

FINDING OF NO SIGNIFICANT IMPACT

KENTUCKY HIGHWAY 15

PERRY COUNTY, KENTUCKY

Item No. 10-269.00

June 2004

FEDERAL HIGHWAY ADMINISTRATION

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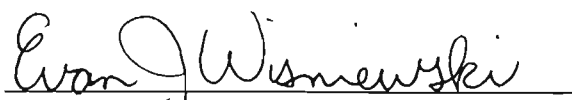
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The FHWA has determined that Alternative 2 (combining southern widening and northern cross-country routes) will have no significant impact on the human environment. This Finding of No Significant Impact (FONSI) has been independently evaluated by the FHWA and determined to adequately and accurately discuss the needs, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement (EIS) is not required. The FHWA takes full responsibility for the accuracy, scope and content of this FONSI.

Recommended:


For Kentucky Transportation Cabinet

6/28/04
Date


For Federal Highway Administration

7/5/04
Date

EXECUTIVE SUMMARY

The Kentucky Transportation Cabinet, in cooperation with the Federal Highway Administration, is proposing improvements to approximately 7.5 miles of Kentucky Highway 15 (KY 15) north of Hazard, Perry County, Kentucky. This long-form Finding of No Significant Impact (FONSI) is being utilized to more fully address the Selected Alternative (Alternative 2), which was developed after approval of the final Environmental Assessment (EA). The EA addressed build and no-build alternatives for the widening of KY 15 throughout the project corridor. However, based on comments received during a series of public meetings and the large number of potential residential/business displacements, the Northern Segment of the project area were re-evaluated for potential cross-country alternatives.

The existing KY 15 is a major rural arterial, which plays an important system linkage role in the region. However, the current two-lane width, sharp curves, steep grades, and essential lack of median and shoulders have led to traffic congestions and safety concerns. The existing KY 15 facility has a Level of Service (LOS) of "E". The purpose of the project is to address growing traffic volume and safety needs. The project will serve to meet current safety, design and economic needs in the area.

The Selected Alternative involves two distinct segments. In the Southern Segment (between Morton Boulevard and a point approximately 700 feet south of Lower Second Creek Road) the existing KY 15 roadway will be widened to a four-lane highway with a 14-foot flush median. In the Northern Segment (from approximately 700 feet south of Lower Second Creek Road to a point approximately 2,000 feet north of KY 28) a new cross-country roadway will be constructed west of the existing KY 15. It will be a four-lane divided highway with a 40-foot depressed median. Preliminary analysis indicates that the Selected Alternative will have an LOS of "B".

Alternatives to the Selected Alternative that were evaluated for the project included: Alternative 1, which was similar, but involved a cross-country route further to the west; a Widening Alternative that involved the original proposal to widen the existing KY 15 along the entire project length; and a No-Build Alternative. The proposed Selected Alternative will have no significant adverse environmental impacts. This alternative has been designed to avoid and minimize impacts to existing resources to as great an extent possible and still meet the project needs of improving the existing KY 15 roadway north of Hazard in order to resolve traffic congestion and safety issues.

In addition to having no significant impacts, the Selected Alternative also offers fewer environmental impacts than the Widening Alternative, Alternative 1, or the No-Build Alternative. In comparison with the other build alternatives, the Selected Alternative has substantially lower construction costs than Alternative 1; has substantially lower stream impacts than either the Widening Alternative or Alternative 1; has fewer wetland impacts than Alternative 1; avoids two archaeological sites (rock shelters), one of which is impacted by Alternative 1; requires fewer Phase II UST/HazMat investigations than the Widening Alternative; and, has substantially fewer residential and business displacements than the Widening Alternative.

Although the No-Build Alternative has no impact on existing resources within the project corridor it has significant negative future impacts in terms of road user costs, mobility, safety, economic growth, and compatibility with planned development within the corridor. The Selected Alternative offers substantial economic benefits in terms of improved mobility throughout the area and increased available land for development.

Mitigation commitments for the project include:

- Phase II UST/HazMat investigations at two sites
- Applicable Clean Water Act permits under Sections 404 and 401 from the U.S. Army Corps of Engineers and the Kentucky Division of Water, respectively, for impacts to approximately 3,750 feet of stream and 0.92 acre of wetland.
- Compensatory mitigation for wetland and stream impacts through restoration, creation, or enhancement of wetland and aquatic habitat.
- Relocation of 36 residences, six businesses, and two churches.
- Relocation of ten graves at three cemeteries: the Miller Family Cemetery and the Campbell/Fugate Cemetery in the Northern Segment of the project, and a cemetery near First Creek in the Southern Segment.
- During the construction phase of any project, there are a wide variety of adverse short-term construction impacts throughout the project corridor. These can include, but are not limited to, increased noise and dust; however, these are temporary inconveniences that will be controlled by applicable laws. The Kentucky Department of Highway Standard Specifications for Road and Bridge Construction address routine mitigation procedures required of highway projects.

The likely environmental impacts of the Selected Alternative and Kentucky Transportation Cabinet mitigation commitments support a Finding of No Significant Impact for the proposed project.

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1. Project Location Map
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1.0 PROJECT DESCRIPTION

The Kentucky Transportation Cabinet (KYTC), in cooperation with the Federal Highway Administration (FHWA), has proposed improvements to approximately 7.5 miles of Kentucky Highway 15 (KY 15) north of Hazard in Perry County, Kentucky. The improvements will result in converting the existing primarily two-lane road to a divided four-lane highway through a combination of widening the existing KY 15 corridor and construction of a new cross-country route to the west. The project corridor extends from Morton Boulevard in the south to Kentucky Highway 28 (KY 28) in the north (Exhibit 1). The preferred alternative for the project involves two major components: 1) the widening of KY 15 between Morton Boulevard and approximately 700 feet south of Lower Second Creek Road (Southern Segment); and, 2) construction of a new cross-country roadway from approximately 700 feet south of Lower Second Creek Road and approximately 2,000 feet north of KY 28 (Northern Segment).

1.1 EXISTING ROADWAY

The existing KY 15 is major rural arterial in rough, mountainous terrain. The National Highway System classifies it as an "Other Principal Arterial", which are highways in rural and urban areas that provide access between arterials and major facilities. It is not included in the Defense Highway Network, but is listed as an AAA (80,000 pound weight limit) trucking highway by the National Trucking Network. KY 15 is classified as a State Primary Route, a category that includes high-volume routes of statewide significance. It is also included in the Kentucky extended weight coal haul system, and is part of the Appalachian Development System. Although the section of KY 15 within the project corridor is included in the TransAmerica Trail for Kentucky Bicycle Tours, it is currently an unsafe bicycle facility due to the rough, mountainous terrain, traffic congestion, and poor shoulder conditions. The proposed project, with four 12-foot lanes and a combination of 40-foot depressed median in the Northern Segment and a 14-foot flush median in the Southern Segment, will improve bicycling conditions; however, the mountainous terrain will remain a challenge for cyclists.

KY 15 is primarily a two-lane roadway with 12-foot wide lanes and 12-foot wide shoulders, ten feet of which are paved. The proposed typical sections for the Southern and Northern Segments of the KY 15 project are presented in Appendix A and B, respectively, and are compared with the existing typical section below.

Dimensions	Existing Typical Section	Proposed Typical Section Northern Segment	Proposed Typical Section Southern Segment
Travel Lanes	2 lane / 2 way	4 lane - 40 foot depressed median	4 lane – 14 foot flush median
Driving Lanes	12 feet; truck lanes on steep grades	12 feet	12 feet
Shoulders	10 feet	12 feet	12 feet

1.2 PROJECT BACKGROUND

An Environmental Assessment (EA) was prepared to determine the environmental impacts of the originally proposed widening of KY 15 through the entire project corridor. The EA was approved by the KYTC and the FHWA on September 27, 1999, and subsequently presented to the public. A detailed description of the public meetings and overall public involvement are presented in Section 7.0.

Of the original four alternatives considered during the EA process for this project, a cross-country by-pass alternative with northern and southern corridors was eliminated due to substantially increased construction costs, safety concerns, environmental impacts, and economic considerations. However, based on comments received during two November 1999 public hearings, a follow-up January 2000 public meeting was held to introduce the concept of revised cross-country alternative. Due to the public response at these meetings, the large number of residential and business displacements associated with the widening of the existing KY 15 roadway, and the high costs of these displacements, the Northern Segment of the project was re-evaluated for potential cross-country alternatives to the proposed widening of KY 15.

This re-evaluation involved the preparation of new environmental base studies of potential impacts from the new cross-country alternatives under the categories of highway noise, air quality, terrestrial ecology, aquatic ecology, socio-economics, hazardous material, and cultural resources. A final public meeting was held in March 2002 to present the two final cross-country alternative alignments to the public for comment. Public comments indicated an overwhelming support for the Selected Alternative (Alternative 2). The Selected Alternative includes a new cross-country roadway that will be constructed west of the existing KY 15 and begins at 700 feet south of Lower Second Creek Road to a point approximately 2,000 feet north of KY 28. It will be a four-lane divided highway with a 40-foot depressed median. Preliminary analysis indicates that the Selected Alternative will have an LOS of "B".

This long-form Finding of No Significant Impact (FONSI) format is being utilized because the Selected Alternative was developed after approval of the final EA. This FONSI describes the revised project in terms of purpose and need, affected environment, alternatives considered, environmental impacts, mitigation measures, and public involvement/coordination.

2.0 PURPOSE AND NEED FOR THE PROJECT

The primary purpose of this project is to improve system linkage and alleviate existing safety, congestion and other traffic-related problems on the KY 15 project corridor between Morton Boulevard and KY 28 through the construction of a four-lane divided highway that meets current highway design and safety standards. Despite its importance for both local and regional transportation, KY 15 is inadequate for meeting present and future traffic needs. The need for the project is summarized below in terms of safety, highway design, system linkage, and economics.

2.1 SAFETY

The proposed improvements to KY 15 are needed to meet the growing traffic volume and safety needs in the project area. Current safety and design concerns are related to the existing roadway characteristics, which include: two-lane width, sharp curves, steep grades, and lack of median and limited shoulders. As reflected in the table listed below, the total number of collisions along the project corridor has increased by 42% from 1999 to 2000 while the statewide collisions increased by only 2.16% during the same timeframe.

Crash Data	Project Area 1999	Project Area 2000	Perry Co. 1999	Perry Co. 2000	Statewide 1999	Statewide 2000
Total Collisions	53	75	558	831	132,216	135,079
Total Fatal Collisions	1	0	4	8	729	711
Total Injury Collisions	26	32	256	350	36,125	34,732
Property Damage Only	26	43	298	473	95,362	99,636

The existing KY 15 project corridor consists of residential and commercial development with frequent on and off traffic. Additionally, trucks from the local coal mining and logging industries add to the heavy traffic within the corridor. This combination of heavy residential, commercial, and industrial vehicular use and the resulting frequent traffic congestion has made it necessary for the KYTC to propose improvements for this section of highway in order to better accommodate the variety of traffic sources and improve the safety of motorists and residents along the corridor. An additional safety benefit is improved response time for emergency vehicles traveling through the corridor.

2.2 DESIGN

The existing KY 15 is a two-lane roadway with narrow shoulders and a narrow raised median causing traffic congestion and safety issues. The design for the Selected Alternative consists of the following:

- Four-lane divided highway with a 40-foot depressed median to accommodate increasing traffic volumes
- Increased design speed
- Proposed lane widths of 12 feet
- Replacement of the existing at-grade KY 15/KY 28 intersection with a diamond overpass

Typical sections for both the Northern and Southern Segment of the Selected Alternative are provided in Appendix A and B.

The American Association of State Highway Transportation Officials (AASHTO) assigns Level of Service (LOS) designations for highway travel conditions. The LOS defines a driver's freedom to operate and is primarily a function of highway geometrics, highway capacity, traffic flow, and congestion. The LOS designations range from "A-level" which represents free-flow to "F-level" which represents a breakdown or choked traffic flow. AASHTO recommends that rural arterial highways in mountainous terrain be designed for a minimum "C-level" LOS.

Preliminary analyses indicate that the LOS for the existing KY 15 facility in the Northern Segment is an "D-level" and will be at an "E-level" by the year 2025 if modifications are not made to the existing roadway. The proposed LOS for the Selected Alternative for the design year 2025 is a "B-level" which will greatly alleviate traffic pressures along the existing facility. In the Southern Segment near Morton Boulevard the current LOS is an "F-level" while the proposed Selected Alternative will have an estimated LOS of "C-level".

Average Daily Traffic (ADT) forecasts, per KYTC Division of Multimodal Programs, for several segments along the existing and proposed KY 15 are listed in the following table:

		2002 Traffic Volume	Projected 2025 Traffic Volume (Design Year)
Segment	Location	ADT*	ADT*
1	KY 15 north of existing KY15/28 interchange	9,000	14,200
2	KY 1067 north of KY 15/1067 junction	1,300	2,050
3	KY 28 north of KY 15/KY 28 interchange	4,800	7,600
5	KY 15 from KY 267 to junction with new cross country alternative	12,000	18,900
6	KY 15 from KY 80 to KY 267	16,100	25,400
7	KY 15 from Morton Boulevard to KY 80	25,100	39,600
8	KY 15 north of existing KY 15/28 interchange	1,800	2,840
9	KY 15 south of existing KY 15/28 interchange	3,800	6,000
10	Proposed KY 15 south of proposed KY15/28 interchange	7,300	11,510
11	KY 15 from KY 1067 to proposed cross country alternative	1,100	1,730
12	KY 15 from proposed cross country alternative to KY 1067	2,100	3,310
13	Proposed KY 15 from existing KY 15 interchange to KY 1067	10,000	15,770

Source: KYTC Intra-Departmental Memo, Perry County Traffic Forecasts, March 20, 2002

*ADT = Average Daily Traffic volumes

The locations of the segments and associated ADT values are provided in Appendix C.

2.3 SYSTEM LINKAGE

The need for the project is further supported by the importance of the project corridor as a system linkage to other major routes in the region, and the increasing social and economic demands for the project. The KY 15 project corridor plays a crucial role in linking Perry County and the region with the commercial, industrial, health care, recreational, and educational facilities throughout eastern and central Kentucky. It is the only primary route connecting the county seats of Letcher, Perry, Breathitt, Wolfe, Powell, and Clark Counties. KY 15 is a main highway through the City of Hazard and has key interchanges with the four-lane intrastate highway KY 80 (Daniel Boone Parkway) and major state highways such as KY 28.

KY 15 also serves as a major route linking Hazard and surrounding areas with recreational areas such as North Fork Kentucky River and the Buckhorn Lake State Park. The proposed project will improve safety and traffic flow at interchanges with KY 80, KY 267, and KY 28 and will improve system linkage between Hazard and the other communities of Perry County and surrounding counties.

