8.7	6.7	4.051	9.47	3.305	2.669	4.551	8.284	6.414	66.76
2030 ADT	-	10,700 - 13,700	22,200 - 24,400	21,000 - 32,500	9800 - 11,800	18,700 - 23,600	18,700 - 32,300	9800 - 12,700	24,500 - 25,000	21,900 - 25,000	13,600 - 19,400	9200 - 10,800	-
Design	-	2,894,000	1,824,000	2,673,000	2,322,000	685,000	2,510,000	927,000	478,000	883,000	1,720,000	1,463,000	$18,379,000
Right-of-Way	2,000,000	4,400,000	2,589,000	14,867,000	5,868,000	2,866,000	8,186,000	2,200,000	2,613,000	2,988,000	4,372,000	4,854,000	$57,803,000
Utilities	500,000	1,500,000	11,171,000	2,675,000	1,875,000	1,013,000	4,868,000	1,000,000	668,000	1,138,000	2,071,000	1,604,000	$30,083,000
Construction	15,000,000	35,943,000	23,604,000	34,432,000	28,842,000	8,737,000	32,070,000	13,353,000	6,086,000	11,223,000	21,831,000	18,530,000	$249,651,000
Contingencies	2,250,000	5,393,000	2,448,000	3,749,000	4,327,000	1,044,000	3,783,000	2,003,000	738,000	1,384,000	2,729,000	2,357,000	$32,205,000
Total	$19,750,000	$50,130,000	$41,636,000	$58,396,000	$43,234,000	$14,345,000	$51,417,000	$19,483,000	$10,583,000	$17,616,000	$32,723,000	$28,808,000	$388,121,000

Heartland Parkway - Option 3
(Two-Lane Facility with Passing Lanes Every Three Miles)

Items	Segment 1	Segment 2	Segment 3		Segment 4	Segment 5		Segment 6	Segment 7		Segment 8		Total
	Section A **Adair Co.** (KY 61 from L.B.N. C'land Pkwy. to Columbia Bypass)	**Section B** **Adair Co.** **Columbia Bypass**	**Section C** **Adair Co.** (KY 55 from Columbia Bypass to Taylor Co. Line)	**Section D** **Taylor Co.** (KY 55 to Campbells-ville Bypass)	**Section E** **Taylor Co.** **Campbellsville Bypass**	**Section F** **Taylor Co.** (US 68 from Campbells-ville Bypass to Marion Co. Line)	**Section G** **Marion Co.** (US 68 to Lebanon Bypass)	**Section H** **Marion Co.** **Lebanon Bypass**	**Section I** **Marion Co.** (KY 55 from Lebanon Bypass to Wash. Co. Line)	**Section J** **Washington Co.** (KY 55 to KY 555)	**Section K** **Washington Co.** (KY 555 to MP 8.284)	**Section L** **Washington Co.** (KY 555 MP 8.284 to M.L.C. Blue Grass Pkwy.)	
Section Length	2.1	4.16	6.356	8.7	6.7	4.051	9.47	3.305	2.669	4.551	8.284	6.414	66.76
2030 ADT	-	10,700 - 13,700	19,500 - 21,700	18,500 - 28,700	8600 - 10,500	16,500 - 20,800	16,500 - 28,400	8600 - 11,100	21,500 - 22,000	19,200 - 22,000	11,900 - 17,100	8100 - 9500	-
Design	-	-	317,000	392,000	1,444,000	193,000	523,000	450,000	142,000	216,000	435,000	348,000	$4,460,000
Right-of-Way	2,000,000	4,400,000	122,000	122,000	5,868,000	0	0	1,300,000	0	0	0	122,000	$13,934,000
Utilities	500,000	1,500,000	600,000	600,000	1,875,000	300,000	900,000	1,000,000	300,000	300,000	900,000	600,000	$9,375,000
Construction	15,000,000	18,750,000	4,198,000	5,228,000	17,933,000	2,561,000	6,893,000	7,428,000	1,871,000	2,869,000	5,754,000	4,594,000	$93,079,000
Contingencies	2,250,000	2,813,000	320,000	360,000	2,690,000	187,000	572,000	1,115,000	151,000	209,000	459,000	377,000	$11,503,000
Total	$19,750,000	$27,463,000	$5,557,000	$6,702,000	$29,810,000	$3,241,000	$8,888,000	$11,293,000	$2,464,000	$3,594,000	$7,548,000	$6,041,000	$132,351,000

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I. INTRODUCTION



Existing KY 555

The purpose of the Heartland Parkway Alternatives Study is to identify and evaluate potential corridors for a new route and/or existing routes (KY 55/US 68/KY 555) from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway. The study is intended to help define the location and purpose of the project and better meet federal requirements regarding the consideration of environmental issues, as defined in the National Environmental Policy Act (NEPA). This report provides a general introduction and description of the project, identifies options for proposed improvements, presents an environmental and geotechnical overview for the study area, presents an extensive traffic forecast for each of the options studied, summarizes the input of local officials, resource agencies, and the public, and provides recommendations for the project.

A. LOCATION

The proposed highway project defined as the “Heartland Parkway” will run from the Louie B. Nunn Cumberland Parkway north to the Martha Layne Collins Blue Grass Parkway, and could include Adair, Green, Marion, Taylor, and Washington Counties. The study area for the corridor encompassed the existing corridor routes of KY 55, US 68, and KY 555, and an area two to three miles east and west of the existing routes.



Southern Terminus:
Louie B. Nunn Cumberland Parkway



Northern Terminus:
Martha Layne Collins Blue Grass Parkway

B. TERMINI and LENGTH

The project is identified in the Six-Year Highway Plan to perform corridor analysis for the location of the "Heartland Parkway" from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway. This study identifies the southern termini as the new interchange for KY 61 on the Louie B. Nunn Cumberland Parkway, and the northern termini as the KY 555 interchange on the Martha Layne Collins Blue Grass Parkway. See **Figure 7** in **Appendix A**.

C. PROJECT OBJECTIVES

The Alternatives Study for the Heartland Parkway will define the project purpose and need, identify approximate corridor locations, proposed improvements within each corridor, and a prioritization of the corridor improvements. The study will also involve a public involvement program, a technical analysis that encompasses geotechnical and environmental issues, traffic forecast and accident analysis and existing conditions.

Specific tasks included in this study are:

- Discuss project needs and issues with public officials, resource agencies, and other groups which have a special interest in the project;
- Define project goals, needs, and issues;
- Define the beginning and ending points of the project corridor;
- Identify any known environmental concerns;
- Identify and evaluate alternate corridors with possible design concepts;
- Listen to, and share information with, the public; and,
- Recommendations.

D. PROJECT ISSUES

Several study issues were anticipated as part of the corridor identification process, and each one addressed in this study. Several issues are identified below:

Currently there are several improvement projects already in the pre-construction phase in the study area, including an improved 5-lane



Green River Lake State Park

urban reconstruction project of KY 61 from 1000 feet south of the Louie B. Nunn Cumberland Parkway to the proposed Columbia Bypass (Item No. 8-162.6). Bypasses are planned for Columbia (Item No. 8-159.0) and Lebanon (Item No. 4-125.10). Right of way process is currently underway for the Columbia Bypass. The Columbia Bypass will be constructed as 2-lane on a 4-lane ultimate right of way; however, the Lebanon Bypass will be constructed as 2-lane on a 2-lane ultimate right of way. Additionally, there is a US 150 Bypass planned for Springfield (Item No. 4-307.01 and 4-103.05).

There are key community issues and interests that are addressed in this study. Some of these issues include impacts to:

- Higher Education Facilities
- Cultural and Historic Features
- Green River Lake and Willisburg Lake
- Lincoln Homestead State Park
- Residences and Businesses

Other issues and concerns that have been identified within the study area and will be addressed in the Alternatives Study include:

- Lack of good access to major expressway-type systems in the region (i.e., I-75, I-65, and the proposed I-66 corridor);
- A need to improve economic development and tourism opportunities in Adair, Green, Taylor, Marion, and Washington Counties;
- Poor geometrics, including narrow lane widths, narrow shoulders, substandard horizontal/vertical alignments, poor sight distance (no passing lanes), and access types;
- Truck access; and,
- A need to improve capacity in Adair, Green, Taylor, Marion, and Washington Counties in certain locations.



Limited Sight Distance

E. PROGRAMMING and SCHEDULE

The project addressed in this study was scheduled in the Kentucky Transportation Cabinet's Six-Year Highway Plan (FY 2003-2008), with committed funds in the amount of $625,000. The current Six-Year Highway Plan does not include funds for additional phases for the Heartland Parkway.

PART 1. PROJECT AREA CHARACTERISTICS

Part 1 of this document provides an overview of the general project area for the Heartland Parkway Scoping Study. Included in **Chapter II** are transportation systems, geometric data, bridges, existing traffic conditions, vehicle crash history, and planned highway improvements. **Chapter III** provides an analysis of future traffic conditions with and without area transportation improvements. The environmental overview in **Chapter IV** addresses various items, such as water quality issues, soils and geology, species and habitats, historic and archaeological resources, farmland, monitored sites, and items impacting the social and economic resources of the project area. **Chapter V** provides a geotechnical overview for the project area, including topography and constructability issues.

II. STUDY AREA CHARACTERISTICS

Characteristics of the study area and the major highway network are identified in the following sections. These characteristics include the project study area, transportation facilities, traffic and geometric data, bridges, crash data, and other Six-Year Highway Plan projects in the study area. Features of the existing highway routes were obtained from the KYTC Highway Information System (HIS) database. Maps and data tables can be found in **Appendix A** and **Appendix C** respectively. Photos of the project area can be found in **Appendix B**.

A. HIGHWAY SYSTEMS

The existing north-south corridor routes of KY 55, US 68, and KY 555 generally parallel I-65 and provide regional connectivity from the Blue Grass Parkway to the Cumberland Parkway (future proposed I-66), with east-west connectivity to I-65 and I-75.

The highway systems within the study area are summarized in **Table 1** in **Appendix C**. Information provided includes the Functional Classification, State Highway System, National Truck Network, National Highway System, and Truck Weight Class. Scenic Byway and Bike Route Systems are also listed for the existing corridor routes. A discussion of significant highway information is summarized as follows:

- State maintained roads in Kentucky are comprised of twelve different functional classification categories. KY 55, US 68, and KY 555 in Adair, Taylor, Marion, and Washington Counties are classified as State Primary routes.

- The National Truck Network (NN) includes routes that have been designated for use by commercial trucks with widths of 102 inches and heights of 13 ½ feet. KY 55, US 68, and KY 555 are all on the National Truck Network.

- The functional classification assigned to KY 55, US 68, and KY 555 is Rural Principal Arterial, except for the sections where KY 55 and US 68 pass through Campbellsville and Lebanon, where the classification is Urban Principal Arterial.

- The Truck Weight Classification along the existing corridor route is AAA (80,000 pounds gross vehicle weight), with the exception of a portion of KY 55 from the Louie B. Nunn Cumberland Parkway to KY 80 (MP 10.059 to MP 10.614) which is classified as AA (62,000 pounds gross vehicle weight). Additionally, KY 55 south of the Louie B.

Nunn Cumberland Parkway is also classified as AA. Some other significant routes in the study area that are classified as AAA include US 68 from Campbellsville to Greensburg, US 150 from Springfield to Danville, and US 150 from Springfield to Bardstown.

DEFINITIONS

State System: State-maintained roads in Kentucky are classified into four categories under the state system, ranging from Supplemental Road to State Primary.

National Truck Network: The National Truck Network (NN) includes roads that have been specifically designated for use by trucks with increased dimensions (102 inches wide; 13 feet 6 inches high; semi-trailers up to 53 feet long; trailers up to 28 feet long – not to exceed two trailers per truck).

National Highway System: The National Highway System (NHS), a system of nationally important roads, was established in the Intermodal Surface Transportation Efficiency Act (ISTEA). It includes the Interstate Highway System and other significant principal arterial roads important to the nation's economy, defense, and mobility.

Functional Classification: One (1) of 12 functional classification categories is assigned to each state-maintained road in Kentucky.

Truck Weight Class: The Kentucky Revised Status requires weight limits on the state-maintained highway system. With the exception of permits for over-dimensional or over-gross-vehicle-weight-classification-limit vehicles issued by the Kentucky Transportation Cabinet, Division of Motor Carriers, there are three weight classification limits: 1) AAA – 80,000 lbs. gross vehicle weight; 2) AA – 62,000 lbs. gross vehicle weight; and 3) A – 44,000 lbs. gross vehicle weight.

- A portion of The Cumberland Cultural Heritage Highway Scenic Byway System is in the Heartland Parkway study area. Routes included in that system include KY 80 and KY 61 in Adair County, KY 55 and US 68 from Columbia via Campbellsville to Greensburg.

- There are four bike routes in the study area as listed below:
  1. Central Heartlands Tour along KY 55 and US 68 in Taylor County
  2. Midland Kentucky Tour along KY 55 and US 68 in Taylor County
  3. Ramblin' River Tour
  4. Kentucky's TransAmerica Bike Trail

B. GEOMETRIC CHARACTERISTICS

Geometric characteristics for the routes along the existing corridor are shown in **Table 1** in **Appendix C**, and include items, such as number of lanes, lane widths, shoulder widths, posted speed limit, and percent of passing sight distance. Within the study area, the existing routes have the following characteristics:

- KY 55, US 68, and KY 555 are predominantly two lanes with a posted speed limit of 55 miles per hour (M.P.H.) in the rural areas. There are a few truck passing lanes. In the urbanized areas of Columbia, Campbellsville, and Lebanon, there are some four-lane undivided highway sections with reduced speed limits of 35-45 M.P.H.



Existing Shoulder – KY 55 in Taylor County

- Typical lane widths are 10-12 feet.

- Shoulders vary in width from 0 feet to 12 feet and vary in composition from gravel to full-width asphalt. Curb and gutter is utilized in the urban areas.

- There are several locations along the existing routes with restricted sight distance similar to the entrance shown on Page 3 of this report.

C. BRIDGES

Bridge data for the routes considered in this study are listed in **Table 2** in **Appendix C**. None of the bridges located on the existing corridor routes are listed as structurally deficient. Two bridges are functionally obsolete. One of the two functionally obsolete bridges is B00052 in Adair County, which will be avoided because of the proposed Columbia Bypass. Below is a list of the bridges along the existing routes.

- B00071 on KY 55 at MP 12.890 in Adair County crosses Butlers Branch. The structure is a Double 12’ x 9’ x 166’ Reinforced Concrete Box Culvert (RCBC) and has a sufficiency rating of 94.9.

- B00015 on KY 55 at MP 2.615 in Taylor County over Green River. The structure is a five-span 70’-95’-100’-95’-75’ Reinforced Concrete Deck Girder (RCDG), and has a sufficiency rating of 82.7. The 436-foot bridge has a horizontal clearance of 30 feet and total bridge width of 35 feet.

- B00014 on KY 55 at MP 2.925 in Taylor County spans Pinch Creek. The structure is a Double 10’ x 6’ x 210’ RCBC and has a sufficiency rating of 90.7.

- B00024 on US 68 at MP 1.706 in Marion County crosses State Creek. The structure is a Double 12’ x 5’ x 37’ RCBC and has a sufficiency rating of 90.3.

- B00072 on US 68 at MP 5.239 in Marion County spans Rolling Fork. The bridge is a four-span 60’-95’-95-95’ Precast Concrete I Beam (PCIB), and has a sufficiency rating of 97.3. The 360-foot bridge has a horizontal clearance of 44 feet.

- B00073, a box culvert on US 68 at MP 5.953 in Marion County crosses Buckhorn Creek. The structure is a Double 12’ x 7’ x 101’ RCBC and has a sufficiency rating of 93.9.

METHODOLOGY

Bridge Ratings: A bridge with a sufficiency rating less than fifty (50.0) is considered to be eligible for replacement with federal funds under the Federal-Aid Highway Bridge Replacement and Rehabilitation Program. Bridges can also be rated either structurally deficient or functionally obsolete.

- B00069 in Marion County on KY 55 at MP 2.781. The 106-foot structure crosses Cartwright Creek. It has spans of 32’ x 41’ x 32’ and a sufficiency rating of 96.3.

- B00048 on KY 55 in Washington County is at MP 1.549. The Double 11’ x 8’ x 201’ culvert carries Servant Run and has a sufficiency rating of 98.1.

- B00043 on KY 55 in Washington County is at MP 4.240. This structure is a 34-foot RCDG bridge over Road Run Branch. It has a horizontal clearance of 28 ½ feet and a sufficiency rating of 83.4.

- B00024 on KY 55 in Washington County is a 48-foot bridge that is listed as a 45-foot RCDG bridge over Road Run Creek. It has a horizontal clearance of 19 feet and a sufficiency rating of 70.6 and is functionally obsolete.

- B00047 on KY 555 in Washington County, is a Double 12’ x 8’ x 106’ culvert at MP 0.02 and carries Haydon Branch. The sufficiency rating is listed at 95.4.



Beech Fork Bridge in Washington County

- B00046 on KY 555 in Washington County is listed at MP 3.457. The 284-foot PCIB bridge crosses Beech Fork River and has a span composition of 93' x 93' x 83' x 93'. The horizontal clearance is shown at 44 feet and it has a sufficiency rating of 90.2.

- B00006 on KY 555 in Washington County is an arch culvert carrying Mays Creek at MP 7.038. The culvert is 30' x 20' x 223' and has a sufficiency rating of 80.

- B00005 on KY 555 in Washington County is at MP 8.284. The 286-foot Welded Steel Plate Girder (WSP) bridge crosses Long Lick Creek and has a span arrangement of 85'x 110'x 85'. The horizontal clearance is 30.2 feet and it has a sufficiency rating of 78.5.

- B00010 on KY 555 in Washington County is a 195-foot PCIB bridge over the Martha Layne Collins Blue Grass Parkway at MP 14.698. The span arrangement is listed as 35' x 58' x 58' x 35.' The horizontal clearance is 33 feet, and the bridge has a sufficiency rating of 77.7.

D. EXISTING TRAFFIC AND LEVEL OF SERVICE

Traffic and operational levels of service are included as part of this study and are shown in **Figure 2** in **Appendix A** and **Table 1** in **Appendix C** as graphical illustrations of existing and future traffic volumes. For this project, the following traffic volumes and levels of service (LOS) have been identified:

- Existing 2003 Traffic Volume and LOS
- Future Year 2030 Traffic Volume and LOS – No Build Alternative

1. EXISTING TRAFFIC VOLUMES and LEVEL OF SERVICE (YEAR 2003)

The KYTC Highway Information System (HIS) was used to provide the existing traffic volumes (2003) for segments along the existing corridor routes of KY 55, US 68, and KY 555. Additionally, existing truck percentages were determined using the HIS database.

The existing average daily traffic volumes and the corresponding truck percentages are shown in **Figure 2** in **Appendix A** and in **Table 1** in **Appendix C** of the document. Within the mapped study area, the existing traffic volumes along the existing corridor routes range from 3,200 average daily traffic (ADT) along KY 555 in Washington County to 28,600 ADT along KY 55 in Adair County.

Listed below are segments along the KY 55, US 68, KY 555 corridor, with traffic volumes and levels of service associated with each segment.


Columbia Courthouse Square

The segment along KY 55, from the Louie B. Nunn Cumberland Parkway (MP 10.059) through Columbia to the proposed Columbia Bypass (MP 12.65) in Adair County, has an ADT range from 10,700 to 28,600, with truck traffic averaging 8.8%. Current Level of Service (LOS) ranges from D to F. Free Flow Speed (FFS) is hampered by signalization of several intersections, the courthouse square, and multiple entrances with access by permit.

The next segment along KY 55, from the proposed Columbia Bypass in Adair County, north to a point where a proposed Campbellsville Bypass (not currently in the Six-Year Highway Plan) will cross KY 55 in Taylor County (MP 8.70), has an ADT range from 7,300 to 10,600, with truck traffic averaging 11.3%. Current Level of Service is in the C to D range. Portions of this section are access by permit.

Through the City of Campbellsville, along KY 55 and US 68, the ADT has a range of 8,500 to 24,200, with truck traffic at 5.9%. Level of Service is predominately in the C to D range, and there are two small four-lane segments on US 68 that have Levels of Service A and B.

From the north edge of Campbellsville, where a proposed bypass was to join US 68 (MP 9.48) to the proposed Lebanon Bypass in Marion County (MP 9.47) on US 68, the ADT range is from 6,500 to 11,200. Truck traffic averages 9.7% on this section, and the Level of Service is in the C and D range.

Through the City of Lebanon, along US 68, KY 55, and KY 49, the ADT ranges from 9,000 to 13,400. Truck traffic averages 8%. On US 68, the Level of Service is E; however, on KY 55 there is a range of A to C Level of Service where there is a 4-lane typical section.

Leaving Lebanon on KY 55 from MP 2.0 and extending north through Marion and Washington Counties to the intersection of KY 555 at MP 4.551 in Springfield, the ADT on this rural section ranges from 7,600 to 8,500 and the average percent of trucks is 8.9%. The Level of Service throughout this section is D.

The northern-most section is KY 555, from the intersection of KY 55 MP 0.00 north to the Martha Layne Collins Blue Grass Parkway at MP 14.738. This rural section has the lowest traffic volumes, ranging from 3,200 to 6,700. The average truck percentage on this section is 15%, and the Level of Service is in the B and C range.

METHODOLOGY

Traffic Volumes: Existing traffic volumes (Year 2003) along project area routes are summarized based on information provided in the HIS database. Existing truck percentages were determined for routes using the HIS data and Kentucky Transportation Cabinet default values for functional highway classes.

Level of Service: Level of Service (LOS) is a qualitative measure defined in the *2000 Highway Capacity Manual*, published by the Transportation Research Board (TRB) and used to describe traffic conditions. Individual levels of service characterize these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined and are given letter designations from A to F with LOS A representing free flow conditions, and LOS F representing severe congestion. Typically, a minimum of LOS D is acceptable in urban areas and LOS C in rural areas. Chapters 15, 20, and 21 of the *2000 Highway Capacity Manual* provide guideline on the analytical procedures for estimating LOS for streets and highways.

E. CRASH ANALYSIS

Crash data along the existing routes (KY 55, US 68, and KY 555) were considered during a six-year period from January 1, 1997, through December 31, 2002. Crash locations were replicated using the mile point in **Table 3** of **Appendix C**, and both spot and segment analysis were performed. Additionally, Critical Rate Factors were determined using the methodology outlined in the Kentucky Transportation Center's *Analysis of Traffic Crash Data in Kentucky (1997-2001)*. The analysis classified each crash as being fatal, involving injuries, or property damage. During the six year time frame, there were 29 fatal, 965 injury, and 1320 property damage crashes. **Figure 3** in **Appendix A** displays segments where the critical rate factor is greater than 1.0.

Areas where the critical rate factor exceeded 1.0 include the following:

- Adair County (KY55) MP 10.440 – MP 10.614
- Taylor County (US68) MP 5.553 – MP 5.923
- Marion County (US68) MP 9.864 – MP 10.690

- Marion County (KY55) MP 0.000 – MP 0.570
- Washington County (KY555) MP 0.000 – MP 0.841

The two sections in Marion County are contiguous.

There are also several spot locations where the critical rate factor is greater than 1.0. These locations are shown in the Spot Analysis section of **Table 3** in **Appendix C**, and often occur at intersecting roadways.

METHODOLOGY

Crash Data: Vehicle crash data for routes in the project area were considered for a six-year period from January 1, 1997 through December 31, 2002. The location of vehicle crashes with valid milepoint designations were identified through data obtained from the Kentucky Transportation Cabinet's Highway Information System (HIS).

Crash Analysis: When a roadway segment has a critical rate factor greater than one (1.00), this indicates that accidents at this location may not be occurring randomly. The critical rate factors are calculated based on the methodology presented in the Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001).* A spot location or segment of roadway is considered to have a high crash rate when the total crash rate is higher than the critical accident rate for similar roadways in the state.

F. HIGHWAY IMPROVEMENTS in the SIX-YEAR HIGHWAY PLAN

Improvements in the 2002 Six-Year Highway Plan along the existing corridor, as well as, improvements within the study area that may influence the location of a recommended corridor for the Heartland Parkway, are identified in **Table 4** of **Appendix C** and listed as follows:

KY 55 - Western Bypass of Columbia in Adair County: Right of Way (2003), Utility Relocation (2003), and Construction (2004-2007) scheduled with $24,650,000 allocated for this project.

KY 61 (MP 10.571 to MP 12.600) in Adair County: Right of Way (2002), Utility Relocation (2004), and Construction (2005) scheduled with $17,500,000 allocated for reconstruction of KY 61 from 1000 feet south of the Louie B. Nunn Cumberland Parkway to the proposed Western Bypass of Columbia.

KY 80 (MP 15.523 to MP 15.623) in Adair County: Design (2003), Right of Way (2005), Utility Relocation (2006), and Construction (2008) scheduled with $3,750,000 allocated to replace the bridge over Russell Creek, 1.2 miles east of KY 55.

KY 61 in Green/Adair Counties: Design (2002) scheduled with $1,250,000 allocated to reconstruct KY 61 from KY 487 in Green County to Columbia.

US 68 in Marion/Boyle Counties: Right of Way (2003), Utility Relocation (2005), and Construction (2006) scheduled with $22,917,925 allocated to reconstruct US 68 from Lebanon to 1.5 miles east of the Boyle County Line.

KY 49 (MP 10.500 to MP 11.730) in Marion County: Design (2002), Right of Way (2003), Utility Relocation (2003), and Construction (2004) scheduled with $2,750,000 allocated to reconstruct KY 49 from Pope Creek Bridge to Riverside Bridge.

US 68 (MP 12.900 to MP 13.200) in Marion County: Construction (2002) scheduled with $225,000 allocated to construct a left-turn lane.

KY 210 (MP 16.184 to MP 16.884) in Taylor County: Design (2004) scheduled with $350,000 allocated to widen KY 210 from US 68 to new connector.

KY 3211 (MP 3.390 to MP 3.490) in Taylor County: Design (2004), Right of Way (2005), Utility Relocation (2005), and Construction (2006) scheduled with $475,000 allocated to replace bridge at Trace Fork, 1.9 miles west of US68/KY55.

CR 1236 in Taylor County: Design (2004), Right of Way (2006), and Construction (2007) scheduled with $1,250,000 allocated to replace bridge over Green River 0.75 miles southwest of KY 55.

US 150 in Washington County: Construction (2002) scheduled with $4,200,000 allocated to relocate US 150 from Springfield to Danville.

US 150 Springfield Bypass in Washington County: Design (2003), Right of Way (2004), Utility Relocation (2005), and Construction (2006-2008) scheduled with $13,000,000 allocated for a new route – Bardstown to Springfield Bypass.

KY 1584 (MP 0.806 to MP 0.906) in Washington County: Right of Way (2002), Utility Relocation (2002), and Construction (2003) scheduled with $200,000 allocated to replace bridge and approaches at Poorhouse Branch.

KY 555 in Washington/Anderson Counties: Construction (2003-2006) scheduled with $21,300,000 allocated to extend KY 555 from the Martha Layne Collins Blue Grass Parkway to KY 248.

III. FUTURE TRAFFIC VOLUMES and LEVEL OF SERVICE (YEAR 2030)

A. FUTURE TRAFFIC VOLUMES and LEVEL OF SERVICE (Year 2030) WITH NO IMPROVEMENTS

Included in this study are a number of traffic forecast options for future year (2030) traffic. The future average daily traffic volumes without any transportation improvements along the existing corridor are shown in **Figure 4A** in **Appendix A** and **Table 1** in **Appendix C**. Future Year traffic along the existing corridor without improvements (no-build), and corresponding Levels of Service are discussed below.

The segment along KY 55, from the Louie B. Nunn Cumberland Parkway MP 10.059) through Columbia to the proposed Columbia Bypass (MP 12.65) in Adair County, is expected to grow to an ADT range from 17,900 to 28,000 vehicles per day (VPD), with truck traffic averaging 13.3%. Level of Service (LOS) is expected to range from E to F. Free Flow Speed (FFS) will continue to decrease due to the signalization of several intersections, the courthouse square, and multiple entrances with access by permit, and will be further complicated by the increase in traffic, particularly truck volumes.



KY 55 South of Columbia

The next segment along KY 55, from the proposed Columbia Bypass in Adair County, north to a point where a proposed Campbellsville Bypass (not currently in the Six-Year Highway Plan) crosses KY 55 in Taylor County (MP 8.70), is projected to have an ADT that ranges from 16,200 to 24,200 VPD, with truck traffic averaging 17.8%. Level of Service is expected to drop in the E to F range. Portions of the section are access by permit.

Through the City of Campbellsville, along KY 55 and US 68, the ADT will range from 18,900 to 53,800 in the Future Year 2030, with truck traffic increasing to an average of 8.8%. Level of Service is predominately in the D to F range, with two small four-lane segments on US 68 having a Level of Service C.

From the north edge of Campbellsville, where a proposed bypass (not currently in the Six-Year Highway Plan) was to join US 68 (MP 9.48) to the

proposed Lebanon Bypass in Marion County (MP 9.47) on US 68, the projected 2030 ADT range is from 14,400 to 24,900. Truck traffic will be 15.2% on this section, and the Level of Service will be in the D to F range.

Through the City of Lebanon, along US 68, KY 55, and KY 49, the 2030 ADT ranges from 11,300 to 23,000. Truck traffic will average 12.1%. On US 68 a Level of Service E is projected; however, on KY 55 the range is A to D Level of Service. The four-lane typical section has a Level of Service A.

Leaving Lebanon on KY 55 from MP 2.0 and extending north through Marion and Washington Counties to the intersection of KY 555 at MP 4.551 in Springfield, the 2030 ADT on this rural section is projected to range from 16,900 to 18,900, and the average percent of trucks at 13.3%. The Level of Service throughout this section is E.

The northern most section is KY 555, from the intersection of KY 55 MP 0.00 north to the Martha Layne Collins Blue Grass Parkway at MP 14.738. This rural section has the lowest 2030 traffic volumes, ranging from 7,100 to 10,400. The average truck percentage on this section will be 23.2%. The 2030 Level of Service is in the D and E range.

IV. ENVIRONMENTAL OVERVIEW

Environmental issues and sensitive areas were identified and shown on the Environmental Footprint Map and are shown in **Figures 5a and 5b** in **Appendix A**. They are also summarized is the following discussion. The Final Environmental Overview is included in **Appendix D**.

- The potential socioeconomic impacts to the region were evaluated, considering the efficient transportation of goods and services, access to shopping areas, employment opportunities, and tourism attractions.

- Environmental Justice Issues that may disproportionately affect minority or low-income groups, neighborhoods or communities must be considered.

- Land use and potential effects on farmland, residential and commercial relocations were considered.

- There will be a number of floodplains and wetlands in the area, as well as, blue line streams.

- There are many resources in the study area. There are Nature Preserves, Historic Resources, Cemeteries, and Section 4(f) and 6(f) Resources. These are identified and shown on the Environmental Footprint Map. Archaeological and Hazardous Materials Sites were also located and shown on the Environmental Footprint Map.

V. GEOTECHNICAL OVERVIEW

Geotechnical characteristics and potential issues in the project area have been identified and summarized in the following paragraphs, and will require further consideration throughout future phases of this project. The Final Geotechnical Overview Report is included in **Appendix E**.

- There are several active and inactive crushed stone and sand quarry sites within the study area. The quarries are currently being mined or have been mined in the past for limestone, dolomitic limestone, and/or dolomitic rock, or sand and gravel materials for a variety of construction uses.



New Albany Shale along US 68

- Karst activity exists over portions of the project area. The potential for karst activity is greatest in the Mississippian Plateau Region near Columbia.

- There is significant potential for acid drainage to occur within the Knobs Region where the New Albany Shale may be exposed to air and water. Cuts and embankments in this area should be assessed for acidity and remedial measures applied, such as capping with four feet of clay-like, non-acidic material.

- Faults known to exist in the area are not considered to be active. Potential for slumping and other forms of slope failure exists because of unstable conditions of the bedrock and soils along the areas affected by the fault.

PART 2. CORRIDOR DEVELOPMENT PROCESS

Part 2 of this document provides a chronological account of the corridor development and public involvement process. The evolution of the identified project corridors is interwoven with the project team meetings and public involvement efforts undertaken as part of this project. **Chapter VI** provides a summary of the initial project team meeting and summaries of the first rounds of local officials/agencies, stakeholder, and public information meetings. The second project team meeting, the refined Draft Project Goals, identification of preliminary improvement corridors, and summaries of the second rounds of local officials/agencies, stakeholders, and public information meetings are identified in **Chapter VII**, which also includes resource agency input.

VI. CABINET and INITIAL PUBLIC INVOLVMENT ACTIVITIES

Throughout this study, local citizens, public officials, representatives of local agencies, and other special interest groups were given an opportunity to ask questions, view project displays, and provide input on the proposed project. The following sections will describe the public involvement activities that took place during the course of this study. In addition to the information presented in this report, all material related to the public meetings is included in each of the Public Meeting Summary Notebooks.

A. FIRST PROJECT TEAM MEETING

The initial project team meeting was held May 28, 2003, in the Elizabethtown District Office Conference Room in order to inform attendees of all information obtained to date, to discuss the project purpose, goals, and issues, and to discuss the limits of the environmental footprint. Attendees included representatives from Central Office, District Offices in Elizabethtown and Somerset, Lincoln Trail Area Development District Office, Lake Cumberland Area Development District Office, and the consultant team. Copies of the meeting minutes are included in **Appendix F**.

Some of the key issues along the existing corridor that were discussed were:

- Lack of good access to major expressway-type systems in the region (i.e., I-75, I-65, and the proposed I-66 corridor);
- Need to improve economic and tourism opportunities in Adair, Green, Taylor, Marion, Nelson, and Washington Counties;
- Poor geometrics, including narrow lane widths, narrow shoulders, substandard horizontal/vertical alignments, poor sight distance (no passing lanes), and access type;
- KY 55/US 68/KY 555 are not on the National Highway System; and,
- Need to improve capacity in Adair, Green, Taylor, Marion, Nelson, and Washington Counties in certain locations.

In addition, other major items discussed at this meeting included:

- Draft Environmental Footprint
- Draft Project Goals
- Possible Design Criteria
- Project Termini
- Traffic Forecasting Methodology
- Public Meeting Preparations

- Review Traffic Data Tables in Handout
- Review Crash Data Tables and Map in Handout
- Review Bridge Data Tables in Handout
- Review Six-Year Highway Plan Projects in the Study Area

Preliminary Draft Project Goals

- Improved statewide and regional access;
- Improved truck access for the region;
- Improved economic opportunities;
- Improved horizontal/vertical alignments to provide adequate sight distances and control of access;
- Improved highway capacity;
- Decrease delays through communities; and
- Improved emergency response times.

B. FIRST ROUND of LOCAL OFFICIALS/AGENCY MEETINGS

As part of the public involvement activities, meetings were held with local officials, agencies, and interest groups. Due to the length of the study area, and the number of counties potentially affected, the first round of meetings was held in the Area Development District Offices. Representatives from Marion, Washington, and Nelson Counties were invited to the meeting at the Lincoln Trail Area Development District Office in Elizabethtown on July 7, 2003, and representatives from Adair, Green, and Taylor Counties were invited to a meeting at the Lake Cumberland Area Development District Office in Russell Springs on July 15, 2003. Lastly, the morning meetings were for Local Officials, and the afternoon meetings were for local agencies.

Meeting minutes for each meeting can be found in **Appendix F**.

At each meeting, attendees were presented with a preliminary environmental footprint area that contained data collected at that time, and draft project goals.

1. LOCAL OFFICIALS MEETING for Marion, Washington, and Nelson Counties

The primary interests for local officials were economic development and increasing tourism opportunities in the area. Consequently, the group recommended adding tourism to the draft project goals. They

also expressed their main concern -- the number of large trucks traveling through their communities.

The draft project goals were further discussed, and some additional changes or refinements were suggested. Another item was added, “Improved Access for Higher Education” to assist commuting students.

The group also expressed interest in a four-lane divided highway similar to Lincoln Parkway and constructed mostly along the existing routes of KY 55, US 68, and KY 555, with unrestricted traffic flow.

During the meeting, there was a discussion of extending this project to connect with I-64, using the KY 555 Extension.

2. LOCAL AGENCY MEETING for Marion, Washington, and Nelson Counties

There were no attendees for this meeting.

3. LOCAL OFFICIALS MEETING for Adair, Taylor, and Green Counties

The primary emphasis of attendees was to improve economic development. Large trucks have difficulty getting through Columbia, which is a deterrent for industry. Also, the group expressed concern that many residents are leaving and finding jobs in other locations.

Additionally, tourism was mentioned as a goal of significant importance.

The group also discussed improved access to higher educational facilities in the region since many students commute from outside the area. An improved transportation system would not only provide better accessibility for students, but also improve the opportunity for economic development and better paying jobs through a more educated workforce.

Since farmers are shifting from tobacco crops to crops that are shipped nationwide, agricultural economy was discussed. This item was also added to the draft project goals.

Safety was also a concern for local officials. An improved transportation facility would improve emergency response times.

The group predominantly supported a four-lane facility similar to the Lincoln Parkway, and they also recommended completion of the community bypasses. Likewise, an eastern bypass was favored for Campbellsville.

4. LOCAL AGENCY MEETING for Adair, Taylor, and Green Counties

Lt. Greg Speck of the Kentucky State Police expressed concern for reducing the number of fatalities. He indicated that most fatalities occur on two-lane roads where vehicles drop off the shoulders and then over-correct into the path of oncoming traffic.

Tourism was mentioned as a major goal, with emphasis placed on Green River Lake State Park. The attendees were told that a proposed development of a lodge and golf course was planned.

Because farm equipment is frequently seen on the highway, wider shoulders would provide an opportunity to move farm equipment without hindering other traffic.

Bypass routes were mentioned as a top priority for the region. The KY 55-KY 210 Connector was discussed as the beginning of a possible bypass route for Campbellsville. After some further discussion of the congestion already on that route, the group felt a new bypass would be appropriate.

When asked about the type of facility that would best serve the needs of the region, most attendees recommended a four-lane partially controlled highway.

C. HEARTLAND PARKWAY TASK FORCE MEETING

A meeting with the leadership of the Heartland Parkway Task Force was held on July 18, 2003, at the Campbellsville University Technology Training Center. The task force was shown a preliminary environmental footprint area, and draft project goals for their consideration.

The group recommended adding Agricultural Economy to the draft project goals.

Economic development was of primary importance among the attendees since it was noted that the garment industry is leaving the area.

Tourism is another significant goal. With Green River Lake State Park currently having over a million visitors annually, tourism is expected to increase with the development of a new lodge and golf course.

Higher educational facilities in the region also generated discussion. Chairman John Chowning pointed out that fifty percent of Campbellsville University's students are first generation college students from working class families, and many of these students are commuters from surrounding counties.

Additionally, it was noted that Campbellsville has the only trauma center in the region, making emergency response time a key project goal.

The group also expressed interest in the future extension of the Heartland Parkway to the south into Tennessee and to the north to I-64.

The type of highway recommended by the group was a four-lane highway similar to Lincoln Parkway in Hardin County. The Lincoln Parkway is a 4-lane divided highway with a depressed median. Access is partially controlled, allowing access at 1200-foot intervals.

D. FIRST ROUND OF PUBLIC INFORMATION MEETINGS

The first round of open house format public information meetings was held in each of the four communities along the existing corridor routes. The purpose of these meetings was to provide the public with a list of the draft project goals and the draft environmental footprint. Also available were exhibits that identified existing conditions related to traffic volumes, crash data, and a display that showed the preliminary environmental footprint with early environmental data. The key point for the meetings was to gather input from individuals on their ideas regarding regional needs and solutions to those needs. At this stage in the study, no corridors had been identified, only the general study area. Many attendees provided additional information related to cultural, historic, or environmental features not yet identified. A handout with a questionnaire was given to each person who attended. Results from the questionnaires have been



First Round of Public Meetings

summarized in **Table 5** in **Appendix C**, and meeting minutes from each meeting can be found in **Appendix F**.

In addition to the information presented in this section, material related to the first round of public information meetings is included in four (4) separate Public Meeting Summary Notebooks on file in the KYTC Division of Planning:

- *September 2, 2003 Public Information Meeting Notebook (Lebanon)*
- *September 4, 2003 Public Information Meeting Notebook (Columbia)*
- *September 8, 2003 Public Information Meeting Notebook (Springfield)*
- *September 11, 2003 Public Information Meeting Notebook (Campbellsville)*

Each of the public information meetings was set up as a walk-through tour, with each Station labeled. At Station One, where Kentucky maps and Kentucky Road Work Ahead pamphlets were available, attendees were asked to sign in before given a handout that included the following items:

- Questionnaire
- Study Purpose, Issues, and Project Goals
- Location Map
- Special Considerations

Attendees were asked to complete the questionnaire prior to leaving the meeting, or return it to the KYTC at a later date in the provided postage-paid envelope.

At Station Two, a narrated PowerPoint Presentation described many of the project issues within the project study area. Issues included the Project Goals, identified environmental, social, and cultural features in the area, and evaluation criteria for this study.

At Station Three, individual county maps were displayed that contained improvement projects identified in the Six-Year Highway Plan (FY 2003-2008).

At Station Four, there were several exhibit boards on display that included:

- Existing conditions information collected to date, including a project location map, Year 2003 traffic data, and crash data from January

1997 through December 2002. Identified environmental data was also displayed, along with the environmental footprint area.

- Traffic Forecast data for YEAR 2030

- Draft Project Goals

At the final station, refreshments were provided.

Consultant and cabinet staff members were available to record oral statements. These statements were transcribed and placed in the Public Information Meeting Summary Notebook, which is in a separate document.

1. MARION COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Tuesday, September 2, 2003, from 4:00 p.m. to 7:00 p.m. at Center Square in Lebanon, Kentucky.

A total of twenty-two people attended this meeting, not including the eleven staff members. However, there were three public members who chose not to register. One attendee made oral comments to one staff member, which were noted and transcribed.



Marion County Public Meeting

2. ADAIR COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Thursday, September 4, 2003, from 4:00 p.m. to 7:00 p.m. at the W.R. Davenport Family Life Center in Columbia, Kentucky.



Adair County Public Meeting

A total of fifty-nine persons registered their attendance at this public information meeting, but this does not include the 10 staff members listed in the minutes in **Appendix F**.

3. WASHINGTON COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Monday, September 8, 2003, from 4:00 p.m. to 7:00 p.m. at the Washington County Extension Office in Springfield, Kentucky.



Washington County Public Meeting

A total of sixteen persons registered their attendance at the public information meeting; this does not include the thirteen staff members. There were some oral comments that were noted and transcribed.

4. TAYLOR COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Thursday, September 11, 2003, from 4:00 p.m. to 7:00 p.m. at the City Council Chambers in Campbellsville, Kentucky.



Taylor County Public Meeting

A total of twenty-three persons registered their attendance at the public information meeting; this does not include the ten staff members.

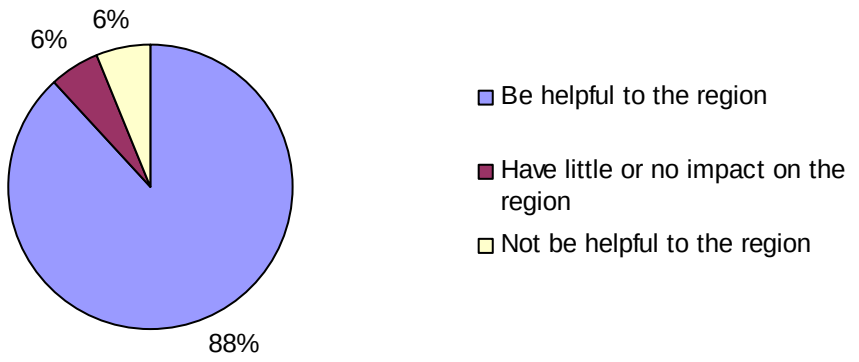
E. SURVEY QUESTIONNAIRE RESPONSES

During the public involvement meetings, attendees were provided with a project survey questionnaire. The survey included questions about the project benefits, potential use, existing transportation-related problems, type of facility, and environmental concerns. The survey responses are tabulated in **Table 5** in **Appendix C**, with the results summarized below:

88% of the survey respondents indicated that the project would be beneficial to the region.

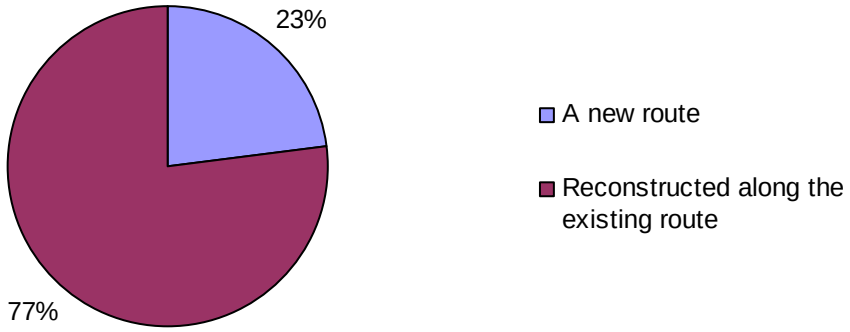
82% of those surveyed indicated that the Heartland Parkway would improve economic development.

If a new/reconstructed roadway were built, do you think it would:



About one-third (33%) of those surveyed indicated they would use this route on a daily basis.
77% of those surveyed indicated they preferred the Heartland Parkway be constructed along the existing route.

The Heartland Parkway should be:



VII. CORRIDOR DEVELOPMENT

As issues and concerns were expressed in the first round of meetings, recommended alternatives were developed that would address concerns identified in the Draft Project Goals as refined from input received in the first round of meetings with local officials, agencies, special interest groups and the public.

A. DRAFT PROJECT GOALS

Preliminary project goals have been identified through this study and are the result of the compilation of ideas from Kentucky Transportation Cabinet personnel, transportation planners from the Area Development Districts, Local Officials and Agencies, special interest groups, and the public.

For this project, the following goals have been identified:

- Improve Regional Access – Improvements to the existing corridor routes of KY 55, US 68, and KY 555 or construction of a new Parkway would provide a better route for truck access, which is essential in improving economic development in the region and serving existing industries, including the agricultural economy as it shifts from tobacco to nationally shipped crops. A new or improved route would also create better access to higher educational facilities in the region, improving the educational level of local residents and allowing an educated workforce to compete for higher paying jobs. In addition, this region is rich in cultural, historic, and recreational sites, which make tourism an industry dependent on an efficient transportation system.



KY 55 in Taylor County

- Improve Safety – Many of the shoulders along the existing routes consist of unstabilized material. As shoulders erode at the edge of the driving lanes, drop-offs develop, creating a potentially hazardous situation. Additionally, there are some locations that have poor sight



KY 210 in Campbellsville

distance at entrances. These are in areas where access control is by permit. High crash locations are located in the urbanized areas, primarily at intersections.

- Improve Highway Capacity in Certain Locations – Some of the existing routes are operating at acceptable levels of service; however, a review of future year (2030) traffic volumes and percentage of trucks will necessitate an improved transportation system in order to minimize congestion. As noted in Table 1, Appendix C, KY 55 and US 68 are operating at Level of Service D and E through the communities of Columbia, Campbellsville, and Lebanon.

- Decrease Delays through Communities – As a major corridor route in this region, the existing route carries up to 26,100 VPD along portions of KY 55. Varying speed limits between 35 and 55 mph do not allow consistent travel speeds. Additionally, frequent entrances, intersections, and traffic signals create delays and contribute to crashes. The most significant delays involve the courthouse square in Columbia; however, other delays are experienced in Campbellsville and Lebanon as a result of traffic signals and reduced speed limits.

- Improve Emergency Response Times - Emergency vehicles transporting patients to more advanced medical facilities in the region, such as the Trauma Center at Taylor Regional Hospital or outside the region, could benefit from reduced travel times. Law enforcement and fire emergency response times could also be reduced.

B. SECOND PROJECT TEAM MEETING

The second project team meeting was held on February 4, 2004, in the Elizabethtown District Office Conference Room. The purpose of this meeting was to discuss the results of the public meeting and the summary of questionnaire results, to discuss three options developed by the consultant, and to review the project purpose, issues, and goals as they have been refined through the public involvement process.

The needs and concerns in the study area were obtained through meetings with local officials, public information meetings, and special interest group meetings. The results of the questionnaires were then summarized.

Different design concepts will be considered as part of this study, with each having its own unique application. The appropriate concept will be applied to corridors along and off the existing routes. Considerations will involve the number of lanes, type of access control, and typical section.

Through field and database research, known environmental concerns were identified and shown on the project exhibits. The following three options were presented for consideration:

Option 1
- 4-Lane Divided Highway
- Access Points at Interchanges Only
- New Alignment

Option 2
- 4-Lane Divided Highway
- Access Provided at 1200' Spacing at Grade with Median Cuts
- Follow Existing Routes (KY 55, US 68, KY 555)
- Upgrade Proposed Bypasses at Columbia and Lebanon to Four-Lane
- New Four-Lane Bypass at Campbellsville on Southeast Side (KY 55 to US 68)

Option 3
- Add Passing Bays to Existing Routes (KY 55, US 68, KY 555)
- Access Locations Would Not Change
- Use Proposed Bypasses at Columbia and Lebanon
- New Two-Lane Bypass at Campbellsville on Southeast Side (KY 55 to US 68)
- Pavement and Shoulders on Existing Routes Would Be Rehabilitated

Attendees were given a handout with a more detailed explanation of each option, as shown below:

As this study progressed, it became apparent that a corridor on the east side of the existing corridor would be difficult due to the Green River Lake area. This study addresses three options: **Option 1** is a parkway to the west of the existing corridor; **Options 2 and 3** are along the existing route with bypasses at the communities.

Option 1 is a four-lane divided fully controlled access facility. It lies approximately two miles west of the existing roadway. Interchanges are provided at major crossroads to access the communities. **Option 1** lies on a new alignment along its entire route, as shown in **Figure 7** of **Appendix A**.


Taylor County

Option 2 consists of widening the

existing KY55/US68/KY555 route to a four-lane partially controlled access facility. It would follow the bypasses currently under design around the west sides of Columbia and Lebanon. Both of these bypasses would be widened to four lanes. **Option 2** would provide a four-lane bypass around the southeast side of Campbellsville.

Option 2, as shown in **Figure 7** of **Appendix A**, is summarized in eight segments, which describes the work required in upgrading the route to a four-lane roadway:



Existing KY 55 in Adair County

Segment 1 follows a section of KY 61 currently under design (Item No. 8-162.6). It is a five-lane facility that connects to the Louie B. Nunn Cumberland Parkway with a new interchange and extends north 1.9 miles to the proposed Columbia Bypass. This five-lane roadway would be included in the Heartland Parkway as presently designed.

Segment 2 is 4.16 miles in length and follows the proposed Columbia Bypass from KY 61 to Mile Point 12.65 on KY 55. The bypass is currently under design as a two-lane initial on four-lane ultimate right of way. **Option 2** would construct the bypass as a four-lane initial, instead of two lanes.

Segment 3 extends along existing KY 55 from Mile Point 12.65 in Adair County to Mile Point 8.70 in Taylor County. **Option 2** would upgrade the existing two-lane route to four lanes with partial access control. Currently, a portion of *Segment 3* has access by permit and a portion has partial access control. In areas with access control by permit, frontage roads will be required to access remaining properties. In areas that are developed with access points closely spaced, using the existing road as a frontage road and constructing *Segment 3* on a new alignment should be considered in the final design phase.

Segment 4 extends from KY 55 Mile Point 8.70 south of Campbellsville to US 68 Mile Point 9.48 north of Campbellsville. *Segment 4* would consist of a four-lane partially controlled access facility on a new alignment, bypassing Campbellsville on the southeast side. The route



Existing KY 55 in Taylor County

would be similar to the bypass design that was begun in 1998 and cancelled.

Segment 5 extends from Mile Point 9.48 in Taylor County to Mile Point 9.47 in Marion County. The north end of *Segment 5* would connect to the bypass currently under design for Lebanon (Item No. 4-125.10). The existing US 68/KY 55 routes have partial access control except for approximately one mile on the Lebanon end of the segment.

Option 2 would add two additional lanes and a 40-foot median to *Segment 5*. Frontage roads would be added to the portion of access control by permit to allow changing access control to partial.



Existing US 68 in Marion County

Segment 6 extends from US 68 Mile Point 9.47 south of Lebanon to KY 55 Mile Point 2.0 north of Lebanon. It would follow the Lebanon Bypass (Item No. 4-125.10) that is currently under design. *Segment 6* would be constructed as a four-lane facility with a 40-foot median.

Segment 7 would follow KY 55 from the Lebanon Bypass to the intersection with KY 555 in Springfield. The route would be widened to four lanes with a 40-foot median. Additional right of way will be acquired and the current partial access control will be maintained.

Segment 8 would follow KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway. KY 555 would have two additional lanes and could have a 40-foot median added or a flush urban-type median. In areas of existing access by permit, frontage roads will be added to convert access control to partial with 1200-foot entrance spacing.

Option 3 consists of providing on existing KY55/US68/KY555 a two-lane facility with passing bays. The bypasses currently in design at Columbia and Lebanon would be used. A two-lane initial, four-lane ultimate bypass will be added around the southeast side of Campbellsville. The remainder of the route would be upgraded by adding one-mile passing bays every three miles. The route would receive a surface rehab and shoulder treatment. Shoulder treatment would consist of widening if necessary and paving to prevent pavement edge drop-offs.

Option 3, as shown in **Figure 7** of **Appendix A**, is summarized in eight segments, which describes the improvements associated with this option:
Segment 1 follows a section of KY 61 currently under design (Item No. 8-162.6). It is a five-lane facility that connects to the Louie B. Nunn Cumberland Parkway with a new interchange and extends north 1.9 miles to the proposed Columbia Bypass. This five-lane roadway would be included in the Heartland Parkway as presently designed.

Segment 2 is 4.16 miles in length and follows the proposed Columbia Bypass from KY 61 to Mile Point 12.65 on KY 55. **Option 3** would use the bypass as it is currently being designed – a two-lane facility on four-lane ultimate right of way.

Segment 3 extends along existing KY 55 from Mile Point 12.65 in Adair County to Mile Point 8.70 in Taylor County. **Option 3** would provide passing bays at needed locations. Additional right of way will be required; however, no additional access restrictions are proposed with **Option 3**.

Segment 4 extends from KY 55 Mile Point 8.70 south of Campbellsville to US 68 Mile Point 9.48 north of Campbellsville. *Segment 4* would consist of a two-lane/four-lane ultimate partially controlled access facility on a new alignment, bypassing Campbellsville on the southeast side. The route would be similar to the bypass design that was begun in 1998 and cancelled.



Existing US 68 in Taylor County

Segment 5 extends from Mile Point 9.48 in Taylor County to Mile Point 9.47 in Marion County. The north end of *Segment 5* would connect to the bypass currently under design for Lebanon (Item No. 4-125.10). Several passing bays would be constructed within the existing right of way. There is no proposed upgrade in access control with this option.

Segment 6 extends from US 68 Mile Point 9.47 south of Lebanon to KY 55 Mile Point 2.0 north of Lebanon. It would follow the Lebanon Bypass (Item No. 4-125.10), as it is currently designed.

Segment 7 would follow KY 55 from the Lebanon Bypass to the



Existing KY 555 in Washington County

intersection with KY 555 in Springfield. Along this segment, some passing bays would be constructed on existing right of way.

Segment 8 would follow KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway. Some passing bays would be added with **Option 3**. Additional right of way would be required; however, no additional access restrictions are proposed with this option.

A display showing the limits of each segment is shown in **Figure 7** in **Appendix A**.

Cost estimates for each option were presented. For **Option 2** and **Option 3**, the estimates were further broken down by segment.

An Eastern Columbia Bypass was discussed; however, since right of way is being purchased for a western bypass route, no change was recommended by the project team at this time.

There was some discussion about making the bypass routes at each of the communities the through movement. It was pointed out that many communities oppose that concept, preferring the movement of through traffic through their communities.

The project team recommended taking the options presented to the local officials and the public.

C. SECOND ROUND of LOCAL OFFICIALS/AGENCY MEETINGS

As a continued effort to keep local officials and agencies informed about the progress of the Heartland Parkway project, a second round of meetings was scheduled. In an attempt to increase attendance and participation, the second round of meetings was held in each of the affected communities, with the location and dates listed below:

February 27, 2004 - Adair Court House Annex Meeting Room - 10:00 am (CST)
February 27, 2004 - Taylor County District Court Room - 2:00 pm (EST)
March 5, 2004 - Green County District Court Room - 1:00 pm (CST)
March 9, 2004 - Marion County 2nd Floor Court Room - 10:00 am (EST)
March 9, 2004 - Washington Co Agricultural Ext Office - 2:00 pm (EST)

These meetings combined Local Officials and Agencies. At each meeting attendees were presented with the project history, a geotechnical overview, an environmental overview, and a brief description of the roadway options being studied. The group was asked to complete a new

questionnaire, which included questions to determine their personal preferences for the options presented. Nine display boards with detailed project information were available.

Meeting minutes for each meeting can be found in **Appendix F**.

1. ADAIR COUNTY LOCAL OFFICIALS/AGENCIES MEETING

There were eight attendees at the February 27th meeting besides department and consultant staff.

There was some discussion about the project goals, but no changes were recommended.

Mayor Curtis Hardwick indicated he could live with Option 3, but would prefer Option 2. He also asked about the length of time it would take to complete this project.

2. TAYLOR COUNTY LOCAL OFFICIALS/AGENCIES MEETING

One attendee questioned the timeframe for a project of this magnitude. If funding was not an issue, an optimistic estimate would be ten to fifteen years.

Mayor Brenda Allen had a question about tourism and industry for Option 1. The concern was that with the towns being bypassed, Option 1 would defeat the purpose of a new road promoting their communities and tourism.

Additionally, there was a discussion about the cost differences between Options 2 and 3. It was noted that Option 3 would mostly utilize the existing right of way with no additional right of way restrictions, and the construction cost would be significantly less.

3. GREEN COUNTY LOCAL OFFICIALS/AGENCIES MEETING

There were several comments and questions regarding the need for a corridor that runs nearly parallel to the proposed KY 61 improvement project from Columbia to Greensburg. Some wanted to know why the KY 61 improvement could not be used as part of the Heartland Parkway.

Patty Dunaway, KYTC District 4, explained to the group that KY 61 was a separate project and was outside the Heartland Parkway's scope.

There is still a concern that the new Heartland Parkway will bypass Greensburg. Attendees mentioned the limited miles of AAA Trucking routes in Green County, making it difficult to attract industry to the area.

Another comment from one attendee centered on the state's current budget crisis. They felt that the Heartland Parkway was a waste of money, and if it wasn't going to benefit Greensburg, they were opposed to the project.

4. MARION COUNTY LOCAL OFFICIALS/AGENCIES MEETING

John Thomas, Lebanon City Administrator, asked if inflation was built into the cost estimates. Dan Byers, WMB Consulting Engineers, responded that because the proposed estimate is in today's dollars, it is a conservative estimate.

Additionally, Mr. Thomas said he preferred Option 2; he did not believe Option 1 would serve the people of Lebanon with its proposed location being two miles from town.

Another question was raised about providing access only at public road intersections. This would be more restrictive than Option 2 but less restrictive than Option 1. Dan Byers responded that it *can* be done; however, it would mean additional frontage roads would be required.

There was also a question about our experience with Option 1, such as the type of road and how the communities were affected. Jim Wilson, KYTC Division of Planning, responded that, generally, growth would migrate to the parkway interchanges.

The remaining question was focused on utilities improvements. Dan Byers responded that utilities improvements would be a local issue; whereas, the Heartland Parkway is a transportation improvement project.

John Thomas also mentioned Congressional support for the project. He also stated that there will be a possible Heartland Summit on May 17th.

5. WASHINGTON COUNTY LOCAL OFFICIALS/AGENCIES MEETING

There was a question regarding access routes from Option 1 into the communities. Dan Byers, WMB Consulting Engineers, responded that these routes would also have to be upgraded.

Next, there was a question on how Option 2 would benefit Springfield. Byers responded by telling the group that we weren't there to endorse any option – only to present the options and listen to the comments from the community.

There was another comment expressing concern about Option 1 bypassing and having a negative impact on Springfield. It was pointed out that a similar sentiment exists in the community regarding the US 150 Bypass.

Additionally, there was another comment on favoring Option 2 because it allows driveway access.

There was also a question regarding the KY 555 extension project and whether that project's effects have been considered with this study. Byers responded that the traffic forecast analysis does consider the KY 555 extension.

Lastly, there was a question about the economic benefits of a new road. Byers said that T.H.E. has reviewed a New York study, which has similar characteristics, in order to determine the potential economic benefits. Marty Marchaterre, T.H.E. Engineers, added that Springfield has most of its infrastructure in place already. The only key component missing is better access to the interstate highway system. Likewise, the cited study mentions that the best way to achieve a positive economic impact is through transportation access.

D. SECOND ROUND OF PUBLIC INFORMATION MEETINGS

The second round of open house format public information meetings was held in each of the four communities along the existing corridor routes plus Greensburg. A handout with a questionnaire was given to each person who attended. Results from the questionnaires have been summarized in **Table 6** in **Appendix C**, and meeting minutes from each meeting can be found in **Appendix F**.

In addition to the information presented in this section, material related to the second round of public information meetings is included in five (5) separate notebooks on file in the KYTC Division of Planning:



Second Round of Public Meetings

- *April 26, 2004 Public Information Meeting Notebook (Greensburg);*
- *April 29, 2004 Public Information Meeting Notebook (Lebanon);*
- *May 6, 2004 Public Information Meeting Notebook (Campbellsville);*
- *May 10, 2004 Public Information Meeting Notebook (Springfield)*; and
- *May 11, 2004 Public Information Meeting Notebook (Columbia)*.

Each meeting was organized as a walk-through tour of project information. Beginning with guest registration, attendees were then led through a series of stations that included a project PowerPoint presentation, exhibits, and refreshments. Detailed descriptions of these stations are listed below.

Station One: Attendees were greeted at the door and asked to sign the attendance list. Kentucky maps, and an assortment of pamphlets, were available for interested parties. Attendees were also given handouts that included the following items:

- Study Purpose, Issues, and Project Goals
- Environmental Footprint Map, showing three options for consideration
- Discussion of each option
- Cost Estimate for each option
- Summary of the questionnaires from the first round of public meetings and local officials/agencies meetings
- Questionnaire

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the postage-paid envelope provided.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area and included the Project Goals, identified environmental, social, and cultural features in the area, as well as, an explanation of the three options being presented for consideration.

Station Three: Individual county maps were displayed with identified current Six-Year Highway Plan projects.

Station Four: Several exhibit boards displayed the following:

- Project Location Map
- Study Area with identified environmental data and the three corridor options
- Year 2003 traffic data
- Traffic Forecast data for YEAR 2030 for each corridor option, as well as, a no-build option
- Draft Project Goals
- Typical Section display for each corridor option

Station Five: Refreshments were provided.

There were flip-charts and markers available for written comments.

1. GREEN COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Monday, April 26, 2004, from 5:00 p.m. to 7:00 p.m. at the Green County Middle School in Greensburg, Kentucky.


Green County Public Meeting

A total of thirty-three individuals registered their attendance at the public information meeting, plus eleven staff members.

There were also two comments written on the provided flip- charts:

- "Most people in Greensburg travel to E'town."

- "Actually, I think most people in Greensburg shop in Campbellsville. After that, it depends on which end of the county they are in – Columbia and Glasgow in addition to Campbellsville."

There was a general consensus of attendees that the Heartland Parkway should be closer to Greensburg because many felt that the community is being bypassed by the Heartland Parkway. In addition, many individuals also noted that the Heartland Parkway should incorporate the proposed improvements planned for KY 61 between Greensburg and Columbia.

2. MARION COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Thursday, April 29, 2004, from 5:00 p.m. to 7:00 p.m. at the Center Square in Lebanon, Kentucky.



Marion County Public Meeting

A total of three persons registered their attendance at the public information meeting, plus ten staff members.

One verbal comment was that Option 1 would bypass all the communities, so it would make more sense to build Option 2 and complete the bypasses for each community.

3. TAYLOR COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Thursday, May 6, 2004, from 5:00 p.m. to 7:00 p.m. in the Student Union Building's Little Auditorium at Campbellsville University in Campbellsville, Kentucky.

The meeting was well attended with a total of forty-



Taylor County Public Meeting

four individuals who registered their attendance, plus nine staff members.

There were discussions on the pros and cons of Option 1, and how it would affect the communities along the corridor. After reviewing the exhibits, some attendees noted that Option 1 would reduce the number of trucks on the existing routes. Others were concerned that Option 1 may "dry up" the communities or cause them to be bypassed by most traffic.

4. WASHINGTON COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Monday, May 10, 2004, from 5:00 p.m. to 7:00 p.m. in the Washington County Extension Office in Springfield, Kentucky.



Washington County Public Meeting

The meeting was well attended with a total of thirty-five individuals who registered their attendance, plus ten staff members.

There were discussions on the pros and cons of each option. Many who attended expressed their displeasure with Option 1 because it would cut through too many farms.

In general, most attendees expressed their support for Option 2.

5. ADAIR COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Tuesday, May 11, 2004, from 5:00 p.m. to 7:00 p.m. in the William R. Davenport Family Life Center in Columbia, Kentucky.



Adair County Public Meeting

The meeting was attended by six individuals, plus eight staff members. One

individual didn't register his/her attendance.

There was discussion about the traffic congestion in Columbia, and the difficulty of transporting houseboats around the downtown square. In addition, the bypass project was mentioned as being the most important roadway improvement project.

6. STAKEHOLDERS MEETING in LEBANON

A local stakeholders meeting was conducted at 5:30 p.m. (EST) on Wednesday, August 11, 2004, at City Hall in Lebanon, Kentucky. The meeting was conducted similar to the local officials/agencies meetings. Presentations included a project history, a geotechnical overview, an environmental overview, and a brief description of the roadway options being studied. The group was given a handout and asked to complete a new questionnaire, which included questions to determine their personal preferences. Nine display boards with detailed project information were available; however, only three were displayed due to the constraints of the meeting room.

Complete minutes can be found in **Appendix F**.

There were 41 registered attendees, in addition to staff members, consultant personnel, and State Representative Jimmy Higdon.

One individual asked if there had been any accident studies focusing on fatalities. She asked which of the options presented was safest. The discussion that followed involved several aspects to consider: (1) If Option 1 were built, nothing would be done along the existing highway to correct deficiencies, leaving unsafe conditions; (2) If Option 2 were built, speed and driver error can still contribute to serious crashes; and, (3) Another consideration is that if Option 1 is built, there will be two roads to maintain.

There was a comment that Marion County is an agricultural county, and Option 1 would take a lot of farmland.

A second question was also brought up regarding the availability of studies on the effects of the Lincoln Parkway on economic growth.

Another question on safety centered on low or broken shoulders. Shoulder drop-offs were mentioned in an earlier meeting.

Still another safety comment said people are driving 85 mph.

Lastly, there was a question about how long it will take to construct this project, which resulted in a discussion of funding issues.

7. STAKEHOLDERS MEETING in SPRINGFIELD

A local stakeholders meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 5:30 p.m. (EDT) on Thursday, September 23, 2004, at the Washington County Courthouse in Springfield, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the options developed by the consultant, and to solicit input from those in attendance.

Complete minutes can be found in **Appendix F**.

There were 16 registered attendees, in addition to staff members, consultant personnel, and State Representative Mike Harmon.

During the discussion of Option 1, it was noted that a new highway of this type would have to be built a minimum of two miles from the communities, and it would need to be completed from beginning to end in order for the communities to receive any transportation benefits. Option 2, which includes four-lane bypasses around the communities of Columbia, Campbellsville, and Lebanon, could be built incrementally, and as each section is completed, immediate use of that facility would be available. Lastly, Option 3 would only include two lane bypasses for the communities of Columbia, Campbellsville, and Lebanon.

The cost for each option was discussed, as was the current budget issue. It was mentioned that a primary question has arisen during the planning study: Which option best meets the goals of the project, and how will it be funded? A review of historic funding of highway projects in the existing corridor is about $20M per year. At that rate, Option 2 - preferred by most who have responded to the questionnaire - would take approximately 18-20 years to complete.

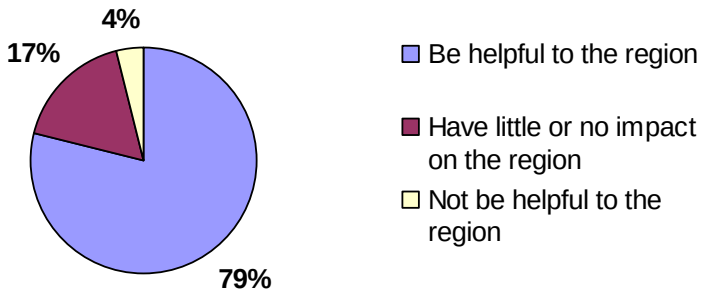
E. SURVEY QUESTIONNAIRE RESPONSES

During this second round of meetings, attendees were provided with a project survey questionnaire. The survey included questions about the project benefits, the type of highway that would best serve the needs of the region, environmental concerns, and an opportunity to prioritize

segments, and the design concept preferred for each segment. A summary of survey results follows:

- 79% of the surveyed respondents indicated that the project would be helpful to the region.

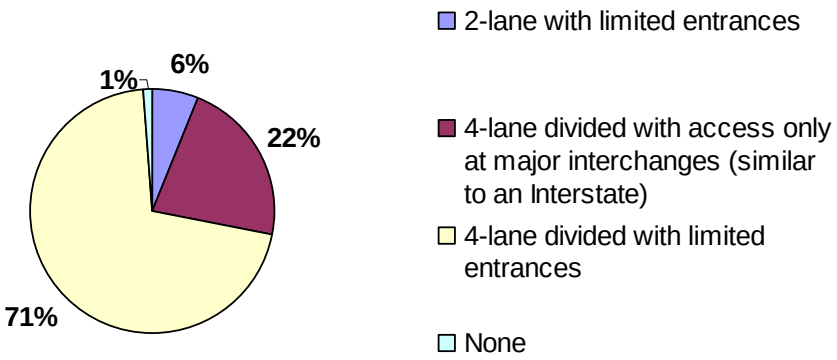
If a new/reconstructed roadway were built, do you think it would:



- 77% of those surveyed said the improvement should be constructed along the existing route.

- 71% of those surveyed said a 4-lane highway with limited entrances would best serve the needs of the region.

What type of roadway best serves the needs of the region:



- Over half (63%) of those surveyed preferred Option 2.

- Several comments written on the forms indicated bypasses for the communities to be the highest priority.

The highest priority segments included completion of bypasses for each community along the existing corridor routes. After the bypass routes, the Campbellsville-Lebanon and Columbia-Campbellsville segments were the next highest priority.

F. RESOURCE AGENCY COORDINATION

Many local, state, and federal resource agencies, with diverse areas of public responsibility, were included in this planning process. Input was solicited through written requests. Each agency was sent a copy of the project purpose and goals statement, existing traffic on KY 55, US 68, and KY 555, environmental footprint map, and a project location map.

This section describes the input received from these organizations. The remainder of recipients did not provide a response. Response letters from the various resource agencies are located in **Appendix G** and are summarized below.

The following seven agencies responded that the proposed Heartland Parkway would have no adverse effects:

- Brainard Palmer-Ball – No comments at this time.
- Charlie Harman, Commonwealth of Kentucky, Education Cabinet – We have no comments to offer at this time.
- Commonwealth of Kentucky, Department of Agriculture – This agency has no specific concerns or issues concerning this project.
- Commonwealth of Kentucky, Cabinet for Health and Family Services, Department for Public Health – The Department for Public Health does not have any specific issues or concerns regarding this proposed highway project.
- Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Division of Mine Permits – After reviewing our surface mining database, no proposed or existing surface coal mining operations will be impacted by the proposed routes of the Heartland Parkway.
- Commonwealth of Kentucky, Kentucky State Police – I am in receipt of your correspondence concerning and alternative planning study for widening and/or relocation of the Heartland Parkway, from the Louie B. Nunn Cumberland Parkway to the Martha L. Collins Bluegrass Parkway.

The following thirty-one agencies responded by offering comments or concerns regarding the project:

- City of Campbellsville, Office of the Mayor – Option 2 will be the best option for us. The upgrading of the existing routes with bypasses around Columbia, Campbellsville, and Lebanon will be the most affordable as well as best suited for this area.
- City of Campbellsville, Fire Department – After looking over the proposal, we found no specific problems or concerns with the project; however, we do believe that Option 2 would be the better choice.
- City of Lebanon City Council – The Heartland Parkway Project will benefit the citizens of Lebanon, and a four-lane bypass would alleviate traffic congestion in the downtown area. In addition, a four-lane bypass would also widen the existing corridor to connect to the Blue Grass Parkway to the Cumberland Parkway as referred to in the Kentucky Transportation Cabinet's study. Option 2 fulfills the needs of Lebanon now and in the future, so the City Council of Lebanon endorses Option 2.
- City of Springfield City Council, Mayor Mike Haydon, and Laurie Smith – It would be in the best interest for our community to stay along the existing 555 Highway.
- Columbia/Adair County Industrial Development Authority, Inc. – Be it resolved that the Columbia-Adair County Industrial Development Authority, Inc. hereby supports Option 2 of the road project known as the Heartland Parkway for the Kentucky counties of Adair, Taylor, Marion, and Washington.
- Commonwealth of Kentucky, Commerce Cabinet – The provided material has been reviewed, and it appears there is a preference toward implementing Option 1. However, my review has noted the impact upon historical sites or potential historical sites along this route. Depending upon the nature of these facilities, they may impact the tourism industry in the area. It is important that areas possessing historical and natural assets be preserved if at all possible. With that in mind, I ask that the Kentucky Historical Society and Kentucky Heritage Council be contacted, if this has not already occurred, to insure properties of interest to these agencies are not impacted in a negative manner.
- Commonwealth of Kentucky, Commerce Cabinet, Department of Fish & Wildlife Resources (KDFWR) – The Kentucky Fish and Wildlife Information System indicates that several federally threatened and endangered species are known to occur in the above-reference counties (Adair, Green, Marion, Taylor, and Washington). The federally endangered Indiana Bat inhabits this area. It forms maternity colonies and roosts with its young under the bark of trees along streams and adjacent upland areas, usually from the middle of May to the middle of August. Disturbance in riparian areas during this time period should be avoided in order to minimize potential impacts to the species. In quadrangles in which gray bats are known to occur, any cave entrances that exist within the project area (i.e. the right-of-way

and regeneration sites) should be surveyed for potential use by gray bats. KDFWR has determined that potential negative impacts to the aquatic resources can occur in the project area. KDFWR also recommends any excavation of stream channel for placement of bridge piers should be kept at a minimum and the existing transportation corridors should be used as the main crossing of the stream during bridge construction if possible to minimize impacts to the aquatic resources.

- Commonwealth of Kentucky, Commerce Cabinet, Department of Parks – There are two State Parks in the vicinity of the study area. Green River Lake State Park is near the widening alternative of Route 55 and Lincoln Homestead State Park is in the vicinity of the relocation alternative. The Park locations are not depicted on the maps provided in your letter so our concerns are general at this time and we do not have specific issues. Our concerns are how the project will impact the park aesthetics, air quality, storm water runoff, landscaping, signage, approach sight distance, turning lanes, right of way encroachments and interruption of access.
- Commonwealth of Kentucky, Cabinet for Economic Development – (Adair County Response) Option 2 seems the best choice for Adair County as it impacts Green River Commerce Park. This 327.3 acre park's only entrance is on KY 55.

  (Green County Response) Both alternatives are well to the east of Greensburg, and the location of both of Green County's industrial parks. There are no direct impacts on either of these parks. Either alternative appears to improve regional transportation, which will positively impact the Green County parks. However, the new highway corridor proposal closer to Greensburg may offer a bit better access to the Louie B. Nunn Cumberland Parkway and the Martha L. Collins Blue Grass Parkway. Especially, if improvements (if needed) to US 68/KY 70 to Greensburg can be considered.

  (Taylor County Response) I recommend Option 2 for two reasons. One, Taylor County has three industrial sites, their oldest park, Campbellsville Industrial Park, is almost at full capacity. Campbellsville's main industrial site focus will be on their new 202 acre "Heartland Commerce & Technology Park." Second, the Transportation Cabinet previously had a bypass design in their 1998 6-year road plan, which would encompass the Heartland Commerce & Technology Park; but the bypass design was cancelled. Interestingly, Option 2 is the former cancelled bypass issue revisited. I feel that Option 2 would greatly enhance ingress and egress to the park. Thus, improving economic development and addressing the transportation needs of the community.

  (Marion County Response) I recommend Option 2 for two reasons. One, Marion County has three industrial sites, their newest park: "Crossroads Industrial Park" is their main industrial site. Second, there

is a current construction of a northwestern connector from KY 2154 at KY 55 to US 68, which will directly affect this park. I feel that Option 2 will improve the current economic development efforts and address the transportation needs of the community.

(Washington County Response) I recommend Option 2 for several reasons. One, Washington County has three industrial sites. The smallest park is 34.6 acres and is adjacent to KY 55. Although widening of KY 55 will negatively impact this site, the improved road will allow for a better entrance to the site and will improve the entire community's transportation system. Second, their newest park, Clearview Commerce Complex, is adjacent to KY 555. The widening of KY 555 will greatly improve the ingress and egress traffic to this park. Third, there is a current bypass project in Washington County along KY 152 and KY 555. The current construction project and the Heartland Parkway widening project will greatly improve the road system in Washington County.

- Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Department for Environmental Protection, Division for Air Quality – The following Kentucky Administrative Regulations apply to this proposed project: 1) 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, and; 2) Kentucky Division for Air Quality Regulation 401 KAR 63:005 Fugitive Emissions states that open burning is prohibited. 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.
- Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Division of Conservation– There are three agricultural districts established in the study area: #044-02 in Green County, #078-01 in Marion County, and #115-01 in Washington County. Also there are three permanent conservation easements in the study area: #002-109-011, #002-100-010, and #001-109-002 in Taylor County. We would like to see the issue of the loss of farmland addressed. Both prime farmland and farmland of statewide importance could be impacted by this project. One other concern we would like to comment on is the control of erosion and sedimentation during and after earth-disturbing activities once this project begins. Agricultural Districts are shown in **Figure 10** in **Appendix A**.
- Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Department for Natural Resources – Personnel from our Department's Non-Coal Branch have conducted a review of the information provided and have identified the following: 1) Adair County – There are two Limestone Quarry permits and one Sand permit in

Adair County; 2) Green County – There are two Limestone Quarry permits in Green County; 3) Marion County – Marion County has one Limestone Quarry; 4) Taylor County – Nally and Gibson Quarries Inc. – Permit 109-9400 operates one Limestone Quarry in Taylor County; and, 5) There is one Limestone Quarry in Washington County.

- Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Department for Natural Resources – We have examined the documentation for the alternatives study for the Heartland Parkway and have identified areas of concern:
  The Kentucky Division of Forestry responds as follows: Option One – A new roadway area to the west of the HWY 55/68 corridor would have minimal impact on the forestlands of Adair, Green, and southern Taylor Counties. Options Two and Three – Widening of the current roadway would have minimal impact on the forestlands.
  The Heritage Land Conservation Fund Board has two properties, which have potential for impact: Tebbs Bend Battle Field and Wyatt Jeffries Woods. A new roadway (Option One) would have the greatest detrimental impact to these lands and is not recommended. The best alternative is to limit the widening of the existing highway by constructing passing bays (Option Three).
- Commonwealth of Kentucky, Justice and Public Safety Cabinet – It is determined it would be beneficial for the proposed area. There are no designated highways in this area for trucks to get into small cities within that region.
- Commonwealth of Kentucky, Kentucky Transportation Cabinet, Division of Environmental Analysis – This study has been evaluated by the Division of Environmental Analysis for any potential environmental challenges that would need to be addressed during future design stages. The following comments are based upon the planning study data presented; additional comments could be provided if/when site visits are conducted: noise concerns with regard to the project may need to be addressed; the Air Quality status of the project would not be a problem – the project is outside an area that requires conformity; channel changes, impacts to Green River and Russell Creek, and wetland impacts should be limited/avoided; and, any impacts to the listed endangered species should be avoided.
- Commonwealth of Kentucky, Kentucky Transportation Cabinet, Permits Branch – We have reviewed the data provided for the subject study site and wish to offer the following: We recommend the Cabinet classify this project as a partially controlled access facility as explained in Option 2. It appears to adequately meet the project goals listed in the study.
- Greensburg/Green County Industrial Foundation, Inc. – Enclosed you will find input and comments by the Greensburg/Green County Industrial Foundation, Inc. concerning the alternative study of the

Heartland Parkway. An Environmental Information Form for the Green River Paddle Trail Access Project is attached. No comments.

- John Houlihan, Commonwealth of Kentucky, Kentucky Transportation Cabinet, Department of Aviation – I have reviewed the proposed locations and have found no negative impact to aviation. There are three airports that are close to this proposed project. The Columbia airport has a 2600 foot runway with an elevation of 818 feet. The Campbellsville airport has a 5000 foot runway with an elevation of 921 feet. The Springfield-Lebanon airport has a 5000 foot runway with an elevation of 866 feet. I have provided a website that describes Kentucky Airport Zoning Commissions jurisdiction. Section 4 also includes regulations concerning construction equipment (cranes).
- Lebanon-Marion County Chamber of Commerce – Be it resolved that the Lebanon-Marion County Chamber of Commerce cast a unanimous vote to recommend Option 2 as the best alternative for the Heartland Parkway Corridor.
- The Nature Conservancy, Kentucky Chapter – The Conservancy most favors the option least likely to create significant additional stress to the aquatic system and surrounding landscape – Option 3. We least favor and would most oppose Option 1. This option would necessitate crossing the Green River near the Roachville area bringing high degrees of traffic and disturbance to a reach of the river containing 1 federally listed endangered species of mussel and 3 state-listed mussel species. In addition, 3 state-listed fishes occur in this reach. Furthermore, Option 1 would have the most potential to harm the natural resources associated with Russell Creek in Adair County, one of the Green River's most important tributaries.
- Marion County Industrial Foundation – Be it resolved, that the Marion County Industrial Foundation cast a unanimous vote to recommend Option 2 as the best alternative for the Heartland Parkway Corridor.
- Marion-Washington County Airport Board – We received the Heartland Parkway proposal and have the following comments: 1) Option 1: This option should be discarded outright as it would be too expensive and would not be beneficial to the communities it by-passes; 2) Option 2: From our location the four lane highway proposed in Segment 7 is fine; and, 3) Option 3: If Option 3 is adopted then it is requested that one of the passing bays proposed in Segment 7 be constructed where Airport Lane meets the existing right of way.
- Mike Blevins, P.G. – The Geotechnical Branch has reviewed the Geotechnical Overview, and their comments are included in that document. Therefore, they will have no comments concerning the coordination letter.
- Paul Patton, Taylor County Judge/Executive – He has no change in preference from our previous meeting, and he supports a four-lane highway along the existing route. Patton also believes that the bypasses should be constructed first and then other segments, as

funding is available; however, the bypass in Columbia is really needed due to congestion.

- Purcell's Business Products – Option 2 would best serve this area in the future. But as we look to the distant future if this area continues to grow I feel the need for a four lane facility is the best option. The only concern I have is that the bypasses around Campbellsville, Columbia, and Lebanon need to be fully controlled access.
- Springfield Water Company – Springfield has a raw water line from Willisburg Lake to Springfield along the west side of KY 555; and the east side of KY 555 has a domestic water line on private property and right of way. There is also a fiber optic line from KY 53 south to Springfield along KY 555; and there are sewer lines and natural gas lines along the roadway within the city limits of Springfield. On behalf of Teddy Boone, representative of Springfield Water Company, Option 3 with a one-mile passing lane every three miles is preferred.
- Team Taylor County Industrial Development Authority – On behalf of the Campbellsville-Taylor County Industrial Development Authority Board of Directors, I want to convey to you a recent action taken by the board. We have unanimously endorsed Option 2 for the proposed Heartland Parkway. I know that you are aware of our continuing interest in this vitally important transportation project. This project will significantly enhance the economic well being of the entire region. As the Economic Impact Study conducted by Younger Associates indicates, this project will assist with the creation of more than 2000 new jobs in commercial development alone with an economic impact exceeding $2 billion.
- University of Kentucky, Kentucky Geological Survey – This letter is to summarize any geologic concerns for the alternatives study: Physiographic Region, Karst Potential, Landslide Potential, Unconsolidated Sediments, Resource Conflicts, Materials Suitability, Fault Potential, and Earthquake Ground Motions.
- United States Department of Health & Human Services – While we have no project specific comments to offer at this time, we do recommend that the topics listed below be considered during the NEPA process along with other necessary topics, and addressed if appropriate: Air Quality, Water Quality/Quantity, Wetlands and Flood Plains, Hazardous Materials/Wastes, Non-Hazardous Solid Waste/Other Materials, Noise, Occupational Health and Safety, Land Use and Housing, and Environmental Justice.
- United States Department of Homeland Security/United States Coast Guard – The project's waterways were evaluated and pursuant to the Coast Guard Authorization Act of 1982, these are not waterways over which the Coast Guard exercises jurisdiction for bridge permit purposes. Coast Guard bridge permits are not required.
- United States Department of Homeland Security/United States Coast Guard – During a telephone conversation, it was stated that the study

shows there will be 18 bridges involved in the project. After asking how may of these bridges would cross bodies of water, a KYTC project representative replied that those questions would have to be researched and a response will be sent as soon as possible. The information on stream crossing was provided.

- Brenda Patterson, Greensburg City Council – Ms. Patterson states there is lack of economic development in Green vs. Taylor, Adair, Marion and Washington Counties. She states Green County has limited AAA highways. She also states that Green County agricultural economy is diversifying and needs improved roads. She indicates that a bypass to Greensburg could connect the Green County Industrial Park to the Nunn Parkway. Options 2 and 3 would not help Green County at all. Ms. Patterson says that the Heartland Parkway should extend into Green County via US 68, then to new KY 61 and on into Columbia in Adair County. She asked that Greenburg not be bypassed again.

PART 3. CORRIDOR ANALYSIS and RECOMMENDATIONS

Part 3 of this document includes a review of the geometric design criteria for this project, an analysis of the final corridors for consideration, priorities, project corridor development costs, future traffic and level of service for each option, and environmental and geotechnical considerations. The analysis and recommendations are based on data collected through the corridor development process. **Chapter VIII** provides an analysis of corridor options, including future traffic volumes, project cost by segment, priorities, and environmental and geotechnical considerations. **Chapter IX** includes a discussion from the Final Project Team Meeting, recommendations for a preferred Heartland Parkway corridor, and prioritized segment cost. **Chapter X** provides an analysis of other potential issues and concerns within each of the final corridors for consideration. Finally, project contacts are included **Chapter XI**.

VIII. CORRIDOR ANALYSIS

A. GEOMETRIC DESIGN CRITERIA

This study addresses three different design concepts. The first concept is a four-lane divided highway on fully controlled access right of way. A forty-foot depressed median with full width shoulders inside and outside are included with this concept. Entry to and from the facility would be at interchanges only. This alternative would be built in a new corridor approximately two miles west of the existing routes. The second concept is also a four-lane divided facility that would be constructed as a partially controlled highway that generally follows the existing routes, utilizing as much of the existing routes as possible. This concept would include a forty-foot depressed median and full width shoulders inside and outside, and right of way access would be restricted to 1200-foot spacing. The third concept also utilizes the existing routes, adding a one-mile passing bay every three miles. No additional right of way restrictions are proposed with this option. The three different typical sections are illustrated in **Figure 8** in **Appendix A**.

B. DISCUSSION OF OPTIONS

The three build options considered for the Heartland Parkway were identified and refined through the study process. Corridor needs and input from local officials, interest groups, community members, and resource agencies were considered in the corridor development process. The three build options evaluated are as follows:

- **Option 1** is a new four-lane fully controlled access corridor from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway, which is located approximately two miles west of the communities of Columbia, Campbellsville, Lebanon, and Springfield.

- **Option 2** is a four-lane partially controlled access facility running along the existing KY 55/US 68/KY 555 route with bypasses at the communities.

- **Option 3** is a two-lane partially controlled access facility running along the existing KY 55/US 68/KY 555 route with bypasses at the communities. **Option 3** includes passing bays at approximate three-mile intervals. Estimates for **Option 3** leave the access control by permit for approximately one mile of KY 55 south of Lebanon, approximate 6.5 miles at the north end of the corridor along KY 555, and for an 11.8 mile section of KY 55 from the Columbia Bypass in Adair County to the intersection of KY 1701 in Taylor County.

- **No-Build Option**

There were four important considerations identified in recommending a preferred option:

- Meet the project goals as determined from the study and public input
- Public Support
- Cost to Construct
- Traffic Volumes

The **No-Build Option** was evaluated by the project team. A conclusion was reached that without some corridor improvements, the project goals that relate to congestion and regional mobility could not be met for the following reasons:

- The existing routes through the communities are congested and cause considerable delays.
- Trucks traveling on the existing roadways between the communities cause increased travel times. As the number of trucks and traffic volumes increase, these delays will continue to increase.

The **No-Build Option** would also do nothing to increase safety, decrease delays, or improve emergency response times, all of which were listed as project goals.

Certainly there are benefits to the **No-Build Option**. There would be no expenditure of funds, except for routine maintenance; no impact to environmental resources; no impact to farms; and, no residential or commercial relocations.

Option 1, the four-lane fully controlled access facility on new location, was the least desirable alternative for the following reasons:

- It does not have significant public support (13%).
- It has the greatest potential for community impact by creating an all new roadway corridor. The corridor would have access from one side to the other at crossroads only. Therefore the potential to separate farms and neighborhoods is high.
- It requires the greatest amount of new right of way.
- A totally new roadway would be created which would leave the state with two systems to maintain (existing KY 55/US 68/KY 555 and the new route).
- It has the greatest cost.
- Greater potential impact to environmental resources.

Option 1 would be a major parkway transportation facility that would reduce the truck traffic along the existing routes to 3 or 4 percent.

Options 2 and **3** have some commonalities that are beneficial to the project area.

- Bypasses around Columbia, Campbellsville, and Lebanon.
- Using existing KY 55/US 68/KY 555 between the communities.
- Communities and rural areas have direct access to the route.

The major difference between **Option 2** and **Option 3** is that **Option 2** is a four-lane facility while **Option 3** is a two-lane facility.

Other considerations regarding **Options 2** and **3** are:

- **Option 3** has the least cost and the least overall impact due to right of way acquisition and construction.
- **Option 2** has the greatest public support (74%). It also provides better regional mobility because the four-lane facility allows passing throughout its length and has greater capacity.
- The traffic volumes warrant a four-lane facility for year 2030.

There are some drawbacks to **Option 2**. **Option 2** would require a significant number of residential and commercial relocations and inconvenience to motorists during construction.

C. PRIORITIES

An evaluation of the cost of completing **Option 2** and how **Option 2** might affect ongoing projects along the KY 55 corridor is listed below:

Based on historic funding of projects in the Six-Year Highway Plan along the corridor, it would take 18 to 20 years to complete **Option 2**. Under this approach more critical sections of the route would be completed first, working through the sections by priority until the entire project is completed. Since this process could take twenty years or more to complete, the project team recommended a spot improvement/safety improvement program for sections of the route that would not be improved until several years in the future. These improvements, such as additional passing lanes, pavement rehabilitation, and shoulder improvements, could be completed within the existing right of way and would not require major construction that would be replaced when the four-lane section is constructed.

It should be noted that projects in the study area, which are currently in the design phase (Columbia Bypass, Lebanon Bypass, and KY 61), were considered, and the improvements associated with those projects will be utilized with two of the options presented in this study. Additionally,

consideration should be given to completion of a bypass around the southeast side of Campbellsville as a priority project. A possible corridor for this bypass would then extend from KY 55 south of Campbellsville to US 68 north of Campbellsville.

KY 61 from the Louie B. Nunn Cumberland Parkway to the Columbia Bypass is currently in the Right of Way Phase. It is designed as a five-lane section with flush median and access control by permit. Including KY 61 as proposed would result in a different typical and access control for the south two miles of the corridor.

The Columbia Bypass is in the Right of Way Phase. It is designed as two-lane initial on four-lane right of way with partial access control. The portion of the bypass from KY 61 to KY 55 on the north side of Columbia could be included in the proposed Heartland Parkway corridor. Two items were noted that could be adjusted on the Columbia Bypass that would make it fit the Heartland Parkway better. As designed, the Columbia Bypass T's into KY 55 north of Columbia. For the parkway, traffic flow would be better if the parkway were the through route around Columbia. It was also noted that the location of the proposed connection of the bypass and KY 55 north of Columbia would serve the parkway route better if it were located approximately 0.5 miles further north of Columbia.

The Lebanon Bypass is currently in the Design Phase. It is being designed as two-lane on two-lane right of way. If the Lebanon Bypass is to be included in the four-lane Heartland Parkway, the bypass would need to be revised to provide four-lane right of way. Both the south connection and the north connection of the Lebanon Bypass "T" into KY 55. Consideration should be given to the Heartland Parkway being the primary route with the route through Lebanon connecting to the parkway. The location of the south connection of the Lebanon Bypass is in an area along KY 55 that has access control by permit. If this location is maintained, there will be the need to change access control from permit controlled to partially controlled on KY 55 for approximately one mile south of the bypass connection. This would provide consistent access control throughout the route.

D. PROJECT CORRIDOR DEVELOPMENT COSTS

Two project corridors, one with two design concepts, have been developed through the course of the alternatives study. **Figure 7** in **Appendix A** identifies the location of these corridors. Option 2 and Option 3 have been broken into segments for consideration of project phasing. Option 1 is a continuous route, making any significant benefits possible only by the completion of this option in its entirety.

Cost estimates have been prepared for each option and by each segment for Option 2 and Option 3. Listed below are cost estimates by option and segment.

OPTION 1: From Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Option 1	Estimated Development Cost
Estimated Length: 60 miles	
Design	$41,027,000
Right-of-Way	$73,801,000
Utilities	$16,000,000
Construction	$509,650,000
Contingencies	$76,448,000
TOTAL	**$716,926,000**

OPTION 2 AND OPTION 3

SEGMENT 1: Utilize the reconstructed section of KY 61, from 1000 feet south of the Louie B. Nunn Cumberland Parkway to the proposed Columbia Bypass in Adair County (**Figure 7** in **Appendix A**).

Option 2 Segment 1	Estimated Development Cost	Option 3 Segment 1	Estimated Development Cost
Estimated Length: 2.1 miles		Estimated Length: 2.1 miles	
Design	-	Design	-
Right-of-Way	$2,000,000	Right-of-Way	$2,000,000
Utilities	$500,000	Utilities	$500,000
Construction	$15,000,000	Construction	$15,000,000
Contingencies	$2,250,000	Contingencies	$2,250,000
TOTAL	**$19,750,000**	**TOTAL**	**$19,750,000**

SEGMENT 2: Will follow the proposed Columbia Bypass to KY 55 north of Columbia in Adair County (**Figure 7** in **Appendix A**).

Option 2 Segment 2	Estimated Development Cost	Option 3 Segment 2	Estimated Development Cost
Estimated Length: 4.16 miles		Estimated Length: 4.16 miles	
Design	$2,894,000	Design	-
Right-of-Way	$4,400,000	Right-of-Way	$4,400,000
Utilities	$1,500,000	Utilities	$1,500,000
Construction	$35,943,000	Construction	$18,750,000
Contingencies	$5,393,000	Contingencies	$2,813,000
TOTAL	**$50,130,000**	**TOTAL**	**$27,463,000**

SEGMENT 3: Reconstruct KY 55 from the Columbia Bypass in Adair County to the proposed bypass for Campbellsville in Taylor County (**Figure 7** in **Appendix A**).

Option 2 Segment 3	Estimated Development Cost	Option 3 Segment 3	Estimated Development Cost
Estimated Length: 15.056 miles		Estimated Length: 15.056 miles	
Design	$4,497,000	Design	$709,000
Right-of-Way	$17,456,000	Right-of-Way	$244,000
Utilities	$13,846,000	Utilities	$1,200,000
Construction	$58,036,000	Construction	$9,426,000
Contingencies	$6,197,000	Contingencies	$680,000
TOTAL	**$100,032,000**	**TOTAL**	**$12,259,000**

SEGMENT 4: Construct new bypass for Campbellsville, from KY 55 south of Campbellsville to US 68 north of Campbellsville in Taylor County (**Figure 7** in **Appendix A**).

Option 2 Segment 4	Estimated Development Cost	Option 3 Segment 4	Estimated Development Cost
Estimated Length: 6.7 miles		Estimated Length: 6.7 miles	
Design	$2,322,000	Design	$1,444,000
Right-of-Way	$5,868,000	Right-of-Way	$5,868,000
Utilities	$1,875,000	Utilities	$1,875,000
Construction	$28,842,000	Construction	$17,933,000
Contingencies	$4,327,000	Contingencies	$2,690,000
TOTAL	**$43,234,000**	**TOTAL**	**$29,810,000**

SEGMENT 5: Reconstruct US 68 from the proposed Campbellsville Bypass in Taylor County to the proposed bypass at Lebanon in Marion County (**Figure 7** in **Appendix A**).

Option 2 Segment 5	Estimated Development Cost	Option 3 Segment 5	Estimated Development Cost
Estimated Length: 13.521 miles		Estimated Length: 13.521 miles	
Design	$3,195,000	Design	$716,000
Right-of-Way	$11,052,000	Right-of-Way	$0
Utilities	$5,881,000	Utilities	$1,200,000
Construction	$40,807,000	Construction	$9,454,000
Contingencies	$4,827,000	Contingencies	$759,000
TOTAL	**$65,762,000**	**TOTAL**	**$12,129,000**

SEGMENT 6: Follow the proposed bypass for Lebanon to KY 55 north of Lebanon in Marion County (**Figure 7** in **Appendix A**)

Option 2 Segment 6	Estimated Development Cost	Option 3 Segment 6	Estimated Development Cost
Estimated Length: 3.305 miles		Estimated Length: 3.305 miles	
Design	$927,000	Design	$450,000
Right-of-Way	$2,200,000	Right-of-Way	$1,300,000
Utilities	$1,000,000	Utilities	$1,000,000
Construction	$13,353,000	Construction	$7,428,000
Contingencies	$2,003,000	Contingencies	$1,115,000
TOTAL	**$19,483,000**	**TOTAL**	**$11,293,000**

SEGMENT 7: Reconstruct KY 55 from the Lebanon Bypass in Marion County to the intersection of KY 555 in Washington County (**Figure 7** in **Appendix A**).

Option 2 Segment 7	Estimated Development Cost	Option 3 Segment 7	Estimated Development Cost
Estimated Length: 7.22 miles		Estimated Length: 7.22 miles	
Design	$1,361,000	Design	$358,000
Right-of-Way	$5,601,000	Right-of-Way	$0
Utilities	$1,806,000	Utilities	$600,000
Construction	$17,309,000	Construction	$4,740,000
Contingencies	$2,122,000	Contingencies	$360,000
TOTAL	**$28,199,000**	**TOTAL**	**$6,058,000**

SEGMENT 8: Reconstruct KY 555 from its intersection with KY 55 in Washington County to the Martha Layne Collins Blue Grass Parkway in Washington County (**Figure 7** in **Appendix A**).