2.4 ECONOMICS

Construction of the Selected Alternative will have a major beneficial impact on the already expanding economy of Hazard and Perry County through stimulating commerce and making the corridor more appealing to future residential, commercial and industrial development. These economic benefits will result from the easing of traffic congestion, improving access and driving conditions, and addressing safety issues. The implementation of this project will restrict access for land and economic development when needed to support increased traffic safety within the corridor; however, the construction of the Selected Alternative will also provide access to a few, currently inaccessible, land areas for development, particularly along ridge tops and former mine benches. The Perry County Planning Commission considers this project crucial to the economic development of the county and sees it as compatible with present and future local and regional development/land-use plans. Proposed development projects along the new roadway will need to be approved on a case-by-case basis by the Perry County Planning Commission to ensure the safety guidelines of the roadway are upheld.

3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

The study area for the project includes a Southern Segment which is comprised of the KY 15 corridor between Morton Boulevard and a point approximately 700 feet south of Lower Second Creek Road, and a Northern Segment comprised of KY 15 from 700 feet south of Lower Second Creek Road to approximately 2,000 feet north of KY 28, including an approximately 900-acre area extending up to one mile west (Exhibit 1). Evaluation of the environmental conditions within this study area were based on two assessments: 1) base studies for the original widening alternative which preceded, and were summarized in, the EA dated September 9, 1999; and, 2) revised base studies conducted in 2001 and 2002 which assessed the Northern Segment cross-country routes and updated the previous assessments of the Southern Segment. The affected environment is described below as a brief summary of these earlier documents under the categories of physical setting, ecological resources, socio-economic conditions, hazardous materials, and cultural resources.

3.1 PHYSICAL SETTING

The project corridor exhibits landscape typical of the Cumberland Plateau and Mountains physiographic region, which is characterized by steep, primarily wooded mountain slopes, with smaller areas of development and open fields along narrow valley bottoms and former mine benches. The Grapevine Creek watershed drains the site to the north, Lower Second Creek and First Creek drain the south-central portion of the site to the southwest, and the Sam Campbell Branch watershed drains the site to the west. Past surface and subsurface mining, residential/commercial development, and logging activities have altered major portions of the project corridor's topography through substantial cuts and fills, stream filling and/or rerouting, and removal of larger, mature trees.

3.2 ECOLOGICAL RESOURCES

The majority of the project area is forested, with smaller areas of development and open field habitat on valley bottoms and former mine benches. Almost the entire site has been heavily impacted by past surface and subsurface mining, logging, and development activities. The major terrestrial habitats on site include upland slope forests, mesic forests, and open fields. Aquatic habitats within the project area include streams and wetlands. Streams within the study area include Sam Campbell Branch, Mudlick Branch, Grapevine

herbaceous/vine layer is characterized by microstegium (*Eulalia viminea*), smooth and glaucous greenbrier, Virginia creeper, hog peanut, Pennsylvania sedge (*Carex pensylvanica*), and Virginia knotweed (*Tovara virginiana*).

3.2.2 Wildlife Communities

Wildlife populations present within the corridor are common throughout the region. Within the terrestrial community, typical mammals found are white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), eastern cottontail (*Sylvilagus floridanus*), white-footed mice (*Peromyscus leucopus*) and deer mice (*Peromyscus maniculatus*). The avian community within the corridor is diverse and the most common species identified are: northern cardinal (*Cardinalis cardinalis*), American crow (*Corvus brachyrhynchos*), pileated woodpecker (*Dryocopus pileatus*), red-bellied woodpecker (*Melanerpes carolinus*), northern flicker (*Colaptes auratus*), Carolina chickadee (*Parus carolinensis*), Carolina wren (*Thryothorus ludovicianus*), white-breasted nuthatch (*Sitta carolinensis*), and American robin (*Turdus migratorius*). Reptile species identified include fence lizard (*Sceloporus undulatus*), eastern box turtle (*Terrapene carolina carolina*), and the eastern garter snake (*Thamnophis sirtalis sirtalis*). Amphibians present include American toad (*Bufo americanus*), bullfrog (*Rana catesbeiana*), and red-spotted newt (*Notophthalmus viridescens viridescens*).

Aquatic sampling of the corridor included the headwaters and upper watersheds of many tributaries in the corridor. The two most common species of fish identified during surveys are the blacknose dace (*Rhinichthys atratulus*) and the creek chub (*Semotilus atromaculatus*). In total, 439 organisms comprising 59 taxa were collected during macroinvertebrate sampling of streams throughout the corridor.

3.2.3 Protected Species

No federally threatened or endangered species, or their critical habitat, are known to occur or were identified on site; however, potential summer foraging habitat for the endangered Indiana bat (*Myotis sodalis*) does exist in the wooded portions of the study area. No critical natural or protected habitats are known to exist or were identified on the site.

3.3 SOCIO-ECONOMIC CONDITIONS

Land use patterns in Perry County are dominated by coal mining, commercial/industrial development, and residential development. The KY 15 project corridor is typical of the majority of the county and region, with residential and commercial development clustered along existing roads and flatter areas along stream bottoms, former mine benches, or other areas of cut and fill. Almost all development in the project corridor occurs along KY 15 and a remainder of the undeveloped portions of the study area have been extensively mined and logged, although they have regrown into young and medium age forest stands.

Other socio-economic conditions present within the corridor include six non-historic cemeteries. Their location is shown on Exhibit 2 and they are described briefly below.

- near First Creek in the Southern Segment. There are six gravesites within the proposed project corridor for all alternatives.
- Hensley Cemetery located in the Northern Segment on the west side of KY 15 approximately 700 feet south of Sam Campbell Branch Drive. It contains 14 gravesites all of which are within the project corridor for the Widening Alternative.
- Miller Family Cemetery located in the Northern Segment approximately 500 feet east of the KY 15/KY 28 intersection. This modern cemetery contains three graves, all of which are within the proposed right-of-way for the two cross-country alternatives.
- Campbell/Fugate Cemetery located in the southern portion of the Northern Segment on the west side of KY 15 approximately 800 feet north of Lower Second Creek Road. This primarily modern cemetery contains one grave (ca. 1933) that is located within the proposed right-of-way; however, it is not eligible for listing in the National Register of Historic Places. The grave is located within the proposed right-of-way of the Selected Alternative, while all other graves appear to be located outside of the corridor. This grave will be relocated in accordance with state laws.

Although there is a span of several years between the original Socio-Economic Analysis, the Environmental Assessment and this FONSI document, there have not been significant changes in population trends and demographics, economic characteristics, income levels, and housing and neighborhood characteristics over this period of time.

3.4 HAZARDOUS MATERIALS

The UST/HazMat baseline assessments identified a total of 11 sites within the project area as suspect properties, all of which are businesses along KY 15. These include six sites in the Northern Segment of the project and five sites in the Southern Segment. Of these 11 sites, six were recommended for further study – four in the Northern Segment and two in the Southern Segment. The following table provides a summary of these 11 sites.

Parcel	Description	Location	Hazard Type	Recommendations
15	Gas Station/ Convenience Store	Hazard Kwik Mart (BP)	Gasoline, oil, UST	Recommended for Phase II investigation
27	Gas Station/ Convenience Store	Highwayman Chevron	Gasoline, oil, UST	Recommended for Phase II investigation
48	Auto Tire and Repair	Combs Tire Service	Solvents, oil, gasoline, potential hazardous waste	No further study
51	Auto Repair	Combs Garage (Combs Marathon)	Gasoline, diesel, UST	No further study
57	Truck, Heavy Equip. Repair	Pollard Truck Repair	Diesel, oil, UST	No further study
313	Gas Station/ Convenience Store	Lee's Mini Mart	Gasoline, potential oil and solvents	No further study
324	Auto Body Repair and Wrecker Service	Howard & Hoskins Body Shop	Oil, potential fuel	No further study
348	Lumber Hauling (Former Sawmill)	D & S Lumber Company	Fuel, diesel, potential hazardous materials	Additional site-specific investigation
352	Supply Store (Former Beauty Shop and Gas Station)	Kids Stuff and Us	Fuel, UST	Additional site-specific investigation
374A	Restaurant (Suspect UST Site)	Fast Break Restaurant	Potential fuel, UST	Additional site-specific investigation
374B	Gas Station/ Convenience Store	BP/Gulf Super Mart	Gasoline, kerosene, oil, potential hazardous materials, UST	Additional site-specific investigation

3.5 CULTURAL RESOURCES

The cultural-historic surveys revealed that no sites eligible for listing on the National Register of Historic Places are present within the study area. The archaeological survey resulted in the discovery of two previously unrecorded prehistoric archaeological sites and two cemeteries, all in the Northern Segment of the project corridor.

The prehistoric sites are both rock shelters - one located in the very western portion of the Northern Segment on a hillside overlooking an unnamed tributary of Sam Campbell Branch, and one in the northern portion of the Northern Segment along an unnamed tributary of Grapevine Creek, near Martha Drive. The western rock shelter is highly disturbed and no further work is recommended. The northern rock shelter will not be directly or indirectly (visually) impacted by either alternative.

The Neace Cemetery is located on a ridge just south of KY 15 and Grapevine Creek and just east of Roseanne Branch, while the Campbell/Fugate Cemetery is on the west side of KY 15 approximately 800 feet north of Lower Second Creek Road (Exhibit 2). The Neace Cemetery has graves dating from 1915 through 2001 and is well maintained and the Campbell/Fugate Cemetery contains one gravesite within the proposed right-of-way for the Selected Alternative. The SHPO issued a clearance letter on February 19, 2003 (Appendix D) stating that neither of the two cemeteries were eligible for listing on the National Register of Historic Places. Any graves within these cemeteries will be relocated in accordance with state regulations.

Letters were sent by KYTC and FHWA on October 30, 2002 and April 30, 2003 to Native American tribes as an invitation to consult on the impacts of the proposed KY 15 project to the Native American Sites. Response letters that were received from federally recognized Indian tribes indicated that no areas of cultural or religious significance to the tribe were identified within the project area. Coordination with the Native American tribes was completed in a letter from the FHWA dated June 23 2003 and this project has received NAC closure. Copies of the Native American consultation letters and responses are provided in Appendix E.

4.0 ALTERNATIVES CONSIDERED

The Selected Alternative for the proposed project is Alternative 2, which includes the widening of KY 15 in the Southern Segment and a cross-country route primarily along ridge tops that roughly parallels KY 15 and extends up to approximately 4,500 feet west of the existing roadway in the Northern Segment.

Three additional alternatives were evaluated for the proposed KY 15 project, including:

- **Alternative 1**, which included the widening of KY 15 in the Southern Segment and an outer cross-country route that extends up to 5,400 feet west of the existing roadway in the Northern Segment
- **Widening Alternative**, which proposed widening of KY 15 within its existing corridor throughout both the Southern and Northern Segments
- **No-Build Alternative**, with no changes to the current roadway

These build alternatives were eliminated due to a combination of substantial environmental impacts and costs. The No-Build Alternative does not meet the transportation needs of the community. These alternatives were evaluated in the revised 2001/2002 base studies, and are summarized below.

4.1 SELECTED ALTERNATIVE – ALTERNATIVE 2

The Selected Alternative includes the widening of KY 15 within the existing highway corridor in its Southern Segment, while its Northern Segment is a cross-country route that starts approximately 700 feet south of Lower Second Creek Road and runs north for approximately 4.3 miles where it rejoins KY 15 approximately 2,000 feet north of KY 28. This alternative would result in construction of a new four-lane divided highway, which maximizes use of existing ridge tops. Compared to Alternative 1, this design consists of one large incline and decline instead of a series of smaller hills. This design also results in a more sinuous roadway than that of Alternative 1.

This alternative crosses numerous roads including KY 28, Sam Campbell Road, Lower Second Creek Road, Route 267, the Daniel Boone Parkway, several local access roads, and a small portion of the existing KY 15. It also perpendicularly crosses two tributaries to Sam Campbell Branch, Lower Second Creek, First Creek, and parallels one tributary to Grapevine Creek and one tributary to First Creek.

4.2 ALTERNATIVE 1

Alternative 1 includes the widening of KY 15 within the existing highway corridor in its Southern Segment, while its Northern Segment is a cross-country route that begins approximately 700 feet below Lower Second Creek Road and runs north for approximately 4.3 miles where it rejoins KY 15 approximately 2,000 feet north of the existing KY 28 intersection. This design specifies the construction of a four-lane divided highway and includes a less sinuous route than Alternative 2; however, it utilizes fewer ridge tops, resulting in more cut/fill areas and higher construction costs.

This alternative crosses numerous roads including KY 28, Sam Campbell Road, Lower Second Creek Road, the Daniel Boone Parkway, several local access roads, and a small portion of the existing KY 15. It also perpendicularly crosses Lower Second Creek, four tributaries to Sam Campbell Branch, and First Creek, and parallels one tributary to Grapevine Creek and one tributary of First Creek.

4.3 WIDENING ALTERNATIVE

The Widening Alternative, originally proposed by the KYTC, proposes to expand KY 15 along the entire project length from Morton Boulevard to KY 28 (both Northern and Southern Segments). The plan proposed the widening of the highway from a two-lane road, to a four-lane divided highway with an approximately 14-foot flush median. This alternative will not eliminate the numerous sharp curves of the existing roadway; however, it does maximize use of the exiting highway corridor. The approved EA addressed this widening design; however, it involves impacts to a large number of existing residential and commercial structures, particularly in the Northern Segment, resulting in high relocation costs.

The Widening Alternative involves crossings of KY 28, Lower Second Creek Road, and the Daniel Boone Parkway. It perpendicularly crosses First Creek and Lower Second Creek, and runs parallel to Mudlick Branch, Grapevine Creek, and a tributary to Lower Second Creek. Substantial sections of these streams will be impacted under the widening proposal.

4.4 NO-BUILD ALTERNATIVE

The No-build Alternative would require no changes to the present system with only routine maintenance being performed. This would leave the residents of the area with an inadequate transportation infrastructure. As residential and commercial development, and recreational use in the area increase, the problems of heavy traffic, congestion, decreased public safety and travel inconvenience will only be further exasperated. Evaluation through the EA process has determined that this No-build Alternative will not satisfy the transportation needs of the Hazard/Perry County area or the region.

5.0 ENVIRONMENTAL IMPACTS OF THE SELECTED ALTERNATIVE

The environmental assessment for the proposed KY 15 project has resulted in the determination that the Selected Alternative will have no significant impact on the human environment. The EA process involved the evaluation of three additional alternatives: a second cross-country alternative (Alternative 1), the Widening Alternative, and the No-Build Alternative.

5.1 SELECTED ALTERNATIVE

The potential impacts of the Selected Alternative are summarized below in terms of construction costs, ecological resources, socio-economic conditions, noise and air quality, hazardous materials, and cultural resources.

5.1.1 Construction Cost

The Selected Alternative has an estimated construction cost of approximately \$56.9 million as of 2003. This cost includes the major line items of excavation, pavement and bridges in order to provide a clear comparison between the alternatives.