Option 2 Segment 8	Estimated Development Cost	Option 3 Segment 8	Estimated Development Cost
Estimated Length: 14.698 miles		Estimated Length: 14.698 miles	
Design	$3,183,000	Design	$783,000
Right-of-Way	$9,226,000	Right-of-Way	$122,000
Utilities	$3,675,000	Utilities	$1,500,000
Construction	$40,361,000	Construction	$10,348,000
Contingencies	$5,086,000	Contingencies	$836,000
TOTAL	**$61,531,000**	**TOTAL**	**$13,589,000**

Some funds are allocated for Segments 1, 2, and 6 in the current Six-Year Highway Plan for portions of the costs estimated above.

E. FUTURE TRAFFIC AND LEVEL OF SERVICE

Future traffic and operational levels of service for the 3 different options for transportation improvements are included as part of this study and are shown in **Figures 4b-4d** in **Appendix A** and **Table 1a** in **Appendix C** as graphical illustrations of future traffic volumes. For this project, the following traffic volumes and levels of service (LOS) have been identified:

- Future Year 2030 Traffic Volume and LOS – Option 1 Alternative
- Future Year 2030 Traffic Volume and LOS – Option 2 with I-66 Alternative
- Future Year 2030 Traffic Volume and LOS – Option 2 without I-66 Alternative
- Future Year 2030 Traffic Volume and LOS – Option 3 with I-66 Alternative
- Future Year 2030 Traffic Volume and LOS – Option 3 without I-66 Alternative

Future Year 2030 Traffic Volume and LOS were performed for the Option 1 Alternative with and without I-66. The results were the same.

F. ENVIRONMENTAL CONSIDERATIONS

Environmental issues and sensitive areas were considered within each of the Option 1 and Options 2 and 3 corridors as described in **Part 2**, **Chapter VII**, **Section B**. Many of the environmental issues are shown on the Environmental Footprint Maps which are **Figures 5A** and **5B** in **Appendix A**. The complete Environmental Overview is contained in **Appendix D**. A summary of the environmental considerations includes:



Green River Lake State Park

1. No-Build Option: Environmental impacts are not anticipated with the No-Build Option.

2. Socioeconomic Impacts: Both Option 1 and Options 2/3 would improve regional access for economic development, existing industry, truck access, tourism, higher education and agricultural activities. A new or improved roadway would enhance travel efficiency for area residents, commuters and thru traffic by reducing travel time and accidents and for Options 1 and 2, increasing capacity. Option 1 and Option 2/3 would provide a more efficient means of transporting raw and finished materials and agricultural products to and from industrial sites and farms. Tourists accessing areas of interest, such as the Green River Lake State Park, Willisburg Lake, and Tebbs Bend Battlefield site would benefit from improved travel conditions. Option 1 may have greater negative secondary impacts, such as requiring travelers to use the limited number of interchanges to enter or leave the roadway, increasing distances to reach county seats, work places and shopping areas, splitting farms and limiting access to interchanges or underpasses and increasing the need to upgrade existing secondary roads.

3. Environmental Justice Issues: Neither Option 1 nor Option 2/3 is expected to have environmental impacts that would disproportionately or adversely affect minority or low-income groups, neighborhoods or communities.

4. Relocations: Low numbers of residential or commercial relocations are anticipated for either Option 1 or Option 2/3. Actual numbers of relocations would be developed during future design phases.

5. Project Area Land Use: The predominant land use in the project corridors is agricultural. Urban areas are contained within or near the city limits of the county seats. The majority of government services, commercial activities and neighborhoods are located within or near the city limits. Most of the residential development is single family in nature, and is concentrated within or near the respective city limits. Dwellings outside the city limits are primarily scattered, single-family residences on farms.

6. Project Area Populations: Project area populations have generally increased between 1900 and 2000, however the population of Washington County has declined, while Taylor County became the fastest growing county in the area. Taylor County is projected to continue its rapid rate of growth through 2030.

7. Labor Force: Each county in the project area has a high percentage of employees in their respective workforces that are currently working in jobs that pay less and require less than the

employees' qualifications. The individual counties and the labor market areas provide an ample and capable workforce to attract industry. In addition, the educational attainment for the overall area has increased between 13 and 30 percent over the past 10 years. Both Option 1 and Option 2/3 are anticipated to cause secondary and indirect benefits to the labor force by improving access and travel efficiency for workers, tourists, and transporters of raw materials, finished products, and agricultural products.

8. Farmland: The project will not affect any purchased agricultural conservation easement properties. Option 1 has the potential to affect one agricultural district in Taylor County. If avoidance is not feasible, coordination with the local conservation district is required and mitigation may be necessary. Option 1 has the greater potential to split farms. Future design phases will need to coordinate with the Natural Resource Conservation Service on potential impacts to farmlands rated as prime, unique, or of statewide importance.


Along KY 55 in Marion County

9. Wetlands: Option 1 has the potential to affect 44 jurisdictional wetlands and 211 non-jurisdictional ponds. Option 2/3 has the potential to affect 6 jurisdictional wetlands and 17 ponds. Depending on where the road would be constructed or widened, impacts to wetlands and ponds could be avoided or minimized.

10. Stream Crossings: Option 1 has the potential to cross approximately 64 perennial streams and 32 intermittent streams. The majority of these stream crossings will be on new alignment. Option 2/3 has the potential to cross approximately 37 perennial and 10 intermittent streams. The majority of Option 2/3 stream crossings will require widening of bridges or extending existing culverts. Actual amounts of stream crossings will likely be reduced during future project development phases. Potential impacts to ephemeral streams could not be determined at this time.

11. Floodplains: Published floodplain information only exists for Marion and Taylor Counties. Option 1 crosses 8 known floodplain zones in Marion and Taylor Counties and Option 2/3 crosses 2 known floodplain zones in Marion County. Additional

floodplain zones likely exist along streams in Washington, Adair and Green Counties. Option 1 is anticipated to have greater impacts to floodplains because it crosses more streams and would require new construction and floodplain disturbances at all crossings.

12. Outstanding and Exceptional Water Resources: No stream segments designated as wild and scenic rivers are located in the project area. Both Option 1 and Option 2/3 will cross the Green River, which is classified as an outstanding state resource water, and Russell Creek, which is classified as exceptional water. Precautions, such as erosion and sedimentation controls, shall be necessary to minimize impacts to these special streams.

13. Permits: Depending on future project impacts to wetlands or streams, federal and state permits may be required and, if appropriate, mitigation activities may be required.

14. Natural Areas: Both Option 1 and Option 2/3 cross the boundaries of the Green River Bioreserve. Several exemplary natural communities monitored by the Kentucky State Nature Preserve Commission are located within Adair, Green, Marion and Taylor Counties. During future design phases, formal data requests will be required to obtain specific locations of these natural communities.

15. Federally Endangered or Threatened Species: Input from resource agencies indicates the potential presence of the federally listed endangered Indiana bat, gray bat, fanshell mussel, clubshell mussel and rough pigtoe (mussel) and the federally threatened bald eagle and Eggert's sunflower. Option 1 and Option 2/3 corridors feature habitat suitable for these endangered or threatened species. Further fieldwork and coordination with the United States Fish and Wildlife Service will be necessary in future project phases to determine if these species exist within right-of-way limits and the potential for adverse impacts.



Gray Bat

16. Historic Resources: A total of 64 sites were identified within the two corridors that are listed or are potentially eligible for listing on the National Register of Historic Sites. The Option 1 corridor could affect 43 structures and the Option 2/3 corridor could affect 17 structures. Due to the width of the corridors, the potential exists to avoid or minimize impacts to historic sites.

17. Archaeological Resources: Five previously recorded archaeological sites have been identified along the Option 1 corridor. Twenty-three previously recorded archaeological sites have been identified along the Option 2/3 corridor. The site disparity between the corridors is likely the result of the limited number of previous cultural resource management studies in the project corridors and should not be interpreted to indicate actual site density in each corridor. The project area has a high potential for containing unrecorded prehistoric or historic archaeological sites. Further archaeological surveys will need to be conducted during future project phases to determine whether additional archaeological sites may be present.

18. Cemeteries: Seven cemeteries were identified in the Option 1 corridor and three cemeteries were located in the Option 2/3 corridor. Efforts should be made during future project phases to avoid or minimize impacts to a cemetery.



Tebbs Bend Battlefield Cemetery

19. Section 4(f) Resources: Section 4(f) resources occur in both corridors. Section 4(f) resources include historic properties listed or eligible for listing on the National Register of Historic Places, archaeological sites requiring preservation in place (e.g., a Native American burial site), or recreation areas, such as Green River Lake State Park. If any Section 4(f) resource is used for a transportation project, a Section 4(f) evaluation must be conducted. This evaluation would be conducted during future project phases.

20. Section 6(f) Resources: Only Option 2/3 has the potential to affect an outdoor recreational land or water area or facility established with the assistance of grants from the Land and Water

Conservation Fund. The Idle Hour Community Park in Springfield is located at the intersection of KY 555 and KY 528. It appears that alternates could be developed to avoid impacting this Section 6(f) resource.

21. Hazardous Materials and Underground Storage Tank Sites: No Superfund sites, landfills or illegal dumps were identified in either the Option 1 or Option 2/3 corridors. The potential exists for some sites to contain hazardous materials or underground storage tanks. The Option 1 corridor contained an estimated 6 sites, which included service stations and automobile repair shops. The Option 2/3 corridor contained an estimated 25 to 30 sites, which included service stations, automobile repair shops and small junk yards/auto salvage yards.

22. Air Quality: All project area counties are considered in attainment for all transportation-related air pollutants (carbon monoxide, hydrocarbons, nitrogen oxides and particulates). No air quality mitigation is expected to be necessary for any Option.

23. Traffic Noise: Future project analysis may predict noise levels that would exceed regulatory noise thresholds for which abatement considerations (e.g., noise barriers) are appropriate at individual receptors (residential or commercial facilities). Depending on alignments within a corridor, noise levels may increase for some receptors as the roadway is moved closer but may decrease for other receptors as the roadway moves away from them.

G. GEOTECHNICAL CONSIDERATIONS

- Items considered as part of the geotechnical overview for the project area include general topography, geology, active and previous mining, and oil and gas wells.

- The study area is within the Mississippian Plateaus. The Mississippian Plateaus contains gently to moderately rolling topography that has been partially influenced by karst weathering in some areas. The Knobs Region consists of a narrow belt of conical knobs situated in the center of the study area.

- The Knobs Region is underlain by shales and limestone that are Ordovician, Silurian, Devonian, and Mississippian in age. The predominant rock type in the area are Devonian age dark gray

carbonaceous shales of the New Albany Shale Formation. The New Albany Shale is often acidic and toxic when exposed to air and water.

- An east-west trending unnamed fault crosses the environmental footprint approximately one mile south of Lebanon, Kentucky. A series of east-west trending faults are located in the vicinity of Springfield. Another series of faults are near the eastern edge of Salleetown in Marion County. The faults discussed are not considered to be active in recent geologic time.

- There are several active, inactive, and abandoned limestone and sand quarries known to exist in the study area.

- The potential for encountering karst activity such as soil piping and solutioning of bedrock, as well as karst features such as sinkholes and subterranean channels, is significant over portions of both corridors. Potential for karst activity is greatest in the southern portion of the study area within the Mississippian Plateaus Region near Columbia.

- The potential exists for acid drainage from bedrock and soils within The Knobs Region. The New Albany Shale within that region is a known acidic stratum. Particular attention should be given to the cut slopes and embankments that are located in The Knobs Area. Cuts and embankments within the New Albany Shale and residual soils from the New Albany Shale should be encapsulated with a minimum of four feet of clay-like, non-acidic material.

- Oil and gas wells could be encountered along any chosen corridor.

- Because of the clayey type soils within the study area, a low CBR value should be anticipated.

IX. PROJECT TEAM RECOMMENDATIONS

This section provides recommendations and conclusions for improvements for the Heartland Parkway. The recommendations made in this section are a result of the Alternatives Study process.

A. FINAL PROJECT TEAM MEETING (SEPTEMBER 1, 2004)

A project team meeting for the Alternatives Study for the Heartland Parkway (Item No. 4-132.00) was conducted on Wednesday, September 1, 2004, at the Kentucky Transportation Cabinet (KYTC) Department of Highways District 4 Office in Elizabethtown, Kentucky. Participants at the meeting included representatives from KYTC District 4, KYTC District 8, KYTC Division of Planning, Lincoln Trail Area Development District, and the consultant staff. The purpose of the meeting was to review the corridors and options being studied, the purpose, goals and objectives of the proposed project, project issues, a summary of the questionnaire results from the second round of local officials, local agencies, and public meetings, and to make recommendations for proposed improvements. The complete meeting minutes are located in **Appendix F**. Project information provided for discussion at the meeting included:

- Project Goals
- Environmental Footprint Map with each Alternative shown
- Handout with a discussion of each Alternative
- Survey Questionnaire results
- Corridor Comparative Matrix

Questionnaire results received to date from all the second round meetings were noted:

- In questions two & three, 80% said the Heartland Parkway is needed, and 79% said the Heartland Parkway is needed and would be helpful to the region.

- In question four, 79% of all responses said the Heartland Parkway should be constructed along the existing route.

- In question five, 74% indicated they prefer a four-lane highway with limited entrances.

- The results of the priority by segment question closely resemble the recommendations presented by WMB, as a result of the public responses and other engineering factors.

After the overview of questionnaire responses, the project team discussed funding for the Columbia and Lebanon Bypasses. There was some concern surrounding these two projects and being able to convert the bypasses to federal funding unless appropriate environmental documents have been approved; and, the question of logical termini as required by FHWA.

A review of historic funding through the corridor indicates the funding level was approximately $20M per year.

Additionally, it was noted that the Lebanon Bypass includes only enough right of way for two-lane construction; however, after the construction of the two-lane bypass, and the commencement of development, it will be difficult to go back and purchase the additional right of way needed for two more lanes.

The project team was updated regarding geotechnical issues since the previous project team meeting. Some of these geotechnical items include the following:

- Both corridors must cross area geological faults.

- Acidic shale will require special design and construction consideration.

An Environmental Overview was provided. Environmental justice considerations were discussed, specifically mentioning the community of Frogtown, which will not be affected by any of the corridors being studied.

The project team was presented with the detailed corridor analysis by the consultant, which is shown in **Section VIII: CORRIDOR ANALYSIS**. There was some concern about the ability to fund the preferred alternative (Alternative 2 or Option 2); however, it was clear that **Option 2** met the project goals and received overwhelming support from the public and local officials. **Option 2** is shown in yellow along the existing corridor routes in **Figure 7** of **Appendix A**.

The project team recommended the following priority for construction project phasing for the preferred alternative:

- Priority 1: Segment 1 – KY 61 from the Louie B. Nunn Cumberland Parkway to the Columbia Bypass.
- Priority 2: Segment 2 – Columbia Bypass
- Priority 3: Segment 6 – Lebanon Bypass
- Priority 4: Segment 4 – Campbellsville Bypass
- Priority 5: Segment 3 – KY 55 from Columbia to Campbellsville

- Priority 6: Segment 5 – US 68 from Campbellsville to Lebanon
- Priority 7: Segment 7 – KY 55 from Lebanon to Springfield
- Priority 8: Segment 8 – KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway

Preliminary cost estimates are shown in **Table 7** of **Appendix C**, as well as, in **Section VIII: D. PROJECT CORRIDOR DEVELOPMENT COSTS**. Estimates are shown for each alternative and by construction segment.

B. RECOMMENDATIONS

It is concluded that for the long term traffic mobility and in keeping with public support, **Option 2** best addresses all of the Project Goals.

Community Considerations	Option 1	Option 2	Option 3
Public Support	Some Support 19%	Most Support 63%	Least Support 16%
Benefits from Incremental Construction	No	Yes	Yes
Adversely Affects Farmland	Yes	No	No
Potential Cultural/ Historic Resources	43	21	21
Meets Project Goals	Yes	Yes	No
Improve Regional Access	Yes	Yes	Yes
Improve Safety	Yes	Yes	Yes
Improve Highway Capacity	Yes	Yes	No
Decrease Delays Through Communities	Yes	Yes	No
Improve Emergency Response Time	Yes	Yes	No

Option 1 would need to be constructed in its entirety, or long sections, to receive any positive returns, such as the reduction of truck traffic along the existing routes or the ability to provide a transportation facility that would enhance shipment of goods to other parts of the state and the nation.

The issue of funding a project of this magnitude was another decisional factor because the cost of **Option 1** is twice that of **Option 2**. In addition, constructing **Option 1** would still leave deficiencies along the existing corridor that would have to be addressed at some point in the future, and it would leave two routes to maintain. Lastly, **Option 1** would be detrimental to many of the farmers that the Heartland Parkway is intended to serve as it would cut through many farms and divide prime farmland.

Option 3 was discarded because it failed to address at least two of the Project Goals: Improve Capacity – because capacity issues are in the urbanized areas, not on rural sections where passing lanes would be added -- and Decrease Delays Through Communities – since passing bays would not be able to correct these deficiencies. In addition, **Option 3** received very little community support.

In making a recommendation, it was apparent that there are several distinct advantages of **Option 2** over **Option 1** and **Option 3**. **Option 2** can be constructed incrementally, allowing immediate benefits from each constructed segment. It would even allow some low priority segments to be upgraded utilizing **Option 3** with limited initial cost. There was also overwhelming support for **Option 2**, both from the local officials, agencies and interest groups, and the public as noted in **Tables 5** and **6** in **Appendix C**.

Lastly, it is also recommended that consideration be given to reconfiguring the ends of the bypasses at Columbia and Lebanon as they are currently planned. In order to provide the most efficient corridor alternative, the bypass routes should be completed to accommodate through traffic. In addition, their termini need to be moved about a half mile further from the communities. To be compatible with Option 2, the current Lebanon Bypass design should be changed to a four-lane facility.

C. PROJECT COSTS BY PRIORITY

PRIORITY #1 - SEGMENT 1: Utilize the reconstructed section of KY 61, from 1000 feet south of the Louie B. Nunn Cumberland Parkway to the proposed Columbia Bypass in Adair County (**Figure 7** in **Appendix A**).

Option 2 Segment 1	Estimated Development Cost
Estimated Length: 2.1 miles	
Design	-
Right-of-Way	$2,000,000
Utilities	$500,000
Construction	$15,000,000
Contingencies	$2,250,000
TOTAL	**$19,750,000**

PRIORITY #2 - SEGMENT 2: Will follow the proposed Columbia Bypass to KY 55 north of Columbia in Adair County (**Figure 7** in **Appendix A**).

Option 2 Segment 2	Estimated Development Cost
Estimated Length: 4.16 miles	
Design	$2,894,000
Right-of-Way	$4,400,000
Utilities	$1,500,000
Construction	$35,943,000
Contingencies	$5,393,000
TOTAL	**$50,130,000**

PRIORITY #3 - SEGMENT 6: Follow the proposed bypass for Lebanon to KY 55 north of Lebanon in Marion County (**Figure 7** in **Appendix A**).

Option 2 Segment 6	Estimated Development Cost
Estimated Length: 3.305 miles	
Design	$927,000
Right-of-Way	$2,200,000
Utilities	$1,000,000
Construction	$13,353,000
Contingencies	$2,003,000
TOTAL	**$19,483,000**

PRIORITY #4 - SEGMENT 4: Construct new bypass for Campbellsville, from KY 55 south of Campbellsville to US 68 north of Campbellsville in Taylor County (**Figure 7** in **Appendix A**).

Option 2 Segment 4	Estimated Development Cost
Estimated Length: 6.7 miles	
Design	$2,322,000
Right-of-Way	$5,868,000
Utilities	$1,875,000
Construction	$28,842,000
Contingencies	$4,327,000
TOTAL	**$43,234,000**

PRIORITY #5 - SEGMENT 3: Reconstruct KY 55 from the Columbia Bypass in Adair County to the proposed bypass for Campbellsville in Taylor County (**Figure 7** in **Appendix A**).

Option 2 Segment 3	Estimated Development Cost
Estimated Length: 15.056 miles	
Design	$4,497,000
Right-of-Way	$17,456,000
Utilities	$13,846,000
Construction	$58,036,000
Contingencies	$6,197,000
TOTAL	**$100,032,000**

PRIORITY #6 - SEGMENT 5: Reconstruct US 68 from the proposed Campbellsville Bypass in Taylor County to the proposed bypass at Lebanon in Marion County (**Figure 7** in **Appendix A**).

Option 2 Segment 5	Estimated Development Cost
Estimated Length: 13.521 miles	
Design	$3,195,000
Right-of-Way	$11,052,000
Utilities	$5,881,000
Construction	$40,807,000
Contingencies	$4,827,000
TOTAL	**$65,762,000**

PRIORITY #7 - SEGMENT 7: Reconstruct KY 55 from the Lebanon Bypass in Marion County to the intersection of KY 555 in Washington County (**Figure 7** in **Appendix A**).

Option 2 Segment 7	Estimated Development Cost
Estimated Length: 7.22 miles	
Design	$1,361,000
Right-of-Way	$5,601,000
Utilities	$1,806,000
Construction	$17,309,000
Contingencies	$2,122,000
TOTAL	**$28,199,000**

PRIORITY #8 - SEGMENT 8: Reconstruct KY 555 from its intersection with KY 55 in Washington County to the Martha Layne Collins Blue Grass Parkway in Washington County (**Figure 7** in **Appendix A**).

Option 2 Segment 8	Estimated Development Cost
Estimated Length: 14.698 miles	
Design	$3,183,000
Right-of-Way	$9,226,000
Utilities	$3,675,000
Construction	$40,361,000
Contingencies	$5,086,000
TOTAL	**$61,531,000**

X. OTHER CONSIDERATIONS

A. CONSTRUCTION CONSIDERATIONS

A number of issues were identified through the course of this study that should be considered in the future construction phase of this project. Potential construction issues related to the preferred corridor include:

EROSION CONTROL: Measures to control erosion and sedimentation during and after construction activities should be utilized. The construction of this project will initially increase the amount of sediment that ground and surface water sources receive. There will also be an increase in sheet-flow pollution when this project is completed. Careful consideration must be given to erosion control methods to minimize the amount of pollution that reaches surface and ground water.

FLOODPLAINS: The construction of this project may impact floodplains in the project area. Detailed hydraulic analysis must be performed to maintain current flood stages without increasing them by more than one foot in uninhabited areas. The construction of this project must not increase the flood hazard within the project's corridor or drainage area.

AIR QUALITY IMPACTS DURING CONSTRUCTION: Construction period air quality impacts need to be evaluated to examine the potential short-term effects of site preparation, demolition, materials storage, and other construction activities to determine if any appropriate mitigation commitments are to be incorporated into the plans.

GEOTECHNICAL CONSIDERATIONS: Karst activity exists over portions of the project area. The potential for karst activity is greatest in the Mississippian Plateau Region near Columbia. There is also significant potential for acid drainage to occur within the Knobs Region where the New Albany Shale may be exposed to air and water. Cuts and embankments in this area should be assessed for acidity and remedial measures applied, such as capping with four feet of clay-like, non-acidic material.

ENVIRONMENTALLY SENSITIVE AREAS: A number of environmentally sensitive areas will be encountered during the construction of this project. Some of these areas include Green River Lake, Willisburg Lake, and Tebbs Bend Civil War Battlefield. When construction activities are being performed in these areas, every precaution should be taken to minimize the disturbance to these properties.

B. SPECIAL CONSIDERATIONS

Below is a summary of important findings in the study area that will need to be addressed in the next phase of project development.

- Due to funding constraints, this project will be implemented incrementally by establishing the priority sections; however, it is recommended that a Phase I environmental study be performed on the recommended corridor.

- There are a number of environmentally sensitive locations within the study area. The Green River Lake State Park, Tebbs Bend Civil War Battlefield, and many potentially historic properties will require consideration in future project phases.

- Further fieldwork and coordination with the United States Fish and Wildlife Service will be necessary in future project phases to determine if the federally listed endangered Indiana bat, gray bat, fanshell mussel, clubshell mussel and rough pigtoe (mussel) and the federally threatened bald eagle and Eggert's sunflower exist within right of way limits and the potential for adverse impacts.

- For streams and wetlands, analyze specific impacts in future project phases, evaluate avoidance and minimization options, and determine permitting and if appropriate, mitigation requirements.

- Historic and archaeological surveys will need to be conducted to determine/confirm the presence of historic or archaeological sites and potential to avoid or minimize project impacts.

- Environmentally sensitive sites (e.g., Tebbs Bend Battlefield), parks (e.g., Lincoln Homestead State Park and Green River Lake State Park) and exemplary natural areas (e.g., Green River Biosphere) will need to be considered in future project phase decisions.

- Determine whether Section 4(f) or Section 6(f) evaluations will be necessary for future project phases.

- Develop numbers of residential and commercial relocations and farmland impacts.

- For potential hazardous materials and underground storage tank sites, confirm presence at facilities such as service stations, automobile repair shops, and auto salvage yards and assess avoidance and mitigation options.

- Modeling of potential air and noise impacts will be necessary in future project phases to determine if mitigation considerations are necessary.

- Additional funding will be needed to complete priority segments.

C. SUGGESTED PUBLIC INVOLVEMENT ACTIVITES

Public involvement will continue to be an important aspect of future project development activities. A review of the questionnaire summary indicates that there is support for the Heartland Parkway to be developed along the existing corridor routes of KY 55, US 68, and KY 555. Future public involvement activities may include the following:

- Create a Public Involvement Plan to ensure that the public is kept informed. This would include maintaining and expanding the database of project stakeholders.

- Hold Public Information Meetings at project milestones. This will provide an opportunity to present current engineering and environmental information to the public for their input.

- Local news media should be involved in making the public aware of decisions as they are made.

XI. CONTACTS

If additional information is needed regarding the Heartland Parkway project, the following individuals may be contacted:

Annette Coffey, P.E.	Director, Division of Planning
Daryl Greer, P.E.	Branch Manager, Division of Planning
Jimmy C. Wilson, P.E.	Team Leader, Division of Planning
Ted Noe, P.E.	Project Manager, Division of Planning

The following address and phone numbers can be used to contact the above individuals:

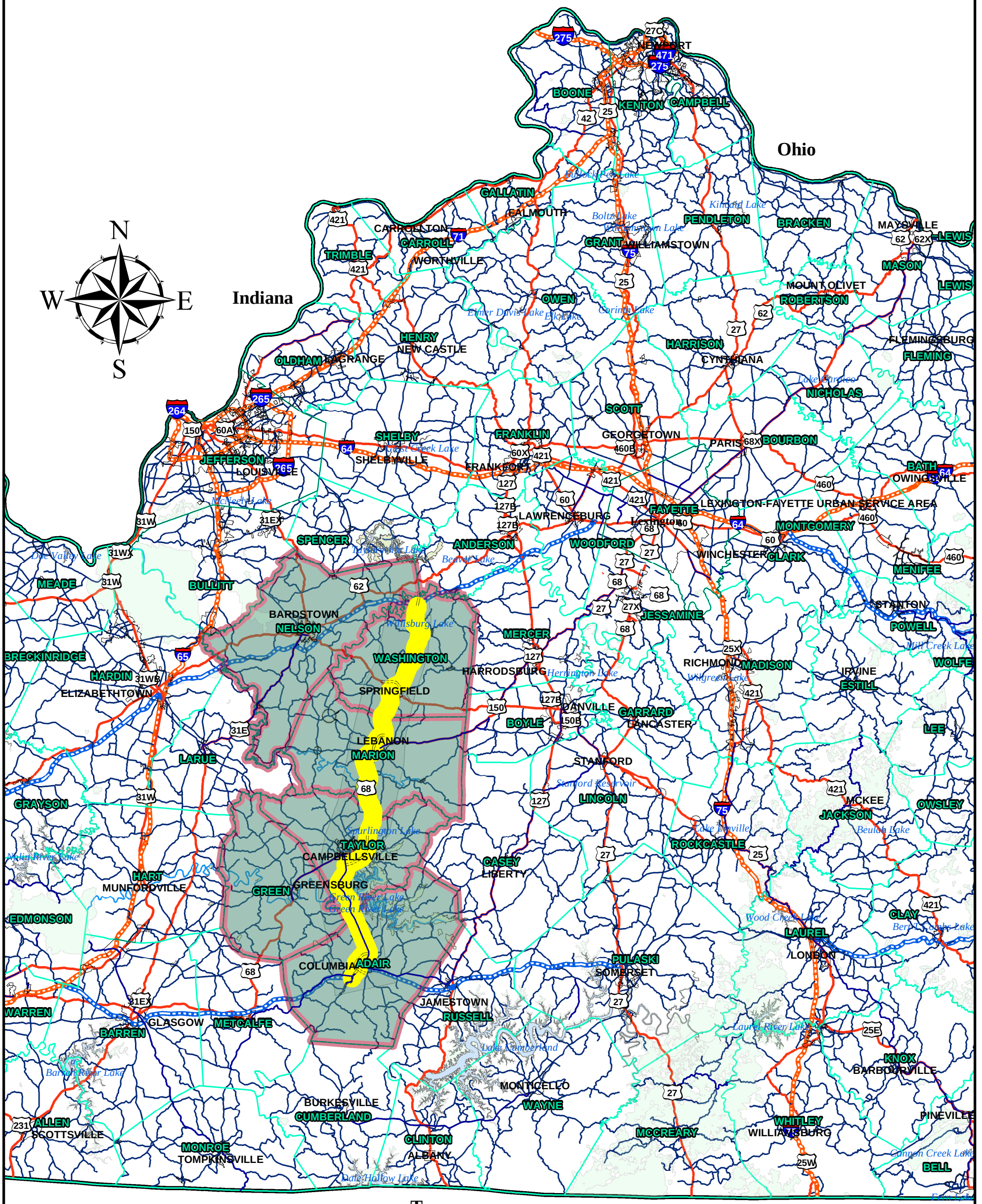
Kentucky Transportation Cabinet
Division of Planning
200 Mero Street, Station W5-05-01
Frankfort, Kentucky 40622
Voice: (502) 564-7183
Fax: (502) 564-2865

You may find additional information at http://transportation.ky.gov/planning/index2.asp

APPENDIX A.

FIGURES

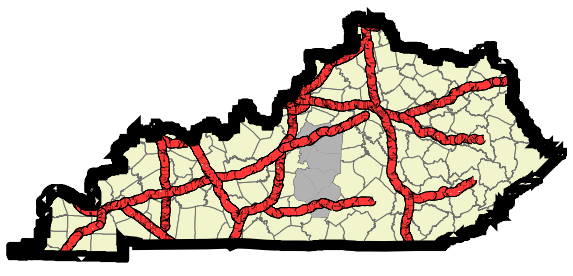
1. Location Map
2. Year 2003 Traffic and Level of Service
3. Vehicle Crash Information by Crash Type
4. Year 2030 Traffic and Level of Service
    a. No-Build Option
    b. Option 1
    c. Option 2
    d. Option 3
5. Environmental Footprint Map
    a. Adair, Taylor, & Green Corridor Region
    b. Marion, Washington, & Nelson Corridor Region
6. Physiographic Regions for the Heartland Parkway
7. Corridors
8. Typical Roadway Sections
9. Culture/Historic Resources
10. Agriculture Districts & Conservation Easements



EDUCATION PAYS

KENTUCKY TRANSPORTATION CABINET

WM3

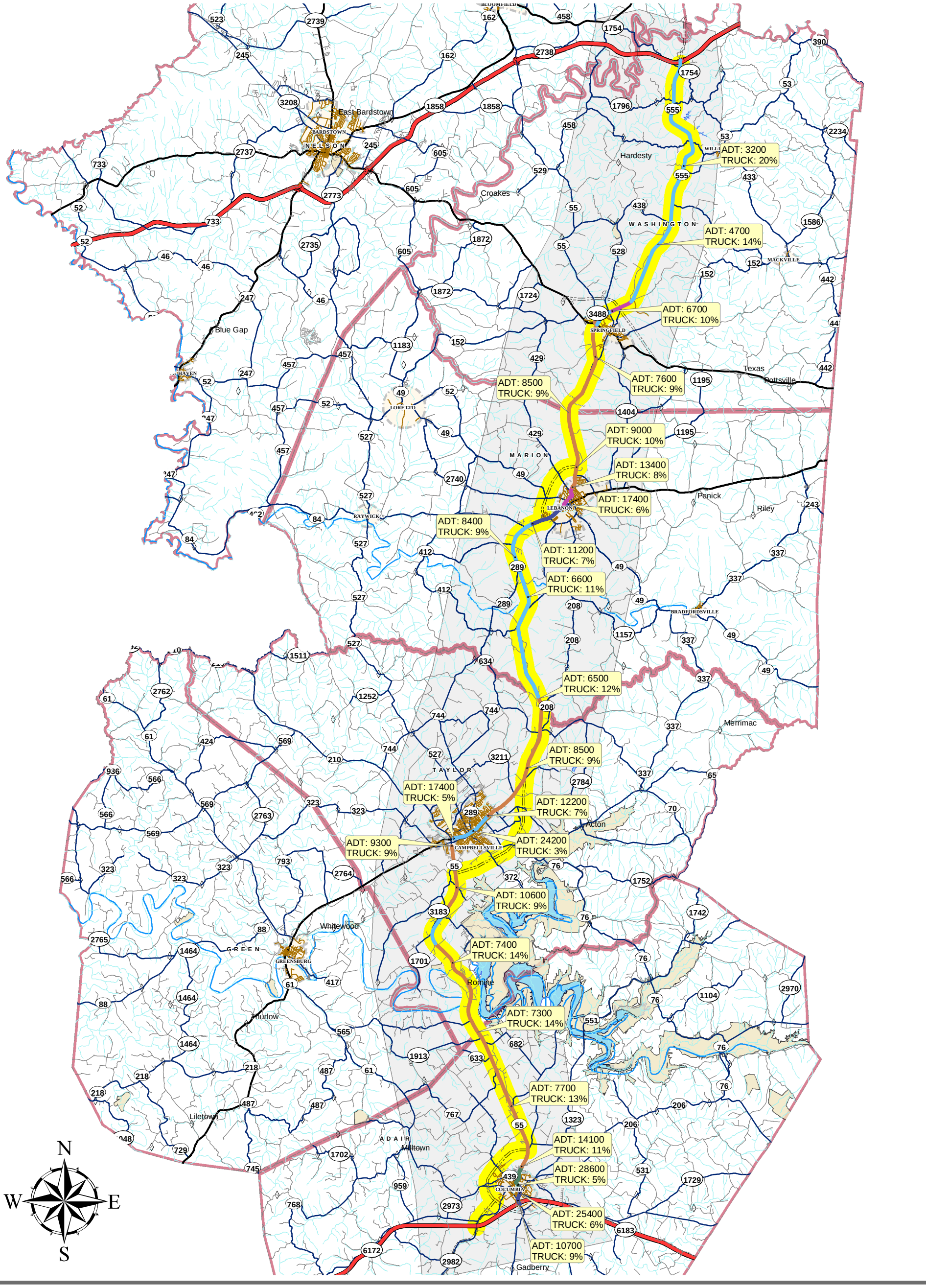


Location Map

Figure 1

Location Map

Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY 555
Item No. 4-132.00



EDUCATION PAYS

KENTUCKY TRANSPORTATION CABINET

WMB

Miles
1 0 1 2 3 4 5

Legend

Current LOS

- A
- B
- C
- D
- E
- F

Location Map

Figure 2

Year 2003 Traffic and Level of Service (LOS)

Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY555
Item No. 4-132.00

Critical Rate > 1.0

Critical Rate > 1.0

Critical Rate > 1.0

Critical Rate > 1.0

N

W E

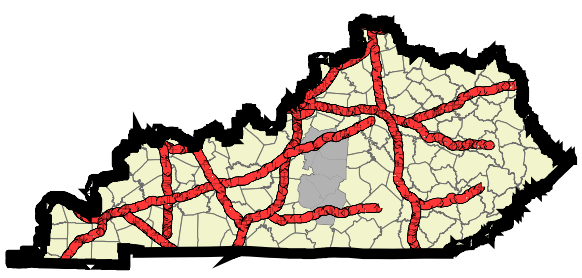
S

EDUCATION PAYS

KENTUCKY TRANSPORTATION CABINET

Miles
1 0 1 2 3 4 5

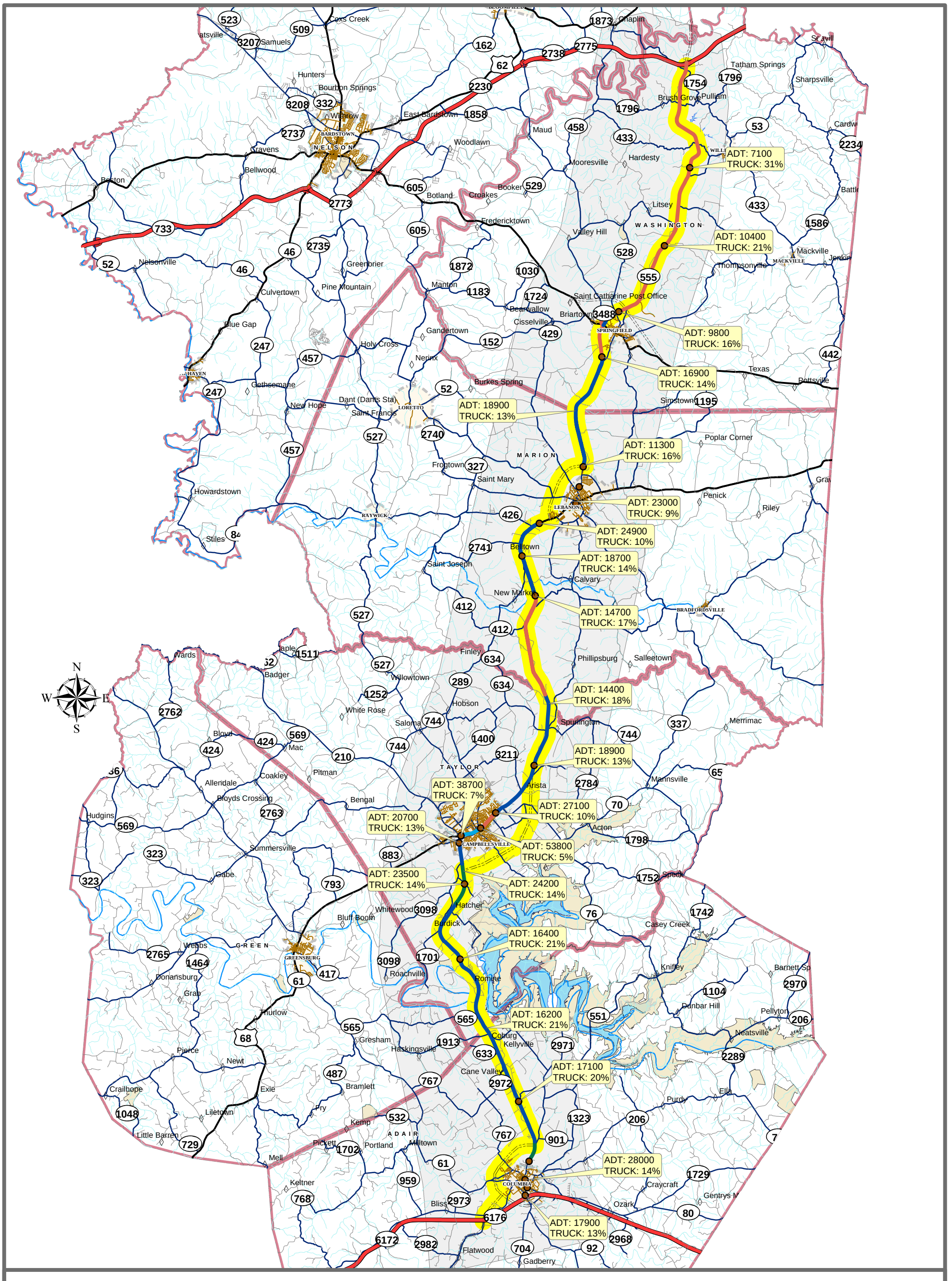
Legend
Critical Rate
> 1.0



Location Map

Figure 3

Venicle Crash Information
Critical Rate Factor > 1.0 (Jan 1997 - Dec 2002)
Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 /US 68 /KY 555
Item No. 4-132.00


ADT: 7100
TRUCK: 31%
ADT: 10400
TRUCK: 21%
ADT: 9800
TRUCK: 16%
ADT: 16900
TRUCK: 14%
ADT: 18900
TRUCK: 13%
ADT: 11300
TRUCK: 16%
ADT: 23000
TRUCK: 9%
ADT: 24900
TRUCK: 10%
ADT: 18700
TRUCK: 14%
ADT: 14700
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TRUCK: 5%
ADT: 23500
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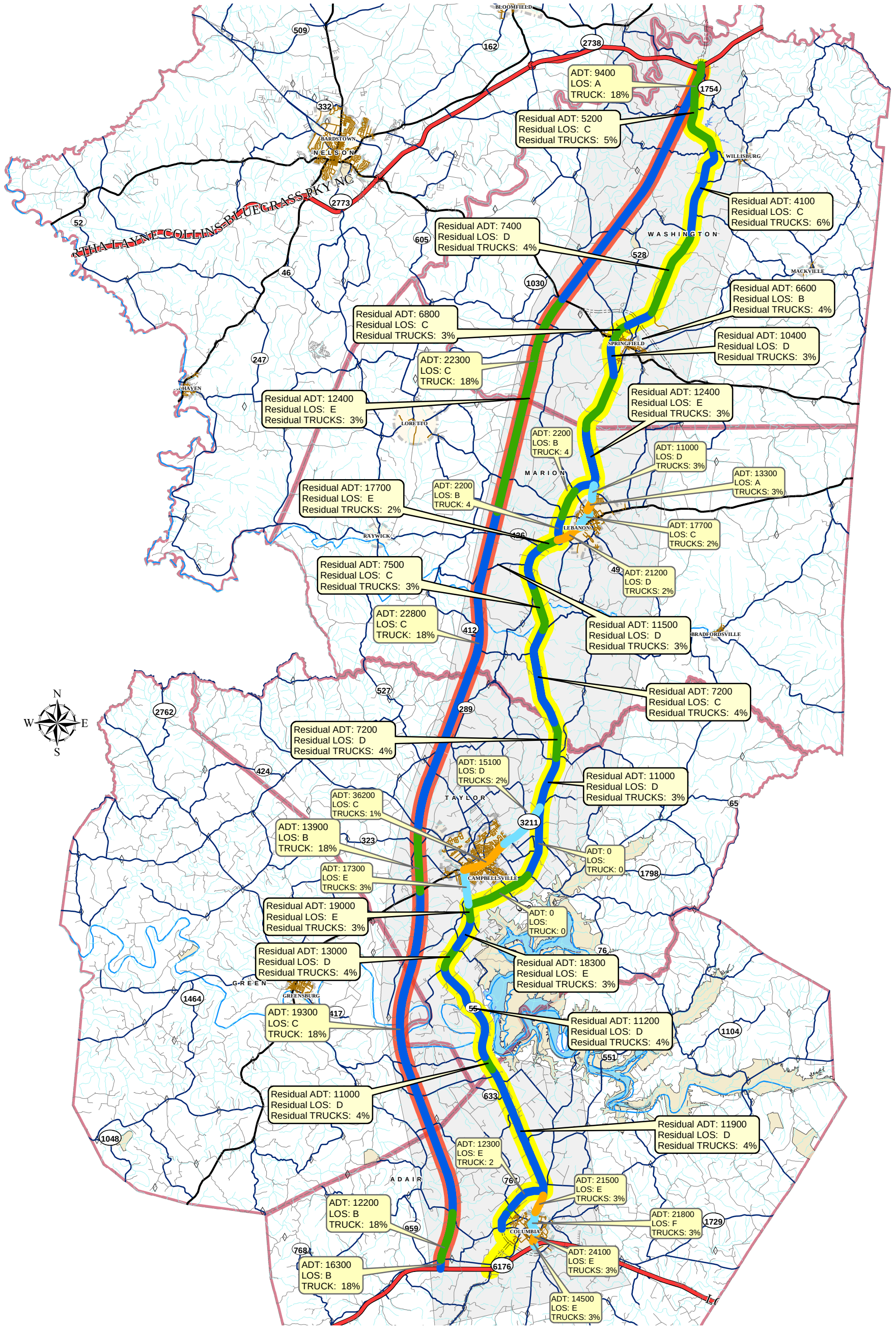
ADT: 24200
TRUCK: 14%
ADT: 16400
TRUCK: 21%
ADT: 16200
TRUCK: 21%
ADT: 17100
TRUCK: 20%
ADT: 28000
TRUCK: 14%
ADT: 17900
TRUCK: 13%
Saint Catharine Post Office
Briartown
Springfield
Texas
Simstown
Poplar Corner
Lebanon
Penick
Riley
Bradfordsville
Phillipsburg
Salleetown
Spurlington
Merrimac
Arista
Mannsville
Acton
Speck
Casey Creek
Hatcher
Burdick
Whitewood
Romine
Knifley
Barnett Sp
Dunbar Hill
Pellyton
Neatsville
Ella
Purdy
Craycraft
Gentrys M
Ozark
Columbia
Campbellsville
Greensburg
Adair
Taylor
Marion
Washington
Nelson
Green
Raywick
Loretto
Bardstown
Mackville
Thompsonville
Jenkin
Tatham Springs
Sharpsville
Brush Grove
Pulliam
Hardesty
Mooresville
Maud
Woodlawn
East Bardstown
Willisburg
Litsey
Valley Hill
Fredericktown
Booker
Botland
Croakes
Finley
Willowtown
Hobson
White Rose
Saloma
Pitman
Coakley
Allendale
Bloyds Crossing
Bengal
Summersville
Gabe
Hudgins
Blue Gap
Culvertown
Nelsonville
Pine Mountain
Greenbrier
Manton
Bearwallow
Cisselville
Gandertown
Holy Cross
Nerinx
Burkes Spring
Dant (Dants Sta)
Saint Francis
New Hope
Gethsemane
Howardstown
Stiles
Frogtown
Saint Mary
Saint Joseph
Calvary
New Market
Bellton
Cane Valley
Coburg
Kellyville
Haskingsville
Roachville
Bliss
Flatwood
Gadberry
Keltner
Mell
Pickett
Portland
Miltown
Kemp
Little Barren
Liletown
Crailhope
Pierce
Newt
Exie
Bramlett
Gresham
Thurlow
Grab
Donansburg
Webbs
Whitehall
Badger
Wards
Maple
Howardstown
Hunters
Bourbon Springs
Samuels
Coxs Creek
Chaplin
Scavill
Sharpsville
Cardw
Battle
Mackville
Jenkin
Texas
Pottsville
Penick
Riley
Grav
Poplar Corner
Speck
Casey Creek
Knifley
Barnett Sp
Dunbar Hill
Pellyton
Neatsville
Ella
Purdy
Craycraft
Gentrys M
Ozark
Merrimac
Mannsville
Acton
Speck
Hatcher
Burdick
Whitewood
Romine



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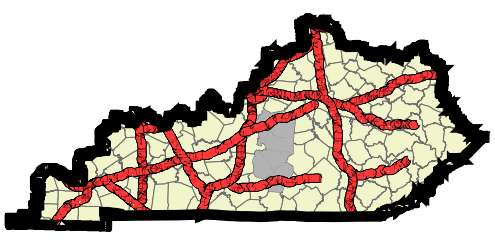
WM3



Location Map

Figure 4B

Year 2030 Traffic and Level of Service (LOS)
Option 1

Heartland Parkway
Louie B. Nunn Cumberland Parkway
toMartha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY 555
Item No. 4-132.00

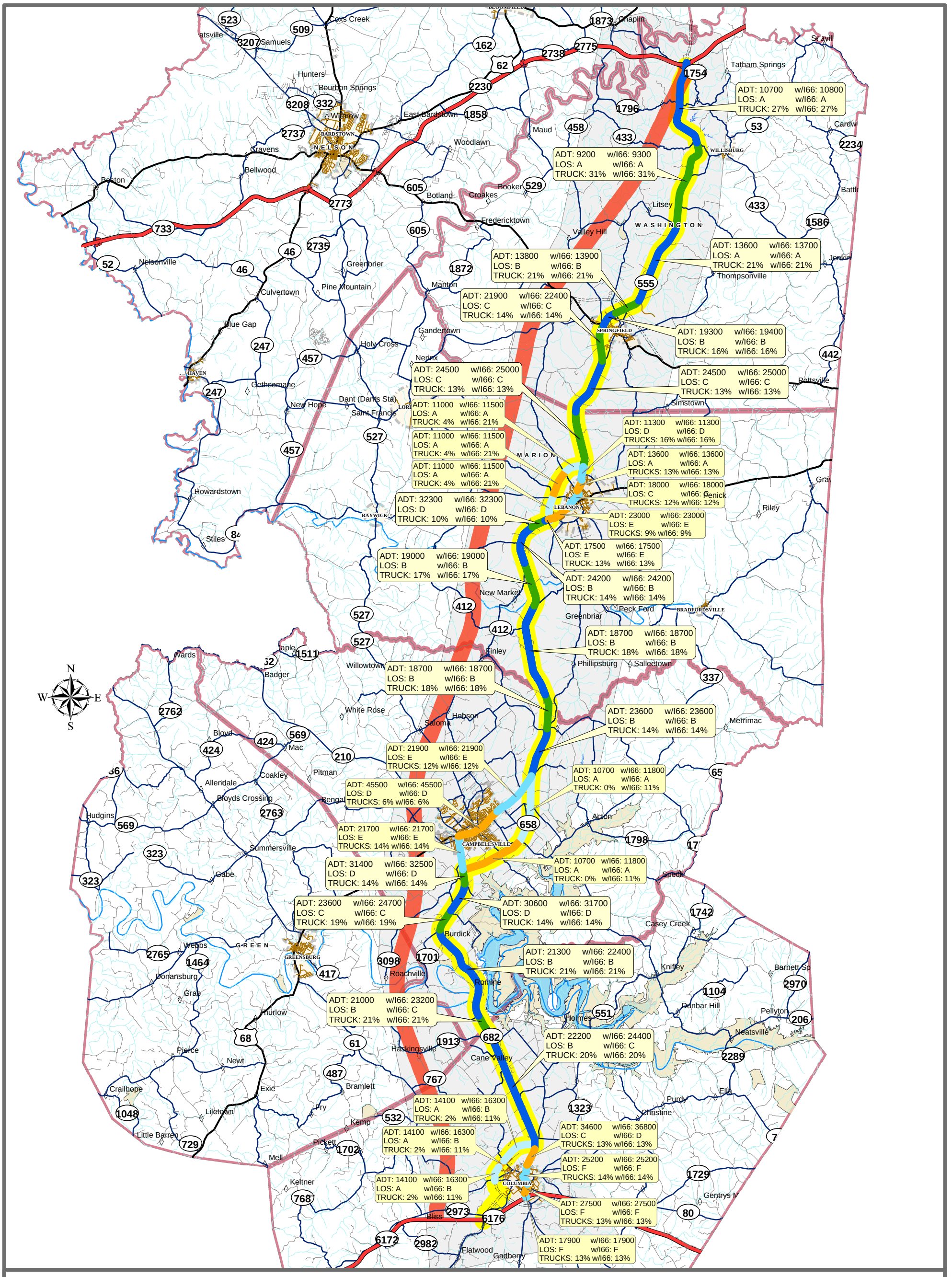


Figure 4C
Year 2030 Traffic and Level of Service (LOS)
Option 2
Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY555
Item No. 4-132.00

ADT: 9400 w/I66: 9500
LOS: D w/I66: D
TRUCK: 27% w/I66: 27%

ADT: 8100 w/I66: 8200
LOS: D w/I66: D
TRUCK: 31% w/I66: 31%

ADT: 12200 w/I66: 12300
LOS: D w/I66: D
TRUCK: 21% w/I66: 21%

ADT: 11900 w/I66: 12000
LOS: D w/I66: D
TRUCK: 21% w/I66: 21%

ADT: 19200 w/I66: 19700
LOS: E w/I66: E
TRUCK: 14% w/I66: 14%

ADT: 17000 w/I66: 17100
LOS: E w/I66: E
TRUCK: 16% w/I66: 16%

ADT: 21500 w/I66: 22000
LOS: E w/I66: E
TRUCK: 13% w/I66: 13%

ADT: 21500 w/I66: 22000
LOS: E w/I66: E
TRUCK: 13% w/I66: 13%

ADT: 9600 w/I66: 10100
LOS: D w/I66: D
TRUCK: 21% w/I66: 21%

ADT: 11300 w/I66: 11300
LOS: D w/I66: D
TRUCKS: 16% w/I66: 16%

ADT: 9600 w/I66: 10100
LOS: D w/I66: D
TRUCK: 21% w/I66: 21%

ADT: 13600 w/I66: 13600
LOS: A w/I66: A
TRUCKS: 13% w/I66: 13%

ADT: 18000 w/I66: 18000
LOS: C w/I66: C
TRUCKS: 12% w/I66: 12%

ADT: 28400 w/I66: 28400
LOS: F w/I66: F
TRUCK: 10% w/I66: 10%

ADT: 23000 w/I66: 23000
LOS: E w/I66: E
TRUCKS: 9% w/I66: 9%

ADT: 16700 w/I66: 16700
LOS: E w/I66: E
TRUCK: 17% w/I66: 17%

ADT: 17500 w/I66: 17500
LOS: E w/I66: E
TRUCK: 13% w/I66: 13%

ADT: 21300 w/I66: 21300
LOS: E w/I66: E
TRUCK: 14% w/I66: 14%

ADT: 16500 w/I66: 16500
LOS: E w/I66: E
TRUCK: 18% w/I66: 18%

ADT: 16500 w/I66: 16500
LOS: E w/I66: E
TRUCK: 18% w/I66: 18%

ADT: 20800 w/I66: 20800
LOS: E w/I66: E
TRUCK: 14% w/I66: 14%

ADT: 21900 w/I66: 21900
LOS: E w/I66: E
TRUCKS: 12% w/I66: 12%

ADT: 45500 w/I66: 45500
LOS: D w/I66: D
TRUCKS: 6% w/I66: 6%

ADT: 21700 w/I66: 21700
LOS: E w/I66: E
TRUCKS: 14% w/I66: 14%

ADT: 9400 w/I66: 10500
LOS: D w/I66: D
TRUCK: 11% w/I66: 11%

ADT: 27600 w/I66: 28700
LOS: F w/I66: F
TRUCK: 14% w/I66: 14%

ADT: 9400 w/I66: 10500
LOS: D w/I66: D
TRUCK: 11% w/I66: 11%

ADT: 20800 w/I66: 21900
LOS: E w/I66: E
TRUCK: 19% w/I66: 19%

ADT: 26800 w/I66: 27900
LOS: F w/I66: F
TRUCK: 14% w/I66: 14%

ADT: 18700 w/I66: 19800
LOS: E w/I66: E
TRUCK: 21% w/I66: 21%

ADT: 18500 w/I66: 20700
LOS: E w/I66: E
TRUCK: 21% w/I66: 21%

ADT: 19500 w/I66: 21700
LOS: E w/I66: E
TRUCK: 20% w/I66: 20%

ADT: 14100 w/I66: 16300
LOS: E w/I66: E
TRUCK: 11% w/I66: 11%

ADT: 14100 w/I66: 16300
LOS: E w/I66: E
TRUCK: 11% w/I66: 11%

ADT: 30400 w/I66: 32600
LOS: F w/I66: F
TRUCKS: 13% w/I66: 13%

ADT: 14100 w/I66: 16300
LOS: E w/I66: E
TRUCK: 11% w/I66: 11%

ADT: 25200 w/I66: 25200
LOS: F w/I66: F
TRUCKS: 14% w/I66: 14%

ADT: 27500 w/I66: 27500
LOS: F w/I66: F
TRUCKS: 13% w/I66: 13%

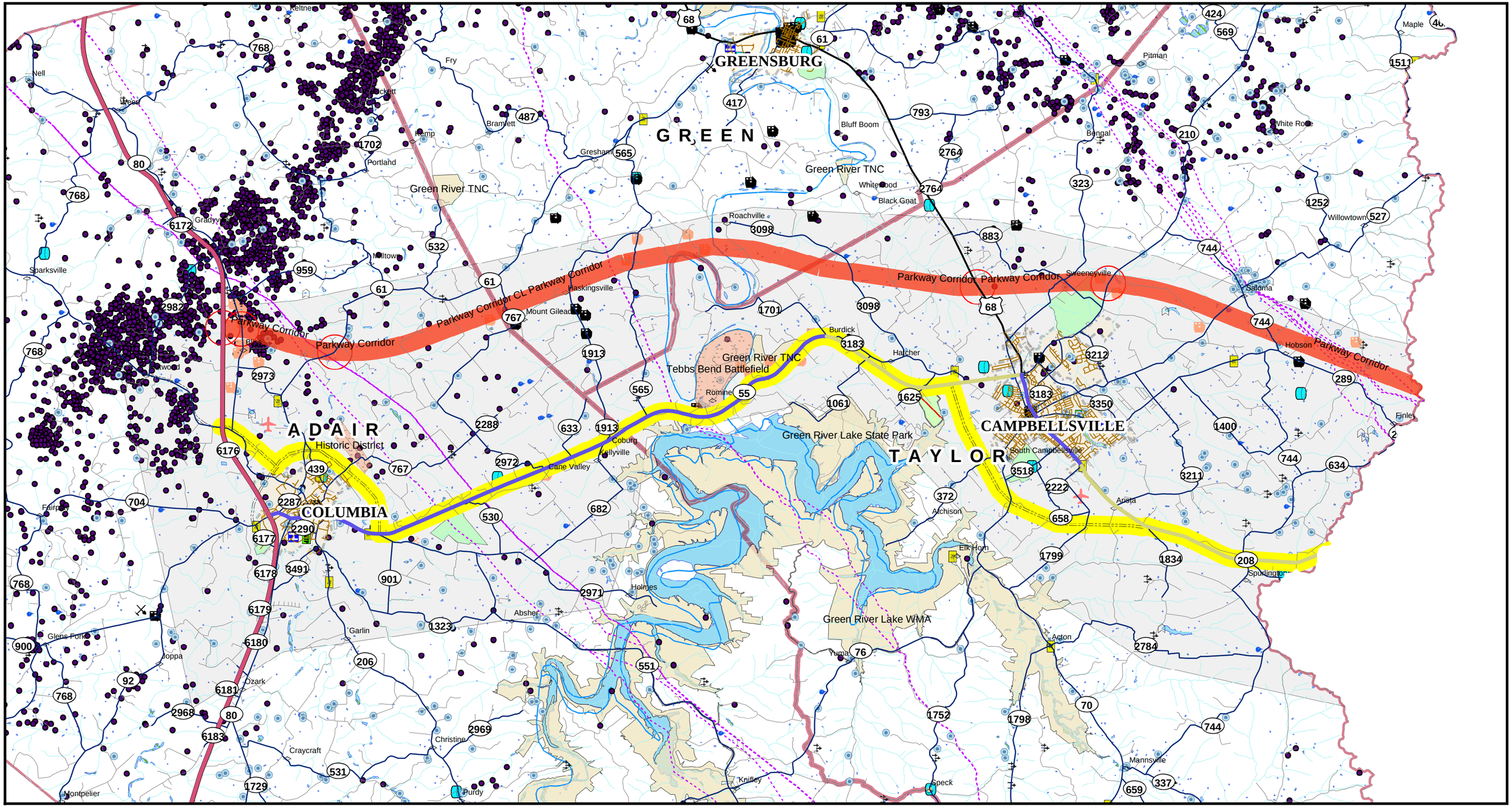
ADT: 17900 w/I66: 17900
LOS: F w/I66: F
TRUCKS: 13% w/I66: 13%

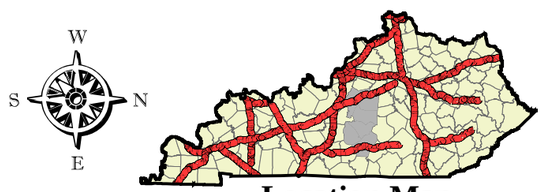
Miles
1 0 1 2 3 4 5

Location Map

Figure 4D
Year 2030 Traffic and Level of Service (LOS)
Option 3

Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY 555
Item No. 4-132.00





0 0.5 1 2 3 4 5 6 7 8
Miles

Legend

- Fully Controlled
- Partial Controlled
- Access by Permit
- City
- County
- Other
- Private Dr.
- Interstate
- KY Route
- Parkway
- US Route
- Bypass
- Bypass
- Option 1 Parkway
- Option 2, 3 Along Existing Alignment
- Possible Interchange
- Town
- Airport
- Historic District
- Historic Properties
- Potential Historic
- Cemetery
- Water Well
- Well
- Coal Out Crops
- Pump Stations
- Water Treatment Location
- Dams
- Water Purchase Source
- Hospitals
- Water Tank
- Mineral Operations
- Spring
- Faultline
- PipeLine
- Stream
- River
- Waterline
- Industrial Sites
- Proposed Industrial Sites
- State Parks
- Incorporated Cities
- County Boundary
- Lake
- wetlands
- Environmental Footprint

Figure 5A

Environmental Footprint Map

Heartland Parkway
South Section (Adair, Green, Taylor County)
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY 555
Item No. 4-132.00

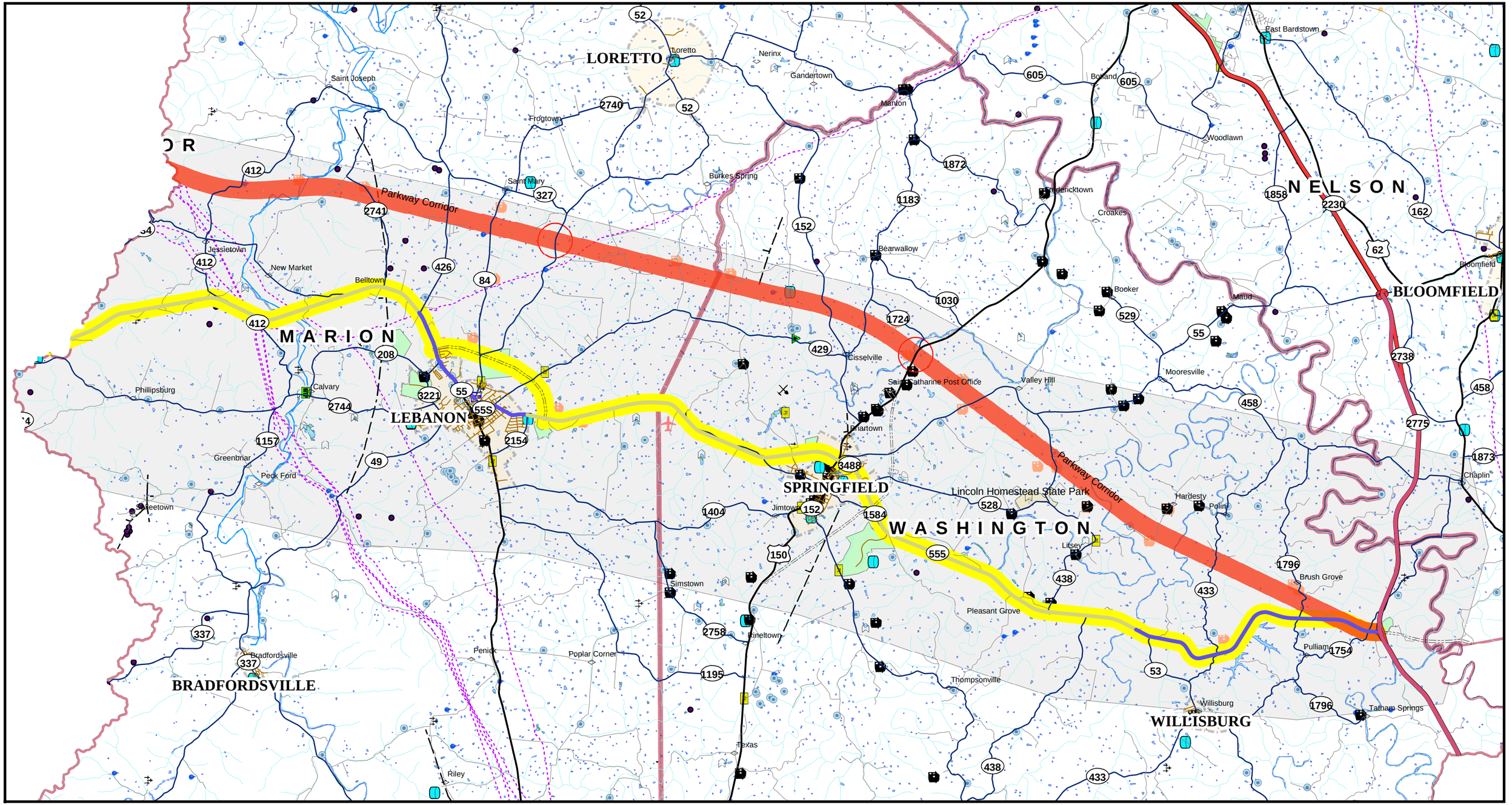


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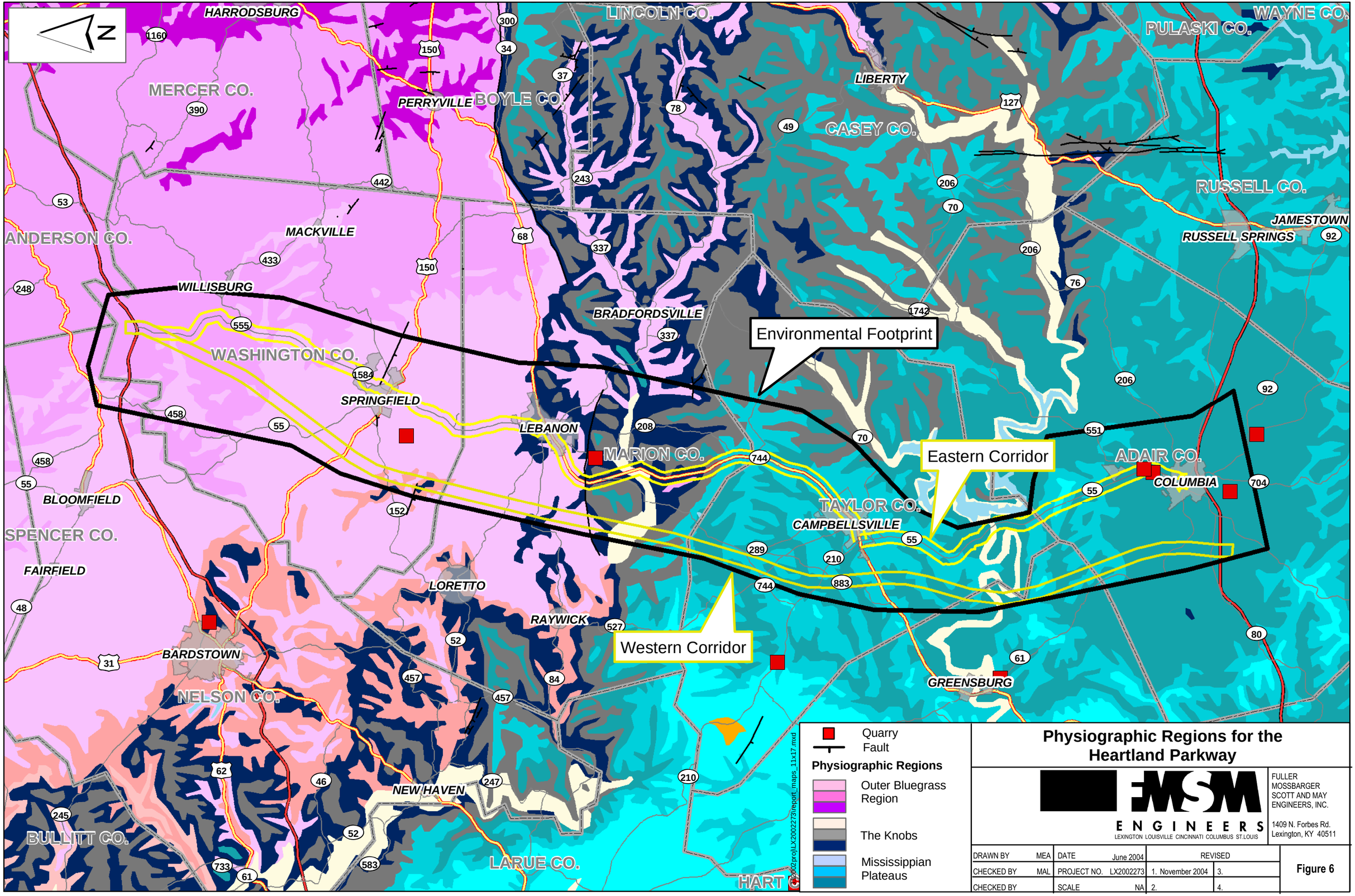
Figure 5B

Environmental Footprint Map

Heartland Parkway
North Section (Marion, Washington, Nelson County)
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY 555
Item No. 4-132.00



Physiographic Regions for the Heartland Parkway

FMSM ENGINEERS
LEXINGTON LOUISVILLE CINCINNATI COLUMBUS ST.LOUIS

FULLER MOSSBARGER SCOTT AND MAY ENGINEERS, INC.
1409 N. Forbes Rd.
Lexington, KY 40511

DRAWN BY	MEA	DATE	June 2004	REVISED	
CHECKED BY	MAL	PROJECT NO.	LX2002273	1. November 2004	3.
CHECKED BY		SCALE	NA	2.	4.

Figure 6

SECTION	LENGTH (Miles)	COST ($)	PRIORITY
SEC 1	2.100	19.750 M	1
SEC 2	4.160	50.130 M	2
SEC 3	15.056	100.032 M	5
SEC 4	6.700	43.234 M	4
SEC 5	13.521	65.762 M	6
SEC 6	3.305	19.483 M	3
SEC 7	7.220	28.199 M	7
SEC 8	14.698	61.531 M	8

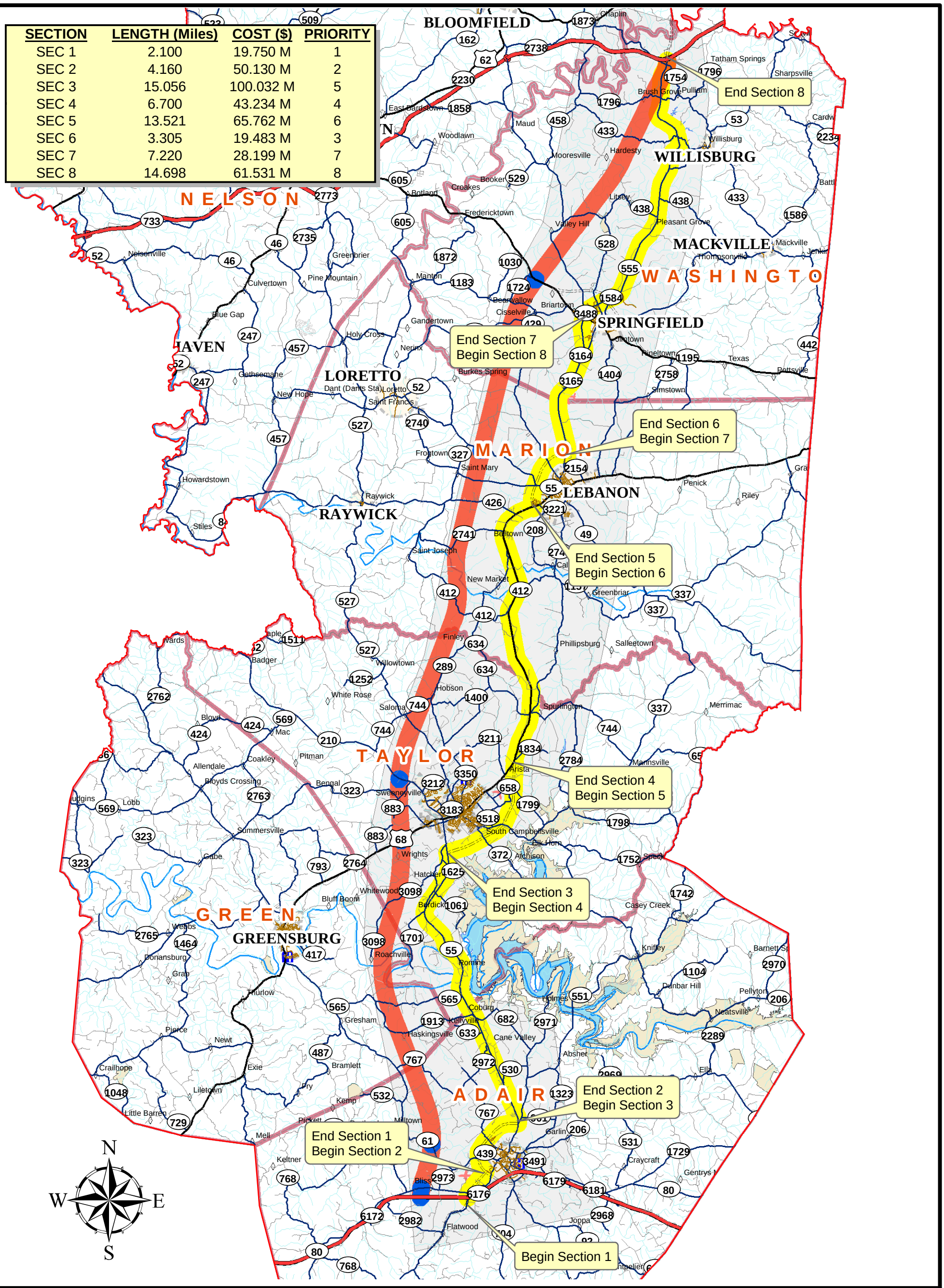


Figure 7
Corridors
Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY 555
Item No. 4-132.00

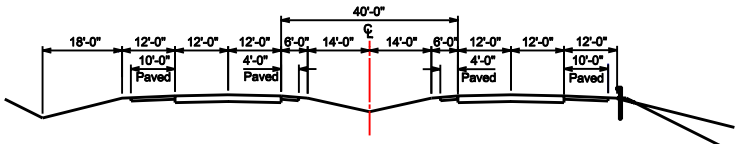
Heartland Parkway

OPTION 1:



Option 1 Typical Interchange

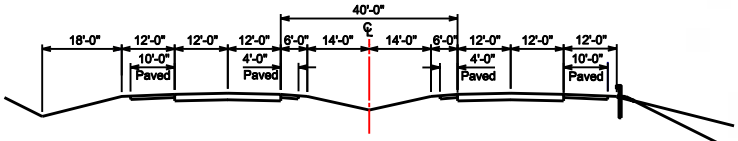
- Four-Lane Divided Highway
- Access Provided at Interchanges Only
- New Alignment



Option 1 Typical Section

OPTION 2:

- Four-Lane Divided Highway
- Access Provided at 1200' Spacing at Grade with Median Cuts
- Follow Existing Routes (KY 55, US 68, KY 555)
- Upgrade Proposed Bypasses at Columbia and Lebanon to Four-Lane
- New Four-Lane Bypass at Campbellsville on Southeast Side (KY 55 to US 68)



Option 2 Typical Section



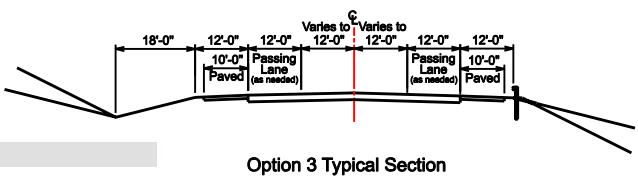
Option 2 Typical Partial Access Control

OPTION 3:



Option 3 Typical Passing Bay

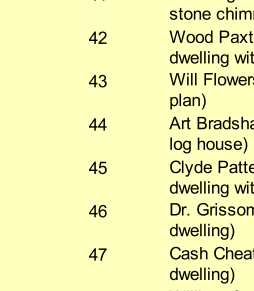
- Add Passing Bays to Existing Routes (KY 55, US 68, & KY 555)
- Access Locations Would Not Change
- Use Proposed Bypasses at Columbia and Lebanon
- New Two-Lane Bypass at Campbellsville on Southeast Side (KY 55 to US 68)
- Pavement and Shoulders on Existing Routes Would be Rehabbed



Option 3 Typical Section

FIGURE 8. TYPICAL ROADWAY SECTIONS

County	Site Number	Description
	Sites Located Within Option 1 Corridor	
Washington	2	Two-story, frame house
Washington	3	Bush Grove Baptist Church and Cemetery
Washington	9	Two-story, frame T-plan
Washington	10	Thomas H. Williams House (two-story, frame house)
Washington	11	John Litsey House (two-story, frame house)
Washington	12	House on corner of Goatley Road
Washington	13	Two-story, American foursquare house
Washington	17	Martha Grundy Walker House (brick, Greek Rivival house with smokehouse)
Washington	18	Edwin R. Walker House (Queen Anne house with turret)
Washington	19	Hip-roofed dwelling with agricultural outbuildings
Washington	20	T-plan with log section
Washington	21	Two-story log house with brick chimney
Marion	22	Double pen, log house
Marion	23	School
Marion	24	Two-story, hip-roofed frame house
Marion	25	Brick, hip-roofed foursquare
Marion	26	Two-story, frame, double pen house
Taylor	27	Two-story, T-plan
Taylor	28	One-story, T-plan
Taylor	29	Two-story dwelling with agricultural outbuildings
Taylor	30	John Chandler House (stone house with brick addition)
Taylor	31	Bungalow with log house in back and agricultural outbuildings
Taylor	32	Country store or church (community center)
Taylor	33	Two-story, hip-roofed frame dwelling
Taylor	34	Two-story, hip-roofed frame dwelling
Taylor	35	Two-story, hip-roofed frame dwelling
Taylor	36	Two-story, hip-roofed frame dwelling
Taylor	37	Two-story dwelling with interior stone chimney
Taylor	38	One-story dwelling with two exterior stone chimneys
Taylor	39	Two-story dwelling with two-tiered porch
Green	40	Mt. Gilead Christian Church
Adair	41	Buck Ingram House (two-story dwelling with stone chimney)
Adair	42	Wood Paxton House (two-story, frame dwelling with central brick chimney)
Adair	43	Will Flowers House (two-story, hip-roofed T-plan)
Adair	44	Art Bradshaw House (one and one-half story log house)
Adair	45	Clyde Patterson House (two-story, frame dwelling with brick chimneys)
Adair	46	Dr. Grissom House (two-story, frame dwelling)
Adair	47	Cash Cheatham House (two-story, frame dwelling)
Adair	48	William Casey House (one and one-half story, brick, double-pile dwelling)
Adair	58	Two-story dwelling with exterior brick chimney
Adair	59	Two-story T-plan
Adair	60	Union Church
Adair	61	Chris Stephens House (two-story, hip-roofed dwelling)
	Sites Located Within Option 2 and Option 3 Corridor	
Washington	1	Two-story, frame house
Washington	4	Two-story, frame house and multiple agricultural outbuildings
Washington	5	W.T. Merritt House/Beechland (two-story, frame dwelling with central chimneys)
Washington	6	Dr. Joe Hopper House (two-story, frame dwelling)
Washington	7	Beechfork Presbyterian Church/Pleasant Grove Presbyterian Church and Cemetery
Washington	8	Hip-roofed, double pile, T-plan
Washington	14	Hip-roofed, frame T-plan
Washington	15	A. Daniel Mitchell House (with early log section)
Washington	16	Classical Revival house
Washington	49	Two-story, central passage, single pile dwelling
Washington	64	One-story, frame T-plan
Marion	50	Joseph Spalding House/Willa Crest Farm (two-story, central passage dwelling and domestic outbuildings)
Marion	51	Dr. James A. McElroy House (two-story, central passage house)
Marion	52	James Henry Kirk House (two-story, side-passage brick dwelling)
Marion	63	Two-story, brick central passage, single pile dwelling
Taylor	53	Stucco bungalow and associated outbuildings
Taylor	54	Bridge over Green River
Taylor	55	Several log buildings
Taylor	56	Columbia Turnpike Tollhouse
Taylor	57	Confederate Cemetery from battle on July 4, 1863 at Tebbs Bend
Adair	62	Cane Valley community (potential crossroads historic district with several commercial buildings and dwellings)

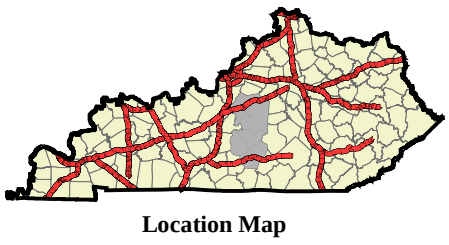




Legend

Corridor Alternates

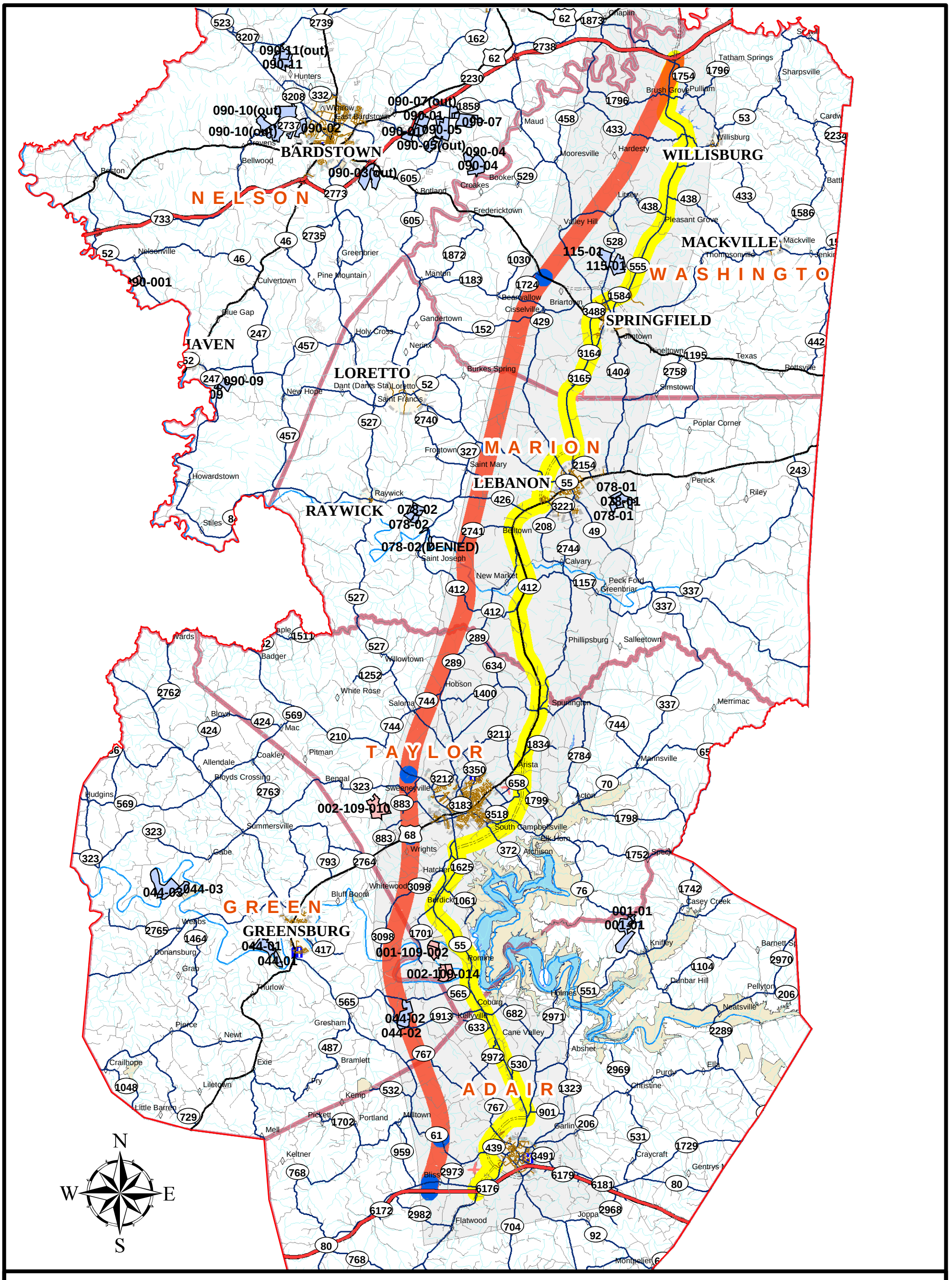
- Bypass
- Option 1 Parkway
- Option 2, 3 Along Existing Alignment
- Possible Interchange
- Environmental Footprint
- Historic Properties
- Potential Historic



Location Map

Figure 9
Cultural / Historic Resources

Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY 555
Item No. 4-132.00



Legend

Corridor Alternates

- Bypass
- Option 1 Parkway
- Option 2, 3 Along Existing Alignment
- Possible Interchange
- Environmental Footprint
- Agricultural Dist.
- PACE

Location Map

Figure 10
Agricultural Districts & Conservation Easements

Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
KY 55 / US 68 / KY 555
Item No. 4-132.00

APPENDIX B.

PHOTOGRAPHS OF PROJECT AREA

Project Area Photos



Photo 1. Historic home on KY 61 at the Louie B. Nunn Cumberland Parkway



Photo 2. KY 55 south of Columbia



Photo 3. Columbia Airport located north of KY 80



Photo 4. Pinewood Country Club along KY 80 in Columbia



Photo 5. Downtown Columbia



Photo 6. Lindsey Wilson College in Columbia



Photo 7. KY 55 north of Columbia



Photo 8. US 68 between Greensburg and Campbellsville in Green County



Photo 9. Historic Green County Courthouse in Greensburg



Photo 10. Historic L & N Railroad Depot in Greensburg



Photo 11. Abandoned Railroad Tunnel near Greensburg



Photo 12. Green River State Park along KY 55 between Columbia & Campbellsville



Photo 13. Historic Iron Truss Bridge over Green River



Photo 14. Tebbs Bend Civil War Battlefield & Cemetery along KY 55 between Columbia & Campbellsville



Photo 15. KY 55 between Columbia and Campbellsville



Photo 16. Amazon.com Distribution Center in Campbellsville



Photo 17. Cox Interior in Campbellsville



Photo 18. Former Fruit of the Loom plant in Campbellsville



Photo 19. Historic Jacob Hiestand House along KY 210 in Campbellsville



Photo 20. KY 55 and KY 210 in Campbellsville



Photo 21. Campbellsville University



Photo 22. Ingersoll-Rand Corporation in Campbellsville



Photo 23. Dairy Farm north of Campbellsville



Photo 24. US 68 between Campbellsville and Lebanon



Photo 25. New Albany Shale along US 68 between Campbellsville and Lebanon



Photo 26. Soybean field along US 68 between Campbellsville and Lebanon



Photo 27. Curtis-Maruyasu America, Inc. in Lebanon



Photo 28. National Cemetery. in Lebanon



Photo 29. Springfield-Lebanon Airport near KY 55



Photo 30. Matthew Walton Homestead along US 150 west of Springfield



Photo 31. St. Catharine College along US 150 west of Springfield



Photo 32. St. Rose Catholic Church along KY 152 west of Springfield



Photo 33. KY 555 north of Springfield



Photo 34. Tobacco field along KY 555 north of Springfield



Photo 35. Beechfork Presbyterian Church along KY 555 north of Springfield



Photo 36. Lincoln Homestead State Park along KY 438 north of Springfield



Photo 37. KY 555 north of Springfield



Photo 38. Willisburg Lake along KY 555



Photo 39. Park & Ride Lot along KY 555 at the Martha Layne Collins Blue Grass Parkway

APPENDIX C.

TABLES

Table 1. Traffic and Geometric Data

Table 2. Bridge Data

Table 3. Crash Data Analysis

Table 4. Six Year Highway Plan Improvements

Table 5. 2003 Local Officials/Agencies/Public Meetings Questionnaire Results

Table 6. 2004 Local Officials/Agencies/Stakeholder/Public Meetings Questionnaire Results

Table 7. Estimated Costs for Priority Segments

Table 8. Summary of Potential Environmental Impacts

Table 9. Federal and State Threatened and Endangered Species Lists by Agency

Table 1. Traffic and Geometric Data
Adair County
KY 55, MP 10.059 to MP 18.909
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Functional Classification	Rural Principal Arterial	Appalachian Dev. Highway System	No
State System	State Primary	Average R/W	40 – 100
National Truck Network	Yes	Bike Route System	No
NHS	No	Coal Haul	No
Truck Weight Class	AA (MP 10.059 to MP 10.614) AAA (MP 10.614 to MP 18.909)	Defense Highway Network	Yes - 1585 (MP 10.06 to MP 11.18) 1590 (MP 11.18 to MP 18.909)
Type of Road	Undivided	Extended Weight System	No
Type of Terrain	Rolling	Forest Highway System	No
Number of Bridges	3	Scenic Byway System	Cumberland Cultural Heritage Highway (MP 10.614 to MP 18.909)
Pavement Type	High Flexible		

Begin MP	End MP	Length (Miles)	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT No Imp	2030 % Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp
10.059	10.159	0.100	10,700	9.3%	3.0%	N/A-bypass	-	2	12	2	-	35	E	N/A-bypass
10.159	10.316	0.157	10,700	9.3%	3.0%	N/A-bypass	-	2	14	2	-	35	E	N/A-bypass
10.316	10.470	0.154	22,400	6.7%	3.0%	N/A-bypass	-	2	14	2	-	35	E	N/A-bypass
10.470	10.614	0.144	25,700	5.8%	3.0%	N/A-bypass	-	2	14	2	-	35	E	N/A-bypass
10.614	10.720	0.106	25,400	5.9%	3.0%	N/A-bypass	-	2	12	2	-	35	E	N/A-bypass
10.720	11.170	0.450	15,300	9.8%	3.0%	N/A-bypass	-	2	12	3	-	35	F	N/A-bypass
11.170	11.190	0.000	28,600	5.2%	3.0%	N/A-bypass	-	2	12	2	-	25	F	N/A-bypass
11.190	11.310	0.120	15,400	9.7%	3.0%	N/A-bypass	-	2	12	2	-	35	F	N/A-bypass
11.310	11.519	0.209	16,200	9.3%	3.0%	N/A-bypass	-	2	12	2	-	35	F	N/A-bypass
11.519	11.780	0.261	14,100	10.6%	3.0%	N/A-bypass	-	2	12	10	45	45	E	N/A-bypass
11.780	12.849	1.069	12,000	8.3%	3.0%	26,700	13%	2	12	10	45	55	D	F
12.849	19.006	6.157	7,700	13.0%	3.0%	17,100	20%	2	12	10	45	55	D	E

Source: KYTC's *Highway Information System (HIS)* database; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003; Truck Percentage Data from Jordan, Jones & Goulding Inc.'s *Technical Memorandum – Traffic Forecast Report (March 31, 2004)*

Table 1. Traffic and Geometric Data (continued)
Taylor County
KY 55, MP 0 to MP 10.293
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Functional Classification	Rural Principal Arterial (MP 0 to MP 9.066) Urban Principal Arterial (MP 9.066 to MP 10.293)	Appalachian Dev. Highway System	No
State System	State Primary	Average R/W	100 - 125
National Truck Network	Yes	Bike Route System	Midland Kentucky Tour (MP 0.675 to MP 2 and MP 6.546 to MP 9.066) Central Heartlands Tour (MP 0.675 to MP 2 and MP 6.546 to MP 9.066)
NHS	No	Coal Haul	No
Truck Weight Class	AAA	Defense Highway Network	1590 (MP 0 to MP 10.293)
Type of Road	Undivided	Extended Weight System	No
Type of Terrain	Rolling	Forest Highway System	No
Number of Bridges	3	Scenic Byway System	Cumberland Cultural Heritage Highway
Pavement Type	High Flexible		

Begin MP	End MP	Length (Miles)	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT No Imp	2030 % Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp
0.000	0.675	0.675	7,300	13.7%	3.0%	16,200	21%	2	12	10	0	55	D	E
0.675	5.483	4.808	7,400	13.5%	3.0%	16,400	21%	2	12	10	0 - 37	55	D	E
5.483	6.546	1.063	8,200	12.2%	3.0%	18,200	19%	2	12	10	90	55	C	E
6.546	8.003	1.457	10,600	9.4%	3.0%	23,500	14%	2	12	10	90	55	D	F
8.003	9.066	1.063	10,900	9.2%	3.0%	24,200	14%	2	12	10	-	55	D	F
9.066	10.293	1.227	9,300	8.6%	3.0%	20,700	13%	2	12	10	-	55	D	E

Source: KYTC's *Highway Information System (HIS)* database; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003; Truck Percentage Data from Jordan, Jones & Goulding Inc.'s *Technical Memorandum – Traffic Forecast Report (March 31, 2004)*

Table 1. Traffic and Geometric Data (continued)
Taylor County
US 68, MP 4.87 to MP 13.531
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Functional Classification	Urban Principal Arterial (MP 4.87 to 7.738) Rural Principal Arterial (MP 7.738 to MP 13.531)	Appalachian Dev. Highway System	No
State System	State Primary	Average R/W	72 - 225
National Truck Network	Yes	Bike Route System	No
NHS	No	Coal Haul	No
Truck Weight Class	AAA	Defense Highway Network	Yes - 1590 (MP 4.871 to MP 13.531)
Type of Road	Divided (MP 4.87 to MP 5.441 and MP 7.404 to MP 7.501) Undivided (MP 5.441 to MP 7.404 and MP 7.501 to MP 13.531)	Extended Weight System	No
Type of Terrain	Rolling	Forest Highway System	No
Number of Bridges	1	Scenic Byway System	No
Pavement Type	High Flexible		

Begin MP	End MP	Length (Miles)	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT No Imp	2030 % Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp
4.870	5.510	0.640	17,400	4.6%	3.0%	38,700	7%	4	10	2	-	45	C	C
5.510	5.687	0.177	18,000	4.4%	3.0%	40,000	7%	4	10	2	-	35	C	D
5.687	5.807	0.120	24,200	3.3%	3.0%	53,800	5%	4	10	0	-	35	C	D
5.807	5.923	0.116	22,700	3.5%	3.0%	50,400	5%	4	10	0	-	35	C	D
5.923	6.469	0.545	20,500	3.9%	3.0%	45,500	6%	4	10	2	-	35	C	D
6.469	6.703	0.234	17,300	4.6%	3.0%	38,400	7%	4	10	2	-	35	C	D
6.703	7.091	0.388	18,500	4.3%	3.0%	41,100	7%	4	10	2	0	45	B	D
7.091	7.404	0.313	12,200	6.6%	3.0%	27,100	10%	4	10	2	0	45	A	C
7.404	8.624	1.220	9,400	8.0%	3.0%	20,900	12%	2	12	12	48	55	D	E
8.624	9.530	0.906	8,500	8.8%	3.0%	18,900	13%	2	12	12	48	55	D	E
9.530	11.879	2.349	8,200	9.1%	3.0%	18,200	14%	2	12	12	0	55	D	E
11.879	13.531	1.652	6,500	11.5%	3.0%	14,400	18%	3	12	12	100	55	D	E

Source: KYTC's *Highway Information System (HIS)* database; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003; Truck Percentage Data from Jordan, Jones & Goulding Inc.'s *Technical Memorandum – Traffic Forecast Report (March 31, 2004)*

Table 1. Traffic and Geometric Data (continued)
Marion County
US 68, MP 0 to MP 10.69
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Functional Classification	Rural Principal Arterial (MP 0 to MP9.13) Urban Principal Arterial (MP 9.13 to MP 10.69)	Appalachian Dev. Highway System	No
State System	State Primary	Average R/W	60 - 500
National Truck Network	Yes	Bike Route System	No
NHS	No	Coal Haul	No
Truck Weight Class	AAA	Defense Highway Network	Yes - 1590 (MP 0.00 to MP10.69)
Type of Road	Undivided (MP 0 to MP 9.816 and MP 9.924 to MP 10.69) Divided (MP 9.816 to MP 9.924)	Extended Weight System	No
Type of Terrain	Rolling	Forest Highway System	No
Number of Bridges	4	Scenic Byway System	No (Adjacent MP 10.69 to MP 23.819)
Pavement Type	High Flexible		

Begin MP	End MP	Length (Miles)	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT No Imp	2030 % Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp
0.000	4.503	4.503	6,500	11.5%	3.0%	14,400	18%	2	12	10	100	55	C	D
4.503	6.640	2.137	6,600	11.4%	3.0%	14,700	17%	2	12	10	100	55	C	E
6.640	8.619	1.979	8,400	8.9%	3.0%	18,700	14%	2	12	10	100	55	C	E
8.619	9.300	0.681	11,200	6.7%	3.0%	24,900	10%	2	12	10	100	55	D	F
9.300	9.864	0.564	11,900	8.4%	3.0%	N/A-bypass	-	2	12	2	80	45	E	N/A-bypass
9.864	9.924	0.600	17,400	5.7%	3.0%	N/A bypass	-	2	12	2	100	35	E	N/A-bypass
9.924	10.690	0.766	17,400	5.7%	3.0%	N/A bypass	-	4	10	0	100	35	E	N/A bypass

Source: KYTC's *Highway Information System (HIS)* database; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003; Truck Percentage Data from Jordan, Jones & Goulding Inc.'s *Technical Memorandum – Traffic Forecast Report (March 31, 2004)*

Table 1. Traffic and Geometric Data (continued)
Marion County
KY 55, MP 0 to MP 4.669 & KY 49, MP 17.621 to MP 17.774
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Functional Classification	Urban Principal Arterial (MP 0 to 2.025) Rural Principal Arterial (MP 2.025 to 4.669)	Appalachian Dev. Highway System	No
State System	State Primary	Average R/W	52 - 100
National Truck Network	Yes	Bike Route System	No
NHS	No	Coal Haul	No
Truck Weight Class	AAA	Defense Highway Network	Yes - 1590
Type of Road	Undivided (MP 0 to MP 4.669)	Extended Weight System	No
Type of Terrain	Rolling	Forest Highway System	No
Number of Bridges	4	Scenic Byway System	No
Pavement Type	High Flexible		

Note: The HIS data for KY 49 is the same as KY 55, except as noted. KY 49 is an Urban Principal Arterial and the average right-of-way width is 40'.

Begin MP	End MP	Length (Miles)	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT No Imp	2030 % Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp
0.000	0.389	0.389	13,100	7.6%	3.0%	N/A-bypass	-	4	12	0	-	35	B	N/A-bypass
0.389	0.567	0.178	13,400	7.5%	3.0%	N/A-bypass	-	4	10	0	-	35	B	N/A-bypass
0.567	0.570	0.003	13,300	7.5%	3.0%	N/A-bypass	-	4	12	0	-	35	B	N/A-bypass
0.570	0.784	0.214	12,500	8.0%	3.0%	N/A-bypass	-	2	17	0	-	35	C	N/A-bypass
0.784	1.358	0.574	12,000	8.3%	3.0%	N/A-bypass	-	4	13	0	-	45	A	N/A-bypass
1.358	2.023	0.665	9,000	10.3%	3.0%	N/A-bypass	-	2	12	0	-	55	D	N/A-bypass
2.023	4.669	2.646	8,400	8.9%	3.0%	18,700	14%	2	12	10	0	55	D	E

Begin MP	End MP	Length (Miles)	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT No Imp	2030 % Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp
17.621	17.774	0.153	22,400	6.7%	3.0%	N/A-bypass	-	2	10	0	-	35	E	N/A-bypass

Source: KYTC's *Highway Information System (HIS)* database; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003; Truck Percentage Data from Jordan, Jones & Goulding Inc.'s *Technical Memorandum – Traffic Forecast Report (March 31, 2004)*. Note: The KY 49 2003 ADT data was calculated using KY 55 2003 ADT data.

Table 1. Traffic and Geometric Data (continued)
Washington County
KY 55, MP 0 to MP 4.551
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Functional Classification	Rural Principal Arterial	Appalachian Dev. Highway System	No
State System	State Primary	Average R/W	100
National Truck Network	Yes	Bike Route System	No
NHS	No	Coal Haul	No
Truck Weight Class	AAA	Defense Highway Network	Yes - 1590 (MP 0 to MP 4.551)
Type of Road	Undivided	Extended Weight System	No
Type of Terrain	Rolling	Forest Highway System	No
Number of Bridges	3	Scenic Byway System	No
Pavement Type	High Flexible		

Begin MP	End MP	Length (Miles)	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT No Imp	2030 % Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp
0.000	2.803	2.803	8,500	8.8%	3.0%	18,900	13%	2	12	10	0	55	D	E
2.803	4.551	1.748	7,600	9.2%	3.0%	16,900	14%	2	12	10	0	55	D	D

Source: KYTC's *Highway Information System (HIS)* database; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003; Truck Percentage Data from Jordan, Jones & Goulding Inc.'s *Technical Memorandum – Traffic Forecast Report (March 31, 2004)*

Table 1. Traffic and Geometric Data (continued)
Washington County
KY 555, MP 0 to MP 14.738
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Functional Classification	Rural Principal Arterial	Appalachian Dev. Highway System	No
State System	State Primary	Average R/W	100 - 220
National Truck Network	Yes	Bike Route System	No
NHS	No	Coal Haul	No
Truck Weight Class	AAA	Defense Highway Network	Yes - 1595 (MP 0 to MP 14.738)
Type of Road	Undivided	Extended Weight System	No
Type of Terrain	Rolling	Forest Highway System	No
Number of Bridges	5	Scenic Byway System	No
Pavement Type	High Flexible		

Begin MP	End MP	Length (Miles)	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT No Imp	2030 % Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp
0.000	0.841	0.841	6,700	10.4%	1.4%	9,800*	16%	2	12	12	-	55	C	E
0.841	2.100	1.259	4,800	13.5%	2.6%	9,600*	21%	2	12	12	100	55	B	D
2.100	6.215	4.115	4,700	13.8%	3.0%	10,400	21%	2	12	12	32	55	C	D
6.215	10.380	4.165	3,200	20.3%	3.0%	7,100	31%	2	12	10	32	55	C	D
10.380	14.738	4.358	3,700	17.6%	3.0%	8,200	27%	2	12	10	60	55	C	D

Source: KYTC's *Highway Information System (HIS)* database; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003; Truck Percentage Data from Jordan, Jones & Goulding Inc.'s *Technical Memorandum – Traffic Forecast Report (March 31, 2004)*

* Note: Growth rate on these segments reflects the impact of the US 150 Bypass in Springfield

Table 1. Traffic and Geometric Data (continued)
Adair & Marion Counties
Bypass Segments

Adair County

Begin MP	End MP	Length (Miles)	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT No Imp	2030 % Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp
KY 55	KY 767	1.600	4,400	8.0%	4.0%	12,700	12%	2	12	10	60	55	N/A	E
KY 767	School	0.500	4,600	8.0%	4.0%	13,300	12%	2	12	10	60	55	N/A	E
School	KY 61	0.700	4,900	7.4%	4.0%	14,100	11%	2	12	10	60	55	N/A	E
KY 61	KY 80	1.200	4,000	9.4%	4.0%	11,500	14%	2	12	10	60	55	N/A	E
KY 80	KY 55	1.300	3,700	9.4%	4.0%	10,700	14%	2	12	10	60	55	N/A	D

Marion County

Begin MP	End MP	Length (Miles)	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT No Imp	2030 % Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp
KY 55	KY 429	0.800	3,800	14.0%	2.3%	7,000	21%	2	12	10	60	55	N/A	D
KY 429	KY 49	1.200	3,400	14.0%	2.3%	6,300	21%	2	12	10	60	55	N/A	D
KY 49	US 68	1.000	4,400	14.0%	2.3%	8,000	21%	2	12	10	60	55	N/A	D

Source: KYTC's *Highway Information System (HIS)* database; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003; Truck Percentage Data from Jordan, Jones & Goulding Inc.'s *Technical Memorandum – Traffic Forecast Report (March 31, 2004)*

Table 1a. Traffic and Geometric Data
Adair, Green, Taylor, Marion, & Washington Counties
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Route	Begin MP	End MP	Length	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT Option 1	2030 % Trucks	Number of Lanes	Lane Width (feet)	Shoulder Width (feet)	Passing % Sight Distance	Speed Limit (mph)	2030 LOS Option 1
HP	LBNCP	KY 80	0.400	-	-	-	16,300	18%	4	12	10	N/A	65	B
HP	KY 80	KY 61	1.600	-	-	-	12,200	18%	4	12	10	N/A	65	B
HP	KY 61	US 68	15.800	-	-	-	19,300	18%	4	12	10	N/A	65	C
HP	US 68	KY 210	3.200	-	-	-	13,900	18%	4	12	10	N/A	65	B
HP	KY 210	KY 84	14.800	-	-	-	22,800	18%	4	12	10	N/A	65	C
HP	KY 84	US 150	10.600	-	-	-	22,300	18%	4	12	10	N/A	65	C
HP	US 150	MLCBGP	12.600	-	-	-	9,400	18%	4	12	10	N/A	65	A

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Adair County
KY 55, MP 10.059 to MP 19.006
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
10.059	10.159	0.1	-	10,700	17,900	14,500	17,900	17,900	17,900	17,900	8.8%	13%	3%	13%	13%	2
10.159	10.316	0.157	-	10,700	17,900	14,500	17,900	17,900	17,900	17,900	8.8%	13%	3%	13%	13%	2
10.316	10.47	0.154	-	22,400	28,000	24,600	28,000	28,000	28,000	28,000	6.7%	10%	2%	10%	10%	2
10.47	10.614	0.144	-	25,700	26,400	23,000	26,400	26,400	26,400	26,400	9.9%	15%	3%	15%	15%	2
10.614	10.72	0.106	-	25,400	28,000	24,600	28,000	28,000	28,000	28,000	9.4%	14%	3%	14%	14%	2
10.72	11.17	0.45	-	15,300	26,500	23,100	26,500	26,500	26,500	26,500	9.8%	15%	3%	15%	15%	2
11.17	11.19	0.02	-	28,600	28,000	24,600	28,000	28,000	28,000	28,000	5.7%	9%	2%	9%	9%	2
11.19	11.31	0.12	-	15,400	23,800	20,400	23,800	23,800	23,800	23,800	9.7%	15%	3%	15%	15%	2
11.31	11.519	0.209	-	16,200	25,600	22,200	25,600	25,600	25,600	25,600	9.3%	14%	3%	14%	14%	2
11.519	11.78	0.261	-	14,100	22,000	18,600	22,000	22,000	22,000	22,000	10.2%	15%	3%	15%	15%	2
11.78	12.849	1.069	3.0%	12,000	26,700	21,500	36,800	34,600	32,600	30,400	8.3%	13%	3%	13%	13%	2
12.849	19.006	6.157	3.0%	7,700	17,100	11,900	24,400	22,200	21,700	19,500	13.0%	20%	4%	20%	20%	2

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
10.059	10.159	12	2	-	35	E	F	E	F	F	F	F
10.159	10.316	14	2	-	35	E	F	E	F	F	F	F
10.316	10.47	14	2	-	35	E	F	E	F	F	F	F
10.47	10.614	14	2	-	35	E	F	E	F	F	F	F
10.614	10.72	12	2	-	35	E	F	E	F	F	F	F
10.72	11.17	12	2	-	35	F	F	F	F	F	F	F
11.17	11.19	12	2	-	35	F	F	F	F	F	F	F
11.19	11.31	12	2	-	35	F	F	F	F	F	F	F
11.31	11.519	12	2	-	35	F	F	F	F	F	F	F
11.519	11.78	12	10	45	55	E	E	E	E	E	E	E
11.78	12.849	12	10	45	55	D	F	E	D	C	F	F
12.849	19.006	12	10	45	55	D	E	D	C	B	E	E

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Adair County
Columbia Bypass, MP KY 55 to MP KY 55
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate Option 1	Annual Growth Rate Option 2	Annual Growth Rate Option 3	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003 % Trucks Option 1	2003 % Trucks Option 2	2003 % Trucks Option 3
KY 55	KY 767	1.600	4.0%	4.0%	4.0%	4,400	12,700	10,900	14,900	12,700	14,900	12,700	8.0%	8.0%	8.0%
KY 767	School	0.500	4.0%	4.0%	4.0%	4,600	13,300	11,500	15,500	13,300	15,500	13,300	8.0%	8.0%	8.0%
School	KY 61	0.700	4.0%	4.0%	4.0%	4,900	14,100	12,300	16,300	14,100	16,300	14,100	7.4%	7.4%	7.4%
KY 61	KY 80	1.200	4.0%	4.0%	4.0%	4,000	11,500	10,100	13,700	11,500	13,700	11,500	9.4%	9.4%	9.4%
KY 80	KY 55	1.300	4.0%	4.0%	4.0%	3,700	10,700	9,300	12,900	10,700	12,900	10,700	9.4%	9.4%	9.4%

Begin MP	End MP	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
KY 55	KY 767	2%	12%	12%	-	E	D	B	A	E	E
KY 767	School	2%	12%	12%	-	E	D	B	A	E	E
School	KY 61	2%	11%	11%	-	E	E	B	A	E	E
KY 61	KY 80	3%	14%	14%	-	D	D	A	A	E	D
KY 80	KY 55	3%	14%	14%	-	D	D	A	A	E	D

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Taylor County
KY 55, MP 0 to MP 10.293
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3
0	0.675	0.675	3.0%	7,300	16,200	11,000	23,200	21,000	20,700	18,500	13.7%	21%	4%	21%	21%
0.675	5.483	4.808	3.0%	7,400	16,400	11,200	22,400	21,300	19,800	18,700	13.5%	21%	4%	21%	21%
5.483	6.546	1.063	3.0%	8,200	18,200	13,000	24,700	23,600	21,900	20,800	12.2%	19%	4%	19%	19%
6.546	8.003	1.457	3.0%	10,600	23,500	18,300	31,700	30,600	27,900	26,800	9.4%	14%	3%	14%	14%
8.003	8.500	0.497	3.0%	10,900	24,200	19,000	32,500	31,400	28,700	27,600	9.2%	14%	3%	14%	14%
8.500	9.066	0.566	3.0%	10,900	24,200	19,000	23,400	23,400	23,400	23,400	9.2%	14%	3%	14%	14%
9.066	10.293	1.227	3.0%	9,300	20,700	15,500	19,900	19,900	19,900	19,900	8.6%	13%	3%	13%	13%

Begin MP	End MP	Length (Miles)	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
0	0.675	0.675	2	12	2	-	35	E	E	D	C	B	E	E
0.675	5.483	4.808	2	14	2	-	35	E	E	D	B	B	E	E
5.483	6.546	1.063	2	14	2	-	35	E	E	D	C	C	E	E
6.546	8.003	1.457	2	14	2	-	35	E	E	E	D	D	F	F
8.003	8.500	0.497	2	12	2	-	35	E	F	E	D	D	F	F
8.500	9.066	0.566	2	12	2	-	35	E	F	E	E	E	E	E
9.066	10.293	1.227	2	12	2	-	35	F	E	E	E	E	E	E

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Taylor County
Campbellsville Bypass, MP KY 55 to MP US 68
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate Option 1	Annual Growth Rate Option 2	Annual Growth Rate Option 3	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003 % Trucks Option 1	2003 % Trucks Option 2
KY 55	KY 70	3.400	-	4.0%	3.5%	-	-	-	11,800	10,700	10,500	9,400	-	-
KY 70	US 68	3.500	-	4.0%	3.5%	-	-	-	9,800	9,800	8,600	8,600	-	-

Begin MP	End MP	2003 % Trucks Option 3	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
KY 55	KY 70	-	-	11%	11%	-	-	-	A	A	D	D
KY 70	US 68	-	-	14%	14%	-	-	-	A	A	D	D

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Taylor County
US 68, MP 4.87 to MP 13.531
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
4.870	5.510	0.64	3.0%	17,400	38,700	31,500	45,300	45,300	45,300	45,300	4.6%	7%	1%	7%	7%	4
5.510	5.687	0.177	3.0%	16,300	36,200	29,000	45,300	45,300	45,300	45,300	4.9%	7%	1%	7%	7%	4
5.687	5.807	0.12	3.0%	24,200	53,800	46,600	51,700	51,700	51,700	51,700	3.3%	5%	1%	5%	5%	4
5.807	5.923	0.116	3.0%	22,700	50,400	43,200	45,700	45,700	45,700	45,700	3.5%	5%	1%	5%	5%	4
5.923	6.469	0.545	3.0%	20,500	45,500	38,300	45,700	45,700	45,700	45,700	3.9%	6%	1%	6%	6%	4
6.469	6.703	0.234	3.0%	17,300	38,400	31,200	45,700	45,700	45,700	45,700	4.6%	7%	1%	7%	7%	4
6.703	7.091	0.388	3.0%	18,500	41,100	33,900	39,200	39,200	39,200	39,200	4.3%	7%	1%	7%	7%	4
7.091	7.404	0.313	3.0%	12,200	27,100	19,900	39,200	39,200	39,200	39,200	6.6%	10%	2%	10%	10%	4
7.404	8.624	1.22	3.0%	9,400	20,900	13,700	13,300	13,300	13,300	13,300	8.0%	12%	2%	12%	12%	2
8.624	9.530	0.906	3.0%	8,500	18,900	11,700	13,300	13,300	13,300	13,300	8.8%	13%	3%	13%	13%	2
9.530	11.879	2.349	3.0%	8,200	18,200	11,000	23,600	23,600	20,800	20,800	9.1%	14%	3%	14%	14%	2
11.879	13.531	1.652	3.0%	6,500	14,400	7,200	18,700	18,700	16,500	16,500	11.5%	18%	4%	18%	18%	2

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Taylor County
US 68, MP 4.87 to MP 13.531
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
4.870	5.510	10	2	-	45	C	C	C	D	D	D	D
5.510	5.687	10	2	-	35	C	D	C	D	D	D	D
5.687	5.807	10	2	-	35	C	D	C	D	D	D	D
5.807	5.923	10	2	-	35	C	D	C	D	D	D	D
5.923	6.469	10	2	-	35	C	D	C	D	D	D	D
6.469	6.703	10	2	-	35	C	D	C	D	D	D	D
6.703	7.091	10	2	0	45	B	D	C	D	D	D	D
7.091	7.404	10	2	0	45	A	C	B	D	D	D	D
7.404	8.624	12	12	48	55	D	E	E	E	E	E	E
8.624	9.530	12	12	48	55	D	E	D	E	E	E	E
9.530	11.879	12	12	0	55	D	E	D	B	B	E	E
11.879	13.531	12	12	0	55	D	E	D	B	B	E	E

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Marion County
US 68, MP 4.87 to MP 13.531
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
0	4.503	4.503	3.0%	6,500	14,400	7,200	18,700	18,700	16,500	16,500	11.5%	18%	4%	18%	18%	2
4.503	6.640	2.137	3.0%	6,600	14,700	7,500	19,000	19,000	16,700	16,700	11.4%	17%	3%	17%	17%	2
6.640	8.629	1.979	3.0%	8,400	18,700	11,500	24,200	24,200	21,300	21,300	8.9%	14%	3%	14%	14%	2
8.629	9.300	0.681	3.0%	11,200	24,900	17,700	32,300	32,300	28,400	28,400	6.7%	10%	2%	10%	10%	2
9.300	9.864	0.564	-	11,900	17,500	15,700	17,500	17,500	17,500	17,500	8.8%	13%	3%	13%	13%	2
9.864	10.690	0.826	-	17,400	23,000	21,200	23,000	23,000	23,000	23,000	5.7%	9%	2%	9%	9%	2

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
0	4.503	12	10	100	55	C	D	C	B	B	E	E
4.503	6.640	12	10	100	55	C	E	C	B	B	E	E
6.640	8.629	12	10	100	55	C	E	D	B	B	E	E
8.629	9.300	12	10	100	55	D	F	E	D	D	F	F
9.300	9.864	12	2	100	45	E	E	D	E	E	E	E
9.864	10.690	12	2	100	45	E	E	D	E	E	E	E

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Marion County
Lebanon Bypass, MP KY 55 to MP US 68
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate Option 1	Annual Growth Rate Option 2	Annual Growth Rate Option 3	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003 % Trucks No Imp.	2003 % Trucks Option 1	2003 % Trucks Option 2	2003 % Trucks Option 3
KY 55	KY 429	0.80	3.0%	4.0%	3.5%	3,800	8,400	2,200	11,500	11,000	10,100	9,600	14%	14%	14%	14%
KY 429	KY 49	1.20	3.0%	4.0%	3.5%	3,400	7,600	1,400	10,300	9,800	9,100	8,600	14%	14%	14%	14%
KY 49	US 68	1.00	3.0%	4.0%	3.5%	4,400	9,800	4,400	12,700	12,700	11,100	11,100	14%	14%	14%	14%

Begin MP	End MP	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
KY 55	KY 429	21%	4%	21%	21%	-	D	B	A	A	D	D
KY 429	KY 49	21%	4%	21%	21%	-	D	A	A	A	D	D
KY 49	US 68	21%	4%	21%	21%	-	E	C	A	A	D	D

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Marion County
KY 55, MP 0 to MP 4.669
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
0	0.389	0.389	-	13,100	19,000	18,700	19,000	19,000	19,000	19,000	7.6%	12%	2%	12%	12%	4
0.389	0.567	0.178	-	13,400	19,000	18,700	19,000	19,000	19,000	19,000	7.5%	11%	2%	11%	11%	4
0.567	0.57	0.003	-	13,300	19,000	18,700	19,000	19,000	19,000	19,000	7.5%	11%	2%	11%	11%	4
0.57	0.784	0.214	-	12,500	16,000	15,700	16,000	16,000	16,000	16,000	8.0%	12%	2%	12%	12%	2
0.784	1.358	0.574	-	12,000	13,600	13,300	13,600	13,600	13,600	13,600	8.3%	13%	3%	13%	13%	4
1.358	2.023	0.665	-	9,700	11,300	11,000	11,300	11,300	11,300	11,300	10.3%	16%	3%	16%	16%	2
2.023	4.669	2.646	3.0%	8,500	18,900	12,400	25,000	24,500	22,000	21,500	8.8%	13%	3%	13%	13%	2

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
0	0.389	12	0	-	35	B	C	C	C	C	C	C
0.389	0.567	10	0	-	35	B	C	C	C	C	C	C
0.567	0.57	12	0	-	35	B	C	C	C	C	C	C
0.57	0.784	17	0	-	35	C	C	C	C	C	C	C
0.784	1.358	13	0	-	55	A	A	A	A	A	A	A
1.358	2.023	12	0	-	55	D	D	D	D	D	D	D
2.023	4.669	12	10	0	55	D	E	E	C	C	E	E

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Washington County
KY 55, MP 0 to MP 4.551
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
0	2.803	2.803	3.0%	8,500	18,900	12,400	25,000	24,500	22,000	21,500	8.80%	13%	3%	13%	13%	2
2.803	4.55	1.748	3.0%	7,600	16,900	10,400	22,400	21,900	19,700	19,200	9.20%	14%	3%	14%	14%	2

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
0	2.803	12	10	0	55	D	E	E	C	C	E	E
2.803	4.55	12	10	0	55	D	E	D	C	C	E	E

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 1a. Traffic and Geometric Data (continued)
Washington County
KY 555, MP 0 to MP 14.738
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
0	0.841	0.841	1.4%	6,700	9,800	6,800	19,400	19,300	17,100	17,000	10.4%	16%	3%	16%	16%	2
0.841	2.1	1.259	2.6%	4,800	9,600	6,600	13,900	13,800	12,300	12,200	13.5%	21%	4%	21%	21%	2
2.1	6.215	4.115	3.0%	4,700	10,400	7,400	13,700	13,600	12,000	11,900	13.8%	21%	4%	21%	21%	2
6.215	10.38	4.165	3.0%	3,200	7,100	4,100	9,300	9,200	8,200	8,100	20.3%	31%	6%	31%	31%	2
10.38	14.738	4.358	3.0%	3,700	8,200	5,200	10,800	10,700	9,500	9,400	17.6%	27%	5%	27%	27%	2

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
0	0.841	12	12	-	55	C	E	C	B	B	E	E
0.841	2.1	12	12	100	55	B	D	B	B	B	D	D
2.1	6.215	12	12	32	55	C	D	D	A	A	D	D
6.215	10.38	12	10	Varies	55	C	D	C	A	A	D	D
10.38	14.738	12	10	60	55	C	D	C	A	A	D	D

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding,

Table 2. Bridge Data
Adair & Taylor Counties
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Adair County

Route	Bridge MP	Bridge No.	Bridge Length	Bridge Width	Horizontal Clearance	Sufficiency Rating	Structural [1] Function	Feature Intersected
KY 55	10.059	B00053	201	51.3	50	97.1	-	Louie B. Nunn Cumberland Parkway
KY 55	11.657	B00052	172	36	26	66.8	F	Russell Creek
KY 55	12.89	B00071	24	Culvert	24	94.9	-	Butlers Branch

Taylor County

Route	Bridge MP	Bridge No.	Bridge Length	Bridge Width	Horizontal Clearance	Sufficiency Rating	Structural [1] Function	Feature Intersected
KY 55	2.615	B00015	436	35	30.4	82.7	-	Green River
KY 55	2.925	B00014	21	Culvert	24	90.7	-	Pinch Creek
KY 55	10.146	B00044	202	48	44	100	-	West Main Street

Taylor County

Route	Bridge MP	Bridge No.	Bridge Length	Bridge Width	Horizontal Clearance	Sufficiency Rating	Structural [1] Function	Feature Intersected
US 68	5.554	B00042	31	Culvert	52	74.4	-	Buckhorn Creek

[1] S – indicates Structurally Deficient; F – indicates Functionally Obsolete
Source: KYTC's *Highway Information System (HIS)* database

Table 2. Bridge Data (continued)
Marion & Washington Counties
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Marion County

Route	Bridge MP	Bridge No.	Bridge Length	Bridge Width	Horizontal Clearance	Sufficiency Rating	Structural [1] Function	Feature Intersected
US 68	1.706	B00024	38	30	24	90.3	-	State Creek
US 68	5.239	B00072	360	44	44	97.3	-	Rolling Fork
US 68	5.953	B00073	24	Culvert	99.5	93.9	-	Buckhorn Creek
US 68	10.266	B00022	39	Culvert	48	63.1	-	Hardin's Creek

Marion County

Route	Bridge MP	Bridge No.	Bridge Length	Bridge Width	Horizontal Clearance	Sufficiency Rating	Structural [1] Function	Feature Intersected
KY 55	2.781	B00069	106	47.2	44	96.3	-	Cartwright Creek

Washington County

Route	Bridge MP	Bridge No.	Bridge Length	Bridge Width	Horizontal Clearance	Sufficiency Rating	Structural [1] Function	Feature Intersected
KY 55	1.549	B00048	26	Culvert	44	98.1	-	Servant Run
KY 55	4.24	B00043	37	46.7	28.5	83.4	-	Road Run Branch
KY 55	4.53	B00024	48	20	19	70.6	F	Road Run Creek

[1] S – indicates Structurally Deficient; F – indicates Functionally Obsolete
Source: KYTC's *Highway Information System (HIS)* database

Table 2. Bridge Data (continued)
Washington County
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Washington County

Route	Bridge MP	Bridge No.	Bridge Length	Bridge Width	Horizontal Clearance	Sufficiency Rating	Structural [1] Function	Feature Intersected
KY 555	0.02	B00047	28	Culvert	24	95.4	-	Haydon Branch
KY 555	3.457	B00046	284	47.9	44	90.2	-	Beech Fork River
KY 555	7.038	B00006	34	44	30	80	-	Mays Creek
KY 555	8.284	B00005	286	33.2	30.2	78.5	-	Long Lick Creek
KY 555	14.23	B00010	195	33	52.5	77.7	-	Bluegrass Parkway

[1] S – indicates Structurally Deficient; F – indicates Functionally Obsolete
Source: KYTC's *Highway Information System (HIS)* database

Table 3. Crash Data Analysis
Adair County
Segment Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Adair County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	10.059	10.159	0.100	10,700	2	Undivided	Rural	252	540.473	0	1	3	4	0.02	0.00	42.67	128.02	170.70	0.32
KY 55	10.159	10.316	0.157	10,700	2	Undivided	Rural	252	478.788	0	1	10	11	0.04	0.00	27.18	271.81	299.00	0.62
KY 55	10.316	10.44	0.124	22,300	2	Undivided	Rural	252	426.430	0	3	12	15	0.06	0.00	49.54	198.16	247.70	0.58
KY 55	10.44	10.614	0.174	25,700	2	Undivided	Rural	252	387.778	0	9	42	51	0.10	0.00	91.90	428.87	520.77	**1.34**
KY 55	10.614	10.768	0.154	25,400	2	Undivided	Rural	252	397.553	0	1	21	22	0.09	0.00	11.67	245.14	256.82	0.65
KY 55	10.768	11.151	0.383	15,300	2	Undivided	Rural	252	370.047	1	3	26	30	0.13	7.79	23.38	202.60	233.77	0.63
KY 55	11.151	11.188	0.037	28,600	2	Undivided	Rural	252	542.197	0	0	5	5	0.02	0.00	0.00	215.75	215.75	0.40
KY 55	11.188	11.313	0.125	15,400	2	Undivided	Rural	252	463.023	0	3	8	11	0.04	0.00	71.16	189.76	260.93	0.56
KY 55	11.313	11.519	0.206	16,200	2	Undivided	Rural	252	410.104	0	6	9	15	0.07	0.00	82.10	123.14	205.24	0.50
KY 55	11.519	11.757	0.238	14,100	2	Undivided	Rural	252	409.647	0	3	10	13	0.07	0.00	40.82	136.07	176.89	0.43
KY 55	11.757	12.9	1.143	12,000	2	Undivided	Rural	252	328.277	3	13	18	34	0.30	9.99	43.28	59.92	113.19	0.34
KY 55	12.9	18.706	5.806	7,710	2	Undivided	Rural	252	293.811	0	9	36	45	0.98	0.00	9.18	36.72	45.90	0.16

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Taylor County
Segment Analysis

Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0	0.665	0.665	7,330	2	Undivided	Rural	252	381.843	1	5	19	25	0.11	9.37	46.84	177.99	234.19	0.61
KY 55	0.665	5.4	4.735	7,290	2	Undivided	Rural	252	299.694	0	13	37	50	0.76	0.00	17.20	48.95	66.14	0.22
KY 55	5.4	6.546	1.146	8,190	2	Undivided	Rural	252	344.629	1	8	22	31	0.21	4.87	38.92	107.03	150.82	0.44
KY 55	6.546	8.003	1.457	10,600	2	Undivided	Rural	252	323.792	0	9	12	21	0.34	0.00	26.61	35.48	62.09	0.19
KY 55	8.003	9.066	1.063	10,900	2	Undivided	Urban	308	399.717	0	4	6	10	0.25	0.00	15.76	23.65	39.41	0.10
KY 55	9.066	10.293	1.227	9,290	2	Undivided	Urban	308	400.486	0	7	25	32	0.25	0.00	28.04	100.15	128.19	0.32

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	4.87	5.553	0.683	17,400	4	Divided	Urban	307	397.394	0	8	28	36	0.16	0.00	50.00	175.00	225.00	0.57
US 68	5.553	5.687	0.134	18,000	4	Divided	Urban	307	512.849	0	7	33	40	0.05	0.00	140.00	660.00	800.00	**1.56**
US 68	5.687	5.807	0.120	24,200	4	Undivided	Urban	500	736.270	0	6	31	37	0.02	0.00	300.00	1550.00	1850.00	**2.51**
US 68	5.807	5.923	0.116	22,700	4	Undivided	Urban	500	748.535	0	8	27	35	0.04	0.00	200.00	675.00	875.00	**1.17**
US 68	5.923	6.442	0.519	20,500	4	Undivided	Urban	500	621.475	0	15	48	63	0.16	0.00	93.75	300.00	393.75	0.63
US 68	6.442	6.703	0.261	17,300	4	Undivided	Urban	500	688.231	0	3	11	14	0.06	0.00	50.00	183.33	233.33	0.34
US 68	6.703	7.091	0.388	18,500	4	Undivided	Urban	500	648.461	0	3	14	17	0.10	0.00	30.00	140.00	170.00	0.26
US 68	7.091	7.404	0.313	12,200	4	Undivided	Urban	500	705.164	0	1	7	8	0.06	0.00	16.67	116.67	133.33	0.19
US 68	7.404	8.6	1.196	9,410	2	Undivided	Urban	308	401.091	0	3	10	13	0.17	0.00	17.65	58.82	76.47	0.19
US 68	8.6	9.404	0.804	8,520	2	Undivided	Rural	252	360.912	0	2	5	7	0.11	0.00	18.18	45.45	63.64	0.18
US 68	9.404	11.879	2.475	8,170	2	Undivided	Rural	252	314.580	0	3	8	11	0.28	0.00	10.71	28.57	39.29	0.12
US 68	11.879	13.33	1.451	6,450	2	Undivided	Rural	252	344.765	2	7	9	18	0.16	12.50	43.75	56.25	112.50	0.33

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Marion County
Segment Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Marion County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	0	3.9	3.900	6,450	2	Undivided	Rural	252	308.003	0	33	76	109	0.42	0.00	78.57	180.95	259.52	0.84
US 68	3.9	6.54	2.640	6,580	2	Undivided	Rural	252	319.614	1	7	12	20	0.21	4.76	33.33	57.14	95.24	0.30
US 68	6.54	8.619	2.079	8,380	2	Undivided	Rural	252	319.513	1	9	10	20	0.24	4.17	37.50	41.67	83.33	0.26
US 68	8.619	9.319	0.700	11,200	2	Undivided	Rural	252	353.601	1	4	8	13	0.11	9.09	36.36	72.73	118.18	0.33
US 68	9.319	9.864	0.545	11,900	2	Undivided	Rural	252	364.026	0	4	25	29	0.10	0.00	40.00	250.00	290.00	0.80
US 68	9.864	10.69	0.826	17,400	2	Divided	Urban	308	390.170	0	20	76	96	0.21	0.00	95.24	361.90	457.14	0.78

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0	0.389	0.389	13,100	4	Undivided	Urban	500	676.905	0	29	51	80	0.07	0.00	414.29	728.57	1142.86	**1.06**
KY 55	0.389	0.57	0.181	12,000	4	Undivided	Urban	500	774.618	0	6	22	28	0.03	0.00	200.00	733.33	933.33	**1.20**
KY 55	0.57	0.784	0.214	12,500	2	Undivided	Urban	308	503.318	0	2	8	10	0.04	0.00	50.00	200.00	250.00	0.50
KY 55	0.784	1.358	0.574	12,000	4	Undivided	Urban	500	651.622	0	1	14	15	0.10	0.00	10.00	140.00	150.00	0.15
KY 55	1.358	2.023	0.665	8,960	2	Undivided	Rural	252	369.035	0	2	2	4	0.09	0.00	22.22	22.22	44.44	0.12
KY 55	2.023	4.569	2.546	8,370	2	Undivided	Rural	252	312.931	0	3	10	13	0.32	0.00	9.38	31.25	40.63	0.13

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 49	17.834	17.93	0.096	22,400	4	Undivided	Urban	500	516.143	0	0	0	5	0.02	0.00	0.00	0.00	250.00	0.48

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; all KY 49 traffic data from 2000-2003

Table 3. Crash Data Analysis (continued)
Washington County
Segment Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

Washington County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0	2.803	2.803	8,500	2	Undivided	Rural	252	309.570	2	15	23	40	0.35	5.71	42.86	65.71	114.29	0.25
KY 55	2.803	4.551	1.748	7,630	2	Undivided	Rural	252	329.376	0	3	21	24	0.19	0.00	15.79	110.53	126.32	0.38

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 555	0	0.841	0.841	6,700	2	Undivided	Rural	252	372.461	0	16	24	40	0.08	0.00	200.00	300.00	500.00	**1.34**
KY 555	0.841	2.075	1.234	4,830	2	Undivided	Rural	252	369.017	0	1	0	1	0.09	0.00	11.11	0.00	11.11	0.03
KY 555	2.075	6.215	4.140	4,690	2	Undivided	Rural	252	315.886	0	2	7	9	0.28	0.00	7.14	25.00	32.14	0.10
KY 555	6.215	10.7	4.485	3,230	2	Undivided	Rural	252	326.177	0	3	4	7	0.2	0.00	15.00	20.00	35.00	0.11
KY 555	10.7	14.523	3.823	3,710	2	Undivided	Rural	252	326.982	0	11	8	19	0.24	0.00	45.83	33.33	79.17	0.24

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis
Adair County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Adair County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	10.059	10.159	0.100	10,700	2	Undivided	Rural	0.25	0.537	0	1	3	4	23.43	0.00	0.04	0.13	0.17	0.32
KY 55	10.259	10.359	0.100	10,700	2	Undivided	Rural	0.25	0.537	0	2	12	14	23.43	0.00	0.09	0.51	0.60	**1.11**
KY 55	10.370	10.470	0.100	22,300	2	Undivided	Rural	0.25	0.445	0	2	12	14	48.84	0.00	0.04	0.25	0.29	0.64
KY 55	10.480	10.580	0.100	25,700	2	Undivided	Rural	0.25	0.431	0	8	18	26	56.28	0.00	0.14	0.32	0.46	**1.07**
KY 55	10.585	10.685	0.100	25,700	2	Undivided	Rural	0.25	0.431	0	1	25	26	56.28	0.00	0.02	0.44	0.46	**1.07**
KY 55	10.705	10.805	0.100	15,300	2	Undivided	Rural	0.25	0.487	0	1	24	25	33.51	0.00	0.03	0.72	0.75	**1.53**
KY 55	10.850	10.950	0.100	15,300	2	Undivided	Rural	0.25	0.487	0	2	1	3	33.51	0.00	0.06	0.03	0.09	0.18
KY 55	10.957	11.057	0.100	15,300	2	Undivided	Rural	0.25	0.487	1	0	8	9	33.51	0.03	0.00	0.24	0.27	0.55
KY 55	11.079	11.179	0.100	15,300	2	Undivided	Rural	0.25	0.487	0	1	10	11	33.51	0.00	0.03	0.30	0.33	0.67
KY 55	11.180	11.280	0.100	28,600	2	Undivided	Rural	0.25	0.421	0	2	11	13	62.63	0.00	0.03	0.18	0.21	0.49
KY 55	11.282	11.382	0.100	15,400	2	Undivided	Rural	0.25	0.487	0	1	3	4	33.73	0.00	0.03	0.09	0.12	0.24
KY 55	11.416	11.516	0.100	16,200	2	Undivided	Rural	0.25	0.480	0	1	3	4	35.48	0.00	0.03	0.08	0.11	0.23
KY 55	11.519	11.619	0.100	14,100	2	Undivided	Rural	0.25	0.498	0	6	8	14	30.88	0.00	0.19	0.26	0.45	0.91
KY 55	11.651	11.751	0.100	14,100	2	Undivided	Rural	0.25	0.498	0	1	4	5	30.88	0.00	0.03	0.13	0.16	0.33
KY 55	11.757	11.857	0.100	14,100	2	Undivided	Rural	0.25	0.498	0	2	7	9	30.88	0.00	0.06	0.23	0.29	0.59
KY 55	11.900	12.000	0.100	12,000	2	Undivided	Rural	0.25	0.520	0	2	1	3	26.28	0.00	0.08	0.04	0.11	0.22
KY 55	12.057	12.157	0.100	12,000	2	Undivided	Rural	0.25	0.520	1	2	1	4	26.28	0.04	0.08	0.04	0.15	0.29
KY 55	12.200	12.300	0.100	12,000	2	Undivided	Rural	0.25	0.520	0	3	6	9	26.28	0.00	0.11	0.23	0.34	0.66
KY 55	12.400	12.500	0.100	12,000	2	Undivided	Rural	0.25	0.520	0	1	2	3	26.28	0.00	0.04	0.08	0.11	0.22

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Adair County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Adair County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	12.565	12.665	0.100	12,000	2	Undivided	Rural	0.25	0.520	0	1	2	3	26.28	0.00	0.04	0.08	0.11	0.22
KY 55	12.700	12.800	0.100	12,000	2	Undivided	Rural	0.25	0.520	0	0	4	4	26.28	0.00	0.00	0.15	0.15	0.29
KY 55	12.819	12.919	0.100	7,710	2	Undivided	Rural	0.25	0.593	2	1	1	4	16.88	0.12	0.06	0.06	0.24	0.40
KY 55	12.949	13.049	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	2	2	16.88	0.00	0.00	0.12	0.12	0.20
KY 55	13.100	13.200	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	2	2	16.88	0.00	0.00	0.12	0.12	0.20
KY 55	13.290	13.390	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	13.400	13.500	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	13.519	13.619	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	0	1	16.88	0.00	0.06	0.00	0.06	0.10
KY 55	13.649	13.749	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	1	2	16.88	0.00	0.06	0.06	0.12	0.20
KY 55	14.000	14.100	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	3	3	16.88	0.00	0.00	0.18	0.18	0.30
KY 55	14.200	14.300	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	2	2	16.88	0.00	0.00	0.12	0.12	0.20
KY 55	14.600	14.700	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	14.991	15.091	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	0	1	16.88	0.00	0.06	0.00	0.06	0.10
KY 55	15.100	15.200	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	15.208	15.308	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	15.800	15.900	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	16.000	16.100	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	1	2	16.88	0.00	0.06	0.06	0.12	0.20
KY 55	16.911	17.011	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	2	3	16.88	0.00	0.06	0.12	0.18	0.30
KY 55	17.200	17.300	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	2	2	16.88	0.00	0.00	0.12	0.12	0.20

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Adair County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Adair County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	17.577	17.677	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	17.700	17.800	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	18.100	18.200	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	1	2	16.88	0.00	0.06	0.06	0.12	0.20
KY 55	18.300	18.400	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	3	4	16.88	0.00	0.06	0.18	0.24	0.40
KY 55	18.406	18.506	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	2	3	16.88	0.00	0.06	0.12	0.18	0.30
KY 55	18.579	18.679	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	3	3	16.88	0.00	0.00	0.18	0.18	0.30
KY 55	18.706	18.806	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Taylor County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0.000	0.100	0.100	7,330	2	Undivided	Rural	0.25	0.603	0	4	14	18	16.05	0.00	0.25	0.87	1.12	**1.86**
KY 55	0.775	0.875	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	0.975	1.075	0.100	7,290	2	Undivided	Rural	0.25	0.604	1	0	1	2	15.97	0.06	0.00	0.06	0.13	0.21
KY 55	1.500	1.600	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	1	2	15.97	0.00	0.06	0.06	0.13	0.21
KY 55	1.665	1.765	0.100	7,290	2	Undivided	Urban	0.29	0.669	0	0	2	2	15.97	0.00	0.00	0.13	0.13	0.19
KY 55	1.900	2.000	0.100	7,290	2	Undivided	Urban	0.29	0.669	0	0	2	2	15.97	0.00	0.00	0.13	0.13	0.19
KY 55	2.031	2.131	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	3	4	15.97	0.00	0.06	0.19	0.25	0.42
KY 55	2.165	2.265	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	2	6	8	15.97	0.00	0.13	0.38	0.50	0.83
KY 55	2.283	2.383	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	1	2	15.97	0.00	0.06	0.06	0.13	0.21
KY 55	2.500	2.600	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	1	2	15.97	0.00	0.06	0.06	0.13	0.21
KY 55	2.665	2.765	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	3	3	15.97	0.00	0.00	0.19	0.19	0.31
KY 55	2.800	2.900	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	2	3	15.97	0.00	0.06	0.13	0.19	0.31
KY 55	3.019	3.119	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	3.192	3.292	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	2	3	15.97	0.00	0.06	0.13	0.19	0.31
KY 55	3.300	3.400	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	2	2	4	15.97	0.00	0.13	0.13	0.25	0.42
KY 55	3.500	3.600	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	2	3	15.97	0.00	0.06	0.13	0.19	0.31
KY 55	3.608	3.708	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	3.908	4.008	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	4.208	4.308	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	4	4	15.97	0.00	0.00	0.25	0.25	0.42

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Taylor County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	4.504	4.604	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	1	2	15.97	0.00	0.06	0.06	0.13	0.21
KY 55	5.000	5.100	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	5.200	5.300	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	5.304	5.404	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	2	2	4	15.97	0.00	0.13	0.13	0.25	0.42
KY 55	5.500	5.600	0.100	8,190	2	Undivided	Urban	0.29	0.645	0	0	1	1	17.94	0.00	0.00	0.06	0.06	0.09
KY 55	5.680	5.780	0.100	8,190	2	Undivided	Urban	0.29	0.645	0	1	5	6	17.94	0.00	0.06	0.28	0.33	0.52
KY 55	5.800	5.900	0.100	8,190	2	Undivided	Rural	0.25	0.582	0	1	3	4	17.94	0.00	0.06	0.17	0.22	0.38
KY 55	5.934	6.034	0.100	8,190	2	Undivided	Rural	0.25	0.582	0	0	2	2	17.94	0.00	0.00	0.11	0.11	0.19
KY 55	6.057	6.157	0.100	8,190	2	Undivided	Rural	0.25	0.582	0	0	2	2	17.94	0.00	0.00	0.11	0.11	0.19
KY 55	6.186	6.286	0.100	8,190	2	Undivided	Rural	0.25	0.582	0	1	4	5	17.94	0.00	0.06	0.22	0.28	0.48
KY 55	6.346	6.446	0.100	8,190	2	Undivided	Rural	0.25	0.582	0	0	2	2	17.94	0.00	0.00	0.11	0.11	0.19
KY 55	6.479	6.579	0.100	8,190	2	Undivided	Rural	0.25	0.582	1	5	3	9	17.94	0.06	0.28	0.17	0.50	0.86
KY 55	6.772	6.872	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	0	2	2	23.21	0.00	0.00	0.09	0.09	0.16
KY 55	6.900	7.000	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	3	1	4	23.21	0.00	0.13	0.04	0.17	0.32
KY 55	7.038	7.138	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	1	1	2	23.21	0.00	0.04	0.04	0.09	0.16
KY 55	7.170	7.270	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	0	1	1	23.21	0.00	0.00	0.04	0.04	0.08
KY 55	7.366	7.466	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	0	1	1	23.21	0.00	0.00	0.04	0.04	0.08
KY 55	7.500	7.600	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	0	2	2	23.21	0.00	0.00	0.09	0.09	0.16
KY 55	7.603	7.703	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	2	1	3	23.21	0.00	0.09	0.04	0.13	0.24

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Taylor County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	7.903	8.003	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	3	3	6	23.21	0.00	0.13	0.13	0.26	0.48
KY 55	8.005	8.105	0.100	10,900	2	Undivided	Rural	0.25	0.535	0	0	2	2	23.87	0.00	0.00	0.08	0.08	0.16
KY 55	8.700	8.800	0.100	10,900	2	Undivided	Rural	0.25	0.535	0	1	1	2	23.87	0.00	0.04	0.04	0.08	0.16
KY 55	8.803	8.903	0.100	10,900	2	Undivided	Rural	0.25	0.535	0	2	0	2	23.87	0.00	0.08	0.00	0.08	0.16
KY 55	8.966	9.066	0.100	10,900	2	Undivided	Urban	0.25	0.535	0	1	3	4	23.87	0.00	0.04	0.13	0.17	0.31
KY 55	9.007	9.107	0.100	9,290	2	Undivided	Urban	0.25	0.560	0	5	6	11	20.35	0.00	0.25	0.29	0.54	0.97
KY 55	9.200	9.300	0.100	9,290	2	Undivided	Rural	0.25	0.560	0	0	2	2	20.35	0.00	0.00	0.10	0.10	0.18
KY 55	9.600	9.700	0.100	9,290	2	Undivided	Rural	0.25	0.560	0	0	2	2	20.35	0.00	0.00	0.10	0.10	0.18
KY 55	10.140	10.240	0.100	9,290	2	Undivided	Rural	0.25	0.560	0	0	3	3	20.35	0.00	0.00	0.15	0.15	0.26
KY 55	10.293	10.393	0.100	9,290	2	Undivided	Rural	0.25	0.560	0	2	12	14	20.35	0.00	0.10	0.59	0.69	**1.23**

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	4.870	4.970	0.100	17,400	4	Divided	Urban	0.29	0.528	0	8	23	31	38.11	0.00	0.21	0.60	0.81	**1.54**
US 68	5.009	5.109	0.100	17,400	4	Divided	Urban	0.29	0.528	0	1	0	1	38.11	0.00	0.03	0.00	0.03	0.05
US 68	5.187	5.287	0.100	17,400	4	Divided	Urban	0.29	0.528	0	0	1	1	38.11	0.00	0.00	0.03	0.03	0.05
US 68	5.300	5.400	0.100	17,400	4	Divided	Urban	0.29	0.528	0	0	1	1	38.11	0.00	0.00	0.03	0.03	0.05
US 68	5.484	5.584	0.100	17,400	4	Divided	Urban	0.29	0.528	0	0	2	2	38.11	0.00	0.00	0.05	0.05	0.10
US 68	5.587	5.687	0.100	18,000	4	Divided	Urban	0.29	0.524	0	7	33	40	39.42	0.00	0.18	0.84	1.01	**1.94**
US 68	5.700	5.800	0.100	24,200	4	Undivided	Urban	0.29	0.490	0	3	24	27	53.00	0.00	0.06	0.45	0.51	**1.04**

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Taylor County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	5.807	5.907	0.100	22,700	4	Undivided	Urban	0.49	0.756	0	5	16	21	49.71	0.00	0.10	0.32	0.42	0.56
US 68	5.923	6.023	0.100	20,500	4	Undivided	Urban	0.49	0.770	0	8	37	45	44.90	0.00	0.18	0.82	1.00	**1.30**
US 68	6.037	6.137	0.100	20,500	4	Undivided	Urban	0.49	0.770	0	4	9	13	44.90	0.00	0.09	0.20	0.29	0.38
US 68	6.160	6.260	0.100	20,500	4	Undivided	Urban	0.49	0.770	0	8	13	21	44.90	0.00	0.18	0.29	0.47	0.61
US 68	6.265	6.365	0.100	20,500	4	Undivided	Urban	0.49	0.770	0	0	3	3	44.90	0.00	0.00	0.07	0.07	0.09
US 68	6.410	6.510	0.100	20,500	4	Undivided	Urban	0.49	0.770	0	1	4	5	44.90	0.00	0.02	0.09	0.11	0.14
US 68	6.542	6.642	0.100	17,300	4	Undivided	Urban	0.49	0.796	0	0	2	2	37.89	0.00	0.00	0.05	0.05	0.07
US 68	6.703	6.803	0.100	18,500	4	Undivided	Urban	0.49	0.786	0	5	18	23	40.52	0.00	0.12	0.44	0.57	0.72
US 68	6.900	7.000	0.100	18,500	4	Undivided	Urban	0.49	0.786	0	1	1	2	40.52	0.00	0.02	0.02	0.05	0.06
US 68	7.032	7.132	0.100	12,200	4	Undivided	Urban	0.49	0.858	0	0	5	5	26.72	0.00	0.00	0.19	0.19	0.22
US 68	7.160	7.260	0.100	12,200	4	Undivided	Urban	0.49	0.858	0	1	1	2	26.72	0.00	0.04	0.04	0.07	0.09
US 68	7.265	7.365	0.100	12,200	4	Undivided	Urban	0.49	0.858	0	0	3	3	26.72	0.00	0.00	0.11	0.11	0.13
US 68	7.404	7.504	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	1	5	6	20.61	0.00	0.05	0.24	0.29	0.47
US 68	7.600	7.700	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	0	1	1	20.61	0.00	0.00	0.05	0.05	0.08
US 68	8.200	8.300	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	0	1	1	20.61	0.00	0.00	0.05	0.05	0.08
US 68	8.330	8.430	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	1	4	5	20.61	0.00	0.05	0.19	0.24	0.39
US 68	8.546	8.646	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	1	0	1	20.61	0.00	0.05	0.00	0.05	0.08

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Taylor County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	8.600	8.700	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	0	3	3	20.61	0.00	0.00	0.15	0.15	0.23
US 68	8.731	8.831	0.100	8,520	2	Undivided	Rural	0.25	0.575	0	0	1	1	18.66	0.00	0.00	0.05	0.05	0.09
US 68	8.924	9.024	0.100	8,520	2	Undivided	Rural	0.25	0.575	0	2	0	2	18.66	0.00	0.11	0.00	0.11	0.19
US 68	9.404	9.504	0.100	8,520	2	Undivided	Rural	0.25	0.575	0	0	1	1	18.66	0.00	0.00	0.05	0.05	0.09
US 68	10.077	10.177	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	1	0	1	17.89	0.00	0.06	0.00	0.06	0.10
US 68	10.204	10.304	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	1	1	2	17.89	0.00	0.06	0.06	0.11	0.19
US 68	10.404	10.504	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	0	1	1	17.89	0.00	0.00	0.06	0.06	0.10
US 68	10.900	11.000	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	0	1	1	17.89	0.00	0.00	0.06	0.06	0.10
US 68	11.200	11.300	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	1	0	1	17.89	0.00	0.06	0.00	0.06	0.10
US 68	11.500	11.600	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	0	1	1	17.89	0.00	0.00	0.06	0.06	0.10
US 68	11.879	11.979	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	1	4	5	14.13	0.00	0.07	0.28	0.35	0.56
US 68	12.080	12.180	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	1	1	2	14.13	0.00	0.07	0.07	0.14	0.23
US 68	12.400	12.500	0.100	6,450	2	Undivided	Rural	0.25	0.628	1	1	1	3	14.13	0.07	0.07	0.07	0.21	0.34
US 68	12.530	12.630	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	1	1	14.13	0.00	0.00	0.07	0.07	0.11
US 68	12.900	13.000	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	1	1	2	14.13	0.00	0.07	0.07	0.14	0.23
US 68	13.030	13.130	0.100	6,450	2	Undivided	Rural	0.25	0.628	1	2	4	7	14.13	0.07	0.14	0.28	0.50	0.79
US 68	13.330	13.430	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	1	1	14.13	0.00	0.00	0.07	0.07	0.11

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Marion County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Marion County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	0.000	0.100	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	31	63	94	14.13	0.00	2.19	4.46	6.65	**10.59**
US 68	0.400	0.500	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	2	0	2	14.13	0.00	0.14	0.00	0.14	0.23
US 68	0.900	1.000	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	2	2	14.13	0.00	0.00	0.14	0.14	0.23
US 68	1.400	1.500	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	2	2	14.13	0.00	0.00	0.14	0.14	0.23
US 68	2.096	2.196	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	1	1	14.13	0.00	0.00	0.07	0.07	0.11
US 68	2.497	2.597	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	1	1	14.13	0.00	0.00	0.07	0.07	0.11
US 68	2.797	2.897	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	2	2	14.13	0.00	0.00	0.14	0.14	0.23
US 68	2.997	3.097	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	3	3	14.13	0.00	0.00	0.21	0.21	0.34
US 68	3.600	3.700	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	1	1	14.13	0.00	0.00	0.07	0.07	0.11
US 68	3.802	3.902	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	2	2	14.13	0.00	0.00	0.14	0.14	0.23
US 68	4.753	4.853	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	1	0	1	14.41	0.00	0.07	0.00	0.07	0.11
US 68	4.903	5.003	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	1	0	1	14.41	0.00	0.07	0.00	0.07	0.11
US 68	5.178	5.278	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	1	2	3	14.41	0.00	0.07	0.14	0.21	0.33
US 68	5.400	5.500	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	0	1	1	14.41	0.00	0.00	0.07	0.07	0.11
US 68	5.678	5.778	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	3	5	8	14.41	0.00	0.21	0.35	0.56	0.89
US 68	5.878	5.978	0.100	6,580	2	Undivided	Rural	0.25	0.624	1	0	1	2	14.41	0.07	0.00	0.07	0.14	0.22
US 68	5.978	6.078	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	1	0	1	14.41	0.00	0.07	0.00	0.07	0.11

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Marion County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Marion County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	6.128	6.228	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	0	1	1	14.41	0.00	0.00	0.07	0.07	0.11
US 68	6.540	6.640	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	0	2	2	14.41	0.00	0.00	0.14	0.14	0.22
US 68	6.740	6.840	0.100	8,380	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.35	0.00	0.00	0.05	0.05	0.09
US 68	7.087	7.187	0.100	8,380	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.35	0.00	0.00	0.05	0.05	0.09
US 68	7.300	7.400	0.100	8,380	2	Undivided	Rural	0.25	0.578	0	2	4	6	18.35	0.00	0.11	0.22	0.33	0.57
US 68	7.687	7.787	0.100	8,380	2	Undivided	Rural	0.25	0.578	0	2	1	3	18.35	0.00	0.11	0.05	0.16	0.28
US 68	8.000	8.100	0.100	8,380	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.35	0.00	0.00	0.05	0.05	0.09
US 68	8.519	8.619	0.100	11,200	2	Undivided	Rural	0.25	0.530	1	4	3	8	24.53	0.04	0.16	0.12	0.33	0.61
US 68	8.700	8.800	0.100	11,200	2	Undivided	Rural	0.25	0.530	0	1	0	1	24.53	0.00	0.04	0.00	0.04	0.08
US 68	8.864	8.964	0.100	11,200	2	Undivided	Rural	0.25	0.530	0	0	2	2	24.53	0.00	0.00	0.08	0.08	0.15
US 68	9.000	9.100	0.100	11,200	2	Undivided	Rural	0.25	0.530	1	3	3	7	24.53	0.04	0.12	0.12	0.29	0.54
US 68	9.250	9.350	0.100	11,200	2	Undivided	Rural	0.25	0.530	0	0	3	3	24.53	0.00	0.00	0.12	0.12	0.23
US 68	9.390	9.490	0.100	11,900	2	Undivided	Rural	0.25	0.521	0	0	4	4	26.06	0.00	0.00	0.15	0.15	0.29
US 68	9.506	9.606	0.100	11,900	2	Undivided	Rural	0.25	0.521	0	0	6	6	26.06	0.00	0.00	0.23	0.23	0.44
US 68	9.652	9.752	0.100	11,900	2	Undivided	Rural	0.25	0.521	0	1	2	3	26.06	0.00	0.04	0.08	0.12	0.22
US 68	9.764	9.864	0.100	11,900	2	Undivided	Rural	0.25	0.521	0	3	13	16	26.06	0.00	0.12	0.50	0.61	**1.18**
US 68	9.875	9.975	0.100	17,400	2	Divided	Urban	0.29	0.528	0	8	15	23	38.11	0.00	0.21	0.39	0.60	**1.14**

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Marion County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Marion County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	9.985	10.085	0.100	17,400	2	Divided	Urban	0.29	0.528	0	0	1	1	38.11	0.00	0.00	0.03	0.03	0.05
US 68	10.090	10.190	0.100	17,400	2	Divided	Urban	0.29	0.528	0	2	7	9	38.11	0.00	0.05	0.18	0.24	0.45
US 68	10.229	10.329	0.100	17,400	2	Divided	Urban	0.29	0.528	0	2	14	16	38.11	0.00	0.05	0.37	0.42	0.80
US 68	10.360	10.460	0.100	17,400	2	Divided	Urban	0.29	0.528	0	3	5	8	38.11	0.00	0.08	0.13	0.21	0.40
US 68	10.502	10.602	0.100	17,400	2	Divided	Urban	0.29	0.528	0	3	8	11	38.11	0.00	0.08	0.21	0.29	0.55
US 68	10.610	10.710	0.100	17,400	2	Divided	Urban	0.29	0.528	0	3	26	29	38.11	0.00	0.08	0.68	0.76	**1.44**

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0.000	0.100	0.100	13,100	4	Undivided	Urban	0.49	0.844	0	23	35	58	28.69	0.00	0.80	1.22	2.02	**2.40**
KY 55	0.130	0.230	0.100	13,100	4	Undivided	Urban	0.49	0.844	0	1	5	6	28.69	0.00	0.03	0.17	0.21	0.25
KY 55	0.280	0.380	0.100	13,100	4	Undivided	Urban	0.49	0.844	0	3	6	9	28.69	0.00	0.10	0.21	0.31	0.37
KY 55	0.389	0.489	0.100	12,000	4	Undivided	Urban	0.49	0.861	0	3	18	21	26.28	0.00	0.11	0.68	0.80	0.93
KY 55	0.520	0.620	0.100	12,500	2	Undivided	Urban	0.29	0.573	0	7	18	25	27.38	0.00	0.26	0.66	0.91	**1.59**
KY 55	0.767	0.867	0.100	12,500	2	Undivided	Urban	0.29	0.573	0	1	7	8	27.38	0.00	0.04	0.26	0.29	0.51
KY 55	1.084	1.184	0.100	12,000	4	Undivided	Urban	0.49	0.861	0	0	3	3	26.28	0.00	0.00	0.11	0.11	0.13
KY 55	1.250	1.350	0.100	12,000	4	Undivided	Urban	0.49	0.861	0	0	5	5	26.28	0.00	0.00	0.19	0.19	0.22
KY 55	1.358	1.458	0.100	12,000	4	Undivided	Urban	0.49	0.861	0	1	3	4	26.28	0.00	0.04	0.11	0.15	0.18

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Marion County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Marion County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	1.690	1.790	0.100	8,960	2	Undivided	Rural	0.25	0.566	0	0	1	1	19.62	0.00	0.00	0.05	0.05	0.09
KY 55	2.004	2.104	0.100	8,960	2	Undivided	Rural	0.25	0.566	0	1	2	3	19.62	0.00	0.05	0.10	0.15	0.27
KY 55	2.223	2.323	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	2.428	2.528	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	2.581	2.681	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	1	0	1	18.33	0.00	0.05	0.00	0.05	0.09
KY 55	3.000	3.100	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	3.200	3.300	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	3.500	3.600	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	3.635	3.735	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	1	1	2	18.33	0.00	0.05	0.05	0.11	0.19
KY 55	3.800	3.900	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	1	0	1	18.33	0.00	0.05	0.00	0.05	0.09
KY 55	4.200	4.300	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	4.269	4.369	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	4.469	4.569	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	2	2	18.33	0.00	0.00	0.11	0.11	0.19

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Washington County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Washington County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0.000	0.100	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	6	17	23	18.62	0.00	0.32	0.91	1.24	**2.15**
KY 55	0.325	0.425	0.100	8,500	2	Undivided	Rural	0.25	0.575	1	1	1	3	18.62	0.05	0.05	0.05	0.16	0.28
KY 55	0.500	0.600	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	0	1	1	18.62	0.00	0.00	0.05	0.05	0.09
KY 55	0.725	0.825	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	1	1	2	18.62	0.00	0.05	0.05	0.11	0.19
KY 55	1.000	1.100	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	1	0	1	18.62	0.00	0.05	0.00	0.05	0.09
KY 55	1.425	1.525	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	2	1	3	18.62	0.00	0.11	0.05	0.16	0.28
KY 55	2.200	2.300	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	0	1	1	18.62	0.00	0.00	0.05	0.05	0.09
KY 55	2.600	2.700	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	0	1	1	18.62	0.00	0.00	0.05	0.05	0.09
KY 55	2.800	2.900	0.100	7,630	2	Undivided	Rural	0.25	0.595	1	3	2	6	16.71	0.06	0.18	0.12	0.36	0.60
KY 55	3.400	3.500	0.100	7,630	2	Undivided	Rural	0.25	0.595	0	2	6	8	16.71	0.00	0.12	0.36	0.48	0.80
KY 55	3.677	3.777	0.100	7,630	2	Undivided	Rural	0.25	0.595	0	0	1	1	16.71	0.00	0.00	0.06	0.06	0.10
KY 55	3.900	4.000	0.100	7,630	2	Undivided	Rural	0.25	0.595	0	0	2	2	16.71	0.00	0.00	0.12	0.12	0.20
KY 55	4.004	4.104	0.100	7,630	2	Undivided	Rural	0.25	0.595	0	0	2	2	16.71	0.00	0.00	0.12	0.12	0.20
KY 55	4.551	4.651	0.100	7,630	2	Undivided	Rural	0.25	0.595	0	1	8	9	16.71	0.00	0.06	0.48	0.54	0.91

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Washington County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Washington County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 555	0.000	0.100	0.100	6,700	2	Undivided	Rural	0.25	0.620	0	11	18	29	14.67	0.00	0.75	1.23	1.98	**3.19**
KY 555	0.600	0.700	0.100	6,700	2	Undivided	Rural	0.25	0.620	0	1	0	1	14.67	0.00	0.07	0.00	0.07	0.11
KY 555	0.740	0.840	0.100	6,700	2	Undivided	Rural	0.25	0.620	0	0	1	1	14.67	0.00	0.00	0.07	0.07	0.11
KY 555	0.836	0.846	0.100	6,700	2	Undivided	Rural	0.25	0.620	0	4	5	9	14.67	0.00	0.27	0.34	0.61	0.99
KY 555	2.075	2.175	0.100	4,830	2	Undivided	Rural	0.25	0.693	0	0	1	1	10.58	0.00	0.00	0.09	0.09	0.14
KY 555	3.600	3.700	0.100	4,690	2	Undivided	Rural	0.25	0.701	0	0	1	1	10.27	0.00	0.00	0.10	0.10	0.14
KY 555	4.300	4.400	0.100	4,690	2	Undivided	Rural	0.25	0.701	0	0	1	1	10.27	0.00	0.00	0.10	0.10	0.14
KY 555	5.000	5.100	0.100	4,690	2	Undivided	Rural	0.25	0.701	0	0	2	2	10.27	0.00	0.00	0.19	0.19	0.28
KY 555	5.216	5.316	0.100	4,690	2	Undivided	Rural	0.25	0.701	0	2	3	5	10.27	0.00	0.19	0.29	0.49	0.69
KY 555	6.715	6.815	0.100	3,230	2	Undivided	Rural	0.25	0.805	0	1	0	1	7.07	0.00	0.14	0.00	0.14	0.18
KY 555	7.091	7.191	0.100	3,230	2	Undivided	Rural	0.25	0.805	0	0	1	1	7.07	0.00	0.00	0.14	0.14	0.18
KY 555	8.280	8.380	0.100	3,230	2	Undivided	Rural	0.25	0.805	0	1	1	2	7.07	0.00	0.14	0.14	0.28	0.35
KY 555	9.200	9.300	0.100	3,230	2	Undivided	Rural	0.25	0.805	0	1	0	1	7.07	0.00	0.14	0.00	0.14	0.18
KY 555	9.500	9.600	0.100	3,230	2	Undivided	Rural	0.25	0.805	0	0	1	1	7.07	0.00	0.00	0.14	0.14	0.18
KY 555	10.700	10.800	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	0	1	1	8.12	0.00	0.00	0.12	0.12	0.16
KY 555	11.000	11.100	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	1	1	2	8.12	0.00	0.12	0.12	0.25	0.32
KY 555	11.480	11.580	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	0	1	1	8.12	0.00	0.00	0.12	0.12	0.16
KY 555	12.707	12.807	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	2	2	4	8.12	0.00	0.25	0.25	0.49	0.64

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 3. Crash Data Analysis (continued)
Washington County
Spot Analysis
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Washington County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 555	12.907	13.007	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	0	1	1	8.12	0.00	0.00	0.12	0.12	0.16
KY 555	13.200	13.300	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	1	0	1	8.12	0.00	0.12	0.00	0.12	0.16
KY 555	14.000	14.100	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	1	0	1	8.12	0.00	0.12	0.00	0.12	0.16
KY 555	14.300	14.400	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	5	1	6	8.12	0.00	0.62	0.12	0.74	0.97
KY 555	14.500	14.523	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	0	2	2	8.12	0.00	0.00	0.25	0.25	0.32

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Table 4. Six Year Highway Plan Improvements
Adair County

Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Adair	8-159.00	KY 55	-	-	5.300	Western bypass of Columbia (grade, drain, & surface)	Right-of-Way	2003	$4,400,000
							Utility Relocation	2003	$1,500,000
							Construction	2004	$5,000,000
							Total:		$10,9000,000

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Adair	8-159.02	KY 55	-	-	5.300	Western bypass of Columbia (additional funding for C Phase)	Construction	2006	$5,000,000
							Total:		$5,000,000

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Adair	8-159.03	KY 55	-	-	5.300	Western bypass of Columbia (additional funding for C Phase)	Construction	2007	$8,750,000
							Total:		$8,750,000

Source: KYTC's Six-Year Highway Plan (FY 2003-2008)

Table 4. Six Year Highway Plan Improvements (continued)
Adair County
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Adair	8-162.60	KY 61	10.571	12.6	2.100	Reconstruct KY 61 from 1000 feet south of the Louie B. Nunn Parkway	Right-of-Way	2002	$2,000,000
							Utility Relocation	2004	$500,000
							Construction	2005	$15,000,000
							Total:		$17,500,000

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Adair	8-1034.00	KY 80	15.523	15.623	.100	Replace bridge over Russell Creek 1.2 miles east of KY 55	Design	2003	$300,000
							Right-of-Way	2005	$500,000
							Utility Relocation	2006	$450,000
							Construction	2008	$2,500,000
							Total:		$3,750,000

Source: KYTC's Six-Year Highway Plan (FY 2003-2008)

Table 4. Six Year Highway Plan Improvements (continued)
Green & Adair Counties

Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Green/ Adair	4-128.50	KY 61	0/ 17.63	4.053/ 23.997	10.42	Reconstruct KY 61 from KY 487 to Columbia	Design	2002	$1,250,000
							Total:		$1,250,000

Table 4. Six Year Highway Plan Improvements (continued)
Marion & Boyle Counties

Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Marion/ Boyle	4-192.00	US 68	12.322/ 0	23.819/ 1.5	13.000	Reconstruct US 68 from Lebanon to 1.5 miles east of Boyle County line	Right-of-Way	2003	$3,155,925
							Utility Relocation	2005	$2,762,000
							Construction	2006	$17,000,000
							Total:		$22,917,925

Source: KYTC's Six-Year Highway Plan (FY 2003-2008)

Table 4. Six Year Highway Plan Improvements (continued)
Marion County
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Marion	4-309.00	KY 49	10.5	11.73	1.200	Reconstruct KY 49 from Pope Creek Bridge to Riverside Bridge	Design	2002	$250,000
							Right-of-Way	2003	$300,000
							Utility Relocation	2003	$200,000
							Construction	2004	$2,000,000
							Total:		$2,750,000

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Marion	4-967.00	US 68	12.9	13.2	.300	Construct left-turn lane on US 68	Construction	2002	$225,000
							Total:		$225,000

Source: KYTC's Six-Year Highway Plan (FY 2003-2008)

Table 4. Six Year Highway Plan Improvements (continued)
Taylor County

Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Taylor	4-114.00	KY 210	16.184	16.884	.700	Widen KY 210 from US 68 to new connector	Design	2004	$350,000
							Total:		$350,000

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Taylor	4-1056.00	KY 3211	3.39	3.49	.100	Replace bridge at Trace Fork 1.9 miles west of US 68/KY 55	Design	2004	$75,000
							Right-of-Way	2005	$100,000
							Utility Relocation	2005	$100,000
							Construction	2006	$200,000
							Total:		$475,000

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Taylor	4-1058.00	CR 1236	-	-	.100	Replace bridge over Green River 0.75 mile SW of KY 55	Design	2004	$200,000
							Right-of-Way	2006	$50,000
							Construction	2007	$1,000,000
							Total:		$1,250,000

Source: KYTC's Six-Year Highway Plan (FY 2003-2008)

Table 4. Six Year Highway Plan Improvements (continued)
Washington County
Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Wash.	4-103.05	US 150	-	-	3.500	Relocation of US 150 from Springfield to Danville	Construction	2002	$4,200,000
							Total:		$4,200,000

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Wash.	4-307.01	US 150	-	-	3.000	New Route: Bardstown to Springfield bypass	Design	2003	$500,000
							Right-of-Way	2004	$2,000,000
							Utility Relocation	2005	$500,000
							Construction	2006	$5,000,000
							Total:		$8,000,000

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Wash.	4-307.02	US 150	-	-	3.000	Add'l Bardstown-Springfield bypass funding	Construction	2008	$5,000,000
							Total:		$5,000,000

Source: KYTC's Six-Year Highway Plan (FY 2003-2008)

Table 4. Six Year Highway Plan Improvements (continued)
Washington County

Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Wash.	4-1004.00	KY 1584	.806	.906	.100	Replace bridge & approaches at Poorhouse Branch	Right-of-Way	2002	$20,000
							Utility Relocation	2002	$10,000
							Construction	2003	$170,000
							Total:		$200,000

Table 4. Six Year Highway Plan Improvements (continued)
Washington & Anderson Counties

Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Wash./ Anderson	4-284.01	KY 555	-	-	7.800	Extend KY 555 from Bluegrass Pkwy. to KY 248	Construction	2003	$10,000,000
							Total:		$10,000,000

Source: KYTC's Six-Year Highway Plan (FY 2003-2008)

Table 4. Six Year Highway Plan Improvements (continued)
Washington & Anderson Counties

Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Bluegrass Parkway

County	Item Number	Route	Begin MP	End MP	Length (miles)	Type of Work	Phase of Development	Fiscal Year Scheduled	Phase Cost
Wash./ Anderson	4-284.02	KY 555	-	-	7.800	Add'l funding - KY 555 extension from B.G. Pkwy. to KY 248	Construction	2006	$11,300,000
							Total:		$11,300,000

Source: KYTC's Six-Year Highway Plan (FY 2003-2008)

Table 5. 2003 Local Officials/Agencies/Public Meetings Questionnaire Results

Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00
Heartland Parkway from the Louie B. Nunn Cumberland Parkway to the
Martha Layne Collins Blue Grass Parkway

1. Have you filled out a questionnaire on this project before?	
Yes	0 (0%)
No	51 (100%)

2. Do you think a new/reconstructed route from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway is needed?	
Yes	44 (88%)
No	6 (12%)

3. If a new/reconstructed roadway were built, do you think it would (check one):	
Be helpful to the region	44 (88%)
Have little or no impact on the region	3 (6%)
Not be helpful to the region	3 (6%)

4. If a new/reconstructed roadway were built, do you think it would (check all that apply):	
Improve regional access to a major highway network	42 (82%)
Improve economic development	42 (82%)
Improve tourism	38 (75%)

5. What types of transportation problems should a new route address? Please rate the following by circling a degree of problems for each issue on existing route:

	No problems	Very few problems	Some problems	Frequent problems	Serious problems
Too much traffic	1(2%)	3(7%)	15(34%)	14(32%)	11(25%)
High speeds	2(5%)	7(16%)	18(42%)	14(33%)	2(5%)
Large trucks	1(2%)	2(4%)	10(22%)	19(42%)	13(29%)
Poor visibility	2(5%)	4(10%)	23(55%)	10(24%)	3(7%)
Dangerous curves	2(5%)	5(11%)	19(43%)	10(23%)	8(18%)
Narrow lanes	1(2%)	4(9%)	13(29%)	16(36%)	11(24%)
Narrow shoulders	1(2%)	2(4%)	16(36%)	16(36%)	10(22%)
Stopped or broken down cars	2(5%)	20(48%)	15(36%)	2(5%)	3(7%)
Other *	4(33%)	3(25%)	0(0%)	1(8%)	4(33%)

* Comments = Limited passing (2); heavy lake traffic (1); city bypasses (1)

6. If a new route were built, would you use it (check one):	
Daily	17 (33%)
1-2 times per week	10 (20%)
3-4 times per week	7 (14%)
1 time per month	2 (4%)
3-4 times per month	9 (18%)
Never	1 (2%)
Other	5 (10%)

7. If you traveled this new route, what would be the primary purpose of your trips (check all that apply):	
To go to work or for business	29 (57%)
To go to the doctor	21 (41%)
To go to school or take kids to school	3 (6%)
For personal business	32 (63%)
To go shopping	33 (65%)
To visits friends or family	24 (47%)
To take trips or vacations	27 (53%)
Other	5 (10%)

8. Are there areas that should be avoided if this new route is constructed? Please check a box for areas to avoid and identify any specific locations you are aware of:	
Personal properties or homes	6 (12%)
Businesses/commercial property	5 (10%)
Natural areas or habitats	20 (39%)
Recreational areas	9 (18%)
Historic or cultural sites	20 (39%)
Hazardous or monitored sites	11 (22%)
Scenic areas or viewsheds	10 (20%)
Other	4 (8%)

9. Given your comments above, what type of roadway would best serve the needs of the region?	
2-lane with limited entrances	5 (10%)
4-lane divided with access only at major interchanges	15 (29%)
4-lane divided with limited entrances	29 (57%)
None	2 (4%)

10. The Heartland Parkway should be:	
A new route	8 (23%)
Reconstructed along the existing route	27 (77%)

Table 6. 2004 Second Round Local Officials/Agencies/Stakeholder/Public Meetings Questionnaire Results

Adair, Green, Taylor, Marion, & Washington Counties, Item No. 4-132.00

Heartland Parkway from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway

1. Have you filled out a questionnaire on this project before?	
Yes	23 (18%)
No	104 (82%)

2. Do you think a new/reconstructed route from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway is needed?	
Yes	101 (80%)
No	26 (20%)

3. If a new/reconstructed roadway were built, do you think it would (check one):	
Be helpful to the region	100 (79%)
Have little or no impact on the region	21 (17%)
Not be helpful to the region	5 (4%)

4. The Heartland Parkway should be:	
A new route	31 (24%)
Reconstructed along the existing route	96 (76%)

5. Given your comments above, what type of roadway would best serves the needs of the region?	
2-lane with limited entrances	7 (6%)
4-lane divided with access only at major interchanges (similar to an Interstate)	28 (22%)
4-lane divided with limited entrances	89 (71%)
None	1 (1%)

6. Are there areas that should be avoided if any of the above options are constructed? Please check a box for areas to avoid and identify any specific locations you are aware of.	
Residential properties or homes	46 (37%)
Businesses/commercial property	18 (14%)
Natural areas or habitats	32 (25%)
Recreational areas	34 (27%)
Historic or cultural sites	65 (52%)
Hazardous or monitored sites	23 (18%)
Scenic areas or viewsheds	24 (19%)
Other *	6 (5%)

* Comments = Farms; Real Lincoln Birthplace; many archeological sites in the area

7. Which Heartland Parkway Option do you prefer?	
Option One (New Interstate Roadway Design)	31 (19%)
Option Two (Existing Roadway Re-Design)	100 (63%)
Option Three (Existing Roadway Re-Design)	25 (16%)
None	4 (2%)

8. If you selected Options Two or Three, indicate which option you prefer for each segment by placing an "x" in the preferred segment square.

Option 2	Seg. 1	Seg. 2	Seg. 3	Seg. 4	Seg. 5	Seg. 6	Seg. 7	Seg. 8
	73	73	55	69	52	72	53	53
Option 3	Seg. 1	Seg. 2	Seg. 3	Seg. 4	Seg. 5	Seg. 6	Seg. 7	Seg. 8
	3	4	23	5	22	4	22	23

9. Of the segments presented in Options Two and Three, indicate which segment you believe should be completed first, second, third, fourth, fifth, sixth, seventh, and eighth by placing a number that expresses your opinion on each segment's priority of completion in the appropriate square.

Priority of Completion:

Seg. 1	First	Sec.	Third	Fourth	Fifth	Sixth	Sev.	Eighth
	21	11	4	15	5	5	1	13
Seg. 2	First	Sec.	Third	Fourth	Fifth	Sixth	Sev.	Eighth
	18	22	7	3	5	3	17	1
Seg. 3	First	Sec.	Third	Fourth	Fifth	Sixth	Sev.	Eighth
	5	6	14	9	13	15	5	5
Seg. 4	First	Sec.	Third	Fourth	Fifth	Sixth	Sev.	Eighth
	7	9	11	18	16	5	2	4
Seg. 5	First	Sec.	Third	Fourth	Fifth	Sixth	Sev.	Eighth
	0	6	3	18	25	12	8	2
Seg. 6	First	Sec.	Third	Fourth	Fifth	Sixth	Sev.	Eighth
	11	2	21	6	4	26	0	2
Seg. 7	First	Sec.	Third	Fourth	Fifth	Sixth	Sev.	Eighth
	1	18	3	5	2	4	37	1
Seg. 8	First	Sec.	Third	Fourth	Fifth	Sixth	Sev.	Eighth
	13	2	8	2	2	3	2	40

* Note: Eleven questionnaires had segment numbers entered on Question 9 that do not exist on this project. This data is not included in the results of Question 9.

Table 7. Estimated Costs for Priority Segments

Heartland Parkway - Option 1 (Interstate/Parkway Type of Facility)	
Items	**Total**
Estimated Length	60
Design	$41,027,000
Right-of-Way	$73,801,000
Utilities	$16,000,000
Construction	$509,650,000
Contingencies	$76,448,000
Total	$716,926,000

Heartland Parkway - Option 2
(Four-Lane Facility Along Existing Routes)

Items	Segment 1	Segment 2	Segment 3		Segment 4	Segment 5		Segment 6	Segment 7		Segment 8		Total
	Section A **Adair Co.** (KY 61 from L.B.N. C'land Pkwy. to Columbia Bypass)	**Section B** **Adair Co.** **Columbia Bypass**	**Section C** **Adair Co.** (KY 55 from Columbia Bypass to Taylor Co. Line)	**Section D** **Taylor Co.** (KY 55 to Campbells-ville Bypass)	**Section E** **Taylor Co.** **Campbellsville Bypass**	**Section F** **Taylor Co.** (US 68 from Campbells-ville Bypass to Marion Co. Line)	**Section G** **Marion Co.** (US 68 to Lebanon Bypass)	**Section H** **Marion Co.** **Lebanon Bypass**	**Section I** **Marion Co.** (KY 55 from Lebanon Bypass to Wash. Co. Line)	**Section J** **Washington Co.** (KY 55 to KY 555)	**Section K** **Washington Co.** (KY 555 to MP 8.284)	**Section L** **Washington Co.** (KY 555 MP 8.284 to M.L.C. Blue Grass Pkwy.)	
Section Length	2.1	4.16	6.356	8.7	6.7	4.051	9.47	3.305	2.669	4.551	8.284	6.414	66.76
2030 ADT	-	10,700 - 13,700	22,200 - 24,400	21,000 - 32,500	9800 - 11,800	18,700 - 23,600	18,700 - 32,300	9800 - 12,700	24,500 - 25,000	21,900 - 25,000	13,600 - 19,400	9200 - 10,800	-
Design	-	2,894,000	1,824,000	2,673,000	2,322,000	685,000	2,510,000	927,000	478,000	883,000	1,720,000	1,463,000	$18,379,000
Right-of-Way	2,000,000	4,400,000	2,589,000	14,867,000	5,868,000	2,866,000	8,186,000	2,200,000	2,613,000	2,988,000	4,372,000	4,854,000	$57,803,000
Utilities	500,000	1,500,000	11,171,000	2,675,000	1,875,000	1,013,000	4,868,000	1,000,000	668,000	1,138,000	2,071,000	1,604,000	$30,083,000
Construction	15,000,000	35,943,000	23,604,000	34,432,000	28,842,000	8,737,000	32,070,000	13,353,000	6,086,000	11,223,000	21,831,000	18,530,000	$249,651,000
Contingencies	2,250,000	5,393,000	2,448,000	3,749,000	4,327,000	1,044,000	3,783,000	2,003,000	738,000	1,384,000	2,729,000	2,357,000	$32,205,000
Total	$19,750,000	$50,130,000	$41,636,000	$58,396,000	$43,234,000	$14,345,000	$51,417,000	$19,483,000	$10,583,000	$17,616,000	$32,723,000	$28,808,000	$388,121,000

Heartland Parkway - Option 3
(Two-Lane Facility with Passing Lanes Every Three Miles)

Items	Segment 1	Segment 2	Segment 3		Segment 4	Segment 5		Segment 6	Segment 7		Segment 8		Total
	Section A **Adair Co.** (KY 61 from L.B.N. C'land Pkwy. to Columbia Bypass)	**Section B** **Adair Co.** **Columbia Bypass**	**Section C** **Adair Co.** (KY 55 from Columbia Bypass to Taylor Co. Line)	**Section D** **Taylor Co.** (KY 55 to Campbells-ville Bypass)	**Section E** **Taylor Co.** **Campbellsville Bypass**	**Section F** **Taylor Co.** (US 68 from Campbells-ville Bypass to Marion Co. Line)	**Section G** **Marion Co.** (US 68 to Lebanon Bypass)	**Section H** **Marion Co.** **Lebanon Bypass**	**Section I** **Marion Co.** (KY 55 from Lebanon Bypass to Wash. Co. Line)	**Section J** **Washington Co.** (KY 55 to KY 555)	**Section K** **Washington Co.** (KY 555 to MP 8.284)	**Section L** **Washington Co.** (KY 555 MP 8.284 to M.L.C. Blue Grass Pkwy.)	
Section Length	2.1	4.16	6.356	8.7	6.7	4.051	9.47	3.305	2.669	4.551	8.284	6.414	66.76
2030 ADT	-	10,700 - 13,700	19,500 - 21,700	18,500 - 28,700	8600 - 10,500	16,500 - 20,800	16,500 - 28,400	8600 - 11,100	21,500 - 22,000	19,200 - 22,000	11,900 - 17,100	8100 - 9500	-
Design	-	-	317,000	392,000	1,444,000	193,000	523,000	450,000	142,000	216,000	435,000	348,000	$4,460,000
Right-of-Way	2,000,000	4,400,000	122,000	122,000	5,868,000	0	0	1,300,000	0	0	0	122,000	$13,934,000
Utilities	500,000	1,500,000	600,000	600,000	1,875,000	300,000	900,000	1,000,000	300,000	300,000	900,000	600,000	$9,375,000
Construction	15,000,000	18,750,000	4,198,000	5,228,000	17,933,000	2,561,000	6,893,000	7,428,000	1,871,000	2,869,000	5,754,000	4,594,000	$93,079,000
Contingencies	2,250,000	2,813,000	320,000	360,000	2,690,000	187,000	572,000	1,115,000	151,000	209,000	459,000	377,000	$11,503,000
Total	$19,750,000	$27,463,000	$5,557,000	$6,702,000	$29,810,000	$3,241,000	$8,888,000	$11,293,000	$2,464,000	$3,594,000	$7,548,000	$6,041,000	$132,351,000

Table 8: Summary of Potential Environmental Impacts

Study Area	Corridor		
	Option 1	**Option 2**	**Option 3**
Stream Crossings	64 perennial 32 intermittent	37 perennial 10 intermittent	7-37 perennial 8-10 intermittent*
Floodplain Encroachment**	(8) 100-year floodplains	(2) 100-year floodplains	None
Potential Wetlands	211 ponds, 18 riverine, 17 emergent, 9 forested	17 ponds, 3 riverine, 1 emergent, 1 forested, 1 lacustrine	6-17 ponds, 2-6 riverine, 2-3 emergent, 2-3 forested, 1 lacustrine††
Threatened and Endangered Species	Five federally endangered species (two bats and three mussels species) and two federally threatened species (bald eagle and Eggert's sunflower) have been known to occur within the project corridor areas.		
Natural Areas	The corridors are located within the boundaries of the Green River Bioreserve. Several exemplary natural communities monitored by KSNPC are located within Adair, Green, Marion, and Taylor Counties. A formal data request would be required to obtain specific locations of natural communities.		
Significant Stream Resources	No wild and scenic rivers have been identified in the project area. Green River is an Outstanding State Resource Water. Russell Creek is an Exceptional Water and Reference Reach Stream.		
Socioeconomic	Some relocations will be required, but should not cause burdens on the local real estate markets. The new roadway is anticipated to provide stimulus for economic development by relieving traffic congestion, improving driving conditions and attracting industrial and commercial businesses to the region. If complementary efforts by local and regional officials are continued, positive impacts could include improved earnings, and lowered unemployment and poverty rates for the five project counties and their Labor Market Areas.		
Farmland	Farmland will be acquired and converted to right of way for each of the project options. Option 1 will require more farmland, and will have a greater potential to affect agricultural conservation easements and agricultural districts than Options 2 and 3.		
Environmental Justice	No environmental justice issues appear to exist in the project area.		
Cultural/Historic Resources	43 structures could potentially be involved, but due to the width of the corridor, the potential exists to avoid or minimize impacts to historic sites.	21 structures could potentially be involved, but due to the width of the corridor, the potential exists to avoid or minimize impacts to historic sites.	21 structures could potentially be involved, but due to the width of the corridor, the potential exists to avoid or minimize impacts to historic sites.
Archaeological Resources	The potential exists for prehistoric and/or historic archaeological sites to be discovered on each option.		
Hazardous Materials/ Underground Storage Tank Sites	No major impacts on hazardous materials or underground storage tanks appear to exist in the project corridors.		
Air Quality	No major air quality impacts are predicted for any option.		
Traffic Noise	The potential exists for individual receptors to approach or exceed regulatory thresholds (e.g., 67 dBA Leq for residential receptors and 72 dBA Leq for commercial receptors, or increase of 10dBA Leq). If any receptor approaches or exceeds a regulatory threshold, abatement considerations (e.g. noise barrier) may be appropriate.		

*Potential number of stream crossings depending on placement of highway improvements

**Additional floodplains likely exist along streams; however, floodplains in Washington, Green, and Adair Counties are not currently mapped.

††Potential number of wetland crossings depending on placement of highway improvements.

TABLE. 9

Federal and State Threatened and Endangered Species Lists by Agency

1. Federal Threatened and Endangered Species reported by USFWS as having potential to occur within the project corridors.

Species Common Name	Species Scientific Name	Listed Status
Mammals		
Indiana Bat	*Myotis sodalis*	Federally endangered
Gray Bat	*Myotis grisescens*	Federally endangered
Birds		
Bald Eagle	*Haliaeetus leucocephalus*	Federally threatened
Plants		
Eggert's Sunflower	*Helianthus eggertii*	Federally threatened
Mussels		
Fanshell	*Cyprogenia stegaria*	Federally endangered
Clubshell	*Pleurobema clava*	Federally endangered
Rough Pigtoe	*Pleurobema plenum*	Federally endangered
Northern Riffleshell	*Epioblasma torulosa rangiana*	Federally endangered (likely extirpated)
Fat Pocketbook	*Potamilus capax*	Federally endangered (likely extirpated)
Tubercled Blossom	*Epioblasma torulosa torulosa*	Federally endangered (likely extirpated)

2. Federal-listed threatened or endangered species reported from quadrangles within the project area. Information obtained from Kentucky Department of Fish and Wildlife Resources (KDFWR) website.

Taxonomic Group	Species	USFWS Status	KDFWR Status	Quadrangle
Birds	*Haliaeetus leucocephalus* (bald eagle)	T	E	Cambellsville, Cane Valley
Bivalves	*Pleurobema clava* (clubshell)	E	E	Cane Valley
Mammals	*Myotis grisescens* (gray bat)	E	E	Campbellsville, Cane Valley, Columbia, Greensburg, Saloma
	Myotis sodalis (Indiana bat)	E	E	Cane Valley, Saloma

E = Endangered
T = Threatened

3. Kentucky State Nature Preserves Commission (KSNPC) species reported as having the potential to occur within the counties listed.

Taxonomic Group	Species	KSNPC Status	County
Plants	*Acer spicatum* (mountain maple)	E	Adair
	Adiantum capillus-veneris (southern maidenhair-fern)	T	Adair, Green, Taylor
	Aureolaria patula (spreading false foxglove)	S	Adair, Green, Taylor
	Chelone oblique var. *speciosa* (rose turtlehead)	S	Adair
	Glyceria acutiflora (sharp-scaled manna-grass)	T	Marion
	Helianthus eggertii (Eggert's sunflower)	T	Taylor
	Heteranthera dubia (grassleaf mud-plantain)	S	Adair
	Juglans cinerea (white walnut)	S	Green
	Parnassia grandifolia (large-leaved grass-of-parnassus)	E	Adair
	Stellaria longifolia (longleaf stitchwort)	S	Marion
	Trillium pusillum (least trillium)	E	Marion
	Ulmus serotina (September elm)	S	Adair, Green
	Vernonia noveboracensis (New York ironweed)	S	Washington
Gastropods	*Lithasia armigera* (armored rocksnail)	S	Adair
Bivalves	*Alasmidonta marginata* (elktoe)	T	Green, Marion, Taylor
	Cyprogenia stegaria (fanshell)	E	Green
	Epioblasma torulosa rangiana (northern riffleshell)	E	Green, Taylor
	Epioblasma triquetra (snuffbox)	S	Green, Marion, Taylor
	Lampsilis ovata (pocketbook)	E	Green, Taylor
	Pleurobema clava (clubshell)	E	Green, Taylor
	Pleurobema plenum (rough pigtoe)	E	Green
	Quadrula cylindrica cylindrica (rabbitsfoot)	T	Adair, Green, Taylor
	Simpsonaias ambigua (salamander mussel)	T	Marion
	Toxolasma lividus (purple lilliput)	E	Adair, Green
	Villosa fabalis (rayed bean)	E	Green
	Villosa lienosa (little spectaclecase)	S	Adair, Green, Marion, Taylor
	Villosa ortmanni (Kentucky creekshell)	T	Adair, Green
Crustaceans	*Barbicambarus cornutus* (bottlebrush crayfish)	S	Adair, Green, Taylor
	Orconectes inermis inermis (a crayfish)	S	Green

Kentucky State Nature Preserves Commission (KSNPC) species reported as having the potential to occur within the counties listed (continued).

Taxonomic Group	Species	KSNPC Status	County
Other Types	*Pseudotremia merops*	T	Adair
Insects	*Allocapnia cunningham*	H	Adair
	Dryobius sexnotatus (sixbanded longhorn beetle)	T	Taylor
	Erora laeta (early hairstreak)	S	Green
	Ophiogomphus aspersus (brook snaketail)	H	Green
	Pseudanophthalmus parvus (tatum cave beetle)	T	Marion
	Stenonema bednariki (a heptageniid mayfly)	S	Marion
	Stylurus notatus (elusive clubtail)	H	Green, Marion
Fishes	*Ammocrypta clara* (western sand darter)	E	Green
	Etheostoma maculatum (spotted darter)	T	Adair, Green
	Ichthyomyzon greeleyi (mountain brook lamprey)	T	Adair, Green
	Lampetra appendix (American brook lamprey)	T	Green
	Noturus exilis (slender madtom)	E	Taylor
	Noturus stigmosus (northern madtom)	S	Green, Marion
	Percina macrocephala (longhead darter)	T	Adair, Green
	Phenacobius uranops (stargazing minnow)	S	Adair, Green
Amphibians	*Cryptobranchus alleganiensis alleganiensis* (eastern hellbender)	S	Adair, Green, Taylor
Birds	*Accipiter striatus* (sharp-shinned hawk)	S	Adair, Washington
	Aimophila aestivalis (Bachman's sparrow)	E	Taylor, Washington
	Ammodramus henslowii (Henslow's sparrow)	S	Adair, Green, Marion, Taylor, Washington
	Ardea herodias (great blue heron)	S	Green
	Chondestes grammacus (lark sparrow)	T	Marion, Taylor, Washington
	Cistothorus platensis (sedge wren)	S	Green, Marion, Taylor
	Thryomanes bewickii (Bewick's wren)	S	Marion, Washington
Mammals	*Corynorhinus rafinesquii* (Rafinesque's big-eared bat)	S	Adair, Taylor
	Myotis grisescens (gray bat)	E	Adair, Green, Taylor
	Myotis sodalis (Indiana bat)	E	Adair, Taylor
	Nycticeius humeralis (evening bat)	T	Adair

E = Endangered
T = Threatened
S = Special Concern
H = Historic

APPENDIX D.

ENVIRONMENTAL OVERVIEW

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ENVIRONMENTAL OVERVIEW

Heartland Parkway
ALTERNATIVES PLANNING STUDY
Adair, Green, Marion, Taylor, and Washington Counties
ITEM NO. 04-132.00

This preliminary environmental overview analysis identifies potential concerns within the two defined project corridors based upon available data and information sources. The project could bring changes to the local communities including improvements in vehicular access, reduced driving times, convenience, and emergency response times. In addition, the project could enhance the future quality of life and the economic vitality for residents within the area.

The project's termini (endpoints) are from the Louie B. Nunn/Cumberland Parkway, in Adair County to the Martha Layne Collins/Blue Grass Parkway in Washington County. The project corridors are located within Adair, Green, Marion, Taylor and Washington Counties. The county seats of Columbia, Lebanon, Campbellsville and Springfield will be included in the project study. Neither corridor is located near Greensburg. The Option 1 Corridor passes through the southeastern corner of Green County. The project corridors will intersect or junction with several state or federal highways. Following is a table that displays these roadways within the respective counties:

Table 1: Major Roadways (by County) that Intersect or Junction with the Project Corridors

Adair	
Louie B. Nunn/Cumberland Pkwy	KY 61
KY 767	KY 80
KY 55*	
Green	
KY 565	
Marion	
KY 426	US 68*
KY 289	KY 429
KY 49	KY 55*
Taylor	
KY 55*	US 68*
KY 210	KY 70

Washington	
Martha Layne Collins/Bluegrass Pkwy	KY 438
KY 53	KY 528
KY 152	US 150
KY 55*	KY 555*

* *These roadways are included as part of the Option 2/3 Corridor*.

The project corridors are identified as Option 1 and Option 2/3 Corridors. Option 1 features a parkway west of existing roadways, Option 2 proposes a 4-lane widening of existing KY55/US68/KY555 (with bypasses of the larger cities), and Option 3 proposes a 2-lane with additional passing bays and ultimate 4-lane bypasses of some of the larger cities. The corridors are 2,000 feet wide, which will provide some flexibility in positioning of the alternates to avoid environmentally sensitive issues and resources. The overall Option 2/3 corridor is 2,000 feet in width, but the narrower area of study was selected because Option 2 would add two lanes to the existing roadways, while Option 3 would widen the existing roadway at some locations. No construction activities are anticipated to occur outside 150 feet on either side of the existing roadway. In addition, the 1-mile long passing bays featured as part of Option 3 are to be placed every three miles, however, they can be shifted to avoid environmentally sensitive resources and issues. The project corridor concerns include:

- Socioeconomic and community impacts.
- Environmental justice concerns.
- Culturally sensitive areas including churches, parks, cemeteries and schools.
- Cultural historic sites.
- Archaeological resources.
- Potential threatened and endangered species.
- River and stream crossings.
- Underground storage tanks and hazardous materials.
- Noise and air impacts.

This section of the planning study focuses upon the preliminary environmental footprint for the proposed Heartland Parkway study area (project corridor). A local geographic information system (GIS), topographic maps and field trips were used to gather and record data on existing features, concerns and conditions within the project corridors. The purpose of identifying these features is to assist the project team and the public in deciding upon the location of project alternates to avoid and/or minimize impacts to the natural and human environments.

I. Socioeconomics and Land Use

The socioeconomic portion of the Environmental Overview identifies the existing conditions of the human environment and the related benefits and impacts of the new roadway upon the communities that exist within or near the project corridor. This section identifies current and projected population levels, and labor force and economic status.

A. Population Estimates and Trends

Table 2
Population Estimates &Projections,
1900 - 2030 for Adair, Green, Marion, Taylor & Washington Counties

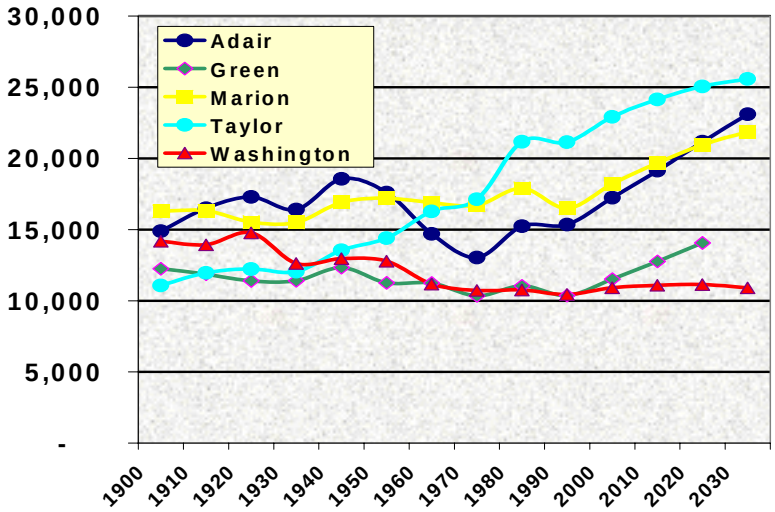

Table 2 (above) and Tables 3 and 4 (below) illustrate the history of each county's population between 1900 and 2000, with projections for the counties beginning at 2010 and carried through 2030. When comparing the population trends with employment figures and labor statistics in this study area, it can be inferred that the fluctuations in population are directly related to the employment conditions. The Kentucky Economic and Development Partnership and the Kentucky Economic Development Cabinet published a report May 2001. The report, *The Recent Economic Performance of Regions in Kentucky,* stated that, "demographic and economic activity are intertwined. A changing population alters the demand for goods and services. Jobs then respond to people. On the other hand, job creation raises expectations for employment and attracts population. People then respond to jobs."

Reviews of population patterns and economic factors in this section have revealed this intertwining of relations for each county. Three counties in the study area experienced growth through the past century – Taylor, Marion and Adair Counties. Taylor County was the least populated county in the study area in 1900. By 1970, it became the most populated county, and its growth continued through 2000. Population projections indicate it is likely that Taylor County will continue this trend surpassing a total of 25,000 residents by 2030 (See Tables 3 and 4 below).

Table 3: Population Estimates, 1900 - 2000
for Adair, Green, Marion, Taylor and Washington Counties

Area	1900	1920	1940	1960	1980	1990	2000
Adair	14,888	17,289	18,566	14,699	15,233	15,360	17,244
Green	12,255	11,391	12,321	11,249	11,043	10,371	11,518
Marion	16,290	15,527	16,913	16,887	17,910	16,499	18,212
Taylor	11,075	12,236	13,556	16,285	21,178	21,146	22,927
Washington	14,182	14,773	12,965	11,168	10,764	10,441	10,916

Table 4: Population Projections, 2010 – 2030
for Adair, Green, Marion, Taylor and Washington Counties

Area	2010	2020	2030
Adair	19,130	21,166	23,111
Green	12,765	14,066	15,339
Marion	19,682	20,961	21,876
Taylor	24,154	25,067	25,594
Washington	11,091	11,135	10,910

Table 4 includes population projections for the counties. The projections for the counties were extracted from the middle series. The Kentucky State Data Center also performs low and high projections, but recommends the middle series for planning purposes. Taylor, Adair and Marion Counties are predicted to continue increasing in population at rates that are consistent with recent growth trends. Green County is anticipated to grow at a slow rate and Washington County is predicted to continue experiencing a slight decline in growth.

If the no-build alternate is selected for this project, the population trends should continue along the projected growth rates as illustrated above. If Option 1 or Option 2/3 would be selected for the project, population trends could increase in the region as secondary and cumulative impacts associated with economic stimulation.

B. Population by Race

U.S. Census 2002 figures were reviewed to determine the racial balance of the communities within the project area of study, and the results were compared against the racial characteristics of Kentucky (See Table 5 below).

Table 5: Population Percentages by Race, 2002 for Kentucky and Project Area Counties

	Kentucky	Adair County	Green County	Marion County	Nelson County	Taylor County	Washington County
White	90.1	96.1	96.8	89.6	93.4	94.0	91.5
Black	7.3	2.7	2.6	9.1	5.3	5.1	7.5
Asian, Pacific Islander	0.1	0.3	0.1	0.7	0.6	0.3	0.3
American Indian	0.25	0.2	0.0	0.0	0.1	0.1	0.2
Hispanic Origin	1.5	0.8	1.1	0.9	1.1	0.9	1.6

Census tracts were reviewed for each county within the study area to determine the areas populated by minority races. Reviews of the tracts and field visits have determined that no minority neighborhoods or communities will be displaced or segmented by the corridors that are currently being considered for this project.