5.1.2 Ecological Resources

The Selected Alternative will impact 3,750 feet of stream and 0.92 acre of wetland. It will also impact approximately 133 acres of terrestrial habitat including 73 acres of upland slope forest, 27 acres of mesic forest, and 33 acres of open field. This alternative could have potential impacts on summer foraging habitat of the federally endangered Indiana bat. Mist netting surveys will be conducted by KYTC biologists prior to construction should tree clearing be scheduled during the summer roost period of March through October, as coordinated with representatives of the U.S. Fish and Wildlife Service and the Kentucky Department of Fish and Wildlife Resources (see coordination letters in Appendix F).

5.1.3 Socio-economic Conditions

The Selected Alternative will result in the displacement of 36 residential family units (100 occupants). Approximately 22 of these displacements are single-family units and 14 are mobile homes. Approximately 70% of these residences are owner-occupied, while 30% are occupied by tenants. Approximately 15% of the displaced households are deemed to be substandard or non-DS&S (Decent Safe and Sanitary) housing. Right-of-way agents will work with relocating occupants to ensure that they are placed in housing meeting DS&S standards. The Conceptual Stage Relocation Report dated February 27, 2004 is provided in Appendix G.

Within the 36 residential units to be relocated, it appears that approximately 100 residents will be displaced. Throughout the corridor it appears that there are potentially three to five interdependent family clusters that may be impacted by the project. If these clusters are impacted, right-of-way officials will work to relocate the families together on suitable parcels within the vicinity of one another. The families may be relocated to parcels that are further away from the project corridor if no other option is available. No disabled or elderly residents were identified during the initial socio-economic assessment. If such individuals are identified through the relocation process, right-of-way officials will work with the residents to make sure that any relocation is made to meet their needs.

The Selected Alternative will result in the relocation of six businesses, which include: a salvage yard and garage building, a storage facility with approximately 20 units, a small owner operated tack shop on a residential property, a bowling alley, a land lease company, and a truck garage. It is anticipated that these businesses will relocate locally and that there will not be any social, economic or cultural loss to the community due to the displacement of these businesses.

The selection of the preferred Alternative will result in impacts to two churches, one of which is a complex, which includes the Bible Baptist Church, the Hazard Christian Academy, the residence of the pastor and an adjoining residence. The Bible Baptist Church has a congregation size of approximately 140 members with three active deacons. Currently, 17 students attend the Hazard Christian Academy and the complex has four full-time employees, which include the pastor and three teachers. Right-of-way officials have met with officials from the church and school and will continue to correspond with them throughout the relocation process. Church representatives have not expressed any objections to the proposed project, given that suitable relocation is provided. If the Selected Alternative is chosen, the officials will work with the church and school to relocate the building and residences on the existing

church property or adjoining property if possible. The church, school and residences will be relocated to an off-site property if no other option is available. Leaders of the second church have been contacted as well. Per the CSRR, there are several sites available in the surrounding area for the church to be relocated.

Construction of the Selected Alternative will also result in impacts to two cemeteries: 1) one near First Creek in the Southern Segment; and 2) the Miller Family Cemetery in the northern portion of the Northern Segment. Project construction will require the relocation of six and three graves, respectively. Impacts to the Campbell/Fugate Cemetery in the southern portion of the Northern Segment are anticipated to only impact one grave; however, a formal survey should be completed to determine the exact number of graves and if any occur within the proposed right-of-way.

This project will have no agricultural impacts because there is not any agricultural or prime farmland in the project corridor. A farmland conversion impact rating (LESA) form was completed for this project and is included in Appendix H.

Based on the results of this environmental analysis, no environmental justice issues are anticipated by the construction of the Selected Alternative. Per *Executive Order 12898: Federal Action to Address Environmental Justice in Minority Population and Low-Income Populations*, this project will not have a disproportionately high or adverse human health or environmental effect on any minority or low-income communities.

The Selected Alternative will also have major beneficial impacts to the local and regional economy. It will provide safer and more efficient transportation for commuting to jobs, shipping of raw materials to industry, and shipping of finished goods to market. It will also open new, previously inaccessible land for residential, commercial and industrial development, particularly along ridge tops and former mine benches.

5.1.4 Noise and Air Quality

Noise

During the noise analysis, several receptors predicted traffic noise levels that approach or exceed the FHWA's Noise Abatement Criteria (NAC) of 67 dBA L_{eq} for residential facilities and 72 dBA L_{eq} for commercial facilities. The following table summarizes the traffic noise levels predicted for the project corridor and values that are in exceedance of the FHWA NAC are shown in bold.

Receptor	Existing (dBA)	No-build (dBA)	Build Alternate 1 (dBA)	Build Alternate 2 (dBA)
1	74.7	77.5	72.2	69.2
2	71.0	74.2	62.5	63.6
3	67.8	70.8	74.1	74.1
4	76.8	79.6	79.5	79.5
5	71.4	74.2	74.9	74.9
6	61.9	64.9	64.7	61.1
7	65.0	67.9	59.6	62.4
8	64.1	67.3	56.6	60.3
9	61.7	64.8	67.5	57.9
10	63.0	66.1	57.7	59.9
11	60.3	63.6	61.6	61.2
12	64.7	67.7	61.7	61.9

For this project, receptor locations were chosen at occupied sites along both Cross Country Alternatives, such as residences, commercial facilities and schools. Noise sensitive locations (such as churches) were also selected as receptors. Receptor locations were not located in area remote from human occupation, which included a large portion of both Cross Country Alternatives.

According to the noise analysis several of the receptors approached or exceeded the NAC of 67 dBA L_{eq} for residential facilities; however, none of the receptors showed both a predicted NAC exceedance and a substantial increase over existing traffic noise levels. Based on this analysis, the project will not

adversely impact the traffic noise levels in the project corridor, and no noise abatement measures are anticipated for the project.

Air Quality

The air quality analysis predicted both increases and decreases in carbon monoxide (CO) concentrations relative to existing levels; however, no predicted carbon monoxide concentrations for existing and future levels exceed the National Ambient Air Quality Standards (NAAQS) of 35 ppm and 9 ppm (one-hour and eight-hour averaging periods, respectively). Currently, Perry County is designated as “in attainment” for all transportation related pollutants, and the projected increase of these pollutants associated with the proposed project will not alter this current attainment status. Based on this analysis, the project will not adversely impact the air quality levels in the project corridor

5.1.5 Hazardous Materials

Potential UST/HazMat impacts resulting from the Selected Alternative are limited to two facilities (Highwayman Chevron and Hazard Double Kwik #2) located in the Southern Segment. Both sites contain four USTs and are recommended for Phase II investigations (located on a map in the UST/HazMat Base Study).

5.1.6 Cultural Resources

The Selected Alternative will not impact any known archaeological or historical sites within the project corridor.

5.2 ALTERNATIVES CONSIDERED BUT REJECTED

The three alternatives to the Selected Alternative considered for the project (Alternative 1, Widening Alternative, and No-Build) were eliminated from consideration due to a combination of substantial environmental impacts, costs, and/or their inability to meet the needs of the project. The potential environmental impacts of these eliminated alternatives are summarized below:

RESOURCE	POTENTIAL IMPACT			
	Selected	Alternative 1	Widening	No-Build
Construction Costs*	\$56.9 Million	\$69.4 million	\$52.6 million	none
Terrestrial Habitat	133 acres	156 acres	<5 acres	none
Streams	3,750 feet	5,610 feet	10,338 feet	none
Wetlands	0.92	3.05 acres	0.2 acre	none
Threatened/Endangered Species	potential IN bat habitat	potential IN bat habitat	potential IN bat habitat	none
Cultural Resources				
Archaeological	none	1 prehistoric rock shelter	none	none
Historic	none	1 historic cemetery	none	none
Hazardous Waste	2 Phase II (s)	2 Phase II (s)	6 Phase II (s)	none
Socio-economics				
Residential displacements	36	26	95	none
Business displacements	6	0	15	none
Cemetery Impacts	2	4	2	none
Church Impacts	2	1	none	none
Economic Impact	beneficial	beneficial	beneficial	negative
Air	None	none	none	none
Noise	None	None	none	none

* includes only excavation, pavement and bridge costs for purposes of comparison

5.3 IMPACT SUMMARY

The proposed Selected Alternative (Alternative 2) will have no significant adverse environmental impacts. This alternative has been designed to avoid and minimize impacts to existing resources to as great an extent possible and still meet the project needs of improving the existing KY 15 roadway north of Hazard to resolve traffic congestion and safety issues.

In addition to having no significant impacts, the Selected Alternative also offers fewer environmental impacts than the Widening Alternative, Alternative 1, or the No-Build Alternative. In comparison with the other build alternatives considered, the Selected Alternative:

- has substantially lower construction costs than Alternative 1
- has substantially lower stream impacts than either the Widening Alternative or Alternative 1
- has fewer wetland impacts than Alternative 1

- avoids the western archaeological site (rock shelter) impacted by Alternative 1
- does not impact any cultural historic resources while Alternative 1 impacts one historic cemetery
- requires fewer Phase II UST/HazMat investigations than the Widening Alternative
- has substantially fewer residential and business displacements than the Widening Alternative

Although the No-Build Alternative has no impact on existing resources within the project corridor it has significant negative future impacts in terms of road user costs, mobility, safety, economic growth, and compatibility with planned development within the corridor. The Selected Alternative offers substantial economic benefits in terms of improved mobility throughout the area and increased available land for development.

might disproportionately or adversely affect minority or low-income groups. The Selected Alternative would have no adverse effect on minority or low-income populations, and no neighborhoods or communities would be adversely impacted. No environmental justice issues have been identified on this project.

6.2 SHORT-TERM MITIGATION MEASURES

During the construction phase of any project, there are a wide variety of adverse short-term construction impacts throughout the project corridor. These can include, but are not limited to, increased noise and dust; however, these are temporary inconveniences that will be controlled by applicable laws. The KDHSS specifications for Road and Bridge Construction address routine mitigation procedures to be required of highway projects. Applicable environmental measures include the following:

REQUIRED ENVIRONMENTAL PROCEDURES		
Impact Area	KDHSS Section(s)	Procedure Required
Air Quality	107.01.04	Controls on burning, drilling, blasting, production and hauling of materials. Includes spraying for dust suppression and keeping engines in tune.
Noise	107.01.06	Provide sound-deadening equipment devices, shield barriers, etc. necessary to restrict noise transmission at sensitive sites, noise monitoring.
Soil Erosion	212.01	Construct brush barriers, prepare the soil for seeding, apply materials, and mulch areas seeded or sodded.
Aquatic Impacts (Water Quality, Sedimentation)	213.01	Control water pollution through use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods. Coordinate these measures with the permanent erosion control features specified in Section 212 and the contract to the extent practical to ensure effective and continuous erosion control throughout the construction and post construction period
Traffic Congestion	104.04	Construction of temporary detour roadways, crossovers, lane closures; use of flagmen, use of signs; incorporation of traffic maintenance plan including project phasing.
Safety	107.01.01,107.08	Limit blasting to times of lowest traffic volumes; halt traffic during blasting; remove hazardous debris; minimum drop-off elevations; barrier walls and crash cushions.

7.0 PUBLIC INVOLVEMENT AND COORDINATION

Public involvement was an integral part of the development process for the KY 15 project. The original EA for road widening throughout the corridor (approved by the KYTC and the FHWA on September 27, 1999) was initially presented to the public during two meetings in late 1999. These and subsequent follow-up meetings are summarized below:

- **November 17, 1999:** a public hearing was held on the project's Southern Segment. There was overall support for the widening of KY 15 between Morton Boulevard and Lower Second Creek Road. Public concerns raised during the meeting were limited to access and drainage details that could be addressed in final design. The Project Team recommended that plans for final design of the Southern Segment be moved forward.
- **November 30, 1999:** a public meeting was held on the project's Northern Segment. There were a large number of comments opposing the widening of KY 15 in the Northern Segment and tentative interest seemed to exist for potential cross-country alternatives. Concerns raised regarding the widening of the northern alternative included the large number of residential/business displacements, and safety issues related to the large number of access points. Accordingly, the Project Team scheduled a follow-up public meeting to present more details concerning potential cross-country alternatives.
- **January 6, 2000:** an open format public meeting was held on the potential for cross-country alternatives in the project's Northern Segment, as a follow-up to the November 30, 1999 meeting. Of the several hundred handwritten comments, the majority (142) were in favor of a cross-country alternative in the Northern Segment. Although 315 comments were received opposing a cross-country route, these were primarily either identical carbon copies of the same letter or multiple signatures on single pages and the KYTC-District 10 only considered these as 41 total comments. The Project Team stated that actual handwritten comments received included 104 in favor of the cross-country alternative versus 35 in favor of widening the existing roadway. Thus, an overall majority of comments from residences or family within the project corridor were in favor of the cross-county alternative. A large number of comments in favor of widening the existing roadway came from one location whose owner was concerned about the loss of business if the roadway went cross-country. Many of the addresses listed on the comments were not local and the Project Team considered all of the comments from this location as one total comment.

Most of the comments received in favor of the cross-county alternative addressed the loss of housing under road widening, a projected long construction time if the project was built within the existing roadway, current safety of the driving public, current danger to school buses and emergency vehicles, benefits of creating additional commercial/industrial land along a cross-country route, and the limited road improvements provided by a widening alternative. There were also comments about potential environmental impacts for the cross-country project. The Project Team addressed these comments by stating that there was a misconception about the level of environmental impacts and, in fact, the widening of the existing facility would take approximately 95 residences and cause impacts to over 10,000 feet of stream while the cross country alternative would impact 48 residences and impact less than 4,000 feet of stream. The Project Team concluded that when all costs were considered for the two alternates including construction, maintenance of traffic, property/housing costs, costs for mitigating stream impacts

and overall community/family cluster impacts, the costs for the two alternates would be very close.