- **Adair County Census Tracts (9701 – 9706)** revealed that between 93.5 and 98.4 percent of the inhabitants within the respective tracts were white in 2000. The lowest percentage was located in Tract 9704, which includes the city of Columbia. Local officials have indicated that most of the minority population in Adair County resides within or near the city limits. No minority communities of disproportionate numbers of minorities will be relocated by this project.

- **Green County Census Tracts (9901-9904)** indicated that between 93.7 and 99.4 percent of the inhabitants within the respective tracts were white in 2000. The lowest percentage of white inhabitants was found in Tract 9902, which includes the city of Greensburg. Field visits and interviews with local officials have confirmed that most of citizens with minority status reside in or near the city limits.

- **Marion County Census Tracts (9702-9708)** indicated that between 81.1 and 98.7 percent of the inhabitants within the respective tracts were white in 2000. The highest percentages of minorities were of African American descent and the percentages ranged between 0.4 and 17.1 percent. Two of the census tracts, 9702 and 9707, had high percentages of all minorities. These tracts include the city of Lebanon. Conversations with local officials at the Marion County Housing Authority and the Property Valuation Assessment offices and field trips confirmed the census reports. An additional area, Census Tract 9703 (St. Mary), reported 16.3 percent of its inhabitants as African Americans. This area, near Frogtown Road, is just west of the proposed Option 1 corridor. At this time, no corridor that is being studied would affect the minority community. Every consideration will be made if the corridors are shifted to ensure that the project does not segment or relocate this minority community. No other minority communities or disproportionate numbers of minorities will be relocated by the project.

- **Taylor County Census Tracts (9801 – 9805)** indicated that between 91.1 and 98.8 percent of its inhabitants are white. The highest percentage of minorities were located within Tracts 9803, 9804 and 9805. Each of these tracts includes portions of the City of Campbellsville. Field trips and conversations with local officials have indicated that most of the minority residents in Taylor County live within or near the city limits. No minority communities or disproportionate numbers of minorities will be relocated by this project.

- **Washington County Census Tracts (9801-9803)** indicated that between 98.9 and 99.7 percent of its inhabitants are white. The highest percentage of minorities reside in Tract 9802, which includes the city of Springfield. Field trips and conversations with local officials have confirmed that most of the minority residents in Washington County live within or near the city

limits. No minority communities or disproportionate numbers of minorities will be relocated by this project.

According to U.S. Census 2000 reviews and windshield inspections, the project corridors avoid areas within the counties where minority and/or ethnic neighborhoods were identified. Therefore, the potential impacts associated with the reconstruction or new development of a highway appear to be low. If minority or ethnic communities are affected, all efforts will be made to design a roadway that will avoid relocating, dividing or otherwise disrupting minority communities.

If the no-build alternate is selected, racial balances in the region and each of the counties will remain similar to those reported above. Option 1 or Option 2/3 are not anticipated to cause racial balances to change if they are selected as the build alternate for the parkway. Neither corridor displaces or divides disproportionate numbers of minority or ethnic populations. Therefore, no environmental justice concerns appear to exist within the project corridors.

C. Educational Attainment by Percentage

Kentucky had a higher percentage than the project area of high school graduates and of those who earned a Bachelor's Degree or higher. Following is a table that compares the educational attainment by percentages for each county and Kentucky.

Table 6 - Educational Attainment by Percentage, 1990 & 2000

Area	High School Graduate or Higher			Bachelors Degree or Higher		
	1990	2000	Percent Change	1990	2000	Percent Change
Kentucky	64.6%	74.1%	14.7	13.6%	17.1%	25.7
Adair County	46.3%	60.1%	29.8	7.4%	10.9%	47.3
Green County	49.0%	61.4%	25.3	6.8%	9.1%	33.8
Marion County	58.9%	70.8%	20.8	6.4%	9.1%	42.2
Taylor County	57.4%	68.0%	18.5	10.1%	12.2%	20.8
Washington County	57.8%	68.8%	19.0	7.5%	13.3%	77.3

The higher percentages of residents who obtained high school diplomas were in the three northern counties – Marion, Taylor and Washington. Reviews of statewide and regional demographics have shown that the higher levels of education are obtained in urbanized areas such as Lexington, Louisville and Northern Kentucky. These areas are more populated, and as a result attract more industry and jobs. The counties within the study area have all realized measurable improvement in educational attainment. These improved graduation rates indicate that the workforce for potential employers has increased. An article in the San Antonio Business Journal indicated that, "a recent study reveals that firms locate in areas with high-performing schools, in part because skilled workers demand excellent learning experiences and opportunities for their children. In addition, good schools improve the quality of the available work force, a key consideration in most corporate locations. This finding corroborates earlier research and is consistent with a fundamental role of government in economic development."

If the no-build alternate is selected, traffic conditions for students and educators will remain difficult within the towns throughout the corridor. If Option 1 is selected, much of the traffic that travels through the region will be

diverted from the roadways concentrated around the towns, and will ease traffic conditions for local schools and colleges. If Option 2/3 is selected, additional traffic capacity will be provided through additional lanes and bypasses.

D. Economic Data

1. Poverty Rate Estimates

Census data were gathered for each of the counties within the project corridors. Table 7, below, is a comparative chart of the project area county poverty rates:

Table 7: Poverty Status of Individuals, Year 2000, Residing in Adair County, Green County, Marion County & Washington County

Area	Percent below poverty level
Adair County	**24.0%**
Green County	**18.4%**
Marion County	**18.6%**
Taylor County	**17.5%**
Washington County	**13.5%**

Field trips and conversations with local officials have indicated that no low income neighborhoods, family clusters or evidence of socially interdependent communities exist within the project corridors. If the corridors are shifted, or if other areas are considered in the future, care will be taken to avoid relocating and segmenting neighborhoods or communities that support these residents.

The project corridors avoid areas within the counties where low income neighborhoods were identified. Field visits and information gathered during the public meetings have revealed that the corridors are located

mainly in areas that are either sparsely populated or unpopulated. Most of the individuals that would meet conditions indicating existence at or below the poverty level are located within or near the limits of the cities. Field trips did not reveal any neighborhoods or concentrations of socially interdependent or family clusters. Therefore, the potential impacts associated with the reconstruction or development of a new highway appear to avoid causing disproportional impacts to low income neighborhoods, and no environmental justice issues appear to exist for either corridor.

If the no-build alternate is selected, economic conditions, including poverty rates, will remain similar to the numbers reported above. If either Option 1 or Option 2/3 are selected, secondary and cumulative impacts to low income residents within the counties appear to be primarily positive. As businesses are attracted to the area and new jobs are established the economic conditions within the area and each respective county are likely to improve. Additionally, if a new roadway is constructed to allow safe and efficient travel to new and existing work sites, it is possible that the poverty rates could be reduced by the creation of the new jobs.

2. Per Capita Personal Income

Per capita personal income (PCPI) is an often-used indicator of financial well-being but because it is an average, it does not reflect income distribution. This indicator combines an area's total income and population. Examining growth in PCPI may illuminate several items, including how well aggregate income is keeping up with population growth, how average income is faring relative to inflation or how income growth compares to others. PCPI is linked to indicators of a literate and well-educated population and therefore PCPI levels in urban areas are typically higher than in rural areas.

In 2001, **Kentucky** had a per capita personal income (PCPI) of $24,878. This PCPI ranked 41st in the United States and was 82 percent of the national average, $30,413. In 1991, the PCPI of Kentucky was $16,207 and ranked 44th in the United States. The average annual growth rate of PCPI over the past 10 years was 4.4 percent. The average annual growth rate for the nation was 4.3 percent. Following is a table that compares PCPIs for Kentucky and the counties within the project study area:

Table 8 PCPIs for KY and the Project Counties

Area	2001 PCPI	State Ranking	Percentage of State Average	Percentage of National Average	Percent of Change 2000 - 2001	1991 – 2001 Annual Average Growth Rate
Kentucky	$24,878	NA	NA	82%	NA	4.4%
Adair	$17,317	87	70%	57%	2.8%	3.3%
Green	$15,815	110	64%	52%	- 1.1%	2.6%
Marion	$20,009	58	80%	66%	0.2%	2.6%
Taylor	$19,024	63	76%	63%	2.5%	3.0%
Washington	$22,113	40	89%	73%	- 1.5%	5.0%

If the no-build alternate is selected, the rate of increases in the PCPIs for the region will continue to increase slowly. If Option 1 or Option 2/3 are selected as the build alternate, the PCPIs could grow at an increased rate, but economic stimulation will be dependent upon the continuing efforts of local, regional, state and federal officials' efforts to recruit and expand industrial and commercial growth.

3. Earnings by Industry

Earnings of persons employed in **Kentucky** increased from $41,806,161 *(All income estimates with the exception of PCPI are in thousands of dollars, not adjusted for inflation.)* in 1991 to $70,491,141 in 2001, an

average annual growth rate of 5.4 percent. The largest industries in 2001 were services, 23.4 percent of earnings; state and local government, 12.9 percent; and durable goods manufacturing, 12.5 percent. In 1991, the largest industries were services, 20.3 percent of earnings; state and local government, 12.9 percent; and durable goods manufacturing, 12.2 percent. Of the industries that accounted for at least 5 percent of earnings in 2001, the slowest growing from 1991 to 2001 was nondurable goods manufacturing (6.8 percent of earnings in 2001), which increased at an average annual rate of 2.3 percent; the fastest was finance, insurance, and real estate (5.4 percent of earnings in 2001), which increased at an average annual rate of 7.5 percent.

Earnings of persons employed in **Adair County** decreased from $142,609 in 2000 to $142,006 in 2001, a decrease of 0.4 percent. The average annual growth rate from the 1991 estimate of $96,272 to the 2001 estimate was 4.0 percent.

Earnings of persons employed in **Green County** decreased from $69,529 in 2000 to $62,706 in 2001, a decrease of 9.8 percent. The average annual growth rate from the 1991 estimate of $53,533 to the 2001 estimate was 1.6 percent.

Earnings of persons employed in **Marion County** decreased from $195,971 in 2000 to $195,137 in 2001, a decrease of 0.4 percent. The average annual growth rate from the 1991 estimate of $105,379 to the 2001 estimate was 6.4 percent.

Earnings of persons employed in **Taylor County** increased from $263,243 in 2000 to $268,365 in 2001, an increase of 1.9 percent. The average annual growth rate from the 1991 estimate of $232,572 to the 2001 estimate was 1.4 percent.

Earnings of persons employed in **Washington County** decreased from $110,956 in 2000 to $101,752 in 2001, a decrease of 8.3 percent. The average annual growth rate from the 1991 estimate of $61,816 to the 2001 estimate was 5.1 percent.

These economic indicators reveal that the area provides moderate to low contributions to the cumulative figures for the Commonwealth. Many factors contribute to these conditions including the populations of the area, the number of available jobs, the capabilities of the workforce and the distance of available work.

If the no-build alternate is selected, earnings rates continue to increase/decrease at similar rates. If either Option 1 or Option 2/3 are selected, and if local and regional officials continue in their efforts to recruit new industrial and commercial business into the region, it is likely that earnings increases will accelerate based upon levels of new economic activity within each county and the region. In addition, agricultural earnings may increase with the improved traffic and travel times for area farmers.

4. Major Manufacturers by County

Each county within the project corridor features at least one industrial park. The parks have been constructed to attract industries, and to continue the promotion of economic development. The purpose of identifying and listing manufacturing statistics is to establish relationships between population patterns, commuting patterns, income distributions and employment conditions within the respective counties and the labor market areas. Following are tables listing the major manufacturing firms for each county, and their corresponding products, total number of employees and the year of establishment:

Table 9A - Adair County Manufacturing Firms

Firm	Product(s)	Emp.	Year Established
FABCO Inc	Machine shop: arc & gas welding; drilling, boring, cutting, honing; structural steel fabricating	9	1980
Gaddie-Shamrock LLC	Crushed limestone & asphalt products	50	1938
Garry Humphress & Sons Inc	Antique reproduction furniture	2	1974
Green River Window & Door Co	Wooden windows & doors for log homes	12	1991
Hancock Furniture Inc	Wooden bedroom & dining room furniture. Custom furniture-Designing and building.	4	1979
Image Analysis Inc	Medical devices	10	1992
Imo Pump Inc	Hydraulic pumps, Fuel system pumps	91	1974
J Downey & Son Lumber	Heading; hardwood, rough & dimension lumber sawing	45	1975
Kentucky Tie & Lumber Co	Hardwood lumber & pallet materials	70	1958
Long's Precision Die Machining	Machine shop: surface, centerless & cylindrical grinding, MIG welding, drilling, boring, cutting, honing, mill & lathe work	2	1988
McCammish Manufacturing Co	Furniture	43	1997
Mid-State Signs	Custom electrical signs	4	1975
Northeastern Products Corp	Sawdust processing: animal bedding & smoking sawdust	14	1986
Old Craftsman Furniture Shop	Cherry bedroom furniture	5	1980
Pyles Concrete Inc	Precast & ready-mixed concrete	20	1962
South Central Printing Inc	Offset & letterpress printing: calendars, book composing, business forms and cards, tags & labels; side & saddle stitch binding, process color printing.	21	1979
Tenco Manufacturing	Sheltered workshop: contract assembling	9	1980
W H Sandusky & Son Inc	Sawing & planing mill: hardwood, rough, dimension, grade lumber & millwork	15	1925
Total Number of Firms = 18		***Total number of employees = 426***	

Table 9B - Green County Manufacturing Firms

Firm	Product(s)	Emp.	Year Established
A & B Downey Lumber Co	Millwork, hardwood & softwood lumber	9	1979
Aluminum Fabricators Inc	Aluminum steeples, cupolas & architectural metal products	21	1981
Andy's Woodcrafts	wooden caskets & coffins	1	1996
Bishop's Cabinet Shop Inc	Custom kitchen cabinets, counter tops, vanities & entertainment centers	5	1954
C & F Custom Quilting Inc	Bedspreads, comforters, dust ruffles & pillows	6	1983
Greensburg Bottling Co	Carbonated beverages	27	1926
Nally & Haydon Surfacing Inc	Asphalt	15	1963
Stor Mor Inc	Portable insulated steel buildings	31	1995
Topps Safety Apparel Inc	Work clothes & uniforms	49	1967
Yates Welding	Arc welding & custom metal fabricating	2	1986
Total Number of Firms = 10		***Total number of employees = 166***	

Table 9C - Marion County Manufacturing Firms

Firm	Product(s)	Emp.	Year Established
American Wood Fibers Inc	Cedar, poplar & pine wood products	25	1990
Angell Manufacturing Co	Metal nameplates & plaques & aluminum trim	150	1965
Canton Cooperage Co	Wine barrels, staves & headings	41	1983
Central Kentucky Tool & Engineering Inc	Machine shop: general, lathe, mill & CNC machining; EDM, drilling, cutting, honing, tool & die, sheet metal fabricating, stamping, welding, grinding & CAD	50	1970
Curtis-Maruyasu America Inc	Tube fabricating	375	1988
Hendrickson Truck Suspension Systems	Heavy truck suspensions	57	1998
Kentucky Cooperage Inc	White oak whiskey barrels	211	1983
Lebanon Oak Flooring Co	Millwork, hardwood & dimension furniture parts & flooring	60	1897
Montebello Packaging Inc	Collapsible aluminum and laminate squeeze tubes primarily for the pharmaceutical and cosmetic industries	98	1999
Morton Custom Plastics	Plastic Products	175	1994
Nally & Haydon Surfacing LLC	Crushed limestone & asphalt	55	1991
NSU Corp	Muffler component parts, fiberglass for headliners for various automotive companies, substrate board	70	2001
Plastic Products Co Inc	Plastic injection molding	120	1986
Portland Forge	Custom impression steel die forgings for truck & farm machinery industries	100	1990
Summa Technology Inc	Metal fabrication: cutting, sawing, laser cutting, welding (certified), design services, specialize in returnable material handling racks & baskets	96	1976

Table 9C continued

Firm	Product(s)	Emp.	Year Established
TG Kentucky LLC	Rubber molded & plastic interior automobile parts	500	1999
Union Tools Inc	Wooden tool handles	40	1994
Universal Sportswear Inc	Sewing contractors	36	1994
Total Number of Firms = 20		***Total number of employees = 2,259***	

Table 9D - Taylor County Manufacturing Firms

Firm	Product(s)	Emp.	Year Established
Adanta Human Development Services	Sheltered workshop: contract assembling & light bench woodworking; assemble screws and washers, count and package screws; count concrete nails and box.	21	1976
Air Safety Kentucky	Respiratory Protection Equipment	16	2003
Airguard	Air filtration products	187	2000
Brentwood International	Paper converting	21	1990
Campbellsville Apparel	Men's T-Shirts & briefs	197	1999
Campbellsville Industries Inc	Ornamental metal & aluminum fabricating; steeples, cupolas, crosses, cornices, awnings, columns, louvers, shutters, railings & balusters	125	1955
Central Kentucky Glass Co	Aluminum store front frames	15	1975
Classic Kitchens Inc	Custom wooden cabinets, vanities & bookcases	32	1983
Cox Interior Inc	Hardwood moldings, trim, stair parts, interior doors & mantels	726	1983
Creation Sportswear Inc	Textile screen printing	35	1984
Farmer's Gate Co	Steel gates, coral panels, round bale feeders, walk-throughs	16	1997
Fleetwood Travel Trailers of Kentucky	Travel Trailers	230	2000
Ingersoll-Rand Co	Vacuum pumps & air & gas compressors	180	1969
J & D Auto Electric	Starter, alternator & generator rebuilding service	15	1983
Lippert Components	Trailer Chassis	20	2001
Murakami Manufacturing USA	Motor vehicle parts & accessories	30	2001
Parker-Kalon	Threaded fasteners	110	1964
Poly Pro LLC	Interior & exterior molding components made of a polyurethane foam.	15	1999
Tec-Fab Inc	Custom sheet metal fabricating: bell towers, church steeples, cupolas, cornices, crosses & columns	15	1978
Whitney Lumber Inc	Hardwood lumber	18	1952
Wholesale Hardwood Interiors	Custom millwork, hardwood flooring, interior moldings, door & stair parts	80	1985
Total Number of Firms = 21		***Total number of employees = 2,104***	

Table 9E - Washington County Manufacturing Firms

Firm	Product(s)	Emp.	Year Established
Akebono Corporation	Friction brake pads	40	2002
All Weather Insulation LLC	Cellulose insulation & hydro seeding mulch	11	1978
Barber Cabinet Co Inc	Wooden, laminated & custom made vanities & kitchen cabinets	58	1947
Boone Sheet Metal Inc	Sheet metal fabricating	12	1991
Midwest Stamping Co	Mig welding.	83	1998
North American Pipe Corp	Industrial & construction plastic pipe	73	1969
Smith Cabinet Craft Inc	Custom wooden cabinets, counter tops & entertainment centers	15	1986
Springfield Products Inc	Automobile armrests & interior plastic parts, seat trim components, instrument panel components	270	1990
Toyotomi-America Co	Automotive after-market products; automotive stampings	151	1999
Total Number of Firms = 9		***Total number of employees = 713***	

Source: Kentucky Cabinet for Economic Development (01/13/2004).

If the no-build alternate is selected, truck and commuter access to and from these facilities will remain unchanged. Traffic conditions associated with rush hours in the downtown areas will not improve. If Option 1 is selected as the build alternate, through traffic including trucks and commuters will be diverted from the crowded conditions in the downtown areas. Option 1 will provide commuters who travel through the region between work and home the quickest route by totally avoiding the downtown areas. Additionally, Option 1 would provide the quickest access for trucks to major highways such as parkways and interstates. If Option 2/3 is selected, traffic capacity will be increased along the existing roadways. This increase in capacity will provide trucks, farmers and commuters improved, safer, more efficient passage between the towns and through the region.

5. Labor Force Market

The counties within this study area and the defined labor market areas indicate that a high number of the area population will be available for existing and future labor. Following are maps that identify the labor

market areas (LMA) for each county. The LMA typically includes the counties immediately surrounding the identified county.

Figure 1 Adair County Labor Market Area



Figure 2 Green County Labor Market Area





Figure 3 Marion County Labor Market Area



Figure 4 Taylor County Labor Market Area



Figure 5 Washington County Labor Market Area

The following table illustrates the conditions of labor forces for each of the counties and their respective labor market areas (LMA). Each county and its corresponding LMA is illustrated above.

TABLE 10 - Labor Characteristics for Each County and LMA*

(* LMA totals overlap. Several counties are included in more than one LMA.)

	Adair County		**Labor Market Area**	
	2002	**Nov. 2003**	**2002**	**Nov. 2003**
Civilian Labor Force	7,958	7,753	43,144	43,299
Employed	7,527	7,415	40,311	40,944
Unemployed	431	338	2,833	2,355
Unemployment Rate (%)	5.4	4.4	6.6	5.4
	Green County		**Labor Market Area**	
	2002	**Nov. 2003**	**2002**	**Nov. 2003**
Civilian Labor Force	4,689	4,669	41,306	41,815
Employed	4,430	4,501	39,090	40,057
Unemployed	259	168	2,216	1,758
Unemployment Rate (%)	5.5	3.6	5.4	4.2
	Marion County		**Labor Market Area**	
	2002	**Nov. 2003**	**2002**	**Nov. 2003**
Civilian Labor Force	11,379	11,740	122,828	124,774
Employed	10,940	11,322	115,225	118,170
Unemployed	439	418	7,603	6,604
Unemployment Rate (%)	3.9	3.6	6.2	5.3
	Taylor County		**Labor Market Area**	
	2002	**Nov. 2003**	**2002**	**Nov. 2003**
Civilian Labor Force	9,474	9,432	78,432	77,840
Employed	8,784	8,854	73,148	74,269
Unemployed	690	578	5,284	3,571
Unemployment Rate (%)	7.3	6.1	6.7	4.6

TABLE 10 - Labor Characteristics for Each County and LMA (cont.)

	Washington County		Labor Market Area	
	2002	Nov. 2003	2002	Nov. 2003
Civilian Labor Force	6,093	6,075	169,985	170,967
Employed	5,785	5,829	159,725	163,385
Unemployed	308	246	10,260	7,582
Unemployment Rate (%)	5.1	4.0	6.0	4.4

6. Total Available Labor

As noted above, labor market areas (LMA) are typically the counties that surround the identified county. The county seat is usually the economic center for the county because all government services are located within the county seat. Table 11 (following) illustrates the available labor forces within each county of the study area and their relevant LMAs. Please refer to the Figures 1 – 5 above to identify the counties within the respective LMAs. Each county and LMA identify the total number of unemployed persons, the potential labor supply, the underemployed (individuals who work at jobs that are below their qualifications), and a projected available labor force between 2003 and 2007.

If the no-build alternate is selected, changes to the LMAs in respect to employment and unemployment activities will remain unchanged. If Option 1 or Option 2/3 is selected for the build alternate, LMAs could see increases in totals of employed residents, and a decrease in unemployment rates. As mentioned below, half or more of those working in each of the LMAs are underemployed. The new roadway could assist local and regional officials' attempts to recruit new industrial and commercial firms into the region. Many of the underemployed citizens would be likely to shift to the available, higher paying jobs. This would open jobs that pay lower and require less skills. Unemployed residents may be able to find work that was formerly unavailable.

Table 11 - Labor Availability, 2002 and Future Labor Availability for Counties and LMAs, 2003 - 2007

	Available Labor, 2001				Future Labor: Becoming 18 Years of Age (2003-2007)
	Total	Unemployed	Potential Labor Supply	Underemployed	
Labor Market Area	13,212	2,888	2,355	7,969	6,995
Adair County	2,085	388	359	1,338	1,172
	Available Labor, 2001				Future Labor: Becoming 18 Years of Age (2003-2007)
	Total	Unemployed	Potential Labor Supply	Underemployed	
Labor Market Area	11,297	2,329	2,007	6,961	6,534
Green County	1,456	332	303	821	826
	Available Labor, 2001				Future Labor: Becoming 18 Years of Age (2003-2007)
	Total	Unemployed	Potential Labor Supply	Underemployed	
Labor Market Area	36,224	7,469	4,865	23,890	19,288
Marion County	2,303	620	183	1,500	1,290
	Available Labor, 2001				Future Labor: Becoming 18 Years of Age (2003-2007)
	Total	Unemployed	Potential Labor Supply	Underemployed	
Labor Market Area	12,322	2,854	1,972	7,496	6,944
Taylor County	2,961	606	540	1,815	1,605
	Available Labor, 2001				Future Labor: Becoming 18 Years of Age (2003-2007)
	Total	Unemployed	Potential Labor Supply	Underemployed	
Labor Market Area	18,514	4,275	1,878	12,361	9,590
Washington County	1,394	379	143	872	848

7. Commuting Patterns

Following are data that report the number of commuters who work within their respective counties and the total number of commuters who work outside their respective counties. It has been estimated that between 23.3 (Taylor County) and 47.1 (Green County) percent of the residents commute out of their resident county to worksites. The number of workers commuting into the counties varies between 11.2 (Green County) and 32.1 (Washington County) percent. When these figures are cross

referenced with the number of manufacturers and their total number of employees, it becomes evident that the commuting patterns are directly proportional to the number of jobs available within the counties.

Table 12 – Commuting Patterns of Residents and Employees, 2000

Residents of Adair County	**2000**	**Percent**
Working and Residing In County	4,500	62.3
Commuting Out of County	2,722	37.7
Total Residents	7,222	100.0
Employees in Adair County		
Working and Residing In County	4,500	82.9
Commuting Into County	931	17.1
Total Employees	5,431	100.0
Residents of Green County	**2000**	**Percent**
Working and Residing In County	2,504	52.9
Commuting Out of County	2,229	47.1
Total Residents	4,733	100.0
Employees in Green County		
Working and Residing In County	2,504	88.8
Commuting Into County	317	11.2
Total Employees	2,821	100.0
Residents of Marion County	**2000**	**Percent**
Working and Residing In County	5,056	67.0
Commuting Out of County	2,487	33.0
Total Residents	7,543	100.0
Employees in Marion County		
Working and Residing In County	5,056	77.5
Commuting Into County	1,472	22.5
Total Employees	6,528	100.0
Residents of Taylor County	**2000**	**Percent**
Working and Residing In County	7,488	76.7
Commuting Out of County	2,281	23.3
Total Residents	9,769	100.0
Employees in Taylor County		
Working and Residing In County	7,488	76.5
Commuting Into County	2,294	23.5
Total Employees	9,782	100.0
Residents of Washington County	**2000**	**Percent**
Working and Residing In County	2,744	57.3
Commuting Out of County	2,043	42.7
Total Residents	4,787	100.0
Employees in Washington County		
Working and Residing In County	2,744	67.9
Commuting Into County	1,297	32.1
Total Employees	4,041	100.0

If the no-build alternate is selected, commuting patterns are anticipated to remain similar to those reported above. If Option 1 is selected as the build alternate, commuting patterns would be anticipated to drop as new industrial and commercial sites are developed within the corridor. It is likely that this decrease in commuting patterns could be slower than if Option 2/3 is chosen. Option 2/3 is located more closely to the existing and proposed industrial parks in the region. The proximity of Option 2/3 would provide a closer access to residents who may choose to work in their home counties.

E. FARMLAND

1. Purchase of Agricultural Conservation Easements

Under Kentucky's Farmland Preservation Program, the Purchase of Agricultural Conservation Easement (PACE) Corporation has been authorized to purchase agricultural conservation easements. These easements are to ensure that lands currently in agricultural use will continue to remain available for agriculture and not be converted to other uses. Since 1994, PACE has purchased conservation agreements with 75 farms totaling 16,238 acres. In addition, 19 easements on 3,069 acres have been donated to the program. Another 512 applications are pending for a total of 101,000 acres.

In the project area, conservation easements have been purchased in Washington and Taylor Counties. Applications for additional conservation easements have been submitted in all counties in the project area except for Marion (i.e., Washington: 1 to 3 applications; Green and Adair: 4 to 9 applications; and Taylor: 10 to 20 applications).

In Taylor County, several conservation easements have been established on farms off KY 883 near the intersection with US 68. In addition, several

conservation easements have been purchased for farms along the Green River near the Tebbs Bend Battlefield. In Washington County, a farm with a conservation easement is located off US 150 near the Nelson County line and therefore, this farm is outside the project corridors.

The potential exists that alternates developed in either corridor could affect conservation easements either purchased by PACE or donated by landowners. If alternates cannot be developed to avoid these farms, KYTC will have to coordinate with both the landowner and PACE to reimburse or replace properties with agricultural conservation easements. If alternates are developed that will affect farmland with conservation easements, the Land Evaluation Site Assessment (LESA) scores will be affected. The no-build alternate, if selected, would have no effects upon conservation easements. Potential impacts to agricultural conservation easements would be higher for Option 1 than Option 2/3. Option 1 is a new roadway, and Option 2/3 would provide improvements and widening of existing roadways. Option 2/3 is located in areas where development occurred while Option 1 has seen very limited development. In addition, if Option 1 is selected, improvements to crossroads will be necessary to provide safe and efficient access between the county seats and the new roadway. This could cause additional loss of agricultural conservation easements. Option 2/3, located in a more developed area would require less farmland. In addition, fewer agricultural conservation easements are situated in this corridor, and it is unlikely that connecting roads would be required to be improved. Therefore, Option 2/3 has fewer secondary/cumulative impacts and fewer direct impacts on agricultural conservation easements that Option 1.

2. Agricultural Districts

Under Kentucky's Agricultural District and Conservation Act, owner or owners of land may petition the local conservation district to create an

agricultural district within a county. The creation of agricultural districts is part of a policy to protect and conserve agricultural lands. An agricultural district must be a minimum of 250 contiguous acres and must be capable of supporting active agricultural production. To support the preservation of agricultural lands, KYTC is required to consider and mitigate the impact of present and future plans upon the continued agricultural use of land within an agricultural district. KYTC would be required to coordinate with the local conservation district to consider impact and potential mitigation.

Fourteen agricultural districts have been identified near Options 1, 2, and 3 (See Appendix A, Figure 10). One agricultural district (044-02) is located within the Option 1 corridor. This agricultural district is located in Green County near Gresham where KY 565 and KY 1913 intersect. No agricultural districts are currently located within the Option 2 or Option 3 corridors. If Option 1 is selected, efforts should be made to avoid the agricultural district. If avoidance is not feasible, coordination with the local conservation district and mitigation may be necessary.

If the no-build alternate is selected, there will be no impacts on agricultural districts. The number of agricultural districts is increasing in the region, and most of the districts are located in the areas surrounding Option 1. Option 2/3 is situated closer to areas either already developed or undergoing land use transitions to residential, commercial and industrial applications. Option 1 would have the greater potential impact on agricultural districts than Option 2/3. Secondary and cumulative impacts include further potential loss of farmlands under this classification resulting from commercial development along the new corridor interchanges and the possible improvements to roadways connecting Option 1 to the county seats. Future design phases will need to coordinate with the Natural Resource Conservation Service on potential impacts to farmlands rated as prime, unique, or of statewide importance.

F. Section 6(f) Resources

The project area was reviewed and inspected for outdoor recreational land and water areas, and facilities that were established with assistance from grants-in-aid from the Land and Water Conservation Fund (LWCF). The National Park Service and the Kentucky Department for Local Government administer these funds to local jurisdictions. Counties and cities in the project area have received funds for parks, swimming pools, boat ramps, tennis courts, and baseball fields (see Table 13 for a breakdown of the number of Section 6(f) resources by county).

Table 13: Section 6(f) Resources

County	Number of Section 6(f) Resources	Section 6(f) Resources Potentially Affected		
		Option 1	Corridor 2	Corridor 3
Adair	4	0	0	0
Green	3	0	0	0
Marion	4	0	0	0
Taylor	6	0	0	0
Washington	5	0	1	1

Properties acquired or developed with LWCF assistance are prohibited by Section 6(f) of the Land and Water Conservation Fund Act from conversion to other than public outdoor recreation use without approval of the National Park Service. This approval can only occur after all practical alternatives have been considered. When LWCF facilities are impacted through either partial or

total acquisitions, the property acquired must be replaced with property that is of equal, or greater, fair market value, and the land must be used for similar purposes.

While several recreational facilities within the project counties have received LWCF monies, only the Idle Hour Community Park in Springfield has the potential to be affected. The Idle Hour Community Park is located at the intersection of KY 555 and KY 528. It contains tennis courts, baseball and softball fields, basketball, volleyball, croquet and shuffleboard courts, tot lot, walking trails, and picnic area. Option 1 and Option 2/3 have the potential to affect this park. Any widening on the east side of KY 555 in front of the Idle Hour Community Park would acquire property from a Section 6(f) resource and require replacement property for mitigation. It appears that alternates could be developed that widen on the west side of the existing roadway and therefore, would not affect the park. Potential Section 6(f) impacts could be avoided.

If the no-build alternate is selected, no impacts to Section 6(f) resources would occur. If either Option 1 or Option 2/3 are selected, positive secondary and cumulative impacts may result from the improved access for area residents. The improved access could result in increased numbers of visits by residents. Indirect impacts would include increased social and recreational activities for families and acquaintances at these resources.

G. Aesthetics/Visual Impacts

It is anticipated that the project will have only a minimal visual impact on the community. The aesthetic quality of a community is composed of visual resources such as those physical features that make up the landscape, including land, water, vegetation, and man-made features (e.g., buildings,

roadways, and structures). Visual impacts affect communities from two perspectives:

1) the view from the road, and
2) the view of the road.

The project is expected to have only minor visual effects on the area. The project corridor is not part of the Kentucky Scenic Byway system. Interviews with local officials and reviews of area maps indicate no corridor features, scenic areas or recognized areas of beauty should be acquired within the project corridors. The most noticeable visual impact of the project will be the removal of existing vegetation. This will affect nearby residents. To minimize visual impacts, efforts should be made to only clear vegetation necessary for construction, proper sight distances, and horizontal clearance requirements. Re-vegetation with native flora would minimize the visual impacts of the project construction. Potential visual effects on several historic properties could be mitigated with appropriate landscaping.

If the no-build alternate is selected, no visual changes will occur in the area. If Option 1 is selected, the new roadway will be located in an area that has been primarily agricultural. Secondary and cumulative impacts may include highway commercial development (i.e. gas stations, restaurants, hotels) at interchanges. If Option 2/3 is selected, visual changes will be minimal because the project will be a road improvement to an existing highway facility. Secondary and cumulative impacts associated with Option 2/3 would be some additional development along the existing corridor.

H. Pedestrian and Bicycle Facilities

KYTC will consider the need for bicycle facilities and pedestrian walkways as required by the Kentucky Pedestrian and Bicycle Travel Policy (July 2002).

No dedicated bicycle facilities or pedestrian walkways have been included in the proposed project corridors. Based on observation of pedestrian traffic and the public involvement process, little pedestrian traffic occurs along the existing roadways. Currently, pedestrian facilities occur only in the segments of existing KY 555 and KY 55 in Lebanon, Campbellsville, and Columbia and these facilities would be unchanged. Due to the primarily rural nature of the project corridors and planned bypasses of the larger cities, it is anticipated that there will be little pedestrian traffic and there may not be a need for pedestrian walkways as part of the project.

Little bicycle traffic and no bicycle facilities exist in the project area. Washington, Marion, Taylor, Adair, and Green Counties do not have comprehensive bicycle plans. If Option 1 is selected, no facilities would be included in the project plans. Limited access highways do not allow bicycle and pedestrian traffic. If Option 2/3 is selected, no local government agencies, community interest groups, or public comments have requested bicycle facilities or improvements to assist bicyclists. Therefore, no impacts are anticipated for Option 2/3. The new highway should still improve conditions for bicyclists by providing wider, paved, 10-foot shoulders.

I. Construction

Potential construction impacts from the Heartland Parkway Project are expected to be minimal, of short-term duration, and with no adverse environmental impacts. Traffic will be maintained at all times. A maintenance-of-traffic plan would be prepared during the design phase. The KYTC Division of Environmental Analysis and the KYTC Division of Highway Design would coordinate construction commitments in the design notes. The Contractor would be required to follow all requirements as outlined by KYTC.

Construction activities will cause some erosion because areas cleared of trees and vegetation are prone to erosion during storm events. KYTC will implement the erosion and sedimentation controls specified in the Kentucky Department of Highways Standard Specifications (KDHSS), Sections 212 and 213, develop erosion control plans during the final design, and implement best management practices during design and construction. In time, re-vegetation will stabilize the construction sites and impacts will diminish. Planting native species of vegetation within construction and right-of-way limits will stabilize highway shoulders; prevent drop-offs, rills, and gullies; beautify the roadside; and prevent sedimentation of culverts and nearby streams. Use of native species also reduces the spread of invasive species (e.g., noxious weeds).

Construction waste will be managed in accordance with KDHSS Section 204 and other applicable state regulations. Debris generated during removal of structures and obstructions will be managed in accordance with KDHSS Section 203 and other applicable state regulations. It is not anticipated that the project will require waste disposal sites to manage excavation material.

Standard noise reducing measures would be implemented during the construction phase to prevent construction noise from becoming a public nuisance.

Road construction activities have the potential to generate fugitive dust. Fugitive dust consists of particulate matter that becomes airborne directly or indirectly as a result of human activity. Road construction can generate fugitive dust from earth-moving equipment (e.g., bulldozers, graders) and trucks loading and unloading or transporting earthen materials. Wind can cause fugitive dust in areas cleared of vegetation during construction. To minimize fugitive dust generation, KYTC will follow KHDSS Section 107.01.04. During construction, KYTC or its contractor will apply water or

other approved materials (chemical dust suppressants), as appropriate, to control dust.

If the no-build alternate is selected, no construction impacts will occur. If Option 1 is selected as the build alternate, it will require greater amounts of excavation material (primarily farmland) than Option 2/3. Option 2/3 is located along existing highways in the region.

J. Summary and Conclusion of Socioeconomic Issues

The project area is located in south central Kentucky. The socioeconomic characteristics of the area include small cities and large expanses of agricultural areas. The land use of each community is similar. Most of the government services, commercial activities and neighborhoods are located within or near the city limits. The majority of the minority residents are also situated within or near the city limits (except for one community in the Frogtown area west of Lebanon in Marion County). This minority community would not be required to relocate. It is situated approximately ½ mile west of the western corridor.

Reviews of U.S. Census figures, conversations with local officials and area field trips have revealed that the project area counties are similar. Each county has a high percentage of employees in the respective workforces that are currently working in jobs that pay less and require less than the employees' qualifications. The educational attainments for each of the counties have increased over the past ten years, and the unemployment rates have remained fairly constant. All but one of the five counties has increased in population. Washington County has remained relatively stable over the past forty years and is predicted to continue this pattern through 2030. The increasing educational attainment, the underemployed workforce and the stable to increasing populations mean that a trainable, available workforce is

available within the project area. If industries and commercial companies locate to communities within the region, it is likely that those who are underemployed would move into the available higher paying jobs – some immediately and some after job-specific training. As this migration to new jobs develops, it is likely that the lower paying jobs that would become available could be filled by those who currently are unemployed or entering the workforce for the first time. The secondary/cumulative benefit is the ultimate lowering of the unemployment rates, improved per capita income levels for the region and overall improved economies for the project counties and the region. As economies improve, residents would be less likely to move to other counties or states in search of employment, and populations would continue to increase, but at higher rates. These benefits would include economic stimulation of the respective counties and the region, population retention for counties that are experiencing outmigration, a safe, efficient roadway to transport workers, goods and raw materials to and from work sites, improved access to government services and reductions in poverty rates.

A study, "*Do New Highways Attract Businesses?"* was conducted for the Transportation Research Board (January 2003); Hodge, Daniel J. (Cambridge Systematics, Inc.), Glen Weisbrod (Economic Development Research Group, Inc.), and Arno Hart (Wilbur Smith Associates, Inc.). Included in the study's methodology was an economic development survey to identify key economic development issues, and why companies chose not to expand or relocate in their study area. The top concerns included a lack of transportation access/infrastructure, availability of buildings and an available labor force. Furthermore, comments from participants in the survey included that "while transportation is not the only concern among economic development practitioners…it is consistently cited as a key consideration among companies contemplating an expansion or relocation and has influenced companies to relocate elsewhere."

Industrial recruiters, private consultants who work with firms who seek to expand or relocate operations, were interviewed for the study. These consultants work with state and local industrial development authorities to locate proper sites for their representative firms. They cited that at least 67 percent of industrial projects require immediate (1 to 2 miles) highway access and the remaining 33 percent of the projects demand one hour access to an interstate.

In reviewing the conditions within this study area, the individual counties and the labor market areas provide an ample and capable workforce to attract industry (50,000 in the combined labor market areas, 6,000 within the 5 counties). In addition, the educational attainment for the overall area has increased between 13 and 30 percent for the five counties over the past ten years. The missing component is an improved highway infrastructure. The new highway could significantly enhance travel within and through the area and provide a more efficient, safer linkage to interstate highways 64 and 65, and the Louie B. Nunn/Cumberland and the Martha Layne Collins/Blue Grass Parkways. The actual amount of industry that could be attracted to relocate or expand in this area would also be dependent upon the ability of local industrial developers, investments in complementary water, sewer, building spaces, and other infrastructure, labor force training and the recruiting and retention efforts of local officials. A survey was made of each of the counties to determine the amount of available land and/or buildings suitable for industrial relocation or expansion. Each county had available structures and sites with complementary infrastructure (power, water, sewer, and communication lines). A total of over 1,300 acres suitable for development is available and 18 buildings are currently on the market. Each of the potential sites and all of the buildings are between 1 and 60 miles to an interstate or parkway. Following is a table listing available industrial/commercial sites and buildings within the five counties:

Table 14 – Available Sites and Buildings

County	Site	Building	Acreage	Distance to Interstate
Adair	Osh Kosh # 2	NA	12 acres	I mile to Nunn PKWY 49 miles to I-65
Adair	Unnamed	NA	327 acres	4.6 miles to Nunn PKWY
Green	Unnamed	NA	103 acres	20.9 miles to Nunn PKWY
Green	Unnamed	NA	7 acres	23.7 miles to Nunn PKWY
Green	NA	Greensburg Furniture	NA	20 miles to Nunn PKYW 40 miles to I-65 50 miles to BG PKWY*
Green	NA	Green County Spec #1	NA	18 miles to Nunn PKWY 40 miles to I-65 55 miles to BG PKWY
Marion	Unnamed	NA	205 acres	24 miles to BG PKWY
Marion	Unnamed	NA	30 acres	22 miles to BG PKWY
Marion	NA	Lebanon Spec.#4	NA	20 miles to BG PKWY 40 miles to I-65
Marion	NA	Marion Co. Spec. #3	NA	23 miles to BG PKWY 44 miles to I-64
Taylor	Heartland Ind. Park	NA	202 acres	32 miles to Nunn PKWY 45 miles to BG PKWY
Taylor	Campbellsville Ind. Park	NA	58 acres	23 miles to Nunn PKWY 42 miles to BG PKWY
Taylor	Campbellsville Airport Site	NA	13 acres	25 miles to Nunn PKWY 40 miles to BG PKWY
Taylor	NA	Fruit of the Loom	NA	20 miles to Nunn PKWY 40 miles to I-65
Taylor	NA	Western KY Coca Cola	NA	15 miles to BG PKWY 40 miles to I-65
Taylor	NA	Taylor Co. Spec. #3	NA	23 miles to BG PKWY
Washington	Clearview Commerce Center	NA	359 acres	13 miles to BG PKWY
Washington	229-003	NA		15 miles to BG PKWY
Washington		11 buildings	NA	All buildings are located within or near Springfield and within 15 miles of the BG PKWY

*** BG PKWY = Martha Layne Collins/Bluegrass Parkway**

The closest regional economic centers are Bardstown, Bowling Green, Elizabethtown, Lexington, and Louisville. One of the highest commuting percentages for residents commuting out of the county to other areas to work was in Washington County – 42.7 percent. Many of the residents in Washington County travel to Bardstown, Elizabethtown and Louisville to work. These commuters have close and easy access to these regional economic centers via the Blue Grass Parkway, US 31W and Interstates 64 and 65. When combined with the proximity to these areas, the Washington County populace has the least challenging commute to jobs that are available outside of their resident county. When considering the loss of jobs in Washington County it may partially explain the reason the population trend has been in decline. As people secure jobs in areas farther from their home and as they establish themselves into long term jobs, they become more inclined to relocate closer to their workplaces.

Green County has the highest percentage (47.0%) of residents that commute out of the county to workplaces. Green County has the lowest number of manufacturing firms, one of the lowest population totals and is the most isolated of the counties in this study. New and/or improved roadways would allow residents safer, more efficient access to jobs. The Heartland Parkway would provide a regional link between Green County and other south-central Kentucky counties. A secondary impact would be the possible attraction of new industry to an area with a high percentage of workforce in Green County that is available for placement. The attraction of industry and the stimulation of local economies would result in lower unemployment rates and lower poverty rates. In addition, the improved economies would lower the out-migration of residents to other counties.

The increase of populations in Taylor and Marion Counties can be associated with the increase in industrial activities. These two counties have the highest number of manufacturing firms and the highest total of employees working in

this job sector of the counties included in this report. Only Adair County has a higher projected population for 2030 than Marion County. Adair County has been cited by local officials as a desirable retirement county due to its low cost of living, and its proximity to the lake resorts of Barren River, Green River, Cumberland and Dale Hollow Lakes.

The number of high school graduates has increased between 13.3 percent in Washington County and 29.7 percent in Adair County. The increases can indicate a more capable workforce for each of the counties, which might attract industry. In addition, if jobs are created, the per capita personal income and total personal incomes will increase with the better wages that accompany industrial jobs. As reported in the labor section of this report, many of the residents in the counties are overqualified for the jobs they currently occupy. These jobs, including clerical and retail work, will likely be vacated as the overqualified workers move toward the higher paying industrial jobs. The remaining workforce, including unemployed residents, would likely fill the non-industrial jobs reducing the unemployment rates for the counties.

Each county has at least one industrial park with available infrastructure such as water, gas, electricity, internal roads, telecommunication lines and other needs that are essential to attracting and maintaining light industrial and commercial businesses. Each industrial site is located less than 50 miles from an interstate highway or parkway, but the current roadways do not allow 4-lane access to these highways. Industrial firms have consistently cited adequate transportation infrastructure as a priority in relocating or expanding operations into a new community. The proposed roadway will allow more efficient transportation of raw materials, agricultural products, and finished goods, and will provide a safe means of travel for commuters between their residences and work destinations.

The new roadway will provide improved access for area residents to governmental and commercial services in each county seat. The new roadway will also promote social interactivity between area residents. Safer, more efficient roadways will provide an opportunity for increased visits to cities for residents who live in the farther areas of the counties.

Additionally, the improved roadway will further promote tourism in the area for the Green River State Park, numerous historical sites and districts and for the institutions of higher learning. These institutions include Campbellsville University, Saint Catharine College (which recently was granted approval to upgrade from a two-year to a four-year institution), and Linsday Wilson College. The improved roadway will provide secondary and cumulative benefits through reduced travel times and improved safety for college personnel and students.

II. CULTURAL AND HISTORIC RESOURCES

A. Historic Resources

Information about the historic cultural resources within Washington, Marion, Taylor, Adair, and Green Counties was compiled from the Kentucky Heritage Council (which is considered the State Historic Preservation Officer or SHPO) site files, National Register of Historic Places, and County planning documents. A windshield survey was conducted of the Option 1 corridor and the Option 2/3 corridor to identify sites listed on the National Register or over 50 years in age that could be potentially eligible for the National Register. The project team noted that many historic sites are located within or near the city limits of the county seats. The Tebbs Bend Battlefield National Register Historic District located along KY 55 in Taylor and Green Counties is located between the two corridors and will be avoided by the project. In addition, the

existing roadways are relatively new and most structures along the roadways are relatively new, therefore fewer of the structures along and near the roadways are eligible for the National Register in comparison to the older, more densely populated areas within and near the city limits of the respective counties.

A total of 64 listed or potentially eligible historic buildings within the two corridors were identified in Washington, Marion, Taylor, Adair, and Green Counties. As shown in Appendix A, Figure 9, Option 2/3 could affect 21 structures. Option 1 could affect 43 structures. Due to the widths of the corridors, the potential exists to avoid or minimize impacts to historic sites.

Bridges currently maintained by the Kentucky Transportation Cabinet were included in the assessment for the five counties. An initial review of these findings indicates that there is one potentially historic bridge in the project corridors. This bridge is located in Taylor County on KY 55. It crosses the Green River, and only Option 2/3 would affect this bridge.

The proposed Lebanon and Columbia Bypasses have previously been surveyed for historic and cultural resources. In the area of the Lebanon Bypass (Options 2/3), 3 sites were determined eligible for the National Register as part of an earlier project, and one additional site may be eligible for listing on the National Register. In the Columbia Bypass area, no cultural historic sites would be affected.

A final determination of eligibility for the National Register sites will require additional research, photography, physical examination of the structures, and evaluation of these sites relative to the integrity standards established by similar properties in the counties under consideration, which are currently listed on the National Register, and consultation with the SHPO.

If any historic property listed or eligible for listing on the National Register is used for a transportation project, a Section 4(f) evaluation must be conducted. Under Section 4(f) of the Department of Transportation Act of 1966, a federally funded highway project can be approved only after a determination is made that no prudent and feasible alternative exists to using property from historic sites. If a historic property will be affected, avoidance alternates and mitigation measures must be considered.

B. Archaeological Resources

The archaeological review included archival (e.g., historic map) and site file research and a windshield survey of the corridors to determine the nature and range of possible archaeological resources. The identification of areas of high archaeological potential was based on the analysis of existing archaeological and historic data.

A search of records maintained by the Office of State Archaeology determined if previously recorded archaeological sites were situated within or near the study corridors. The majority of the previously recorded sites are prehistoric open habitations without mounds. These sites may include hunting, fishing, gathering sites as well as base camps and villages. Structural remains and burial sites could possibly be found at these types of sites. Historic farms/residences (e.g., presettlement to approximately 1945) and cave sites are also located in the alternate corridors.

Twenty-three previously recorded archaeological sites have been identified along the Option 2/3 corridor. Of the 23 previously recorded archaeological sites along Option 2/3, 6 sites have been disturbed by prior road construction; one site has been disturbed by livestock and; one site has been disturbed by construction of a new home.

Five archaeological sites were identified within the Option 1 corridor. The disparity between the two corridors is likely the result of the limited number of previous cultural resource management studies in the project corridors and should not be interpreted to indicate actual site density in each corridor.

Based on a historic map review and windshield survey, efforts were made to identify potential historic archaeological sites predating 1900. These sites have the potential to yield more significant archaeological data. Eleven potential historic archaeological sites were located along the Options 1 and 2/3 corridors. These sites were predominantly in Washington and Marion Counties. All of these sites included at least a residence, barn or rock wall. Probably the most significant historic archaeological site would be the Tebbs Bend Battlefield National Register Historic District located along KY 55 in Taylor and Green Counties. The location of archaeological resources in the Tebbs Bend Battlefield Historic District is not known but could include entrenchments, fortifications, military roads, camp locations and battlefield areas. The Option 2/3 corridor contained at least 4 potential historic archaeological sites. Three residences and one church site were identified.

Ten cemeteries were identified during the windshield survey in the two corridors. Seven of the cemeteries were located in the Option 1 corridor and three cemeteries were located in the Option 2/3 corridor.

The no-build option would have no effect on archaeological resources. Both build corridors have a high potential for archaeological sites. The lack of widespread development (commercial, industrial and residential) has probably left many archaeological sites relatively undisturbed. The two corridors traverse a variety of landform types (e.g., floodplains, hillsides) that have the potential to contain prehistoric and historic archaeological sites. A Section 4(f) evaluation must be conducted and avoidance options considered if right of way is taken from any archaeological site requiring preservation in

place (e.g., a burial site such as areas within the Tebbs Bend Battlefield Historic District).

When alignments within a corridor are developed, an archaeological survey will be conducted to identify archaeological sites. It should be noted that additional archaeological sites may be present within each corridor, but they may not be documented at this time.

III. AQUATIC AND TERRESTRIAL RESOURCES

A. Watersheds

The proposed corridors cross two large watersheds. These rivers collect most of the surface water that drains from the five counties crossed for this project. The northern watershed in the Outer Bluegrass Region is Rolling Fork, which drains most of Washington and Marion Counties. Rolling Fork has a drainage area of approximately 1,450 square miles. Once in Taylor County, the Muldraugh Hill separates the Outer Bluegrass Region from the Mississippi Plateau Region. The watershed south of the Muldraugh Hill that drains most of Taylor, Green, and Adair Counties is the Green River, which has a drainage area of approximately 8,810 square miles.

B. Floodplain Encroachment

The Federal Emergency Management Agency (FEMA) was consulted for information regarding floodplains within the proposed corridors. No published floodplain information is available for Washington, Green, and Adair Counties. Those counties that had published information (Marion and Taylor Counties) were searched to identify potential floodplain encroachments by both corridors. For viewing of published floodplains, refer to the following internet

link:
http://store.msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1

The project team considered potential impacts to floodplain areas for both the three build options and the no-build option. If the no-build option is selected, there will be no effect on floodplains.

The Option 1 corridor crosses eight known floodplain zones within Marion and Taylor Counties. All floodplains crossed are listed as 100-year flood areas with no flood hazard factors determined (Zone A areas). Two Zone A floodplain areas along Hardins Creek and Rolling Fork River are crossed in Marion County. Additional Zone A floodplain areas crossed in Taylor County are along Big Pitman Creek, Middle Pitman Creek, Little Pitman Creek, Flat Run, Little Meadow Creek, and Meadow Creek. Some floodplain impacts (i.e. loss of riparian vegetation, disturbance of habitat, potential for increased sedimentation in the stream, etc) would be expected during construction if this corridor were selected. Fills and/or cuts in the floodplains during construction may limit the buffering capacity of flood control for that area.

Additional floodplain zones likely exist along streams in Washington, Green, and Adair Counties but these zones are not mapped. Zone A floodplains may exist along Cartwright Creek in Washington County, Green River in Green County, and Russell Creek in Adair County. The Option 1 corridor is likely to have greater impacts to floodplains since new construction would be required at all crossings, which may lead to greater disturbances.

The Option 2/3 corridor crosses two known floodplain zones in Marion County. A Zone A floodplain area exists along Cartwright Creek and Rolling

Fork River in Marion County. These areas are listed as 100-year floodplains with no flood hazard factors determined. Some impacts would be expected to these floodplains (i.e. loss of riparian vegetation, disturbance of habitat, potential for increased sedimentation in the stream, etc) during construction if this corridor were selected. Additional floodplain zones likely exist along streams in Washington, Green, and Adair Counties but these zones are not mapped. Zone A floodplains may exist along Long Lick and Beech Fork in Washington County, Green River in Green County, and Russell Creek in Adair County. The Option 2/3 corridor would likely have a smaller impact on floodplains since fewer are crossed and all of these streams currently have spanning structures in place.

C. Stream Crossings

Both Option 1 and Option 2/3 will involve many stream crossings. Impacts to these areas may range from water quality issues to channel changes to removal of plant and animal habitat. Bridges, culverts, and other structures will need to be constructed for the Option 1 corridor or need to be widened and updated for the Option 2/3 corridor.

Perennial (water is always present in perennial streams) and intermittent (water is present except in late summer and fall in intermittent streams) stream crossings occur throughout both of the study corridors. Option 1 has the potential to cross approximately 64 perennial streams and 32 intermittent streams. Ephemeral stream (water rarely is present except during and immediately after a rain event) crossings could not be determined from viewing topographic maps. The amount of actual stream crossings will likely be reduced when alignments are selected within the corridor. This corridor will likely have a greater impact on area streams than upgrading existing roadways since some areas of streams have not been previously disturbed.

New structures (bridges and culverts) may cause the loss of certain riparian zones as well as disturbance of the stream's flow pattern and its water quality. Potential for channel changes exists as well with construction in this corridor. Various impacts to streams and rivers may require permits and potential stream restoration/mitigation.

Stream crossings for the Option 2/3 corridor are less than for the Option 1 corridor. Approximately 37 perennial streams and 10 intermittent streams will be crossed. Most of these streams currently have some structure (bridge or culvert) spanning them. Widening and upgrading these crossings will likely incur fewer impacts to area streams than constructing new crossings. Potential for channel changes exists as well with construction in this corridor. Various impacts to streams and rivers may require permits and potential stream restoration/mitigation.

D. Outstanding and Exceptional Water Resources

No wild and scenic rivers have been identified within the project area. The Green River and Russell Creek are listed under Special Use Waters determined by the Kentucky Division of Water (KYDOW). The Green River from milepoint 305 (Green River Lake dam) to milepoint 207 is classified as an Outstanding State Resource Water. This classification is given to certain surface waters that are designated as unique waters of the Commonwealth. Both corridors cross the Green River at points within this designation. Russell Creek is listed as an Exceptional Water and Reference Reach Stream. Exceptional Waters are "water bodies whose quality exceeds that necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water" (KYDOW, 401 KAR 5:030, Section 3). A Reference Reach Water is a stream representative of a large number of similar streams within a definable geographic area. These streams are categorized as the least

impacted within that ecoregion. Both Option 1 and Option 2/3 corridors cross the Green River and Russell Creek within the designated areas. Precautions should be taken to minimize impacts to these special streams. The no-build option would not impact these streams.

E. Wetlands

Wetlands were identified using National Wetland Inventory (NWI) maps for Washington, Marion, Taylor, Green, and Adair Counties. The wetlands were then divided into subgroups (i.e. ponds, riverine, emergent, forested, and lacustrine) so that they could be easily compared by type between the two corridors. Wetlands were not broken down into jurisdictional and non-jurisdictional and size was not calculated since these characterizations are primarily determined through field inspection.

The Option 1 corridor consists of a 2000-foot wide area within which a smaller alignment can be selected. Within this corridor, approximately 211 ponded wetlands were identified, along with 18 riverine wetlands, 17 emergent wetlands, 9 forested wetlands, and zero lacustrine (lake) wetlands. Upon selection of alignments within this corridor, many of these wetlands may be avoided. Numbers of wetland impacts cannot be addressed until final alignments are selected. Best judgment should be used when designing alignments to avoid impacting wetlands. If this is not possible, mitigation may be an option to compensate for those impacts.

The Option 2/3 corridor expands 150 feet on either side of the existing roadway. The overall corridor is 2,000 feet in width, but the narrower area of study was selected because Option 2 would add two lanes to the existing roadways, while Option 3 would widen the existing roadway. No construction activities are anticipated to occur outside 150 feet on either side of the

existing roadway. Within Corridor 2/3, approximately 17 ponded wetlands were identified, along with 3 riverine wetlands, 1 emergent wetland, 1 forested wetland, and 1 lacustrine wetland. Depending on where the road would be widened, impacts to many of these wetlands can be avoided. Numbers of wetland impacts cannot be addressed until final alignments are selected. Best judgment shall be used when designing alignments to avoid impacting wetlands. If this is not possible, mitigation may be an option to compensate for those impacts.

The Option 1 corridor has greater potential to impact wetlands compared to the widening of existing roadways under Option 2/3 (Appendix A, Figures 5A and 5B). The no-build option would not impact wetlands.

F. Federal and State Threatened and Endangered Species

The data summarized in this analysis represents known occurrences of federal threatened and endangered species within both corridor options. Information came from coordination with the United States Fish and Wildlife Service (USFWS) in Frankfort, Kentucky. Initial data was gathered from county records displayed on the USFWS website. This information is very general and does not necessarily imply that a specific number of impacts would occur within a corridor. The following paragraphs list and briefly describe the federally threatened and endangered species that can occur within the project's corridors.

The federally endangered Indiana bat (*Myotis sodalis*) is a medium-sized bat, 3.5 inches in length, with dark gray to brownish-black fur (Slone and Wethington, 2001). Typical winter habitats for the Indiana bat include limestone caves with stable temperatures of 39 to 46 degrees F. During summer months, maternity colonies roost under loose bark in floodplain and

riparian forests. Indiana bats forage along streams or other bodies of water near forests, as well as in the canopy of upland and bottomland forests. The Indiana bat is listed as occurring in Taylor and Adair Counties, but habitat may be available in surrounding counties (Washington, Marion, and Green) to support breeding populations. The Option 1 corridor may be more likely to contain suitable habitat since it contains more contiguous tracts of forest and crosses several large streams.

The gray bat (*Myotis grisescens*, federally endangered) is a medium-sized bat, 3-4 inches in length, with gray fur, which is sometimes russet in summer. Gray bats roost, breed, rear young, and hibernate in caves year round. They migrate between summer and winter caves and will use transient or stopover caves along the way (Slone and Wethington, 2001). The gray bat is listed as occurring in Taylor, Green, and Adair Counties. Washington and Marion Counties contain less karst topography than Taylor, Green, and Adair Counties, therefore this limits the occurrence of gray bats in those areas. Building in the Option 1 corridor would likely have more potential impacts to riparian zones where the bats forage and potentially two known caves that may house gray bats. Additional caves may exist within Option 1, but they have not been identified.

The bald eagle (*Haliaeetus leucocephalus*, federally threatened) is a large, dark-brown bird with a bright yellow bill, eyes, and feet and all white head. An adult is 3-3.5 feet tall with a wingspan of 6-7.5 feet. Bald eagles are found mostly along major rivers and large, open bodies of water where fish, waterfowl, and other prey are abundant (Slone and Wethington, 2001). The bald eagle is listed as occurring in Taylor County, likely near Green River Lake. Construction of either corridor is not likely to impact habitat or feeding grounds of the bald eagle.

Eggert's sunflower (*Helianthus eggertii*, federally threatened) is a perennial plant that stands 3.5-6.5 feet tall and has sessile (without a stalk) leaves oppositely arranged on the stem with yellow flowers about 1 inch across. This plant occurs in barrens/woodland ecosystems, which are a mix of grassy treeless openings among a thin overstory of small to medium-sized trees. Additional habitat includes fields and roadsides where barrens formerly existed (Slone and Wethington, 2001). Eggert's sunflower occurs only in Taylor County. Both corridors could potential harm habitat that may be suitable for Eggert's sunflower.

The fanshell mussel (*Cyprogenia stegaria*, federally endangered) has a subcircular shell that is rarely more than 3.2 inches long. Shell color is light green or yellow with green rays. This mussel is found in medium sized to large rivers of the Ohio River basin (Slone and Wethington, 2001). The fanshell is listed as occurring in Marion and Green Counties. Option 1 and Option 2/3 could potentially impact habitat suitable for the fanshell since both corridors cross the Green River.

The clubshell mussel (*Pleurobema clava*, federally endangered) is a small to medium-sized mussel that rarely exceeds 3 inches in length. The clubshell has a triangular shell that is dull yellow or yellowish brown with prominent dark green rays. This species is usually found burrowed 2 to 4 inches below the surface in clean sand or gravel in big rivers (Slone and Wethington, 2001). This species occurs in the Green River and was found in Taylor and Green Counties. Both corridors could potentially impact habitat that may be suitable for the clubshell since Option 1 and Option 2/3 both cross the Green River.

The rough pigtoe (*Pleurobema plenum*, federally endangered) is a medium-sized mussel with an inflated triangular shaped shell. Shell color ranges from dark brown to yellowish brown. Light green rays may be present on younger specimens. This is a large river species, usually found on gravel bottoms (Slone and Wethington, 2001). This species is known from the Green River in Green and Taylor Counties. Options 1 and 2/3 could potentially impact habitat that may be suitable for the rough pigtoe since both corridors cross the Green River.

Several other mussels are listed as historical records from Taylor and Green counties. These mussels have not been collected as live specimens for over ten years and most are believed to be extirpated (removed or displaced) from the area. The northern riffleshell (*Epioblasma torulosa rangiana*, federally endangered), fat pocketbook (*Potamilus capax*, federally endangered), and the tubercled blossom (*Epioblasma torulosa torulosa*, federally endangered) are formerly known from the Green River in Taylor and Green County but are believed to be extirpated from this river. All three of these mussels have preferred habitat that consists of large rivers with clean sand or gravel bottoms.

The Kentucky Department of Fish and Wildlife Resources (KDFWR) Fish and Wildlife Information System (FWIS) and the Kentucky State Nature Preserves Commission (KSNPC) County Report of Monitored Species were consulted for lists of state and federal threatened and endangered species that may occur within proposed Options 1 and 2/3 corridors. See Appendix C, Table 9 for a list of state and federal threatened and endangered species that occur within the corresponding counties.

G. Natural Areas

The Kentucky State Nature Preserves Commission monitors areas considered relatively undisturbed or areas that have recovered sufficiently from previous disturbances. These exemplary natural communities have the flora (plants) and fauna (animals) that represent the natural communities that existed in Kentucky at the time of European colonization. One example of a Calcareous Mesophytic Forest occurs in Adair County. This type of community is considered very common. Green County contains one known Bottomland Hardwood Forest, which is a rare occurrence. Two examples of Limestone Slope Glades, which are considered uncommon to rare, occur in Marion County. The county may also support four Siltstone/Shale Glades (listed as uncertain). Taylor County contains an extremely rare example of Xerohydric Flatwoods and possibly one example of Siltstone/Shale Glade (listed as uncertain). A formal data request would be required in order to obtain specific locations of each natural community.

Both Option 1 and Option 2/3 corridors occur within the boundaries of the Green River Bioreserve, a system of above ground and subterranean aquatic habitats comprising the recharge area of the Green River and associated Mammoth Cave systems. The Green River Bioreserve is the complete Green River watershed from the Green River Lake Dam to the Nolin River in Mammoth Cave National Park. Nationally, it is an important site for the conservation of rare aquatic organisms. Future design phases must consider appropriate erosion and sediment control measures to minimize impacts to the bioreserve.

The Kentucky Division of Forestry's "Kentucky's Big Trees" list indicates that two state champion trees occur within the project vicinity. According to the list, a champion black willow (*Salix nigra*) is located in the back yard of a residence off KY 55 in Columbia. It does not appear that this tree falls within

the Option 2/3 corridor. A champion cucumbertree (*Magnolia acuminata*) is reported three miles west of Campbellsville. Based on the location description provided, it is unknown whether this tree occurs within the limits of the Option 1 corridor.

IV. Hazardous Materials and Underground Storage Tanks

A record search and a windshield survey of the project area was performed to identify any sites with hazardous materials or underground storage tanks. The records search did not identify any sites on the Resource Conservation and Recovery Act (RCRA) Notifiers' list of hazardous waste generators, sites on the Comprehensive Environmental Response, Compensation, and Liability Act Information System of potential Superfund sites, or sites with incidents involving hazardous materials. The record search for listed underground storage tanks (USTs) did not indicate any USTs within the project area. No landfills (including illegal landfills) or dump sites were identified during field trips through Options 1 and 2/3. The windshield surveys identified some existing and former businesses primarily along both the Option 1 corridor and the Option 2/3 corridor, but most will not have hazardous materials. The sites identified include existing and former gasoline stations, auto repair facilities, etc. A few sites have the potential to contain hazardous materials. The Option 1 corridor contained an estimated 6 sites that were service stations, auto repair shops, etc. The Option 2/3 corridor contained and estimated 25 to 30 sites of similar nature. Every effort will be made to avoid these sites during the design process. If any sites must be included in the right of way limits of the project, Phase II hazardous materials investigations may be necessary. At this time, it is not anticipated that hazardous materials or underground storage tanks will be a significant issue for the project.

If the no-build option is selected, no impacts will occur to hazardous materials or underground storage tanks.

V. Air Quality

Air quality concerns routinely exist for most types of highway improvements. For the Heartland Parkway corridors, air quality issues are of particular concern relative to where the corridors fall in close proximity to sensitive land uses, such as population centers (Springfield, Lebanon, Campbellsville, and Columbia), natural areas (Green River Lake and Willisburg Lake), and recreational facilities. Sensitive areas exist in larger numbers within the Option 2/3 corridor along KY 555 and KY 55. For the Option 1 corridor air quality concerns focus more on residential receptors.

Washington and Marion Counties are located within the North Central Kentucky Intrastate Air Quality Control Region. Taylor, Green, and Adair Counties are located in the South Central Kentucky Intrastate Air Quality Control Region. All counties crossed by the corridors (Washington, Marion, Taylor, Green, and Adair Counties) are considered in attainment for all transportation-related pollutants (carbon monoxide (CO), hydrocarbons (HC), nitrogen oxides (NOx), and particulates). The project is in air quality regions where the State Implementation Plan (SIP) does not contain transportation measures.

Following is a table that displays the ranges of VPD for each of the project counties:

TABLE 15: Range of Existing (2003 Figures)
Vehicles Per Day for Project Counties*

Area	Vehicles Per Day
Adair County	**7,700 to 26,100**
Marion County	**6,500 to 17,400**
Taylor County	**6,500 to 24,200**
Washington County	**3,200 to 8,500**

*** VPD not included for Green County.**

For the Heartland Parkway corridor alternates, maximum future traffic volumes (2030 projections) are expected to reach 46,600 (Option 1 corridor) VPD or 51,700 (Option 2/3 corridor) VPD. These traffic volumes are not expected to cause carbon monoxide concentrations to exceed the one-hour standard of 35 parts per million (ppm) or the eight-hour standard of 9 ppm. Future levels of transportation-related pollutants are not expected to impact the attainment status of Washington, Marion, Taylor, Green, and Adair Counties. More site-specific air quality analysis and computer modeling will be conducted when alternates are developed. No air quality mitigation is expected to be necessary for this project.

If the no-build alternate is selected, future impacts to air quality will not occur. Secondary and cumulative impacts include the potential for additional air impacts if industrial and commercial businesses move into the available sites within the project region. Changes in potential air impacts from traffic changes are built into air quality modeling that will be required for individual projects.

VI. Traffic Noise

KY 555 and KY 55 carry normal volumes of traffic and the existing receptors are already accustomed to some level of traffic noise. While the Option 1 corridor has roadways crossing it, the majority of the corridor would have traffic traveling on a new roadway alignment. Depending on the alignments developed, noise levels may increase for some receptors as the roadway is moved closer but may decrease for other receptors as the roadway moves away from them. In addition, the Option 2/3 corridor along KY 555 and KY 55 will require the relocation of some residences and commercial facilities. For the relocatees, traffic noise will not be an issue.

More site-specific traffic noise analysis and computer modeling would be conducted as alternates are developed. Future traffic noise levels in the study

area may approach or exceed regulatory thresholds for which noise abatement considerations are appropriate at individual receptors (e.g., for residences 67 dBA and commercial facilities 72 dBA). For the Option 1 corridor, predicted future noise levels may increase by over 10 dBA at individual receptors. The construction of noise barriers is not expected to be necessary or prudent for the residential or church facilities in the project area. Lincoln Holmstead State Park, Tebbs Civil War Battlefield, and other cultural resources that would be considered sensitive receptors will be assessed by computer modeling once alternates have been developed. Every effort will be made to avoid or minimize noise impacts to cultural resources.

Existing traffic volumes and projection ranges have been listed in Table 15, above, and the paragraph immediately following the table in the Air Quality Section on page 53. Once alternates have been developed, computer modeling would assess each alternate's predicted impact on the area noise environment. Receptor sites would be selected that are representative of residences, businesses, churches, parks, and other development along the project corridor.

If the no build alternate is selected, future impacts from traffic noise are not anticipated. Secondary and cumulative impacts include the potential for additional noise impacts if industrial and commercial businesses move into the available sites within the project region. Changes in potential noise impacts from traffic changes are built into noise modeling that will be required for individual projects.

VII. Conclusion

Field surveys, record searches and contacts with resource agencies, government representatives and the general public have identified environmental issues and sensitive areas. Potential impacts to the human and natural environment will be considered as the project moves into future phases and are described below:

- The project area hosts many natural, scenic and sensitive areas including the Green River Lake State Park, Lincoln Homestead State Park, Green River Bioreserve, Tebbs Bend Battlefield and Green County caves.
- These scenic areas potentially are home to several federally listed endangered or threatened species such as the Indiana bat, gray bat, bald eagle, Eggert's sunflower and several species of mussels.
- The project corridors cross numerous streams which will require widening of bridges, extending culverts, or constructing new structures. Construction impacts on streams and floodplains will need to be evaluated and if appropriate, mitigated.
- Both project corridors will cross the Green River, which is classified as outstanding state resource water, and Russell Creek, which is classified as exceptional water. Erosion and sedimentation controls will be necessary to minimize impacts to these streams.
- Wetlands could be affected by future project phases and all reasonable efforts will be made to avoid or minimize impacts.
- The project corridors contain 64 historic sites that are listed or are potentially eligible for listing on the National Register of Historic Places. The project area also has a high potential for containing unrecorded prehistoric or historic archaeological sites. Historic and archaeological surveys will need to be conducted to determine/confirm the presence of historic or archaeological sites and potential to avoid or minimize project impacts.
- If historic sites (e.g., Tebbs Bend Battlefield) or recreation areas (e.g., Green River State Park) are impacted, a Section 4(f) evaluation will be necessary.
- A new or improved roadway will enhance regional access for travelers, workers, tourists, and transporters of raw materials, finished products and agricultural products. Beneficial impacts of future phases include

anticipated opportunities for industry, tourism, higher education and agricultural activities.

- Only low numbers of residential or commercial relocations are expected in future design phases.
- As the predominant land use in the project area is agricultural, potential impacts to farmlands rated as prime, unique, or of statewide importance must be considered. One agricultural district is in the Option 1 corridor and if avoidance is not feasible, coordination with the local conservation district is required.
- Several service stations, automobile repair shops, and auto salvage yards occur in the project corridors and could have potential hazardous materials and underground storage tank sites. Further consideration will be necessary to confirm the presence of these sites and reasonable efforts will be made to assess avoidance and mitigation options.

Report of Geotechnical Overview

Corridor Study for the Proposed Heartland Parkway
Adair, Green, Taylor, Marion, Washington and Nelson Counties, Kentucky
Item No. 04-132

Prepared for
WMB Engineers, Inc.
Lexington, Kentucky

August, 2004

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August 6, 2004 O.1.1.LX2002273R01

Mr. Dan Byers, PE
WMB, Inc.
1950 Haggard Court
Lexington, Kentucky 40503

Re: Report of Geotechnical Overview
Proposed Heartland Parkway
Adair, Green, Taylor, Marion, Washington
And Nelson Counties, Kentucky
Item No. 4-132

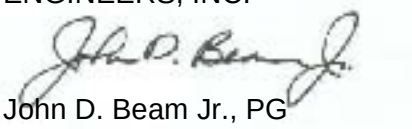
Dear Mr. Byers:

Fuller, Mossbarger, Scott and May Engineers, Inc. (FMSM) is pleased to submit this report of our geotechnical overview for the proposed Heartland Parkway project situated between the Louie B. Nunn Parkway and the Blue Grass Parkway in Adair, Green, Taylor, Marion, Washington and Nelson Counties, Kentucky. The overview is based upon a site reconnaissance performed by FMSM personnel on December 10, 2004 and January 20, 2004, research of available published data, and input from various Project Team meetings.

WMB, Inc. provided FMSM with topographic mapping and preliminary locations for the environmental footprint and two proposed corridors. The scope of work performed and results of the overview are presented in the accompanying report. FMSM appreciates having the opportunity to provide these engineering services and would be happy to answer any questions and further assist you concerning this project.

Respectfully submitted,

FULLER, MOSSBARGER, SCOTT AND MAY
ENGINEERS, INC.



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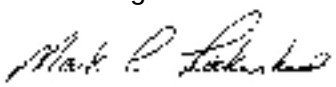
Senior Geologist



Mark A. Litkenhus, PE
Associate

/me

c: Division of Planning (10 copies and electronic files)

Report of Geotechnical Overview
Corridor Study for the Proposed Heartland Parkway
Adair, Green, Taylor, Marion, Washington
and Nelson Counties, Kentucky
Item No. 04-132

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Report of Geotechnical Overview
Corridor Study for the Proposed Heartland Parkway
Adair, Green, Taylor, Marion, Washington and Nelson Counties, Kentucky
Item No. 04-132

1. Project Description

The Kentucky Transportation Cabinet (KYTC) is in the process of reviewing potential corridors for a new route and/or improvements to existing routes along KY 55, US 68 and KY 555 from the vicinity of milepost 47 near KY 61 overpass on the Louie B. Nunn Parkway to milepost 42 on the Blue Grass Parkway. The review area has been titled as the Heartland Parkway.

The Project Team prepared an environmental footprint of the area to be studied. This area incorporates portions of Adair, Green, Taylor, Marion, Washington and Nelson Counties. Based on public input, two corridors have been identified within the environmental footprint for further review. The western most corridor would involve a new fully controlled parkway. The eastern corridor would upgrade the existing roads to a four-lane divided highway or an improved two lane with a truck passing lane one mile long, every three miles. Both corridors are approximately 63 miles in length. See Appendix I for a site location map.

2. Scope of Work

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

- Available topographic and geologic mapping of the project area published by the United States Geological Survey (USGS) and the Kentucky Geological Survey (KGS);
- The Geologic Map of Kentucky, published by the USGS and the KGS (1988);
- Karst Occurrence in Kentucky Map, published by the KGS, and other KGS sources referencing karst activity in the area;
- KGS Mineral and Fuel Resources Map of Kentucky, 1998;
- USGS Hydrologic Investigation Atlas HA-21, Availability of Groundwater in Marion, Nelson and Washington Counties, Kentucky, 1960;
- KGS Oil and Gas Development Activity Mapping, and Oil and Gas information provided by WMB, Inc.;

- United States Department of Agriculture, Soil Conservation Service (SCS) Soil Survey Publications for affected counties;
- Kentucky Department for Surface Mining Reclamation and Enforcement (KDSMRE) was contacted for Rock and Mineral Quarry Locations and Information. Permit mapping showing quarry locations and mine status information was obtained from KDSMRE;
- National Wetlands and Wildlife Management Areas as recognized by the U.S. Department of the Interior, Fish and Wildlife Service;

FMSM performed a preliminary study of the area within the environmental footprint. The preliminary study was conducted to assist the Project Team in determining potential corridors. The preliminary study consisted of literature and internet searches for geotechnical and geologic information that would effect the project. The results of the preliminary study were submitted to WMB, Inc. in letters dated July 14, 2003 and August 12, 2003. This information was incorporated into exhibits by WMB for use in public meetings.

Utilizing input from the public meetings, WMB identified two potential corridors. Field reconnaissance of the proposed corridors was performed by FMSM personnel on December 10, 2003 and January 20, 2004. Based upon the results of the field reconnaissance and review of the noted information, the general site geology has been summarized, along with corridor features of geotechnical significance that may influence selection in the following sections.

3. Physiographic and Stratigraphic Setting

3.1. Topography and Drainage

The proposed Heartland Parkway environmental footprint is located in Central–South Central Kentucky, situated on portions of seventeen USGS 7.5-minute topographic quadrangle maps. They are the Gradyville (1973), Columbia (1973, revised 1976), Gresham (1953, revised 1987), Cane Valley (1970, revised 1979), Greensburg (1961, revised 1987), Campbellsville (1970, revised 1976), Mannsville (1970), Saloma (1961), Spurlington (1953, revised 1994), Bradfordsville (1953, revised 1987), Raywick (1953, revised 1987), Lebanon West (1953, revised 1994), Lebanon East (1953), St. Catharine (1953, revised 1979), Springfield (1972, revised 1979), Maud (1972), and Brush Grove (1972) Quadrangles.

The study area is within the Mississippian Plateaus, The Knobs, and the Outer Blue Grass Physiographic Regions of Kentucky. See Appendix II for a generalized map of the physiographic regions for the Heartland Parkway. The Mississippian Plateaus Region is situated at the southern end of the environmental footprint. The Mississippian Plateaus contains gently to moderately rolling topography that has been partially influenced by karst weathering in some areas. Photo 1 shows a typical topographic setting affected by karst activity within the Mississippian Plateaus Region. The Knobs Region consists of a narrow belt of conical knobs situated in the center of the study area. Within the corridor area, the knobs are a 1.2- to 5.0-mile wide band of knobs situated in a general east–west direction on the south side of Lebanon, Kentucky. Muldraugh Hill is situated on the southern portion of The Knobs Region. The Outer Blue Grass Region is situated between the south side of Lebanon, Kentucky and extends beyond the Blue Grass Parkway. The Outer Blue Grass

Region consists of a well dissected upland with irregular hills and ridges. The Outer Blue Grass Region has some areas affected by karst activity. The karst areas in both the Mississippian Plateaus and Outer Blue Grass Regions are characterized by the existence of sinkholes, ridgetop ponds, sinking streams, springs, and various subterranean channels. Appendix III contains a drawing from KGS that depicts karst occurrence in Kentucky.
`

Surface drainage within the region is directed towards numerous swales, ditches, creeks, and streams, including the Green River, Rolling Fork, and Beech Fork, as well as karst features in the area. The Green River Reservoir is located on the eastern side of the study area.



Photo 1. Large Karst Related Depression in Topography Typical of the Mississippian Plateaus Region Terrain Near Columbia, Kentucky

3.2. Stratigraphy

Corresponding USGS geologic quadrangles are available for the Gradyville (1963), Columbia (1963), Gresham (1953), Cane Valley (1964), Greensburg (1963), Campbellsville (1965), Mannsville (1966), Saloma (1976), Spurlington (1974), Bradfordsville (1965), Raywick (1973), Lebanon West (1978), Lebanon East (1978), St. Catharine (1975), Springfield (1977), Maud (1972), and Brush Grove (1973) Quadrangles.

Based on the various geologic mapping and literature reviewed, the proposed corridor is primarily underlain by limestones, shales and possibly some sandstones. Bedrock within the Mississippian Plateaus Region consists of Mississippian age limestones, shales and isolated sandstones. The limestones are predominantly gray, medium to coarse grained, zones argillaceous, with fossiliferous and cherty zones. The shales are gray, clayey to silty, with calcareous zones. The sandstones are generally light to yellowish gray, and very fine to medium grained.

The Knobs Region is underlain by shales and limestone that are Ordovician, Silurian, Devonian and Mississippian in age. The predominant rock type in the area are Devonian age dark gray carbonaceous shales of the New Albany Shale Formation. The New Albany Shale is often acidic and toxic when exposed to air and water. Ditches, soils and the surrounding bedrock often show mineralization deposits due to the acidity of the New Albany Shale. Guardrails showed corrosion at some locations because of the acidity of the shale. The Silurian age bedrock consists of sporadic layers of dolomitic limestone. Ordovician age limestone and shales are situated in the lower elevations within The Knobs area. Mississippian age limestones and shales, similar to the bedrock encountered in the Mississippian Plateaus Region, occurs in the upper elevations for portions of The Knobs.

The Outer Blue Grass Region is predominantly underlain by limestones and shales. The limestones are generally gray, micro-grained to coarsely crystalline grained, zones silty and/or argillaceous, and fossiliferous. The shales are usually gray, calcareous, and sometimes silty. Some shales throughout the corridor could be considered a siltstone. Photo 2 shows a typical rock cut in the Outer Blue Grass Region. Alluvial deposits of clay, silt, sand, and gravel are also present along major streams and rivers in the area.



Photo 2. Typical Outer Blue Grass Stratigraphy Along Existing KY 555 Road Cut Showing Interbedded Limestones and Shales

3.3. Faulting in the Area

Based on USGS Geologic mapping, an east-west trending unnamed fault crosses the environmental footprint studied approximately one mile south of Lebanon, Kentucky. The fault crosses both corridors studied in this report. The strike of the fault tends to be parallel with and is in the vicinity of KY 2741. Terrain in the area of the fault is generally covered by soils and vegetation. Several areas of irregular or abruptly changing topography was noted during field observations that may be associated with the fault. Several scarps and outcrops probably associated with the fault are visible along KY 2741. The displacement of the fault could not be determined during this study. See Photo 3 for a view of an apparent fault scarp in the area.



Photo 3. Apparent Fault Scarp Along KY 2741 South of Lebanon, Kentucky

USGS Geologic mapping also indicates that a series of east-west trending faults are situated within the environmental footprint in the vicinity of Springfield, Kentucky. One fault of this series is situated approximately 0.3 miles east of the proposed eastern corridor on the north side of Springfield. Another fault within this series of faults is noted approximately 3.5 miles southeast of Springfield. This fault is mapped within portions of the western corridor studied during this overview.

Another series of faults are shown on USGS Geologic mapping near the eastern edge of the environmental footprint near Salleetown, Marion County, Kentucky. These faults are not near the corridors studied in this report and are not likely to have an effect on this project.

The faults discussed are not considered to be active in recent geologic time. Fault locations are shown on the Physiographic Regions map presented in Appendix II. The faults described are as shown on USGS geologic mapping. No additional faults were found during our field reconnaissance of the area. It is possible that other faults exist within the

environmental footprint that are not exposed at the ground surface and/or were not found during this overview.

3.4. Soils and Unconsolidated Materials

Residual soils are the predominant soil type within the environmental footprint. Soil descriptions contained herein are based upon SCS soil surveys, observations made during the field reconnaissance, and on FMSM's knowledge of the study area. Soils within the Mississippian Plateaus Region along the corridors are predominantly a clayey to silty clay and range in depths from four feet to greater than twelve feet. Soils can become very thin to very deep in karst areas within a relatively short distance. Soils associated with The Knobs Region are generally covered by a clayey to loamy soil that ranges from shallow to deep (zero to greater than six feet thick). In areas close to rock outcrops, the soils can be acidic because of the acidic nature of the New Albany Shales that exist in The Knobs area. Disturbed areas along existing roadways often exhibit shallow to no soils in The Knobs area. Soils within the Outer Blue Grass Region are generally moderately deep to deep (greater than five feet deep), clayey to silty loams, and contain karst areas.

Alluvial materials comprised of sands, silts and gravels cover the floodplains of major streams and tributaries in the study area. Major streams within the environmental footprint include Green River, Rolling Fork, and Beech Fork. Green River Lake is just east of the study area.

3.5. Groundwater

Groundwater flow is controlled by many factors throughout the study area. Groundwater flows primarily by secondary porosity such as along bedding planes, joints, fractures, and karst features such as sinkholes and subterranean channels. Groundwater also migrates through the fabric of the bedrock in the area. Many of the limestones and shales retard but do not prevent the flow of water because of their low permeability. Springs often occur at the intersection of the ground surface with the bedding planes of more durable, less permeable rock units. Springs occur where karst activity has developed in the bedrock above a more durable, less permeable rock unit.

Based on the USGS Hydrologic Atlas of the area, most drilled wells in the footprint area do not produce enough water for domestic purposes. Wells near bottom areas and drainage channels sometimes produce 100 to 500 gallons per day. The water is hard and may contain salt or hydrogen sulfide, especially at depths greater than 100 feet. No groundwater well inventory was performed during this overview.

3.6. Regional Seismicity

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

al., (1996). This document and other information available from the Kentucky Geological Survey (KGS) were reviewed in relation to the Heartland Parkway Corridor.

An Earthquake Epicenters and Magnitudes Map for the Central and Eastern United States from 1568 to 1987 is presented in Figure 1. This map indicates that earthquakes are uncommon within the Heartland Corridor area, but the area could be affected by earthquake events from other areas, particularly the New Madrid Seismic Zone (NMSZ). The NMSZ lies within the Central Mississippi Valley, extending from northeast Arkansas, southeast Missouri, western Tennessee, western Kentucky, and southern Illinois. The NMSZ is the most seismically active region in the United States east of the Rocky Mountains.

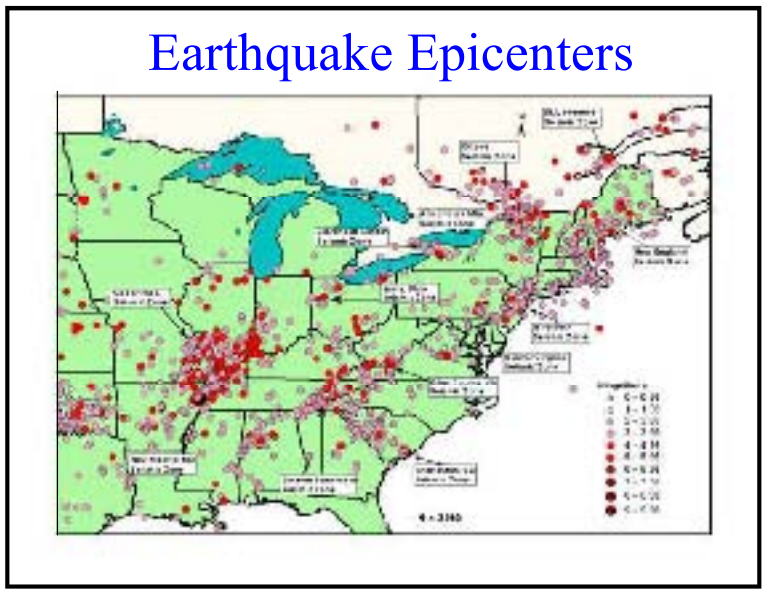

Figure 1. Earthquake Epicenters and Magnitudes in the Central and Eastern United States from 1568 -1987

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

A time history response spectra identification map for Kentucky is presented in Figure 2. This map shows county groupings compiled by Street et. al. (1996) for earthquake events not exceeding 50-year intervals. The recommended design earthquakes in the KTC-96-4 report were the events that produced the largest peak-particle group accelerations. Subsequently, the counties were grouped into similar regions and a design response spectra and time history were determined for each region, consistent with event producing and peak ground acceleration.

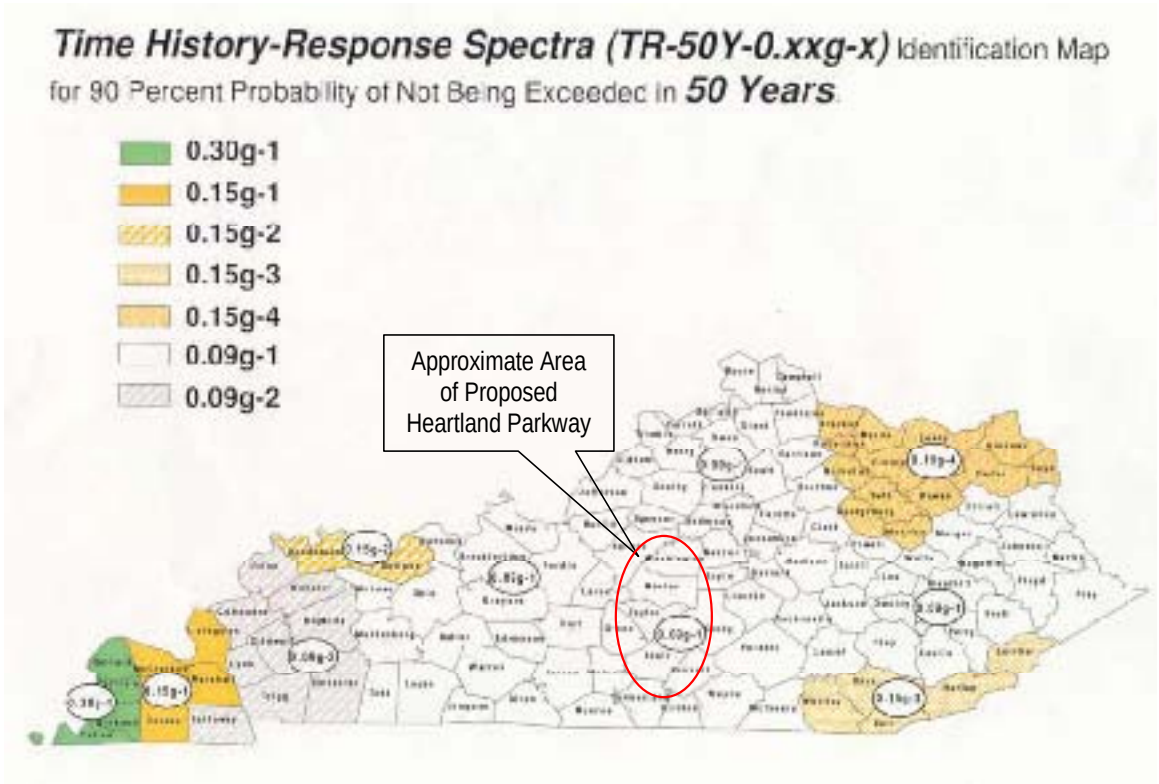

Figure 2. County Groupings for 50 Year Event (475-Year Return Period) as Shown in Street et. al. (1996)

Based upon Figure 2 and information contained in the KTC research report, the probability for an earthquake with damaging effects is low for this project.

4. Existing Corridor Features

4.1. General

The primary land uses within the project corridors are farmland, undeveloped forest, grasslands and wetlands; single family dwellings; and commercial entities commonly associated with communities. There are numerous limestone quarries within and surrounding the environmental footprint.

4.2. Domestic and Public Areas

Adair, Green, Taylor, Marion, Washington, and Nelson Counties are within a predominantly rural farm community setting. Communities such as Columbia, Campbellsville, Lebanon, and Springfield are situated at the intersection of county and state routes or historic railroad depots. Numerous schools and churches are located within the study area. Gas stations, stores, small commercial businesses and residences are common within these communities. Many small stores along the existing roadway sell gas and diesel. Existing gas stations and stores that handle petroleum products and chemicals often have numerous storage tanks for their products. Small businesses such as auto body and repair shops, farm equipment and supply stores, construction companies and equipment rental companies have tanks and other environmentally sensitive concerns. Locations of former gas stations, stores and other

businesses may have abandoned storage tanks, unstable refuse storage areas, or debris dumpsites.

The rural areas generally have various homestead and farm situations that exist within sub-watersheds off a primary watershed. These properties are often owned by families that have been in the area for many decades. Lumberyards, farm equipment stores, and community groceries are commonplace in rural areas. Family and community cemeteries are common throughout the region.

Based on the observations made during the field reconnaissance, the Eastern Corridor has numerous towns and rural developments along its route. The western corridor is situated in a predominantly rural setting, with existing rural roads crossing the corridor periodically.

4.3. Quarry Locations

There are several active and inactive crushed stone and sand quarry sites within the environmental footprint. Specific locations of the quarries have been presented on individual location maps in Appendix IV showing the approximate permit boundaries of the quarries. The quarries are currently being mined or have been mined in the past for limestone, dolomitic limestone and/or dolomite rock, or sand and gravel materials for a variety of construction uses. FMSM has discussed the permit status of each quarry site with the Kentucky Department for Surface Mining Reclamation and Enforcement (KDSMRE) – London District Office. Table 1 presents a summary of information obtained from KDSMRE. Exhibit numbers referenced in Table 1 relate to the individual quarry location maps presented in Appendix IV.

Table 1. Quarry Locations and Status

Quarry/ Exhibit No.	Quarry Name	County	Permit No.	Status*
1	Gaddie – Shamrock, Inc.	Adair	001-9402	Active
2	Burton Stone, Inc.	Adair	001-9403	Active
3	Henson Paving	Adair	001-9600	Active, No Significant Mining
4	Nally & Gibson Quarries, Inc.	Green	044-9400	Not Active, Not Disturbed
5	Nally & Gibson Quarries, Inc.	Green	044-9401	Active
6	Haydon Brothers Aggregate, LLC	Green	044-9402	Active, Mining Ceased, Being Reclaimed
7	Nally & Gibson Quarries, Inc.	Taylor	109-9400	Active
8	Nally & Haydon Surfacing, Inc.	Marion	078-9400	Active
9	Nally & Gibson Quarries, Inc.	Washington	115-9400	Active
10	David Butler owns property (not confirmed)	Adair	NA	Inactive

* Based on conversations with KDSMRE- London District Office Personnel on August 1, 2003.

All quarries above are thought to involve surface mining of the surrounding bedrock, with the exception of Quarry No. 3. Quarry No. 3 apparently is involved with mining sand and gravel material from a bottom area. FMSM conducted site visits to each known quarry location that may have an effect on the proposed corridors. Based on the proximity of workings observed, the quarries referenced as 3, 8, and 10 are in the vicinity of the Eastern Corridor. Quarry No. 9 is between the western and eastern corridors and could have an effect on an alignment for either corridor should they be shifted towards the quarry. Quarry No. 10 is an abandoned quarry that is not thought to have been mined since the late 1960s, early 1970s according to Pyles Concrete Personnel. They said that the quarry is owned by David Butler, and that Randle Pyles has a lease on the mineral rights on the property. Photo 4 shows the inactive



Photo 4. View of Abandoned Quarry East of KY 55 on North Side of Columbia, Kentucky

and abandoned quarry north of Columbia (Quarry No. 10). The two corridors have been chosen to avoid or minimize impacts to these areas. If the Eastern Corridor is chosen, an additional study should be performed when choosing an alignment due to the close proximity of the quarries to the existing roadway.

5. Geotechnical Considerations

5.1. Karst Activity in the Area

Karst activity exists over portions of the project area. Based on existing occurrences of known karst in the area, bedrock in the Outer Blue Grass Region is considered to have a moderate potential for karst development over approximately half of the area within the project. The potential for moderate karst activity is greater between Springfield and Lebanon.

Karst activity within The Knobs area is generally considered to be limited. Limestone bedrock exists within the lower and upper elevations of The Knobs Region which is where karst activity may be encountered. The Knobs Region is roughly defined as being between Lebanon and the Marion/Taylor County line.

Moderate to high potential for karst development exists for a significant portion of the bedrock within the Mississippian Plateaus Region. The potential for karst activity is greatest in areas near Columbia, Kentucky. Photo 5 shows a collapsed sinkhole along KY 55 near Columbia. Based on observations made during the field reconnaissance and from reviews of USGS topographic mapping of the area, there are numerous sinkholes and depressions situated in the immediate vicinity of both corridors from the Louie B. Nunn Parkway to approximately five miles north of Columbia. Appendix III includes a map prepared by KGS titled "Karst Occurrence in Kentucky" showing the potential for karst activity throughout the State of Kentucky, including the Heartland Parkway study area. Solution weathering exposed in a rock cut along KY 55 is presented in Photo 6.



Photo 5. Collapsed Sinkhole Within the Mississippian Plateaus Physiographic Region

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



Photo 6. Solution Weathering Observed Within Cut Along KY 55 in the Mississippian Plateaus Physiographic Region

5.2. Acid Drainage Potential

There is a significant potential for acidic drainage to occur within The Knobs Region where the New Albany Shale may be exposed to air and water. The Knobs Region is depicted on the Physiographic Regions map presented in Appendix II which is in the center portion of the environmental footprint. Acid drainage could be generated from exposed rock outcrops, embankment areas, and/or fill areas composed of New Albany Shale. New Albany Shale is generally dark gray to black, carbonaceous, often exhibits conchoidal fracturing, weathers with iron staining, and contains pyrite nodules and laminations. Existing roadways within The Knobs area exhibits very little or no vegetation in many areas along cut and fill areas. Photos 7 and 8 show affects of probable acidic drainage in rock cuts and fills along roadways within The Knobs Region. Existing vegetation often appears burned or dried out.



Photo 7. Existing Roadway Cut Along KY 55 South of Lebanon Within The Knobs Region - Cut in New Albany Shales Exhibiting Sparse Vegetation Because of Acidic Drainage

Cuts and existing embankments in this area should be assessed for acidity and remedial measures such as capping exposed acidic strata with four feet of clay-like, non-acidic material. Acidic materials used in embankments should be encapsulated in a similar manner. Capped areas should then be properly vegetated or protected with limestone aggregate. The use of limestone lined ditches or detention basins designed to neutralize acidic drainage should also be considered during the next phase of study.



Photo 8. Existing Roadway Fill Composed of New Albany Shales - Shows Lack of Vegetation Probably Due to Acidic Drainage from the Shale

5.3. Cut Slope Considerations

It is anticipated that roadway cuts within the Outer Blue Grass and The Knobs Regions would consist predominantly of a combination of soil and rock excavations. The majority of the cuts within the Mississippian Plateaus Region is likely to be shallow cuts in soils and bedrock. As previously discussed, rock types will consist of limestones, shales, and possibly sandstones. These rock types were observed along existing open cuts at several locations during the field reconnaissance. It is anticipated that the rock types will consist of durable and non-durable materials. Cut slope configurations in rock are generally controlled by bedrock lithology, bedrock quality, results of Slake Durability Index (SDI) tests in shales and siltstones, and by the presence of any fractures and/or joints. In general, if joint/fracture angles are high (as measured from horizontal), steeper cut slopes can be constructed and an acceptable level of stability can be maintained. If discontinuities exhibit low angles and steep cut slopes are utilized, large block failures may occur along the open cut face.

Slope configurations for rock cuts in durable or Type I non-durable rock generally range from 1H:4V to 1H:2V pre-split slopes on approximate 30-foot intervals of vertical height. These type of cuts could be anticipated within the Mississippian Plateaus and Outer Blue Grass Regions. Situations where the bedrock is highly weathered and/or is non-durable (Type II and III non-durable), the cut slopes are laid back on 1.5H:1V to 2H:1V slopes. Non-durable shales should be anticipated within the Knobs Region. Vertical lifts are typically separated by 18-foot to 20-foot wide intermediate benches, the elevations of which are controlled by breaks in lithology. Overburden benches are typically placed at the base of the weathered rock zone (RDZ), and 2H:1V slopes utilized for weathered rock and soil overburden at the top of a cut. Shallow cuts in bedrock may be best handled on 2H:1V slopes, covered with a soil layer and vegetated. Once the roadway is built, less maintenance would be required in this situation.

Cut slopes in suspected acidic strata within the Knobs Region should be constructed no steeper than 2H:1V. A four-foot clay-like, non-acidic layer should then be placed on the reclaimed slopes as described in Section 5.2.

5.4. Embankment Considerations

The anticipated excavated rock materials should be suitable for use in project embankments. Select rock types for use as rock embankment, rock roadbed, channel lining, etc. would be durable limestones and/or durable shales. Foundation soils are likely to be clays, silty clays, clayey silts and clayey sands.

Embankments constructed of durable rock materials generally exhibit adequate stability at 2H:1V slope configurations. However, flatter embankment slopes may be required for tall embankments or in areas where embankments are founded on alluvial, colluvial or mine spoil materials. Alluvial soils can be expected along Green River and Rolling Fork. Mine spoil materials should be expected at the quarry locations identified in Section 4.3.

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

5.5. Seismic Concerns

Although faults are located in the area of study, the probability for an earthquake with damaging effects is low for this project. During a more comprehensive geotechnical exploration, site seismicity issues should be evaluated in conjunction with subsurface profiles to determine if earthquake loadings could be a problem with structures, cut slopes or embankments. If seismicity appears to be a problem, then common computer programs can be utilized to input dynamic conditions for evaluation of slope stabilities and a seismic site response analysis may be required to evaluate structures.

A seismic event could induce liquefaction of foundation soils beneath embankments and substructure locations. Liquefaction induces a reduction of the load bearing capacity of the soils in the affected areas. Liquefaction is typically associated with deep, loose soils. Liquefaction potential of soil is significantly affected by the soil structure, void ratio, soil type, initial confining stress and intensity/duration of ground motion. In review of the geologic quadrangles, alluvial soils on the order of 50 feet thick could be encountered along Green River and up to 40 feet thick within Rolling Fork. If liquefaction appears to be a concern after a comprehensive geotechnical exploration, detailed liquefaction potential studies should be performed in order to evaluate foundation recommendations.

5.6. Concerns Related to Faults in the Area

Faults known to exist in the area are not considered to be active, thus it is highly unlikely that the faults would shift causing an earthquake. Potential for slumping and other forms of slope failure exists because of unstable conditions of the bedrock and soils along the areas affected by the fault. Based on the known fault locations discussed in Section 3.3, the current corridors are positioned to encounter the faults perpendicular to the strike of the faults. This orientation should minimize typical problems associated with roadway construction in areas of known faults. Alignments trending parallel with the strike of a fault are more likely to encounter problems from unstable bedrock blocks and soil. Problems from the fault areas include folding of bedrock, significant fracturing and other localized faults. Areas of known faulting should be studied further and appropriately considered during the design phase of any chosen roadway corridor.

6. Conclusions and Recommendations

6.1. The purposes of this overview were to provide a general summary of the bedrock, soil and geomorphic features likely to be encountered within the proposed environmental footprint and corridors; and to identify geotechnical features that could have an adverse impact on the Heartland Parkway project. This overview has also been performed to assist the Project Team in choosing a preferred corridor.

6.2. Based on observations and information reviewed during this study, both corridors are feasible and would encounter similar geotechnical concerns and geologic conditions. The Eastern Corridor is the preferred roadway geotechnically because there would likely be less new disturbance to implement proposed improvements and require the least amount of new cut and fill situations. The main disadvantage of the Western Corridor may be from a cost perspective.

6.3. There are several active, inactive, and abandoned limestone and sand quarries known to exist in the immediate vicinity of the studied corridors. If the Eastern Corridor is selected as the preferred corridor, quarries situated near the existing roadways should be further evaluated for potential impacts.

6.4. The potential for encountering karst activity such as soil piping and solutioning of bedrock, as well as karst features such as sinkholes and subterranean channels, are significant over portions of both corridors. Potential for karst activity is greatest in the southern portion of the corridor within the Mississippian Plateaus Region near Columbia, Kentucky. FMSM recommends that an inventory of karst features be conducted during the geotechnical exploration to assist the Design Team in line and grade selection.

6.5. The potential exists for acid drainage from bedrock and soils within The Knobs Region. The New Albany Shale within that region is a known acidic stratum. Particular attention should be given to the design of cut slopes and embankments that are located in The Knobs Area. Cuts and embankments within the New Albany Shale and residual soils from the New Albany Shale should be encapsulated with a minimum of four feet of clay-like, non-acidic material.

6.6. Oil and gas wells could be encountered along any chosen corridor. It is generally good practice to avoid disturbing oil and gas wells, if possible.

6.7. Because of the clayey type soils within the corridors, a low CBR value should be anticipated. Therefore, if durable rock is not available for a rock roadbed, chemical modifications to the soils and thicker pavement sections may be required.

6.8. The information presented in this report should be viewed in the general nature in which it was intended. A more detailed study, which was beyond the scope of this work, will be required to more specifically define potential problem areas within any alternate corridor proposed for the Heartland Parkway. A thorough geotechnical exploration of the selected alignment(s) and grade(s) will be required to properly anticipate and plan for special requirements necessary for the design and construction of a roadway once a preferred corridor and alignment is chosen.

APPENDIX E.
GEOTECHNICAL OVERVIEW

Appendix I

Site Location Map

N

MERCER CO.

BOYLE CO.

PERRYVILLE

UNINCORPORATED
LIBERTY

PULASKI CO.

CASEY CO.

RUSSELL CO.

RUSSELL SPRINGS

ANDERSON CO.

MACKVILLE

WILLISBURG

WASHINGTON CO.

BRADFORDSVILLE

SPRINGFIELD

LEBANON

MARION CO.

BLOOMFIELD

TAYLOR CO.

CAMPBELLSVILLE

ADAIR CO.

UNINCORPORATED
COLUMBIA

LORETTO

RAYWICK

BARDSTOWN

NELSON CO.

GREENSBURG

NEW HAVEN

BULLITT CO.

LARUE CO.

Environmental Footprint

Eastern Corridor

Western Corridor

Site Location Map for the Heartland Parkway

FULLER
MOSSBARGER
SCOTT AND MAY
ENGINEERS, INC.

1409 N. Forbes Rd.
Lexington, KY 40511

EMSM ENGINEERS
LEXINGTON LOUISVILLE CINCINNATI COLUMBUS ST.LOUIS

DRAWN BY	MEA	DATE	January 2004	REVISED	Sheet
CHECKED BY	MAL	PROJECT NO.	LX2002273	1. 3.	1 of 1
CHECKED BY		SCALE	NA	2. 4.	

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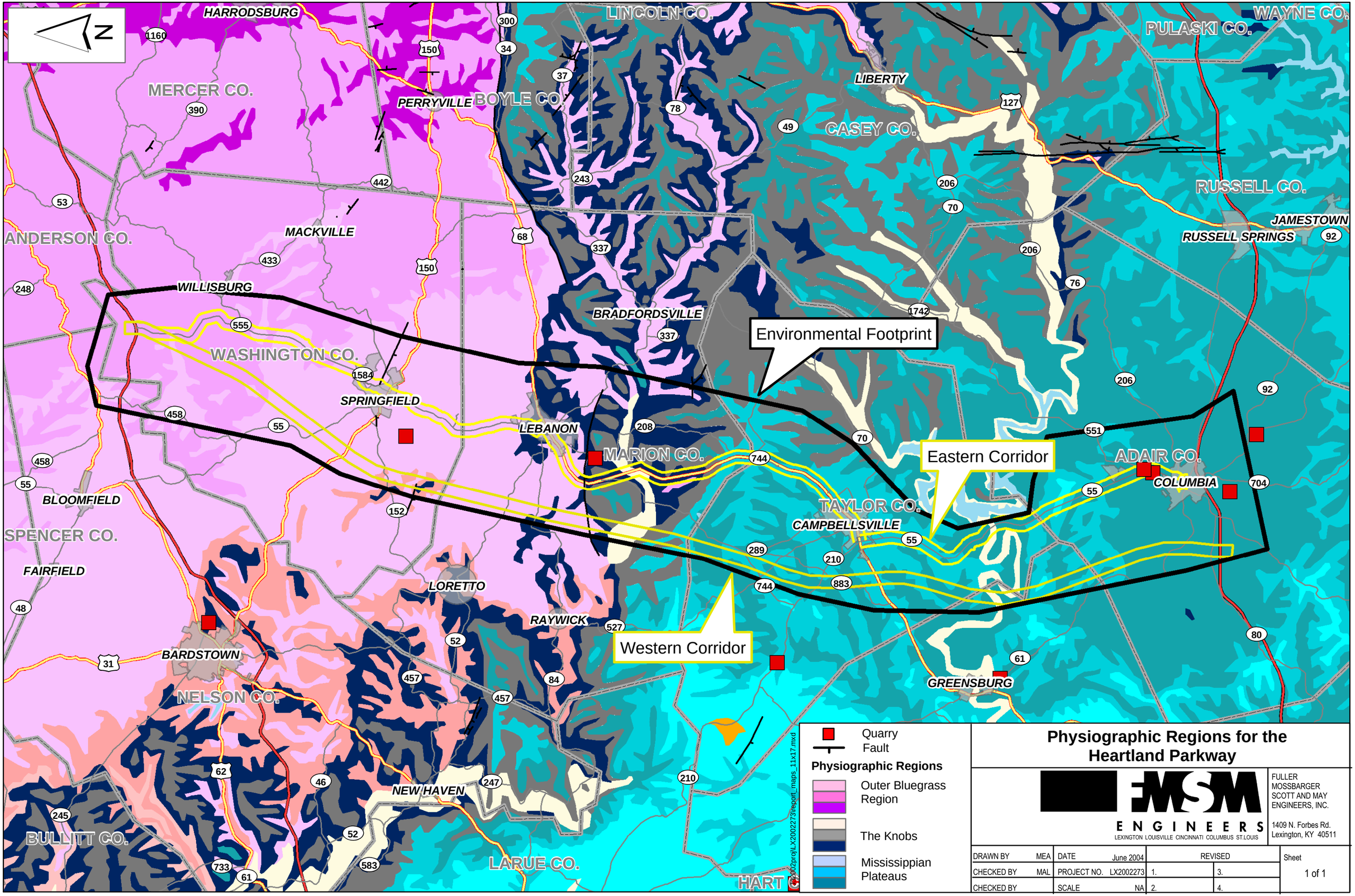
Appendix II

Physiographic Regions for Heartland Parkway



Physiographic Regions for the Heartland Parkway

FMSM ENGINEERS
LEXINGTON LOUISVILLE CINCINNATI COLUMBUS ST.LOUIS

FULLER MOSSBARGER SCOTT AND MAY ENGINEERS, INC.
1409 N. Forbes Rd.
Lexington, KY 40511

DRAWN BY	MEA	DATE	June 2004	REVISED		Sheet
CHECKED BY	MAL	PROJECT NO.	LX2002273	1.	3.	1 of 1
CHECKED BY		SCALE	NA	2.	4.	

Appendix III

Map of Karst Occurrence in Kentucky

KENTUCKY GEOLOGICAL SURVEY
James C. Cobb, State Geologist and Director
UNIVERSITY OF KENTUCKY, LEXINGTON

MAP AND CHART 33
Series XII, 2001

KARST OCCURRENCE IN KENTUCKY

Randall L. Paylor and
James C. Currens

This map was compiled from a digital version of the 1:500,000-scale geologic map of Kentucky (Noger, M.C., comp., 1988, Geologic map of Kentucky: U.S. Geological Survey). The areas of potential karst development were delineated using stratigraphic units mapped on the geologic map. The classification of the potential for karst development was based on the field experience of the authors and other cave. A number of isolated carbonate units that would not have otherwise been differentiated on the geologic map were newly digitized for this map.

This karst map should not be used for evaluating karst geologic hazards or hydrogeology at scales larger than 1:500,000. The base geologic map was digitized at 1:500,000 scale and is limited in precision to that scale. Because of the small scale of the original geologic map, lithostratigraphic units were consolidated into bulk chemostratigraphic units to create an area large enough to delineate on the geologic map. In some cases, the consolidation resulted in carbonates (limestone or dolomite) and noncarbonates (sandstone or shale, for example) being grouped; these rocks are not delineated on this map. Although the potential for karst development can be predicted from lithology, other factors such as relief and length of time a rock is exposed are also important and were considered in the making of this map. Finally, areas where the karst surface bed rock is insoluble or is closely underlain by soluble rock are common, particularly in the Eastern Pennyroyal. Conduits that receive drainage commonly extend through ridges capped with insoluble rocks. Therefore, some areas mapped as having limited potential for karst are adjacent to areas of higher potential are actually karst, but cannot be differentiated on the map.

Karst is a terrane that is generally underlain by limestone or dolomite, where the topography is formed chiefly by the dissolving of rock. Karst landscapes are commonly characterized by sinkholes, sinking streams, closed depressions, subterranean drainage, large springs, and caves.

Karst regions are susceptible to unique problems such as sinkhole collapse, sinkhole flooding, and rapid groundwater pollution. Springs in karst areas are an important, productive source of groundwater. Rare biologic communities and endangered species can be found in the fragile aboveground environments developed in karst landscapes.

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EXPLANATION

- Areas underlain by bedrock with high potential for karst development
- Areas commonly bedrock with moderate potential for karst development
- Areas underlain by bedrock with limited or no potential for karst development

Outer Bluegrass Region

Inner Bluegrass Region

Eastern Pennyroyal Region

Western Pennyroyal Region

Pine Mountain Region

Environmental Footprint

KENTUCKY

WEST VIRGINIA

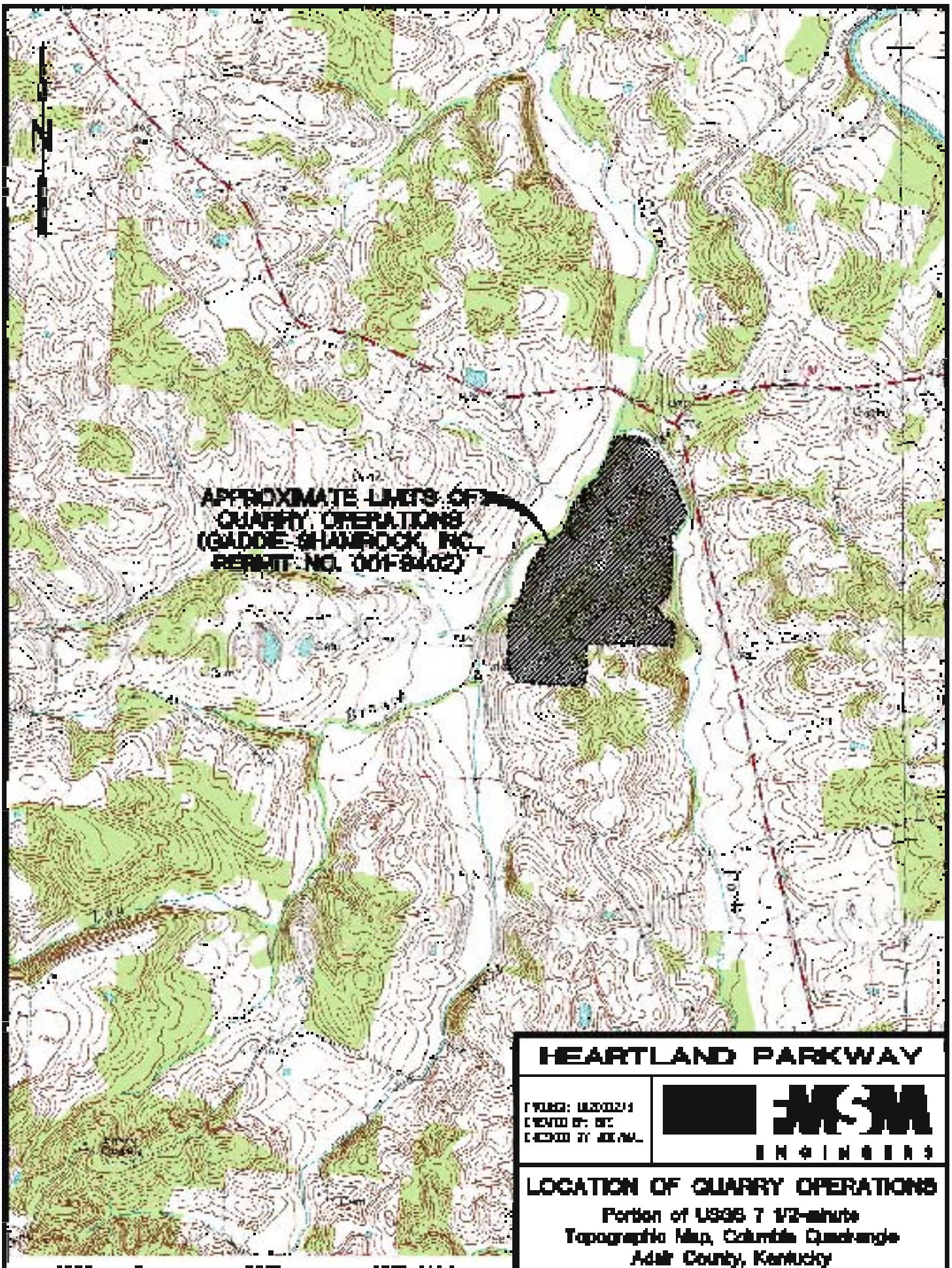
VIRGINIA

TENNESSEE

Cartography by Jerry Prewitt

Appendix IV

Location of Quarry Operations



HEARTLAND PARKWAY

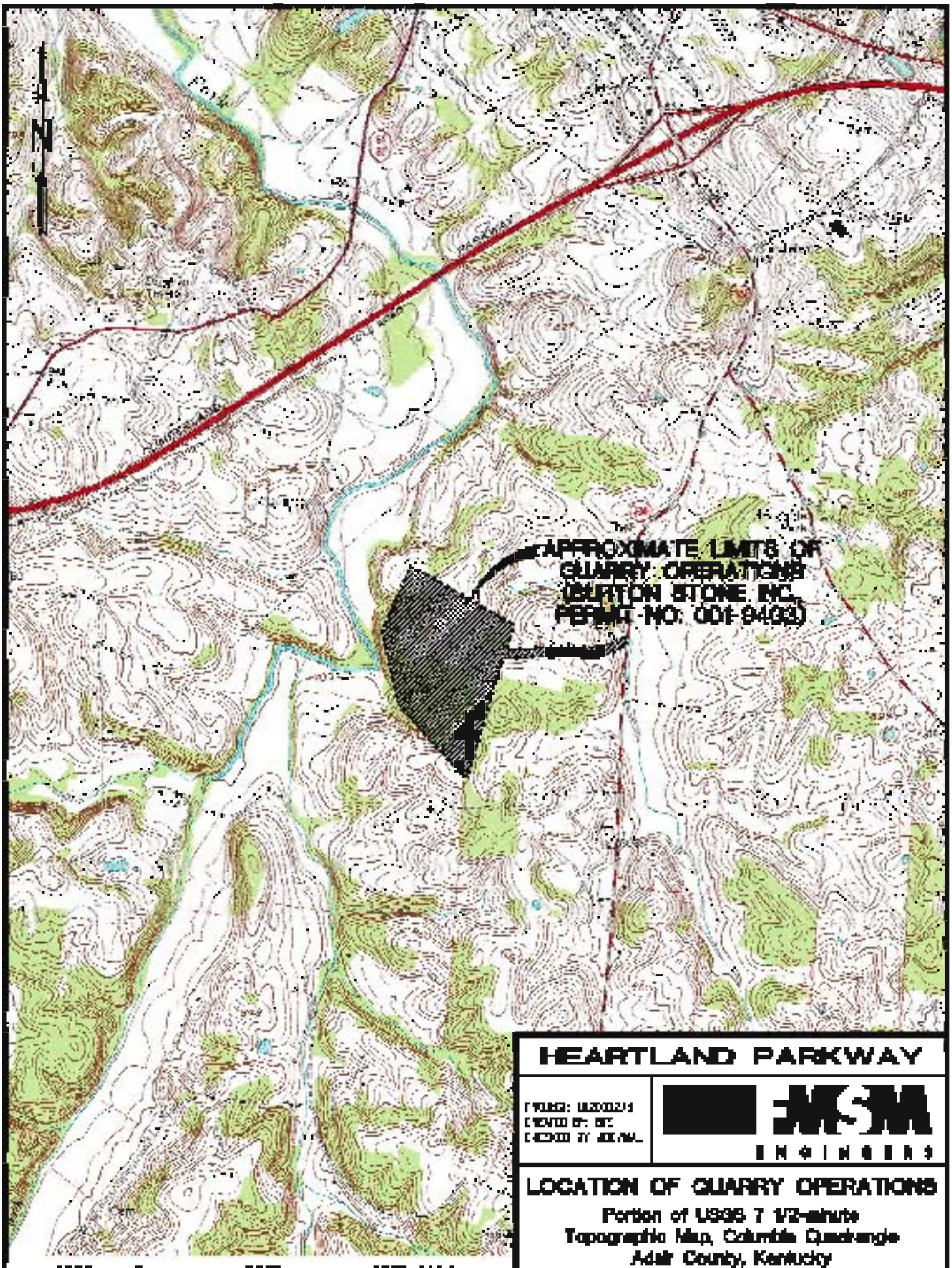
MSM ENGINEERS

LOCATION OF QUARRY OPERATIONS

Portion of USGS 7 1/2-minute
Topographic Map, Columbia Quadrangle
Adair County, Kentucky

Item Number 4-182

Exhibit 1



HEARTLAND PARKWAY

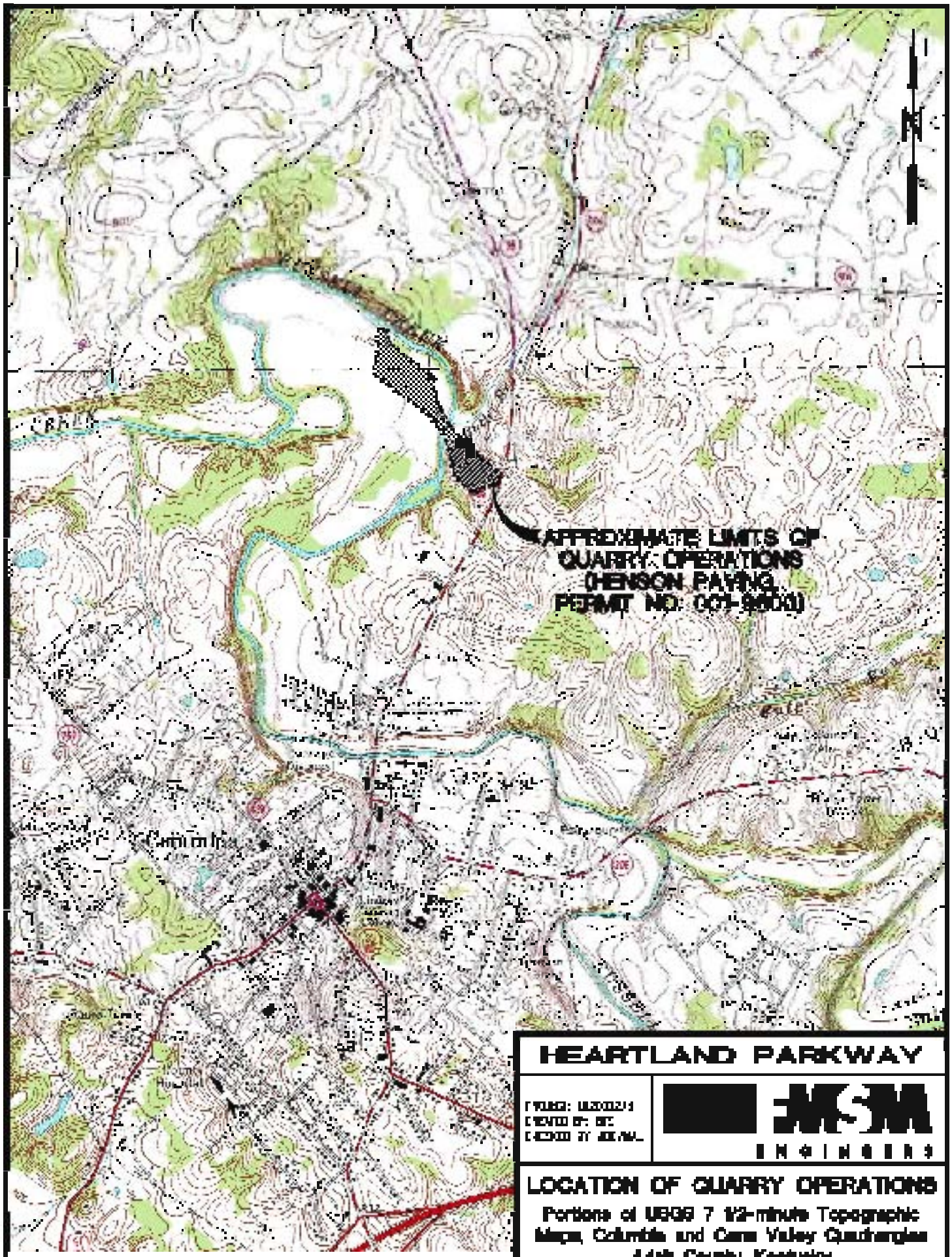
MSM ENGINEERS

LOCATION OF QUARRY OPERATIONS

Portion of USGS 7 1/2-minute
Topographic Map, Columbia Quadrangle
Adair County, Kentucky

Item Number 4-192

Exhibit 2



HEARTLAND PARKWAY

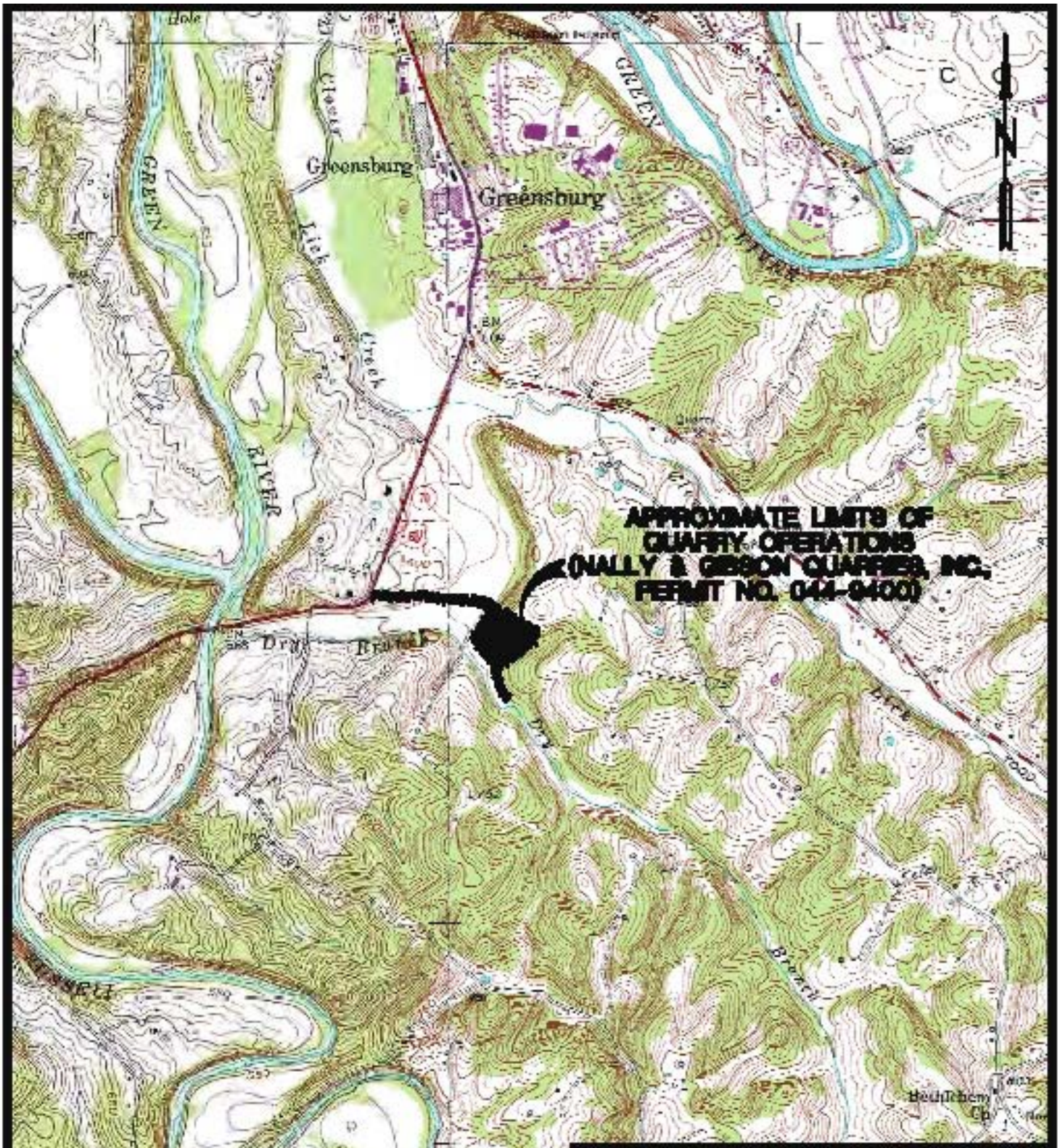
MSM ENGINEERS

LOCATION OF QUARRY OPERATIONS

Portions of USGS 7 1/2-minute Topographic Maps, Columbia and Cane Valley Quadrangles
Adair County, Kentucky

Item Number 4-192

Exhibit 3



HEARTLAND PARKWAY

PROJECT: [redacted]
CHECKED BY: [redacted]
CHECKED BY: JDB/WL

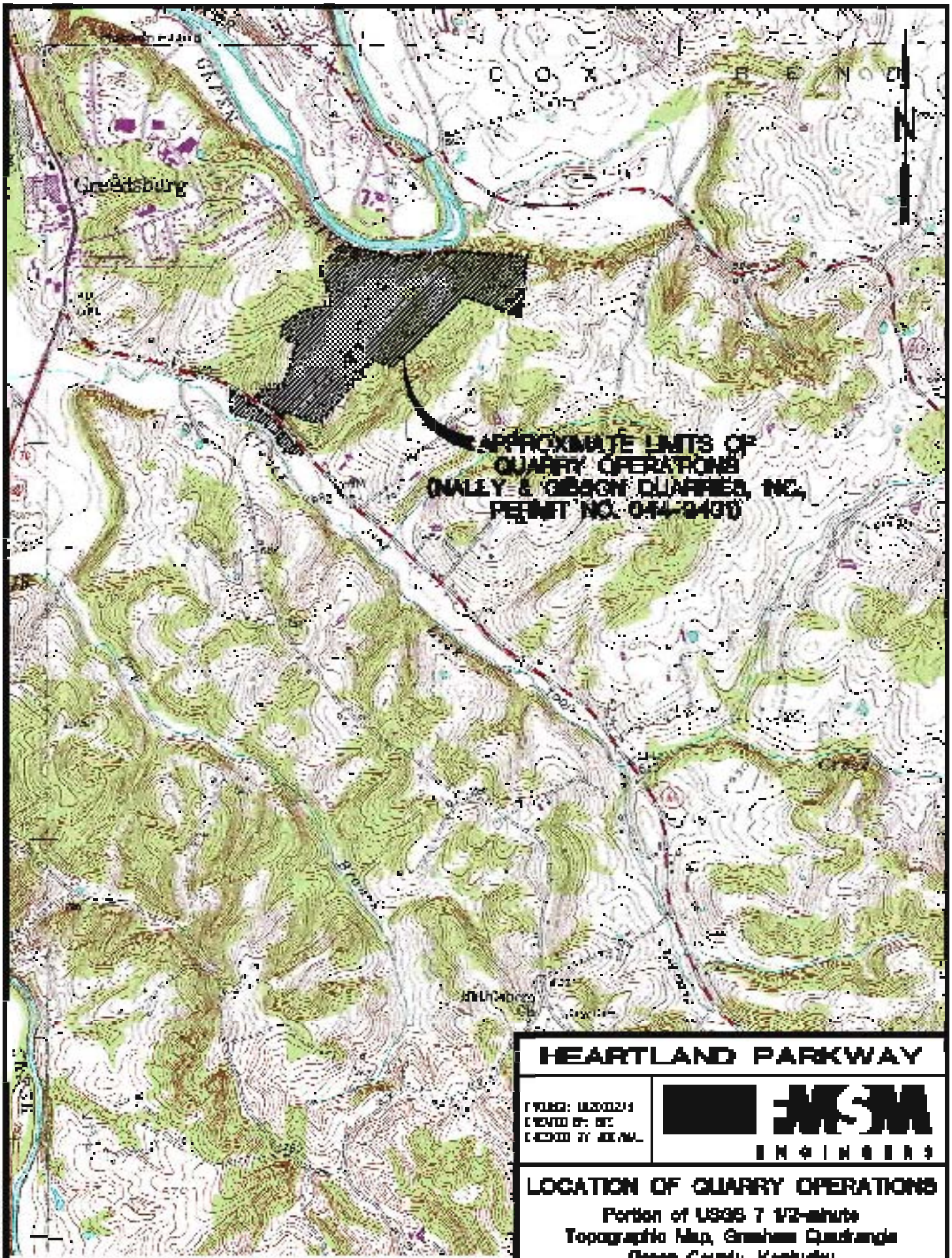
[redacted] EMSM ENGINEERS

LOCATION OF QUARRY OPERATIONS

Portions of USGS 7 1/2-minute Topographic Maps, Greenham and Exie Quadrangles
Green County, Kentucky

Item Number 4-182

Exhibit 4


C O X
R E N D
N
Greensburg
APPROXIMATE LIMITS OF
QUARRY OPERATIONS
DALLEY & GIBSON QUARRIES, INC.
PERMIT NO. 044-9400
HEARTLAND PARKWAY
MSM
ENGINEERS
LOCATION OF QUARRY OPERATIONS
Portion of USGS 7 1/2-minute
Topographic Map, Greenham Quadrangle
Green County, Kentucky
Item Number 4-182
Exhibit 6
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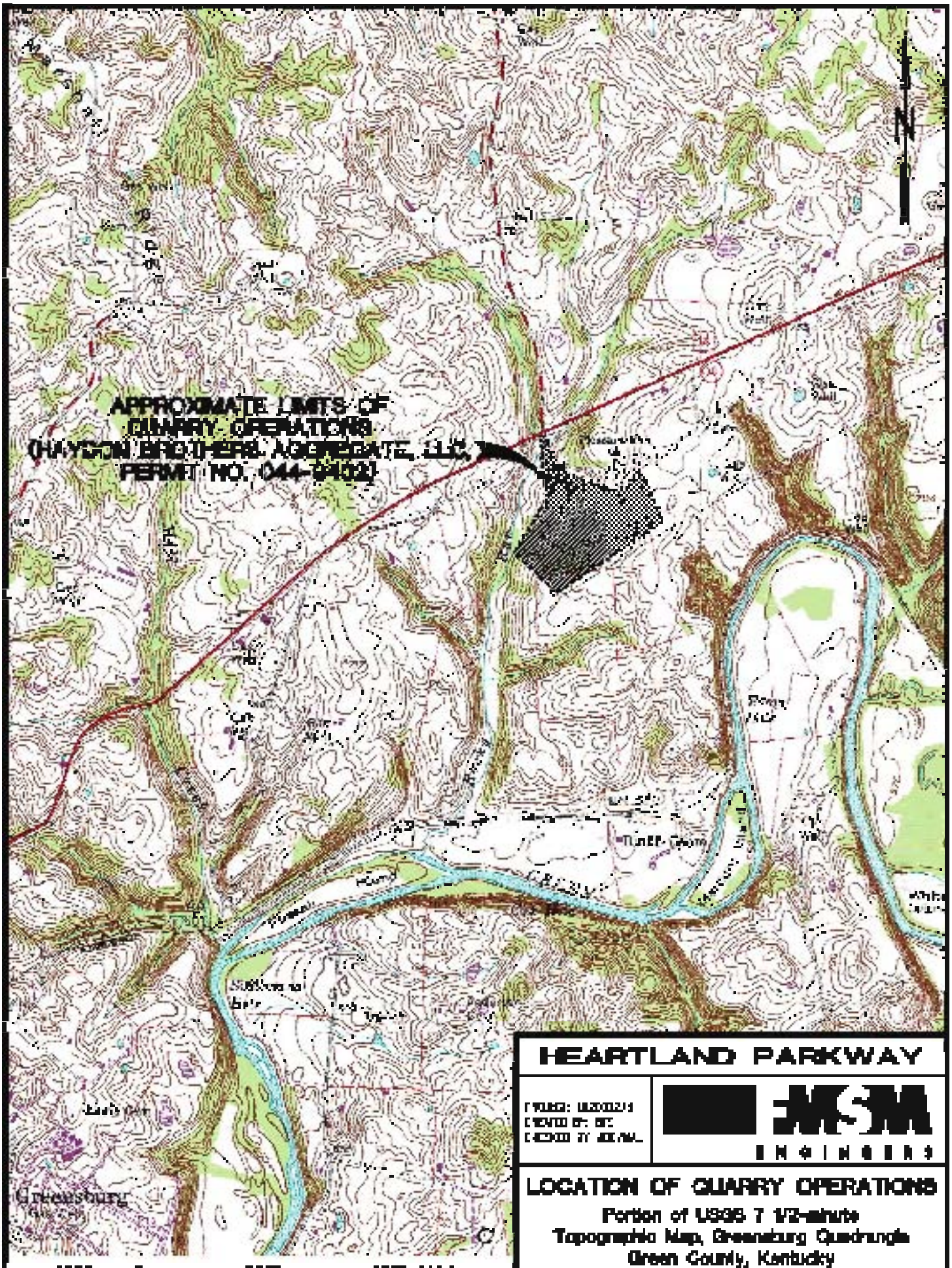
GRAPHIC SCALE: 1" = 2000'



HEARTLAND PARKWAY

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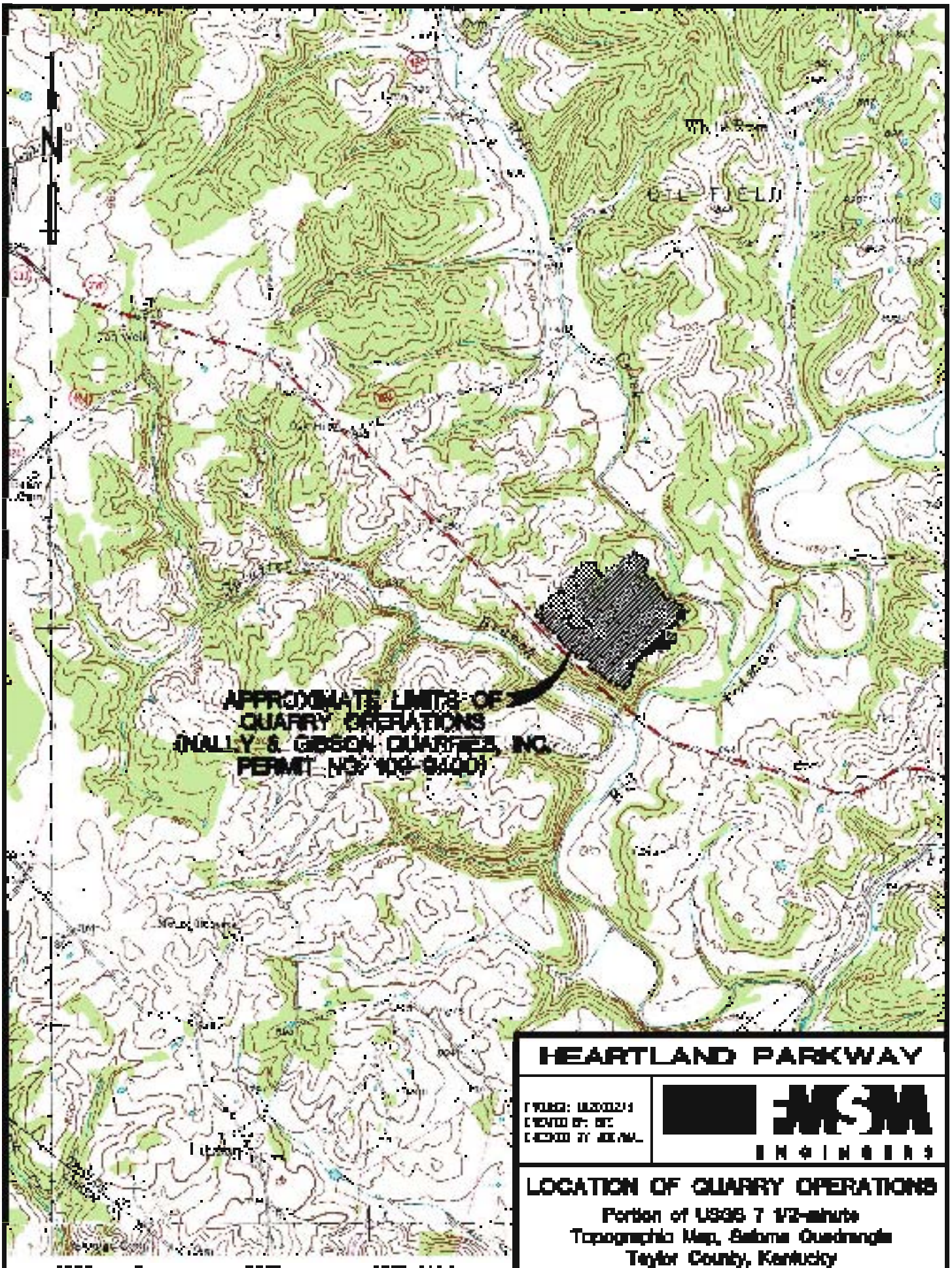
LOCATION OF QUARRY OPERATIONS

Portion of USGS 7 1/2-minute
Topographic Map, Greensburg Quadrangle
Green County, Kentucky

Item Number 4-192

Exhibit B



HEARTLAND PARKWAY

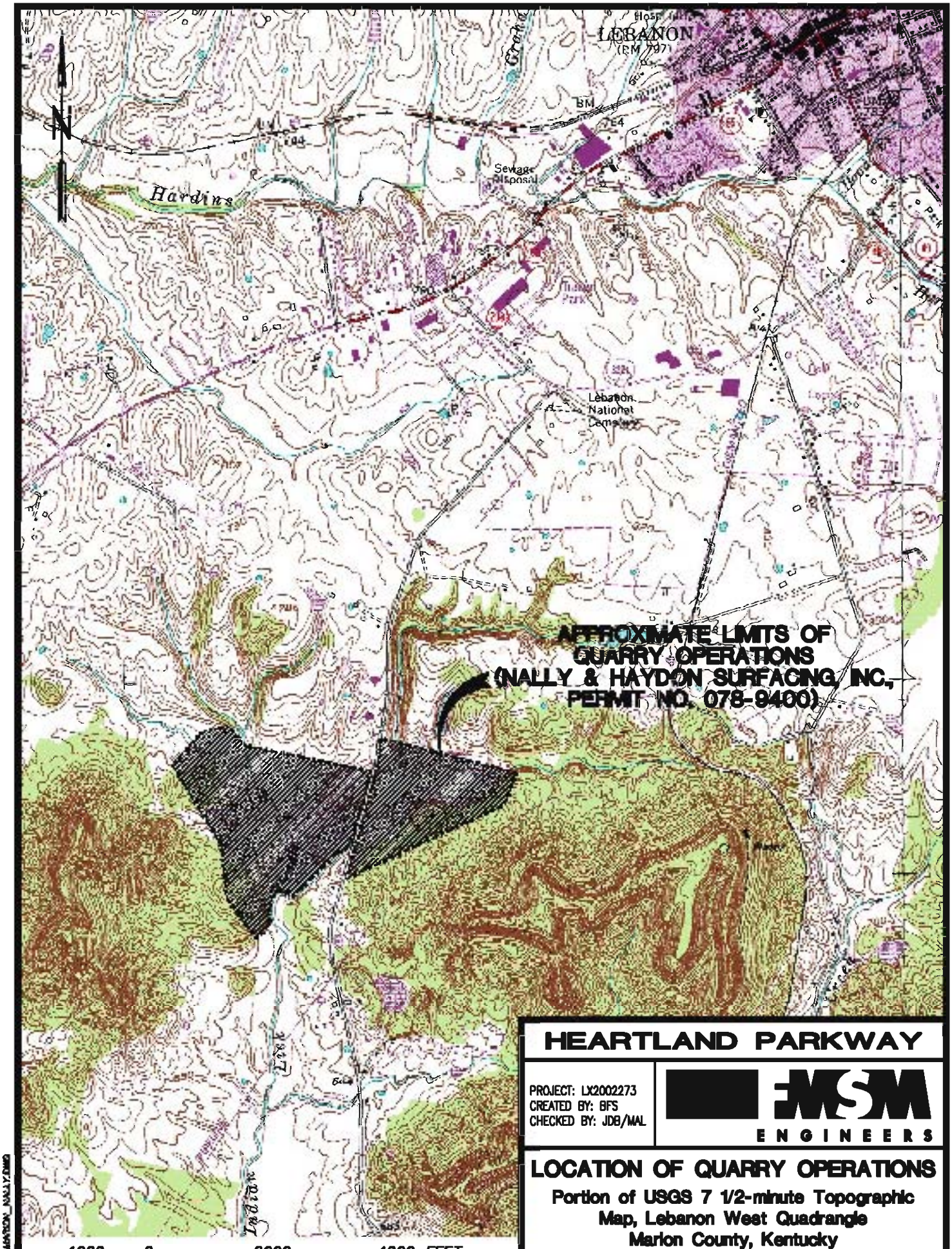
MSM ENGINEERS

LOCATION OF QUARRY OPERATIONS

Portion of USGS 7 1/2-minute
Topographic Map, Saloma Quadrangle
Taylor County, Kentucky

Item Number 4-182

Exhibit 7



HEARTLAND PARKWAY

PROJECT: LX2002273
CREATED BY: BFS
CHECKED BY: JDB/MAL

FMSM ENGINEERS

LOCATION OF QUARRY OPERATIONS

Portion of USGS 7 1/2-minute Topographic Map, Lebanon West Quadrangle
Marion County, Kentucky

Item Number 4-132

Exhibit 8

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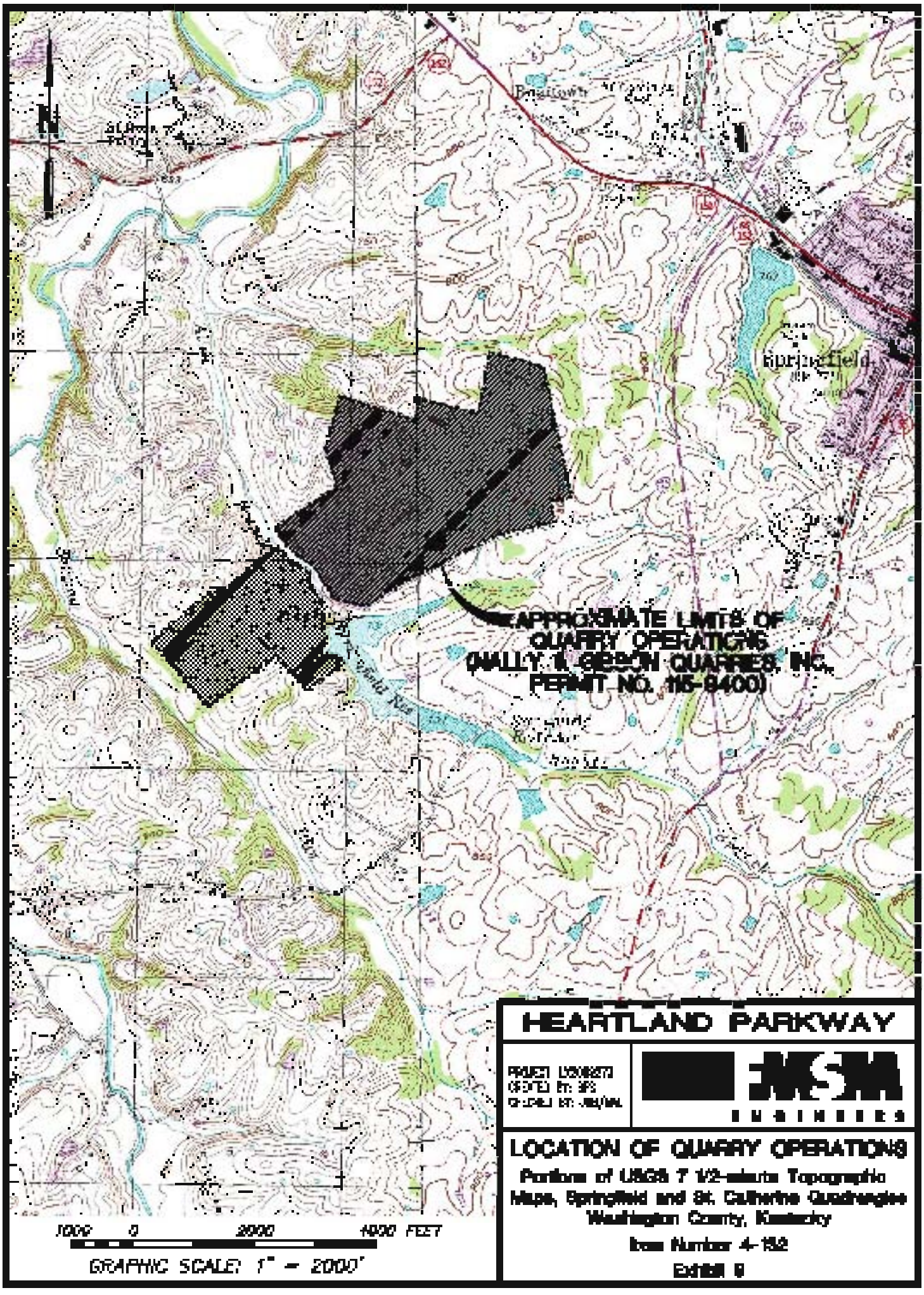

N
Springfield
APPROXIMATE LIMITS OF
QUARRY OPERATIONS
(NALLY & GIBSON QUARRIES, INC.
PERMIT NO. 115-9400)
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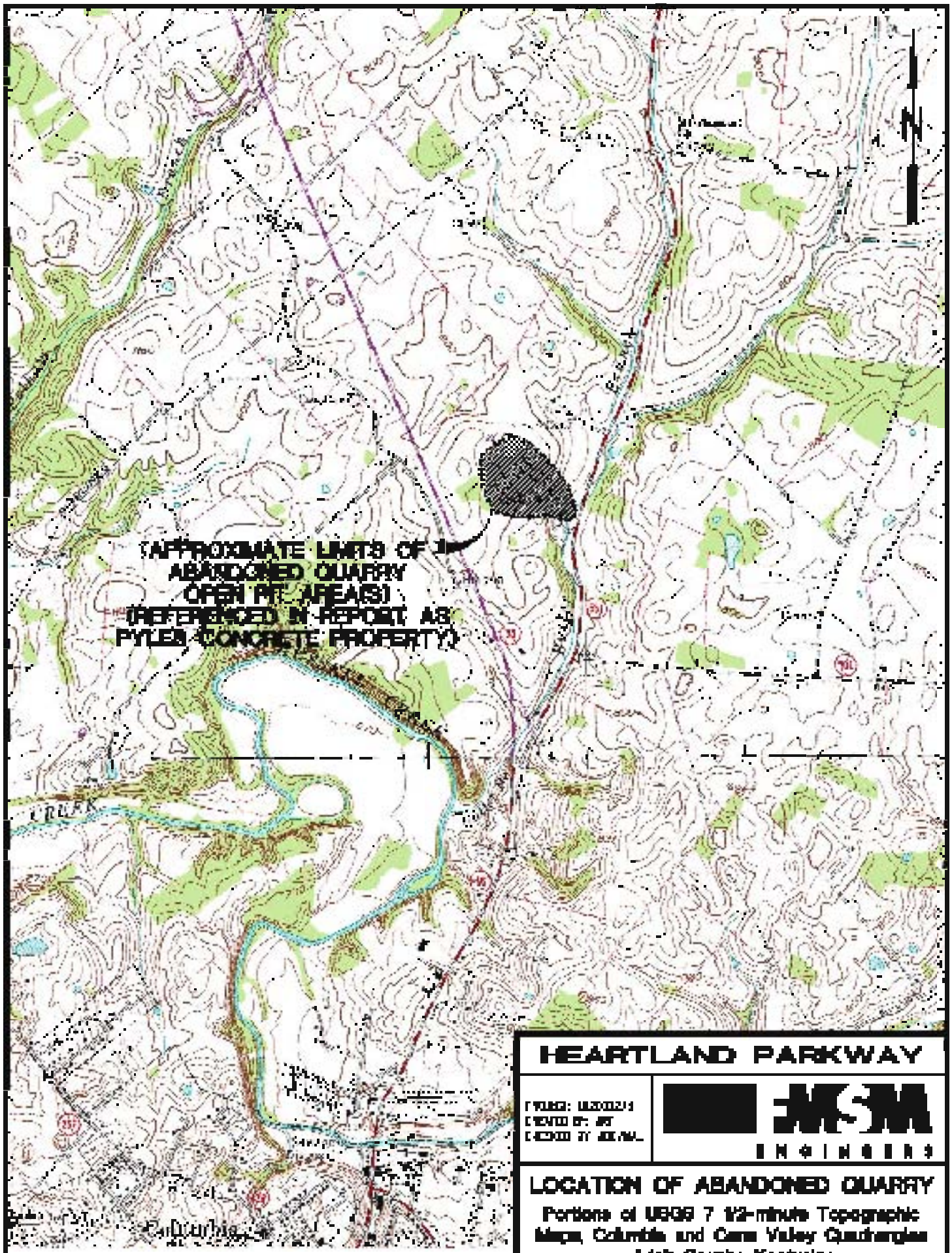
GRAPHIC SCALE: 1" = 2000'
HEARTLAND PARKWAY
FMSM
ENGINEERS
LOCATION OF QUARRY OPERATIONS
Portions of USGS 7 1/2-minute Topographic
Maps, Springfield and St. Catherine Quadrangles
Washington County, Kentucky
Ibcs Number 4-152
Exhibit 9



HEARTLAND PARKWAY

MSM ENGINEERS

LOCATION OF ABANDONED QUARRY

Portions of USGS 7 1/2-minute Topographic Maps, Columbia and Cane Valley Quadrangles
Adair County, Kentucky

Item Number 4-192

Exhibit 10

APPENDIX F.

MEETING MINUTES

1. May 28, 2003 – Project Team Initial Meeting
2. July 7, 2003 – Lincoln Trail Development District Local Officials Meeting
3. July 7, 2003 – Lincoln Trail Development District Local Agencies Meeting
4. July 15, 2003 – Lake Cumberland Area Development District Local Officials Meeting
5. July 15, 2003 – Lake Cumberland Area Development District Local Agencies Meeting
6. July 18, 2003 – Heartland Parkway Task Force Meeting
7. September 2, 2003 – Marion County First Round Public Information Meeting
8. September 4, 2003 – Adair County First Round Public Information Meeting
9. September 8, 2003 – Washington County First Round Public Information Meeting
10. September 11, 2003 – Taylor County First Round Public Information Meeting
11. February 4, 2004 – Project Team Second Meeting
12. February 27, 2004 – Adair County Second Round Local Officials/Agencies Meeting
13. February 27, 2004 – Taylor County Second Round Local Officials/Agencies Meeting
14. March 5, 2004 – Green County Second Round Local Officials/Agencies Meeting
15. March 9, 2004 – Marion County Second Round Local Officials/Agencies Meeting
16. March 9, 2004 – Washington County Second Round Local Officials/Agencies Meeting
17. April 26, 2004 – Green County Second Round Public Information Meeting
18. April 29, 2004 – Marion County Second Round Public Information Meeting
19. May 6, 2004 – Taylor County Second Round Public Information Meeting
20. May 10, 2004 – Washington County Second Round Public Information Meeting
21. May 11, 2004 – Adair County Second Round Public Information Meeting
22. August 11, 2004 – Stakeholder First Meeting
23. September 1, 2004 – Project Team Third Meeting
24. September 23, 2004 – Stakeholder Second Meeting

Project Team Initial Meeting Minutes

Alternatives Study
Adair, Marion, Taylor, and Washington Counties
Item No. 4-132.00
Heartland Parkway
May 28, 2003

A project team meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted on Wednesday, May, 28, 2003, at the Kentucky Transportation Cabinet (KYTC) Department of Highways District 4 Office in Elizabethtown, Kentucky. The purpose of the meeting was to discuss the purpose, goals, and objectives of the proposed project, project issues, and to review existing conditions data for the study area. Participants at the meeting included representatives from KYTC District 4, KYTC District 8, KYTC Division of Planning, Lincoln Trail Area Development District, the consultant staff from T.H.E. Engineers, F.M.S.M. Engineers, and WMB, Inc. Attendees for the meeting are as follows:

Jim Wilson	KYTC – Central Office Planning
Ted Noe	KYTC – Central Office Planning
Tom Jobe, Jr.	KYTC D-4 Chief District Engineer
Patty Dunaway	KYTC D-4 Planning
Kevin Young	KYTC D-4 Planning
Gary Raymer	KYTC D-4 Construction
Becky Judson	KYTC D-4 Public Information Officer
E.L. Lewis	KYTC D-4 Traffic
Kevin Cartwright	KYTC D-4 Design
Tom Clouse	KYTC D-8 Planning
George Best	KYTC – Central Office Design
Mike Skaggs	Lincoln Trail ADD
Jack Qualls	Lincoln Trail ADD
John W. Brown	T.H.E. Engineers
John Beam	F.M.S.M. Engineers
Mark Litkenhus	F.M.S.M. Engineers
Daniel Byers	WMB, Inc.
Phil Lambert	WMB, Inc.

A summary of the comments and discussion items for this meeting are outlined below.

Introduction and Project History

Attendees were given a project history, including the source of interest and funding. The current alternatives study will review options along the existing corridor of KY 55, US 68, and KY 555 between the Louie B. Nunn Cumberland Parkway and the Bluegrass Parkway, as well as, corridors east and west of the

existing facilities. The project will identify general corridor locations, a description of each corridor, corridor issues, desires of elected and public officials, public interest sectors, and documentation of environmental justice factors. The final study report will attempt to identify a recommended corridor for use in future design efforts. It will also document the process and address project goals.

Additionally, the project consultant presented both a *draft of the project purpose, issues, and goals* and a display board and handout maps of the *preliminary environmental footprint.*

Draft Project Purpose

The purpose of the Heartland Parkway Scoping Study is to identify and evaluate potential corridors for a new route and/or existing routes (KY 55/US 68/KY 555) from the Louie B. Nunn Cumberland Parkway to the Bluegrass Parkway. The study is intended to help define the location and purpose of the project and better meet Federal requirements regarding consideration of environmental issues, as defined in the National Environmental Policy Act (NEPA).

Items involved with this study include:

- Discuss project needs and issues with public officials, resource agencies, and other groups which have a special interest in the project;
- Define project goals, needs, and issues;
- Define the beginning and ending points of the project corridor;
- Identify any known environmental concerns;
- Identify and evaluate alternate corridors with possible design concepts; and,
- Listen to, and share information with, the public.

Draft Project Issues

Major issues and concerns have been identified within the study area that will be addressed in the Scoping Study. These include:

- Lack of good access to major expressway-type systems in the region (i.e., I-75, I-65, and the proposed I-66 corridor);
- A need to improve economic and tourism opportunities in Adair, Green, Taylor, Marion, Nelson, and Washington Counties;
- Poor geometrics, including narrow lane widths, narrow shoulders, substandard horizontal/vertical alignments, poor sight distance (no passing lanes), and access type;
- KY 55/US 68/KY 555 are not on the National Highway System; and,
- A need to improve capacity in Adair, Green, Taylor, Marion, Nelson, and Washington Counties.

Draft Project Goals

For the Heartland Parkway Scoping Study project, several goals and objectives were identified. These include:

- Improved statewide and regional access;
- Improved truck access for the region;
- Improved economic opportunities;
- Improved horizontal/vertical alignments to provide adequate sight distances and control of access;
- Improved highway capacity;
- Decreased delays through communities; and,
- Improved emergency response times.

Study Area

The project team discussed the environmental footprint area, and suggested an expansion westward near Lebanon and south of Lebanon. Attendees were provided copies of summary tables and maps defining existing conditions of the study area. The following tables and maps were included in the handout:

Traffic and Geometric Data tables were compiled for each county along the existing corridor route. Data for these tables was obtained from KYTC's *Highway Information System (HIS)* database.

Bridge Data tables were compiled for each county in the study area. Data for these tables was obtained from KYTC's *Highway Information System (HIS)* database.

Six Year Highway Plan Improvement tables were compiled for each county. The source for this information is KYTC's *Six-Year Highway Plan.*

Crash Data Analysis tables for segments and spots were included in the handout for each county. Sources for these tables were KYTC's *Highway Information System (HIS)*, Kentucky Transportation Center's *Analysis of Traffic Crash Data in Kentucky (1997-2001)*, and data received from KYTC Central Office Accident Section.

Maps included in the handout were an Environmental Footprint and Crash Data.

The consultant pointed out the different typical sections currently found along the existing facilities. Differences included lane and shoulder widths, as well as, the type of access control. The team also noted that continuity between sections is an important consideration for the project.

Project Termini

The project team discussed the new interchange on the Louie B. Nunn Cumberland Parkway at KY 61 as a possible southern terminus, and the KY 555 interchange on the Bluegrass Parkway as a northern terminus. It was noted in the meeting that a project to extend KY 555 north of the Bluegrass Parkway is currently in the Right of Way phase.

Design Criteria

Following the consultant's presentation of design criteria for Rural Arterial Roads (Other Than Freeways) and for Interstate/Parkway-type facilities, a discussion was held regarding the minimum design standards desired by the project team. It was noted that a two-lane facility should not be eliminated from consideration. Lane, shoulder, and median widths were also discussed, noting the difference in partial and full access control facilities. The consultant also discussed that additional input will be obtained from local officials, special interest groups, and the public regarding the type of facility desired for the Heartland Parkway.

Consequently, the design criteria presentation and discussion led to the primary question concerning the purpose and need for the Heartland Parkway: What are we trying to accomplish with this project? It has been described as an economic development project to promote economic growth for the communities along the corridor. If it is an economic growth project, other factors such as unemployment rates in affected and adjacent counties will need to be evaluated. It is also described as a north-south route to link other major expressway-type highways.

Public Involvement

Meetings with elected/local officials will be scheduled in about a month. These meeting will be divided by Area Development District. The Lincoln Trail Area Development District will arrange meetings that include officials from Nelson, Washington, and Marion Counties; whereas, the Lake Cumberland Area Development District will arrange meetings that include officials from Green Adair, and Taylor Counties. It is anticipated that the meetings will be further divided, with elected officials attending a morning session and other local officials, resource agencies, and special interest groups attending an afternoon session.

There will not be a presentation of corridors at either the local/elected officials meetings, or the public meetings to be held in each of the communities along the existing corridor. This will allow the public to convey their ideas. It was noted, however, that the public may need to be educated regarding differences in the benefits of a two-lane versus four-lane, and partial access control versus full access control highway.

For each of the public meetings, a *power point presentation* may be used. The arrangements need to allow adequate seating, good visibility, and sufficient

audio. Advertisements will be placed in newspapers in each county and adjacent counties of the study area. There will also be advertisements placed in statewide newspapers, clarifying the different time zones involved in several of the planned meetings. A master mailing list will be developed for use in coordination letters.

Traffic Forecasting

The consultant presented the proposed methodology for development of the future no build traffic forecasts. There was some question regarding the 3.5% growth rate; however, the project team deferred their approval (disposition?) to Rob Bostrom, Division of Multimodal Programs.

With no further comments, the meeting concluded at approximately 11:30 am.

Local Officials Meeting Minutes

Alternatives Study
Adair, Marion, Taylor, and Washington Counties
Item No. 4-132.00
Heartland Parkway
July 7, 2003
10:00 a.m.
Lincoln Trail Area Development District Conference Room

A local officials meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 10:00 a.m. on Monday, July, 7, 2003, at the Lincoln Trail Area Development District Office in Elizabethtown, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the draft study area, and to solicit input from the local officials. Those in attendance included:

Reagan Barnum	Congressman Ron Lewis' Office
Brian Smith	Congressman Ron Lewis' Office
Dean Watts	Nelson County Judge-Executive
John Thomas	Lebanon City Administrator
John A. Settles	Washington County Judge-Executive
Hal B. Goode	Washington County Economic Dev.
Tom Jobe	KYTC D-4 Chief District Engineer
Patty Dunaway	KYTC D-4 Planning
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Mike Skaggs	Lincoln Trail ADD
Jack Qualls	Lincoln Trail ADD
Dan Byers	WMB, Inc.
Phil Lambert	WMB, Inc.

- Ted Noe began the meeting with introductions and an explanation of the study process. Next, Jim Wilson advised the attendees of previously held project team meeting and future meetings.

- The consultant gave a brief outline of the handout and the exhibits displayed. The *draft* project goals and *draft* study area were then discussed.

- The location for a corridor was discussed with most attendees preferring a corridor that would follow the existing routes.

- There was also a discussion of the type of roadway that is needed. The discussion included the types of access and the number of lanes as the Department explained the differences between fully controlled access and

partially controlled access. Afterward, the group expressed a preference for a partially controlled access and four-lane facility because it provides unrestricted traffic flow. It was noted by the group, however, that it would be acceptable to construct two lanes initially in areas where traffic volumes did not warrant four lanes then the additional two lanes could be added in the future if sufficient right of way is purchased. It was also suggested that photographs of an existing roadway, such as KY 61 from Elizabethtown to Hodgenville, be taken and displayed at public meetings

- The group expressed concern for transportation delays along the existing corridor. Items mentioned that contribute to delays include signalized intersections, driveways, lack of turn lanes, lack of passing lanes, and traveling through the communities. It was stated that these delays make it more difficult for the communities to attract industry. The attendees also suggested that a review of census data on the loss of jobs and migration from the communities along the proposed corridor might help identify future transportation needs for the affected counties since the economic livelihood is dependent on employment within the communities.

- As the *draft* goals were discussed, the group recommended adding tourism to the draft project goals, as well as noting economic development and the prevention of job losses. The Department stated that any data available from local officials regarding job losses would be used to help document the need for this project.

- There was some concern that the proposed Heartland Parkway will diminish the small community atmosphere or livability.

- The KY 555 extension project was discussed, and the group agreed that it would be desirable to connect the Heartland Parkway to the new facility. The group also expressed interest in extending KY 555 north to I-64.

- Ted Noe discussed the Public Involvement process and requested from attendees a suggested time frame for public meetings that will generate greater public participation. Suitable locations suggested were Center Square in Lebanon, Washington County Elementary School Commons Area, and Spalding Hall at St. Catharine College in the Springfield area.

- The group discussed environmental justice but didn't know of any applicable areas within the corridor.

- Other environmental concerns identified:

    - Possibility of Farm Service Agency Conservation District
    - Cemeteries
    - Prime Farm Land

    - Area around Green River Lake

- Additional discussions involved the project's impact on St. Catharine College - and other affected colleges and universities - and its inclusion within the project goals. The group felt that improved access would increase the availability of educational opportunities.

- Copies of the meeting minutes were requested by local officials.

With no further discussion, the meeting adjourned at 11:30 a.m.

Local Agencies Meeting Minutes

Alternatives Study
Adair, Marion, Taylor, and Washington Counties
Item No. 4-132.00
Heartland Parkway
July 7, 2003
1:00 p.m.
Lincoln Trail Area Development District Conference Room

A local agencies meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 1:00 p.m. on Monday, July, 7, 2003, at the Lincoln Trail Area Development District Office in Elizabethtown, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the draft study area, and to solicit input from the local agencies. Those in attendance included:

Tom Jobe	KYTC D-4 Chief District Engineer
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Jack Qualls	Lincoln Trail ADD
Dan Byers	WMB, Inc.
Phil Lambert	WMB, Inc.

There were no local agencies represented. The meeting was concluded at 1:30 p.m.

Local Officials Meeting Minutes

Alternatives Study
Adair, Marion, Taylor, and Washington Counties
Item No. 4-132.00
Heartland Parkway
July 15, 2003
10:00 a.m. CDT
Lake Cumberland Area Development District Conference Room

A local officials meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 10:00 a.m. on Tuesday, July 15, 2003, at the Lake Cumberland Area Development District Office in Russell Springs, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the draft study area, and to solicit input from the local officials. Those in attendance included:

Frances Clinkscales	Campbellsville City Council
Brenda Allen	Mayor of Campbellsville
Mike Halk, Jr.	Campbellsville City Council
Dan Hayes	Campbellsville City Council
Jerry Vaughan	Adair County Judge-Executive
Paul Patton	Taylor County Judge-Executive
Redell Jewell	Green County Magistrate
Curtis Hardwick	Mayor of Columbia
J.M. Shelley	Columbia
Tom Clouse	KYTC D-8 Planning
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Neal Cundiff	Lake Cumberland ADD
Donna Diaz	Lake Cumberland ADD
David Rowland	Lake Cumberland ADD
Larry Wilson	Lake Cumberland ADD
Dan Byers	WMB, Inc.
Phil Lambert	WMB, Inc.

- Ted Noe began the meeting with introductions and an explanation of the study process. Next, Jim Wilson advised the attendees of previously held project team meetings and of future meetings before asking the group to explain what needs to be done.

- The consultant defined the end-product of the Alternatives Study by emphasizing that local officials had personal knowledge of transportation needs in their area, and by how groups would benefit from transportation improvements. These local observations will be documented in the final

report. Currently, information is still being gathered for the study, so the final goals can be defined.

- The consultant then gave a brief outline of the handout and the exhibits displayed before discussing the *draft* project goals and the *draft* study area.

- There was a discussion regarding the project goals, with several of the goals being related. The primary emphasis was on economic development. Not only are local officials concerned of the difficulty of trucks getting through Columbia, but they are also concerned that the region's loss of jobs is forcing many individuals to leave the area for other employment. Local officials were asked for supporting data to document the migrating workforce.

- Additionally, it was mentioned that Campbellsville does not have railway service. The only current mode of shipping is by truck, but truck widths greater than 102 inches are not permitted through Columbia.

- Tourism was also mentioned as a goal of significant importance. The group was told of a new development planned for Green River Lake that would include a lodge, conference center, and golf course. The John Hunt Morgan Civil War Trail was also mentioned as a local tourist attraction.

- Improved access to higher education facilities was also discussed since many students from Campbellsville University, Lindsey Wilson College, and St. Catharine College – one of the area's fastest growing colleges - commute from outside the area. Therefore, an improved transportation facility would provide more educational opportunities for students in the region. This was viewed as a benefit to economic development because with a better trained and educated workforce, higher paying professional and technical jobs could be attracted to the region.

- Agricultural economy was discussed because farmers are shifting from tobacco to crops that are shipped nationwide. In order to be competitive, improved transportation facilities are needed to better transport the products.

- With safety mentioned as another significant goal, it was noted that with only two hospitals along the existing corridor, in Lebanon and Campbellsville, a major highway is necessary for quick emergency response since the only regional trauma facility is located in Campbellsville.

- The group was asked what type of road was expected; most responded that a four-lane divided highway - similar to Lincoln Parkway (KY 61) from

Elizabethtown to Hodgenville - was needed. The consultant mentioned that many new highways are being built as a two-lane with passing bays on a four-lane right of way. This would allow for the expansion to four lanes as traffic increases and would allow more miles of highway improvement in a shorter timeframe. The group felt that, at a minimum, a two-lane highway with passing lanes should be built, as well as, the purchase of a four-lane right of way.

- Completion of the bypasses was a top priority. Since Campbellsville does not have a bypass in the current six-year highway plan, the group was asked about the need and location for a bypass. All agreed that an eastern bypass was the most appropriate and needed. It was recommended that the study should also address the comprehensive plan regarding a Campbellsville bypass.

- There was interest in extending the proposed Heartland Parkway route north to I-64.

- Ted Noe discussed the Public Involvement process and requested from attendees a suggested time frame for public meetings that will generate the greatest public participation. The preferred time was from 5:00 pm – 7:00 pm. Suitable locations suggested were the American Legion Hall or the Adair County High School lunchroom in Columbia. An additional opportunity to inform the public would be during a Campbellsville Chamber of Commerce monthly luncheon.

- Ted Noe also requested information on other employers/contacts in the region, such as Amazon.com, United Parcel Service, Campbellsville University, Lindsey Wilson College, and St. Catharine College.

- In conclusion, the group discussed environmental justice but did not know of any applicable areas within the corridor.

With no further discussion, the meeting adjourned at 11:30 a.m. CDT.

Local Agencies Meeting Minutes

Alternatives Study
Adair, Marion, Taylor, and Washington Counties
Item No. 4-132.00
Heartland Parkway
July 15, 2003
1:30 p.m. CDT
Lake Cumberland Area Development District Conference Room

A local agencies meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 1:30 p.m. on Tuesday, July 15, 2003, at the Lake Cumberland Area Development District Office in Russell Springs, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the draft study area, and to solicit input from the local agencies. Those in attendance included:

Jeffrey Schuhmann	Team Taylor County
Phyllis Causey	Congressman Ron Lewis' Office
Lt. Greg Speck	Kentucky State Police
Tom Clouse	KYTC D-8 Planning
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Neal Cundiff	Lake Cumberland ADD
Dan Byers	WMB, Inc.
Phil Lambert	WMB, Inc.

- Ted Noe introduced the project before he and Jim Wilson gave its brief history. They informed the group that we are seeking input from local leaders and the general public.

- The consultant explained that the final product of the alternatives study will document the needs of the communities along the corridor as they relate to transportation.

- After the draft project goals were discussed, Lt. Speck spoke of his concern for reducing the number of fatalities. He indicated that most fatalities occur on two-lane roads where vehicles drop off the shoulders and then over-correct and into the path of oncoming traffic. Consequently, four-lane sections with medians – as well, as wider shoulders with rumble strips - provide a greater separation from oncoming traffic and lower the risk of accidents. This type of shoulder was discussed with everyone agreeing that paved shoulders also do not have the erosion problems along the edges of driving lanes that other shoulders do.

- Tourism was another significant goal, with an emphasis placed on access to Green River Lake. The proposed development of a lodge and golf course was noted, with work scheduled to begin this fall.

- Because farm equipment is frequently seen on the highway, wider shoulders would provide an opportunity to move farm equipment without hindering other traffic.

- Bypass routes were a top priority with the group as a way to alleviate congestion in the communities. Since Campbellsville does not have a bypass in the current six-year highway plan, the consultant asked the group if this study should address that need and where a bypass should be built. There was some discussion about the connector route built between KY 55 and KY 210. However, it has already become congested, and everyone felt it would not be a consideration for a bypass. Therefore, all agreed that a bypass was needed and should be positioned on the east side of Campbellsville.

- Focusing on the public involvement process, Ted Noe discussed that the next step will be public meetings in each of the four communities along the existing corridor. Ted mentioned that coordination letters will be sent out to local, state, and federal agencies, as well as, local hospitals.

- Ted Noe also discussed environment justice by asking the group if they were aware of any low-income or minority groups that may be disproportionately impacted by the project. No one was aware of any that may be affected.

- In conclusion, Ted Noe asked the attendees whether a two-lane road should be built on a four-lane right of way. There was a general consensus that a four-lane divided highway is the most desirable; however, a two-lane with passing lanes may be the most feasible at this time.

With no further discussion, the meeting adjourned at 2:40 pm CDT.

Heartland Parkway Task Force Meeting Minutes

Alternatives Study
Adair, Marion, Taylor, and Washington Counties
Item No. 4-132.00
Heartland Parkway
July 18, 2003
10:00 a.m. EDT
Campbellsville University Technology Training Center

A special meeting with the Heartland Parkway Task Force leadership was conducted at 10:00 a.m. on Friday, July 18, 2003, at the Campbellsville University Technology Training Center in Campbellsville, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the draft study area, and to solicit input from the task force. Those in attendance included:

Brian D. Smith	U.S. Representative Ron Lewis' Office
Sandy Simpson	U.S. Representative Ed Whitfield's Office
Jim Askins	U.S. Senator Jim Bunning's Office
John E. Chowning	Chairman, Heartland Pkwy. Task Force
John Thomas	Vice-Chairman, Heartland Pkwy. Task Force
Alan Medders	Campbellsville University
Kevin Sheilley	Economic Development Director
Brenda Allen	Mayor of Campbellsville
Tom Jobe	KYTC D-4 Chief District Engineer
Patty Dunaway	KYTC D-4 Planning
Tom Clouse	KYTC D-8 Planning
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Dan Byers	WMB, Inc.
Phil Lambert	WMB, Inc.

- Chairman Chowning welcomed all attendees.

- Ted Noe introduced the project before he and Jim Wilson gave its brief history. They informed the group that we are seeking input from local leaders and the general public.

- The consultant explained that the final product of the alternatives study will document the needs of the communities along the corridor as they relate to transportation.

- After the draft project goals were discussed, Chairman Chowning indicated that all of the goals presented were needed and that none

should be eliminated. He, additionally, suggested adding a goal - *agricultural economy* - because local farming is beginning to shift from the raising of tobacco to the raising of crops that are being shipped nationwide.

- Economic development was of primary importance among the attendees. Kevin Sheilley indicated that new industries are seeking the best locations with the lowest transportation costs. Consequently, the garment industry has left the region and agriculture is on the decline.

- Tourism was another significant goal, with emphasis placed on access to Green River Lake. The proposed development of a lodge and golf course was mentioned with work scheduled to begin this fall and to be completed by the spring of 2005. Kevin Sheilley also showed the group a drawing of the proposed project, which is expected to generate a significant tourism increase from the current one million visitors per year.

- Chairman Chowning noted that 50% of Campbellsville University's enrollment consists of first generation college students from working class families. Many students, consequently, commute from within the area and would benefit from a new highway. Chairman Chowning also indicated that the higher educational facilities of Campbellsville University, Lindsey Wilson College, St. Catharine College, and the Vocational School in Lebanon are the region's public means of educating local residents. As a result, Jim Wilson requested additional data on the number of commuters and their counties of residence.

- Emergency response time is also a key goal of the project. The Campbellsville hospital houses the only regional trauma center, making travel time critical. Because the trauma center is second only to those facilities in Louisville and Lexington, data is required that indicates counties served, the number of patients transported to Campbellsville, and the number of patients transported to either Louisville or Lexington before the final project study report can be completed.

- Reducing delay time was also discussed with several attendees commenting on traffic congestion in Columbia. Tom Clouse told the group that a bypass is currently planned and already designed for Columbia. Many also mentioned the need for a bypass around the eastern side of Campbellsville.

- The group expressed interest in the future extension of the proposed Heartland Parkway to the south into Tennessee and to the north to I-64.

- Ted Noe then discussed the public involvement process. The next step will be public meetings in each of the four communities along the existing

corridor. Ted also mentioned that coordination letters will be sent out to local, state, and federal agencies. Kevin Sheilley offered to help publicize the public meetings and to supply a directory of agencies from his mailing list.

- Focusing on environmental justice, Ted Noe asked the group if they were aware of any low-income or minority groups that may be disproportionately impacted by the project. No one was aware of any that may be affected. Chairman Chowning, chairman of Greater Campbellsville United, which represents minorities and low-income families, indicated that these groups should be solicited for their input on the project.

- Ted Noe asked about the type of road the task force expected. He mentioned the magnitude of this project and the funding that would be required. There was a general consensus that a four-lane divided highway is the most desirable. Chairman Chowning gave the example of the Lincoln Parkway (KY61) as the type of road that would best serve the needs of the region. With everyone in agreement, he also stated that the project would be even more beneficial if the existing roadway could be utilized. Therefore, Dan Byers mentioned that projects are often designed and constructed as two-lanes with passing lanes but with additional right of way purchased for future four-lane expansion.

With no further discussion, the meeting adjourned at 11:40 am EDT.

Public Information Meeting

Heartland Parkway, from the Cumberland Parkway to the Blue Grass Parkway
Adair, Taylor, Marion, and Washington Counties.
Item No. 4-132.00
Center Square, Lebanon, Kentucky
4:00 p.m. to 7:00 p.m. (EDT) September 2, 2003

A public information meeting was held on Tuesday, September 2, 2003 from 4:00 p.m. to 7:00 p.m. at Center Square in Lebanon, Kentucky. The following KYTC Central Office Planning, KYTC District 4, Lincoln Trail Area Development District, and consultant staff members were in attendance:

Jim Wilson	KYTC Central Office Planning
Ted Noe	KYTC Central Office Planning
Tom Jobe	KYTC District 4
Patty Dunaway	KYTC District 4
Becky Judson	KYTC District 4
Jack Qualls	Lincoln Trail ADD
John Brown	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers
Lyn Johnson	WMB Consulting Engineers
Cliff Planck	WMB Consulting Engineers
Phil Lambert	WMB Consulting Engineers

The public information meeting was organized as a walk-through tour of project information. The room was set up with an arrangement of a guest registration, PowerPoint Presentation tour, exhibits, and refreshments at the end. As attendees entered, they were led through the following stations:

Station One: Attendees were greeted and asked to sign the attendance list. Kentucky maps and Kentucky Road Work Ahead pamphlets were available for any interested parties. Attendees were also given a handout that included the following items:

- Project Questionnaire
- Study Purpose, Issues, and Project Goals
- Project Environmental Footprint Map
- Special Project Considerations

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the provided postage-paid envelope.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area. This included the project goals, identified environmental, social, and

cultural features in the area, and indicated evaluation criteria to be used for this study.

Station Three: Individual county maps were displayed with current Six-Year Highway Plan projects identified.

Station Four: Several exhibit boards were displayed, including:

- Existing conditions information collected to date that included a project location map, Year 2003 traffic data, and accident data from January 1997 through December 2002. Identified environmental data was also displayed, including the environmental footprint area.
- Traffic Forecast data for YEAR 2030
- Draft Project Goals

Station Five: Refreshments were provided.

A total of twenty-two people registered their attendance at the public information meeting. This does not include the eleven staff members listed above. There were also three who chose not to register. Lastly, one attendee made oral comments to one staff member, which were noted and transcribed.

Public Information Meeting

Heartland Parkway, from the Cumberland Parkway to the Blue Grass Parkway
Adair, Taylor, Marion, and Washington Counties.
Item No. 4-132.00
W.R. Davenport Family Life Center, Columbia, Kentucky
4:00 p.m. to 7:00 p.m. (CDT) September 4, 2003

A public information meeting was held on Thursday, September 4, 2003, from 4:00 p.m. to 7:00 p.m. at the W.R. Davenport Family Life Center in Columbia, Kentucky. The following KYTC Central Office Planning, KYTC District 4, Lincoln Trail Area Development District, and consultant staff members were in attendance:

Jim Wilson	KYTC Central Office Planning
Ted Noe	KYTC Central Office Planning
Tom Clouse	KYTC District 8
Kim Shoemaker	KYTC District 8
Cathi Blair	KYTC District 8
John Brown	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers
Lyn Johnson	WMB Consulting Engineers
Cliff Planck	WMB Consulting Engineers
Phil Lambert	WMB Consulting Engineers

The public information meeting was organized as a walk-through tour of project information. The room was set up with an arrangement of a guest registration, PowerPoint Presentation tour, exhibits, and refreshments at the end. As attendees entered, they were led through the following stations:

Station One: Attendees were greeted and asked to sign the attendance list. Kentucky maps and Kentucky Road Work Ahead pamphlets were available for any interested parties. Attendees were also given a handout that included the following items:

- Project Questionnaire
- Study Purpose, Issues, and Project Goals
- Project Environmental Footprint Map
- Special Project Considerations

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the provided postage-paid envelope.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area. This included the project goals, identified environmental, social, and

cultural features in the area, and indicated evaluation criteria to be used for this study.

Station Three: Individual county maps were displayed with current Six-Year Highway Plan projects identified.

Station Four: Several exhibit boards were displayed, including:

- Existing conditions information collected to date that included a project location map, Year 2003 traffic data, and accident data from January 1997 through December 2002. Identified environmental data was also displayed, including the environmental footprint area.
- Traffic Forecast data for YEAR 2030
- Draft Project Goals

Station Five: Refreshments were provided.

A total of fifty-nine people registered their attendance at the public information meeting. This does not include the ten staff members listed above.

Public Information Meeting

Heartland Parkway, from the Cumberland Parkway to the Blue Grass Parkway
Adair, Taylor, Marion, and Washington Counties.
Item No. 4-132.00
Washington County Extension Office, Springfield, Kentucky
4:00 p.m. to 7:00 p.m. (EDT) September 8, 2003

A public information meeting was held on Monday, September 8, 2003 from 4:00 p.m. to 7:00 p.m. at the Washington County Extension Office in Springfield, Kentucky. The following KYTC Central Office Planning, KYTC District 8, Lincoln Trail Area Development District, and consultant staff members were in attendance:

Jim Wilson	KYTC Central Office Planning
Ted Noe	KYTC Central Office Planning
Tom Jobe	KYTC District 4
Gary Valentine	KYTC District 4
Patty Dunaway	KYTC District 4
Becky Judson	KYTC District 4
Jack Qualls	Lincoln Trail ADD
Mike Skaggs	Lincoln Trail ADD
Marty Marchaterre	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers
Lyn Johnson	WMB Consulting Engineers
Cliff Planck	WMB Consulting Engineers
Phil Lambert	WMB Consulting Engineers

The public information meeting was organized as a walk-through tour of project information. The room was set up with an arrangement of a guest registration, PowerPoint Presentation tour, exhibits, and refreshments at the end. As attendees entered, they were led through the following stations:

Station One: Attendees were greeted and asked to sign the attendance list. Kentucky maps and Kentucky Road Work Ahead pamphlets were available for any interested parties. Attendees were also given a handout that included the following items:

- Project Questionnaire
- Study Purpose, Issues, and Project Goals
- Project Environmental Footprint Map
- Special Project Considerations

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the provided postage-paid envelope.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area. This included the project goals, identified environmental, social, and cultural features in the area, and indicated evaluation criteria to be used for this study.

Station Three: Individual county maps were displayed with current Six-Year Highway Plan projects identified.

Station Four: Several exhibit boards were displayed, including:

- Existing conditions information collected to date that included a project location map, Year 2003 traffic data, and accident data from January 1997 through December 2002. Identified environmental data was also displayed, including the environmental footprint area.
- Traffic Forecast data for YEAR 2030
- Draft Project Goals

Station Five: Refreshments were provided.

A total of sixteen people registered their attendance at the public information meeting. This does not include the thirteen staff members listed above. There were also some oral comments received by staff members, which were noted and transcribed.

Public Information Meeting

Heartland Parkway, from the Cumberland Parkway to the Blue Grass Parkway
Adair, Taylor, Marion, and Washington Counties.
Item No. 4-132.00
City Council Chambers, Campbellsville, Kentucky
4:00 p.m. to 7:00 p.m. (EDT) September 11, 2003

A public information meeting was held on Thursday, September 11, 2003 from 4:00 p.m. to 7:00 p.m. at the City Council Chambers in Campbellsville, Kentucky. The following KYTC Central Office Planning, KYTC District 4, and consultant staff were in attendance:

Jim Wilson	KYTC Central Office Planning
Ted Noe	KYTC Central Office Planning
Tom Jobe	KYTC District 4
Gary Valentine	KYTC District 4
Patty Dunaway	KYTC District 4
Marty Marchaterre	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers
Lyn Johnson	WMB Consulting Engineers
Cliff Planck	WMB Consulting Engineers
Phil Lambert	WMB Consulting Engineers

The public information meeting was organized as a walk-through tour of project information. The room was set up with an arrangement of a guest registration, PowerPoint Presentation tour, exhibits, and refreshments at the end. As attendees entered, they were led through the following stations:

Station One: Attendees were greeted and asked to sign the attendance list. Kentucky maps and Kentucky Road Work Ahead pamphlets were available for any interested parties. Attendees were also given a handout that included the following items:

- Project Questionnaire
- Study Purpose, Issues, and Project Goals
- Project Environmental Footprint Map
- Special Project Considerations

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the provided postage-paid envelope.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area. This included the project goals, identified environmental, social, and

cultural features in the area, and indicated evaluation criteria to be used for this study.

Station Three: Individual county maps were displayed with current Six-Year Highway Plan projects identified.

Station Four: Several exhibit boards were displayed, including:

- Existing conditions information collected to date that included a project location map, Year 2003 traffic data, and accident data from January 1997 through December 2002. Identified environmental data was also displayed, including the environmental footprint area.
- Traffic Forecast data for YEAR 2030
- Draft Project Goals

Station Five: Refreshments were provided.

A total of twenty-three people registered their attendance at the public information meeting. This does not include the ten staff members listed above.

Project Team Second Meeting Minutes

Alternatives Study
Adair, Marion, Taylor, and Washington Counties
Item No. 4-132.00
Heartland Parkway
February 4, 2004
10:00 a.m.

A second project team meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted on Wednesday, February 4, 2004, at the Kentucky Transportation Cabinet (KYTC) Department of Highways District 4 Office in Elizabethtown, Kentucky. The purpose of the meeting was to review the corridors and options being studied, the purpose, goals and objectives of the proposed project, project issues, and a summary of the questionnaire results from the first round of local officials, local agencies, and public meetings. Participants at the meeting included representatives from KYTC District 4, KYTC District 8, KYTC Division of Planning, Lincoln Trail Area Development District, the consultant staffs from T.H.E. Engineers, F.M.S.M. Engineers, and WMB, Inc. Attendees for the meeting were as follows:

Jim Wilson	KYTC – Central Office Planning
Ted Noe	KYTC – Central Office Planning
Rusty Wallace	KYTC D-4 Acting Chief District Engineer
Daniel Jewell	KYTC D-8 Chief District Engineer
Patty Dunaway	KYTC D-4 Planning
Kevin Young	KYTC D-4 Planning
Gary Raymer	KYTC D-4 Construction
Becky Judson	KYTC D-4 Public Information Officer
E.L. Lewis	KYTC D-4 Traffic
Kevin Cartwright	KYTC D-4 Design
Jeff Schaefer	KYTC D-4 Environmental Coordinator
Tom Clouse	KYTC D-8 Planning
Jack Qualls	Lincoln Trail ADD
Marty Marchaterre	T.H.E. Engineers
John W. Brown	T.H.E. Engineers
John Beam	F.M.S.M. Engineers
Mark Litkenhus	F.M.S.M. Engineers
Daniel Byers	WMB Consulting Engineers, Inc.
Phil Lambert	WMB Consulting Engineers, Inc.

A summary of the comments and discussion items for this meeting are outlined below.

Introduction and Project History

The project consultant updated attendees on the project's history and description of events that have taken place since the first project team meeting. This included information on the meetings with local officials and local agencies, which were held in two sessions at the Area Development District Offices – a morning session for local officials and an afternoon session with local agencies. Locations for these meetings were:

Lincoln Trail Area Development District	July 7, 2003
Lake Cumberland Area Development District	July 15, 2003

These meeting were followed by the first round of public meetings, which were held in the communities along the existing corridor. Locations for these meetings were:

Center Square in Lebanon	September 2, 2003
William R. Davenport Family Life Center in Columbia	September 4, 2003
Washington County Extension Office in Springfield	September 8, 2003
City Council Chambers in Campbellsville	September 11, 2003

Additionally, there was a progress meeting held with the Division of Planning in Frankfort on November 20, 2003.

The introduction and project history segment of the meeting concluded with the project consultant presenting a revised *draft of the project purpose, issues, and goals* and a display board with alternative corridors and handouts.

Draft Project Purpose

The purpose of the Heartland Parkway Scoping Study is to identify and evaluate potential corridors for a new route and/or existing routes (KY 55/US 68/KY 555) from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway. The study is intended to help define the location and purpose of the project and better meet federal requirements regarding consideration of environmental issues, as defined in the National Environmental Policy Act (NEPA).

Items involved with this study include:

- Discuss project needs and issues with public officials, resource agencies, and other groups which have a special interest in the project;
- Define project goals, needs, and issues;
- Define the beginning and ending points of the project corridor;
- Identify any known environmental concerns;
- Identify and evaluate alternate corridors with possible design concepts; and,

- Listen to, and share information with, the public.

Draft Project Issues

Major issues and concerns have been identified within the study area that will be addressed in the Scoping Study. These include:

- Lack of good access to major expressway-type systems in the region (i.e., I-75, I-65, and the proposed I-66 corridor);
- A need to improve economic and tourism opportunities in Adair, Green, Taylor, Marion, Nelson, and Washington Counties;
- Poor geometrics, including narrow lane widths, narrow shoulders, substandard horizontal/vertical alignments, poor sight distance (no passing lanes), and access type;
- Truck Access; and,
- A need to improve capacity in Adair, Green, Taylor, Marion, Nelson, and Washington Counties in certain locations.

Draft Project Goals

For the Heartland Parkway Scoping Study project, the public's input led to the revision of the project goals and objectives after the public meetings. The revised draft goals include:

- Improve Regional Access for:
  - Economic Development;
  - Existing Industry;
  - Truck Access;
  - Tourism;
  - Higher Education; and,
  - Agricultural Economy
- Improved Safety;
- Improved highway capacity in certain locations;
- Decreased delays through communities; and,
- Improved emergency response times.

Questionnaire Results

During the second project team meeting, the project team was given a summary of the questionnaire results by the project consultant that was included in the provided handout. The following results were noted:

In questions two & three, 100% of the local officials and 82% of the public said the Heartland Parkway is needed and would be helpful to the region.

In question four, 94% of the local officials and 77% of the public said it would improve regional access to a major highway network; similar percentages said it would improve economic development and tourism.

In question five, where existing condition problem areas were identified, 93% of the local officials and 90% of the public rated “too much traffic” from “some problems to serious problems.” 100% of the local officials and 98% of the public rated “large trucks” from “some problems to serious problems.” Similar results were also noted regarding dangerous curves and narrow shoulders.

The top two concerns for local officials were “Natural Areas or Habitats” and “Hazardous or Monitored Sites”; whereas, the public’s top two concerns were “Historic or Cultural Sites” and “Natural Areas or Habitats.”

Most of those who completed a questionnaire indicated that the Heartland Parkway should be a four-lane divided highway with limited access points and should be constructed along the existing route.

Special Considerations

The project consultant also presented some of the special considerations along the two corridors.

A geotechnical overview was presented by Mark Litkenhus, F.M.S.M. Engineers who noted that existing quarries, for the most part, have been avoided.

Mr. Litkenhus also indicated the potential for encountering Karst features, such as sinkholes and subterranean channels. These features exist along significant portions of both corridors with the greatest potential being in the southern portion of the region. He also mentioned Albany Shale, which is an acidic shale.

Furthermore, there are faults that both corridors must cross; however, the corridor alignments are generally oriented in a favorable direction.

It was also noted that in the Knobs Region, the acidic shale will require special design consideration.

An environmental overview was presented by Marty Marchaterre of T.H.E. Engineers who began by noting that some wetlands are going to be encountered, as well as, special consideration biological habitats, such as those of the Indiana Bat, Gray Bat, Bald Eagle, and mussels.

Additionally, Mr. Marchaterre indicated that both historic and archaeological investigations have been completed, including some of the major sites in the region: Green River Lake, Willisburg Lake, Tebbs Bend Civil War Battlefield, Lincoln Homestead State Park, and Homeplace on Green River.

Mr. Marchaterre also advised the project team that a few farms have been purchased as Agricultural Conservation Easements along Green River. These easements are being purchased under Kentucky’s Farm Preservation Program, the Purchase of Agricultural Conservation Easement Corporation (PACE).

John Brown of T.H.E. Engineers presented socio-economic information for this region, citing several studies and reports. Mr. Brown also addressed environmental justice considerations and research he had conducted in the study area.

Discussion of Alternatives

Dan Byers of WMB Consulting Engineers, Inc. presented the alternative corridors and options associated with the existing corridor.

Option 1 is a four-lane divided fully controlled access facility. It lies approximately two miles west of the existing corridor with interchanges provided at major crossroads to access the communities. These crossroads would need to be upgraded from the parkway to the communities. Mr. Byers indicated the cost for this type of improvement would be in excess of $700 million.

Option 2 is also a four-lane divided partially controlled highway. It will use as much of the existing roadway and right of way as possible. It is broken into eight segments, beginning at KY 61 from the Louie B. Nunn Cumberland Parkway. With Option 2, KY 61 would be used as currently designed, and the Columbia and Lebanon Bypasses would be upgraded to four-lane facilities. Additionally, a four-lane bypass is proposed for Campbellsville on the southeast side. The remaining portions of KY 55/ US 68/ KY 555 corridor would be upgraded to four-lane, and all right of way would be upgraded to partial access control. Some frontage roads would also be required to serve properties where access points are closed.

Option 3 also begins at the KY 61 interchange on the Louie B. Nunn Parkway. This option uses KY 61 and the Columbia and Lebanon bypasses as designed. However, unlike Option 2, a two-lane bypass is proposed for Campbellsville on the southeast side. The Campbellsville Bypass would be constructed on four-lane ultimate right of way, which is consistent with the design concept used on the bypasses in Columbia and Lebanon. Option 3 would also add passing bays along the exist routes requiring the purchase of right of way where needed. Pavement and shoulder rehabilitation would be included in this option; whereas, no improvements to right of way access control are proposed in this option. This option provided the least improvement to future level of service.

Mr. Byers noted that Options 2 and 3 allowed an opportunity to mix and match the options for different segments. He noted that with the four-lane option being the ultimate goal, the most critical areas could be upgraded to four lanes now and an Option 3 upgrade for the remainder of the route could be completed. Currently, the most needed areas are from Lebanon, south to the Louie B. Nunn Parkway. Mr. Byers also pointed out the traffic forecast data included in each handout.

It was noted that the section of the existing corridor from the Adair-Taylor County Line to Campbellsville has several sensitive areas such as the lake, historic sites, and significant development. Widening along the existing corridor will require consideration of these items.

Costs are tabulated for each segment and each option.

In addition, there was some discussion about the Columbia Bypass design; however, since right of way is already being bought, no changes were recommended at this time.

The project team also discussed the pros and cons of making the bypasses the direct route with the route through the communities connecting to the bypasses. Jim Wilson pointed out that many communities oppose that concept, preferring the movement of through-traffic through their communities.