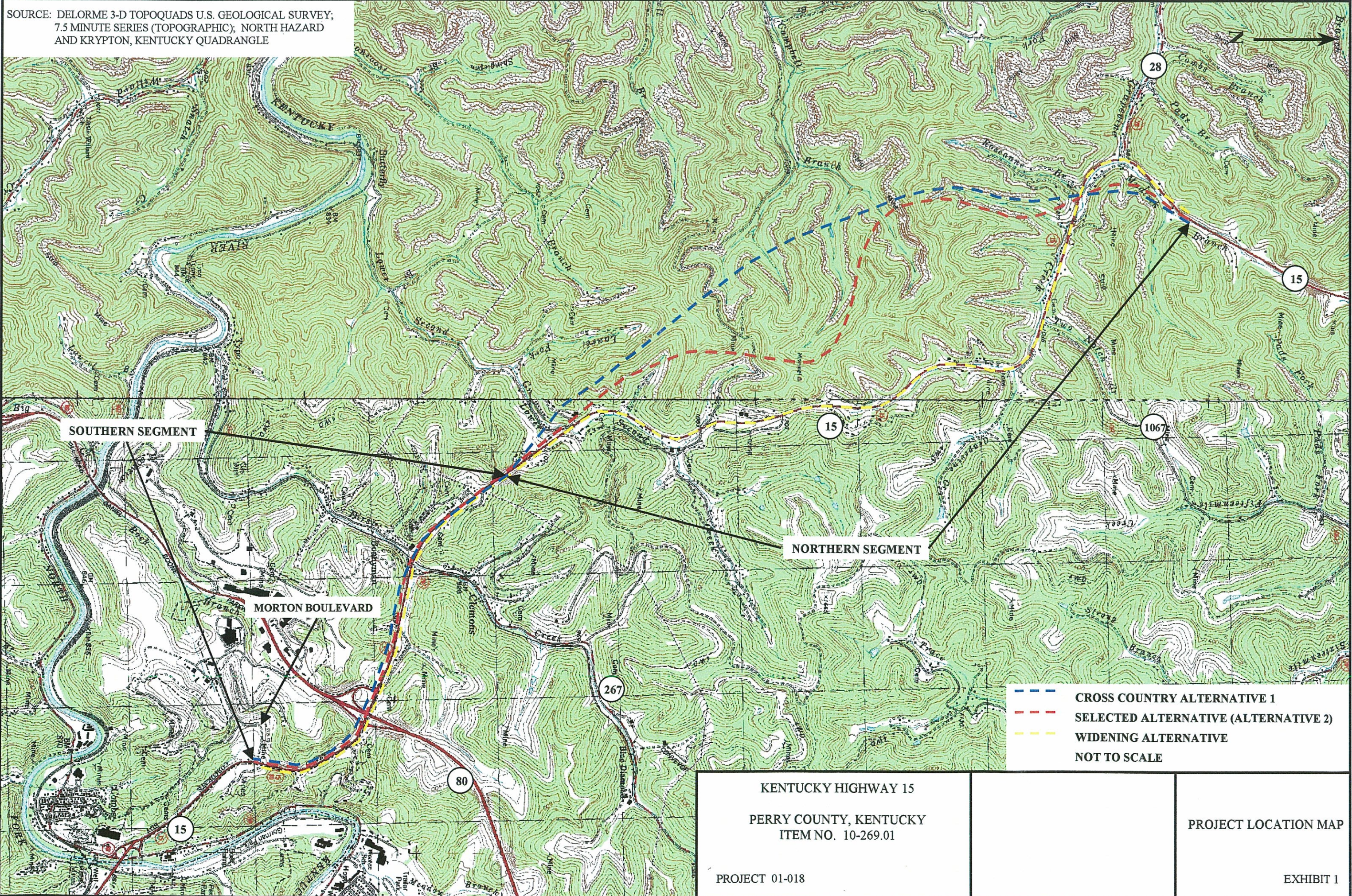
The Project Team stated that the proposed alignment along the existing roadway for the Northern Segment was dangerous due to the number of access points along its length, the fact that many of the design standards were at maximums, and that the proposed five-lane design would make it harder for traffic to cross the road. The Project Team recommended that analysis of potential cross-country alternative routes be pursued with a full 40-foot median and partially controlled access through this section. They stated that there would be much less maintenance of traffic during construction, the road could be designed to incorporate full safety measures, and there would be the potential to reclaim some strip-mined land for development. The Project Team had met with FHWA and indicated that they were willing to let KYTC proceed with the FONSI for the project and include the cross-country analysis in the FONSI.

- **March 28, 2002:** a follow-up public meeting was held to present and receive comments on two cross-country alternatives to the widening of existing KY 15 in the Northern Segment of the project. The study of the two cross-country alternates was deemed necessary after an original public meeting held on January 6, 2000, where 104 comments suggested that KY 15 follow a cross-country alternative. The public meeting was held as an open format and attendees were allowed to move freely throughout the room and view displays, locate their property, and speak with KYTC and consultant representatives. Of the 51 people that attended the meeting, 17 individuals provided comments about the alternatives. Public comments overwhelmingly favored the Selected Alternative (11 comments) over both the second cross-country route (1 comment) and the widening (3 comments) of the existing KY 15 roadway (73% to 7% to 20%, respectively). From this meeting, it was determined to proceed with the Selected Alternative.
- **January 27, 2003:** a meeting held at the Bible Baptist Church in Hazard, Kentucky to discuss potential impacts to, and the relocation of, the church, the Hazard Christian Academy, and two adjoining residences due to the proposed highway construction impacts. During the meeting, church representatives were given a brief description of the project and shown maps to detail where the proposed alternative would impact the church and school. KYTC-District 10 personnel discussed the relocation process and different options for relocation including redesigning the church and school in its current location, lowering an existing cut and rebuilding the church and school in an area north of the existing building, and relocating the church to another property. Church representatives expressed several concerns that were addressed during the meeting or will be addressed throughout the easement acquisition process if the project moves forward. The church indicated their preference to relocate on the same property or adjacent property, if possible. Overall, the church representatives appeared to understand the potential impacts of the project and voiced no objections to the overall KY 15 project or to the taking of the church/school complex given that adequate relocation can be accomplished. KYTC-District 10 personnel will continue to coordinate with the pastor and church deacons as the project progresses.

In summary, coordination with the public and response to their concerns have resulted in the identification of a Selected Alternative for the project consisting of the widening of KY 15 in the Southern Segment and the construction of a cross-country roadway (Cross-Country Alternative 2) in the Northern Segment (a copy of the original Environmental Assessment is included in Appendix I). This balances public concerns regarding residential displacements, overall highway costs, and environmental impacts.

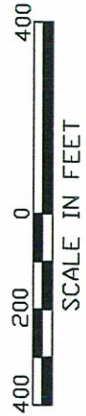
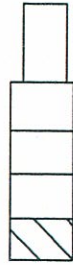
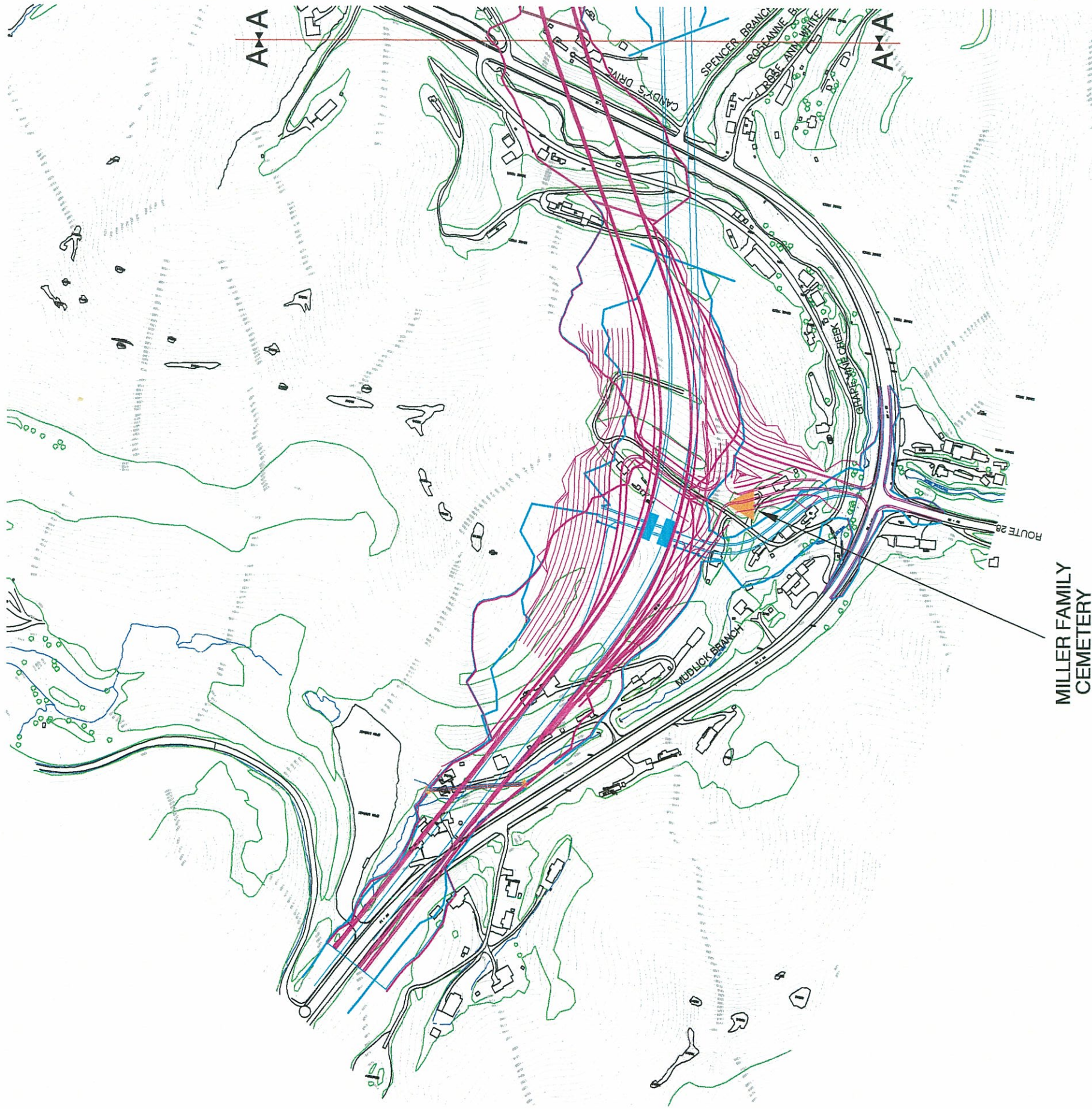
EXHIBITS

SOURCE: DELORME 3-D TOPOQUADS U.S. GEOLOGICAL SURVEY;
7.5 MINUTE SERIES (TOPOGRAPHIC); NORTH HAZARD
AND KRYPTON, KENTUCKY QUADRANGLE



LEGEND

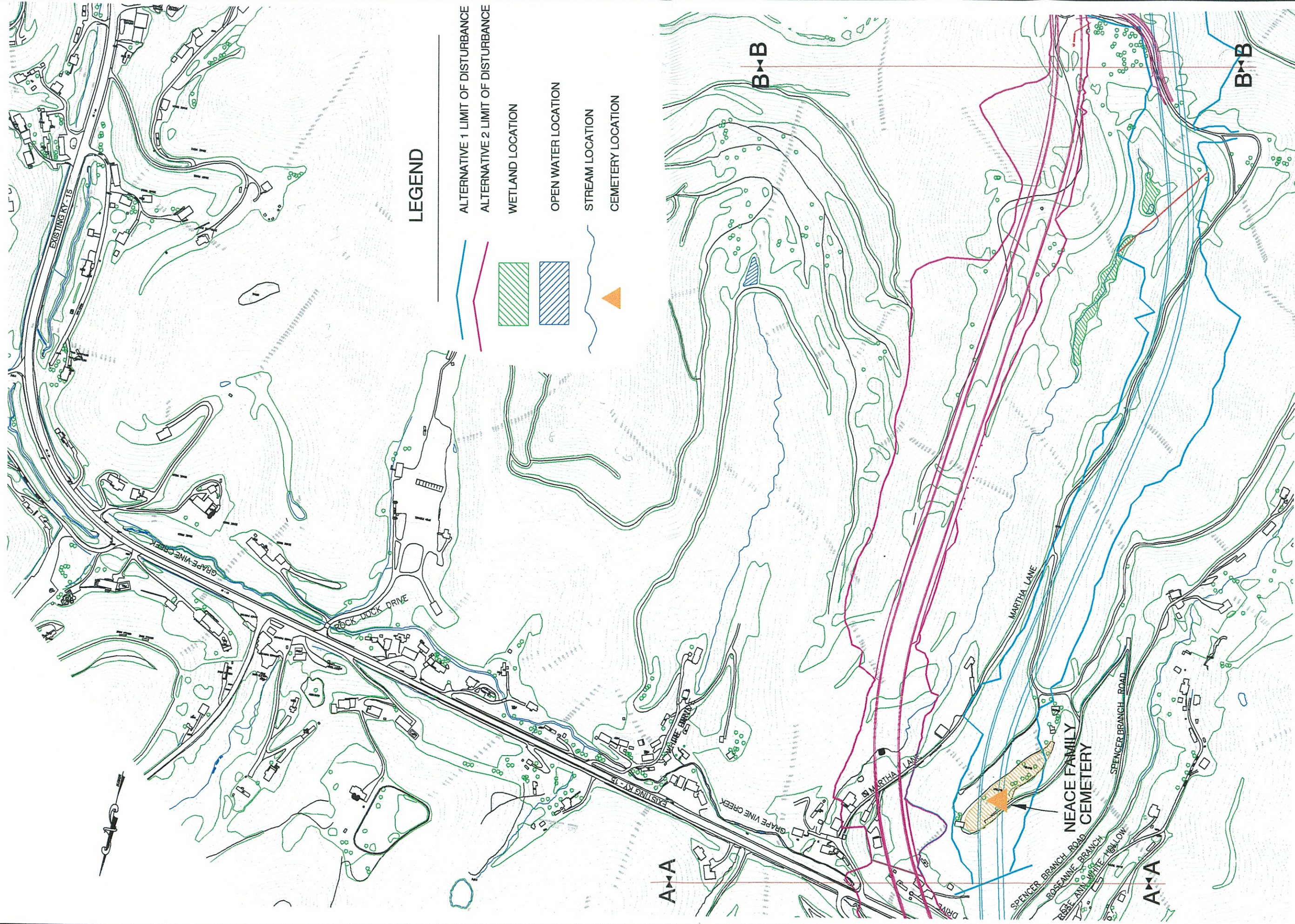
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- ALTERNATIVE 2 LIMIT OF DISTURBANCE
- WETLAND LOCATION
- OPEN WATER LOCATION
- STREAM LOCATION
- CEMETERY LOCATION



KENTUCKY HIGHWAY 15
 ENVIRONMENTAL ASSESSMENT
 PERRY COUNTY, KENTUCKY
 ITEM NUMBER 10-269.01

FILENAME: 01-018-FINAL
 PROJECT No.: 01-018
 DRAWN BY: CCD

CROSS-COUNTRY ALTERNATIVES
 ENVIRONMENTAL IMPACTS
 EXHIBIT 2



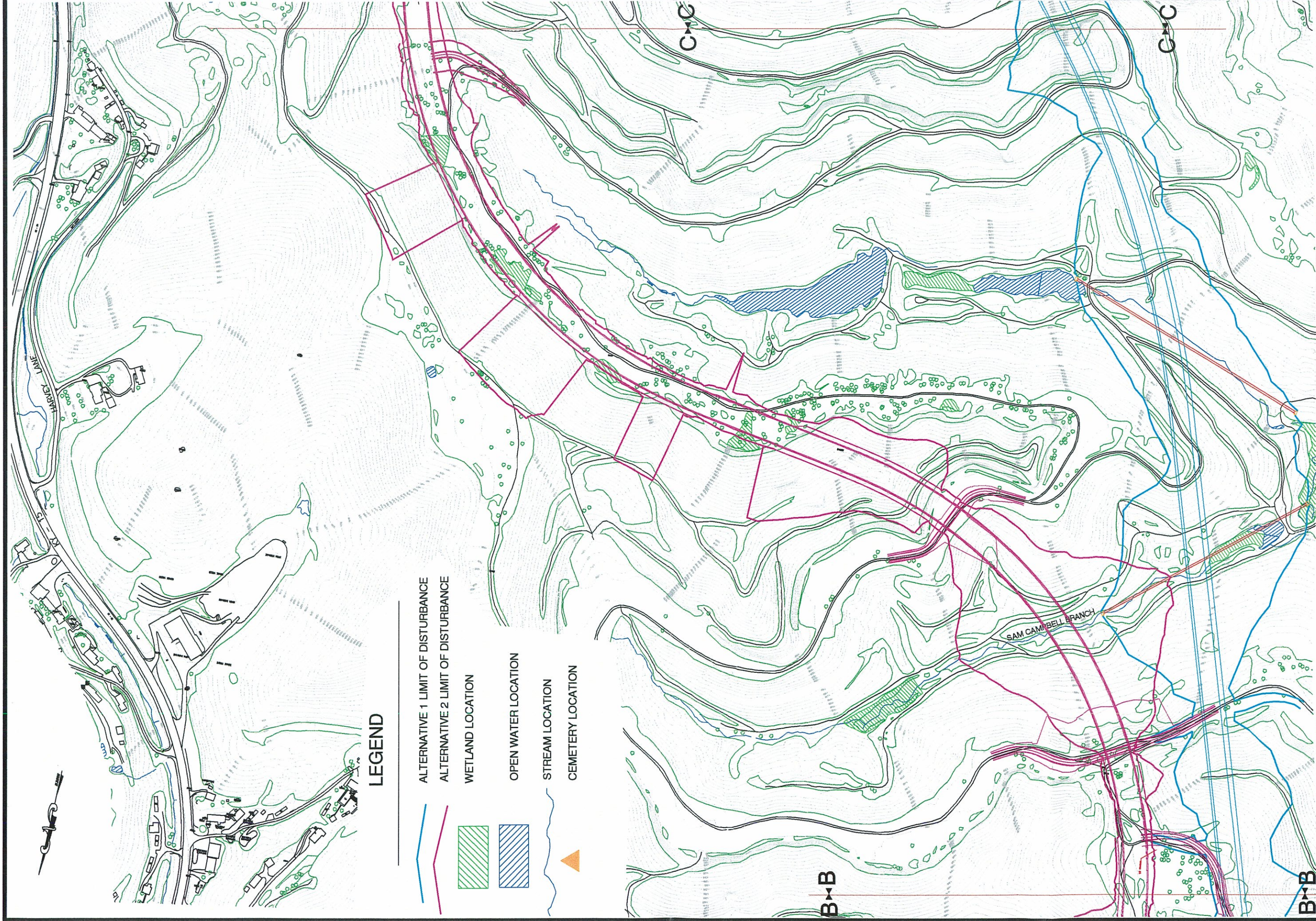
KENTUCKY HIGHWAY 15
 ENVIRONMENTAL ASSESSMENT
 PERRY COUNTY, KENTUCKY
 ITEM NUMBER 10-269.01

FILENAME: 01-018-FINAL
 PROJECT No.: 01-018
 DRAWN BY: CDD
 PLOT DATE: 11/14/03

CROSS-COUNTRY ALTERNATIVES
 ENVIRONMENTAL IMPACTS

EXHIBIT 2

SHEET 2 OF 5



LEGEND

ALTERNATIVE 1 LIMIT OF DISTURBANCE



ALTERNATIVE 2 LIMIT OF DISTURBANCE



WETLAND LOCATION



OPEN WATER LOCATION



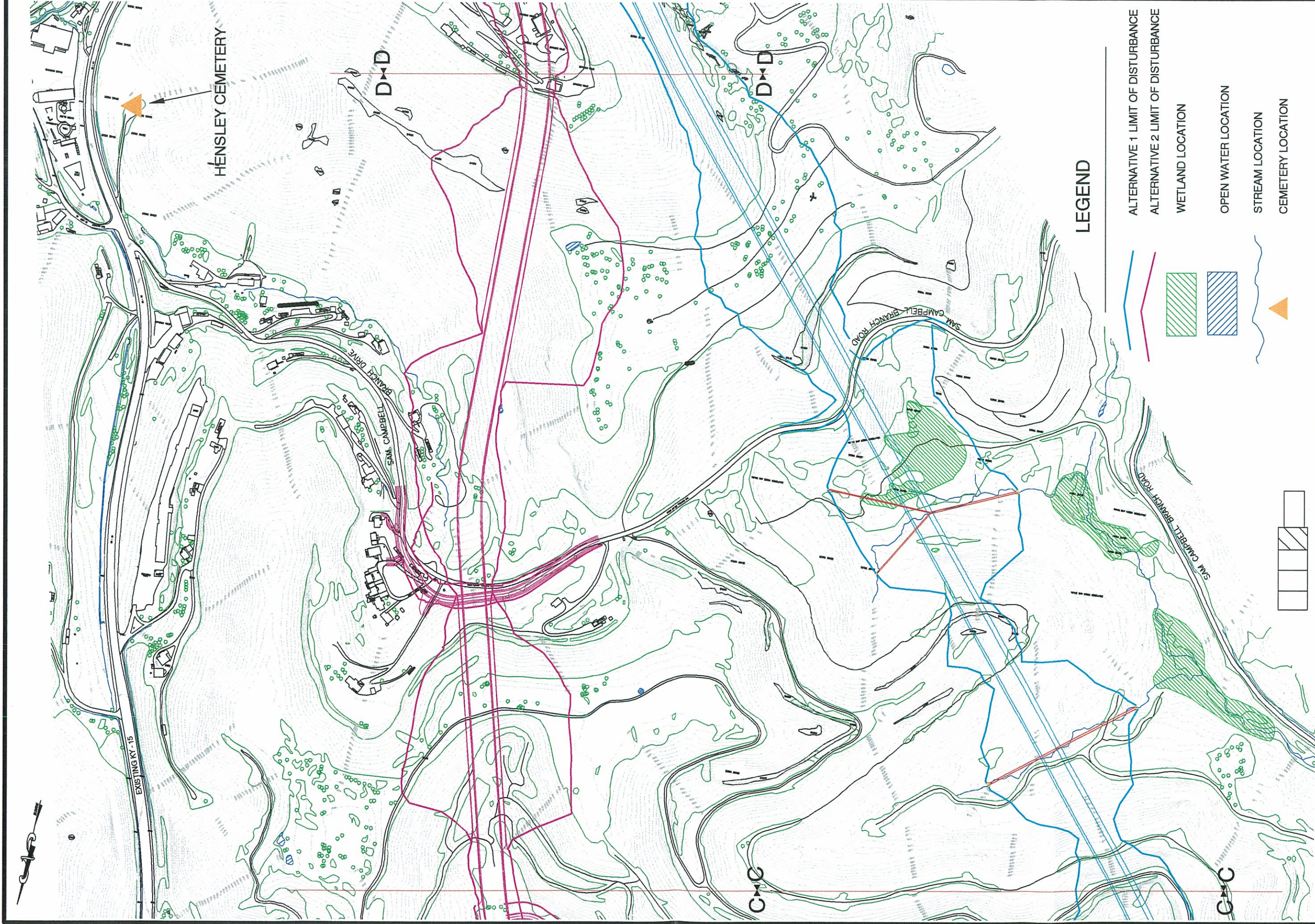
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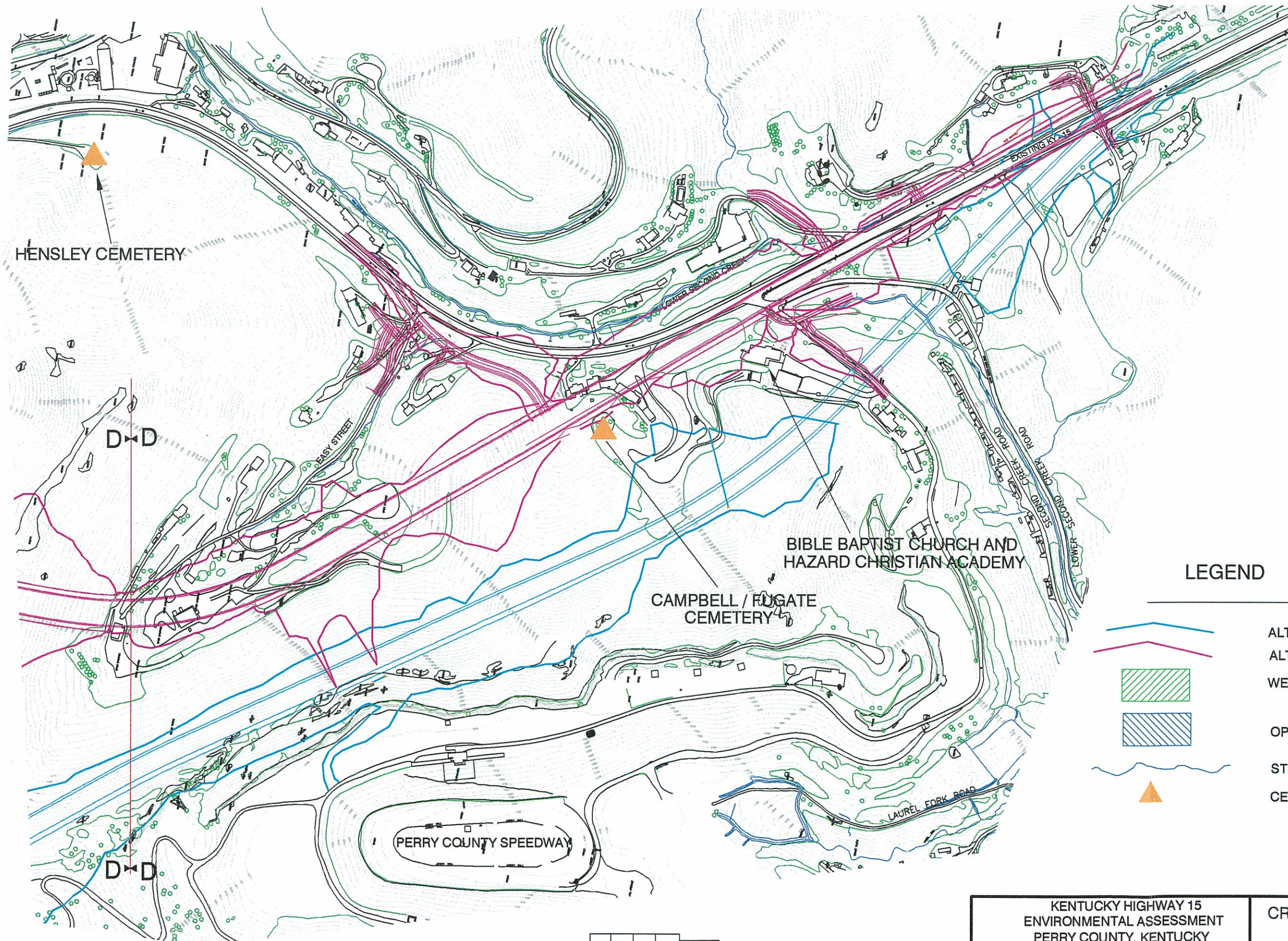


CEMETERY LOCATION



400 200 0 400





LEGEND

- ALTERNATIVE 1 LIMIT OF DISTURBANCE
- ALTERNATIVE 2 LIMIT OF DISTURBANCE
- WETLAND LOCATION
- OPEN WATER LOCATION
- STREAM LOCATION
- CEMETERY LOCATION

400 200 0 400
SCALE IN FEET



KENTUCKY HIGHWAY 15
ENVIRONMENTAL ASSESSMENT
PERRY COUNTY, KENTUCKY
ITEM NUMBER 10-269.01

FILENAME: 01-018-FINAL

PROJECT No.: 01-018

DRAWN BY: CCD

PLOT DATE: 11/14/03

CROSS-COUNTRY ALTERNATIVES
ENVIRONMENTAL IMPACTS

EXHIBIT 2

SHEET 5 OF 5



LEGEND

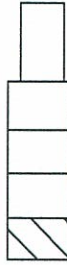
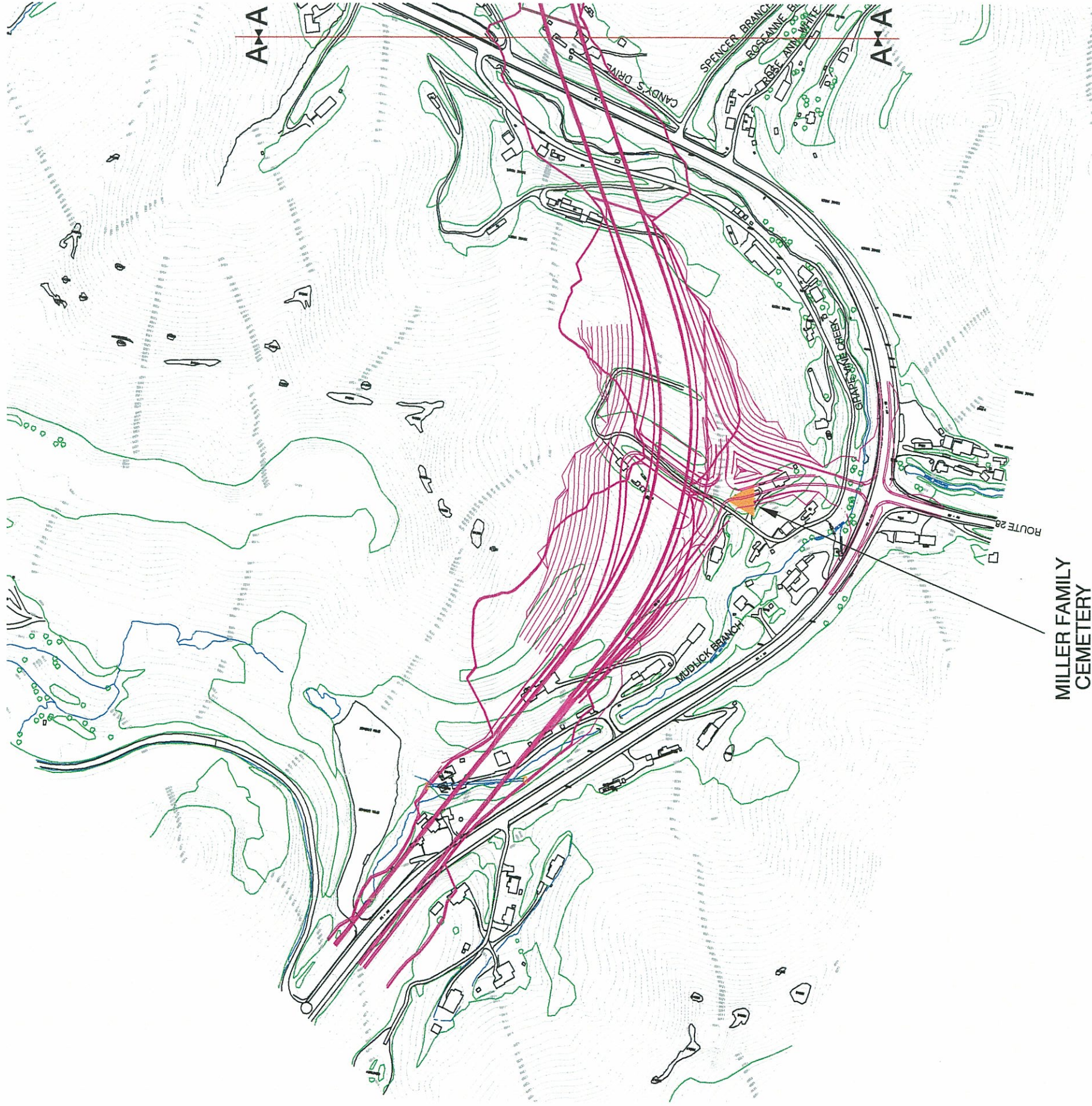
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WETLAND LOCATION