The project team recommended that the Campbellsville Bypass extend from KY 55 south of Campbellsville to US 68/KY 55 north of Campbellsville around the southeast side of Campbellsville.

The project team also recommended showing Option 1 as a shaded corridor on the project exhibits.

There was some discussion about showing an option on the east side of Columbia, but no proposals were made.

After a review of the cost matrix, the team recommended that the cost of KY 61, Columbia Bypass, and Lebanon Bypass be shown within the cost of the roadway option and affected segment.

Purpose, Goals, and Issues

After the project consultant's presentation, Ted Noe asked if any of the project's purposes, goals, and issues needed changes or revisions. However, none were suggested at this time.

Public Involvement

It was decided that the second round of meetings with elected/local officials will be scheduled as soon as possible. Since there was such low attendance at the first round of meetings, it was proposed to hold these meetings in each community, rather than at the Area Development District Offices.

The project team also discussed ideas to generate more public involvement, such as meeting with civic groups or getting a civic group to sponsor a local forum. Other civic groups could also be invited to the meeting, while advertising

the meeting as open to the public. Patty Dunaway then mentioned the possibility of showing a PowerPoint presentation on Campbellsville University's television station.

With no further comments, the meeting concluded at approximately 11:50 am.

Second Local Officials/Agencies Meeting Minutes

Heartland Parkway Alternatives Study
Adair, Green, Marion, Taylor, and Washington Counties
Item No. 4-132.00
February 27, 2004
10:00 a.m. CST
Court House Annex Meeting Room in Columbia

A combined meeting for local officials and agencies for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 10:00 a.m. (CST) on Friday, February 27, 2004, at the Court House Annex Meeting Room in Columbia, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the options developed by the consultant, and to solicit input from those in attendance. Those in attendance included:

Jerry Vaughan	Adair County Judge-Executive
Lt. Greg Speck	Kentucky State Police
Curtis Hardwick	City of Columbia - Mayor
Stacey Bailey	Columbia/Adair Co Industrial Dev. Authority
Charles D. Grimsley	City of Columbia Councilman
Tony Loy	Adair County Magistrate
J.M. Shelley	Adair County Magistrate
William “Wid” Harris	Adair County Magistrate
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Neal Cundiff	Lake Cumberland ADD
Larry Wilson	Lake Cumberland ADD
John Brown	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers, Inc.
Phil Lambert	WMB Consulting Engineers, Inc.

- Ted Noe began the meeting with introductions, asking each attendee to introduce himself.

- The consultant gave a brief history of the project that began with the first Project Team Meeting in May 2003. That first Project Team Meeting was followed by the first round of Local Officials/Agencies Meetings in July 2003, held at Lake Cumberland Area Development District Office in Russell Springs and at the Lincoln Trail Area Development District Office in Elizabethtown. In September 2003, the first round of Public Information Meetings was held in Columbia, Campbellsville, Lebanon, and Springfield. Today’s meeting is to provide the attendees with the options that have been developed by the consultant.

- The consultant then gave a presentation of the project purpose, project issues, and *draft* project goals, which have been revised through input from the first round of Local Officials/Agencies Meetings. Additionally, an exhibit board listing the *draft* project goals was on display, along with other exhibit boards illustrating the following: project location map, project options showing roadway typical sections, project study area of all three options, current ADT totals, 2030 ADT – No Improvement projected totals, 2030 ADT – Option 1 projected totals, 2030 ADT – Option 2 projected totals, and 2030 ADT – Option 3 project totals.

- The questionnaire results from the first Local Officials/Agencies and Public Information Meetings were summarized by the consultant.

- A brief overview of the geotechnical issues in the study area was given. It was noted that the corridor options presented would most likely encounter sinkholes, with the southern portion of the region having the greatest potential for karst activity. Both corridors cross faulted areas within the Knobs Region. Additionally, acidic shale associated with the New Albany Shale will also be encountered in the Knobs Region. This will require special consideration to achieve adequate cover over the shale.

- John Brown, of T.H.E. Engineers, gave an environmental overview. He discussed the sensitive cultural and historic areas, such as Green River Lake State Park and Tebbs Bend Civil War Battlefield. He also provided regional socio-economic information.

- Dan Byers then led the attendees through each of the corridor options. He explained that Option 1 was an interstate-type highway where access on and off would be at interchanges only. There would be eight or nine interchanges between the Louie B. Nunn Cumberland Parkway and the Martha Layne Collins Blue Grass Parkway. Byers noted that it would have to be constructed from end to end before the benefits could be fully realized. Furthermore, it is necessary for Option 1 to be located on the west side of the existing routes because of Green River Lake and the Wildlife Habitat Areas. The tie-in on the Louie B. Nunn Cumberland Parkway is located about two miles from the proposed reconstructed KY 61 interchange, and was pushed out beyond the Tebbs Bend Civil War Battlefield and the bends in Green River, making it necessary to cross Green River one time. Referring to the cost estimate sheet in the handout, Byers mentioned that the cost of this option is about $720M. Looking at the typical section for Option 2, and noting that it would be a road similar to the Lincoln Parkway, Byers posed the question: Where could this concept be built? For the most part, it can be constructed along the existing road, allowing both local and through traffic to use it. This concept would utilize the planned bypasses at Columbia and Lebanon and add a bypass at Campbellsville. He mentioned that the locations of KY 55/KY

555 are already serving as a bypass for Springfield. This option would allow driveway access every 1200 feet along with median crossovers. Option 2 has an estimated cost of $367M. Option 3 also follows the existing routes and leaves them as a two-lane facility, but Byers explained that one-mile passing bays would be added every three miles. The remainder of the route would then receive pavement and shoulder rehab treatment and be brought up to full-safety. The cost estimate for Option 3 was $113M.

- There was also a brief explanation of Level of Service, which compared Level of Service rating to a report card. For example, Level of Service A would receive the highest rating while Level of Service F would receive the worst.

- Before Dan Byers continued discussing the handout contents and the questionnaire, he responded to Mayor Hardwick's question. According to Hardwick, he stated that he could live with Option 3 but would prefer Option 2; therefore, how long would it take to build. Byers responded with ten years, if money is not an object.

- Ted Noe requested that the attendees complete the questionnaire and return them before the close of the meeting.

- The Project Goals were discussed again, noting that they are still in draft form and can be changed. The group was then asked if any of the goals needed to be changed or added, but no suggestions were made.

- Lastly, Ted Noe inquired about the meeting time and location for the next Public Information Meeting. Everyone expressed his approval of the facilities at the William R. Davenport Family Life Center – site of the last Columbia Public Information Meeting – and a time of 5:00 pm to 8:00 pm.

With no further discussion, the meeting adjourned at 11:30 a.m. CST.

Second Local Officials/Agencies Meeting Minutes

Heartland Parkway Alternatives Study
Adair, Green, Marion, Taylor, and Washington Counties
Item No. 4-132.00
February 27, 2004
2:00 p.m. EST
District Court Room in Campbellsville

A combined meeting for local officials and agencies for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 2:00 p.m. (EST) on Friday, February 27, 2004, it the District Court Room in Campbellsville, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the options developed by the consultant, and to solicit input from those in attendance. Those in attendance included:

Brenda Allen	Mayor of Campbellsville
Paul Patton	Taylor County Judge-Executive
James E. Jones	Taylor County Magistrate
Robert T. Roots	Taylor County Magistrate
John Gaines	Taylor County Fiscal Court
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Neal Cundiff	Lake Cumberland ADD
Larry Wilson	Lake Cumberland ADD
John Brown	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers, Inc.
Phil Lambert	WMB Consulting Engineers, Inc.

- Ted Noe began the meeting with introductions, asking all attendees to introduce themselves.

- The consultant gave a brief history of the project that began with the first Project Team Meeting in May, 2003. That first project team meeting was followed with the first round of Local Officials/Agencies Meetings in July 2003, at Lake Cumberland Area Development District Office in Russell Springs and at the Lincoln Trail Area Development District Office in Elizabethtown. In September, 2003, the first round of Public Information Meetings was held in Columbia, Campbellsville, Lebanon, and Springfield. Today's meeting is to provide the attendees with the options that have been developed by the consultant.

- The consultant then gave a presentation of the project purpose, project issues, and *draft* project goals, which have been revised through input

from the first round of Local Officials/Agencies Meetings. Additionally, an exhibit board listing the *draft* project goals was on display, along with other exhibit boards illustrating the following: project location map, project options showing roadway typical sections, project study area of all three options, current ADT totals, 2030 ADT – No Improvement projected totals, 2030 ADT – Option 1 projected totals, 2030 ADT – Option 2 projected totals, and 2030 ADT – Option 3 project totals.

- The questionnaire results from the first Local Officials/Agencies and Public Information Meetings were summarized by the consultant. A comparison of results from both the Local Officials/Agencies and Public Information Meetings was also discussed.

- A brief overview of the geotechnical issues in the study area was given. It was noted that the corridor options presented would most likely encounter sinkholes, with the southern portion of the region having the greatest potential for karst activity. Both corridors cross faulted areas within the Knobs Region. Additionally, acidic shale associated with the New Albany Shale will also be encountered in the Knobs Region. This will require special consideration to achieve adequate cover over the shale.

- John Brown, of T.H.E. Engineers, gave an environmental overview. He discussed the sensitive cultural and historic areas, such as Green River Lake State Park and Tebbs Bend Civil War Battlefield. He also provided regional socio-economic information.

- Dan Byers then led the attendees through each of the corridor options. He explained that Option 1 was an interstate-type highway where access on and off would be at interchanges only. There would be eight or nine interchanges between the Louie B. Nunn Cumberland Parkway and the Martha Layne Collins Blue Grass Parkway. Byers noted that it would have to be constructed from end to end before the benefits could be fully realized. Furthermore, it is necessary for Option 1 to be located on the west side of the existing routes because of Green River Lake and the Wildlife Habitat Areas. The tie-in on the Louie B. Nunn Cumberland Parkway is located about two miles from the proposed reconstructed KY 61 interchange, and was pushed out beyond the Tebbs Bend Civil War Battlefield and the bends in Green River, making it necessary to cross Green River one time. Referring to the cost estimate sheet in the handout, Byers mentioned that the cost of this option is about $720M. Looking at the typical section for Option 2, and noting that it would be a road similar to the Lincoln Parkway, Byers posed the question: Where could this concept be built? For the most part, it can be constructed along the existing road, allowing both local and through traffic to use it. This concept would utilize the planned bypasses at Columbia and Lebanon and add a bypass at Campbellsville. He mentioned that the locations of KY 55/KY

555 are already serving as a bypass for Springfield. This option would allow driveway access every 1200 feet along with median crossovers. Option 2 has an estimated cost of $367M. Option 3 also follows the existing routes and leaves them as a two-lane facility, but Byers explained that one-mile passing bays would be added every three miles. The remainder of the route would then receive pavement and shoulder rehab treatment and be brought up to full-safety. The cost estimate for Option 3 was $113M.

- Dan Byers also addressed a question regarding the timeframe for a project of this magnitude. His reply was an optimistic ten to fifteen year estimate, if funding was not an issue.

- Mayor Allen had a question regarding tourism and industry on Option 1. The concern was that with the towns being bypassed, Option 1 would defeat the purpose of a new road to promote their communities and improve tourism and economic development.

- Additionally, there was a discussion about the cost differences in Options 2 and 3.

- There was also a brief explanation of Level of Service, which compared Level of Service rating to a report card. For example, Level of Service A would receive the highest rating while Level of Service F would receive the worst.

- Dan Byers continued discussing the handout contents and the questionnaire. Consequently, Ted Noe requested that the attendees complete the questionnaire and return them before the close of the meeting.

- The Project Goals were discussed again, noting that they are still in draft form and can be changed. The group was then asked if any of the goals needed to be changed or added, but no suggestions were made.

- Lastly, Ted Noe inquired about the meeting time and location for the next Public Information Meeting. Everyone expressed approval of the facilities at the City Council Chambers – site of the last Campbellsville Public Information Meeting – and a time of 5:00 pm to 8:00 pm.

With no further discussion, the meeting adjourned at 3:15 p.m. EST.

Second Local Officials/Agencies Meeting Minutes

Heartland Parkway Alternatives Study
Adair, Green, Marion, Taylor, and Washington Counties
Item No. 4-132.00
March 5, 2004
1:00 p.m. CST
District Court Room in Greensburg

A combined meeting for local officials and agencies for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 1:00 p.m. (CST) on Friday, March 5, 2004, it the District Court Room in Greensburg, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the options developed by the consultant, and to solicit input from those in attendance. Those in attendance included:

Brian D. Smith	Governor's Regional Office - Elizabethtown
Lisle Cheatham	City of Greensburg - Mayor
Redell Jewell	Green County Magistrate
Homer B. Simpson	Green County Magistrate
Brenda Patterson	Greensburg City Council
Bill Patterson	Green County Industrial Foundation
Terry D. Mills	Green Tourism
Faye Conley	Green County Industrial Foundation
Mike Mills	Director of Community Development
Morris Gozz	Director Industrial Foundation
Tom Mills	Greensburg Record-Herald
Bill Taylor	Greensburg City Council
Gerald Ford	Green County Magistrate
Ronnie Milby	Green County Deputy Judge/Executive
Mitchell Hudgins	Nally & Haydon LLC
Wayne Edwards	Greensburg Industrial Foundation
Marty Marchaterre	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers, Inc.
Phil Lambert	WMB Consulting Engineers, Inc.
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Larry Wilson	Lake Cumberland ADD
Patty Dunaway	KYTC D-4 Planning

- Ted Noe began the meeting with introductions, asking attendees to introduce themselves.
- The consultant gave a brief history of the project that began with the first Project Team Meeting in May 2003. That first Project Team Meeting was followed by the first round of Local Officials/Agencies Meetings in July

2003, held at Lake Cumberland Area Development District Office in Russell Springs and at the Lincoln Trail Area Development District Office in Elizabethtown. In September 2003, the first round of Public Information Meetings was held in Columbia, Campbellsville, Lebanon, and Springfield. Today's meeting is to provide the attendees with the options that have been developed by the consultant.

- The consultant then gave a presentation of the project purpose, project issues, and *draft* project goals, which have been revised through input from the first round of Local Officials/Agencies Meetings. Additionally, an exhibit board listing the *draft* project goals was on display, along with other exhibit boards illustrating the following: project location map, project options showing roadway typical sections, project study area of all three options, current ADT totals, 2030 ADT – No Improvement projected totals, 2030 ADT – Option 1 projected totals, 2030 ADT – Option 2 projected totals, and 2030 ADT – Option 3 project totals.

- The questionnaire results from the first Local Officials/Agencies and Public Information Meetings were summarized by the consultant.

- A brief overview of the geotechnical issues in the study area was given. It was noted that the corridor options presented would most likely encounter sinkholes, with the southern portion of the region having the greatest potential for karst activity. Both corridors cross faulted areas within the Knobs Region. Additionally, acidic shale associated with the New Albany Shale will also be encountered in the Knobs Region. This will require special consideration to achieve adequate cover over the shale.

- Marty Marchaterre, of T.H.E. Engineers, gave an environmental overview. He discussed the sensitive cultural and historic areas, such as Green River Lake State Park and Tebbs Bend Civil War Battlefield.

- Dan Byers then led the attendees through each of the corridor options. He explained that Option 1 was an interstate-type highway where access on and off would be at interchanges only. There would be eight or nine interchanges between the Louie B. Nunn Cumberland Parkway and the Martha Layne Collins Blue Grass Parkway. Byers noted that it would have to be constructed from end to end before the benefits could be fully realized. Furthermore, it is necessary for Option 1 to be located on the west side of the existing routes because of Green River Lake and the Wildlife Habitat Areas. The tie-in on the Louie B. Nunn Cumberland Parkway is located about two miles from the proposed reconstructed KY 61 interchange, and was pushed out beyond the Tebbs Bend Civil War Battlefield and the bends in Green River, making it necessary to cross Green River one time. Referring to the cost estimate sheet in the handout, Byers mentioned that the cost of this option is about $720M. Looking at

the typical section for Option 2, and noting that it would be a road similar to the Lincoln Parkway, Byers posed the question: Where could this concept be built? For the most part, it can be constructed along the existing road, allowing both local and through traffic to use it. This concept would utilize the planned bypasses at Columbia and Lebanon and add a bypass at Campbellsville. He mentioned that the locations of KY 55/KY 555 are already serving as a bypass for Springfield. This option would allow driveway access every 1200 feet along with median crossovers. Option 2 has an estimated cost of $367M. Option 3 also follows the existing routes and leaves them as a two-lane facility, but Byers explained that one-mile passing bays would be added every three miles. The remainder of the route would then receive pavement and shoulder rehab treatment and be brought up to full-safety. The cost estimate for Option 3 was $113M.

- There were several comments and questions regarding the need for a corridor that runs nearly parallel to the proposed KY 61 improvement project from Columbia to Greensburg. Some wanted to know why the KY 61 improvement could not be used as part of the Heartland Parkway. However, there is still a concern that the new Heartland Parkway will bypass Greensburg again. Attendees mentioned the limited miles of AAA Trucking routes in Green County, making it difficult to attract industry to the area.

- Patty Dunaway explained to the group that KY 61 was a separate project and was outside the scope to be included in this project.

- Another comment from the attendees centered on the state's current budget crisis. They felt that the Heartland Parkway was a waste of money, and if it wasn't going to benefit Greensburg, they were opposed to the project.

- Additional general comments were also mentioned, including the need to improve KY 565 from KY 61 to New Road; Segment 2 of Option 2 would encompass 60% of Option 2's total cost; a good road is needed to Greensburg; and, traveling between Greensburg and the Louie B. Nunn Cumberland Parkway necessitates travel through Columbia.

- Dan Byers continued discussing the handout contents and the questionnaire. Attendees were encouraged to fill out the questionnaires and make their concerns known. Ted Noe requested that attendees complete them before leaving, if possible; however, postage-paid envelopes were made available for those who preferred mailing in their questionnaires.

- Ted Noe inquired about any possible meeting facilities for the Greensburg/Green County area public information meetings. Several were mentioned, including Green County Middle and High Schools and the Greensburg Fire Department. Noe also asked if a 5:00 pm to 8:00 pm meeting time would be acceptable; no alternative times were offered by the attendees.

- The Project Goals were discussed again, noting that they are still in draft form and can be changed. The group was then asked if any of the goals needed to be changed or added, but no suggestions were made.

With no further discussion, the meeting adjourned at 1:50 p.m. CST.

Second Local Officials/Agencies Meeting Minutes

Heartland Parkway Alternatives Study
Adair, Green, Marion, Taylor, and Washington Counties
Item No. 4-132.00
March 9, 2004
10:00 a.m. EST
Second Floor Court Room in Lebanon

A combined meeting for local officials and agencies for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 10:00 a.m. (EST) on Tuesday, March 9, 2004, in the Second Floor Court Room in Lebanon, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the options developed by the consultant, and to solicit input from those in attendance. Those in attendance included:

Jimmy Moda	Marion County Water District
Dave Hourigan	Marion County Judge Executive
Roger P. Marcum	Marion County Public Schools
Keith Kleine	Lebanon Tourist Commission
John Thomas	City of Lebanon – City Manager
Kathy Browning	Lebanon-Marion Co. Chamber of Commerce
Marty Marchaterre	T.H.E. Engineers
Daniel R. Byers	WMB Consulting Engineers, Inc.
Phil Lambert	WMB Consulting Engineers, Inc.
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Patty Dunaway	KYTC D-4 Planning
Jack Qualls	Lincoln Trail Area Development District
Mike Skaggs	Lincoln Trail Area Development District

- Ted Noe began the meeting with introductions, asking all attendees to introduce themselves.

- Phil Lambert, of WMB, gave a brief history of the project that began with the first Project Team Meeting in May 2003. At that meeting, Draft Project Goals and a Preliminary Environmental Footprint area were established. This first project team meeting was then followed with the first round of Local Officials/Agencies Meetings in July 2003, held at the Lake Cumberland Area Development District Office in Russell Springs and the Lincoln Trail Area Development District Office in Elizabethtown. Additionally, in September 2003, the first round of Public Information Meetings was held in Columbia, Campbellsville, Lebanon, and Springfield. Today's meeting, therefore, is to provide the attendees with the options that have since been developed by the consultant.

- He continued by pointing out that the project goals have been revised to now include both *Higher Education* and *Agricultural Economy* under the heading *Improve Regional Access For*. It was also noted that these changes were a result of input received at the first round of Local Officials/Agencies Meetings. Additionally, an exhibit board listing the *draft* project goals was on display, along with other exhibit boards illustrating the following: project location map, project options showing roadway typical sections, project study area of all three options, current ADT totals, 2030 ADT – No Improvement projected totals, 2030 ADT – Option 1 projected totals, 2030 ADT – Option 2 projected totals, and 2030 ADT – Option 3 project totals.

- The questionnaire results from the first Local Officials/Agencies and Public Information Meetings were summarized by Phil Lambert before discussing the comparison of results from both types of meetings.

- A brief overview of the geotechnical issues in the study area was given. It was noted that the corridor options presented would most likely encounter sinkholes, with the southern portion of the region having the greatest potential for karst activity. Both corridors cross known faulted areas within the Knobs Region. Additionally, acidic shale associated with the New Albany Shale will also be encountered in the Knobs Region.

- Marty Marchaterre, of T.H.E. Engineers, gave an environmental overview. He discussed the sensitive cultural and historic areas, such as Green River Lake State Park and Tebbs Bend Civil War Battlefield. He also provided regional socio-economic information.

- Dan Byers then led the attendees through each of the corridor options. He explained that Option 1 was an interstate-type highway where access on and off would be at interchanges only. There would be eight or nine interchanges between the Louie B. Nunn Cumberland Parkway and the Martha Layne Collins Blue Grass Parkway. Byers noted that it would have to be constructed from end to end before the benefits could be fully realized. Furthermore, it is necessary for Option 1 to be located on the west side of the existing routes because of Green River Lake and the Wildlife Habitat Areas. The tie-in on the Louie B. Nunn Cumberland Parkway is located about two miles from the proposed reconstructed KY 61 interchange, and was pushed out beyond the Tebbs Bend Civil War Battlefield and the bends in Green River, making it necessary to cross Green River one time. Referring to the cost estimate sheet in the handout, Byers mentioned that the cost of this option is about $720M. Looking at the typical section for Option 2, and noting that it would be a road similar to the Lincoln Parkway, Byers posed the question: Where could this concept be built? For the most part, it can be constructed along the existing road, allowing both local and through traffic to use it. This concept

would utilize the planned bypasses at Columbia and Lebanon and add a bypass at Campbellsville. He mentioned that the locations of KY 55/KY 555 are already serving as a bypass for Springfield. This option would allow driveway access every 1200 feet along with median crossovers. Option 2 has an estimated cost of $367M. Option 3 also follows the existing routes and leaves them as a two-lane facility, but Byers explained that one-mile passing bays would be added every three miles. The remainder of the route would then receive pavement and shoulder rehab treatment and be brought up to full-safety. The cost estimate for Option 3 was $113M.

- Dan Byers also led the group through the current questionnaire.

- Jim Wilson then asked Byers to explain the Traffic Volumes and Level of Service (LOS) sheets included in the attendees' handouts. He compared the LOS letter assigned as being similar to a report card, with A being the best, and D, E, and F being the worst.

- John Thomas asked if inflation was built into the cost estimates. Byers responded that because the proposed estimate is in today's dollars, it is a conservative estimate.

- Additionally, John Thomas said the city preferred Option 2; he did not believe Option 1 would serve the people of Lebanon with its proposed location being two miles from town.

- Another question was raised about providing access only at public road intersections. This would be more restrictive than Option 2 but less restrictive than Option 1. Dan Byers responded that it can be done; however, it would mean additional frontage roads would be required.

- There was also a question about our experience with Option 1, such as the type of road and how the communities were affected. Jim Wilson responded that, generally, some growth would migrate to the parkway interchanges.

- The remaining question was focused on utilities improvements. Byers responded that utilities improvements would be a local issue; whereas, the Heartland Parkway is a transportation improvement project.

- Ted Noe mentioned that pages one and two of the handout contained the project purpose, goals, and issues. The group was then asked if any of the goals needed to be changed or added, but no suggestions were made.
- Lastly, Ted Noe inquired about the meeting time – 5:00 to 8:00 pm – and location – The Center Square – for the next Public Information Meeting, but no one objected to either the time or location. He also emphasized the

importance of completing the questionnaires and offered postage-paid envelopes to anyone who needed them.

- Lastly, John Thomas mentioned Congressional support for the project. He also stated that there will be a Heartland Summit on May 17th.

With no further discussion, the meeting adjourned at 11:05 a.m. EST.

Second Local Officials/Agencies Meeting Minutes

Heartland Parkway Alternatives Study
Adair, Green, Marion, Taylor, and Washington Counties
Item No. 4-132.00
March 9, 2004
2:00 p.m. EST
Agricultural Extension Office in Springfield

A combined meeting for local officials and agencies for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 2:00 p.m. (EST) on Tuesday, March 9, 2004, at the Washington County Agricultural Extension Office in Springfield, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the options developed by the consultant, and to solicit input from those in attendance. Those in attendance included:

Gary Byerly	Washington Co. Planning Commission
John A. Settles	Washington Co. Judge/Executive
Nell R. Haydon	City of Springfield
Reagan Barnum	Congressman Ron Lewis' Office
Brian D. Smith	Governor Ernie Fletcher's Office
Hal B. Goode	Economic Development (SWEDA)
Laurie Smith	City of Springfield
Amy Bishop	Springfield-Washington Co. Chamber of Commerce
Joe Pat Haydon	ACE Hardware
James Roberts	Springfield Sun
Marty Marchaterre	T.H.E. Engineers
Daniel R. Byers	WMB Consulting Engineers, Inc.
Phil Lambert	WMB Consulting Engineers, Inc.
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Patty Dunaway	KYTC D-4 Planning
Jack Qualls	Lincoln Trail Area Development District
Mike Skaggs	Lincoln Trail Area Development District

- Ted Noe began the meeting with introductions, asking all attendees to introduce themselves. He then asked Phil Lambert, of WMB Consulting Engineers, to give the project history.

- Phil Lambert gave a brief history of the project that began with the first Project Team Meeting in May 2003. At that meeting, Draft Project Goals and a Preliminary Environmental Footprint area were established. This first project team meeting was then followed with the first round of Local

Officials/Agencies Meetings in July 2003, held at the Lake Cumberland Area Development District Office in Russell Springs and the Lincoln Trail Area Development District Office in Elizabethtown. Additionally, in September 2003, the first round of Public Information Meetings was held in Columbia, Campbellsville, Lebanon, and Springfield. Today's meeting, therefore, is to provide the attendees with the options that have since been developed by the consultant.

- He continued by pointing out that the project goals have been revised to now include both *Higher Education* and *Agricultural Economy* under the heading *Improve Regional Access For*. It was also noted that these changes were a result of input received at the first round of Local Officials/Agencies Meetings. Additionally, an exhibit board listing the *draft* project goals was on display, along with other exhibit boards illustrating the following: project location map, project options showing roadway typical sections, project study area of all three options, current ADT totals, 2030 ADT – No Improvement projected totals, 2030 ADT – Option 1 projected totals, 2030 ADT – Option 2 projected totals, and 2030 ADT – Option 3 project totals.

- In addition to the project goals, he also discussed the project purpose, highlighting some key points from the handout.

- The questionnaire results from the first Local Officials/Agencies and Public Information Meetings were summarized by Phil Lambert before discussing the comparison of results from both types of meetings.

- A brief overview of the geotechnical issues in the study area was given. It was noted that the corridor options presented would most likely encounter sinkholes, with the southern portion of the region having the greatest potential for karst activity. Both corridors cross known faulted areas within the Knobs Region. Additionally, acidic shale associated with the New Albany Shale will also be encountered in the Knobs Region.

- Marty Marchaterre, of T.H.E. Engineers, gave an environmental overview. He discussed the sensitive cultural and historic areas, such as Green River Lake State Park and Tebbs Bend Civil War Battlefield. He noted that an inventory of cultural, historic, and archaeological resources has been performed. He also mentioned that even though some of these resources exist in the corridor, they may be avoidable or the impacts may be minimized. He also mentioned that parks have been identified, such as Idle Hour Park in Springfield. Socio-economic information was provided, citing a report from a similar situation in New York. Marchaterre also mentioned that they have performed environmental justice research in the study area, involving low income and minority communities. Consequently, these areas have been avoided in the selection of roadway options

- Dan Byers revealed the study purpose, which is to improve the transportation corridor from the Louie B. Nunn Cumberland Parkway near Columbia to the Martha Layne Collins Blue Grass Parkway north of Springfield near the KY 555 interchange. The study and the selection of options consider both economic development and safety issues.

- Dan Byers then led the attendees through each of the corridor options. He explained that Option 1 was an interstate-type highway where access on and off would be at interchanges only. There would be eight or nine interchanges between the Louie B. Nunn Cumberland Parkway and the Martha Layne Collins Blue Grass Parkway. Byers noted that it would have to be constructed from end to end before the benefits could be fully realized. Furthermore, it is necessary for Option 1 to be located on the west side of the existing routes because of Green River Lake and the Wildlife Habitat Areas. The tie-in on the Louie B. Nunn Cumberland Parkway is located about two miles from the proposed reconstructed KY 61 interchange, and was pushed out beyond the Tebbs Bend Civil War Battlefield and the bends in Green River, making it necessary to cross Green River one time. Referring to the cost estimate sheet in the handout, Byers mentioned that the cost of this option is about $720M. Looking at the typical section for Option 2, and noting that it would be a road similar to the Lincoln Parkway, Byers posed the question: Where could this concept be built? For the most part, it can be constructed along the existing road, allowing both local and through traffic to use it. This concept would utilize the planned bypasses at Columbia and Lebanon and add a bypass at Campbellsville. He mentioned that the locations of KY 55/KY 555 are already serving as a bypass for Springfield. This option would allow driveway access every 1200 feet along with median crossovers. Option 2 has an estimated cost of $367M. Option 3 also follows the existing routes and leaves them as a two-lane facility, but Byers explained that one-mile passing bays would be added every three miles. The remainder of the route would then receive pavement and shoulder rehab treatment and be brought up to full-safety. The cost estimate for Option 3 was $113M.

- Dan Byers continued by explaining the Traffic Volumes and Level of Service (LOS) sheets in the handouts. Dan compared the LOS letter assigned as being similar to a report card, with A being the best, and D, E, and F being the worst. He also noted that the next sheet contained truck percentage data.

- Jim Wilson asked Byers to explain the usability of options. It was pointed out that segments could be prioritized, such as upgrading to four lanes first, allowing the remaining segments to use Option 3. Unlike Option 1, completing a segment of either Option 2 or 3 would be immediately beneficial by allowing an opportunity to mix and match these options,

according to need and available funding. This would permit incremental improvements. Whereas, Option 1 would have to be entirely completed, rather than built in segments, in order to receive the option's full benefits.

- There was a question regarding access routes from Option 1 into the communities. Byers responded that many of those routes would likely need to be upgraded, but those costs have not been included in the estimate.

- Next, there was a question about how Option 2 would benefit Springfield. Byers responded by telling the group that they weren't there to endorse any option – but to present the options and listen to the comments from the community. Another comment focused on a concern by some local residents about the bypass. Three questions were also asked: would the KY 555 extension affect traffic; when will the KY 555 extension be constructed; and, has any economic modeling been done on this route.

- There was another comment expressing concern about Option 1 bypassing and having a negative impact on Springfield. It was pointed out that a similar sentiment exists in the community regarding the US 150 Bypass.

- Additionally, there was another comment on favoring Option 2 because it allows driveway access.

- There was also a question regarding the KY 555 extension project, and whether the project's effects have been considered with this study. Byers responded that the traffic forecast analysis does consider the KY 555 extension.

- Lastly, there was a question about the economic benefits of a new road. Byers said that T.H.E. has reviewed a New York study, with characteristics similar to this one, in order to determine the potential economic benefits. Marty Marchaterre added that Springfield has most of its infrastructure in place already. The only key component missing is access to a major highway. Likewise, the cited study mentions that the best way to achieve a positive economic impact is through transportation access.

- Dan Byers mentioned the questionnaire at the back of the handout and requested that all attendees complete their questionnaires before leaving.

- Ted Noe mentioned pages one and two of the handout contained the project purpose, goals, and issues; and since these goals are still in draft form, they can be changed. He also indicated that these goals are used in

the environmental document. The group was then asked if any of the goals needed to be changed or added, but no suggestions were made.

- Ted Noe inquired about the meeting time – 5:00 pm to 8:00 pm – and location – Agricultural Extension Office – for the next Public Information Meeting; no one objected to either the potential time or location. He also inquired if any groups or area employers would like an agency coordination letter.

- Ted Noe, lastly, asked for any additional questions, but none were presented.

With no further discussion, the meeting adjourned at 3:00 p.m. EST.

Public Information Meeting

Heartland Parkway, from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway
Adair, Green, Taylor, Marion, and Washington Counties - Item No. 4-132.00
Green County Middle School, Greensburg, Kentucky
April 26, 2004 - 5:00 p.m. to 7:00 p.m. (CDT)

A public information meeting was held on Monday, April 26, 2004, from 5:00 p.m. to 7:00 p.m. at the Green County Middle School in Greensburg, Kentucky. The following KYTC Central Office Planning, KYTC District 4, Lake Cumberland Area Development District, and consultant staff were in attendance:

Jim Wilson	KYTC Central Office Planning
Ted Noe	KYTC Central Office Planning
Gary Valentine	KYTC District 4
Patty Dunaway	KYTC District 4
Becky Judson	KYTC District 4
Larry Wilson	Lake Cumberland ADD
Marty Marchaterre	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers
Lyn Johnson	WMB Consulting Engineers
Cliff Planck	WMB Consulting Engineers
Phil Lambert	WMB Consulting Engineers

The public information meeting was organized as a walk-through tour of project information. Beginning with guest registration, attendees were then led through a series of stations that included a project PowerPoint presentation, exhibits, and refreshments. Detailed descriptions of these stations are listed below.

Station One: Attendees were greeted at the door and asked to sign the attendance list. Kentucky maps, and an assortment of pamphlets, were available for interested parties. Attendees were also given handouts that included the following items:

- Study Purpose, Issues, and Project Goals
- Environmental Footprint Map, showing three options for consideration
- Discussion of each option
- Cost Estimate for each option
- Summary of the questionnaires from the first round of public meetings and local officials/agencies meetings
- Questionnaire

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the postage-paid envelope provided.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area and included the Project Goals, identified environmental, social, and cultural features in the area, as well as, an explanation of the three options being presented for consideration.

Station Three: Individual county maps were displayed with identified current Six-Year Highway Plan projects.

Station Four: Several exhibit boards displayed the following:

- Project Location Map
- Study Area with identified environmental data and the three corridor options
- Year 2003 traffic data
- Traffic Forecast data for YEAR 2030 for each corridor option, as well as, a no-build option
- Draft Project Goals
- Typical Section display for each corridor option

Station Five: Refreshments were provided.

A total of thirty-three individuals registered their attendance at the public information meeting. This does not include the eleven staff members listed above.

There were also two comments written on the provided flip-charts:

- “Most people in Greensburg travel to E’town.”
- “Actually, I think most people in Greensburg shop in Campbellsville. After that, it depends on which end of the county they are in – Columbia and Glasgow in addition to Campbellsville.”

There was a general consensus of attendees that the Heartland Parkway should be closer to Greensburg because many felt that the community is being bypassed by the Heartland Parkway. In addition, many individuals also noted that the Heartland Parkway should incorporate the proposed improvements planned for KY 61 between Greensburg and Columbia.

Public Information Meeting

Heartland Parkway, from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway
Adair, Green, Taylor, Marion, and Washington Counties - Item No. 4-132.00
Center Square, Lebanon, Kentucky
April 29, 2004 - 5:00 p.m. to 7:00 p.m. (EDT)

A public information meeting was held on Thursday, April 29, 2004, from 5:00 p.m. to 7:00 p.m. at the Center Square in Lebanon, Kentucky. The following KYTC Central Office Planning, KYTC District 4, Lincoln Trail Area Development District, and consultant staff were in attendance:

Jim Wilson	KYTC Central Office Planning
Ted Noe	KYTC Central Office Planning
Patty Dunaway	KYTC District 4
Becky Judson	KYTC District 4
Jack Qualls	Lake Cumberland ADD
John Brown	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers
Lyn Johnson	WMB Consulting Engineers
Cliff Planck	WMB Consulting Engineers
Phil Lambert	WMB Consulting Engineers

The public information meeting was organized as a walk-through tour of project information. Beginning with guest registration, attendees were then led through a series of stations that included a project PowerPoint presentation, exhibits, and refreshments. Detailed descriptions of these stations are listed below.

Station One: Attendees were greeted at the door and asked to sign the attendance list. Kentucky maps, and an assortment of pamphlets, were available for interested parties. Attendees were also given handouts that included the following items:

- Study Purpose, Issues, and Project Goals
- Environmental Footprint Map, showing three options for consideration
- Discussion of each option
- Cost Estimate for each option
- Summary of the questionnaires from the first round of public meetings and local officials/agencies meetings
- Questionnaire

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the postage-paid envelope provided.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area and included the Project Goals, identified environmental, social, and cultural features in the area, as well as, an explanation of the three options being presented for consideration.

Station Three: Individual county maps were displayed with identified current Six-Year Highway Plan projects.

Station Four: Several exhibit boards displayed the following:

- Project Location Map
- Study Area with identified environmental data and the three corridor options
- Year 2003 traffic data
- Traffic Forecast data for YEAR 2030 for each corridor option, as well as, a no-build option
- Draft Project Goals
- Typical Section display for each corridor option

Station Five: Refreshments were provided.

A total of three persons registered their attendance at the public information meeting. This does not include the ten staff members listed above.

There was one comment written on the provided flip chart:

- St. Rose Church in Washington County isn't shown as a historic property.

One verbal comment was that Option 1 would bypass all the communities, so it would make more sense to build Option 2 and complete the bypasses for each community.

Public Information Meeting

Heartland Parkway, from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway
Adair, Green, Taylor, Marion, and Washington Counties - Item No. 4-132.00
Campbellsville University Little Auditorium, Campbellsville, Kentucky
May 6, 2004 - 5:00 p.m. to 7:00 p.m. (EDT)

A public information meeting was held on Thursday, May 6, 2004, from 5:00 p.m. to 7:00 p.m. in the Student Union Building's Little Auditorium at Campbellsville University in Campbellsville, Kentucky. The following KYTC Central Office Planning, KYTC District 4, and consultant staff were in attendance:

Jim Wilson	KYTC Central Office Planning
Ted Noe	KYTC Central Office Planning
Patty Dunaway	KYTC District 4
Becky Judson	KYTC District 4
John Brown	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers
Lyn Johnson	WMB Consulting Engineers
Cliff Planck	WMB Consulting Engineers
Phil Lambert	WMB Consulting Engineers

The public information meeting was organized as a walk-through tour of project information. Beginning with guest registration, attendees were then led through a series of stations that included a project PowerPoint presentation, exhibits, and refreshments. Detailed descriptions of these stations are listed below.

Station One: Attendees were greeted at the door and asked to sign the attendance list. Kentucky maps, and an assortment of pamphlets, were available for interested parties. Attendees were also given handouts that included the following items:

- Study Purpose, Issues, and Project Goals
- Environmental Footprint Map, showing three options for consideration
- Discussion of each option
- Cost Estimate for each option
- Summary of the questionnaires from the first round of public meetings and local officials/agencies meetings
- Questionnaire

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the postage-paid envelope provided.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area and included the Project Goals, identified environmental, social, and cultural features in the area, as well as, an explanation of the three options being presented for consideration.

Station Three: Individual county maps were displayed with identified current Six-Year Highway Plan projects.

Station Four: Several exhibit boards displayed the following:

- Project Location Map
- Study Area with identified environmental data and the three corridor options
- Year 2003 traffic data
- Traffic Forecast data for YEAR 2030 for each corridor option, as well as, a no-build option
- Draft Project Goals
- Typical Section display for each corridor option

Station Five: Refreshments were provided.

The meeting was well attended with a total of forty-four individuals who registered their attendance. This does not include the nine staff members listed above.

There were no comments written on the provided flip-charts.

However, there were discussions on the pros and cons of Option One, and how it would affect the communities along the corridor. After reviewing the exhibits, some attendees noted that Option One would reduce the number of trucks on the existing routes. Others were concerned that Option One may “dry up” the communities or cause them to be bypassed by most traffic.

One woman indicated that Option One would split her family’s farm, while another indicated that Option One would take her house.

In addition, one gentleman was concerned about how the construction of Option Two would affect his plan to build a new house. Living along US 68 north of Campbellsville, he hopes to build adjacent to his current home but is concerned that Option Two would place his new home too close to the highway.

Public Information Meeting

Heartland Parkway, from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway
Adair, Green, Taylor, Marion, and Washington Counties - Item No. 4-132.00
Washington County Extension Office, Springfield, Kentucky
May 10, 2004 - 5:00 p.m. to 7:00 p.m. (EDT)

A public information meeting was held on Monday, May 10, 2004, from 5:00 p.m. to 7:00 p.m. in the Washington County Extension Office in Springfield, Kentucky. The following KYTC Central Office Planning, KYTC District 4, Lincoln Trail Area Development District, and consultant staff were in attendance:

Jim Wilson	KYTC Central Office Planning
Ted Noe	KYTC Central Office Planning
Patty Dunaway	KYTC District 4
Becky Judson	KYTC District 4
Jack Qualls	Lincoln Trail ADD
Marty Marchaterre	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers
Lyn Johnson	WMB Consulting Engineers
Cliff Planck	WMB Consulting Engineers
Phil Lambert	WMB Consulting Engineers

The public information meeting was organized as a walk-through tour of project information. Beginning with guest registration, attendees were then led through a series of stations that included a project PowerPoint presentation, exhibits, and refreshments. Detailed descriptions of these stations are listed below.

Station One: Attendees were greeted at the door and asked to sign the attendance list. Kentucky maps, and an assortment of pamphlets, were available for interested parties. Attendees were also given handouts that included the following items:

- Study Purpose, Issues, and Project Goals
- Environmental Footprint Map, showing three options for consideration
- Discussion of each option
- Cost Estimate for each option
- Summary of the questionnaires from the first round of public meetings and local officials/agencies meetings
- Questionnaire

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the postage-paid envelope provided.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area and included the Project Goals, identified environmental, social, and cultural features in the area, as well as, an explanation of the three options being presented for consideration.

Station Three: Individual county maps were displayed with identified current Six-Year Highway Plan projects.

Station Four: Several exhibit boards displayed the following:

- Project Location Map
- Study Area with identified environmental data and the three corridor options
- Year 2003 traffic data
- Traffic Forecast data for YEAR 2030 for each corridor option, as well as, a no-build option
- Draft Project Goals
- Typical Section display for each corridor option

Station Five: Refreshments were provided.

The meeting was well attended with a total of thirty-five individuals who registered their attendance. This does not include the ten staff members listed above.

There were no comments written on the provided flip-charts.

However, there were discussions on the pros and cons of each option. Many that attended expressed their displeasure of Option One because it would cut through too many farms.

One attendee indicated Option One, as currently shown, would go through her home. She was told that the current Option One corridor area is approximately 2000 feet wide, which may not actually take her home when a final alignment is selected in a future design phase.

Three families that live near the community of Cisselville were also concerned that Option One would either take their property or split their farms, so they preferred Option Two.

Public Information Meeting

Heartland Parkway, from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway
Adair, Green, Taylor, Marion, and Washington Counties - Item No. 4-132.00
William R. Davenport Family Life Center, Columbia, Kentucky
May 11, 2004 - 5:00 p.m. to 7:00 p.m. (CDT)

A public information meeting was held on Tuesday, May 11, 2004, from 5:00 p.m. to 7:00 p.m. in the William R. Davenport Family Life Center in Columbia, Kentucky. The following KYTC Central Office Planning, KYTC District 8, and consultant staff were in attendance:

Jim Wilson	KYTC Central Office Planning
Ted Noe	KYTC Central Office Planning
Tom Clouse	KYTC D-8 Planning
John Brown	T.H.E. Engineers
Dan Byers	WMB Consulting Engineers
Lyn Johnson	WMB Consulting Engineers
Cliff Planck	WMB Consulting Engineers
Phil Lambert	WMB Consulting Engineers

The public information meeting was organized as a walk-through tour of project information. Beginning with guest registration, attendees were then led through a series of stations that included a project PowerPoint presentation, exhibits, and refreshments. Detailed descriptions of these stations are listed below.

Station One: Attendees were greeted at the door and asked to sign the attendance list. Kentucky maps, and an assortment of pamphlets, were available for interested parties. Attendees were also given handouts that included the following items:

- Study Purpose, Issues, and Project Goals
- Environmental Footprint Map, showing three options for consideration
- Discussion of each option
- Cost Estimate for each option
- Summary of the questionnaires from the first round of public meetings and local officials/agencies meetings
- Questionnaire

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the postage-paid envelope provided.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area and included the Project Goals, identified environmental, social, and cultural features in the area, as well as, an explanation of the three options being presented for consideration.

Station Three: Individual county maps were displayed with identified current Six-Year Highway Plan projects.

Station Four: Several exhibit boards displayed the following:

- Project Location Map
- Study Area with identified environmental data and the three corridor options
- Year 2003 traffic data
- Traffic Forecast data for YEAR 2030 for each corridor option, as well as, a no-build option
- Draft Project Goals
- Typical Section display for each corridor option

Station Five: Refreshments were provided.

The meeting was attended by six individuals, which does not include the eight staff members listed above. One individual didn't register his/her attendance.

There were no comments written on the provided flip-charts.

However, there was discussion about the traffic congestion in Columbia, and the difficulty of transporting houseboats around the downtown square. In addition, the bypass project was mentioned as being the most important roadway improvement project.

Stakeholder First Meeting Minutes

Heartland Parkway Alternatives Study
Adair, Green, Marion, Taylor, and Washington Counties
Item No. 4-132.00
August 11, 2004
5:30 p.m. EST
City Hall in Lebanon

A local stakeholders meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 5:30 p.m. (EST) on Wednesday, August 11, 2004, at City Hall in Lebanon, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the options developed by the consultant, and to solicit input from those in attendance. Those in attendance included:

Jimmy Higdon	State Representative
John Thomas	City of Lebanon – City Manager
Marty Marchaterre	T.H.E. Engineers
John Brown	T.H.E. Engineers
Daniel R. Byers	WMB Consulting Engineers, Inc.
Phil Lambert	WMB Consulting Engineers, Inc.
Daryl Greer	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Patty Dunaway	KYTC D-4 Planning
Becky Judson	KYTC D-4

- Ted Noe began the meeting with introductions of KYTC and consultant personnel.

- The handouts prepared for this meetings contained: (1) Study Purpose, (2) Project Goals and Issues, (3) A discussion of the three options studied, (4) Questionnaire Summary, (5) Project Map and Estimate, and (6) a Questionnaire.

- Phil Lambert, of WMB, gave a brief history of the project that began with the first Project Team Meeting in May 2003. At that meeting, Draft Project Goals and a Preliminary Environmental Footprint area were established. This first project team meeting was then followed with the first round of Local Officials/Agencies Meetings in July 2003, at the Lake Cumberland Area Development District Office in Russell Springs and the Lincoln Trail Area Development District Office in Elizabethtown. Additionally, in September 2003, the first round of Public Information Meetings was held in Columbia, Campbellsville, Lebanon, and Springfield.

- Lambert continued by pointing out that the project goals have been revised throughout the public involvement process. It was also noted that these changes were a result of input received at the first round of Local Officials/Agencies and Public Meetings. Additionally, an exhibit board listing the *draft* project goals was on display, along with other exhibit boards illustrating the following: project location map, project options showing roadway typical sections, and project study area with all three options. Other boards available but not displayed due to space restrictions were Current ADT totals, 2030 ADT – No Improvement projected totals, 2030 ADT – Option 1 projected totals, 2030 ADT – Option 2 projected totals, and 2030 ADT – Option 3 project totals.

- The questionnaire results from the first Local Officials/Agencies and Public Information Meetings were summarized by Phil Lambert. Also, a summary of the questionnaires received to date from the second round of meetings was presented. He informed everyone that their responses will be included in the final summary.

- A brief overview of the geotechnical issues in the study area was given. It was noted that the corridor options presented would most likely encounter sinkholes within the southern portion of the region. Both corridors cross known faulted areas within the Knobs Region. Additionally, acidic shale associated with the New Albany Shale will also be encountered in the Knobs Region, and it was noted that active and abandoned quarries have been identified and avoided.

- Marty Marchaterre, of T.H.E. Engineers, gave an environmental overview. He discussed the sensitive cultural and historic areas, such as Green River Lake State Park and Tebbs Bend Civil War Battlefield.

- John Brown, with T.H.E. Engineers gave an overview of the socio-economic impacts of this project. He discussed the local infrastructure and available workforce. One comment received indicated people from Larue County travel to Elizabethtown rather than Lebanon for employment because of a better highway, even though Larue County is closer to Lebanon than it is to Elizabethtown.

- Dan Byers then led the attendees through each of the corridor options. He explained that Option 1 was an interstate-type highway where access on and off would be at interchanges only. Byers noted that it would have to be constructed from end to end before the benefits could be fully realized. Furthermore, it is necessary for Option 1 to be located on the west side of the existing routes because of Green River Lake and the Wildlife Habitat Areas. Referring to the cost estimate sheet in the handout, Mr. Byers mentioned that the cost of this option is about $750M. Looking at the typical section for Option 2, and noting that it would be a road similar to

the Lincoln Parkway, for the most part, it can be constructed along the existing road, allowing both local and through traffic to use it. This concept would utilize the planned bypasses at Columbia and Lebanon and add a bypass at Campbellsville. He mentioned that the locations of KY 55/KY 555 are already serving as a bypass for Springfield. This option would allow driveway access every 1200 feet along with median crossovers. Option 2 has an estimated cost of about $370M. Option 3 also follows the existing routes and leaves them as a two-lane facility, but Byers explained that one-mile passing bays would be added every three miles. The remainder of the route would then receive pavement and shoulder rehab treatment and be brought up to full-safety. The cost estimate for Option 3 was $125M.

- Mr. Byers mentioned that each handout contained a questionnaire, and encouraged everyone to complete and return it.

- One individual asked if there had been any accident studies focusing on fatalities. She asked which of the options presented was safest. The discussion that followed involved several aspects to consider (1) If Option 1 were built, nothing would be done along the existing highway to correct deficiencies. (2) If Option 2 were built, speed and driver error can still contribute to serious crashes. (3) Another consideration is that if Option 1 is built, there will be two roads to maintain.

- There was one comment that Marion County is an agricultural county, and Option 1 would take a lot of farmland.

- There was a question regarding the availability of studies on the effects of Lincoln Parkway and how it has impacted economic growth.

- Another question on safety centered on low or broken shoulders. Shoulder drop-offs were mentioned in an earlier meeting. Mr. Byers noted that full-depth paved shoulders have been included in the project estimate.

- Still another safety comment said people are diving 85 mph.

- There was a question about how long it will take to construct this project. Mr. Byers responded that it was a funding issue.

- Department and consultant personnel were available to answers questions individually following the question and answer session.

There were approximately 50-60 attendees in addition to staff members, consultant personnel, Rep. Higdon, and Mr. Thomas listed above.

With no further discussion, the meeting adjourned at 7:35 p.m. EST.

Project Team Third Meeting Minutes

Alternatives Study
Adair, Green, Marion, Taylor, and Washington Counties
Item No. 4-132.00
Heartland Parkway
September 1, 2004
10:00 a.m.

A project team meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted on Wednesday, September 1, 2004, at the Kentucky Transportation Cabinet (KYTC) Department of Highways District 4 Office in Elizabethtown, Kentucky. The purpose of the meeting was to review the corridors and options being studied, the purpose, goals and objectives of the proposed project, project issues, a summary of the questionnaire results from the second round of local officials, local agencies, and public meetings, and to make preliminary recommendations for proposed improvements. An additional public involvement meeting is scheduled for September 23, 2004 at Springfield. Any comments generated by this meeting will be considered in the final recommendation of alternatives. Participants at the meeting included representatives from KYTC District 4, KYTC District 8, KYTC Division of Planning, Lincoln Trail Area Development District, the consultant staffs from T.H.E. Engineers, and WMB, Inc. Attendees for the meeting were as follows:

Gary Raymer	KYTC D-4 Chief District Engineer
Jim Wilson	KYTC – Central Office Planning
Ted Noe	KYTC – Central Office Planning
Patty Dunaway	KYTC D-4 Planning
E.L. Lewis	KYTC D-4 Traffic
Gary Valentine	KYTC D-4 Design
Jude Filiatreau	KYTC D-4 Maintenance
John Moor	KYTC D-4 Maintenance
David Matthews	KYTC D-4 Traffic
Tom Clouse	KYTC D-8 Planning
Jack Qualls	Lincoln Trail ADD
Marty Marchaterre	T.H.E. Engineers
Daniel Byers	WMB Consulting Engineers, Inc.
Phil Lambert	WMB Consulting Engineers, Inc.

A summary of the comments and discussion items for this meeting are outlined below.

Introduction and Project History

The project team received an update on the project's history and description of events that have taken place since the second project team meeting. This included information on the meetings with local officials and local agencies,

which were held in each of the five communities in order to provide an opportunity for more participation. These meetings grouped the local officials and resource agencies from each of the respective counties. Locations for these meetings were:

Court House Annex Meeting Room in Columbia	February 27, 2004
District Court Room in Campbellsville	February 27, 2004
District Court Room in Greensburg	March 5, 2004
2nd Floor Court Room in Lebanon	March 9, 2004
Agriculture Extension Office in Springfield	March 9, 2004

These meeting were followed by the second round of public meetings, which were held in the communities along the existing corridor, and in Greensburg. Locations for these meetings were:

Green County Middle School	April 26, 2004
Center Square in Lebanon	April 29, 2004
Campbellsville University Little Auditorium	May 6, 2004
Washington County Extension Office in Springfield	May 10, 2004
William R. Davenport Family Life Center in Columbia	May 11, 2004

Additionally, there was a stakeholders meeting held at City Hall in Lebanon on August 11, 2004. It was noted that a second stakeholders meeting is scheduled for September 23, 2004 in Springfield.

The consultant displayed an exhibit showing the Draft Project Goals.

Questionnaire Results

The next item discussed was the questionnaire results received to date from all the second round meetings. The following results were noted:

In questions two & three, 80% said the Heartland Parkway is needed, and 79% said the Heartland Parkway is needed and would be helpful to the region.

In question four, 79% of all responses said the Heartland Parkway should be constructed along the existing route.

In question five, 74% indicated they prefer a four-lane highway with limited entrances.

The results of the priority by segment question closely resemble the recommendations presented by WMB, as a result of the public responses and other engineering factors.

After the overview of questionnaire responses, the project team discussed funding for the Columbia and Lebanon Bypasses. There was some concern surrounding these two projects being able to convert the bypasses to federal funding unless appropriate environmental documents have been approved; and, the question of logical termini as required by FHWA.

A review of historic funding through the corridor indicate the funding level was approximately $20M per year.

Additionally, it was noted that the Lebanon Bypass includes only enough right of way for two-lane construction; however, after the construction of the two-lane bypass, and the commencement of development, it will be difficult to go back and purchase the additional right of way needed for two more lanes.

Special Considerations

The project team was updated regarding geotechnical issues, indicating that nothing new has developed since the previous project team meeting. Some of these geotechnical items include the following:

- Both corridors must cross area geological faults.

- Acidic shale will require special design and construction consideration.

An update was provided by T.H.E. Engineers on the environmental overview. He indicated that a draft environmental overview had been submitted to the Division of Planning for consideration.

Environmental justice considerations were discussed, specifically mentioning the community of Frogtown, which will not be affected by any of the corridors being studied.

Discussion of Alternatives

Three alternatives were presented to the project team.

1. Alternate 1 is a new four-lane fully controlled access corridor from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway and lying approximately two miles west of the communities of Columbia, Campbellsville, Lebanon, and Springfield.

2. Alternate 2 is a four-lane partially controlled access facility running along the existing KY 55 route with bypasses at the communities.

3. Alternate 3 is a two-lane partially controlled access facility running along the existing KY 55 route with bypasses at the communities. Alternate 3 includes passing bays at approximately three-mile intervals. Estimates for

Alternate 3 leave the access control by permit for approximately one mile of KY 55 south of Lebanon and for approximately 6.5 miles at the north end of the corridor along KY 555, and an 11.8 mile section of KY 55 from the Columbia Bypass in Adair County to the intersection of KY 1701 in Taylor County.

4. No Build Alternate

The project team identified the following as important considerations in recommending an alternate.

1. Meet the project goals as determined from the study and public input.
2. Public Support
3. Cost to Construct
4. Traffic Volumes

The no build alternate was evaluated by the project team and a conclusion was reached that without some corridor improvements, the project goals that relate to congestion and regional mobility could not be met for the following reasons:

1. The existing routes through the communities are congested and cause considerable delays.
2. Trucks traveling on the existing roadways between the communities cause increased travel times. As the number of trucks and traffic volumes increase, these delays will continue to increase.

Alternate 1 was discussed and eliminated from further consideration for the following reasons:

1. It does not have significant support (13%).
2. It has the greatest potential for community impact by creating an all new roadway corridor. The corridor would have access from one side to the other at crossroads only. Therefore the potential to separate farms and neighborhoods is high.
3. It requires the greatest amount of new right of way.
4. A totally new roadway would be created which would leave the state with two systems to maintain (existing KY 55 and the new route).
5. It has the greatest cost.

Alternates two and three were discussed together. Items common to the two alternates that were recognized by the project team as being beneficial to the project were:

1. Bypasses around Columbia, Campbellsville, and Lebanon.
2. Using existing KY 55-KY 555 between the communities.
3. Communities and rural areas have direct access to the route.

The major difference between Alternate 2 and Alternate 3 is that Alternate 2 is a four-lane facility while Alternate 3 is a two-lane facility.

The project team discussed how this difference affected the ability of each alternate meeting the project goals.

1. Alternate 3 has the least cost and the least overall impact due to right of way and construction.
2. Alternate 2 has the greatest public support (74%). It also provides better regional mobility because the four-lane facility allows passing throughout it length and has greater capacity.
3. The traffic volumes warrant a four-lane facility for year 2030.

Based on these considerations the project team concluded that for the long term traffic mobility and in keeping with public support Alternate 2 best addresses the project goals.

A discussion was held concerning the cost of completing Alternate 2 and how Alternate 2 might affect ongoing projects along the KY 55 corridor.

Based on historic cost of projects in the Six-Year Road Plan along the corridor this process would take 18 to 20 years to complete Alternate 2. Under this approach more critical sections of the route would be completed first, working through the sections by priority until the entire project is completed. Since this process is expected to take approximately twenty years to complete, the project team recommended that a spot improvement/safety improvements program for sections of the route that would not be improved until several years in the future. These improvements such as additional passing lanes, pavement rehabilitation, and shoulder improvements could be completed within the existing right of way and would not require major construction that would be replaced when the four-lane section is constructed.

There are three projects that are currently in the six-year plan: KY 61 with new interchange with the Louie B. Nunn Cumberland Parkway, Columbia Bypass, and the Lebanon Bypass that could become a part of Alternate 2.

KY 61 from the Louie B. Nunn Cumberland Parkway to the Columbia Bypass is currently in the Right of Way Phase. It is designed as a five-lane section with flush median and access control by permit. Including KY 61 as proposed would result in a different typical and access control for the south two miles of the corridor.

The Columbia Bypass is in the Right of Way Phase. It is designed as a two-lane initial on four-lane right of way with partial access control. The portion of the bypass from KY 61 to KY 55 on the north side of Columbia could be included in the proposed Heartland Parkway corridor. Two items were noted that could be

adjusted on the Columbia Bypass that would make it fit the Heartland Parkway better. As designed, the Columbia Bypass T's into KY 55 north of Columbia. For the parkway, traffic flow would be better if the parkway were the through route around Columbia. It was also noted that the location of the proposed connection of the bypass and KY 55 north of Columbia would serve the parkway route better if it were located approximately 0.5 miles further north of Columbia.

The Lebanon Bypass is currently in the Design Phase. It is being designed as two-lane on two-lane right of way. If the Lebanon Bypass is to be included in the four-lane Heartland Parkway, the bypass would need to be revised to provide four-lane right of way. Both the south connection and the north connection of the Lebanon Bypass "T" into KY 55. Consideration should be given to the Heartland Parkway being the primary route with the route through Lebanon connecting to the parkway. The location of the south connection of the Lebanon Bypass is in an area along KY 55 that has access control by permit. If this location is maintained, there will be the need to change access control from permit controlled to partially controlled on KY 55 for approximately one mile south of the bypass connection. This would provide consistent access control throughout the route.

The project team recommended the following priority for construction:

- Priority 1 – Segment 1 – KY 61 from the Louie B. Nunn Cumberland Parkway to the Columbia Bypass.
- Priority 2 – Segment 2 – Columbia Bypass
- Priority 3 – Segment 6 – Lebanon Bypass
- Priority 4 – Segment 4 – Campbellsville Bypass
- Priority 5 – Segment 3 – KY 55 from Columbia to Campbellsville
- Priority 6 – Segment 7 – KY 55 from Lebanon to Springfield
- Priority 7 – Segment 5 – US 68 from Campbellsville to Lebanon
- Priority 8 – Segment 8 – KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway

With no further comments, the meeting concluded at approximately 11:30 am.

Stakeholders Second Meeting Minutes

Heartland Parkway Alternatives Study
Adair, Green, Marion, Taylor, and Washington Counties
Item No. 4-132.00
September 23, 2004
5:30 p.m. EDT
Washington County Courthouse
First Floor Court Room

A local stakeholders meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 5:30 p.m. (EDT) on Thursday, September 23, 2004, at the Washington County Courthouse in Springfield, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the options developed by the consultant, and to solicit input from those in attendance. Those in attendance included:

Mike Harmon	State Representative
Gary Raymer	KYTC D-4 Chief District Engineer
Patty Dunaway	KYTC D-4 Planning
Becky Judson	KYTC D-4 Public Information Officer
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Jack Qualls	Lincoln Trail ADD
Marty Marchaterre	T.H.E. Engineers
Daniel R. Byers	WMB Consulting Engineers, Inc.
Phil Lambert	WMB Consulting Engineers, Inc.

- State Representative Mike Harmon welcomed everyone, thanked them for attending, and introduced Ted Noe for opening remarks. Noe then introduced attending KYTC staff and consultant personnel.

- Phil Lambert of WMB Consulting Engineers, Inc. gave a brief history of the project, which began with the first Project Team Meeting in May 2003. He mentioned that there have been three project team meetings and two rounds of meetings with local officials and the public.

- Lambert continued by discussing the results of all received questionnaires and noted that the majority of the responses indicated a preference for a four-lane divided highway with limited access similar to the Lincoln Parkway.

- Next, Marty Marchaterre of T.H.E. Engineers gave an environmental overview. He discussed the number of stream crossings with Option 1 having more crossings than Options 2 and 3. He also indicated that the

research of agriculture conservation districts has been completed and none or the districts would be affected by any of the proposed options. In addition, Marchaterre said they have reviewed the area for impacts on threatened and/or endangered species.

- Marchaterre continued by stating that extensive research related to economic impacts on the region has also been completed.

- Additionally, environmental justice issues have been studied, with no low-income or minority communities being displaced by any of the studied options.

- Dan Byers of WMB Consulting Engineers, Inc. then led the attendees through each of the three options. He indicated that the options were created in an effort to improve the transportation corridor between the Louie B. Nunn Cumberland Parkway and the Martha Layne Collins Blue Grass Parkway. He continued by mentioning that through the public involvement process, regional goals have been modified. However, prior to developing alternative corridors, the preservation and identification of environmental resources were discussed and researched. At that point, roadway options were developed that would improve transportation, preserve environmental resources, and meet the project goals.

- Three options were defined: (1) Option 1 is a four-lane divided highway with access provided only at interchanges; however, this option may create access issues because of splits in farmland. (2) Option 2 is a four-lane divided highway similar to the Lincoln Parkway with access being provided every 1200 feet. (3) Option 3 would be a two-lane highway with the addition of passing lanes; Option 3 would require minimal improvements.

- During the discussion of Option 1, it was noted that a new highway of this type would have to be built a minimum of two miles from the communities, and it would need to be completed from beginning to end in order for the communities to receive any transportation benefits. Option 2, which includes four-lane bypasses around the communities of Columbia, Campbellsville, and Lebanon, could be built incrementally, and as each section is completed, immediate use of that facility would be available. Lastly, Option 3 would only include two lane bypasses for the communities of Columbia, Campbellsville, and Lebanon.

- The cost for each option was discussed, as was the current budget issue. It was mentioned that a primary question has arisen during the planning study: Which option best meets of the goals of the project, and how will it be funded? A review of historic funding of highway projects in the existing corridor is about $20M per year. At that rate, Option 2 - preferred by most

who have responded to the questionnaire - would take approximately 18-20 years to complete.

- After the presentation by the project consultants, all attendees were invited to review the exhibits and ask questions. The exhibits included:

  1. Environmental Footprint with Alternatives shown
  2. Draft Project Goals
  3. Typical Sections for each option.

- Representative Harmon again thanked everyone who attended and encouraged everyone to comment on the project. He also reiterated the current budgetary concerns.

- Ted Noe concluded by adding some closing remarks and mentioned that additional handouts were available if anyone wanted to take extra copies for friends and neighbors who were unable to attend tonight's meeting.

There were 16 attendees, including staff members, consultant personnel, and Rep. Harmon.

With no further discussion, the meeting adjourned at 6:15 p.m. EDT.

APPENDIX G.

RESOURCE AGENCY COORDINATION RESPONSES

Coordination Letters

1. Agency Coordination Letter (07/22/04) with Mailing List and attachment
2. Email from Brainard Palmer-Ball
3. City of Campbellsville, Mayor Brenda Patterson
4. City of Campbellsville, Fire Department
5. Email from Charlie Harman – Commonwealth of Kentucky, Education Cabinet
6. City of Lebanon City Council
7. Email from City of Springfield City Council, Mayor Mike Haydon, & Laurie Smith
8. Columbia/Adair County Industrial Development Authority, Inc.
9. Commonwealth of Kentucky, Department of Agriculture
10. Commonwealth of Kentucky, Commerce Cabinet
11. Commonwealth of Kentucky, Commerce Cabinet, Department of Fish & Wildlife Resources (KDFWR)
12. Commonwealth of Kentucky, Commerce Cabinet, Department of Parks
13. Commonwealth of Kentucky, Cabinet for Economic Development
14. Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Department for Natural Resources
15. Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Division of Conservation
16. Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Division for Air Quality
17. Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Department for Natural Resources, Division of Mine Permits
18. Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Department for Natural Resources, Non-Coal Branch
19. Commonwealth of Kentucky, Cabinet for Health and Family Services, Department for Public Health
20. Commonwealth of Kentucky, Justice and Public Safety Cabinet
21. Commonwealth of Kentucky, Kentucky State Police
22. Commonwealth of Kentucky, Transportation Cabinet, Division of Environmental Analysis
23. Commonwealth of Kentucky, Transportation Cabinet, Permits Branch
24. Greensburg/Green County Industrial Foundation, Inc.
25. Email from John Houlihan, Commonwealth of Kentucky, Transportation Cabinet, Department of Aviation
26. Lebanon-Marion County Chamber of Commerce
27. The Nature Conservancy, Kentucky Chapter
28. Marion County Industrial Foundation
29. Marion-Washington County Airport Board

30. Comments by telephone from Mike Blevins, P.E., KYTC, Division of Materials, Geotechnical Branch
31. Comments by telephone Judge Paul Patton, Taylor County Judge/Executive (via telephone)
32. Letter from Purcell's Business Products
33. Comments by telephone Springfield Water Company
34. Team Taylor County Industrial Development Authority
35. University of Kentucky Geological Survey
36. United States Department of Health & Human Services
37. United States Department of Homeland Security/United States Coast Guard
38. United States Department of Homeland Security/United States Coast Guard
39. Brenda Patterson, Greensburg City Council

Dan Byers

Matthew G. Bevin
Governor

Transportation Cabinet
Frankfort, Kentucky 40622
www.transportation.ky.gov

Jim Gray
Secretary

July 29, 2020

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

Dear «Letter_Title» «Last_Name»

Subject: Alternatives Study
Adair County, Marion, Taylor, and Washington Counties
Controlled Driveway, Widening, and/or Relocation from the Louie B. Nunn
Cumberland Parkway to the Martha L. Collins Bluegrass Parkway
Item No. 4-132.00

The Kentucky Transportation Cabinet is requesting your agency's input and comments on the various routes being considered for a proposed highway project.

The Kentucky Transportation Cabinet has established a study team to evaluate the proposed widening and/or relocation of the Cumberland Parkway in Adair, Green, Marion, Taylor, and Washington Counties from the Louie B. Nunn Cumberland Parkway to the Martha L. Collins Bluegrass Parkway. This study is currently in the data-gathering stage.

We ask that you provide any specific issues or concerns that your agency may have that affect the development of the project. The planning study will include a scoping process for the early identification of potential environmental issues, and impacts related to the proposed project. We feel that early identification of issues or concerns can help us develop highway project alternatives to avoid or minimize negative impacts.

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

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 comments:

- A draft statement of Study Purpose, Project Goals, Issues, and Discussion
- Project Location Map
- Year 2001 Traffic and Level of Service
- Year 2020 Traffic and Level of Service
- Crash Information
- Summary of Round One Questionnaire Results
- Topographic Environmental Footprint with Alternates
- Cost Estimates

We respectfully ask that you provide us with your comments by August 15, 2001, to ensure timely progress in this planning effort.

We appreciate any input you can provide concerning this project. Please direct any comments, questions, or requests for additional information to Tel. Nee of the Division of Planning at 502-[illegible]-718 or at TNI Nee@kytc.gov. Please address all written correspondence to Annette Coffey, P.E., Director, Division of Planning, Kentucky Transportation Cabinet, WS-05-01, 200 Mero Street, Frankfort, KY 40622.

Sincerely,

Annette Coffey, P.E.
Director
Division of Planning

AC:[illegible]

Enclosures

c. Jane Sepulveda (w/e)
Bob Farley
Mark Mahoney
Phil Lambert – WMB
Don Byers – WMB
Chris Pitman
David Wallace
Gary Rawson
Patty Dunaway
David Beatty
Gary Valentine
Tim Tempe
Tom Clouse
George Best
Lynn Fain
Jill Wolfe
[illegible] Schaefer

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Frankfort KY 40601

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Regional Environmental Officer
Fish of Emergency Management Agency, Region IV
3003 Chamblee Tucker Road
Atlanta GA 30341-1130

Ms. Margie Shaver
Independent Hatter Association
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P.O. Box 128
Madisonville KY 42431

Mr. Janet Fish
President
Kentuckians for Better Transportation
12333 Thoroughbred Parkway
Louisville KY 40299

Kentuckians for The Commonwealth
125 Rearte Street
P.O. Box 1450
London KY 40743

Mr. James Holsinger
Secretary
Kentucky Health Services Cabinet
275 East Main
Frankfort KY 40601

Mr. John Hoeckman
Kentucky Airport Zoning Commission
Transportation Office Building, W3-09-02
200 Mero Street
Frankfort KY 40622

Mr. Bob Arnold
Executive Director
Kentucky Association of Counties
180 Kings Daughters Drive
Frankfort KY 40601

Mr. Ken Offschlag
President
Kentucky Chamber of Commerce Executives, Inc.
664 Chenault Road
Frankfort KY 40601

Mr. Richie Farmer
Commissioner
Kentucky Department of Agriculture
Capitol Annex, Room 189
Frankfort KY 40601

Mr. Lloyd Cross, Sr.
Commissioner
Kentucky Department of Environmental Protection
14 Reilly Road
Frankfort KY 40601

Mr. C. Thomas Pennett
Commissioner
Kentucky Department of Fish and Wildlife Resources
Arnold L. Mitchell Bldg., #1 Game Farm Rd
Frankfort KY 40601

Ms. Susan Bush
Commissioner
Kentucky Department of Natl. Resources
663 Teton Trail
Frankfort KY 40601

Mr. Stephen A. Coleman
Director
Kentucky Department of Natl. Resources, Division of Conservation
663 Teton Trail
Frankfort KY 40601

Mr. Mark Miller
Commissioner
Kentucky Department of State Police
919 Versailles Road
Frankfort KY 40621

Mr. Frank Reid
Acting Commissioner
Kentucky Dept. of Surface Mining Reclamation and Enforcement
#2 Hudson Hollow
Frankfort KY 40601

Kentucky Disabilities Coalition
P.O. Box 1189
Frankfort KY 40603-1189

Mr. John Lyons
Director
Kentucky Division of Air Quality
803 Schenkel Lane
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Ms. Leah W. MacSwords
Director
Kentucky Division of Forestry
627 Comanche Trail
Frankfort KY 40601

Mr. Greg Howard
Commissioner
Kentucky Department of Vehicle Enforcement
Transportation Office Building, Suite T 500
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Frankfort KY 40622

Mr. Tony Hatton
Acting Director
Kentucky Division of Waste Management
14 Reilly Road
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Mr. Jeff Pratt
Director
Kentucky Division of Water
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Frankfort KY 40601

Mr. Marvin E. Strong, Jr.
Secretary
Kentucky Economic Development Cabinet
Capitol Plaza Tower, 500 Mero St.
Frankfort KY 40601

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Heartland Parkway

STUDY PURPOSE, PROJECT GOALS, AND DISCUSSION

Adair, Green, Taylor, Marion, Nelson, and Washington Counties
Item No. 4-132.00
Agency Coordination Letters

Study Purpose

The purpose of the Heartland Parkway Alternatives Study is to identify and evaluate potential corridors for a new route and/or the reconstruction of existing routes (KY 55/US 68/KY 555) from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway. The study is intended to help define the location and purpose of the project and better meet Federal requirements regarding consideration of environmental issues, as defined in the National Environmental Policy Act (NEPA). Items involved in this study include:

- Discuss project needs and issues with public officials, resource agencies, and other groups which have a special interest in the project;
- Define project goals, needs, and issues;
- Define the beginning and ending points of the project corridor;
- Identify any known environmental concerns;
- Identify and evaluate alternate corridors with possible design concepts; and,
- Listen to, and share information with, the public.

Project Goals

The project goals, which were initially drafted, have been refined, as shown:

I. Improve Regional Access for:
   - Economic Development
   - Existing Industry
   - Truck Access
   - Tourism
   - Higher Education
   - Agricultural Economy

II. Improved Safety
III. Improved Highway Capacity in Certain Locations
IV. Decreased Delays through Communities
V. Improved Emergency Response Times

Issues

Major issues and concerns have been identified within the study area that will be addressed in the Alternatives Study. These include:

- Access to major expressway-type systems in the region (i.e., I-75, I-65, and the proposed I-66 corridor);
- Improving economic development and tourism opportunities in Adair, Green, Taylor, Marion, Nelson, and Washington Counties;
- Poor geometrics, including narrow lane widths, narrow shoulders, substandard horizontal/vertical alignments, poor sight distance, no passing lanes, and access type;
- Truck Access for existing and future industries; and,
- Improving traffic congestion in Adair, Green, Taylor, Marion, Nelson, and Washington Counties in certain locations.

Discussion

The public's needs and concerns, obtained through meetings with local officials, public information meetings, and special interest group meetings, have been analyzed and tabulated and are included within this handout. In addition, traffic data was also evaluated prior to the compilation of the handout.

Through field and database research, known environmental concerns have been identified and are shown on the project exhibit.

As this study progressed, it became apparent that a corridor on the east side of the existing corridor would be difficult due to the Green River Lake area. This study addresses three options: **Option 1** is a parkway to the west of the existing corridor; **Options 2 and 3** are along the existing route with bypasses at the communities.

Option 1 is a four-lane divided fully controlled access facility. It lies approximately two miles west of the existing roadway. Interchanges are provided at major crossroads to access the communities. **Option 1** lies on a new alignment along its entire route.



Option 2 consists of widening the existing KY55/US68/KY555 route to a four-lane partially controlled access facility. It would follow the bypasses currently under design around the west sides of Columbia and Lebanon. Both of these bypasses would be

widened to four lanes. **Option 2** would provide a four-lane bypass around the southeast side of Campbellsville.

Option 2 is summarized in eight segments, which describes the work required in upgrading the route to a four-lane roadway:

Segment 1 follows a section of KY 61 currently under design (Item No. 8-162.6). It is a five-lane facility that connects to the Louie B. Nunn Cumberland Parkway with a new interchange and extends north 1.9 miles to the proposed Columbia Bypass. This five-lane roadway would be included in the Heartland Parkway as presently designed.

Segment 2 is 4.16 miles in length and follows the proposed Columbia Bypass from KY 61 to Mile Point 12.65 on KY 55. The bypass is currently under design as a two-lane initial on four-lane ultimate right of way. **Option 2** would construct the bypass as a four-lane initial, instead of two lanes.



Segment 3 extends along existing KY 55 from Mile Point 12.65 in Adair County to Mile Point 8.70 in Taylor County. **Option 2** would upgrade the existing two-lane route to four lanes with partial access control. Currently, a portion of *Segment 3* has access by permit and a portion has partial access control. In areas with access control by permit, frontage roads will be required to access remaining properties. In areas that are developed with access points closely spaced, using the existing road as a frontage road and constructing *Segment 3* on a new alignment should be considered in the final design phase.

Segment 4 extends from KY 55 Mile Point 8.70 south of Campbellsville to US 68 Mile Point 9.48 north of Campbellsville. *Segment 4* would consist of a four-lane partially controlled access facility on a new alignment, bypassing Campbellsville on the southeast side. The route would be similar to the bypass design that was begun in 1998 and cancelled.

Segment 5 extends from Mile Point 9.48 in Taylor County to Mile Point 9.47 in Marion County. The north end of *Segment 5* would connect to the bypass currently under design for Lebanon (Item No. 4-125.10). The existing US 68/KY 55 routes have partial access control except for approximately one mile on the Lebanon end of the segment. **Option 2** would add two additional lanes and a 40-foot median to *Segment 5*. Frontage roads would be added to the portion of access control by permit to allow changing access control to partial.



Segment 6 extends from US 68 Mile Point 9.47 south of Lebanon to KY 55 Mile Point 2.0 north of Lebanon. It would follow the Lebanon Bypass (Item No. 4-125.10) that is currently under design. *Segment 6* would be constructed as a four-lane facility with a 40-foot median.

Segment 7 would follow KY 55 from the Lebanon Bypass to the intersection with KY 555 in Springfield. The route would be widened to four lanes with a 40-foot median. Additional right of way will be acquired and the current partial access control will be maintained.

Segment 8 would follow KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway. KY 555 would have two additional lanes with a 40-foot median. In areas of existing access by permit, frontage roads will be added to convert access control to partial with 1200-foot entrance spacing.

Option 3 consists of providing on existing KY55/US68/KY555 a two-lane facility with passing bays. The bypasses currently in design at Columbia and Lebanon would be used. A two-lane initial, four-lane ultimate bypass will be added around the southeast side of Campbellsville. The remainder of the route would be upgraded by adding one-mile passing bays every three miles. The route would receive a surface rehab and shoulder treatment.

Option 3 is summarized in eight segments, which describes the improvements associated with this option:

Segment 1 follows a section of KY 61 currently under design (Item No. 8-162.6). It is a five-lane facility that connects to the Louie B. Nunn Cumberland Parkway with a new interchange and extends north 1.9 miles to the proposed Columbia Bypass. This five-lane roadway would be included in the Heartland Parkway as presently designed.

Segment 2 is 4.16 miles in length and follows the proposed Columbia Bypass from KY 61 to Mile Point 12.65 on KY 55. **Option 3** would use the bypass as it is currently being designed – a two-lane facility on four-lane ultimate right of way.



Segment 3 extends along existing KY 55 from Mile Point 12.65 in Adair County to Mile Point 8.70 in Taylor County. **Option 3** would provide passing bays at needed locations. Additional right of way will be required; however, no additional right of way restrictions are proposed with **Option 3**.

Segment 4 extends from KY 55 Mile Point 8.70 south of Campbellsville to US 68 Mile Point 9.48 north of Campbellsville. *Segment 4* would consist of a two-lane/four-lane ultimate partially controlled access facility on a new

alignment, bypassing Campbellsville on the southeast side. The route would be similar to the bypass design that was begun in 1998 and cancelled.



Segment 5 extends from Mile Point 9.48 in Taylor County to Mile Point 9.47 in Marion County. The north end of *Segment 5* would connect to the bypass currently under design for Lebanon (Item No. 4-125.10). Several passing bays would be constructed within the existing right of way. There is no proposed upgrade in access control with this option.

Segment 6 extends from US 68 Mile Point 9.47 south of Lebanon to KY 55 Mile Point 2.0 north of Lebanon. It would follow the Lebanon Bypass (Item No. 4-125.10), as it is currently designed.

Segment 7 would follow KY 55 from the Lebanon Bypass to the intersection with KY 555 in Springfield. Along this segment, some passing bays would be constructed on existing right of way.

Segment 8 would follow KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway. Some passing bays would be added with **Option 3**. Additional right of way would be required; however, no additional right of way restrictions are proposed with this option.

Conclusions

If **Option 1** is recommended, it must be used throughout the corridor to be effective. Also, large segments must be constructed before significant benefits can be realized from Option 1.

Options 2 and 3 both follow the existing corridor; therefore, segments of one option are compatible with the other option. This allows the construction of **Option 2** on a portion of the corridor and **Option 3** on the remainder of the corridor. Since **Options 2 and 3** are along the existing corridor, construction of a segment would give benefit to the corridor independent of completion of the entire corridor.

Based on level of service, segment priority would be:

Priority 1 – Segments 1, 2, 4, 6
Priority 2 – Segments 3, 5
Priority 3 – Segment 7
Priority 4 – Segment 8

2003 Local Officials & Public Questionnaire Results

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from the Louie B. Nunn Cumberland Parkway to the
Martha Layne Collins Blue Grass Parkway

1. Have you filled out a questionnaire on this project before?	
Yes	0 (0%)
No	51 (100%)

2. Do you think a new/reconstructed route from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway is needed?	
Yes	44 (88%)
No	6 (12%)

3. If a new/reconstructed roadway were built, do you think it would (check one):	
Be helpful to the region	44 (88%)
Have little or no impact on the region	3 (6%)
Not be helpful to the region	3 (6%)

4. If a new/reconstructed roadway were built, do you think it would (check all that apply):	
Improve regional access to a major highway network	42 (82%)
Improve economic development	42 (82%)
Improve tourism	38 (75%)

5. What types of transportation problems should a new route address? Please rate the following by circling a degree of problems for each issue on existing route:

	No problems	Very few problems	Some problems	Frequent problems	Serious problems
Too much traffic	1(2%)	3(7%)	15(34%)	14(32%)	11(25%)
High speeds	2(5%)	7(16%)	18(42%)	14(33%)	2(5%)
Large trucks	1(2%)	2(4%)	10(22%)	19(42%)	13(29%)
Poor visibility	2(5%)	4(10%)	23(55%)	10(24%)	3(7%)
Dangerous curves	2(5%)	5(11%)	19(43%)	10(23%)	8(18%)
Narrow lanes	1(2%)	4(9%)	13(29%)	16(36%)	11(24%)
Narrow shoulders	1(2%)	2(4%)	16(36%)	16(36%)	10(22%)
Stopped or broken down cars	2(5%)	20(48%)	15(36%)	2(5%)	3(7%)
Other *	4(33%)	3(25%)	0(0%)	1(8%)	4(33%)

* Comments = Limited passing (2); heavy lake traffic (1); city bypasses (1)

6. If a new route were built, would you use it (check one):	
Daily	17 (33%)
1-2 times per week	10 (20%)
3-4 times per week	7 (14%)
1 time per month	2 (4%)
3-4 times per month	9 (18%)
Never	1 (2%)
Other	5 (10%)

7. If you traveled this new route, what would be the primary purpose of your trips (check all that apply):	
To go to work or for business	29 (57%)
To go to the doctor	21 (41%)
To go to school or take kids to school	3 (6%)
For personal business	32 (63%)
To go shopping	33 (65%)
To visits friends or family	24 (47%)
To take trips or vacations	27 (53%)
Other	5 (10%)

8. Are there areas that should be avoided if this new route is constructed? Please check a box for areas to avoid and identify any specific locations you are aware of:	
Personal properties or homes	6 (12%)
Businesses/commercial property	5 (10%)
Natural areas or habitats	20 (39%)
Recreational areas	9 (18%)
Historic or cultural sites	20 (39%)
Hazardous or monitored sites	11 (22%)
Scenic areas or viewsheds	10 (20%)
Other	4 (8%)

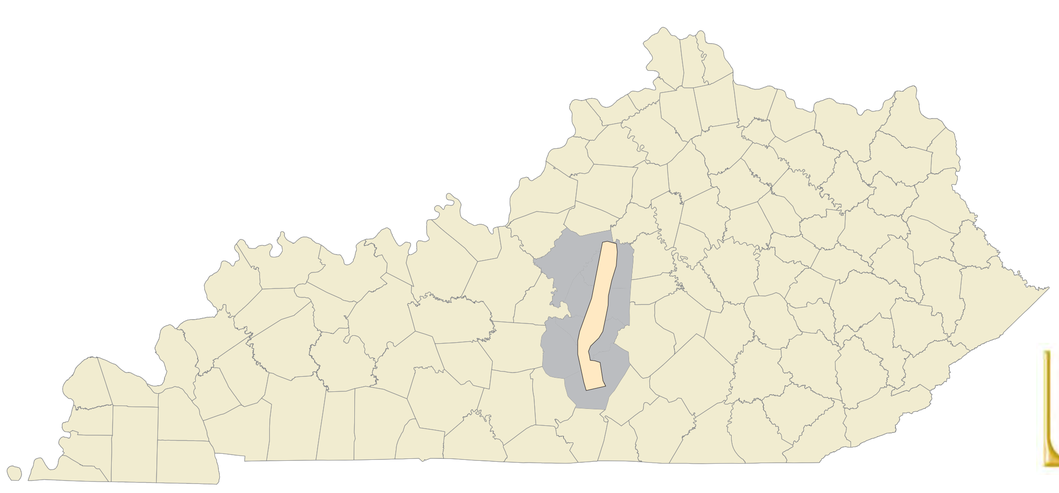
9. Given your comments above, what type of roadway would best serve the needs of the region?	
2-lane with limited entrances	5 (10%)
4-lane divided with access only at major interchanges	15 (29%)
4-lane divided with limited entrances	29 (57%)
None	2 (4%)

10. The Heartland Parkway should be:	
A new route	8 (23%)
Reconstructed along the existing route	27 (77%)

10 5 0 10 20 30 40

Miles

N W E S



Location Map

Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Bluegrass Parkway
Ky 55
Item No. 4-132.00

Environmental Footprint
Heartland Parkway
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
Ky 55
Item No. 4-132.00

End Section 8

End Section 7
Begin Section 8

End Section 6
Begin Section 7

End Section 5
Begin Section 6

End Section 4
Begin Section 5

End Section 3
Begin Section 4

End Section 2
Begin Section 3

End Section 1
Begin Section 2

Begin Section 1

Legend

Corridor Alternates

- Bypass
- Option 1 Parkway
- Option 2, 3 Along Existing Alignment
- Possible Interchange
- Environmental Footprint

Miles 1 0.5 0 1 2 3 4

EDUCATION PAYS

Location Map

Cost Estimates

Heartland Parkway - Option 1 (Interstate/Parkway Type of Facility)	
Items	**Total**
Estimated Length	60
Design	$41,027,000
Right-of-Way	$73,801,000
Utilities	$16,000,000
Construction	$509,650,000
Contingencies	$76,448,000
Total	$716,926,000

Heartland Parkway - Option 2
(Four-Lane Facility Along Existing Routes)

Items	Segment 1	Segment 2	Segment 3		Segment 4	Segment 5		Segment 6	Segment 7		Segment 8		Total
	Section A Adair Co. (KY 61 from L.B.N. C'land Pkwy. to Columbia Bypass)	**Section B Adair Co. Columbia Bypass**	**Section C Adair Co.** (KY 55 from Columbia Bypass to Taylor Co. Line)	**Section D Taylor Co.** (KY 55 to Campbells-ville Bypass)	**Section E Taylor Co. Campbellsville Bypass**	**Section F Taylor Co.** (US 68 from Campbells-ville Bypass to Marion Co. Line)	**Section G Marion Co.** (US 68 to Lebanon Bypass)	**Section H Marion Co. Lebanon Bypass**	**Section I Marion Co.** (KY 55 from Lebanon Bypass to Wash. Co. Line)	**Section J Washington Co.** (KY 55 to KY 555)	**Section K Washington Co.** (KY 555 to MP 8.284)	**Section L Washington Co.** (KY 555 MP 8.284 to M.L.C. Blue Grass Pkwy.)	
Section Length	2.1	4.16	6.356	8.7	6.7	4.051	9.47	3.305	2.669	4.551	8.284	6.414	66.76
2030 ADT	-	10,700 - 13,700	22,200 - 24,400	21,000 - 32,500	9800 - 11,800	18,700 - 23,600	18,700 - 32,300	9800 - 12,700	24,500 - 25,000	21,900 - 25,000	13,600 - 19,400	9200 - 10,800	-
Design	-	2,894,000	1,824,000	2,673,000	2,322,000	685,000	2,510,000	927,000	478,000	883,000	1,720,000	1,463,000	$18,379,000
Right-of-Way	2,000,000	4,400,000	2,589,000	14,867,000	5,868,000	2,866,000	8,186,000	1,300,000	2,613,000	2,988,000	4,372,000	4,854,000	$54,903,000
Utilities	500,000	1,500,000	11,171,000	2,675,000	1,875,000	1,013,000	4,868,000	1,000,000	668,000	1,138,000	2,071,000	1,604,000	$29,583,000
Construction	15,000,000	35,943,000	23,604,000	34,432,000	28,842,000	8,737,000	32,070,000	13,353,000	6,086,000	11,223,000	21,831,000	18,530,000	$234,651,000
Contingencies	2,250,000	5,393,000	2,448,000	3,749,000	4,327,000	1,044,000	3,783,000	2,003,000	738,000	1,384,000	2,729,000	2,357,000	$29,955,000
Total	$19,750,000	$50,130,000	$41,636,000	$58,396,000	$43,234,000	$14,345,000	$51,417,000	$18,583,000	$10,583,000	$17,616,000	$32,723,000	$28,808,000	$367,471,000

Heartland Parkway - Option 3
(Two-Lane Facility with Passing Lanes Every Three Miles)

Items	Segment 1	Segment 2	Segment 3		Segment 4	Segment 5		Segment 6	Segment 7		Segment 8		Total
	Section A Adair Co. (KY 61 from L.B.N. C'land Pkwy. to Columbia Bypass)	**Section B Adair Co. Columbia Bypass**	**Section C Adair Co.** (KY 55 from Columbia Bypass to Taylor Co. Line)	**Section D Taylor Co.** (KY 55 to Campbells-ville Bypass)	**Section E Taylor Co. Campbellsville Bypass**	**Section F Taylor Co.** (US 68 from Campbells-ville Bypass to Marion Co. Line)	**Section G Marion Co.** (US 68 to Lebanon Bypass)	**Section H Marion Co. Lebanon Bypass**	**Section I Marion Co.** (KY 55 from Lebanon Bypass to Wash. Co. Line)	**Section J Washington Co.** (KY 55 to KY 555)	**Section K Washington Co.** (KY 555 to MP 8.284)	**Section L Washington Co.** (KY 555 MP 8.284 to M.L.C. Blue Grass Pkwy.)	
Section Length	2.1	4.16	6.356	8.7	6.7	4.051	9.47	3.305	2.669	4.551	8.284	6.414	66.76
2030 ADT	-	10,700 - 13,700	19,500 - 21,700	18,500 - 28,700	8600 - 10,500	16,500 - 20,800	16,500 - 28,400	8600 - 11,100	21,500 - 22,000	19,200 - 22,000	11,900 - 17,100	8100 - 9500	-
Design	-	-	317,000	392,000	1,444,000	193,000	523,000	450,000	142,000	216,000	435,000	348,000	$4,460,000
Right-of-Way	2,000,000	4,400,000	122,000	122,000	5,868,000	0	0	1,300,000	0	0	0	122,000	$11,934,000
Utilities	500,000	1,500,000	600,000	600,000	1,875,000	300,000	900,000	1,000,000	300,000	300,000	900,000	600,000	$8,875,000
Construction	15,000,000	18,750,000	4,198,000	5,228,000	17,933,000	2,561,000	6,893,000	7,428,000	1,871,000	2,869,000	5,754,000	4,594,000	$78,079,000
Contingencies	2,250,000	2,813,000	320,000	360,000	2,690,000	187,000	572,000	1,115,000	151,000	209,000	459,000	377,000	$9,253,000
Total	$19,750,000	$20,250,000	$5,557,000	$6,702,000	$29,810,000	$3,241,000	$8,888,000	$9,543,000	$2,464,000	$3,594,000	$7,548,000	$6,041,000	$112,601,000

Traffic and Geometric Data
Adair, Green, Taylor, Marion, & Washington Counties
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Route	Begin MP	End MP	Length	2003 ADT	2003 % Trucks	Annual Growth Rate	2030 ADT Option 1	2030 % Trucks	Number of Lanes	Lane Width (feet)	Shoulder Width (feet)	Passing % Sight Distance	Speed Limit (mph)	2030 LOS Option 1
HP	Nunn	KY 80	0.400	-	-	-	16,300	18%	4	12	10	N/A	65	B
HP	KY 80	KY 61	1.600	-	-	-	12,200	18%	4	12	10	N/A	65	B
HP	KY 61	US 68	15.800	-	-	-	19,300	18%	4	12	10	N/A	65	C
HP	US 68	KY 210	3.200	-	-	-	13,900	18%	4	12	10	N/A	65	B
HP	KY 210	KY 84	14.800	-	-	-	22,800	18%	4	12	10	N/A	65	C
HP	KY 84	US 150	10.600	-	-	-	22,300	18%	4	12	10	N/A	65	C
HP	US 150	BG	12.600	-	-	-	9,400	18%	4	12	10	N/A	65	A

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Adair County
KY 55, MP 10.059 to MP 19.006
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Functional Classification	Rural Principal Arterial
State System	State Primary
National Truck Network	Yes
NHS	No
Truck Weight Class	AA & AAA
Type of Road	Undivided
Type of Terrain	Rolling
Number of Bridges	3
Pavement Type	High Flexible

Appalachian Dev. Highway System	No
Average R/W	40 & 100
Bike Route System	No
Coal Haul	No
Defense Highway Network	1585 & 1590
Extended Weight System	No
Forest Highway System	No
Scenic Byway System	Cumberland Cultural Heritage Highway

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
10.059	10.159	0.1	-	10,700	17,900	14,500	17,900	17,900	17,900	17,900	8.8%	13%	3%	13%	13%	2
10.159	10.316	0.157	-	10,700	17,900	14,500	17,900	17,900	17,900	17,900	8.8%	13%	3%	13%	13%	2
10.316	10.47	0.154	-	22,400	28,000	24,600	28,000	28,000	28,000	28,000	6.7%	10%	2%	10%	10%	2
10.47	10.614	0.144	-	25,700	26,400	23,000	26,400	26,400	26,400	26,400	9.9%	15%	3%	15%	15%	2
10.614	10.72	0.106	-	25,400	28,000	24,600	28,000	28,000	28,000	28,000	9.4%	14%	3%	14%	14%	2
10.72	11.17	0.45	-	15,300	26,500	23,100	26,500	26,500	26,500	26,500	9.8%	15%	3%	15%	15%	2
11.17	11.19	0.02	-	28,600	28,000	24,600	28,000	28,000	28,000	28,000	5.7%	9%	2%	9%	9%	2
11.19	11.31	0.12	-	15,400	23,800	20,400	23,800	23,800	23,800	23,800	9.7%	15%	3%	15%	15%	2
11.31	11.519	0.209	-	16,200	25,600	22,200	25,600	25,600	25,600	25,600	9.3%	14%	3%	14%	14%	2
11.519	11.78	0.261	-	14,100	22,000	18,600	22,000	22,000	22,000	22,000	10.2%	15%	3%	15%	15%	2
11.78	12.849	1.069	3.0%	12,000	26,700	21,500	36,800	34,600	32,600	30,400	8.3%	13%	3%	13%	13%	2
12.849	19.006	6.157	3.0%	7,700	17,100	11,900	24,400	22,200	21,700	19,500	13.0%	20%	4%	20%	20%	2

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Adair County
KY 55, MP 10.059 to MP 19.006
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
10.059	10.159	12	2	-	35	E	F	E	F	F	F	F
10.159	10.316	14	2	-	35	E	F	E	F	F	F	F
10.316	10.47	14	2	-	35	E	F	E	F	F	F	F
10.47	10.614	14	2	-	35	E	F	E	F	F	F	F
10.614	10.72	12	2	-	35	E	F	E	F	F	F	F
10.72	11.17	12	2	-	35	F	F	F	F	F	F	F
11.17	11.19	12	2	-	35	F	F	F	F	F	F	F
11.19	11.31	12	2	-	35	F	F	F	F	F	F	F
11.31	11.519	12	2	-	35	F	F	F	F	F	F	F
11.519	11.78	12	10	45	55	E	E	E	E	E	E	E
11.78	12.849	12	10	45	55	D	F	E	D	C	F	F
12.849	19.006	12	10	45	55	D	E	D	C	B	E	E

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Adair County
Columbia Bypass, MP KY 55 to MP KY 55
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate Option 1	Annual Growth Rate Option 2	Annual Growth Rate Option 3	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003 % Trucks Option 1	2003 % Trucks Option 2	2003 % Trucks Option 3
KY 55	KY 767	1.600	4.0%	4.0%	4.0%	4,400	12,700	10,900	14,900	12,700	14,900	12,700	8.0%	8.0%	8.0%
KY 767	School	0.500	4.0%	4.0%	4.0%	4,600	13,300	11,500	15,500	13,300	15,500	13,300	8.0%	8.0%	8.0%
School	KY 61	0.700	4.0%	4.0%	4.0%	4,900	14,100	12,300	16,300	14,100	16,300	14,100	7.4%	7.4%	7.4%
KY 61	KY 80	1.200	4.0%	4.0%	4.0%	4,000	11,500	10,100	13,700	11,500	13,700	11,500	9.4%	9.4%	9.4%
KY 80	KY 55	1.300	4.0%	4.0%	4.0%	3,700	10,700	9,300	12,900	10,700	12,900	10,700	9.4%	9.4%	9.4%

Begin MP	End MP	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
KY 55	KY 767	2%	12%	12%	-	E	D	B	A	E	E
KY 767	School	2%	12%	12%	-	E	D	B	A	E	E
School	KY 61	2%	11%	11%	-	E	E	B	A	E	E
KY 61	KY 80	3%	14%	14%	-	D	D	A	A	E	D
KY 80	KY 55	3%	14%	14%	-	D	D	A	A	E	D

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Taylor County
KY 55, MP 0 to MP 10.293
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Functional Classification	Rural Principal Arterial & Urban Principal Arterial
State System	State Primary
National Truck Network	Yes
NHS	No
Truck Weight Class	AAA
Type of Road	Undivided
Type of Terrain	Rolling
Number of Bridges	3
Pavement Type	High Flexible