OPEN WATER LOCATION

STREAM LOCATION

CEMETERY LOCATION



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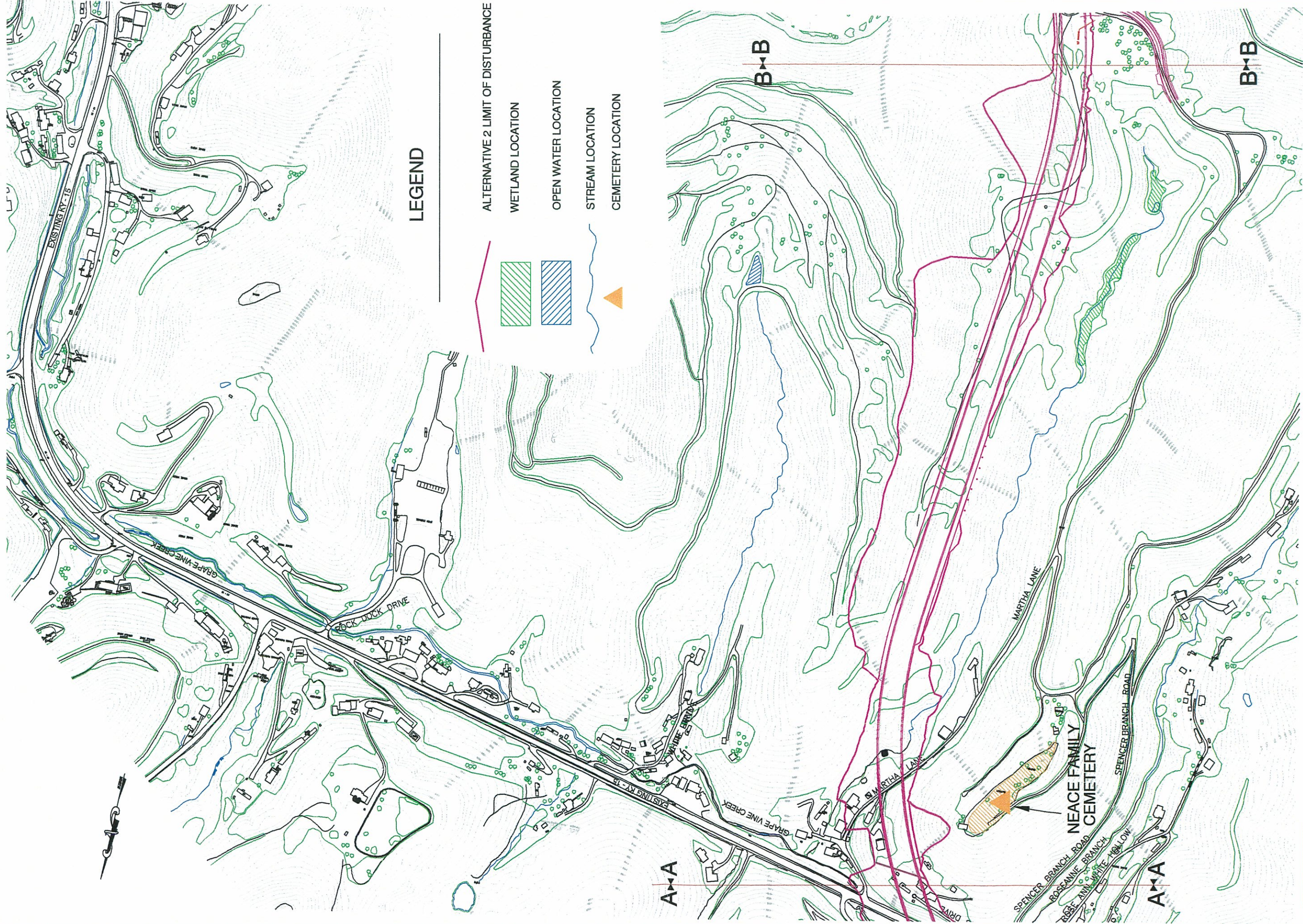
KENTUCKY HIGHWAY 15
ENVIRONMENTAL ASSESSMENT
PERRY COUNTY, KENTUCKY
ITEM NUMBER 10-269.01

FILENAME: 01-018-EX3

PROJECT No.: 01-018 DRAWN BY: CCD

SELECTED ALTERNATIVE
ENVIRONMENTAL IMPACTS
EXHIBIT 3

SHEET 1 OF 5



LEGEND

- ALTERNATIVE 2 LIMIT OF DISTURBANCE
- WETLAND LOCATION
- OPEN WATER LOCATION
- STREAM LOCATION
- CEMETERY LOCATION



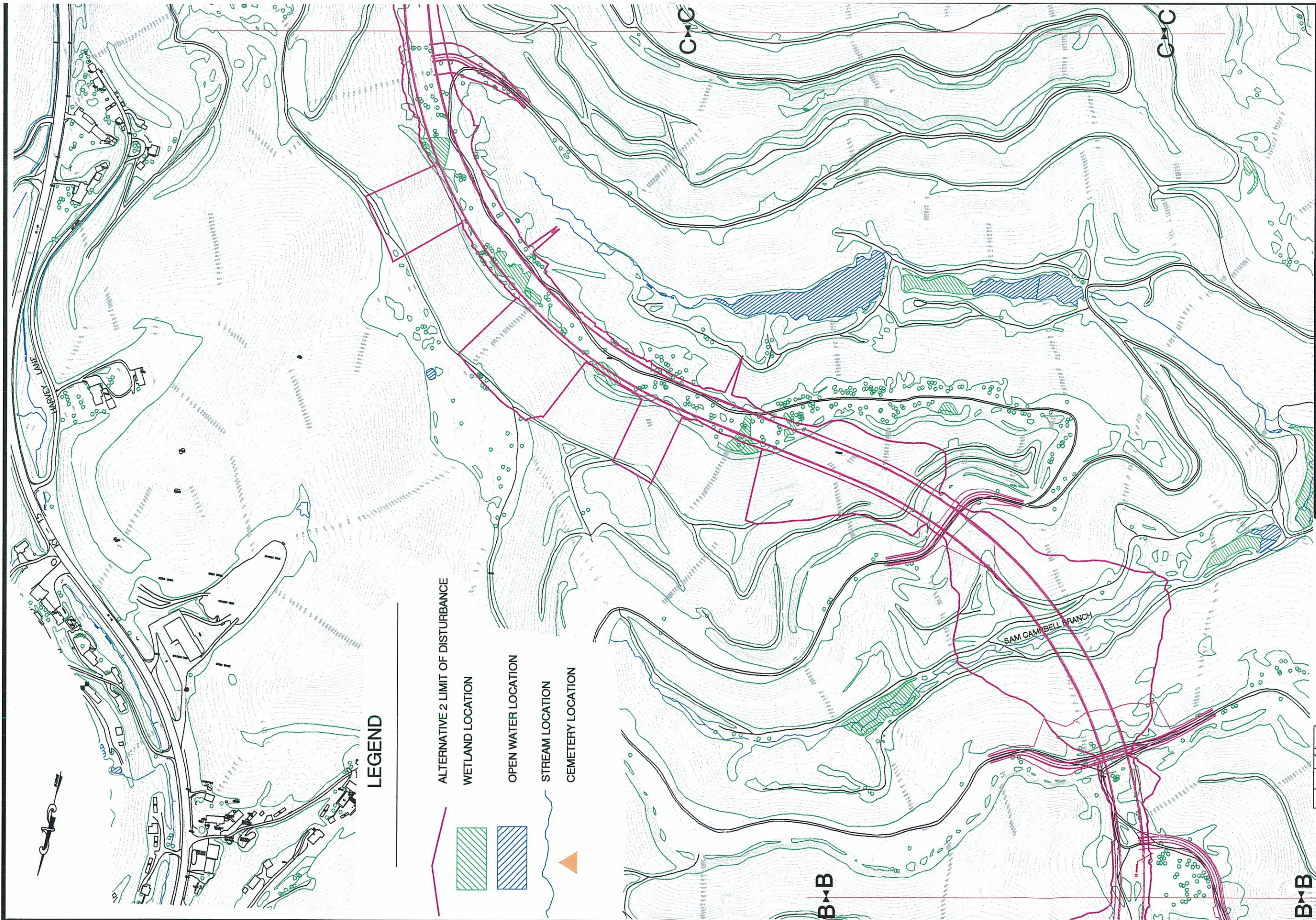
KENTUCKY HIGHWAY 15
ENVIRONMENTAL ASSESSMENT
PERRY COUNTY, KENTUCKY
ITEM NUMBER 10-269.01

FILENAME: 01-018-EX3
PROJECT No.: 01-018

DRAWN BY: CCD

SELECTED ALTERNATIVE
ENVIRONMENTAL IMPACTS
EXHIBIT 3

SHEET 3 OF 5



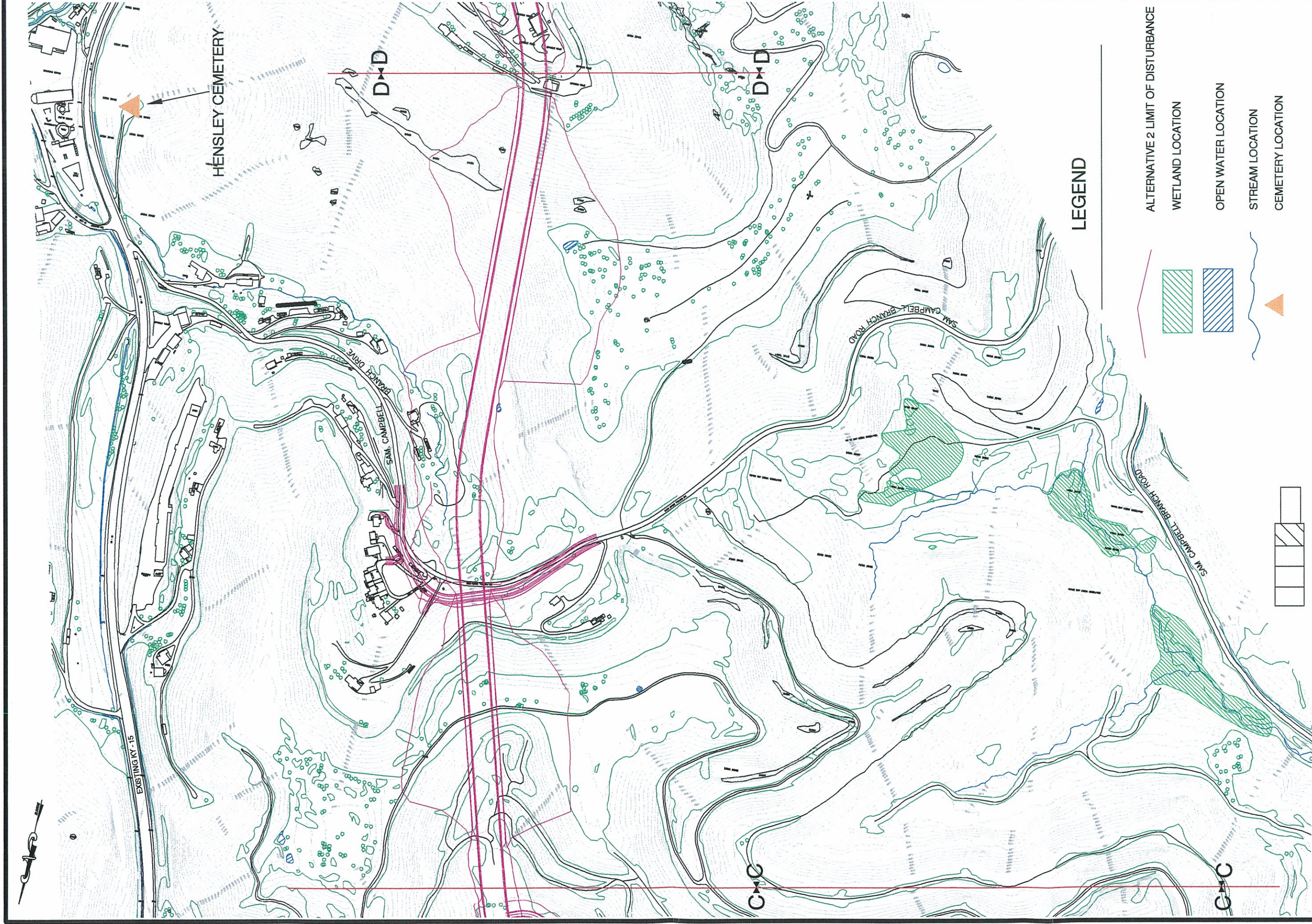
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- WETLAND LOCATION
- OPEN WATER LOCATION
- STREAM LOCATION
- CEMETERY LOCATION



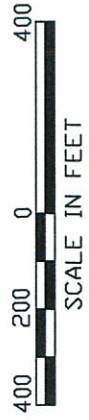
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SCALE IN FEET

KENTUCKY HIGHWAY 15	
ENVIRONMENTAL ASSESSMENT	
PERRY COUNTY, KENTUCKY	
ITEM NUMBER 10-269.01	
FILENAME: 01-018-EX3	DRAWN BY: CDD
PROJECT No: 01-018	



LEGEND

- ALTERNATIVE 2 LIMIT OF DISTURBANCE
- WETLAND LOCATION
- OPEN WATER LOCATION
- STREAM LOCATION
- CEMETERY LOCATION



KENTUCKY HIGHWAY 15
ENVIRONMENTAL ASSESSMENT
PERRY COUNTY, KENTUCKY
ITEM NUMBER 10-269.01

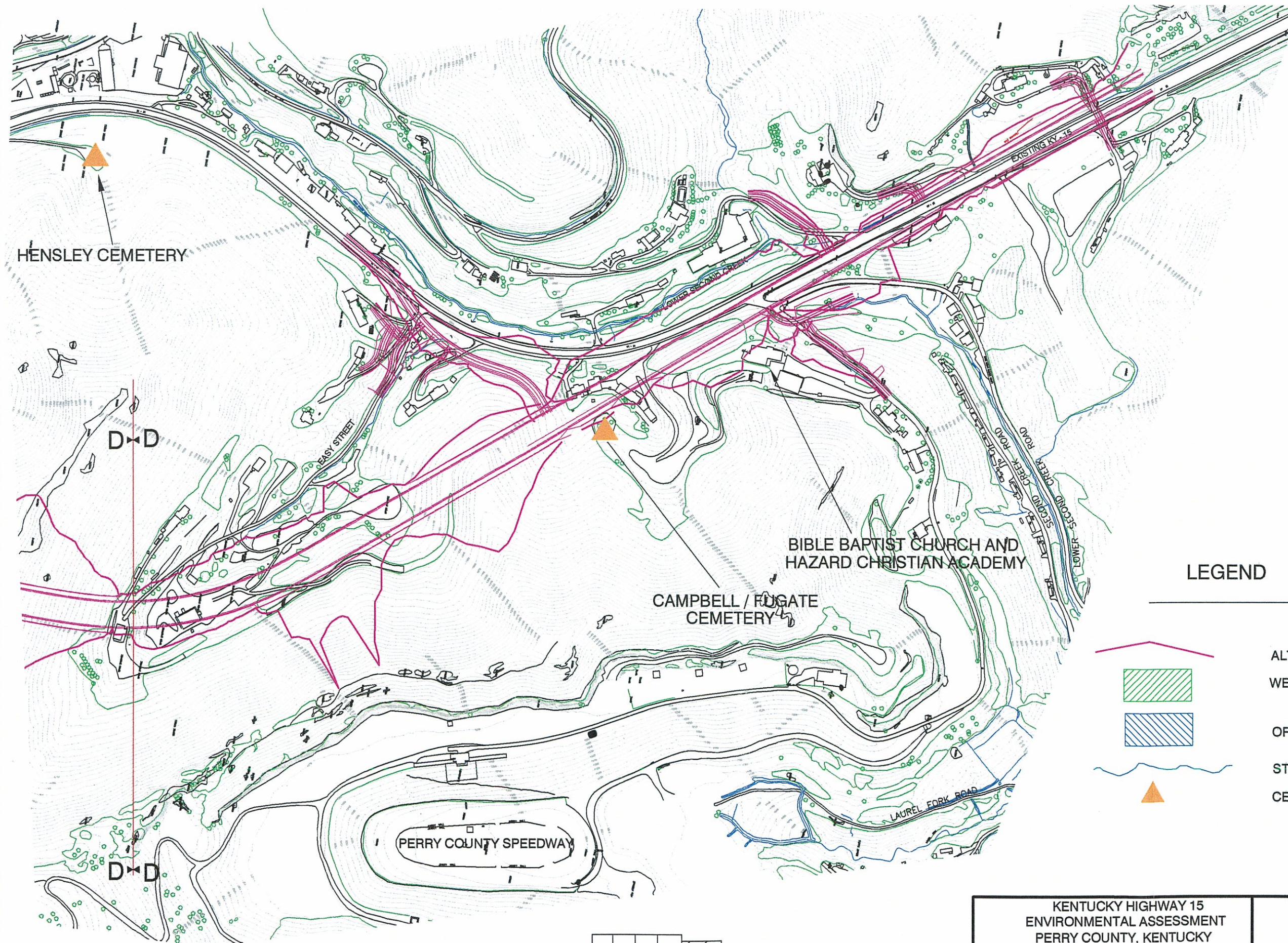
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PROJECT No.: 01-018

DRAWN BY: COD

SELECTED ALTERNATIVE
ENVIRONMENTAL IMPACTS

EXHIBIT 3

SHEET 4 OF 5



LEGEND

- ALTERNATIVE 2 LIMIT OF DISTURBANCE
- WETLAND LOCATION
- OPEN WATER LOCATION
- STREAM LOCATION
- CEMETERY LOCATION



KENTUCKY HIGHWAY 15
ENVIRONMENTAL ASSESSMENT
PERRY COUNTY, KENTUCKY
ITEM NUMBER 10-269.01

FILENAME: 01-018-EX3
PROJECT No.: 01-018
DRAWN BY: CCD
PLOT DATE: 6/15/04

SELECTED ALTERNATIVE
ENVIRONMENTAL IMPACTS
EXHIBIT 3
SHEET 5 OF 5

APPENDIX A

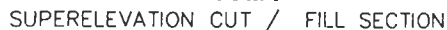
TYPICAL SECTION – SOUTHERN SEGMENT

RIGHT OF WAY PLANS

COUNTY OF	ITEM NO.	SHEET NO.
PERRY	10-269.00	R002

NOTES

- ①
- ② FOR ROCK SLOPES. SEE CROSS SECTIONS.
- ③ SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER.
- ④ SEE CROSS SECTIONS FOR PRE-SPILT SLOPES FROM RULZ TO GRADE FOR ROCK CUTS.
- ⑤ SUPPLEMENTED SHOULDER TO BE 12' MIN. WIDE AT THE RULZ. THE SHOULDER BEING WIDENED SHALL BE 12' MIN. WIDE WITH THE SLOPE INDICATED FOR NORMAL SECTION.
- ⑥ SHOULDER SHALL BE WIDENED 2' WHERE SIDEWALKS OF CURBED EDGES OF KENTUCKY HIGHWAY DEPARTMENT ARE LOCATED. SHOULDER SHALL BE WIDENED 2' TO FACE OF CURB/LANE.
- ⑦ REFILL MATERIAL TO CONFORM TO APPLICABLE SECTIONS OF CURRENT EDITION OF KENTUCKY MANUAL OF SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- ⑧ BITUMINOUS SEAL REQUIRED FROM OUTSIDE EDGE OF SHOULDER TO A POINT 2' DOWN THE FACE OF HILL SLOPE.
- ⑨ SHOULDER SHALL BE WIDENED 6' FOR ALL USHED AREAS FOR FUTURE UTILITY CONSTRUCTION.



MAINLINE PVMT. SCHEDULE

TRAFFIC LANES

CSB						4"	DEPTH
CL 2 ASPH BASE 1000 PC654-22						1-1/2"	DEPTH
CL 2 ASPH SURF 0.500 PC654-22							

SHOULDERS

CSB						FULL	DEPTH
CL 1 ASPH BASE 1000 PC654-22						9"	DEPTH
CL 1 ASPH SURF 0.500 PC654-22						1-1/2"	DEPTH



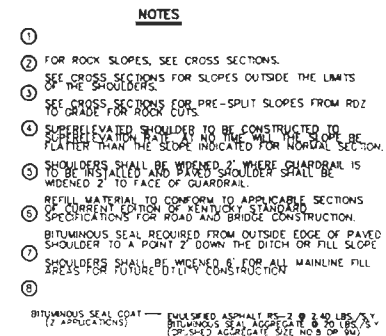
1 = THICKNESS OF SURFACE COURSE

Work under this item shall include cutting out the existing asphalt surface to a minimum depth and width as shown, so the new surface may heel into the existing surface. This work shall be incidental to construction of the asphalt concrete.

NOTE: PAYMENT COURSE THICKNESSES ARE SHOWN FOR ESTIMATING PURPOSES ONLY. FINAL PAYMENT DESIGN WILL BE PROVIDED BY THE KYC.

TYPICAL SECTIONS
KY 15 WIDENING
MAINLINE

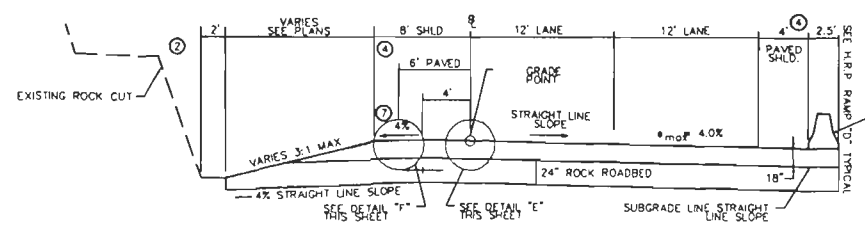
COUNTY OF	ITEM NO.	SHEET NO.
PERRY	10-269.00	R002A



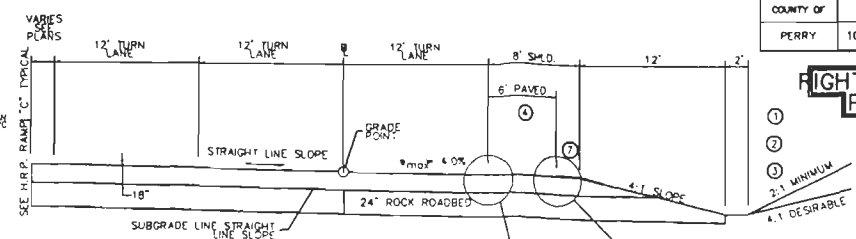
MAINLINE PAVEMENT SCHEDULE:					
TRAFFIC LANES					
CSB					4" DEPTH
CL 2 ASPH	BASE	1.000	P664-22	12-1/2"	DEPTH
CL 2 ASPH	SURF	0.38C	P664-22	1-1/2"	DEPTH
SHOULDER					
CSB					FULL DEPTH
CL 1 ASPH	BASE	1.000	P664-22		DEPTH
CL 1 ASPH	SURF	0.38D	P664-22	1-1/2"	DEPTH

TYPICAL SECTIONS
KY 15 WIDENING
KY 15/H.R. PKWY INTERCHANGE

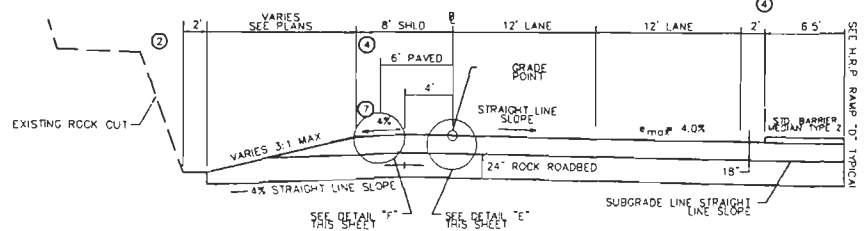
RIGHT OF WAY PLANS



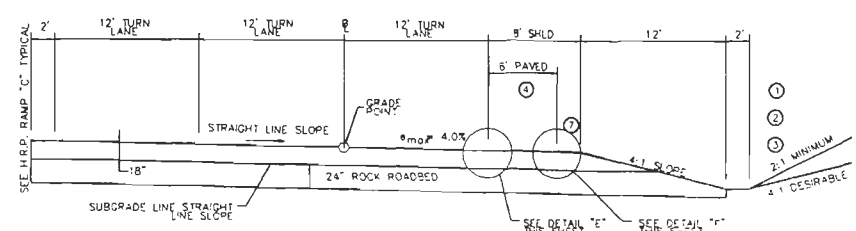
SUPERELEVATION CUT SECTION
STA. 74+36.02 TO STA. 77+23.60



SUPERELEVATION CUT SECTION
STA. 73+37.08 TO STA. 77+22.21



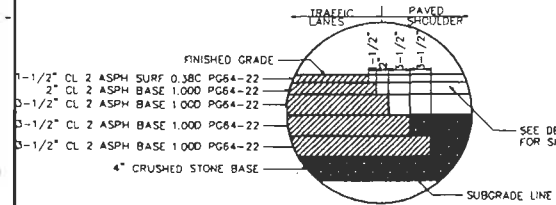
SUPERELEVATION CUT / FILL SECTION
STA. 77+23.60 TO STA. 79+63.00
H.R.P. RAMP "C"



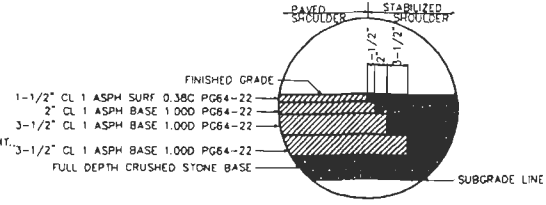
SUPERELEVATION CUT / FILL SECTION
STA. 77+22.21 TO STA. 79+63.00
H.R.P. RAMP "D"

SCALE: 1" = 5'

SCALE: 1" = 5'



DETAIL "F" TRAFFIC LANE PAVEMENT
N.T.S.



DETAIL "F" SHOULDER PAVEMENT
N.T.S.

INTERCHANGE PAVEMENT SCHEDULE			
TRAFFIC LANES			
CSB	CL 2 ASPH BASE 1.000 PG64-22	12-1/2"	4" DEPTH
CL 2 ASPH SURF 0.380 PG64-22		1-1/2"	DEPTH
SHOULDER			
CSB	CL 1 ASPH BASE 1.000 PG64-22	FULL DEPTH	
CL 2 ASPH SURF 0.380 PG64-22		1-1/2"	DEPTH

NOTES

- FOR ROCK SLOPES, SEE CROSS SECTIONS.
- SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE L.I.V.'S OF THE SHOULDER.
- SEE CROSS SECTIONS FOR PRE-SPLIT SLOPES FROM RDZ TO GRADE FOR ROCK CUTS.
- SUPERELEVATED SHOULDER TO BE CONSTRUCTED TO SUPERELEVATION RATE AT NO TIME WILL THE SLOPE BE FLATTER THAN THE SLOPE INDICATED FOR NORMAL SECTION.
- SHOULDER SHALL BE WIDENED 2' WHERE GUARDRAIL IS TO BE INSTALLED AND PAVED SHOULDER SHALL BE WIDENED 2' TO FACE OF GUARDRAIL.
- REF. MATERIAL TO CONFORM TO APPLICABLE SECTIONS OF CURRENT EDITION OF KENTUCKY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- BITUMINOUS SEAL REQUIRED FROM OUTSIDE EDGE OF PAVED SHOULDER TO A POINT 2' DOWN THE DITCH OR FILL SLOPE.

BITUMINOUS SEAL COAT: EMULSIFIED ASPHALT RS-2 @ 2.40 LBS./Y² (2 APPLICATIONS)

TYPICAL SECTIONS
KY 15 WIDENING
INTERCHANGES

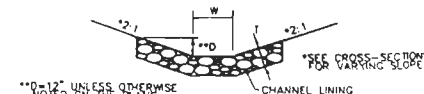
RIGHT OF WAY PLANS

COUNTY OF	ITEM NO.	SHEET NO.
PERRY	10-269.00	RO02C

NOTES

- FOR ROCK SLOPES, SEE CROSS SECTIONS.
- SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDERS.
- SEE CROSS SECTIONS FOR PRE-SPLIT SLOPES FROM RDZ FOR GRADE FOR ROCK CUTS.
- SUPERELEVATED SHOULDER TO BE CONSTRUCTED TO BE FLATTER THAN THE SLOPE INDICATED FOR NORMAL SECTION.
- SHOULDERS SHALL BE WIDENED 2' WHERE GUARDRAIL IS TO BE INSTALLED AND PAVED SHOULDER SHALL BE WIDENED 2' TO FACE OF GUARDRAIL.
- REFILL MATERIAL TO CONFORM TO APPLICABLE SECTIONS OF CURRENT EDITION OF KENTUCKY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- BITUMINOUS SEAL REQUIRED FROM OUTSIDE EDGE OF PAVED SHOULDER TO A POINT 2' DOWN THE DITCH OR FILL SLOPE.