Appalachian Dev. Highway System	No
Average R/W	100
Bike Route System	Midland Kentucky Tour/Central Heartlands Tour
Coal Haul	No
Defense Highway Network	1590
Extended Weight System	No
Forest Highway System	No
Scenic Byway System	Cumberland Cultural Heritage Highway

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3
0	0.675	0.675	3.0%	7,300	16,200	11,000	23,200	21,000	20,700	18,500	13.7%	21%	4%	21%	21%
0.675	5.483	4.808	3.0%	7,400	16,400	11,200	22,400	21,300	19,800	18,700	13.5%	21%	4%	21%	21%
5.483	6.546	1.063	3.0%	8,200	18,200	13,000	24,700	23,600	21,900	20,800	12.2%	19%	4%	19%	19%
6.546	8.003	1.457	3.0%	10,600	23,500	18,300	31,700	30,600	27,900	26,800	9.4%	14%	3%	14%	14%
8.003	8.500	0.497	3.0%	10,900	24,200	19,000	32,500	31,400	28,700	27,600	9.2%	14%	3%	14%	14%
8.500	9.066	0.566	3.0%	10,900	24,200	19,000	23,400	23,400	23,400	23,400	9.2%	14%	3%	14%	14%
9.066	10.293	1.227	3.0%	9,300	20,700	15,500	19,900	19,900	19,900	19,900	8.6%	13%	3%	13%	13%

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Taylor County
KY 55, MP 0 to MP 10.293
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
0	0.675	0.675	2	12	2	-	35	E	E	D	C	B	E	E
0.675	5.483	4.808	2	14	2	-	35	E	E	D	B	B	E	E
5.483	6.546	1.063	2	14	2	-	35	E	E	D	C	C	E	E
6.546	8.003	1.457	2	14	2	-	35	E	E	E	D	D	F	F
8.003	8.500	0.497	2	12	2	-	35	E	F	E	D	D	F	F
8.500	9.066	0.566	2	12	2	-	35	E	F	E	E	E	E	E
9.066	10.293	1.227	2	12	2	-	35	F	E	E	E	E	E	E

Traffic and Geometric Data
Taylor County
Campbellsville Bypass, MP KY 55 to MP US 68
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate Option 1	Annual Growth Rate Option 2	Annual Growth Rate Option 3	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003 % Trucks Option 1	2003 % Trucks Option 2
KY 55	KY 70	3.400	-	4.0%	3.5%	-	-	-	11,800	10,700	10,500	9,400	-	-
KY 70	US 68	3.500	-	4.0%	3.5%	-	-	-	9,800	9,800	8,600	8,600	-	-

Begin MP	End MP	2003 % Trucks Option 3	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
KY 55	KY 70	-	-	11%	11%	-	-	-	A	A	D	D
KY 70	US 68	-	-	14%	14%	-	-	-	A	A	D	D

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Taylor County
US 68, MP 4.87 to MP 13.531
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Functional Classification	Urban Principal Arterial & Rural Principal Arterial
State System	State Primary
National Truck Network	Yes
NHS	No
Truck Weight Class	AAA
Type of Road	Divided & Undivided
Type of Terrain	Rolling
Number of Bridges	1
Pavement Type	High Flexible

Appalachian Dev. Highway System	No
Average R/W	Varies
Bike Route System	No
Coal Haul	No
Defense Highway Network	1590
Extended Weight System	No
Forest Highway System	No
Scenic Byway System	No

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
4.870	5.510	0.64	3.0%	17,400	38,700	31,500	45,300	45,300	45,300	45,300	4.6%	7%	1%	7%	7%	4
5.510	5.687	0.177	3.0%	16,300	36,200	29,000	45,300	45,300	45,300	45,300	4.9%	7%	1%	7%	7%	4
5.687	5.807	0.12	3.0%	24,200	53,800	46,600	51,700	51,700	51,700	51,700	3.3%	5%	1%	5%	5%	4
5.807	5.923	0.116	3.0%	22,700	50,400	43,200	45,700	45,700	45,700	45,700	3.5%	5%	1%	5%	5%	4
5.923	6.469	0.545	3.0%	20,500	45,500	38,300	45,700	45,700	45,700	45,700	3.9%	6%	1%	6%	6%	4
6.469	6.703	0.234	3.0%	17,300	38,400	31,200	45,700	45,700	45,700	45,700	4.6%	7%	1%	7%	7%	4
6.703	7.091	0.388	3.0%	18,500	41,100	33,900	39,200	39,200	39,200	39,200	4.3%	7%	1%	7%	7%	4
7.091	7.404	0.313	3.0%	12,200	27,100	19,900	39,200	39,200	39,200	39,200	6.6%	10%	2%	10%	10%	4
7.404	8.624	1.22	3.0%	9,400	20,900	13,700	13,300	13,300	13,300	13,300	8.0%	12%	2%	12%	12%	2
8.624	9.530	0.906	3.0%	8,500	18,900	11,700	13,300	13,300	13,300	13,300	8.8%	13%	3%	13%	13%	2
9.530	11.879	2.349	3.0%	8,200	18,200	11,000	23,600	23,600	20,800	20,800	9.1%	14%	3%	14%	14%	2
11.879	13.531	1.652	3.0%	6,500	14,400	7,200	18,700	18,700	16,500	16,500	11.5%	18%	4%	18%	18%	2

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Taylor County
US 68, MP 4.87 to MP 13.531
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
4.870	5.510	10	2	-	45	C	C	C	D	D	D	D
5.510	5.687	10	2	-	35	C	D	C	D	D	D	D
5.687	5.807	10	2	-	35	C	D	C	D	D	D	D
5.807	5.923	10	2	-	35	C	D	C	D	D	D	D
5.923	6.469	10	2	-	35	C	D	C	D	D	D	D
6.469	6.703	10	2	-	35	C	D	C	D	D	D	D
6.703	7.091	10	2	0	45	B	D	C	D	D	D	D
7.091	7.404	10	2	0	45	A	C	B	D	D	D	D
7.404	8.624	12	12	48	55	D	E	E	E	E	E	E
8.624	9.530	12	12	48	55	D	E	D	E	E	E	E
9.530	11.879	12	12	0	55	D	E	D	B	B	E	E
11.879	13.531	12	12	0	55	D	E	D	B	B	E	E

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Marion County
US 68, MP 4.87 to MP 13.531
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Functional Classification	Rural Principal Arterial & Urban Principal Arterial
State System	State Primary
National Truck Network	Yes
NHS	No
Truck Weight Class	AAA
Type of Road	Divided & Undivided
Type of Terrain	Rolling
Number of Bridges	4
Pavement Type	High Flexible

Appalachian Dev. Highway System	No
Average R/W	Varies
Bike Route System	No
Coal Haul	No
Defense Highway Network	1590
Extended Weight System	No
Forest Highway System	No
Scenic Byway System	No

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
0	4.503	4.503	3.0%	6,500	14,400	7,200	18,700	18,700	16,500	16,500	11.5%	18%	4%	18%	18%	2
4.503	6.640	2.137	3.0%	6,600	14,700	7,500	19,000	19,000	16,700	16,700	11.4%	17%	3%	17%	17%	2
6.640	8.629	1.979	3.0%	8,400	18,700	11,500	24,200	24,200	21,300	21,300	8.9%	14%	3%	14%	14%	2
8.629	9.300	0.681	3.0%	11,200	24,900	17,700	32,300	32,300	28,400	28,400	6.7%	10%	2%	10%	10%	2
9.300	9.864	0.564	-	11,900	17,500	15,700	17,500	17,500	17,500	17,500	8.8%	13%	3%	13%	13%	2
9.864	10.690	0.826	-	17,400	23,000	21,200	23,000	23,000	23,000	23,000	5.7%	9%	2%	9%	9%	2

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
0	4.503	12	10	100	55	C	D	C	B	B	E	E
4.503	6.640	12	10	100	55	C	E	C	B	B	E	E
6.640	8.629	12	10	100	55	C	E	D	B	B	E	E
8.629	9.300	12	10	100	55	D	F	E	D	D	F	F
9.300	9.864	12	2	100	45	E	E	D	E	E	E	E
9.864	10.690	12	2	100	45	E	E	D	E	E	E	E

Traffic and Geometric Data
Marion County
Lebanon Bypass, MP KY 55 to MP US 68
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Length (Miles)	Annual Growth Rate Option 1	Annual Growth Rate Option 2	Annual Growth Rate Option 3	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003 % Trucks No Imp.	2003 % Trucks Option 1	2003 % Trucks Option 2	2003 % Trucks Option 3
KY 55	KY 429	0.80	3.0%	4.0%	3.5%	3,800	8,400	2,200	11,500	11,000	10,100	9,600	14%	14%	14%	14%
KY 429	KY 49	1.20	3.0%	4.0%	3.5%	3,400	7,600	1,400	10,300	9,800	9,100	8,600	14%	14%	14%	14%
KY 49	US 68	1.00	3.0%	4.0%	3.5%	4,400	9,800	4,400	12,700	12,700	11,100	11,100	14%	14%	14%	14%

Begin MP	End MP	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
KY 55	KY 429	21%	4%	21%	21%	-	D	B	A	A	D	D
KY 429	KY 49	21%	4%	21%	21%	-	D	A	A	A	D	D
KY 49	US 68	21%	4%	21%	21%	-	E	C	A	A	D	D

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Marion County
KY 55, MP 0 to MP 4.669
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Functional Classification	Urban Principal Arterial & Rural Principal Arterial
State System	State Primary
National Truck Network	Yes
NHS	No
Truck Weight Class	AAA
Type of Road	Undivided
Type of Terrain	Rolling
Number of Bridges	1
Pavement Type	Flexible Over Rigid & Highly Flexible

Appalachian Dev. Highway System	No
Average R/W	Varies
Bike Route System	No
Coal Haul	No
Defense Highway Network	1590
Extended Weight System	No
Forest Highway System	No
Scenic Byway System	No

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
0	0.389	0.389	-	13,100	19,000	18,700	19,000	19,000	19,000	19,000	7.6%	12%	2%	12%	12%	4
0.389	0.567	0.178	-	13,400	19,000	18,700	19,000	19,000	19,000	19,000	7.5%	11%	2%	11%	11%	4
0.567	0.57	0.003	-	13,300	19,000	18,700	19,000	19,000	19,000	19,000	7.5%	11%	2%	11%	11%	4
0.57	0.784	0.214	-	12,500	16,000	15,700	16,000	16,000	16,000	16,000	8.0%	12%	2%	12%	12%	2
0.784	1.358	0.574	-	12,000	13,600	13,300	13,600	13,600	13,600	13,600	8.3%	13%	3%	13%	13%	4
1.358	2.023	0.665	-	9,700	11,300	11,000	11,300	11,300	11,300	11,300	10.3%	16%	3%	16%	16%	2
2.023	4.669	2.646	3.0%	8,500	18,900	12,400	25,000	24,500	22,000	21,500	8.8%	13%	3%	13%	13%	2

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Marion County
KY 55, MP 0 to MP 4.669
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
0	0.389	12	0	-	35	B	C	C	C	C	C	C
0.389	0.567	10	0	-	35	B	C	C	C	C	C	C
0.567	0.57	12	0	-	35	B	C	C	C	C	C	C
0.57	0.784	17	0	-	35	C	C	C	C	C	C	C
0.784	1.358	13	0	-	55	A	A	A	A	A	A	A
1.358	2.023	12	0	-	55	D	D	D	D	D	D	D
2.023	4.669	12	10	0	55	D	E	E	C	C	E	E

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Washington County
KY 55, MP 0 to MP 4.551
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Functional Classification	Rural Principal Arterial
State System	State Primary
National Truck Network	Yes
NHS	No
Truck Weight Class	AAA
Type of Road	Undivided
Type of Terrain	Rolling
Number of Bridges	1
Pavement Type	High Flexible

Appalachian Dev. Highway System	No
Average R/W	100
Bike Route System	No
Coal Haul	No
Defense Highway Network	1590
Extended Weight System	No
Forest Highway System	No
Scenic Byway System	No

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option 1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
0	2.803	2.803	3.0%	8,500	18,900	12,400	25,000	24,500	22,000	21,500	8.80%	13%	3%	13%	13%	2
2.803	4.55	1.748	3.0%	7,600	16,900	10,400	22,400	21,900	19,700	19,200	9.20%	14%	3%	14%	14%	2

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
0	2.803	12	10	0	55	D	E	E	C	C	E	E
2.803	4.55	12	10	0	55	D	E	D	C	C	E	E

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Traffic and Geometric Data
Washington County
KY 555, MP 0 to MP 14.738
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Functional Classification	Rural Principal Arterial
State System	State Primary
National Truck Network	Yes
NHS	No
Truck Weight Class	AAA
Type of Road	Undivided
Type of Terrain	Rolling
Number of Bridges	5
Pavement Type	High Flexible

Appalachian Dev. Highway System	No
Average R/W	100
Bike Route System	No
Coal Haul	No
Defense Highway Network	1595
Extended Weight System	No
Forest Highway System	No
Scenic Byway System	No

Begin MP	End MP	Length (Miles)	Annual Growth Rate	2003 ADT	2030 ADT No Imp.	2030 ADT Option1	2030 ADT Option 2 (w/I-66)	2030 ADT Option 2 (wo/I-66)	2030 ADT Option 3 (w/I-66)	2030 ADT Option 3 (wo/I-66)	2003% Trucks	2030 % Trucks No Imp.	2030 % Trucks Option 1	2030 % Trucks Option 2	2030 % Trucks Option 3	Number of Lanes
0	0.841	0.841	1.4%	6,700	9,800	6,800	19,400	19,300	17,100	17,000	10.4%	16%	3%	16%	16%	2
0.841	2.1	1.259	2.6%	4,800	9,600	6,600	13,900	13,800	12,300	12,200	13.5%	21%	4%	21%	21%	2
2.1	6.215	4.115	3.0%	4,700	10,400	7,400	13,700	13,600	12,000	11,900	13.8%	21%	4%	21%	21%	2
6.215	10.38	4.165	3.0%	3,200	7,100	4,100	9,300	9,200	8,200	8,100	20.3%	31%	6%	31%	31%	2
10.38	14.738	4.358	3.0%	3,700	8,200	5,200	10,800	10,700	9,500	9,400	17.6%	27%	5%	27%	27%	2

Begin MP	End MP	Lane Width (Feet)	Shoulder Width (Feet)	Passing % Sight Distance	Speed Limit (MPH)	2003 LOS	2030 LOS No Imp.	2030 LOS Option 1	2030 LOS Option 2 (w/I-66)	2030 LOS Option 2 (wo/I-66)	2030 LOS Option 3 (w/I-66)	2030 LOS Option 3 (wo/I-66)
0	0.841	12	12	-	55	C	E	C	B	B	E	E
0.841	2.1	12	12	100	55	B	D	B	B	B	D	D
2.1	6.215	12	12	32	55	C	D	D	A	A	D	D
6.215	10.38	12	10	Varies	55	C	D	C	A	A	D	D
10.38	14.738	12	10	60	55	C	D	C	A	A	D	D

Source: KYTC's *Highway Information System (HIS)* d'base; 2003 ADT data from KYTC's *Highway Information System (HIS)* d'base on 05/13/2003; 2030 Data by Jordan, Jones and Goulding, Inc. on 02/02/04

Crash Data Analysis
Adair County
Segment Analysis

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00

Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Adair County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Rate Factor	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	10.059	10.159	0.100	10,700	2	Undivided	Rural	252	540.473	0	1	3	4	0.02	0.00	42.67	128.02	170.70	0.32
KY 55	10.159	10.316	0.157	10,700	2	Undivided	Rural	252	478.788	0	1	10	11	0.04	0.00	27.18	271.81	299.00	0.62
KY 55	10.316	10.44	0.124	22,300	2	Undivided	Rural	252	426.430	0	3	12	15	0.06	0.00	49.54	198.16	247.70	0.58
KY 55	10.44	10.614	0.174	25,700	2	Undivided	Rural	252	387.778	0	9	42	51	0.10	0.00	91.90	428.87	520.77	1.34
KY 55	10.614	10.768	0.154	25,400	2	Undivided	Rural	252	397.553	0	1	21	22	0.09	0.00	11.67	245.14	256.82	0.65
KY 55	10.768	11.151	0.383	15,300	2	Undivided	Rural	252	370.047	1	3	26	30	0.13	7.79	23.38	202.60	233.77	0.63
KY 55	11.151	11.188	0.037	28,600	2	Undivided	Rural	252	542.197	0	0	5	5	0.02	0.00	0.00	215.75	215.75	0.40
KY 55	11.188	11.313	0.125	15,400	2	Undivided	Rural	252	463.023	0	3	8	11	0.04	0.00	71.16	189.76	260.93	0.56
KY 55	11.313	11.519	0.206	16,200	2	Undivided	Rural	252	410.104	0	6	9	15	0.07	0.00	82.10	123.14	205.24	0.50
KY 55	11.519	11.757	0.238	14,100	2	Undivided	Rural	252	409.647	0	3	10	13	0.07	0.00	40.82	136.07	176.89	0.43
KY 55	11.757	12.9	1.143	12,000	2	Undivided	Rural	252	328.277	3	13	18	34	0.30	9.99	43.28	59.92	113.19	0.34
KY 55	12.9	18.706	5.806	7,710	2	Undivided	Rural	252	293.811	0	9	36	45	0.98	0.00	9.18	36.72	45.90	0.16

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Taylor County
Segment Analysis

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00

Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Rate Factor	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0	0.665	0.665	7,330	2	Undivided	Rural	252	381.843	1	5	19	25	0.11	9.37	46.84	177.99	234.19	0.61
KY 55	0.665	5.4	4.735	7,290	2	Undivided	Rural	252	299.694	0	13	37	50	0.76	0.00	17.20	48.95	66.14	0.22
KY 55	5.4	6.546	1.146	8,190	2	Undivided	Rural	252	344.629	1	8	22	31	0.21	4.87	38.92	107.03	150.82	0.44
KY 55	6.546	8.003	1.457	10,600	2	Undivided	Rural	252	323.792	0	9	12	21	0.34	0.00	26.61	35.48	62.09	0.19
KY 55	8.003	9.066	1.063	10,900	2	Undivided	Urban	308	399.717	0	4	6	10	0.25	0.00	15.76	23.65	39.41	0.10
KY 55	9.066	10.293	1.227	9,290	2	Undivided	Urban	308	400.486	0	7	25	32	0.25	0.00	28.04	100.15	128.19	0.32

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Rate Factor	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	4.87	5.553	0.683	17,400	4	Divided	Urban	307	397.394	0	8	28	36	0.16	0.00	50.00	175.00	225.00	0.57
US 68	5.553	5.687	0.134	18,000	4	Divided	Urban	307	512.849	0	7	33	40	0.05	0.00	140.00	660.00	800.00	1.56
US 68	5.687	5.807	0.120	24,200	4	Undivided	Urban	500	736.270	0	6	31	37	0.02	0.00	300.00	1550.00	1850.00	2.51
US 68	5.807	5.923	0.116	22,700	4	Undivided	Urban	500	748.535	0	8	27	35	0.04	0.00	200.00	675.00	875.00	1.17
US 68	5.923	6.442	0.519	20,500	4	Undivided	Urban	500	621.475	0	15	48	63	0.16	0.00	93.75	300.00	393.75	0.63
US 68	6.442	6.703	0.261	17,300	4	Undivided	Urban	500	688.231	0	3	11	14	0.06	0.00	50.00	183.33	233.33	0.34
US 68	6.703	7.091	0.388	18,500	4	Undivided	Urban	500	648.461	0	3	14	17	0.10	0.00	30.00	140.00	170.00	0.26
US 68	7.091	7.404	0.313	12,200	4	Undivided	Urban	500	705.164	0	1	7	8	0.06	0.00	16.67	116.67	133.33	0.19
US 68	7.404	8.6	1.196	9,410	2	Undivided	Urban	308	401.091	0	3	10	13	0.17	0.00	17.65	58.82	76.47	0.19
US 68	8.6	9.404	0.804	8,520	2	Undivided	Rural	252	360.912	0	2	5	7	0.11	0.00	18.18	45.45	63.64	0.18
US 68	9.404	11.879	2.475	8,170	2	Undivided	Rural	252	314.580	0	3	8	11	0.28	0.00	10.71	28.57	39.29	0.12
US 68	11.879	13.33	1.451	6,450	2	Undivided	Rural	252	344.765	2	7	9	18	0.16	12.50	43.75	56.25	112.50	0.33

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report;

Crash Data Analysis
Marion County
Segment Analysis

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00

Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Marion County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Rate Factor	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	0	3.9	3.900	6,450	2	Undivided	Rural	252	308.003	0	33	76	109	0.42	0.00	78.57	180.95	259.52	0.84
US 68	3.9	6.54	2.640	6,580	2	Undivided	Rural	252	319.614	1	7	12	20	0.21	4.76	33.33	57.14	95.24	0.30
US 68	6.54	8.619	2.079	8,380	2	Undivided	Rural	252	319.513	1	9	10	20	0.24	4.17	37.50	41.67	83.33	0.26
US 68	8.619	9.319	0.700	11,200	2	Undivided	Rural	252	353.601	1	4	8	13	0.11	9.09	36.36	72.73	118.18	0.33
US 68	9.319	9.864	0.545	11,900	2	Undivided	Rural	252	364.026	0	4	25	29	0.10	0.00	40.00	250.00	290.00	0.80
US 68	9.864	10.69	0.826	17,400	2	Divided	Urban	308	390.170	0	20	76	96	0.21	0.00	95.24	361.90	457.14	1.17

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Rate Factor	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0	0.389	0.389	13,100	4	Undivided	Urban	500	676.905	0	29	51	80	0.07	0.00	414.29	728.57	1142.86	1.69
KY 55	0.389	0.57	0.181	12,000	4	Undivided	Urban	500	774.618	0	6	22	28	0.03	0.00	200.00	733.33	933.33	1.20
KY 55	0.57	0.784	0.214	12,500	2	Undivided	Urban	308	503.318	0	2	8	10	0.04	0.00	50.00	200.00	250.00	0.50
KY 55	0.784	1.358	0.574	12,000	4	Undivided	Urban	500	651.622	0	1	14	15	0.10	0.00	10.00	140.00	150.00	0.23
KY 55	1.358	2.023	0.665	8,960	2	Undivided	Rural	252	369.035	0	2	2	4	0.09	0.00	22.22	22.22	44.44	0.12
KY 55	2.023	4.569	2.546	8,370	2	Undivided	Rural	252	312.931	0	3	10	13	0.32	0.00	9.38	31.25	40.63	0.13

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Washington County
Segment Analysis

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00

Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Washington County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Rate Factor	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0	2.803	2.803	8,500	2	Undivided	Rural	252	309.570	2	15	23	40	0.35	5.71	42.86	65.71	114.29	0.37
KY 55	2.803	4.551	1.748	7,630	2	Undivided	Rural	252	329.376	0	3	21	24	0.19	0.00	15.79	110.53	126.32	0.38

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Rate Factor	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 555	0	0.841	0.841	6,700	2	Undivided	Rural	252	372.461	0	16	24	40	0.08	0.00	200.00	300.00	500.00	1.34
KY 555	0.841	2.075	1.234	4,830	2	Undivided	Rural	252	369.017	0	1	0	1	0.09	0.00	11.11	0.00	11.11	0.03
KY 555	2.075	6.215	4.140	4,690	2	Undivided	Rural	252	315.886	0	2	7	9	0.28	0.00	7.14	25.00	32.14	0.10
KY 555	6.215	10.7	4.485	3,230	2	Undivided	Rural	252	326.177	0	3	4	7	0.2	0.00	15.00	20.00	35.00	0.11
KY 555	10.7	14.523	3.823	3,710	2	Undivided	Rural	252	326.982	0	11	8	19	0.24	0.00	45.83	33.33	79.17	0.24

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Adair County
Spot Analysis

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00

Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Adair County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	10.059	10.159	0.100	10,700	2	Undivided	Rural	0.25	0.537	0	1	3	4	23.43	0.00	0.04	0.13	0.17	0.32
KY 55	10.259	10.359	0.100	10,700	2	Undivided	Rural	0.25	0.537	0	2	12	14	23.43	0.00	0.09	0.51	0.60	1.11
KY 55	10.370	10.470	0.100	22,300	2	Undivided	Rural	0.25	0.445	0	2	12	14	48.84	0.00	0.04	0.25	0.29	0.64
KY 55	10.480	10.580	0.100	25,700	2	Undivided	Rural	0.25	0.431	0	8	18	26	56.28	0.00	0.14	0.32	0.46	1.07
KY 55	10.585	10.685	0.100	25,700	2	Undivided	Rural	0.25	0.431	0	1	25	26	56.28	0.00	0.02	0.44	0.46	1.07
KY 55	10.705	10.805	0.100	15,300	2	Undivided	Rural	0.25	0.487	0	1	24	25	33.51	0.00	0.03	0.72	0.75	1.53
KY 55	10.850	10.950	0.100	15,300	2	Undivided	Rural	0.25	0.487	0	2	1	3	33.51	0.00	0.06	0.03	0.09	0.18
KY 55	10.957	11.057	0.100	15,300	2	Undivided	Rural	0.25	0.487	1	0	8	9	33.51	0.03	0.00	0.24	0.27	0.55
KY 55	11.079	11.179	0.100	15,300	2	Undivided	Rural	0.25	0.487	0	1	10	11	33.51	0.00	0.03	0.30	0.33	0.67
KY 55	11.180	11.280	0.100	28,600	2	Undivided	Rural	0.25	0.421	0	2	11	13	62.63	0.00	0.03	0.18	0.21	0.49
KY 55	11.282	11.382	0.100	15,400	2	Undivided	Rural	0.25	0.487	0	1	3	4	33.73	0.00	0.03	0.09	0.12	0.24
KY 55	11.416	11.516	0.100	16,200	2	Undivided	Rural	0.25	0.480	0	1	3	4	35.48	0.00	0.03	0.08	0.11	0.23
KY 55	11.519	11.619	0.100	14,100	2	Undivided	Rural	0.25	0.498	0	6	8	14	30.88	0.00	0.19	0.26	0.45	0.91
KY 55	11.651	11.751	0.100	14,100	2	Undivided	Rural	0.25	0.498	0	1	4	5	30.88	0.00	0.03	0.13	0.16	0.33
KY 55	11.757	11.857	0.100	14,100	2	Undivided	Rural	0.25	0.498	0	2	7	9	30.88	0.00	0.06	0.23	0.29	0.59
KY 55	11.900	12.000	0.100	12,000	2	Undivided	Rural	0.25	0.520	0	2	1	3	26.28	0.00	0.08	0.04	0.11	0.22
KY 55	12.057	12.157	0.100	12,000	2	Undivided	Rural	0.25	0.520	1	2	1	4	26.28	0.04	0.08	0.04	0.15	0.29
KY 55	12.200	12.300	0.100	12,000	2	Undivided	Rural	0.25	0.520	0	3	6	9	26.28	0.00	0.11	0.23	0.34	0.66
KY 55	12.400	12.500	0.100	12,000	2	Undivided	Rural	0.25	0.520	0	1	2	3	26.28	0.00	0.04	0.08	0.11	0.22

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Adair County
Spot Analysis

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00

Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Adair County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	12.565	12.665	0.100	12,000	2	Undivided	Rural	0.25	0.520	0	1	2	3	26.28	0.00	0.04	0.08	0.11	0.22
KY 55	12.700	12.800	0.100	12,000	2	Undivided	Rural	0.25	0.520	0	0	4	4	26.28	0.00	0.00	0.15	0.15	0.29
KY 55	12.819	12.919	0.100	7,710	2	Undivided	Rural	0.25	0.593	2	1	1	4	16.88	0.12	0.06	0.06	0.24	0.40
KY 55	12.949	13.049	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	2	2	16.88	0.00	0.00	0.12	0.12	0.20
KY 55	13.100	13.200	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	2	2	16.88	0.00	0.00	0.12	0.12	0.20
KY 55	13.290	13.390	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	13.400	13.500	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	13.519	13.619	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	0	1	16.88	0.00	0.06	0.00	0.06	0.10
KY 55	13.649	13.749	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	1	2	16.88	0.00	0.06	0.06	0.12	0.20
KY 55	14.000	14.100	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	3	3	16.88	0.00	0.00	0.18	0.18	0.30
KY 55	14.200	14.300	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	2	2	16.88	0.00	0.00	0.12	0.12	0.20
KY 55	14.600	14.700	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	14.991	15.091	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	0	1	16.88	0.00	0.06	0.00	0.06	0.10
KY 55	15.100	15.200	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	15.208	15.308	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	15.800	15.900	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	16.000	16.100	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	1	2	16.88	0.00	0.06	0.06	0.12	0.20
KY 55	16.911	17.011	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	2	3	16.88	0.00	0.06	0.12	0.18	0.30
KY 55	17.200	17.300	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	2	2	16.88	0.00	0.00	0.12	0.12	0.20

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Adair County
Spot Analysis

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00

Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Adair County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	17.577	17.677	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	17.700	17.800	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10
KY 55	18.100	18.200	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	1	2	16.88	0.00	0.06	0.06	0.12	0.20
KY 55	18.300	18.400	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	3	4	16.88	0.00	0.06	0.18	0.24	0.40
KY 55	18.406	18.506	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	1	2	3	16.88	0.00	0.06	0.12	0.18	0.30
KY 55	18.579	18.679	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	3	3	16.88	0.00	0.00	0.18	0.18	0.30
KY 55	18.706	18.806	0.100	7,710	2	Undivided	Rural	0.25	0.593	0	0	1	1	16.88	0.00	0.00	0.06	0.06	0.10

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Taylor County
Spot Analysis

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00

Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0.000	0.100	0.100	7,330	2	Undivided	Rural	0.25	0.603	0	4	14	18	16.05	0.00	0.25	0.87	1.12	1.86
KY 55	0.775	0.875	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	0.975	1.075	0.100	7,290	2	Undivided	Rural	0.25	0.604	1	0	1	2	15.97	0.06	0.00	0.06	0.13	0.21
KY 55	1.500	1.600	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	1	2	15.97	0.00	0.06	0.06	0.13	0.21
KY 55	1.665	1.765	0.100	7,290	2	Undivided	Urban	0.29	0.669	0	0	2	2	15.97	0.00	0.00	0.13	0.13	0.19
KY 55	1.900	2.000	0.100	7,290	2	Undivided	Urban	0.29	0.669	0	0	2	2	15.97	0.00	0.00	0.13	0.13	0.19
KY 55	2.031	2.131	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	3	4	15.97	0.00	0.06	0.19	0.25	0.42
KY 55	2.165	2.265	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	2	6	8	15.97	0.00	0.13	0.38	0.50	0.83
KY 55	2.283	2.383	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	1	2	15.97	0.00	0.06	0.06	0.13	0.21
KY 55	2.500	2.600	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	1	2	15.97	0.00	0.06	0.06	0.13	0.21
KY 55	2.665	2.765	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	3	3	15.97	0.00	0.00	0.19	0.19	0.31
KY 55	2.800	2.900	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	2	3	15.97	0.00	0.06	0.13	0.19	0.31
KY 55	3.019	3.119	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	3.192	3.292	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	2	3	15.97	0.00	0.06	0.13	0.19	0.31
KY 55	3.300	3.400	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	2	2	4	15.97	0.00	0.13	0.13	0.25	0.42
KY 55	3.500	3.600	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	2	3	15.97	0.00	0.06	0.13	0.19	0.31
KY 55	3.608	3.708	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	3.908	4.008	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	4.208	4.308	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	4	4	15.97	0.00	0.00	0.25	0.25	0.42

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Taylor County
Spot Analysis
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	4.504	4.604	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	1	1	2	15.97	0.00	0.06	0.06	0.13	0.21
KY 55	5.000	5.100	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	5.200	5.300	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	0	1	1	15.97	0.00	0.00	0.06	0.06	0.10
KY 55	5.304	5.404	0.100	7,290	2	Undivided	Rural	0.25	0.604	0	2	2	4	15.97	0.00	0.13	0.13	0.25	0.42
KY 55	5.500	5.600	0.100	8,190	2	Undivided	Urban	0.29	0.645	0	0	1	1	17.94	0.00	0.00	0.06	0.06	0.09
KY 55	5.680	5.780	0.100	8,190	2	Undivided	Urban	0.29	0.645	0	1	5	6	17.94	0.00	0.06	0.28	0.33	0.52
KY 55	5.800	5.900	0.100	8,190	2	Undivided	Rural	0.25	0.582	0	1	3	4	17.94	0.00	0.06	0.17	0.22	0.38
KY 55	5.934	6.034	0.100	8,190	2	Undivided	Rural	0.25	0.582	0	0	2	2	17.94	0.00	0.00	0.11	0.11	0.19
KY 55	6.057	6.157	0.100	8,190	2	Undivided	Rural	0.25	0.582	0	0	2	2	17.94	0.00	0.00	0.11	0.11	0.19
KY 55	6.186	6.286	0.100	8,190	2	Undivided	Rural	0.25	0.582	0	1	4	5	17.94	0.00	0.06	0.22	0.28	0.48
KY 55	6.346	6.446	0.100	8,190	2	Undivided	Rural	0.25	0.582	0	0	2	2	17.94	0.00	0.00	0.11	0.11	0.19
KY 55	6.479	6.579	0.100	8,190	2	Undivided	Rural	0.25	0.582	1	5	3	9	17.94	0.06	0.28	0.17	0.50	0.86
KY 55	6.772	6.872	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	0	2	2	23.21	0.00	0.00	0.09	0.09	0.16
KY 55	6.900	7.000	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	3	1	4	23.21	0.00	0.13	0.04	0.17	0.32
KY 55	7.038	7.138	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	1	1	2	23.21	0.00	0.04	0.04	0.09	0.16
KY 55	7.170	7.270	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	0	1	1	23.21	0.00	0.00	0.04	0.04	0.08
KY 55	7.366	7.466	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	0	1	1	23.21	0.00	0.00	0.04	0.04	0.08
KY 55	7.500	7.600	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	0	2	2	23.21	0.00	0.00	0.09	0.09	0.16
KY 55	7.603	7.703	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	2	1	3	23.21	0.00	0.09	0.04	0.13	0.24

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Taylor County
Spot Analysis

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00

Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	7.903	8.003	0.100	10,600	2	Undivided	Rural	0.25	0.539	0	3	3	6	23.21	0.00	0.13	0.13	0.26	0.48
KY 55	8.005	8.105	0.100	10,900	2	Undivided	Rural	0.25	0.535	0	0	2	2	23.87	0.00	0.00	0.08	0.08	0.16
KY 55	8.700	8.800	0.100	10,900	2	Undivided	Rural	0.25	0.535	0	1	1	2	23.87	0.00	0.04	0.04	0.08	0.16
KY 55	8.803	8.903	0.100	10,900	2	Undivided	Rural	0.25	0.535	0	2	0	2	23.87	0.00	0.08	0.00	0.08	0.16
KY 55	8.966	9.066	0.100	10,900	2	Undivided	Urban	0.25	0.535	0	1	3	4	23.87	0.00	0.04	0.13	0.17	0.31
KY 55	9.007	9.107	0.100	9,290	2	Undivided	Urban	0.25	0.560	0	5	6	11	20.35	0.00	0.25	0.29	0.54	0.97
KY 55	9.200	9.300	0.100	9,290	2	Undivided	Rural	0.25	0.560	0	0	2	2	20.35	0.00	0.00	0.10	0.10	0.18
KY 55	9.600	9.700	0.100	9,290	2	Undivided	Rural	0.25	0.560	0	0	2	2	20.35	0.00	0.00	0.10	0.10	0.18
KY 55	10.140	10.240	0.100	9,290	2	Undivided	Rural	0.25	0.560	0	0	3	3	20.35	0.00	0.00	0.15	0.15	0.26
KY 55	10.293	10.393	0.100	9,290	2	Undivided	Rural	0.25	0.560	0	2	12	14	20.35	0.00	0.10	0.59	0.69	1.23

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	4.870	4.970	0.100	17,400	4	Divided	Urban	0.29	0.528	0	8	23	31	38.11	0.00	0.21	0.60	0.81	1.54
US 68	5.009	5.109	0.100	17,400	4	Divided	Urban	0.29	0.528	0	1	0	1	38.11	0.00	0.03	0.00	0.03	0.05
US 68	5.187	5.287	0.100	17,400	4	Divided	Urban	0.29	0.528	0	0	1	1	38.11	0.00	0.00	0.03	0.03	0.05
US 68	5.300	5.400	0.100	17,400	4	Divided	Urban	0.29	0.528	0	0	1	1	38.11	0.00	0.00	0.03	0.03	0.05
US 68	5.484	5.584	0.100	17,400	4	Divided	Urban	0.29	0.528	0	0	2	2	38.11	0.00	0.00	0.05	0.05	0.10
US 68	5.587	5.687	0.100	18,000	4	Divided	Urban	0.29	0.524	0	7	33	40	39.42	0.00	0.18	0.84	1.01	1.94
US 68	5.700	5.800	0.100	24,200	4	Undivided	Urban	0.29	0.490	0	3	24	27	53.00	0.00	0.06	0.45	0.51	1.04

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Taylor County
Spot Analysis
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	5.807	5.907	0.100	22,700	4	Undivided	Urban	0.49	0.756	0	5	16	21	49.71	0.00	0.10	0.32	0.42	0.56
US 68	5.923	6.023	0.100	20,500	4	Undivided	Urban	0.49	0.770	0	8	37	45	44.90	0.00	0.18	0.82	1.00	1.30
US 68	6.037	6.137	0.100	20,500	4	Undivided	Urban	0.49	0.770	0	4	9	13	44.90	0.00	0.09	0.20	0.29	0.38
US 68	6.160	6.260	0.100	20,500	4	Undivided	Urban	0.49	0.770	0	8	13	21	44.90	0.00	0.18	0.29	0.47	0.61
US 68	6.265	6.365	0.100	20,500	4	Undivided	Urban	0.49	0.770	0	0	3	3	44.90	0.00	0.00	0.07	0.07	0.09
US 68	6.410	6.510	0.100	20,500	4	Undivided	Urban	0.49	0.770	0	1	4	5	44.90	0.00	0.02	0.09	0.11	0.14
US 68	6.542	6.642	0.100	17,300	4	Undivided	Urban	0.49	0.796	0	0	2	2	37.89	0.00	0.00	0.05	0.05	0.07
US 68	6.703	6.803	0.100	18,500	4	Undivided	Urban	0.49	0.786	0	5	18	23	40.52	0.00	0.12	0.44	0.57	0.72
US 68	6.900	7.000	0.100	18,500	4	Undivided	Urban	0.49	0.786	0	1	1	2	40.52	0.00	0.02	0.02	0.05	0.06
US 68	7.032	7.132	0.100	12,200	4	Undivided	Urban	0.49	0.858	0	0	5	5	26.72	0.00	0.00	0.19	0.19	0.22
US 68	7.160	7.260	0.100	12,200	4	Undivided	Urban	0.49	0.858	0	1	1	2	26.72	0.00	0.04	0.04	0.07	0.09
US 68	7.265	7.365	0.100	12,200	4	Undivided	Urban	0.49	0.858	0	0	3	3	26.72	0.00	0.00	0.11	0.11	0.13
US 68	7.404	7.504	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	1	5	6	20.61	0.00	0.05	0.24	0.29	0.47
US 68	7.600	7.700	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	0	1	1	20.61	0.00	0.00	0.05	0.05	0.08
US 68	8.200	8.300	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	0	1	1	20.61	0.00	0.00	0.05	0.05	0.08
US 68	8.330	8.430	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	1	4	5	20.61	0.00	0.05	0.19	0.24	0.39
US 68	8.546	8.646	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	1	0	1	20.61	0.00	0.05	0.00	0.05	0.08

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Taylor County
Spot Analysis
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Taylor County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	8.600	8.700	0.100	9,410	2	Undivided	Urban	0.29	0.620	0	0	3	3	20.61	0.00	0.00	0.15	0.15	0.23
US 68	8.731	8.831	0.100	8,520	2	Undivided	Rural	0.25	0.575	0	0	1	1	18.66	0.00	0.00	0.05	0.05	0.09
US 68	8.924	9.024	0.100	8,520	2	Undivided	Rural	0.25	0.575	0	2	0	2	18.66	0.00	0.11	0.00	0.11	0.19
US 68	9.404	9.504	0.100	8,520	2	Undivided	Rural	0.25	0.575	0	0	1	1	18.66	0.00	0.00	0.05	0.05	0.09
US 68	10.077	10.177	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	1	0	1	17.89	0.00	0.06	0.00	0.06	0.10
US 68	10.204	10.304	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	1	1	2	17.89	0.00	0.06	0.06	0.11	0.19
US 68	10.404	10.504	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	0	1	1	17.89	0.00	0.00	0.06	0.06	0.10
US 68	10.900	11.000	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	0	1	1	17.89	0.00	0.00	0.06	0.06	0.10
US 68	11.200	11.300	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	1	0	1	17.89	0.00	0.06	0.00	0.06	0.10
US 68	11.500	11.600	0.100	8,170	2	Undivided	Rural	0.25	0.582	0	0	1	1	17.89	0.00	0.00	0.06	0.06	0.10
US 68	11.879	11.979	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	1	4	5	14.13	0.00	0.07	0.28	0.35	0.56
US 68	12.080	12.180	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	1	1	2	14.13	0.00	0.07	0.07	0.14	0.23
US 68	12.400	12.500	0.100	6,450	2	Undivided	Rural	0.25	0.628	1	1	1	3	14.13	0.07	0.07	0.07	0.21	0.34
US 68	12.530	12.630	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	1	1	14.13	0.00	0.00	0.07	0.07	0.11
US 68	12.900	13.000	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	1	1	2	14.13	0.00	0.07	0.07	0.14	0.23
US 68	13.030	13.130	0.100	6,450	2	Undivided	Rural	0.25	0.628	1	2	4	7	14.13	0.07	0.14	0.28	0.50	0.79
US 68	13.330	13.430	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	1	1	14.13	0.00	0.00	0.07	0.07	0.11

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Marion County
Spot Analysis
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Marion County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	0.000	0.100	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	31	63	94	14.13	0.00	2.19	4.46	6.65	10.59
US 68	0.400	0.500	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	2	0	2	14.13	0.00	0.14	0.00	0.14	0.23
US 68	0.900	1.000	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	2	2	14.13	0.00	0.00	0.14	0.14	0.23
US 68	1.400	1.500	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	2	2	14.13	0.00	0.00	0.14	0.14	0.23
US 68	2.096	2.196	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	1	1	14.13	0.00	0.00	0.07	0.07	0.11
US 68	2.497	2.597	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	1	1	14.13	0.00	0.00	0.07	0.07	0.11
US 68	2.797	2.897	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	2	2	14.13	0.00	0.00	0.14	0.14	0.23
US 68	2.997	3.097	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	3	3	14.13	0.00	0.00	0.21	0.21	0.34
US 68	3.600	3.700	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	1	1	14.13	0.00	0.00	0.07	0.07	0.11
US 68	3.802	3.902	0.100	6,450	2	Undivided	Rural	0.25	0.628	0	0	2	2	14.13	0.00	0.00	0.14	0.14	0.23
US 68	4.753	4.853	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	1	0	1	14.41	0.00	0.07	0.00	0.07	0.11
US 68	4.903	5.003	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	1	0	1	14.41	0.00	0.07	0.00	0.07	0.11
US 68	5.178	5.278	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	1	2	3	14.41	0.00	0.07	0.14	0.21	0.33
US 68	5.400	5.500	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	0	1	1	14.41	0.00	0.00	0.07	0.07	0.11
US 68	5.678	5.778	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	3	5	8	14.41	0.00	0.21	0.35	0.56	0.89
US 68	5.878	5.978	0.100	6,580	2	Undivided	Rural	0.25	0.624	1	0	1	2	14.41	0.07	0.00	0.07	0.14	0.22
US 68	5.978	6.078	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	1	0	1	14.41	0.00	0.07	0.00	0.07	0.11

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Marion County
Spot Analysis
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Marion County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	6.128	6.228	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	0	1	1	14.41	0.00	0.00	0.07	0.07	0.11
US 68	6.540	6.640	0.100	6,580	2	Undivided	Rural	0.25	0.624	0	0	2	2	14.41	0.00	0.00	0.14	0.14	0.22
US 68	6.740	6.840	0.100	8,380	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.35	0.00	0.00	0.05	0.05	0.09
US 68	7.087	7.187	0.100	8,380	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.35	0.00	0.00	0.05	0.05	0.09
US 68	7.300	7.400	0.100	8,380	2	Undivided	Rural	0.25	0.578	0	2	4	6	18.35	0.00	0.11	0.22	0.33	0.57
US 68	7.687	7.787	0.100	8,380	2	Undivided	Rural	0.25	0.578	0	2	1	3	18.35	0.00	0.11	0.05	0.16	0.28
US 68	8.000	8.100	0.100	8,380	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.35	0.00	0.00	0.05	0.05	0.09
US 68	8.519	8.619	0.100	11,200	2	Undivided	Rural	0.25	0.530	1	4	3	8	24.53	0.04	0.16	0.12	0.33	0.61
US 68	8.700	8.800	0.100	11,200	2	Undivided	Rural	0.25	0.530	0	1	0	1	24.53	0.00	0.04	0.00	0.04	0.08
US 68	8.864	8.964	0.100	11,200	2	Undivided	Rural	0.25	0.530	0	0	2	2	24.53	0.00	0.00	0.08	0.08	0.15
US 68	9.000	9.100	0.100	11,200	2	Undivided	Rural	0.25	0.530	1	3	3	7	24.53	0.04	0.12	0.12	0.29	0.54
US 68	9.250	9.350	0.100	11,200	2	Undivided	Rural	0.25	0.530	0	0	3	3	24.53	0.00	0.00	0.12	0.12	0.23
US 68	9.390	9.490	0.100	11,900	2	Undivided	Rural	0.25	0.521	0	0	4	4	26.06	0.00	0.00	0.15	0.15	0.29
US 68	9.506	9.606	0.100	11,900	2	Undivided	Rural	0.25	0.521	0	0	6	6	26.06	0.00	0.00	0.23	0.23	0.44
US 68	9.652	9.752	0.100	11,900	2	Undivided	Rural	0.25	0.521	0	1	2	3	26.06	0.00	0.04	0.08	0.12	0.22
US 68	9.764	9.864	0.100	11,900	2	Undivided	Rural	0.25	0.521	0	3	13	16	26.06	0.00	0.12	0.50	0.61	1.18
US 68	9.875	9.975	0.100	17,400	2	Divided	Urban	0.29	0.528	0	8	15	23	38.11	0.00	0.21	0.39	0.60	1.14

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Marion County
Spot Analysis

Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00

Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Marion County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	9.985	10.085	0.100	17,400	2	Divided	Urban	0.29	0.528	0	0	1	1	38.11	0.00	0.00	0.03	0.03	0.05
US 68	10.090	10.190	0.100	17,400	2	Divided	Urban	0.29	0.528	0	2	7	9	38.11	0.00	0.05	0.18	0.24	0.45
US 68	10.229	10.329	0.100	17,400	2	Divided	Urban	0.29	0.528	0	2	14	16	38.11	0.00	0.05	0.37	0.42	0.80
US 68	10.360	10.460	0.100	17,400	2	Divided	Urban	0.29	0.528	0	3	5	8	38.11	0.00	0.08	0.13	0.21	0.40
US 68	10.502	10.602	0.100	17,400	2	Divided	Urban	0.29	0.528	0	3	8	11	38.11	0.00	0.08	0.21	0.29	0.55
US 68	10.610	10.710	0.100	17,400	2	Divided	Urban	0.29	0.528	0	3	26	29	38.11	0.00	0.08	0.68	0.76	1.44

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0.000	0.100	0.100	13,100	4	Undivided	Urban	0.49	0.844	0	23	35	58	28.69	0.00	0.80	1.22	2.02	2.40
KY 55	0.130	0.230	0.100	13,100	4	Undivided	Urban	0.49	0.844	0	1	5	6	28.69	0.00	0.03	0.17	0.21	0.25
KY 55	0.280	0.380	0.100	13,100	4	Undivided	Urban	0.49	0.844	0	3	6	9	28.69	0.00	0.10	0.21	0.31	0.37
KY 55	0.389	0.489	0.100	12,000	4	Undivided	Urban	0.49	0.861	0	3	18	21	26.28	0.00	0.11	0.68	0.80	0.93
KY 55	0.520	0.620	0.100	12,500	2	Undivided	Urban	0.29	0.573	0	7	18	25	27.38	0.00	0.26	0.66	0.91	1.59
KY 55	0.767	0.867	0.100	12,500	2	Undivided	Urban	0.29	0.573	0	1	7	8	27.38	0.00	0.04	0.26	0.29	0.51
KY 55	1.084	1.184	0.100	12,000	4	Undivided	Urban	0.49	0.861	0	0	3	3	26.28	0.00	0.00	0.11	0.11	0.13
KY 55	1.250	1.350	0.100	12,000	4	Undivided	Urban	0.49	0.861	0	0	5	5	26.28	0.00	0.00	0.19	0.19	0.22
KY 55	1.358	1.458	0.100	12,000	4	Undivided	Urban	0.49	0.861	0	1	3	4	26.28	0.00	0.04	0.11	0.15	0.18

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Marion County
Spot Analysis
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Marion County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	1.690	1.790	0.100	8,960	2	Undivided	Rural	0.25	0.566	0	0	1	1	19.62	0.00	0.00	0.05	0.05	0.09
KY 55	2.004	2.104	0.100	8,960	2	Undivided	Rural	0.25	0.566	0	1	2	3	19.62	0.00	0.05	0.10	0.15	0.27
KY 55	2.223	2.323	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	2.428	2.528	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	2.581	2.681	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	1	0	1	18.33	0.00	0.05	0.00	0.05	0.09
KY 55	3.000	3.100	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	3.200	3.300	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	3.500	3.600	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	3.635	3.735	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	1	1	2	18.33	0.00	0.05	0.05	0.11	0.19
KY 55	3.800	3.900	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	1	0	1	18.33	0.00	0.05	0.00	0.05	0.09
KY 55	4.200	4.300	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	4.269	4.369	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	1	1	18.33	0.00	0.00	0.05	0.05	0.09
KY 55	4.469	4.569	0.100	8,370	2	Undivided	Rural	0.25	0.578	0	0	2	2	18.33	0.00	0.00	0.11	0.11	0.19

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Washington County
Spot Analysis
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Washington County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	0.000	0.100	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	6	17	23	18.62	0.00	0.32	0.91	1.24	2.15
KY 55	0.325	0.425	0.100	8,500	2	Undivided	Rural	0.25	0.575	1	1	1	3	18.62	0.05	0.05	0.05	0.16	0.28
KY 55	0.500	0.600	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	0	1	1	18.62	0.00	0.00	0.05	0.05	0.09
KY 55	0.725	0.825	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	1	1	2	18.62	0.00	0.05	0.05	0.11	0.19
KY 55	1.000	1.100	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	1	0	1	18.62	0.00	0.05	0.00	0.05	0.09
KY 55	1.425	1.525	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	2	1	3	18.62	0.00	0.11	0.05	0.16	0.28
KY 55	2.200	2.300	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	0	1	1	18.62	0.00	0.00	0.05	0.05	0.09
KY 55	2.600	2.700	0.100	8,500	2	Undivided	Rural	0.25	0.575	0	0	1	1	18.62	0.00	0.00	0.05	0.05	0.09
KY 55	2.800	2.900	0.100	7,630	2	Undivided	Rural	0.25	0.595	1	3	2	6	16.71	0.06	0.18	0.12	0.36	0.60
KY 55	3.400	3.500	0.100	7,630	2	Undivided	Rural	0.25	0.595	0	2	6	8	16.71	0.00	0.12	0.36	0.48	0.80
KY 55	3.677	3.777	0.100	7,630	2	Undivided	Rural	0.25	0.595	0	0	1	1	16.71	0.00	0.00	0.06	0.06	0.10
KY 55	3.900	4.000	0.100	7,630	2	Undivided	Rural	0.25	0.595	0	0	2	2	16.71	0.00	0.00	0.12	0.12	0.20
KY 55	4.004	4.104	0.100	7,630	2	Undivided	Rural	0.25	0.595	0	0	2	2	16.71	0.00	0.00	0.12	0.12	0.20
KY 55	4.551	4.651	0.100	7,630	2	Undivided	Rural	0.25	0.595	0	1	8	9	16.71	0.00	0.06	0.48	0.54	0.91

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report;

Crash Data Analysis
Washington County
Spot Analysis
Adair, Green, Taylor, Marion, Nelson, & Washington Counties, Item No. 4-132.00
Heartland Parkway from Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Washington County

Route	Begin MP	End MP	Length (miles)	2002 ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc. Rate	Critical Acc. Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 555	0.000	0.100	0.100	6,700	2	Undivided	Rural	0.25	0.620	0	11	18	29	14.67	0.00	0.75	1.23	1.98	3.19
KY 555	0.600	0.700	0.100	6,700	2	Undivided	Rural	0.25	0.620	0	1	0	1	14.67	0.00	0.07	0.00	0.07	0.11
KY 555	0.740	0.840	0.100	6,700	2	Undivided	Rural	0.25	0.620	0	0	1	1	14.67	0.00	0.00	0.07	0.07	0.11
KY 555	0.836	0.846	0.100	6,700	2	Undivided	Rural	0.25	0.620	0	4	5	9	14.67	0.00	0.27	0.34	0.61	0.99
KY 555	2.075	2.175	0.100	4,830	2	Undivided	Rural	0.25	0.693	0	0	1	1	10.58	0.00	0.00	0.09	0.09	0.14
KY 555	3.600	3.700	0.100	4,690	2	Undivided	Rural	0.25	0.701	0	0	1	1	10.27	0.00	0.00	0.10	0.10	0.14
KY 555	4.300	4.400	0.100	4,690	2	Undivided	Rural	0.25	0.701	0	0	1	1	10.27	0.00	0.00	0.10	0.10	0.14
KY 555	5.000	5.100	0.100	4,690	2	Undivided	Rural	0.25	0.701	0	0	2	2	10.27	0.00	0.00	0.19	0.19	0.28
KY 555	5.216	5.316	0.100	4,690	2	Undivided	Rural	0.25	0.701	0	2	3	5	10.27	0.00	0.19	0.29	0.49	0.69
KY 555	6.715	6.815	0.100	3,230	2	Undivided	Rural	0.25	0.805	0	1	0	1	7.07	0.00	0.14	0.00	0.14	0.18
KY 555	7.091	7.191	0.100	3,230	2	Undivided	Rural	0.25	0.805	0	0	1	1	7.07	0.00	0.00	0.14	0.14	0.18
KY 555	8.280	8.380	0.100	3,230	2	Undivided	Rural	0.25	0.805	0	1	1	2	7.07	0.00	0.14	0.14	0.28	0.35
KY 555	9.200	9.300	0.100	3,230	2	Undivided	Rural	0.25	0.805	0	1	0	1	7.07	0.00	0.14	0.00	0.14	0.18
KY 555	9.500	9.600	0.100	3,230	2	Undivided	Rural	0.25	0.805	0	0	1	1	7.07	0.00	0.00	0.14	0.14	0.18
KY 555	10.700	10.800	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	0	1	1	8.12	0.00	0.00	0.12	0.12	0.16
KY 555	11.000	11.100	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	1	1	2	8.12	0.00	0.12	0.12	0.25	0.32
KY 555	11.480	11.580	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	0	1	1	8.12	0.00	0.00	0.12	0.12	0.16
KY 555	12.707	12.807	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	2	2	4	8.12	0.00	0.25	0.25	0.49	0.64

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

Crash Data Analysis
Washington County
Spot Analysis
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Washington County

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										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 555	12.907	13.007	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	0	1	1	8.12	0.00	0.00	0.12	0.12	0.16
KY 555	13.200	13.300	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	1	0	1	8.12	0.00	0.12	0.00	0.12	0.16
KY 555	14.000	14.100	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	1	0	1	8.12	0.00	0.12	0.00	0.12	0.16
KY 555	14.300	14.400	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	5	1	6	8.12	0.00	0.62	0.12	0.74	0.97
KY 555	14.500	14.523	0.100	3,710	2	Undivided	Rural	0.25	0.763	0	0	2	2	8.12	0.00	0.00	0.25	0.25	0.32

Source: KYTC's *Highway Information System (HIS)* database; Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2002)* report; 2002 ADT data from KYTC's *Highway Information System (HIS)* database on 05/13/2003

GREENSBURG

GREEN

ADAIR

Historic District

COLUMBIA

TAYLOR

CAMPBELLSVILLE

Tebbs Bend Battlefield

Parkway Corridor

KENTUCKY TRANSPORTATION CABINET

EDUCATION PAYS

W

S N

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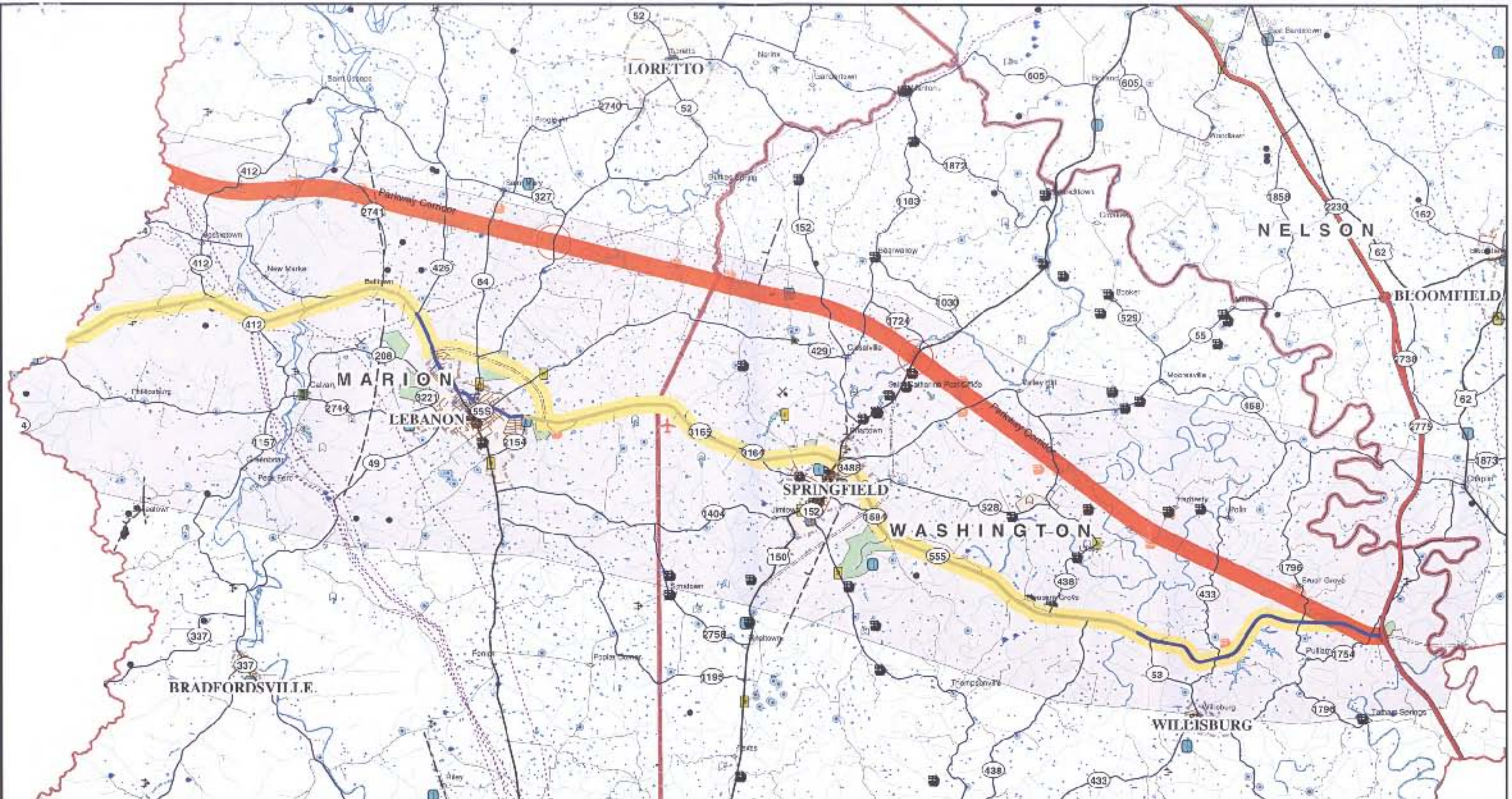
Location Map

Environmental Footprint
Heartland Parkway
South Section
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
Ky 55
Item No. 4-132.00



KENTUCKY TRANSPORTATION CABINET

EDUCATION PAYS


Location Map

Environmental Footprint
Heartland Parkway
North Section
Louie B. Nunn Cumberland Parkway
to Martha Layne Collins Blue Grass Parkway
Ky 55
Item No. 4-132.00



Noe, Tad (KYTC)

From: Palmer Bell, Brandon (EEPG,XENES)
Sent: Monday, October 11, 2004 3:39 PM
To: Noe, Tad (KYTC)
Subject: RE: Hazelwood Parkway

Thanks! I don't think we've got any comments at this time. There are obviously many more issues relative to new road construction vs. realignments of the current right of way projects. I think your input will benefit us as we address issues for future projects. Have a great weekend!

-----Original Message-----
From: Noe, Tad (KYTC)
Sent: Monday, October 11, 2004 3:37 PM
To: Palmer Bell, Brandon (EEPG,XENES)
Subject: RE: Hazelwood Parkway

Our design staff is currently in the majority of the local officials in the four directly affected counties for the project. Upon preliminary plan completion, we will hold a public meeting for the project. Anticipated date for the Hazelwood Parkway project is late 2005 or early 2006. At that time, the new road parkway would require 40 acres of new right of way.

-----Original Message-----
From: Palmer Bell, Brandon (EEPG,XENES)
Sent: Monday, October 11, 2004 3:31 PM
To: Noe, Tad (KYTC)
Subject: RE: Hazelwood Parkway

What is the proposed timeline of this project? Is something on the books or is this a new project? Is it a new road or realigning an existing road? Is something in place? Do not propose any changes to the current right of way?

Thanks,

B.P.

-----Original Message-----
From: Noe, Tad (KYTC)
Sent: Monday, October 11, 2004 3:02 PM
To: Palmer Bell, Brandon (EEPG,XENES)
Cc: Wilson, Emma (KYTC)
Subject: RE: Hazelwood Parkway

Brandon,

If you possibly have comments to us regarding the Hazelwood Parkway project, please let us know. The local officials in the area met with us on Wednesday, September 29th to review the draft alignment and discuss issues and concerns with the proposed project. After the draft has been reviewed and discussed with the local officials, we will hold a public meeting for the project. The purpose of the meeting is to present the project development process and the design, right of way acquisition, utility relocation and construction of the project segments. The reason that design is not the only topic discussed is because issues with the property segments, specifically the Expansion of Outer Loop and Bohannon, already have been impacted by right of way acquisition in the past. If you have any questions please let me know. Thanks.

-----Original Message-----
From: Palmer Bell, Brandon (EEPG,XENES)
Sent: Monday, October 11, 2004 2:55 PM
To: Noe, Tad (KYTC)
Subject: Hazelwood Parkway

Tad,

I did not receive any comments on this project due August 15, 2004. Where is this project at? What is the next step?

Thanks

Brandon Palmer Bell, P.E.,S.E.(KY)

[illegible]
MAYOR

[illegible]
CITY CLERK

PHONE: [illegible]
FAX: [illegible]
E-MAIL: [illegible]

City of Campbellsville

[illegible]

CAMPBELLSVILLE, KY [illegible]

July 30, 2004

Ms. Annette Caffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
W5-07-01
200 Metro Street
Frankfort, Kentucky 40622

Dear Ms. Caffey:

I am really excited about the work being done concerning the Heartland Parkway. I have had the opportunity to attend several of the public meetings. I believe Option 3 will be the best option for us. The upgrading of the existing routes with bypasses around Columbia, Campbellsville, and Lebanon will be the most affordable as well as best suited for this area.

Thanks for your continued work on the project.

Sincerely,

Brenda Allen
Mayor

[illegible]

EDUCATION PAYS

Campbellsville Fire Department

Emergency 911

Chief Allen Johnson
100 Tern Street
Campbellsville, Kentucky 42718

Telephone: (270) 465-4111
Fax: (270) 465-6181
E-mail: [illegible]@campbellsville.us

August 2, 2004

Ms. Annette Coffey, P.E.
Director
Division of Planning
Kentucky Transportation Cabinet
W5-05-01
200 Mero Street
Frankfort, KY 40622

RE: Alternative Study
Adair, Green, Marion, Taylor, and Washington Counties
Heartland Parkway, Widening and/or Relocation from the Louie B. Nunn
Cumberland Parkway to the Martha L. Collins Bluegrass Parkway
Item No. 4-137.90

Dear Ms. Coffey:

I am writing in response to your request for input from my agency on the above proposed highway project.

After looking over the proposal we found no specific problems or concerns with the project, however we do believe that Option 2 would be the better choice.

Sincerely,

Odell Allen Johnson

Allen

DIV. OF PLANNING
2004 AUG 5 A 9:53

Nee, Ted (KYTC)

From: [redacted]
Sent: Monday, August 02, 2004 3:00 PM
To: Nee, Ted (KYTC)
Subject: Item No. 4-1120 Study

Ted,

I have reviewed the subject materials for the Secretary's [redacted]. We have no comments to offer at this time.

Ch

[redacted]
Office of Budget and Administrative Services
Education Cabinet
[redacted]

[redacted]

RESOLUTION NO. 04-05

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LEBANON, KENTUCKY ENDORSING OPTION 2 OF THE HEARTLAND PARKWAY PROJECT

WHEREAS, the Heartland Parkway Project will benefit the citizens of Lebanon, and

WHEREAS, a four-lane by-pass would alleviate traffic congestion in the downtown area, and

WHEREAS, a four-lane by-pass would also widen the existing corridor to connect the Bluegrass Parkway and the Cumberland Parkway as referred to in the Kentucky Transportation Cabinet's study, and

WHEREAS Option 2 fulfills the needs of Lebanon now and in the future,

NOW, THEREFORE be it resolved that the City Council of Lebanon, Kentucky does hereby endorse Option 2 of the Project as being the best option for the City of Lebanon.

Done this 9th day of August, 2004.

CITY OF LEBANON, KENTUCKY

GARY D. CRUTCHFIELD, MAYOR

ATTEST:

JOYCE A. FORD, City Clerk

Noe, Ted (KYTC)

From: Lee X. Smith (lauries@kytc.net)

Sent: Monday, August 23, 2004 3:30 PM

To: Ted.Noe@ky.gov

Subject: Answers: Pkwy Comments From Mayor Hawkins

Ted, Mayor Mike Hayden and the Springfield City Council discussed the proposed corridors for the Head Land Parkway and concurred that it would be in the best interest for our community to stay along the existing 536 Hwy. (at least within the Springfield Community). Can you please forward this info those officials who need such information. Thank you and we are sorry not to have met your deadline. Laurie Smith, City Administrator

Columbia / Adair County Industrial Development Authority, Inc.

[illegible]
[illegible]

September [illegible], 2004

WMH
Phil Lambert
[illegible] Howard Ct.
Lexington, KY [illegible]

Dear Mr. Lambert:

Enclosed you will [illegible] Columbia Adair County Industrial Development Authority regarding the Heartland Parkway. The Industrial Authority is Very supportive of this project, specifically option 2. We appreciate your support on this road development as well.

Best Regards,

Stacey M. Tailey
Director of Economic Development

SMB/[illegible]

Enclosure

Columbia / Adair County Industrial Development Authority, Inc.

[illegible]

Resolution

Be it resolved that the Columbia-Adair County Industrial Development Authority, Inc. hereby supports "Option 'A'" of the road project known as the "Heartland Parkway" for the Kentucky counties of Adair, Taylor, Marion and Washington.

Resolved this 1st day of September, 2004.

Barry Gaddie
Chairman

Dorie Farmer
[illegible]

DIV OF PLANNING

Office Telephone
(502) 564-5125
FAX: (502) 564-3010
TTY: (502) 564-2075

[illegible] 2004

Commonwealth of Kentucky
Department of Agriculture
Office of the Commissioner
Capitol Annex, Suite 188
Frankfort, KY 40601

August 3, 2004

Ms. Annette Cathey, P.E.
Director
Division of Planning
Kentucky Transportation Cabinet
Wharton
200 Mero Street
Frankfort, Kentucky 40622

Re: Alternatives Study
Adair, Green, Marion, Taylor, and Washington Counties
Heartland Parkway, Widening and/or Relocation from the Louie B. Nunn
Cumberland Parkway to the Martha L. Hall at Bluegrass Parkway
Item No. 1-132.00

Dear Ms. Cathey,

Please be advised that this agency has no specific concerns or issues as serving the above noted project.

Yours truly,

Ann Stewart

Ann Stewart
Staff Assistant

Paul E. Patton
Governor

Commerce Cabinet
Capital Plaza Tower
500 Mero Street, 24th Floor
Frankfort, Kentucky 40601-1974
Phone: (502) 564-4270 Fax: (502) 564-1512
commerce.ky.gov

W. Jamie Fitch
Secretary
Commerce Cabinet

Deborah K. Ramsey
Deputy Secretary
Commerce Cabinet

DIV OF PLANNING
2004 OCT 15 A 11:20

October 5, 2004

Annette Colley, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
#5-05-01
200 Mero Street
Louisville, Kentucky 40622

Subject: Adair, Green, Marion, Taylor and Washington Counties
Heartland Parkway, Widening and/or Relocation from Louie B. Nunn
Cumberland Parkway to the Martin L. Collins Bluegrass Parkway
Item No. 4-132.00

Dear Ms. Colley,

Thank you for providing the opportunity to review and comment upon the alternatives being considered for the restructuring of roadways in Adair, Green, Marion, Taylor and Washington Counties.

I have reviewed the material provided by your office relating to this project and the options being considered. It appears there is a preference towards implementing Option 1. However, my review has noted the impact upon historical sites or potential historical sites along this route. Depending upon the nature of these facilities they may impact the tourism industry in the area. These facilities appear to be numerous.

It is important that areas possessing historical and natural assets be preserved if at all possible. With that in mind I ask that the Kentucky Historical Society, Kentucky Heritage Council be contacted. If this has not already occurred, to insure properties of interest to these agencies are not impacted in a negative manner.

Your efforts to improve the Kentucky roadways are greatly appreciated. Providing safe and pleasant driving experiences will assist in our efforts to grow the tourism industry within the Commonwealth.

If I may be of further assistance please do not hesitate to contact my office. I can be reached at 564-4770

Sincerely,

W. James Hrat
Secretary

Ernie Fletcher
Governor

Commerce Cabinet
Department of Fish & Wildlife Resources
61 Crane Park Road
Frankfort, Kentucky 40601
Phone (502) 564-3400 Fax (502) 564-0506
(800) 858-1549
www.kentucky.gov

Wilson Hall
Secretary, Commerce Cabinet

C. Tom Bennett
Commissioner

DIV OF PLANNING
2004 AUG 13 A 10:26

August 10, 2004

Annette Coffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, KY 40601

Ken Alternatives Study for Hospital Parkway, Widening and/or Relocation from the Louis B. Nunn Cumberland Parkway to the Martha Lafferty Highway, Adair Green, Marion, Taylor, and Washington Counties, Kentucky

Dear Ms. Coffey:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) has received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicates that several recently threatened and endangered species are known to occur in the above-referenced counties (see attached list). Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

The federally endangered Indiana Bat (*Myotis sodalis*) inhabits this area. Informs maternity colonies are known with the young under the care of occupating streams and adjacent upland areas, usually from the middle of May to the middle of August. Disturbance to riparian areas during this time period should be avoided in order to minimize potential impacts to the species. The applicant should contact the USFWS to determine the extent of survey needed and what measures will be needed to protect the species and its habitat.

In general, gives in which gray bats are known to occur, any cave entrances that occur within the project area (i.e. the right-of-way and regeneration sites) should be surveyed for external use by gray bats. Because gray bats are cave residents year-round and maternity colonies are generally found in close proximity to rivers, streams and lakes, any cases within the project area could offer potentially valuable habitat to resident gray bats. To that survey is necessary, please contact the US Fish and Wildlife Service office at (502) 695-0468 for information on how to proceed.

KDFWR has determined that potential resource impacts to the aquatic resources can occur in the project area and offers the following recommendations:

1) crossing should be designed and constructed to accommodate high flow conditions;
2) development in or near streams only during low flow periods to minimize disturbances;
3) culverts should be placed even with substrate to allow aquatic organisms to move freely within stream channel;
4) cruiser placement of erosion control structures, below disturbed areas to minimize entry of silt to stream;
5) replanting of disturbed areas after construction, including stream banks and right-of-ways, with native vegetation for soil stabilization and enhancement of fish and wildlife populations;
6) return of disturbed instream habitat to its original condition upon completion of construction in the area;
7) avoidance of tree canopy overhanging streams; and
8) return all right-of-ways to original elevation.

KDFWR also recommends any excavation of stream channel for placement of bridge bents should be kept at a minimum and the existing transportation corridors should be used as the main crossing of the stream during bridge construction if possible to minimize impacts to the aquatic resources.

Based on the information provided, KDFWR cannot determine the full extent of impacts to fish and wildlife resources without knowing the extent of the proposed project. When further information is available to our agency we can make a final determination regarding environmental impacts.

I hope this information will be helpful to you. Should you require additional information, please contact me at (502) 564-7109, ext. 387.

Sincerely,

Maria Barbour Callaghan
Fisheries Biologist II

... Environmental Section File

search

Site Se

Species Information

Federal Threatened and Endangered Species observations for selected quads

Unkeal re history provided courtesy of Natureserve Explorer
US Status Definitions Kentucky Status Definitions

List Federal Threatened and Endangered Species observations in 10 selected quads.
Selected quads are: Brush Grove, Campbellsville, Cane Valley, Cardwell, Columbia, Gradyville, Greensburg, Gresham, Lebanon West, Spurlington.
9 records are listed.

Page 1 of 1

Scientific Name	Common Name	Class	Quad	US Status	KY Status
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	AVES	Campbellsville	PE:LT,PDL	L
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	AVES	Cane Valley	PE:LT,PDL	E
FLUTOSUMA CLUBA	CLUBSHELL	BIVALVIA	Cane Valley	LE:XN	I
MYOTIS GRISESCENS	GRAY MYOTIS	MAMMALIA	Greensburg	LE	E
MYOTIS GRISESCENS	GRAY MYOTIS	MAMMALIA	Campbellsville	LE	E
MYOTIS GRISESCENS	GRAY MYOTIS	MAMMALIA	Cane Valley	LE	E
MYOTIS GRISESCENS	GRAY MYOTIS	MAMMALIA	Gradyville	LE	E
MYOTIS GRISESCENS	GRAY MYOTIS	MAMMALIA	Columbia	LE	E
MYOTIS SODALIS	INDIANA BAT	MAMMALIA	Cane Valley	LE	E

Last Updated - 03/2

Ernie Fletcher
Governor

Department of Parks
Commissioner
George Ward Tower
200 Mero Street, 11th Floor
Frankfort, Kentucky 40601-1974
Phone (502) 564-2172 Fax (502) 564-5315
www.kyg.ca

W. Jayne Hoe
Secretary
Commerce Cabinet

George Ward
Commissioner
Department of Parks

September 2, 2004

Mr. Annette Coffey, P.E., Director
Division of Planning
Kentucky Transportation Cabinet
200 Mero Street
Frankfort, Kentucky 40622

Re: Alternatives Study
Heartland Parkway
Item No. 4-132.00

Dear Mr. Coffey:

The Department of Parks (DOP) has reviewed your correspondence to me regarding the subject. There are two State Parks in the vicinity of the study area: Green River State Park, consider the widening alternative of Route 60 and Lincoln Homestead State Park is in the vicinity of the relocation alternative. The DOP has several concerns that we would like to discuss with you should this project move forward in design.

The Park locations are not depicted on the maps provided in your letter and our comments are general at this time and we do not have specific issues. Our concerns are how the project will impact the parks' aesthetics, air quality, storm water runoff, landscaping, signage, approach sight distance, turning lanes, right-of-way encroachments and interruption of access.

I appreciate you seeking our Agency's comments on this project and we look forward to making the project a success. Please contact Mr. John Drake or myself at 564-8100 if you have any questions or comments.

Sincerely,

W. George Ward, Commissioner
Kentucky Department of Parks

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DIV OF PLANNING

JIMIE FLETCHER
GOVERNOR

COMMONWEALTH OF KENTUCKY

MARVIN E. STRUNK, JR.
SECRETARY

Cabinet for Economic Development

500 MERO STREET

CAPITAL PLAZA TOWER

FRANKFORT, KENTUCKY 40601-1811

August 6, 2004

Ms Annette Coffee, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
WS 05-01
3000 Mero Street
Frankfort, KY 40601

Dear Ms Coffee,

SUBJECT: Transportation Cabinet Alternatives Study

Below is the Cabinet for Economic Development, 8 to Evaluation Branch's response to the study for Heartland Parkway widening and/or Relocation in regard to Adair, Green, Taylor, Marion, and Washington Counties from the Louie B. Nunn Cumberland Parkway to the Martha L. Collins Bluegrass parkway.

Adair County Response. Prepared by Russell Casey

Option 2 does the best choice for Adair County, as it impacts Green River Commerce Park. This 327.3 acre park's only entrance is on KY 55. Improved regional accessibility will greatly enhance development potential of this park through improved truck and motor access. I would recommend that particular consideration be provided for improving the ingress and egress to the park with focus on turning movements.

Green County Response Prepared by Russell Casey

Both alternatives are well to the east of Greensburg, and the location of both Green County's industrial parks. There are no direct impacts on either of these parks. Either alternative appears to improve regional transportation, which will positively impact the Green County parks. However, The new highway on the proposed closer to Greensburg may offer a bit better access to Louie B. Nunn Cumberland Parkway and the Martha L. Collins Bluegrass parkway. Especially, if improvements (if needed) to US 68/KY 70 to Greensburg can be considered.

Taylor County Response: Prepared by Terri Stamper

I recommend Option 2 for two reasons. One, Taylor County has three industrial sites, their oldest park, Campbellsville Industrial Park, is almost at full capacity. Campbellsville's main industrial site focus will be on their new 203 acre "Heartland Commerce & Technology Park." Second, the Transportation Cabinet previously had a bypass design in their 2008 6 year road plan, which would encompass the Heartland Commerce & Technology Park, but the bypass design was canceled. Interestingly, Option 2 is the former canceled bypass now revisited. I feel that option 2 would greatly enhance ingress and egress to this park. Thus, improving economic development and addressing the transportation needs of the community.

Marion County Response: Prepared by Terri Stamper

I recommend Option 1 for two reasons. One, Marion County has three industrial sites, their newest park, "Crossroads Industrial Park" is their main industrial site. Second, there is a new construction of a northwestern connector from KY 2164 at KY 55 to U.S. 68, which will directly affect this park. However, the Marion County Industrial Foundation has planned for this construction, which will benefit this industrial park. I feel that Option 2 will improve the current economic development efforts and address the transportation needs of the community.

Washington County Response: Prepared by Terri Stamper

I recommend Option 2 for several reasons. One, Washington County has three industrial sites. The smallest park is 34.6 acres and is adjacent to KY 55. Although widening of KY 55 will improve ingress/egress at this site the improved road will allow for a better entrance to the site and will improve the entire community's transportation system. Second, their newest park, Clearview Commerce Complex is adjacent to KY 555. The widening of KY 555 will greatly improve the ingress and egress traffic to this park. Third, there is a current bypass project in Washington County along KY 152 to KY 555. The current construction project and the Heartland Parkway widening project will greatly improve the road system in Washington County.

Sincerely,

Rick F. True,
Executive Director, Office of Research and Information Technology

Ernie Fletcher
Governor

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
Department for Natural Resources
663 Teton Trail
Frankfort, Kentucky 40601
Phone (502) 564-2184 Fax (502) 564-6199
www.naturalresources.ky.gov
www.kentucky.gov

LAJUANA S. WILLIAMS
Secretary

Susan D. Rose
Commissioner

August 20, 2004

Ms. Annette Coffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
W3-05-01
200 Mero Street
Frankfort, KY 40622

Re: Widening and/or Relocation of the Heartland Parkway

Dear Ms. Coffey:

The Department for Natural Resources has examined this documentation for the alternatives study for the Heartland Parkway and has identified areas of concern. Mr. Rick Render of O'Brien Gas Co. is a valuable assisted the shape files so that he could prepare overlays of oil and gas wells on the proposed sites to ascertain any impact. Mr. Ted Noe kindly supplied the mine files. I will send Mr. Render's findings as soon as this work is done. To facilitate your planning, I am sending the other agencies comments.

The Kentucky Division of Forestry responds as follows:

Option One: A new roadway area to the west of the Hwy 80/68 corridor would have [illegible] impact on the forestlands in Adair, Green and southern Taylor Counties. This area consists mainly of cattle farms and the majority of the property is in pastures, haylights, and row crops. The forestlands in this area consist of smaller parcels of land that are usually in areas too steep, wet or rocky to farm. However, as the parkway entered into Northern Taylor and Marion Counties, the effects on the forest would increase, since the parkway would travel through highly wooded areas. This area in general is "knobby" with very steep topography that is best suited to woodland. Extensive harvesting would be required for right of way through this section of the proposed parkway resulting in undesirable forest fragmentation. As the parkway continued north of Lebanon, it would encounter a similar situation found in Adair and Green Counties.

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Printed on recycled paper

Options Two and Three. Widening of the current roadway would have minimal impact on the forest stands. The majority of trees along this corridor have already been affected in the past by road projects and the majority of trees along the right of way are smaller trees. The tree species that are observed along this corridor are very common for this region.

The Heritage Land Conservation Fund Board has two properties, which have potential for impact. Tebbs Bend Battle Field and Wyatt Adkins Woods. A new roadway (Option One) would have the greatest detrimental impact on these lands and is not recommended. The best alternative is to avoid the widening of the existing highway by constructing passing bays (Option Three). If this is not feasible, then widening the existing highway (Option Two) is the next best alternative.

Sincerely,

Susan C. Nash, P.E.
Commissioner

Ernie Fletcher
Governor

Environmental and Public Protection Cabinet
Division of Conservation
663 Teton Trail
Frankfort, Kentucky 40601
Phone (502) 564-3080 Fax (502) 564-9135
www.kentucky.gov

Fabiana R. Wicker
Secretary

Stephen A. Coleman
Director

DIV OF PLANNING

2004 AUG 26 12 2 56

August 12, 2004

Ms. Annette Coffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
Wa-Ub-01
200 Mero Street
Frankfort, KY 40622

Subject: Heartland Parkway

Dear Ms. Coffey:

As requested, the Division of Conservation has reviewed the proposed construction of a new route and/or reconstruction of existing routes (KY 55 / US 68 / KY 55) from the Louie B. Nunn Cumberland Parkway to the Martha Lane Collins Bluegrass Parkway and would like to provide the following comments and express concerns that may help in the planning stage for this project.

There are three agricultural districts established in the study area, #044-02 in Green County, #078-01 in Marion County, and #115-01 in Washington County (see enclosed map; electronic shape files available on request). These agricultural districts were certified by the Kentucky Soil and Water Conservation Commission on July 15, 2003, January 18, 1988, and July 15, 2003 respectively, 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 there are three permanent conservation easements in the study area, #002-109-011, #002-100-010, and #002-109-002 all in Taylor County (see enclosed map; electronic shape files available on request). These easements were acquired by the Purchase of Agricultural Conservation Easement Corporation to ensure that land currently in agricultural use will continue to remain available for agricultural use and not be converted to other uses.

We would like to see the issue of the loss of farmland addressed. Both prime farmland and farmland of statewide importance could be impacted by this project. Every year pressure is placed by utility right-of-ways, urban expansion, and new roads reduce the land available for agricultural use in the Commonwealth. There are five documents that could be utilized to identify these farmland designations: the *Soil Survey of Adair County* (NRCS 1964), the *Soil Survey of Green and Taylor Counties* (NRCS 1982), the *Soil Survey of Marion County* (NRCS 1991), the *Soil Survey of Washington County* (NRCS 1986) and *Important Farmland Soils of Kentucky* (NRCS 1993). All of these documents are available through this office.

One other concern we would like to comment on is the control of erosion and sedimentation during and after earth-disturbing activities once this project begins. We encourage the best management practices (BMP's) be utilized to prevent nonpoint source water pollution. This would protect the water quality and aquatic habitat of several 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 from this office or the Kentucky Division of Water.

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

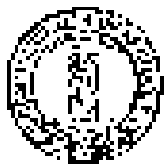
Sincerely,

Stephen A. Coleman, Director
Kentucky Division of Conservation

SAC/ssk

Enclosure

Paul E. Patton
Governor



LaJuana S. Wilcher
Secretary

DIV OF PLANNING

2001 AUG 17 A 10:21

Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Ln
Frankfort, KY 40601-1403

August 13, 2001

Ms. Aubrey N. Quilty, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
Willoughby
200 Mero Street
Frankfort, Kentucky 40622

Dear Ms. Quilty,

The Division has reviewed the Alternatives Study for the proposed widening and/or reconstruction of the Heartland Parkway in Adair, Green, Marion, Taylor, and Washington Counties from the Louie B. Nunn Cumberland Parkway to the Marion L. Collins Bluegrass Parkway, Item Number 4-152.00. 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 precautions 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/clearinghouse.html

Kentucky Division for Air Quality Regulation 401 KAR 63:005 states that open burning is prohibited. Open Burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney. However, open burning may be utilized for the expressed purposes listed on the Open Burning Fact Sheet incorporated by reference in 401 KAR 63:005 Section 2, Prohibition of Open Burning. The Fact Sheet is located at http://www.air.ky.gov/clearinghouse.html.

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.

Every effort should be made to maintain compliance with the processing 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 me at (502) 573-3382 extension 347.

Sincerely,

Joseph E. Gowans
Supervisor, Inspection Section
Program Planning & Administration Branch

JEGojcf

ERNIE FLETCHER
Governor

LAJUANA S. WILCHER
Secretary

COMMONWEALTH OF KENTUCKY
ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR NATURAL RESOURCES
FRANKFORT, KENTUCKY 40601
SUSAN C. BUSH
COMMISSIONER

August 13, 2004

Ms. Annette Coffey, P.E., Director
Division of Planning
Kentucky Transportation Cabinet
W5-05-01
200 Mero Street
Frankfort, Kentucky 40622

Dear Ms. Coffey:

Thank you for inviting our Division to comment on the Heartland Parkway Alternatives Study. After reviewing our surface mining database, no proposed or existing surface coal mining operations will be impacted by the proposed routes of the Heartland Parkway.

If I can be of any further assistance, or if you have any questions, please do not hesitate to call my office at (502) 564-2320.

Sincerely,

Larry D. Adams, P.E., Director
Division of Mine Permits

DIV. OF PLANNING
04 AUG 17 A 10:31

Ernie Fletcher
Governor

LaJuana S. Wilcher
Secretary

COMMONWEALTH OF KENTUCKY
ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR NATURAL RESOURCES
FRANKFORT, KENTUCKY 40601
SHAAN C. BUSH
COMMISSIONER

August 5, 2004

Annette Coffey, P.E., Director
Division of Planning
Kentucky Transportation Cabinet
W5-05-01
200 Mero Street
Frankfort, KY 40622

RE: Alternatives Study
Adair, Green, Marion, Taylor and Washington Counties
Heartland Parkway, widening, and/or Relocation from the Louie B. Nunn
Country and Parkway to the Martha L. Collins Bluegrass Parkway
ITEM No. 4-1132.00

Dear Ms. Coffey:

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

Personnel from our Department's Non-Coal Branch have conducted a review of the information provided and have identified the following:

Adair County – There are two Limestone Quarry permits and one Sand permit in Adair County. The Sand Operation (Benson Paving – Permit No. 001-9400) is located on KY 55 approximately 2 miles North of Columbia. One quarry (Dunton Stone, Inc. – Permit No. 001-9403) is located on KY 204 approximately 2 miles South of Columbia. The other quarry (Gribble-Sherbrook, Inc. Permit No. 001-9402) is located on KY 55 approximately 4 miles Southwest of Columbia.

Green County – There are two Limestone Quarry permits in Green County. One is located on KY 61 approximately 0.5 miles Southwest of Greensburg. This Quarry is (Nally and Gibson Quarries, Inc. – Permit No. 044-9401). Another Quarry is (Hayden Southern Aggregates, LLC – Permit No. 044-9402) and is located on KY 61 approximately 1.0 miles North of Greensburg. This Quarry has ceased mining operations and is in the reclamation phase.

Marion County – Marion County has one Limestone Quarry located on KY 208 approximately 5 miles South of Lebanon. This quarry is operated by Nally and Hayden Surfacing, LLC – Permit No. 078-9400.

Taylor County – Nally and Gibson Quarries Inc. – Permit [illegible] operates one Limestone Quarry in Taylor County. This operation is located on KY 210 approximately 4 miles Northwest of Campbellsville.

Washington County – Thomas [illegible] Quarry in Washington County. This quarry is operated by Nally and Gibson Quarries, Inc. – Permit No. 115-9400. The quarry is located just off KY 55 on Booker Road approximately 1.0 mile South of Springfield.

These quarries generate a substantial amount of traffic in and around the study area.

If, or my staff can be of any further assistance in this or any other matter please don't hesitate to contact me at (502) [illegible].

Sincerely,

Keith Smith
Acting Director

KS/JM/sw

cc: James McKenzie, Non-Coal Branch Manager

DIV OF PLANNING

2004 AUG 13 A 11:27

Ernie Fletcher
Governor

CABINET FOR HEALTH AND FAMILY SERVICES
DEPARTMENT FOR PUBLIC HEALTH
275 EAST MAIN STREET HS1C-GWA
FRANKFORT, KENTUCKY 40621-0001
(502) 564-4856 (502) 564-3377 Fax

James W. Holsinger, Jr. M.D.
Secretary

August 9, 2004

Annette Coffey, Director
Division of Planning
Transportation Cabinet
125 Holmes Street
Frankfort, Kentucky 40601

Dear Ms. Coffey:

Thank you for your letter to James W. Holsinger, Jr., M.D., Secretary of the Cabinet for Health and Family Services regarding alternatives that are being considered for a proposed widening and/or relocation of the Heartland Parkway.

The Department for Public Health does not have any specific issues or concerns regarding this proposed highway project. Thank you for allowing the Cabinet to provide input on this project.

Sincerely,

William D. Hacker, M.D.
Acting Commissioner

Ernie Fletcher
Governor

COMMONWEALTH OF KENTUCKY
JUSTICE AND PUBLIC SAFETY CABINET
Bush Building, Second Floor
403 Wilkinson Street
Frankfort, Kentucky 40601-2570
(502) 564-7551
Fax No. (502) 564-4840

Stephen H. Pence
Secretary

CIV OF PLANNING
2004 AUG -5 P 2:22

MEMORANDUM

TO: Annette Coffey, P.E.
Director
Division of Planning
Transportation Cabinet

FROM: Greg Howard
Commissioner
Department of Kentucky Vehicle Enforcement
Justice and Public Safety Cabinet

DATE: August 2, 2004

SUBJECT: Anonymous Study
Adair, Green, Marion, Taylor, and Washington Counties
Heartland Parkway, Widening and/or Relocation from the Leslie B. Nunn Cumberland Parkway to the Martha L. Collins Bluegrass Parkway
Item No. 4 – 132.00

After having my staff review the packet you sent, it is determined it would be beneficial for the proposed area. There are no designated highways in this area for trucks to get into small cities within this region. We cannot see any bad effect this project would have upon the Department of Kentucky Vehicle Enforcement.

If you have any questions, please feel free to call me at 502/564-3276.

Ernie Fletcher
Governor

Kentucky State Police
919 Versailles Road
Frankfort, KY 40601
www.kentucky.gov

Mark L. Miller
Commissioner

May 10, 2004

Ms. Annette Coffey, P.E.
Director, Division of Planning
Transportation Cabinet, WS-05-01
200 Mero Street
Frankfort, Kentucky 40622

Dear Ms. Coffey:

I am in receipt of your correspondence concerning an alternative planning study for widening and/or relocation of the Heartland Parkway, from the Louie B. Nunn Cumberland Parkway to the Martha L. Collins Bluegrass Parkway in Adair, Green, Marion, Taylor and Washington Counties.

I have forwarded your remarks to Captain Jeff Bancock, Commander of the Columbia Post. He can be reached at (270) 384-4790. Thank you for including our input during the planning stages of this development.

Sincerely,

Mark L. Miller
Commissioner

MM:mls

cc: Commander, West Troop
Commander, Post 15

Ernie Fletcher
Governor

Kentucky Transportation Cabinet
[illegible]

Marcheta G. Sparrow
Secretary

CITY OF PLANNING

2004 DEC 14 A 9:26

MEMORANDUM

To: Annette Coffey, P.E.
Division of Planning

From: David M. Waldner, P.E., Director
Division of Environmental Analysis

Date: December 2, 2004

Re: Planning Study – Hendersonville Parkway Alternatives Study
Adair, Green, Marion, Taylor and Washington Counties, Ky Item #4-137

The Hendersonville Parkway Alternatives Study has been evaluated by the Division of Environmental Analysis for any potential environmental challenges that would need to be addressed during future design stages. The following comments are based upon the planning study data presented; additional comments could be provided if further site visits are conducted:

1. Noise concerns with regard to the project may have to be addressed in future design. abatement considerations will likely have to be evaluated. Base studies will be required if the project is federally funded.
2. The Air Quality status of the project likely would not be a problem; the project is not on any list that requires conformity. If the project is to be federally funded then limited base studies would be required to determine any air impacts. The planning study should also clearly state that the project originates from the latest conforming STIP.
3. Channel changes in reaches of the Green River (Outstanding water resource) and Russell Creek (exceptional water body) and wetland impacts should be limited/avoided. These types of impacts would require 401 and 404 permits and special procedures that limit impacts during construction. They would also pose mitigation challenges with regard to the design process; costs for stream restoration and wetland mitigation could be very costly. Excess waste sites should be considered and assessed early in the design process. Floodplain impacts would not usually not hinder project schedules; every effort should be made to avoid encroachments on the floodplains.
4. Any impacts to the listed endangered species should be avoided, if unavoidable would require costly mitigation and could hinder the project schedule. Mist-

netting surveys for endangered bats as part of a biological assessment would likely be required.

5. Specific details concerning HAZMAT and storage tanks would need to be obtained through a thorough site assessment later once alignments are developed.
6. Potential section 4(f) and 106 issues exist and should be evaluated along with a detailed base study by a qualified historian.
7. A base study for archaeology will be required.

Our staff appreciates the opportunity to provide early comments on projects during the planning stage. If you should have any questions regarding these comments please contact Tony Vinegar or me at 564-7250.

DWM/TV
attachments

C: J. Schaefer Tiles

Kentucky Transportation Cabinet
Frankfort, Kentucky 40622
www.kentucky.gov

Paul E. Patton
Governor

Maxwell C. Bailey
Secretary

DIV OF PLANNING

[illegible]

MEMORANDUM

TO: Annette Cathey
Director
Division of Planning

FROM: M. Chad LaRue
Branch Manager
Permits

DATE: September 14, 2001

RE: Aiken, Green, Marion, Taylor, and Washington Counties
Alternative Studies Hospital Parkway
Item No. [illegible]

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

1. We recommend the Cabinet [illegible] this project [illegible] in Option 2. It appears to [illegible] the project goals listed in the study.

2. Assuming the project is partial control access, we encourage all possible [illegible] plans [illegible] with 603 KAR 5:120, even if they are not to be constructed at that time. We encourage using the existing roadway as a frontage road to provide access to closely spaced [illegible] to reduce the amount of conflict points.

3. When [illegible] R/W for this and all reconstruction routes, assuming the access control is partial control, new deeds for all adjoining property owners need to be executed to identify the access control even if no new R/W is required.

4. In addition, we would like to make every effort [illegible] the design [illegible] the [illegible] anticipated posted speed [illegible] complete.

5. We would like to see access control fence installed with the project.

6. If the proposed roadway is to be on the N.H.S., early [illegible] of the final [illegible] and grade is needed. This enables us to [illegible] developing device, prior to [illegible] being completed.

7. Please notify this office if the proposed roadway is to be placed on the National Highway System. This [illegible] is needed to assist this office [illegible] installation of any [illegible] advertising device.

Thank you for the opportunity to [illegible]

[illegible]

Greensburg
Green County
INDUSTRIAL FOUNDATION
INCORPORATED

TO ADVANCE AND DEVELOP THE TOWN OF GREENSBURG AND GREEN COUNTY INDUSTRIALLY
108 CARLILE AVENUE GREENSBURG, KENTUCKY 42743

August 15, 2004

Ms. Annette Coffey, P. E.
Director
Division of Planning
Kentucky Transportation Cabinet
W5-05-01
200 Mero Street
Frankfort KY 40622

RE: Heartland Parkway Alternative Study

Dear Ms. Coffey:

Enclosed you will find input and comments by the Greensburg/Green County Industrial Foundation, Inc. concerning the alternative study of the Heartland Parkway.

If you need any additional information or if I can be of any assistance, pleased let me know.

Sincerely

W. C. "Bill" Patterson
President

PHONE [illegible] E-MAIL [illegible] [illegible]

KENTUCKY STATE CLEARINGHOUSE

SAI#_____

ENVIRONMENTAL INFORMATION FORM

1. Facility Name: Green River Paddle Trail Access Project

2. Describe in a step by step manner, from raw material receiving to final product shipping the industrial (commercial) processes performed at this facility:
This project involves the construction of an access road to the Greensburg Green River Paddle Trail access location. The construction of an access point to Green River at the State Hwy. 88 bridge and the printing of maps and brochures for the Green River Paddle Trail.

Provide applicable Standard Industrial Classification (SIC) Codes

N/A

3. Water – Provide the following:

Water Server: N/A

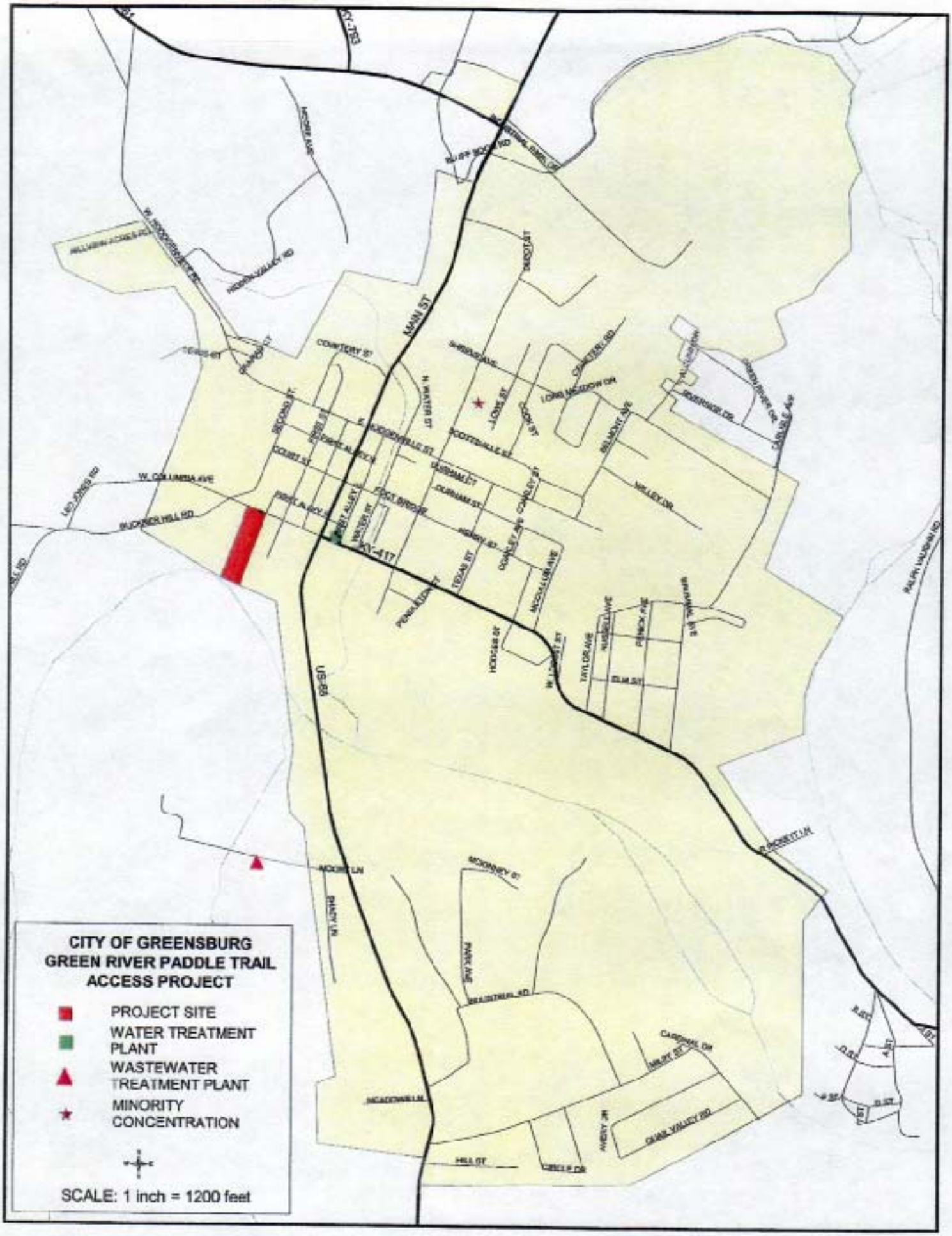
Use: (Industrial, Domestic, or Both):

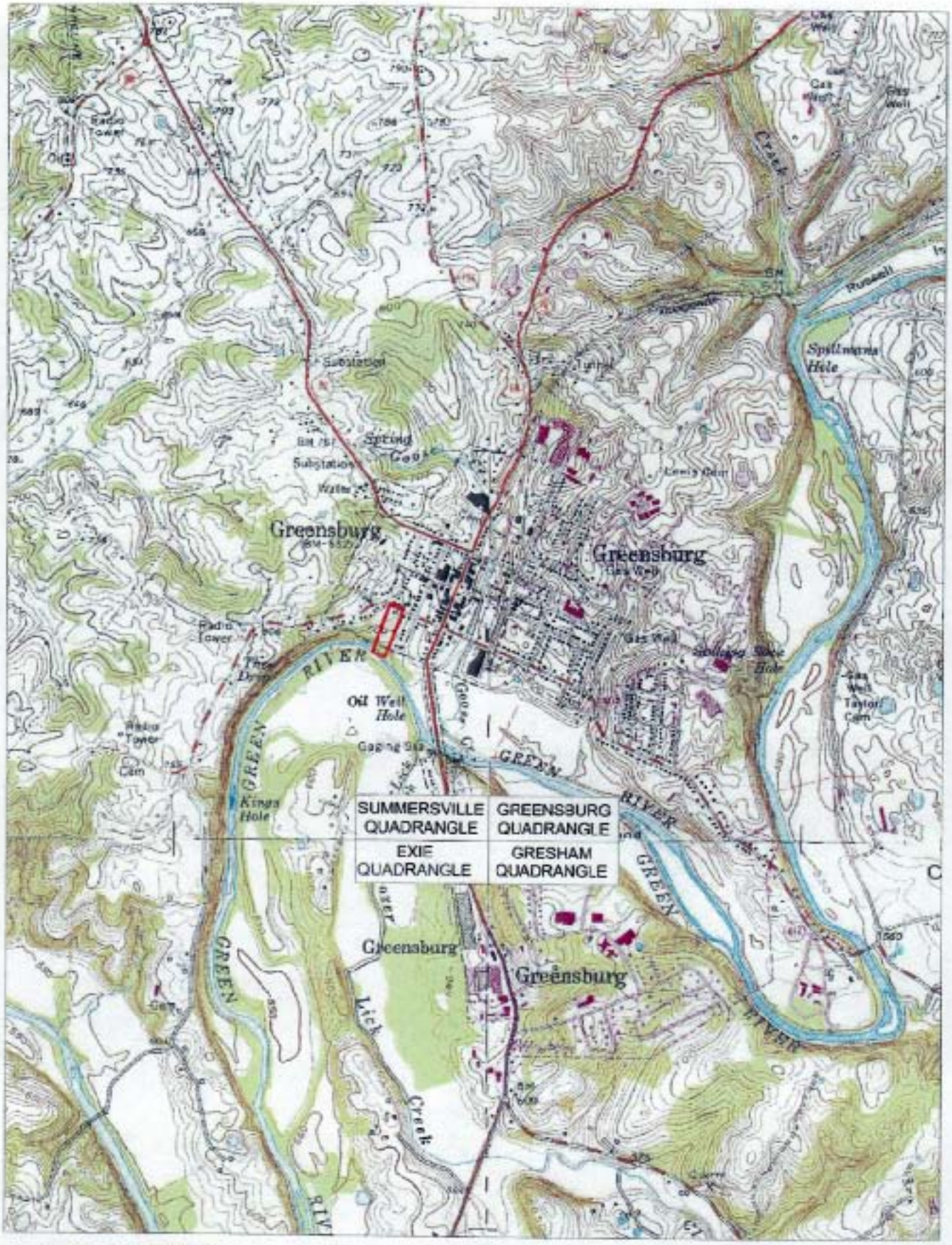
Service Line(s):	Current:	Size_____inche(s)	Capacity_____GPD
	Proposed:	Size_____inche(s)	Capacity_____GPD
Facility Usage	Current:	Normal_____GPD	Peak_____GPD
	Proposed:	Normal_____GPD	Peak_____GPD

4. Process Wastewater (Industrial by-product) – Provide the following: N/A

Constituent	Volume (Percentage of or in mg/l or per liter)

Describe treatment (pretreatment if sent to a Publicly Owned Treatment Work (POTW)—Municipal wastewater treatment plant):


CITY OF GREENSBURG
GREEN RIVER PADDLE TRAIL
ACCESS PROJECT
PROJECT SITE
WATER TREATMENT PLANT
WASTEWATER TREATMENT PLANT
MINORITY CONCENTRATION
SCALE: 1 inch = 1200 feet
MAIN ST
US-88
KY-417
W. COLUMBIA AVE
BUCKNER HILL RD
COUNTRY ST
N. WATER ST
SCOTTSVILLE ST
LONG MEADOW DR
BELMONT AVE
WILLEY DR
RIVERSIDE DR
CARLISLE AVE
MCCOLLUM AVE
TAYLOR AVE
ELM ST
MCCONNEY ST
PARK AVE
MEADOWS LN
HILL ST
CIRCLE DR
QUAIL VALLEY RD
CARDINAL DR
RALPH VAUGHN RD
HOOPER VALLEY RD
SHADY LN
MOORE AVE
LEO JONES RD
FOOT BRIDGE
COURT ST
FIRST ALLEY
SECOND ST
PENNINGTON ST
TEXAS ST
HENRY ST
DURHAM ST
CONNELLY AVE
HODGES ST
W. LOCUST ST
R. PICKETT LN
MILBY ST
AVERY LN



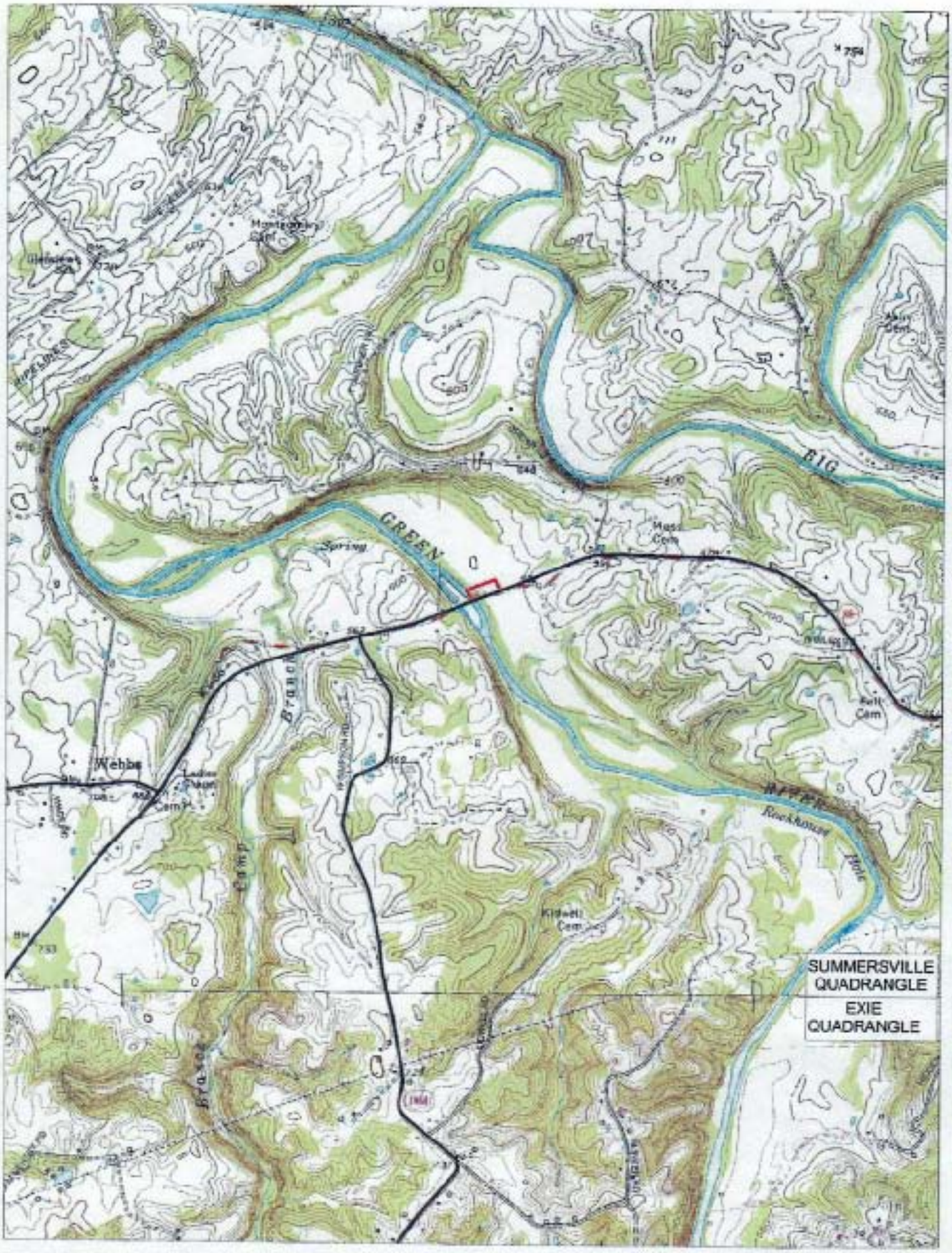
GREENSBURG SITE

PROJECT SITE

N

SCALE: 1" = 2000'

CITY OF GREENSBURG
GREEN RIVER PADDLE TRAIL ACCESS PROJECT



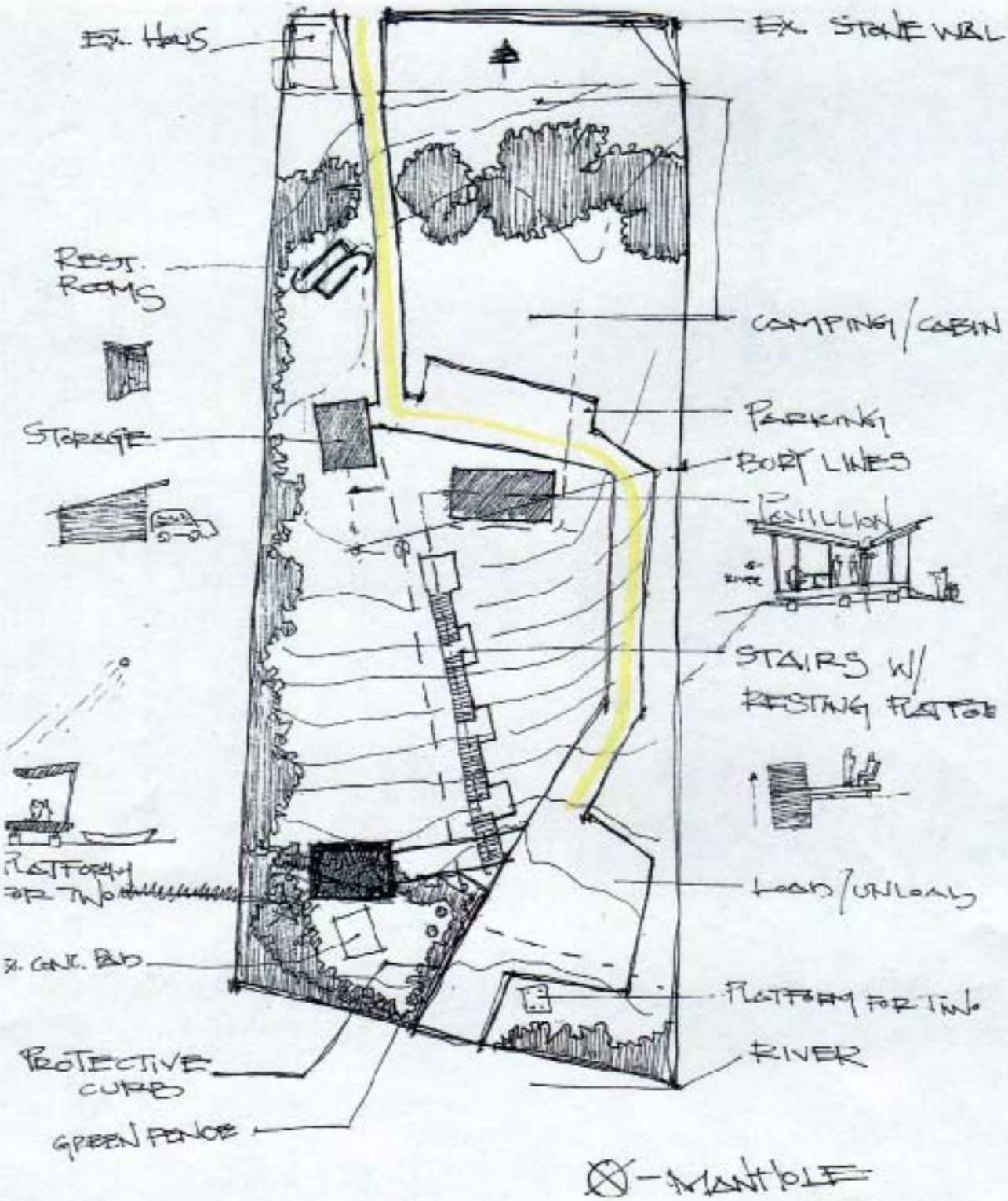
HIGHWAY 88 SITE

PROJECT SITE

N

SCALE: 1" = 2000'

CITY OF GREENSBURG
GREEN RIVER PADDLE TRAIL ACCESS PROJECT



Proposed Project

Now, Ted (KYTC)

From:	[illegible]
Sent:	Monday, August 09, 2001 [illegible]
To:	Now, Ted (KYTC)
Subject:	Item No. [illegible]

[illegible] the proposed [illegible] and have found no negative impact [illegible] in this proposed project. [illegible] airport has a 2,000' runway with a elevation of [illegible]. Campbellsville airport has a 5,000' runway with a elevation of [illegible]. Springfield-Lebanon airport has a 3,000' runway with a elevation of [illegible]. I have provided a website that describes KY Airport Zoning Commission's [illegible]. [illegible] If you have any questions let me know. Thank you.

http://www.[illegible]

Lebanon-Marion County
Chamber of Commerce

21 Court Square
Lebanon, KY 40033-1233

Phone: 270-692-4304 Fax: 270-692-3661
Website: www.lebanon.com & www.lebanon-ky.com
E-mail: chamber@lebanon.com

RESOLUTION

WHEREAS, the Lebanon-Marion County Chamber of Commerce is composed of community leaders concerned about the economic well being of Lebanon and Marion County Kentucky, and;

WHEREAS, the Heartland Parkway will have a dramatic impact on the business community in Lebanon and Marion County, and;

WHEREAS, the Lebanon-Marion County Chamber of Commerce has considered the various alternatives proposed for the Heartland Parkway, and

WHEREAS, the Lebanon-Marion County Chamber of Commerce at its regularly scheduled meeting on August 12, 2004 voted unanimously, now therefore;

BE IT RESOLVED, that the Lebanon-Marion County Chamber of Commerce cast a unanimous vote to recommend option # 2 as the best alternative for the Heartland Parkway Corridor.

Signed by: _____

David Winebrenner, Jr., President
Lebanon-Marion County
Chamber of Commerce

The Nature Conservancy
Kentucky Chapter

DIV OF PLANNING

2005 DEC -5 A 11:13

Mr. Daniel Driver
Division of Planning
Kentucky Transportation Cabinet
WS-20-03
200 Mero Street
Frankfort, KY 40622

Dear Mr. Driver

I want you to accept my comments regarding the proposed Heartland Parkway. My comments are primarily in regards to Sections A-F of the proposed Heartland Parkway. For over 5 years the Nature Conservancy (TNC) has been working with local communities, landowners, and state and federal agencies to conserve the unique Green River watershed and its globally significant biota. Evidence of this significance can be seen in the presence of nearly 70 mussel species and 130 fishes in the system. These include 7 federally- listed and 11 state-listed endangered species. Recently, TNC along with the Commonwealth of Kentucky (including the Kentucky Department of Fish and Wildlife Resources and Division of Conservation) and United States Department of Agriculture partnered to bring Kentucky's largest conservation effort, $160 million+, to the region. Green River Initiative efforts are centered on the purpose of improving the water quality and aquatic habitat of the Green River and its wildlife habitat in the watershed. Numerous landowners in this area have participated in the program adding acres of riparian protection and planting trees to conserve soil, planning in cropland for animal waste practices and more. In addition, numerous landowners in this area have participated in the EQIP (Environmental Quality Incentives) or AG District programs using cost-share funds for agricultural production instead of development. So, a great deal of time, money and effort has been expended by numerous entities to improve and protect this resource of ours.

Generally speaking, the Conservancy must favor the option least likely to create significant additional access to the aquatic system and surrounding landscape. Option 3 We least favor and would most oppose Option 1. This option would necessitate crossing the Green River near the Rockhills area bringing high levels of traffic and disturbance to a reach of the river containing 3 federally listed endangered species of mussel and 3 state listed mussel species. In addition, 2 state-listed fishes occur in the reach. Furthermore, Option 1 would pose the most potential to harm our natural resources associated with Russell Creek in Adair County and other, near river, surface impoundments. From a natural history and biological perspective Option should be avoided. The level of damage in this reach of the river would be nearly irreversible. Thank you for the opportunity to comment on this proposal.

Sincerely,

Richard K. Lowder, PhD
The Nature Conservancy
Green River Director
208 Cambridge Way
Campbellsville, KY 42718

Cc: Antonia Coffey, P.E.

RESOLUTION

WHEREAS, the Marion County Industrial Foundation is composed of community leaders concerned about the economic well being of central Kentucky; and

WHEREAS, the Heartland Parkway will have a dramatic economic impact on central Kentucky; and

WHEREAS, the Marion County Industrial Foundation has considered the various alternatives proposed for the Heartland Parkway; and

WHEREAS, the Marion County Industrial Foundation in their regularly scheduled meeting on August 20, 2014 voted unanimously, now therefore:

BE IT RESOLVED, that the Marion County Industrial Foundation makes a unanimous vote to recommend option # 2 as the best alternative for the Heartland Parkway corridor.

Signed by _____

Frederick A. Higdon, President
Marion County Industrial Foundation

Marion Washington County Airport Board
PO Box 805
Lebanon, KY 40033
(859) 336-3618 Terminal
(270) 692-1143 Secretary/Treasurer

DIV OF PLANNING
[illegible] 27

August 12, 2004

Ms. Annette Coffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
WS 05 01
200 Mero Street
Frankfort, Ky 40622

Dear Ms. Coffey:

We received the Heartland Parkway proposal and have the following comments.

Re: Option #

This option should be discarded outright as it would be too expensive and would not be beneficial to the communities it by passes.

Re: Option #2

From our location (The Lebanon/Springfield Airport) the four lane highway proposed in segment 7 is fine.

Re: Option #3

If option #3 is adopted then it is requested that one of the passing bays proposed in Segment 7 be constructed where Airport Lane meets the existing right of way.

Sincerely,

James C. Tucker
Chairman
Marion Washington County Airport Board

Comments by Telephone

On: July 28, 2004

Time: 10:45 a.m.

From: Second Coordination Letter

Re: Heartland Parkway Alternatives Study

By: Mike Blevins, P.G.
Geotechnical Branch
Frankfort, KY
Phone 502 564 2374

Comments:

- Mr. Blevins comments: The Geotechnical Branch has reviewed the Geotechnical Overview and their comments are included in that document. Therefore, they will have no comments concerning the coordination letter.

Transcribed By: Ted Noe
Project Manager
Kentucky Department of Highways
Division of Planning
Frankfort, KY

Comments by Telephone

Date: August 31, 2004

Time: 8:30 a.m.

Re: Second Coordination Letter

For: Heartland Parkway Alternatives Study

By: Judge Paul Patton
Taylor County Judge/Executive
Campbellsville, KY

Comments:

- He has no change or preference from our previous meeting.
- He supports a four-lane highway along the existing route.
- Do the bypasses first and then other segments, as funding is available
- Bypass in Columbia is really needed due to the congestion there.

Transcribed By: Ted Noe
Project Manager
Kentucky Department of Highways
Division of Planning
Frankfort, KY

PBusiness Purcell's Products
advanced technology vacuum service

DIV OF PLANNING

[illegible] AUG -11 A 10:32

August 3, 2004

Ms. Annette Coffey
Division of Planning
Kentucky Transportation Cabinet
200 Metro Street
Frankfort, KY 40622

Ms. Coffey

I can tell me thank you for including me in the information process in the Heartland Parkway project. I have taken several hours to personally study the different options as well as have discussed them with several citizens of Campbellsville.

I believe that Option 2 would best serve this area in the future. I understand that the additional costs of this very is Option 3 are severe. But as we look to the distant future if this area continues to grow I feel the need for a four-lane facility is the best option. The only concern I have is that the bypasses around Campbellsville, Columbia and Lebanon need to be fully controlled access. I believe this is necessary to protect the business life of the communities. With fully controlled access the local communities would have better control of planned growth in the future.

If you have further questions feel free to call me at any time.

Respectfully,

Dania R. Hayes
President

[illegible] Fort Street, Campbellsville, Kentucky [illegible] Phone: (270) [illegible] or [illegible] [illegible]
www.purcells.com

On: August 5, 2004

Time: 9:15 a.m.

From: Second Coordination Letter

For: Heartland Parkway Alternatives Study

By: Teddy Boone
Springfield Water Company
Springfield, KY
Phone 859 336 5454

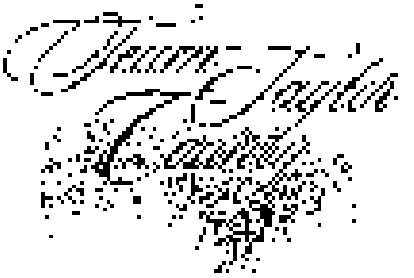
Comments:

- Mr. Boone's comments: Springfield has a new water line from Wilsburgh Lake to Springfield along the west side of KY 555. The east side of KY 555 has a domestic water line on private property and right of way. One or both of these will probably have to be relocated if the roadway is widened.

- Mr. Boone also noted that there is a fiber optic line from KY 55 south to Springfield along KY 555. And there are sewer lines and natural gas lines along the roadway within the city limits of Springfield.

- Mr. Boone prefers Option 3 with a one mile passing lane every three miles because this option has the least cost and least disruption to the water utility.

Transcribed By: Ted Noe
Project Manager
Kentucky Department of Highways
Division of Planning
Frankfort, KY



Industrial Development Authority

7 September 2001

Hon. Maxwell C. Bailey
Secretary
Kentucky Transportation Cabinet
200 Mero Street
Frankfort, Kentucky 40622

Dear Sec. Bailey

On behalf of the Campbellsville Taylor County Industrial Development Authority (Team Taylor County) Board of Directors, I wish to convey to you a recent action taken by the Board. We have unanimously endorsed Option 2 for the proposed Heartland Parkway.

I know that you are aware of our continuing interest in this vitally important transportation project. This project will significantly enhance the economic well being of the entire region. As the Economic Impact Study conducted by Youngen Associates Inc. states, this project will assist with the creation of more than 7000 new jobs in commerce, have opened alone with an economic impact exceeding $2 billion.

We appreciate the support you and the Governor expressed during the recent Team Meeting in Somerset via the CenterNet system. As the scoping study comes to an end we are looking forward working with you and the Cabinet to make this project a reality.

Best,

John E. Choinang
Chairman

Kevin T. Shelley
Executive Director/CEO

C: Hon. Ron Lewis, Congressman, Kentucky 2nd District
Hon. Dick Murgatroyd, Deputy Secretary, Transportation Cabinet
Hon. Paul W. Patton, Judge Executive, Taylor County
Hon. Brenda Allen, Mayor, City of Campbellsville
Ms. Annette Coffey, Director, Division of Planning, Transportation Cabinet
Mr. Ted Noe, Division of Planning, Transportation Cabinet
Mr. Gary Raymer, Chief District Engineer, District 4, Transportation Cabinet
Mr. Phil Hamburg, Engineer, WMS Consulting Engineering

UK

UNIVERSITY OF KENTUCKY

DIV OF PLANNING

[illegible]

Kentucky Geological Survey
Jerome and Graduate Studies
228 Mining and Mineral Resources Building
Lexington, KY 40506-0107
Phone: (859) 257-5500
Fax: (859) 257-1147
www.uky.edu/kgs

June 28, 2004

Annette Coffey, P.E.
Director
Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, Kentucky 40622

Dear Ms. Coffey:

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

Adair, Green, Marion, Taylor, and Washington Counties
Heartland Parkway, Wilkinson Junction from The Louis B. Nunn (Cumberland) Parkway to the Martha L. Collins (Blue Grass) Parkway
Item No. 4 – 137.00

Physiographic Region

This project area is in the Mississippian Plateau, Muldraugh Hill, Knobs, and Outer Bluegrass physiographic regions, which are underlain by limestone, sandstone, siltstone, shale, gravel, sand, silt, and clay.

Karst Potential

This project area probably would encounter karst features such as sinkholes and caves.

Landslide Potential

This project area would encounter shale and clay which are highly susceptible to slumping when they become wet. In section 6 of the yellow corridor and its associated red corridor. This is not to be is particularly prevalent on steep slopes.

Unconsolidated Sediments

This project area would encounter unconsolidated sediments such as silt and clay in drainage areas. Some unconsolidated material may be suitable for construction stone.

Resource Conflicts

This project area might encounter resource conflicts such as prior ownership of property for [illegible] or mining, and oil and gas wells.

KGS

Materials Suitability

This project area would [illegible] limestone units that would be suitable as construction stone; beware of the short content and its varying physical properties. Several abandoned limestone quarries are in the area. The shales [illegible] in section 5 of the yellow corridor and its associated red corridor have pyritic zones in either wallets or solid lies, which when exposed to the surface elements are prone to oxidation and expansion and [illegible] in structures and roads.

Fault Potential

This project area would encounter faulted areas in section 6 of the yellow corridor and its associated red corridor. There is potential to come across some minor faults in sections 7 and 8 of the yellow corridor and its associated red corridor.

Earthquake Ground Motions

This project [illegible] probable peak ground acceleration (PGA) due to earthquake ground motion of 0.09g. There would be a very low potential for liquefaction or slope [illegible] in the unconsolidated sediments at or near streams caused by earthquake [illegible] ground motion.

Sincerely,

Richard A. [illegible]
Geologist

cc: Mike [illegible]

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
and Prevention (CDC)
Atlanta GA 30333

CITY OF PLANNING

2004 AUG 20 A 11:12

August 17, 2004

Annette Coffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, Kentucky 40622

Dear Ms. Coffey:

This is in response to your letter of July 27, 2004 requesting our agency's input and comments on any concerns that could affect the development of the Alternatives Study (Item No. 4-132.00) for the Widening/Relocation from the Louie B. Nunn Cumberland Parkway to the Martin Luther King Bluegrass Parkway. We are responding on behalf of the Department of Health and Human Services (DHHS), U.S. Public Health Service.

While we have no project specific comments to offer at this time, we do recommend that the topics listed below be considered during the NEPA process along with other necessary topics and addressed, if appropriate. Mitigation plans which are protective of the environment and public health should be described in the DEIS whenever warranted.

AREAS OF POTENTIAL PUBLIC HEALTH CONCERN:

I. Air Quality
- dust control measures during project construction, and potential release of air toxics
- potential process air emissions after project completion
- compliance with air quality standards

II. Water Quality/Quantity
- special consideration on private and public potable water supply, including ground and surface water resources
- compliance with water quality and waste water treatment standards
- ground and surface water contamination (e.g. runoff and erosion control)
- body contact recreation

III. Wetlands and Flood Plains
- potential contamination of underlying aquifers
- conservation within flood plains which may endanger human health
- contamination of the food chain

IV. Hazardous Materials/Wastes
- identification and characterization of hazardous/contaminated sites
- safety plans/procedures, including use of pesticides/herbicides; worker training
- spill prevention, containment, and countermeasures plan

V. Non-Hazardous Solid Waste/Other Materials
- any unusual effects associated with solid waste disposal should be considered

VI. Noise
- identify projected elevated noise levels and sensitive receptors (i.e. residential, schools, hospitals) and appropriate mitigation plans during and after construction

VII. Occupational Health and Safety
- compliance with appropriate criteria and guidelines to ensure worker safety and health

VIII. Land Use and Housing
- special consideration and appropriate mitigation for necessary relocation and other potential adverse impacts to residential areas, community cohesion, community services
- demographic aspects, sensitive centers (e.g. hospitals, nursing homes, day care centers, schools
- consideration of beneficial and adverse long term land use impacts, including the potential influx of people into the area as a result of a project and associated impacts
- potential impacts, non-vector control should be considered

IX. Environmental Justice
- federal requirements emphasize the issue of environmental justice to ensure equitable environmental protection regardless of race, ethnicity, economic status or community, so that no segment of the population bears a disproportionate share of the consequences of environmental pollution attributable to a proposed project. (Executive Order 12898)

While this is not intended to be an exhaustive list of possible impact topics, it provides a guide for typical areas of potential public health concern which may be applicable to this project. Any health related topic which may be associated with the proposed project should receive consideration when developing the draft and final EISs. Please Remember is with one copy of the draft document when it becomes available for review.

Sincerely yours,

Paul Jones, PO, MPH
Medical Officer
National Center for Environmental Health (F16)
Centers for Disease Control & Prevention

U.S. Department of Homeland Security

United States Coast Guard

Commander
Eighth Coast Guard District

1222 Spruce Street
St. Louis, MO 63103-2832
Staff Symbol: [illegible]
Phone: (314) 539-3900 Ext. 2379
Fax: (314) 539-3799
[illegible]

DIV OF PLANNING
[illegible]

10591 Hillcrest Pkwy
September 22, 2001

Ms. Annette Coffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
W3-05-01
200 Vero Street
Frankfort, KY 40622

Subj: ALTERNATIVES STUDY, HEARTLAND PARKWAY, KENTUCKY

Dear Ms. Coffey

Please refer to your letter dated July 22, 2001. The following waterways were evaluated and pursuant to the Coast Guard Authorization Act of 1982, these are not waterways over which the Coast Guard exercises jurisdiction for bridge permit purposes. Coast Guard bridge permits are not required.

Green River (Taylor County)
Butlers Branch
Buckhorn Creek
Hammond Creek
Servant Run
Road Run Creek
Mays Creek
Long Lake Creek
Russell Creek
Pinch Creek
State Creek
Crowright Creek
Road Run Branch
Beech Fork
Rolling Fork River

Sincerely,

ROGER K. WIEBUSCHE
Bridge Administrator
By direction of the District Commander

U.S. Department of Homeland Security
United States Coast Guard

Commander
Upper Coast Guard District

1222 Spruce Street
St. Louis, MO 63103-2000
Staff Symbol: obr
Phone: [illegible]
Fax: [illegible]
Email: [illegible]

DIV OF PLANNING

[illegible] 18 A D 59

16591 LKY
August 13, 2004

Ms. Annette Coffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
Division of Planning, WB-06-01
200 Mero Street
Frankfort, KY 40622

Sub: ALTERNATIVES STUDY, HEART AND PARKWAY, KENTUCKY

Dear Ms. Coffey:

This is to confirm an August 11, 2004, telephone conversation between Mr. Ted Noe of your office and myself.

During that conversation I stated that the study shows there will be 18 bridges involved in the project. I then asked how many of those bridges would cross bodies of water (approx. to those that will cross other roads and railroads). Mr. Noe replied that those questions would have to be researched and that he would get back to me as soon as possible.

As soon as I receive Mr. Noe's reply, I will be able to complete my review of the study and offer any pertinent comments. If you need further information, please call me at the above telephone number.

Sincerely,

BRUCE L. MCLAREN
Project Manager
By direction of the District Commander

Add this Letter

DIV OF PLANNING

2024 AUG 19 P 1:38

KENTUCKY TRANSPORTATION CABINET
[illegible] 40622
www.kentucky.com

[illegible]
Governor

[illegible]
Secretary

July 22, 2024

Ms. Brenda Patterson
108 Carlisle Avenue
Greensburg, KY 42743

Dear Ms. Patterson:

Subject: Alternatives Study
Adair, Green, Marion, Taylor, and Washington Counties
Heartland Parkway, Widening and/or Relocation from the Louie B. Nunn Cumberland Parkway to the Martha L. Collins Bluegrass Parkway
Item No. 4-132.00

The Kentucky Transportation Cabinet is requesting your agency's input and comments on alternatives that are being considered for a proposed highway project.

The Kentucky Transportation Cabinet has assembled a study team to evaluate the proposed widening and/or relocation of the Heartland Parkway in Adair, Green, Marion, Taylor, and Washington Counties from the Louie B. Nunn Cumberland Parkway to the Martha L. Collins Bluegrass Parkway. This study is currently in the data-gathering stage.

We ask that you identify specific issues or concerns of your agency that could affect the development of the project. This planning study will include a scoping process for the early identification of potential alternatives, 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.

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

Issues & Concerns -

1) Lack of economic development in Green vs. Taylor, Adair, Marion and Washington Counties.

2) This lesser amount of economic development due to extremely limited highway (AMA) access.

(Dice)

An Equal Opportunity Employer M/F/D

3) closing of industry in Green County

4) Tourism development limited - Attractions are here, but highway access is limited.

5) Our agricultural economy is beginning to diversify - but needs improved roads - why build a road through this area and a by-pass, Green County's needs for the future?

6) If a by-pass is built to Greensburg - all counties in this Heartland area will have modern - and safer and improved roads.

7) A by-pass to Greensburg could connect to the Green County Industrial Park which could then go to the Nonn Parkway. Option 2 + 3 do not include any help for Green County. This project will probably be the last in this area of Ky. for many years and should provide good highways to as many counties and people as possible.

8) I believe the logical, practical and most beneficial way to build this proposed road is to extend the Heartland Parkway into Green County by Hwy. 68 to the new highway 61 to Columbia/Adair County. This would give every county access to 2 parkways, interstate access and is the only way citizens in Green County will be helped by building the Heartland Parkway.

Please - Do Not Big-Pass as Again - [illegible] Patterson
Greensburg City Council

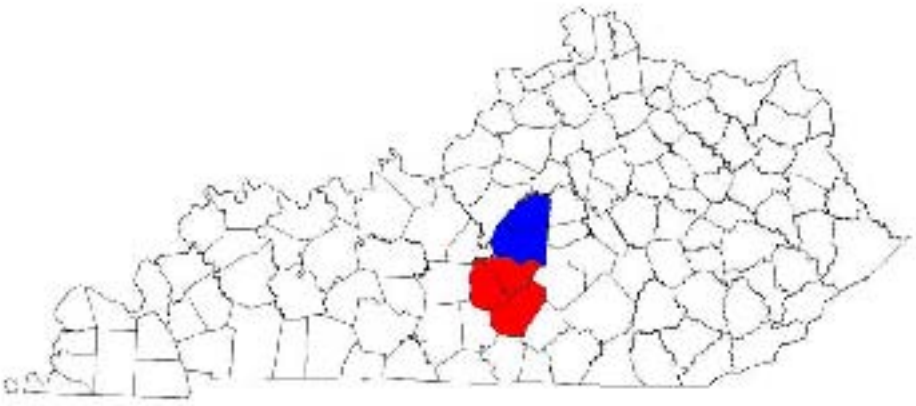
APPENDIX H.
ENVIRONMENTAL JUSTICE

Environmental Justice and Community Impact Report

Heartland Parkway

KY 555, US 68, & KY 55 from the Louie B. Nunn Cumberland Parkway to the Martha L. Collins Bluegrass Parkway

August 2004



Prepared by

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Appendices

Appendix A. *Planning Study Contact List*

Appendix B. *Methodology for Assessing Potential Environmental Justice*

Appendix C. *Census Tracts and Block Groups (Maps)*
Figure 5.3 – 5.4

Appendix D. *Census Tracts and Block Groups (Tables)*
Population by Race (Figure 6.0 – 6.5)
Population by Poverty Level (Figure 7.0 – 7.5)
Population by Age (Figure 8.0 – 8.5)

1.0 Introduction

This document assesses the community demographics involved in the proposed project, a new route and/or reconstruction of segments of (US 68, KY 55, and KY 555) also known as the Heartland Parkway, from the Louie B. Nunn Cumberland Parkway to the Martha L. Collins Bluegrass Parkway. The Lincoln Trail Area Development District (ADD) in a collaborative effort with the Lake Cumberland Area Development District have analyzed and prepared the following document to identify any concentration of population that could be displaced or segmented as result of the proposed project. The data displayed in this report has been compiled from a number of sources including the U.S. Census Bureau, Kentucky State Data Center, Kentucky Transportation Cabinet (KYTC) Division of Planning, local elected officials, community leaders, and field observations of the study area. The information and results are intended to assist the Kentucky Transportation Cabinet in making informed and prudent transportation decisions in the study area, especially as it pertains to the requirements of Executive Order 12898[1], to ensure equal protection to all groups potentially impacted by this project.

This report includes maps and tables of statistical comparisons of the study area based on US Census 2000 tracts and block groups with regard to minority, low-income, and aging populations for the United States and Kentucky (Adair, Green, Taylor, Marion, and Washington Counties.) The study area includes tracts and block groups directly in and around portions of the defined area. For the purpose of this report, the study area has been divided into a northern corridor and a southern corridor. A map *(Figure 1.1)* on the following page depicts both corridors encompassed by the Heartland Parkway study area.

Northern corridor *includes:*

Marion County
Washington County

Southern corridor *includes:*

Adair County
Green County
Taylor County

[1] Executive Order 12898 signed on February 11, 1994 states "…each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations…"

2.0 What is Environmental Justice?

The U.S. EPA Office of Environmental Justice (EJ) defines EJ 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."

A disproportionately high and adverse effect on a minority or low-income population means an adverse effect that:

1. is predominately borne by a minority population and/or low-income population, or

2. will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

2.1 Definitions

USDOT Order 5610.2 on EJ, issued in the April 15, 1997 Federal Register defines what constitutes low income and minority populations.

- Low-Income is defined as a person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.
- Minority is defined as 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 is defined as 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 program, policy or activity.

- Minority Population is defined as any readily identifiable group of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons who will be similarly affected by a proposed program, policy or activity.

EO 12898 and U.S. DOT Order 5610.2 do not address consideration of the elderly population. However, the U.S. DOT encourages the study of these populations in EJ discussions and 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 this study includes statistics for persons age 65+ that are within the study and comparison areas.

3.0 Methodology

For this study, data was collected by using the method outlined by the KYTC document, "Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies".

The primary sources of data were the US Census Bureau, Kentucky State Data Center, local elected officials, community leaders, and field observations. Statistics were collected to present a detailed analysis of the community conditions for the Heartland Parkway study area.

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 or statistically equivalent entity delineated for data presentation purposes by a local group of census data users or the geographic staff of a regional census center in accordance with Census Bureau guidelines. CTs generally contain between 1,000 and 8,000 people. CT boundaries are delineated with the intention of being stable over many decades, so they generally follow relatively permanent visible features. They may also follow governmental unit boundaries and other invisible features in some instances; the boundary of a state or county is always a census tract boundary."

- Block Group (BG) - “A statistical subdivision of a CT. A BG consists of all tabulation blocks whose numbers begin with the same digit in a CT. BGs generally contain between 300 and 3,000 people, with an optimum size of 1,500 people.”

- Census Block (CB) – “An area bounded on all sides by visible and/or invisible features shown on a map prepared by the Census Bureau. A CB is the smallest geographic entity for which the Census Bureau tabulates decennial census data.”

5.0 Study Findings/Study Area

This Environmental Justice and Community Impact Report should be utilized as a component of the planning study being conducted by Kentucky Transportation Cabinet’s Division of Planning, for a potential new route and/or reconstruction of segments of the proposed project known as the Heartland Parkway, from the Louie B. Nunn Cumberland Parkway to the Martha L. Collins Blue Grass Parkway. This study is intended to help define the location and purpose of the project and meet federal requirements regarding consideration of environmental issues as defined in the National Environmental Policy Act (NEPA).

5.1 Northern Corridor (Figure 5.1)

The Northern Corridor study area includes seven Census Tracts and fifteen different Block Groups. Detailed data of Census Tracts and Block Groups are located in *Appendix D* of this document. The Northern Corridor Census Tracts and Block Groups are listed below. (*Appendix C* includes maps)

Marion County:

Tract: 9702	Tract: 9703	Tract: 9705
BG: 1,2,3 & 4	BG: 1	BG: 2

Tract: 9707
BG: 1 & 4

Washington County:

Tract: 9801	Tract: 9802	Tract: 9803
BG: 1 & 2	BG: 2, 3, 4, & 5	BG: 1

5.2 Southern Corridor (Figure 5.2)

The Southern Corridor portion of the study area contains thirty-one Block Groups within ten Census Tracts. This section of corridor includes three counties: Adair, Green and Taylor. Tables located in *Appendix D* reflect data analyzed for these counties in the study area. The Southern Corridor Census Tracts and Block Groups are listed below. (*Appendix C* includes maps)

Adair County:

Tract: 9702	Tract: 9704	Tract: 9705
BG: 1	BG: 1, 2, 3, 4, 5, & 6	BG: 1 & 2

Green County:

Tract: 9902	Tract: 9904
BG: 1 & 4	BG: 1

Taylor County:

Tract: 9801	Tract: 9802	Tract: 9803	Tract: 9804
BG: 2	BG: 1, 2, & 3	BG: 1, 2, 3, & 4	BG: 1, 2, 3, & 4

Tract: 9805
BG: 1, 2, 3, 4, 5, 6 & 7

6.0 Study Findings / Population by Race

Census Tracts and block groups were reviewed to determine if any significant minority populations in the study area could potentially be impacted by the proposed project. The comparison between the United States, Kentucky, and five counties within the study area has been assessed below. According to the U.S. Census 2000, Kentucky has 15.6 percent higher population of whites living within the Commonwealth than the national average of 75.0 percent. (See Figure 6.0)

6.1 Adair County (Figure 6.1)

The defined study area in Adair County encompasses portions of the following Census Tracts: 9702, 9704, and 9705. The following is a compilation of pertinent information related to the Environmental Justice Concerns. LCADD Staff met with local officials and community members to review maps and Census data related to the study. The intent of these discussions was to confirm previous conclusions and solicit input into the process of developing the Environmental Justice Report.

The majority of Census Tracts and Block Groups in the study area contain minority populations that are considerably less than the national, state, and

county averages. However, there are a few particular Block Groups in the study area that warrant further discussion.

As indicated in Figure 6.1 Census Tract 9704 has a percentage of Black population of 5.8 percent, which exceeds the county average of 2.8 percent, but is considerably less than the national and is comparable with state averages. Block Group 4 in Tract 9704 contains a percentage of Black population of 17.1 percent. Block Group 5 in Tract 9704 contains a percentage of Black population of 9.5 percent. Block Group 2 in Tract 9704 contains a percentage of Black population of 7.7 percent. Block Group 3 in Tract 9704 contains a percentage of Black population of 4.39 percent. Other Block Groups in Tract 9704 located in the study area have percentages well below the county average. Although the percentage of black population in Block Group 2 and Block Group 3 are higher, the county is comparable with or below the state averages. Block Group 4 and Block Group 5 are entirely within the city limits of Columbia. Reconstruction of the existing road or construction of a bypass around the City of Columbia would have no adverse affect on the minority population.

Meetings with local officials and community members resulted in the conclusion that additional concentrations of minorities are not located in the study area; therefore, it is anticipated that the implementation of this project would not have a disproportionate effect on minorities residing in the proposed study area.

6.2 **Green County** (Figure 6.2)

The defined study area within Green County encompasses portions of the following Census Tracts: 9902 and 9904. The population by race percentages for Green County is comparable to those of the counties in the study area and considerably lower than the national and state averages. Based on the census data, there appears to be no concentrations of minorities in this specific study area.

6.3 **Taylor County** (Figure 6.3)

The defined study area within Taylor County encompasses portions of the following Census Tracts: 9801, 9802, 9803, 9804, and 9805. Taylor County's population by race percentages are lower than the national and state averages. However, there is one Census Tract and a few particular Block Groups in the study area that warrant further discussion.

Track 9805, indicates higher percentages of minority populations than the state. However, the track is lower percentages compared to national levels. Upon review and discussion with local community members, the higher concentration occurs in three out of six Block Groups: Block Group 1, Block Group 2, and Block Group 3. There is a concentration of Black population in Block Group 2 of 36.6 percent, which is higher than the remainder of Census Tract 9805. Also areas of

Block Group 1 and Block Group 3 that are adjacent to Block Group 2 show similar levels. These Block Groups are located within the older sections of the City of Campbellsville.

The reconstruction of the existing route or the construction of the Bypass around the south east side of the City of Campbellsville should not have an adverse affect upon the minority concentration if constructed in the area it is currently planned.

6.4 **Marion County** (Figure 6.4)

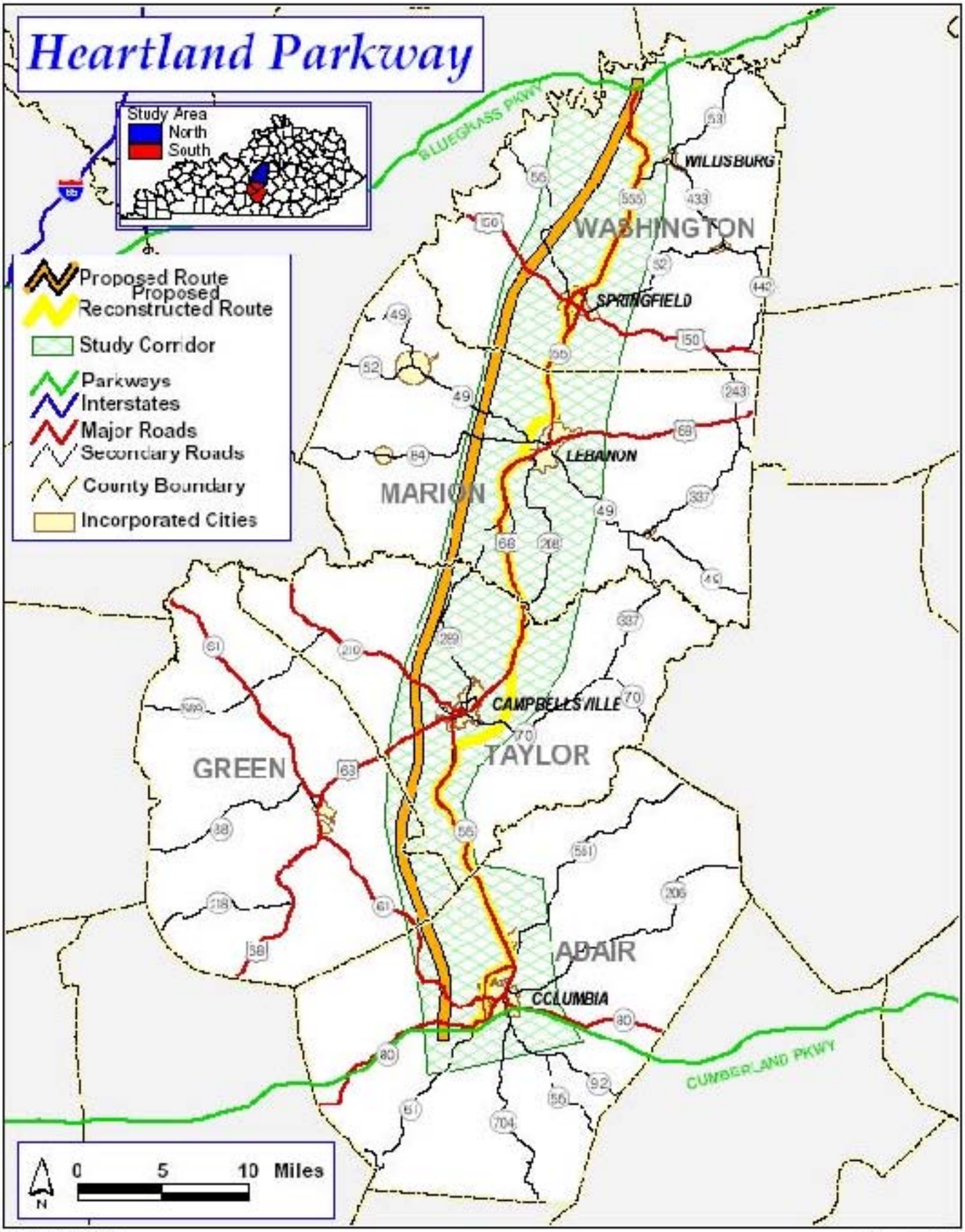
Figure 6.4 indicates that Marion County is comparable to the state average of minority population containing 90.2 percent white inhabitants. However, two Census Tracts contain elevated percentages of minorities that are Black. Census Tract 9702 is 17.1 percent, and is considerably higher than the state level of 7.3 percent. Block Groups in this tract that show significantly higher percentages include: Block Groups 1, 2, 3, & 4. Census Block Group 1 (City of Lebanon, northwest section) is 21.7 percent black and is 9.5 percent higher than the national average. Block Group 2, 3, & 4 (City of Lebanon) are approximately 16.2 percent minority and are potential high percentages. Consultation with local officials and community members confirm that high percentages are normal levels for the study area. Census Tract 9703 (St. Mary Community) also indicates high minority percentages. Block Group 1 (Frogtown Road) shows a high percentage of Blacks inhabiting this rural community. The project should not displace this or any other minority communities in the study area.

6.5 **Washington County** (Figure 6.5)

Figure 6.5 indicates that 91.9 percent of the inhabitants of Washington County are white. The highest percentages of minorities in Washington County occur in Tract 9802, which includes the City of Springfield. The Tract contains higher percentages of residence of black descent when compared to the other Tracts. Discussions with the local officials and community members confirm, that most minorities live in or around the city limits. No minorities will be impacted by the proposed project. Findings conclude no concentrations of minority population are present in the study area.

7.0 Study Findings / Population by Poverty Level

It is evident that a high percentage of population below poverty level is a universal issue that occurs throughout the entire Commonwealth, as well as other counties in this study area. The chance of encountering significant concentrations of populations falling under this distinction is very likely. It should also be noted that these percentages are comparable to many surrounding counties in this particular section of Kentucky. All of the counties within this study area are often identified as economically distressed due to high



LTADD20041109

Figure 1.1

unemployment rates and the unavailability of quality employment opportunities. The proposed connector route is viewed by many local officials and community members as a project that could potentially be beneficial for further economic growth and development; thereby improving conditions for the residents that currently live below poverty levels. (See Figure 7.0)

7.1 **Adair County** (Figure 7.1)

The percentage of the population below poverty level for Adair County and all Census Tracts in the study area significantly exceeds state and national averages. Percentages of population below the poverty level in these Tracts range from a low of 18.1 percent to a high of 27.3 percent. A review of additional data shows that all Block Groups in the study area exceed the state and national averages for the percentage of population below the poverty level, and these percentages range from 17.5 percent to 29.7 percent. The State average is 15.4 percent and the national average is 12.1 percent. No concentration of poverty populations will be adversely impacted by the proposed project.

7.2 **Green County** (Figure 7.2)

The defined study area within Green County encompasses portions of the following Census Tracts: 9902, 9904. The percentage of the population below poverty level for the census tracts in Green County is also significantly higher than national average. Percentages in the Green County Tracts range from a low of 14.7 percent to a high of 19.8 percent. A review of Block Group 1 and Block Group 4 in Census Tract 9902, and Block Group 1 in Census Tract 9904, which are in or near the study area, shows poverty levels below the state and national average. Therefore, the proposed parkway route would have no adverse affect to the percentage of the population below the poverty level. The proposed parkway route could potentially be beneficial for further economic growth and development; thereby improving conditions for the population of the county that currently is declared below poverty level. Following the selection of a preferred alternate for this proposed roadway, LCADD Staff recommends that a subsequent review of poverty data within affected Census divisions be undertaken to determine if particular concentrations of population below the poverty level exist in the project area; and if so, proactive measures be undertaken to insure that these groups are not disproportionately affected by the project.

7.3 **Taylor County** (Figure 7.3)

The defined study area within Taylor County encompasses portions of the following Census Tracts: 9801, 9802, 9803, 9804, and 9805. Three of the five Census Tracts within the study area are comparable or below the state and national average, Census Tracts: 9801, 9803, and 9804. However, there are block groups in those tracts that are higher than the state and national averages. They include Block Group 3, and Block Group 4, of Census Tract 9803, and

Block Group 2, and Block Group 3 of Census Tract 9804. Both Tracts remain consistent with other percentages in the region.

Census Tract 9802 has a higher percentage for the population below poverty level than the state or national average. Upon further analysis, Block Group 2 is the only Block Group in of Census Tract 9802 in the study area. The Block Group is 19.5 percent of population below poverty level.

Census Tract 9805 has the highest percentage of the population below poverty level in the Taylor County study area at 24.8 percent. That percent is double the national average. Block Group 1, Block Group 4, Block Group 6, and Block Group 7, range from a low of 13.0 percent to a high of 24.5 percent and is comparable to the state and regional averages. Block Group 2, 38.1 percent and Block Group 3, 51.6 percent has a high average of population below poverty level. Although higher than the state and nation, these levels are comparable to the entire study area and the percentages of all the Block Groups.

Again, upon the selection of a preferred alternate for this proposed roadway, a subsequent review of poverty data within the affected census tracts should be undertaken to determine if particular concentrations of population might be adversely affected.

7.4 **Marion County** (Figure 7.4)

Figure 7.4 indicates the population residing in Marion County is 26.1 percent below poverty level. Percentages at state and national levels remain lower. Poverty levels in Marion County reflect those across the Commonwealth. Tract 9702 has 23.6 percent of the total population below poverty. In this Tract, Block Group 1 has 53.6 percent of the population below poverty levels. This Block Group is located on the northeast side of downtown Lebanon and has been identified as mainly local businesses. Block Group 2 has 21.2 percent below poverty levels. This Block Group is also located within the City of Lebanon boundaries. The population in Census Tracts 9707 is 20.2 percent below poverty level. Block Group 1 is 32.6 percent below poverty. Consultations with local officials and community members confirm that significant portions of the populations in Marion County live in rural areas on farms. No concentration of poverty populations will be adversely impacted by the proposed project.

7.5 **Washington County** (Figure7.5)

Figure 7.5 indicates the population in Washington County is 23.5 percent below the poverty level. When compared to state and national averages this percentage is potentially high. Poverty levels in Washington County are comparable to those across the Commonwealth. Block Groups 3 and 5 in Census Tract 9802 show elevated percentages when compared to other county levels. These Block Groups are located within the City of Springfield. No

concentrations of population below poverty level have been identified while researching and preparing this report.

8.0 Study Findings / Population by Age

Census Tracts and block groups were analyzed to determine if any, significant segments of the population sixty-five or older are concentrated in the study area. The comparison between the United States, Kentucky, and five counties within the study area has been determined below. According to the U.S. Census 2000, 12.4 percent of the population in the United States is age sixty-five or older. The Kentucky percentage of the population age sixty-five or older is 12.5 percent. (See Figure 8.0)

8.1 **Adair County** (Figure 8.1)

The defined study area within Adair County encompasses portions of the following Census Tracts: 9702, 9704, and 9705. Adair County percentages for the population by age are similar to those of surrounding counties, the state and nation. The Census Tracts are also comparable. The data indicates potential concentrations in Census Tract 9704. The city of Columbia is within this Census Tract. Census Tract 9704, Block Group 4 of 39.1 percent has a high percentage of population 65 and over. This is much higher than the Census Tract percentage of 17.4. Adair County's aging population is 14.6 percent and comparable to the state 12.5 percent and the nation 12.4 percent. Local officials and community members explained that high percentages are mainly the result of Summitt Manor Nursing Home that is not impact by the proposed project. This concentration of aging populations will not be adversely impacted by the proposed project

8.2 **Green County** (Figure 8.2)

The defined study area within Green County encompasses portions of the following Census Tracts: 9902 and 9904. Census Tract 9902 Block Group 4 has 25.6 percent age 65 or older, an elevated average compared to state and national levels. This concentration of aging populations will not be adversely impacted by the proposed project

8.3 **Taylor County** (Figure 8.3)

The defined study area within Taylor County encompasses portions of the following Census Tracts: 9801, 9802, 9803, 9804 and 9805. Most Census Tracts are comparable to state and national averages. However, there are some elevated percentages of groups age 65 and over in three Census Tracts; Census Tract 9803 Block Group 3, Census Tract 9804 Block Group 2 and Census Tract 9805 Block Group 2 indicate elevated averages. Census Tract 9803 Block

Group 4 shows potential higher levels of aging population, 23.0 percent. This Census Tract is located between Census Tract 9803 Block Group 3, which is 33.3 percent, and Census Tract 9805 Block Group 2, which is 31.9 percent. Another tract that indicates elevated levels is Census Tract 9805 Block Group 7, which is 26.6 percent. Census Tract 9804 Block Group 2 is 21.3 percent. After discussions with other community members, it appears that the higher percentages are the result of older sections of the City of Campbellsville. Reconstruction of KY 55 or the Campbellsville Bypass should have no affect on this age group.

8.4 Marion County (Figure 8.4)

Figure 8.4 indicates that Census Tracts in Marion County contain comparable percentages of an aging population to state and national levels. However, Tract 9702 in Marion County contains a higher percentage of aged population than state and national percentiles. Block Group 1 contains 27.3 percent compared to the 12.5 percent state and 12.4 percent national level. Block Group 2 is 22.6 percent and is considered to be at elevated levels when compared to other block groups. Block Group 3 shows that 14.6 percent of the population is sixty-five or over and is a comparable average. Further examination of the area confirmed the higher levels of aged population are the result of nursing home facilities or rural/family owned farms located within the Census Tracts. No concentration of aging populations will be adversely impacted by the proposed project.

8.5 Washington County (Figure 8.5)

Figure 8.5 indicates that Washington County has a higher percentage of aging population sixty-five or older than state and national averages. Closer review reveals that Washington County contains considerably higher percentages of elderly population compared to Kentucky and the United State levels. Census Tract 9802 indicates 17.2 percent of population residing there is elderly. This is compared to a 12.5 percent state and 12.4 percent national average. Several block groups contain higher percentages when compared to state and national levels. Block Group 3, 25.5 percent and Block Group 4, 24.0 percent are potential high percentiles of aging population when compared to other Tracts. Consultation with local officials and community members has confirmed that high percentages of aging are the result of Nursing home facilities located in the area. No concentration of aging populations will be adversely impacted by the proposed project.

9.0 Conclusion

Northern Corridor

Potential concentrations of minority populations were identified during the assessment of the study area. Data indicates Census Tracts encompassing the Frogtown Road location shows potential high percentages of Blacks inhabiting

this area. Consultations with community members and local officials confirm the data. The proximity of the community to the proposed project shows no elevated impact to inhabitants of the area.

Data indicate many of the counties in the study area suffer from high levels of poverty. Marion and Washington Counties are no exception to the issue of concentration of low-income residents. Both counties have over twenty percent of the population below the state and national poverty level averages. Farmlands and rural areas in these counties are common factors. High poverty percentages in the urban areas are the probable result of the sparse number of residents in and outside city limits. Currently, no elevated concentrations were identified as the result of this report.

Concentrations of Aging population identified in Marion and Washington Counties were confirmed as the result of aging facilities and family farms located in the study area. Many of the Block Groups discussed are contained within different city boundaries. These Census Tracts consist mainly of local businesses, with a small numbers of residents living in the area. No significant portions of aging populations were identified as a result of the Environmental Justice analysis of the study area.

Southern Corridor

Based on data obtained from the U.S. Census Bureau for income, race and age, discussions with local officials and field observations; it appears there is a small concentration of populations over 65 years of age in Adair and Taylor counties. The concentrations identified in Adair and Taylor counties should not be affected by a new route considering their proximity and previous discussions about possible routes. The elevated percentages in the populations below poverty level might be indicative of concentrations throughout the study area. However, based on the economic status of these rural depressed counties, these percentages are not uncommon for this area. Analysis of the minority population data showed several of the block groups as having an identified concentration of some sort. The more elevated concentrations identified were noted in the narrative analysis of that county.

Appendix A.

Planning Study Contact List

Northern Corridor Contacts List

David R. Hourigan
Marion County Judge / Executive
102 West Main Street
Lebanon, KY 40033
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City of Greensburg
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City of Campbellsville
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Campbellsville, KY 42718

Honorable Jerry Vaughn
Adair County Judge Executive
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Honorable Paul Patton
Taylor County Judge Executive
Taylor County Courthouse
Campbellsville, KY 42718

Honorable Mary Ann Blaydes Baron
Green County Judge Executive
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Appendix B.

Methodology for Assessing Potential Environmental Justice

Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies

Updated: February 1, 2002

The demographics of the affected area should be defined using U.S. Census data (Census tracts and block groups) and the percentages for minorities, low-income, elderly, or disabled populations should be compared to those for the following:

- Other nearby Census tracts and block groups,
- The county as a whole,
- The entire state, and
- The United States.

Information from PVA offices, social service agencies, local health organizations, local public agencies, and community action agencies can be used to supplement the Census data. Specifically, we are interested in obtaining the following information:

- Identification of community leaders or other contacts who may be able to represent these population groups and through which coordination efforts can be made.
- Comparison of the Census tracts and block groups encompassing the project area to other nearby Census tracts and block groups, county, state, and United States percentages.
- Locations of specific or identified minority, low-income, elderly, or disabled population groups within or near the project area. This may require some field reviews and/or discussions with knowledgeable persons to identify locations of public housing, minority communities, ethnic communities, etc., to verify Census data or identify changes that may have occurred since the last Census. Examples would be changes due to new residential developments in the area or increases in Asian and/or Hispanic populations.
- Concentrations or communities that share a common religious, cultural, ethnic, or other background, e.g., Amish communities.
- Communities or neighborhoods that exhibit a high degree of community cohesion or interaction and the ability to mobilize community actions at the start of community involvement.
- Concentrations of common employment, religious centers, and/or educational institutions with members within walking distance of facilities.
- potential effects, both positive and negative, of the project on the affected groups as compared to the non-target groups. This may include, but are not limited to:
    1. Access to services, employment or transportation.
    2. Displacement of persons, businesses, farms, or non-profit organizations.
    3. Disruption of community cohesion or vitality.
    4. Effects to human health and/or safety.

- Possible methods to minimize or avoid impacts on the target population groups.

If percentages of these populations are elevated within the project area, it should be brought to the attention of the Division of Planning immediately so that coordination with affected populations may be conducted to determine the affected population's concerns and comments on the project. Also, with this effort, representatives of minority, elderly, low-income, or disabled populations should be identified so that, together, we can build a partnership for the region that may be incorporated into other projects. Also, we hope to build a Commonwealth-wide database of contacts. We are available to participate in any meetings with these affected populations or with their community leaders or representatives.

In identifying communities, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of analysis may be a governing body's jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as not to artificially dilute or inflate the affected population. A target population also exists if there is (1) more than one minority or other group present and (2) the percentages, as calculated by aggregating all minority persons, exceed that of the general population or other appropriate unit of geographic analysis.

Maps should be included that show the Census tracts and block groups included in the analysis as well as the relation of the project area to those Census tracts and block groups.

Appendix C.

Census Tracts and Block Groups (Maps)

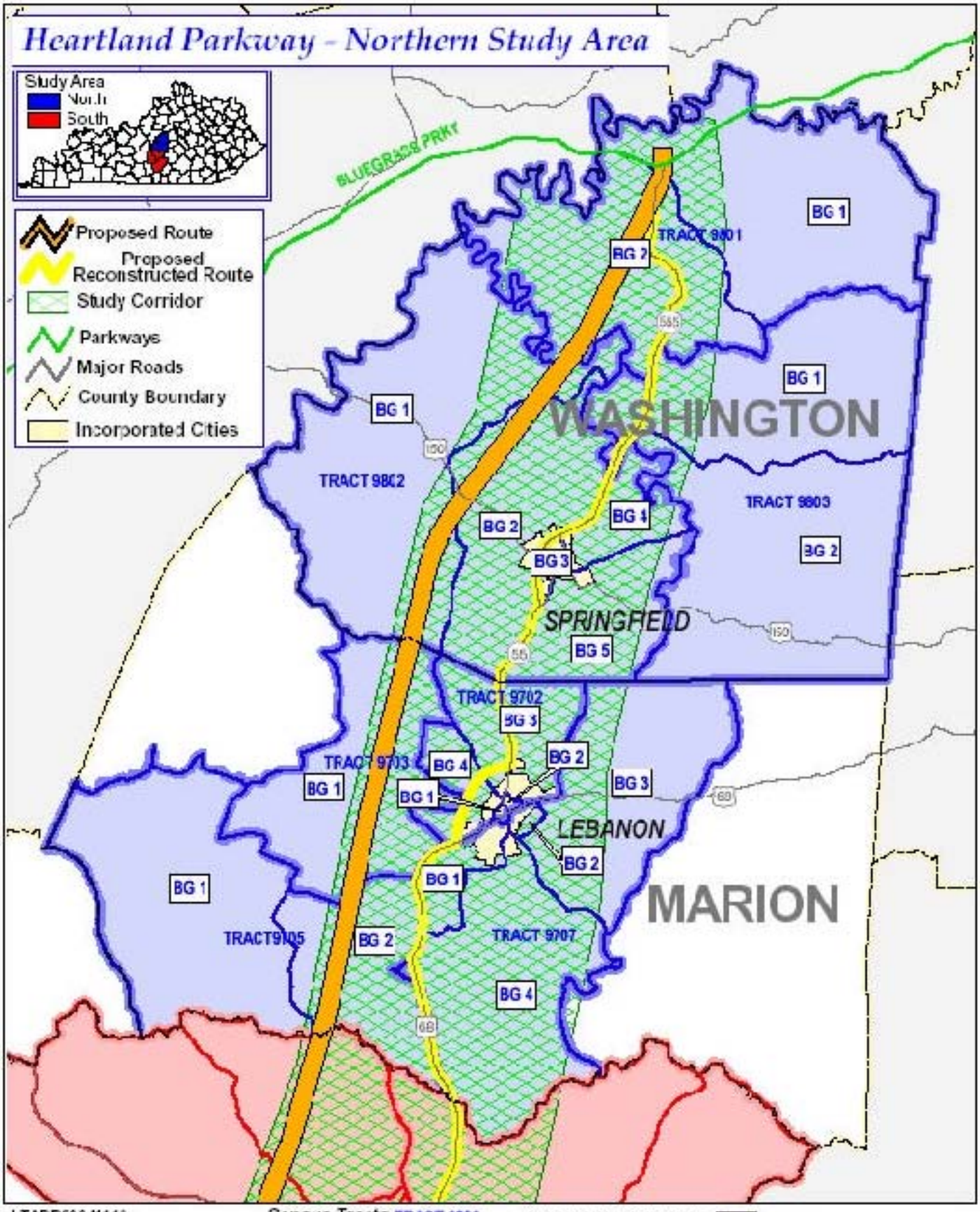
Heartland Parkway - Northern Study Area
Study Area
North
South
Proposed Route
Proposed Reconstructed Route
Study Corridor
Parkways
Major Roads
County Boundary
Incorporated Cities
BLUEGRASS PKWY
WASHINGTON
SPRINGFIELD
LEBANON
MARION
TRACT 9801
TRACT 9802
TRACT 9803
TRACT 9702
TRACT 9703
TRACT9705
TRACT 9707
BG 1
BG 2
BG 3
BG 4
BG 5
LTADD20041110
Census Tracts TRACT 9802
North
South
Census Block Groups BG 1
North
South

Figure 5.1

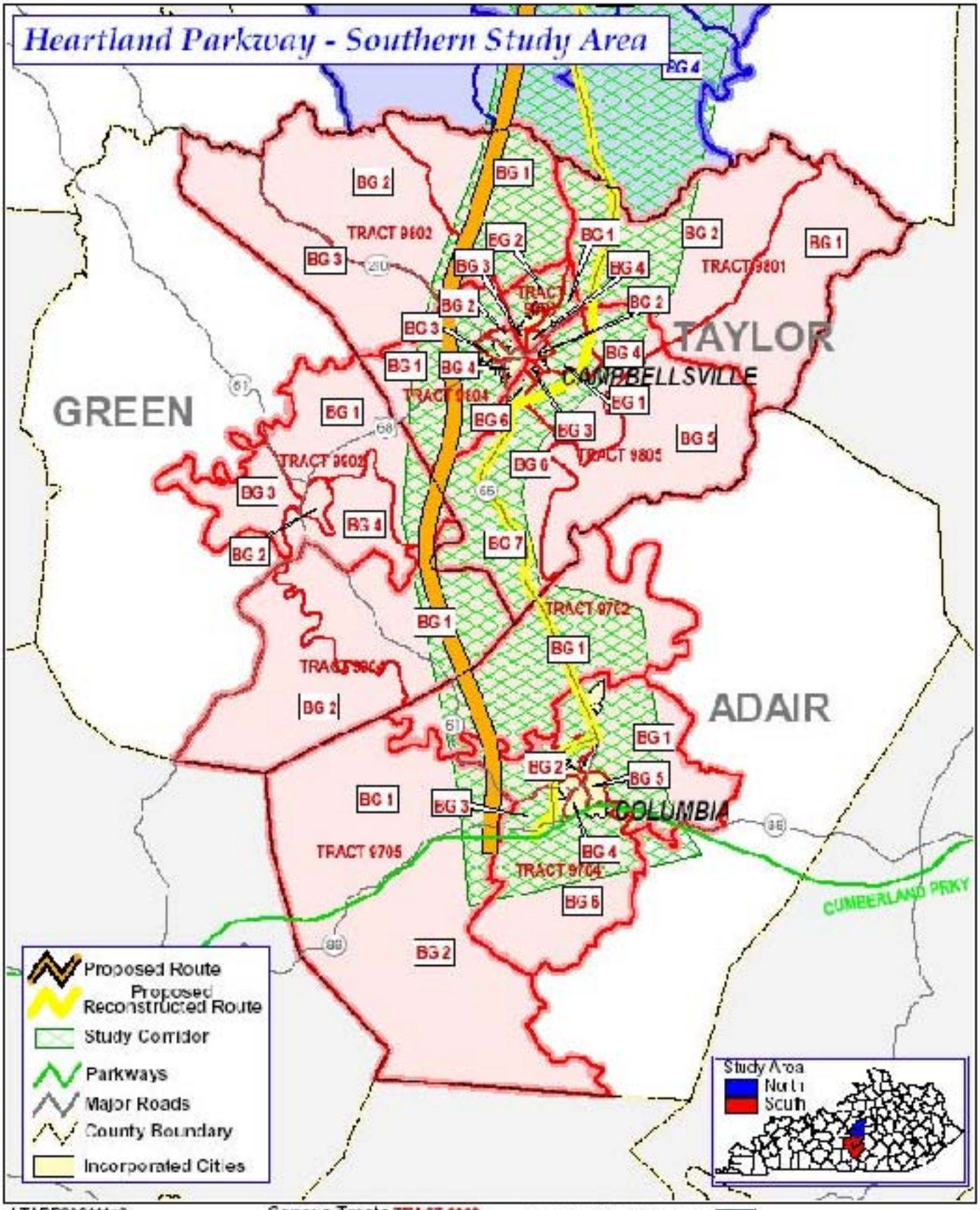
Heartland Parkway - Southern Study Area
GREEN
TAYLOR
ADAIR
CAMPBELLSVILLE
COLUMBIA
CUMBERLAND PKWY
TRACT 9602
TRACT 9603
TRACT 9604
TRACT 9605
TRACT 9701
TRACT 9702
TRACT 9705
BG 1
BG 2
BG 3
BG 4
BG 5
BG 6
BG 7
Proposed Route
Proposed Reconstructed Route
Study Corridor
Parkways
Major Roads
County Boundary
Incorporated Cities
Study Area
North
South
LTADD200411-0
Census Tracts TRACT 9802
North
South
Census Block Groups BG 1
North
South

Figure 5.2

Appendix D.

Census Tracts and Block Groups (Tables)

Comparison Table for 2000 Population By Race: Nation, State, County, City

Figure 6.0

	White	% of Total Pop	Black	% of Total Pop	America Indian	% of Total Pop	Asian	% of Total Pop	Hispanic	% of Total Pop	Other	% of Total Pop	Total Pop.
United States	211,353,725	75.00%	34,361,740	12.2%	2,447,989	0.9%	10,171,820	3.6%	35,238,481	12.5%	15,436,924	5.5%	281,421,906
Kentucky	3,639,725	90.60%	293,915	7.3%	9,080	0.2%	28,994	0.7%	56,414	1.4%	22,116	0.5%	4,041,769
Adair County	16,573	96.11%	479	2.8%	0	0.0%	27	0.2%	103	0.6%	23	0.1%	17,244
Green County	11,168	96.96%	228	2.0%	9	0.1%	49	0.4%	47	0.4%	10	0.1%	11,518
Taylor County	21,436	93.50%	1,200	5.2%	15	0.1%	20	0.1%	175	0.8%	90	0.4%	22,927
Marion County	16,240	90.2%	1,661	9.2%	17	0.1%	80	0.4%	144	0.8%	87	0.5%	18,062
Washington County	9,892	91.9%	820	7.6%	17	0.2%	31	0.3%	175	1.6%	74	0.7%	10,827

Figure 6.1

	White	% of Total Pop	Black	% of Total Pop	America Indian	% of Total Pop	Asian	% of Total Pop	Hispanic	% of Total Pop	Other	% of Total Pop	Total Pop.
Adair County	16,573	96.1%	479	2.8%	0	0.0%	27	0.2%	103	0.6%	23	0.1%	17,244
TRACT 9702	1,493	99.0%	9	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,508
Block Grp. 1	1,493	99.0%	9	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,508
TRACT 9704	6,997	92.9%	434	5.8%	0	0.0%	13	0.2%	81	10.8%	6	0.1%	7,530
Block Grp. 1	2,083	98.5%	18	0.7%	0	0.0%	0	0.0%	29	1.4%	6	0.3%	2,114
Block Grp. 2	886	90.7%	75	7.7%	0	0.0%	0	0.0%	10	1.0%	0	0.0%	977
Block Grp. 3	1,066	95.6%	49	4.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,115
Block Grp. 4	688	80.4%	146	17.1%	0	0.0%	4	0.5%	19	2.2%	0	0.0%	856
Block Grp. 5	1,371	89.3%	146	9.5%	0	0.0%	9	0.6%	23	1.5%	0	0.0%	1,536
Block Grp. 6	903	96.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	932
TRACT 9705	2,358	98.5%	11	0.5%	0	0.0%	14	0.6%	0	0.0%	0	0.0%	2,395
Block Grp. 1	1,230	98.9%	0	0.0%	0	0.0%	14	1.1%	0	0.0%	0	0.0%	1,244
Block Grp. 2	1,128	98.0%	11	1.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,151

Source: US Census Bureau, 2000 Census

Comparison Table for 2000 Population By Race: Nation, State, County, City

Figure 6.2

	White	% of Total Pop	Black	% of Total Pop	America Indian	% of Total Pop	Asian	% of Total Pop	Hispanic	% of Total Pop	Other	% of Total Pop	Total Pop.
Green County	11,168	97.0%	228	2.0%	9	0.1%	49	0.4%	47	0.4%	10	0.1%	11,518
TRACT 9902	4,093	94.1%	156	3.6%	4	0.1%	43	1.0%	47	1.1%	10	0.2%	4,349
Block Grp. 1	1,185	97.7%	24	2.0%	0	0.0%	0	0.0%	22	1.8%	0	0.0%	1,213
Block Grp. 4	740	95.2%	23	3.0%	0	0.0%	4	0.5%	0	0.0%	0	0.0%	777
TRACT 9904	1,668	96.5%	38	2.2%	5	0.3%	6	0.4%	0	0.0%	0	0.0%	1,728
Block Grp. 1	868	94.0%	38	4.1%	0	0.0%	6	0.7%	0	0.0%	0	0.0%	923

Figure 6.3

	White	% of Total Pop	Black	% of Total Pop	America Indian	% of Total Pop	Asian	% of Total Pop	Hispanic	% of Total Pop	Other	% of Total Pop	Total Pop.
Taylor County	21,436	93.5%	1,200	5.2%	15	0.1%	20	0.1%	175	0.8%	90	0.4%	22,927
TRACT 9801	2,298	99.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2,311
Block Grp. 1	1,620	100%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,620
TRACT 9802	2,873	98.4%	41	1.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2,920
Block Grp. 1	1,535	99.2%	12	0.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,547
Block Grp. 2	713	95.3%	29	3.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	748
Block Grp. 3	625	100%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	625
TRACT 9803	4,028	93.1%	255	5.9%	0	0.0%	0	0.0%	71	1.6%	42	1.0%	4,325
Block Grp. 1	767	90.6%	80	9.5%	0	0.0%	0	0.0%	27	3.2%	0	0.0%	847
Block Grp. 2	1,708	93.8%	113	6.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,821
Block Grp. 3	708	96.7%	24	3.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	732
Block Grp. 4	845	91.4%	38	4.1%	0	0.0%	0	0.0%	44	4.8%	42	4.5%	925
TRACT 9804	6,482	92.5%	402	5.7%	15	0.2%	20	0.3%	87	1.2%	48	0.7%	7,007
Block Gro. 1	3,266	96.2%	78	2.3%	0	0.0%	0	0.0%	87	2.6%	32	0.9%	3,394
Block Grp. 2	790	91.4%	52	6.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	864
Block Grp. 3	1,434	86.1%	195	11.7%	0	0.0%	20	1.2%	0	0.0%	16	1.2%	1,665
Block Grp. 4	992	91.5%	77	7.1%	15	1.4%	0	0.0%	0	0.0%	0	0.0%	1,084
TRACT 9805	5,755	90.4%	502	7.9%	0	0.0%	0	0.0%	7	0.1%	0	0.0%	6,364
Block Grp. 1	806	90.4%	85	9.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	891
Block Grp. 2	414	63.4%	239	36.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	653
Block Grp. 3	808	79.9%	178	17.6%	0	0.0%	0	0.0%	7	0.7%	0	0.0%	1,011
Block Grp. 4	1,434	100%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,434
Block Grp. 6	914	93.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	975
Block Grp. 7	693	100%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	693

Source: US Census Bureau, 2000 Census

Comparison Table for 2000 Population By Race: Nation, State, County, City

Figure 6.4

	White	% of Total Pop.	Black	% of Total Pop.	American Indian	% of Total Pop.	Asian	% of Total Pop.	Hispanic	% of Total Pop.	Other	% of Total Pop.	Total Pop.
Marion County	16,240	90.2%	1,661	9.2%	17	0.1%	80	0.4%	144	0.8%	87	0.5%	18,062
TRACT 9702	3,473	81.1%	731	17.1%	3	0.1%	17	0.4%	31	0.7%	16	0.4%	4,281
Block GRP. 1	499	76.4%	142	21.7%	1	0.2%	1	0.2%	9	1.4%	4	0.6%	653
Block Grp. 2	581	82.8%	114	16.2%	0	0.0%	2	0.3%	6	0.9%	3	0.4%	702
Block Grp. 3	1,184	81.5%	235	16.2%	2	0.1%	4	0.3%	10	0.7%	6	0.4%	1,453
Block Grp. 4	1,209	82.1%	240	16.3%	0	0.0%	10	0.7%	6	0.4%	3	0.2%	1,473
TRACT 9703	2,112	82.7%	417	16.3%	2	0.1%	1	0.0%	17	0.7%	6	0.2%	2,553
Block Grp. 1	2,112	82.7%	417	16.3%	2	0.1%	1	0.0%	17	0.7%	6	0.2%	2,553
TRACT 9705	1,641	98.7%	12	0.7%	0	0.0%	2	0.1%	8	0.5%	3	0.2%	1,663
Block Grp. 2	685	98.3%	10	1.4%	0	0.0%	1	0.1%	1	0.1%	0	0.0%	697
TRACT 9707	4,336	87.6%	483	9.8%	9	0.2%	53	1.1%	42	0.8%	16	0.3%	4,950
Block Grp. 1	1,067	83.5%	154	12.1%	4	0.3%	27	2.1%	23	1.8%	10	0.8%	1,278
Block Grp. 4	1,564	97.9%	5	0.3%	5	0.3%	13	0.8%	3	0.2%	0	0.0%	1,598

Figure 6.5

	White	% of Total Pop.	Black	% of Total Pop.	American Indian	% of Total Pop.	Asian	% of Total Pop.	Hispanic	% of Total Pop.	Other	% of Total Pop.	Total Pop.
Washington County	9,892	91.9%	820	7.6%	17	0.2%	31	0.3%	175	1.6%	74	0.7%	10,827
TRACT 9801	2,608	98.0%	23	0.9%	8	0.3%	5	0.2%	30	1.1%	8	0.3%	2,660
Block Grp. 1	1,087	98.6%	2	0.2%	7	0.6%	4	0.4%	7	0.6%	0	0.0%	1,102
Block Grp. 2	1,521	97.6%	21	1.3%	1	0.1%	1	0.1%	23	1.5%	8	0.5%	1,558
TRACT 9802	5,248	84.7%	787	12.7%	8	0.1%	26	0.4%	128	2.1%	58	0.9%	6,195
Block Grp. 2	1,246	87.5%	142	10.0%	8	0.6%	8	0.6%	26	1.8%	16	1.1%	1,424
Block Grp. 3	841	88.3%	73	7.7%	0	0.0%	4	0.4%	9	0.9%	12	1.3%	952
Block Grp. 4	763	72.2%	269	25.4%	0	0.0%	10	0.9%	7	0.7%	4	0.4%	1,057
Block Grp. 5	873	72.1%	297	24.5%	0	0.0%	2	0.2%	66	5.5%	24	2.0%	1,211
TRACT 9803	2,036	98.8%	10	0.5%	1	0.0%	0	0.0%	17	0.8%	1	0.0%	2,061
Block Grp. 1	948	97.6%	9	0.9%	0	0.0%	0	0.0%	12	1.2%	1	0.1%	971
Block Grp. 2	1,088	99.8%	1	0.1%	1	0.1%	0	0.0%	5	0.5%	0	0.0%	1,090

Source: US Census Bureau, 2000 Census

Comparison Table for 2000 Population by Poverty Level: Nation, State, County, City

Figure 7.0 **Nation, State, County Tracts**

	Population Below Poverty Level	% of Pop	Age 0-17 Below Poverty Level	% of Pop	Age 18-64 Below Poverty Level	% of Pop	Age 65 -Over Below Poverty Level	% of Pop	Total Pop.
United States	33,899,812	12.1%	11,746,858	4.2%	18,865,180	6.7%	3,287,774	1.2%	281,421,906
Kentucky	621,096	15.4%	203,547	5.0%	350,072	8.7%	67,477	1.7%	4,041,769
Adair County	3,954	22.9%	1,234	7.2%	2,192	12.7%	528	3.1%	17,244
Green County	2,087	18.1%	602	5.2%	1,137	9.9%	348	3.0%	11,518
Taylor County	3,915	17.1%	1,260	6.0%	2,004	9.5%	621	5.4%	21,146
Marion County	4,749	26.1%	1,163	6.4%	2,998	16.5%	758	4.2%	18,212
Washington County	2,563	23.5%	521	4.8%	1327	12.2%	535	4.9%	10,916

Figure 7.1

Block Group	Population Below Poverty Level	% of Pop	Age 0-17 Below Poverty Level	% of Pop	Age 18-64 Below Poverty Level	% of Pop	Age 65 -Over Below Poverty Level	% of Pop	Total Pop.
Adair County	3,954	22.9%	1,234	7.2%	2,192	12.7%	528	3.1%	17,244
Tract 9702	273	18.1%	71	4.7%	175	11.6%	27	1.8%	1,508
Block Grp. 1	273	18.1%	71	4.7%	175	11.6%	27	1.8%	1,508
Tract 9704	1605	21.3%	517	6.90%	812	10.8%	276	3.7%	7,530
Block Grp. 1	502	23.8%	192	9.10%	249	11.8%	61	2.9%	2,114
Block Grp. 2	241	24.7%	135	1.4%	91	9.3%	15	1.5%	977
Block Grp. 3	213	19.1%	61	5.5%	101	9.1%	51	4.6%	1,115
Block Grp. 4	183	21.4%	48	5.6%	106	1.2%	29	3.4%	856
Block Grp. 5	269	17.5%	65	4.2%	142	9.2%	62	4.0%	1,536
Block Grp. 6	197	21.1%	16	1.7%	123	13.2%	58	6.2%	932
Tract 9705	653	27.3%	207	8.6%	357	14.1%	79	3.3%	2,395
Block Grp. 1	369	29.7%	154	12.4%	176	14.2%	39	31.4%	1,244
Block Grp. 2	284	24.7%	63	5.5%	181	15.7%	40	3.5%	1,151

Source: US Census Bureau, 2000 Census

Comparison Table for 2000 Population by Poverty Level: Nation, State, County, City

Figure 7.2

Block Group	Population Below Poverty Level	% of Pop	Age 0-17 Below Poverty Level	% of Pop	Age 18-64 Below Poverty Level	% of Pop	Age 65 -Over Below Poverty Level	% of Pop	Total Pop.
Green County	2,087	18.1%	602	5.2%	1,137	9.9%	348	3.0%	11,518
Tract 9902	862	19.8%	254	5.8%	515	11.8%	93	2.1%	4,349
Block Grp. 1	144	11.9%	46	3.8%	88	7.3%	4	0.3%	1,213
Block Grp. 4	59	7.6%	28	3.6%	31	4.0%	0	0.0%	777
Tract 9904	254	14.7%	81	4.7%	127	7.4%	46	2.7%	1,728
Block Grp. 1	102	11.1%	18	2.0%	52	5.6%	32	3.5%	923

Figure 7.3

Block Group	Population Below Poverty Level	% of Pop	Age 0-17 Below Poverty Level	% of Pop	Age 18-64 Below Poverty Level	% of Pop	Age 65 -Over Below Poverty Level	% of Pop	Total Pop.
Taylor County	3,915	17.1%	1,260	6.0%	2,004	9.5%	621	5.4%	21,146
Tract 9801	366	15.8%	93	4.0%	222	9.6%	51	2.2%	2,311
Block Grp. 2	170	10.5%	32	2.0%	116	7.2%	22	1.4%	1,620
Tract 980200	532	18.2%	145	5.0%	282	9.7%	105	3.6%	2,920
Block Grp. 1	234	15.1%	92	6.0%	101	6.5%	41	2.7%	1,547
Block Grp. 2	146	19.5%	40	5.4%	76	10.2%	30	4.0%	748
Block Grp. 3	152	24.3%	13	2.1%	105	16.8%	34	5.4%	625
Tract 9803	518	12.0%	181	4.2%	230	5.3%	107	2.5%	4,325
Block Grp. 1	131	15.5%	72	8.5%	50	5.9%	9	1.1%	847
Block Grp. 2	92	5.1%	26	1.4%	50	2.8%	16	0.9%	1,821
Block Grp. 3	145	19.8%	70	9.6%	48	6.6%	27	3.7%	732
Block Grp. 4	150	16.2%	13	1.4%	82	8.9%	55	6.0%	925
Tract 9804	919	13.1%	245	3.5%	502	7.2%	142	2.0%	7,007
Block Grp. 1	367	10.8%	95	2.8%	219	6.5%	53	1.6%	3,394
Block Grp. 2	182	21.1%	47	5.4%	116	13.4%	19	2.2%	864
Block Grp. 3	283	17.0%	84	5.1%	131	7.9%	38	2.3%	1,665
Block Grp. 4	87	8.0%	19	1.8%	36	3.3%	32	3.0%	1,084
Tract 9805	1580	24.8%	596	9.4%	768	12.1%	216	3.4%	6,364
Block Grp. 1	218	24.5%	80	9.0%	90	10.1%	38	4.3%	891
Block Grp. 2	249	38.1%	74	11.3%	108	16.5%	67	10.3%	653
Block Grp. 3	522	51.6%	248	24.5%	239	23.6%	35	3.5%	1,011
Block Grp. 4	236	16.5%	83	5.8%	137	9.6%	16	1.1%	1,434
Block Grp. 6	163	16.7%	47	7.8%	109	11.2%	7	0.7%	975
Block Grp. 7	90	13.0%	11	1.6%	34	4.9%	45	6.5%	693

Source: US Census Bureau, 2000 Census

Comparison Table for 2000 Population by Poverty Level: Nation, State, County, City

Figure 7.4

	Population Below Poverty Level	% of Pop.	Age 0-17 Below Poverty Level	% of Pop.	Age 18-64 Below Poverty Level	% of Pop.	Age 65-Over Below Poverty Level	% of Total Pop.	Total Pop.
Marion County	4,749	26.1%	1,163	6.4%	2,998	16.5%	758	4.2%	18,212
TRACT 9702	1,012	23.6%	230	5.4%	533	12.5%	146	3.4%	4,281
Block GRP. 1	350	53.6%	67	10.3%	184	28.2%	51	7.8%	653
Block Grp. 2	149	21.2%	26	3.7%	86	12.3%	26	3.7%	702
Block Grp. 3	311	21.4%	86	5.9%	145	10.0%	47	3.2%	1,453
Block Grp. 4	202	13.7%	51	3.5%	118	8.0%	22	1.5%	1,473
TRACT 9703	131	5.1%	20	0.8%	106	4.2%	0	0.0%	2,553
Block Grp. 1	131	5.1%	20	0.8%	106	4.2%	0	0.0%	2,553
TRACT 9705	158	9.5%	26	1.6%	89	5.4%	29	1.7%	1,663
Block Grp. 2	39	5.6%	0	0.0%	29	4.2%	4	0.6%	697
TRACT 9707	1,001	20.2%	197	4.0%	590	11.9%	99	2.0%	4,950
Block Grp. 1	416	32.6%	103	8.1%	245	19.2%	12	0.9%	1,278
Block Grp. 4	264	16.5%	27	1.7%	172	10.8%	38	2.4%	1,598

Figure 7.5

	Population Below Poverty Level	% of Pop.	Age 0-17 Below Poverty Level	% of Pop.	Age 18-64 Below Poverty Level	% of Pop.	Age 65-Over Below Poverty Level	% of Total Pop.	Total Pop.
Washington County	2,563	23.5%	521	4.8%	1327	12.2%	535	4.9%	10,916
TRACT 9801	338	12.7%	98	3.7%	202	7.6%	22	0.8%	2,660
Block Grp. 1	104	9.4%	21	1.9%	75	6.8%	8	0.7%	1,102
Block Grp. 2	234	15.0%	77	4.9%	127	8.2%	14	0.9%	1,558
TRACT 9802	791	12.8%	124	2.0%	383	6.2%	219	3.5%	6,195
Block Grp. 2	164	11.5%	20	1.4%	86	6.0%	36	2.5%	1,424
Block Grp. 3	166	17.4%	22	2.3%	70	7.4%	71	7.5%	952
Block Grp. 4	140	13.2%	13	1.2%	66	6.2%	59	5.6%	1,057
Block Grp. 5	228	18.8%	69	5.7%	119	9.8%	19	1.6%	1,211
TRACT 9803	305	14.8%	77	3.7%	157	7.6%	53	2.6%	2,061
Block Grp. 1	162	16.7%	42	4.3%	89	9.2%	20	2.1%	971
Block Grp. 2	143	13.1%	35	3.2%	68	6.2%	33	3.0%	1,090

Source: US Census Bureau, 2000 Census

Comparison Table for 2000 Population by Age : Nation, State, City, County

Figure 8.0

	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
United States	72,142,756	25.6%	174,300,177	61.9%	34,978,882	12.4%	281,421,906
Kentucky	993,841	24.6%	2,544,260	63.0%	503,668	12.5%	4,041,769
Adair County	4,047	23.5%	10,226	59.3%	2,515	14.6%	17,244
Green County	2,608	22.6%	6,952	60.4%	1,951	16.9%	11,518
Taylor County	5,279	23.0%	14,042	61.3%	3,453	15.1%	22,927
Marion Co.	4,596	25.2%	11,277	61.9%	2,339	12.8%	18,212
Washington Co.	2,757	25.3%	6,526	59.8%	1,633	15.0%	10,916

Figure 8.1

	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
Adair Co.	4,047	23.5%	10,226	59.3%	2,515	14.6%	17,244
TRACT 9702	345	22.9%	990	65.7%	173	11.5%	1508
Block Grp. 1	345	22.9%	990	65.7%	173	11.5%	1508
Tract 9704	1561	20.7%	4590	61.0%	1307	17.4%	7530
Block Grp. 1	592	28.0%	1286	60.8%	236	11.2%	2114
Block Grp. 2	225	23.0%	552	56.5%	200	20.5%	977
Block Grp. 3	255	22.9%	680	61.0%	180	16.1%	1115
Block Grp. 4	136	15.9%	313	36.6%	335	39.1%	856
Block Grp. 5	192	12.5%	1155	75.2%	189	12.3%	1536
Block Grp. 6	161	17.3%	604	64.8%	167	17.9%	932
TRACT 9705	625	26.1%	1469	61.3%	288	12.0%	2395
Block Grp. 1	326	26.2%	754	60.6%	164	13.2%	1244
Block Grp. 2	299	26.0%	715	62.1%	124	10.8%	1151

Source: US Census Bureau, 2000 Census

Comparison Table for 2000 Population by Age : Nation, State, City, County

Figure 8.2

	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
Green Co.	2,608	22.6%	6,952	60.4%	1,951	16.9%	11,518
TRACT 9902	955	22.0%	2508	57.7%	886	20.4%	4349
Block Grp. 1	272	22.4%	784	64.6%	157	12.9%	1213
Block Grp. 4	166	21.4%	412	53.0%	199	25.6%	777
TRACT 9904	352	20.4%	1088	63.0%	288	16.7%	1728
Block Grp. 1	182	19.8%	584	63.3%	157	17.0%	923

Figure 8.3

	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
Taylor Co.	5,279	23.0%	14,042	61.3%	3,453	15.1%	22,927
TRACT 9801	677	29.3%	1400	60.6%	199	8.6%	2311
Block Grp. 2	485	30.0%	978	60.4%	131	8.1%	1620
TRACT 9802	631	21.6%	1868	64.0%	421	14.4%	2920
Block Grp. 1	420	27.2%	981	63.4%	146	9.4%	1547
Block Grp. 2	88	11.8%	483	64.6%	177	23.7%	748
Block Grp. 3	123	19.7%	404	64.6%	98	15.7%	625
TRACT 9803	884	20.4%	2510	58.0%	883	20.4%	4325
Block Grp. 1	248	29.3%	493	58.2%	106	12.5%	847
Block Grp. 2	366	20.1%	1087	59.7%	320	17.6%	1821
Block Grp. 3	134	18.3%	354	48.4%	244	33.3%	732
Block Grp. 4	136	14.7%	576	62.3%	213	23.0%	925
TRACT 9804	1469	21.0%	4496	64.2%	982	14.0%	7007
Block Grp. 1	934	27.5%	2017	59.4%	443	13.1%	3394
Block Grp. 2	138	16.0%	542	62.7%	184	21.3%	864
Block Grp. 3	214	12.9%	1213	72.9%	188	11.3%	1665
Block Grp. 4	183	16.9%	724	66.8%	167	15.4%	1084
TRACT 9805	1618	25.4%	3768	59.2%	968	15.2%	6364
Block Grp. 1	288	32.3%	466	52.3%	137	15.4%	891
Block Grp. 2	99	15.2%	346	53.0%	208	31.9%	653
Block Grp. 3	331	32.7%	605	59.8%	75	7.4%	1011
Block Grp. 4	403	28.1%	903	63.0%	128	8.9%	1434
Block Grp. 6	251	25.7%	633	64.9%	91	9.3%	975
Block Grp. 7	99	14.3%	410	59.2%	184	26.6%	693

Source: US Census Bureau, 2000 Census

Comparison Table for 2000 Population by Age : Nation, State, City, County

Figure 8.4

	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
Marion Co.	4,596	25.2%	11,277	61.9%	2,339	12.8%	18,212
TRACT 9702	1,012	23.6%	2,545	59.4%	724	16.9%	4,281
Block GRP. 1	117	17.9%	358	54.8%	178	27.3%	653
Block Grp. 2	169	24.1%	374	53.3%	159	22.6%	702
Block Grp. 3	427	29.4%	814	56.0%	212	14.6%	1,453
Block Grp. 4	299	20.3%	999	67.8%	175	11.9%	1,473
TRACT 9703	554	21.7%	1,871	73.3%	128	5.0%	2,553
Block Grp. 1	554	21.7%	1,871	73.3%	128	5.0%	2,553
TRACT 9705	424	25.5%	1051	63.2%	188	11.3%	1,663
Block Grp. 2	190	27.3%	428	61.4%	79	11.3%	697
TRACT 9707	1,341	27.1%	2,954	59.7%	655	13.2%	4,950
Block Grp. 1	386	30.2%	775	60.6%	117	9.2%	1,278
Block Grp. 4	433	27.1%	996	62.3%	169	10.6%	1,598

Figure 8.5

	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
Washington Co.	2,757	25.3%	6,526	59.8%	1,633	15.0%	10,916
TRACT 9801	703	26.4%	1,645	61.8%	312	11.7%	2,660
Block Grp. 1	276	25.0%	716	65.0%	110	10.0%	1,102
Block Grp. 2	427	27.4%	929	59.6%	202	13.0%	1,558
TRACT 9802	1533	24.7%	3,595	58.0%	1,067	17.2%	6,195
Block Grp. 2	359	25.2%	842	59.1%	223	15.7%	1,424
Block Grp. 3	189	19.9%	520	54.6%	243	25.5%	952
Block Grp. 4	232	21.9%	571	54.0%	254	24.0%	1,057
Block Grp. 5	332	27.4%	705	58.2%	174	14.4%	1,211
TRACT 9803	521	25.3%	1,286	62.4%	254	12.3%	2,061
Block Grp. 1	236	24.3%	606	62.4%	129	13.3%	971
Block Grp. 2	285	26.1%	680	62.4%	125	11.5%	1,090

Source: US Census Bureau, 2000 Census