BITUMINOUS SEAL COAT - EMULSION ASPHALT PS-2 @ 240 LBS./Y. (12 APPLICATIONS) CRUSHED AGGREGATE SIZE NO. 8 OR 20.



**D=12" UNLESS OTHERWISE NOTED ON THE PLANS

W = WIDTH, SEE PLANS FOR VALUE
T = THICKNESS
D = DEPTH TO PROTECT

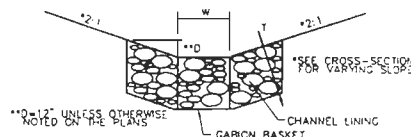
CLASS II CH. LIN. - T=15"
CLASS III CH. LIN. - T=24"
CLASS III CH. LIN. - T=36", D50=18"

TYPICAL DITCH SECTION

CHANNEL LINING
CL II, CL III, & CL III (Modified)

CHANNEL LINING CLASS III (MODIFIED)

Provide material meeting the general requirements of Section 805 of the Standard Specifications. No less than 80 percent, by volume, of individual stones shall be in the upper surface and dressing to the proper slope.



**D=12" UNLESS OTHERWISE NOTED ON THE PLANS

W = WIDTH, SEE PLANS FOR VALUE
T = THICKNESS = 16"
D = DEPTH TO PROTECT

TYPICAL DITCH SECTION
CHANNEL LINING - GABION

Construction in accordance with the general requirements of Section 703 of the Standard Specifications and Standard Drawing Number R60-030-02. Gabion basket construction shall be in accordance with Subsection 703.03.02 (c) of the Standard Specifications to the dimensions specified in the plans or as designated by the Engineer. Anchors shall be lengthened to provide the embedment desired in the standard drawing. Stone fill for the baskets shall be as specified in the note for Channel Lining Class III (Modified).

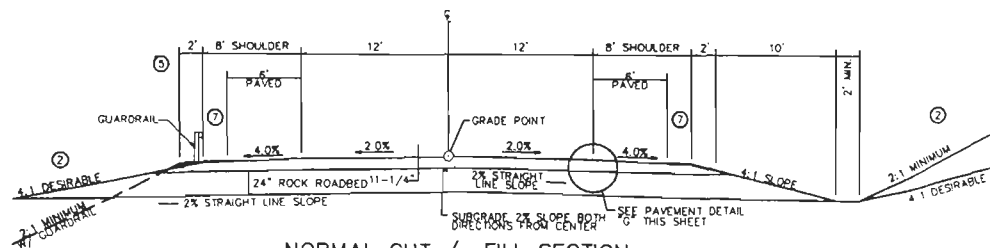
KY 267 PAVEMENT SCHEDULE

TRAFFIC LANES			
CSB			6" DEPTH
CL 1 ASPH BASE	0.750	PG64-22	6" DEPTH
CL 1 ASPH SURF	0.385	PG64-22	1-1/4" DEPTH
SHOULDERS			
CSB			FULL DEPTH
CL 1 ASPH BASE	0.750	PG64-22	3" DEPTH
CL 1 ASPH SURF	0.385	PG64-22	1-1/4" DEPTH

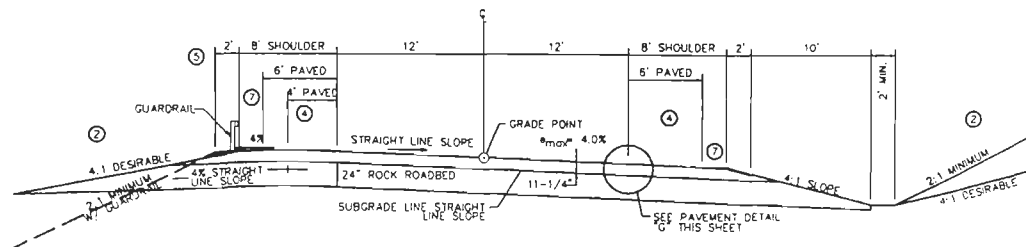
LOCAL ACCESS ROAD PAVEMENT SCHEDULE

TRAFFIC LANES			
CSB			8" DEPTH
CL 1 ASPH BASE	0.750	PG64-22	3" DEPTH
CL 1 ASPH SURF	0.385	PG64-22	1-1/4" DEPTH

TYPICAL SECTIONS
KY 267 AND LOCAL ACCESS ROADS



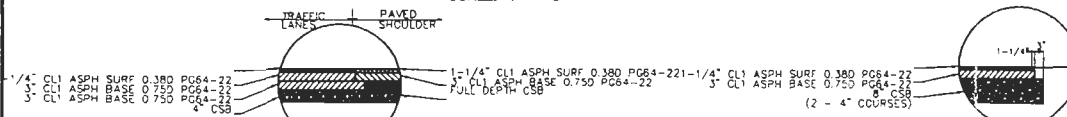
NORMAL CUT / FILL SECTION



SUPERELEVATION CUT / FILL SECTION

KY 267 CONNECTOR

SCALE: 1" = 5'

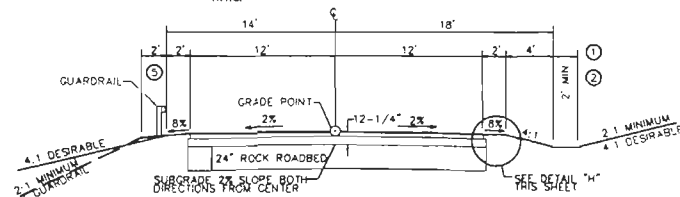


DETAIL "G"

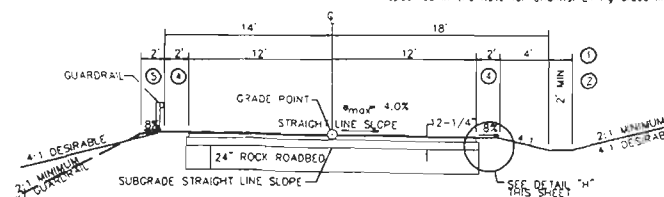
N.T.S.

DETAIL "H"

N.T.S.



NORMAL CUT / FILL SECTION



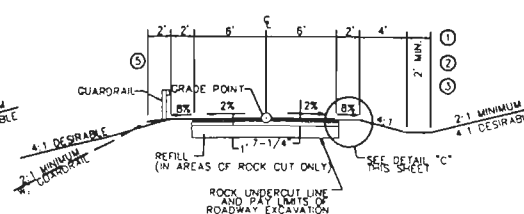
SUPERELEVATION CUT / FILL SECTION

LOCAL ACCESS ROADS

CRAWFORD MOUNTAIN RD. LOCAL ACCESS RD. "B"
KEMPER DR. SHERIFF CT.
TERRACE VIEW LANE SPEEDWAY RD.
CRAWFORD VALLEY RD.

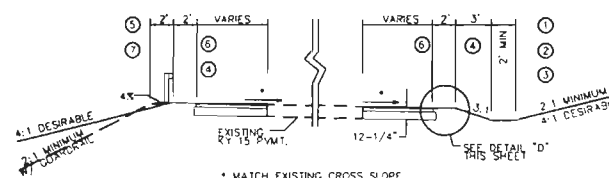
SCALE: 1" = 5'

NOTE: PAVEMENT COVER THICKNESSES ARE SHOWN FOR DESIGN WILL BE PROVIDED BY THE CITY.



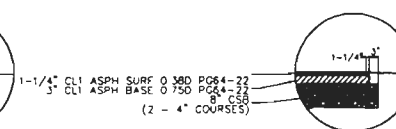
RESIDENTIAL ENTRANCE SECTION

SCALE: 1" = 5'



SUPERELEVATION CUT / FILL SECTION

SCALE: 1" = 5'



DETAIL "D"
N.T.S.

- ①
- ② FOR ROCK SLOPES, SEE CROSS SECTIONS.
- ③ SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER.
- ④ SEE CROSS SECTIONS FOR PRE-SPILL SLOPES FROM RD 1 TO GRADE FOR ROCK CUTS.
- ⑤ SUPERELEVATED SHOULDER TO BE CONSTRUCTED TO BE FLATTER THAN THE SLOPE INDICATED FOR THE NORMAL SECTION.
- ⑥ SHOULDER SHALL BE WIDENED 2' WHERE GUARDRAIL IS TO BE INSTALLED AND PAVED SHOULDER SHALL BE WIDENED 2' TO FACE OF GUARDRAIL.
- ⑦ WHEN REQUIRED VERTICAL PANELS ARE TO BE PLACED AT THE INTERSECTIONS OF SIDEWALKS, SIDEWALKS AND THE SLABS SHALL POINT TOWARDS THE CENTERLINE.
- ⑧ WHEN REQUIRED VERTICAL PANELS SHALL BE PLACED BEHIND THE GUARDRAIL WHEN GUARDRAIL IS REQUIRED.
- ⑨ REFILL MATERIAL TO CONFORM TO APPLICABLE SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- ⑩

NOTE: PAVEMENT COURSE THICKNESSES ARE SHOWN FOR
ESTIMATING PURPOSES ONLY. NOT FOR PAYMENT

TYPICAL SECTIONS
ENTRANCES AND TEMPORARY WIDENING

APPENDIX B

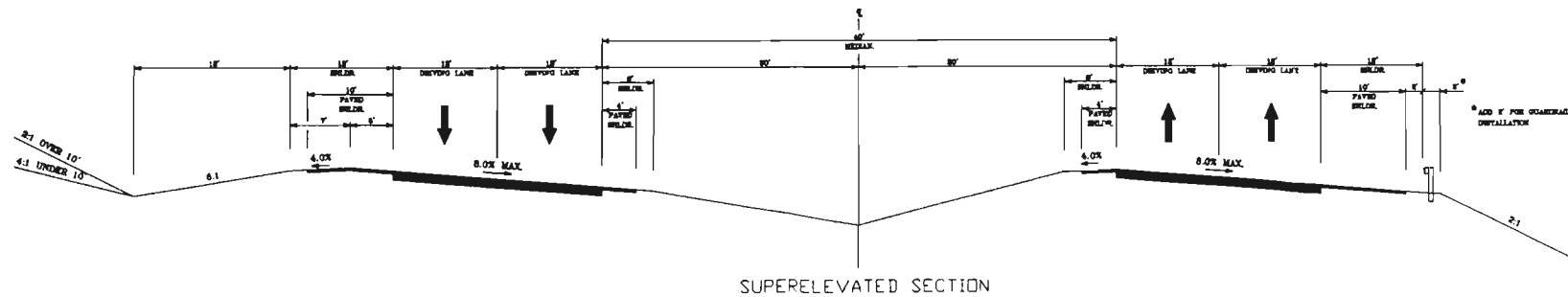
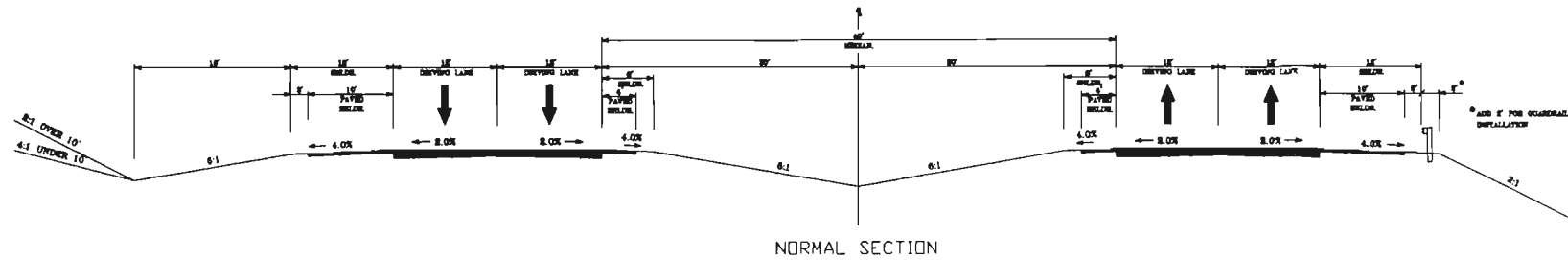
TYPICAL SECTION – NORTHERN SEGMENT

TYPICAL SECTIONS WITH DEPRESSED MEDIAN

STA. _____ TO STA. _____

QUANTITY OF	PRICE UNIT	AMOUNT	TOTAL AMOUNT
PERKIN		?	?

ITEM NO. 10-269.00



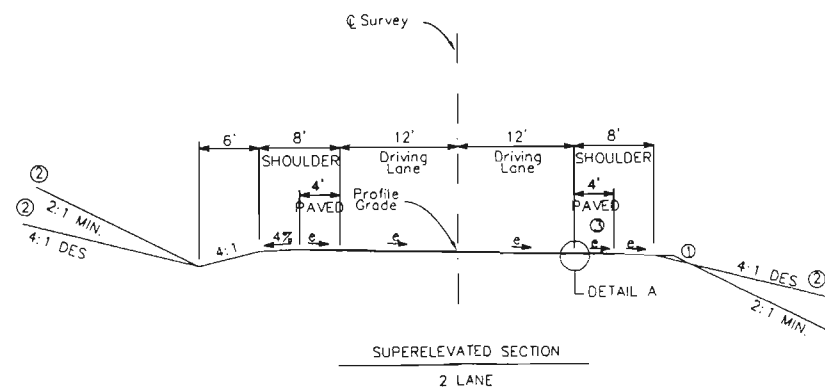
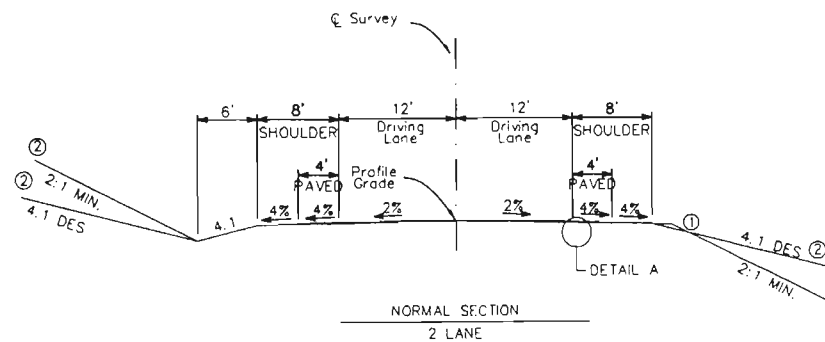
NOT TO SCALE

KY 15 PERRY COUNTY
TYPICAL SECTIONS

SECTION 1 of 1

TYPICAL SECTIONS MAINLINE KY 28

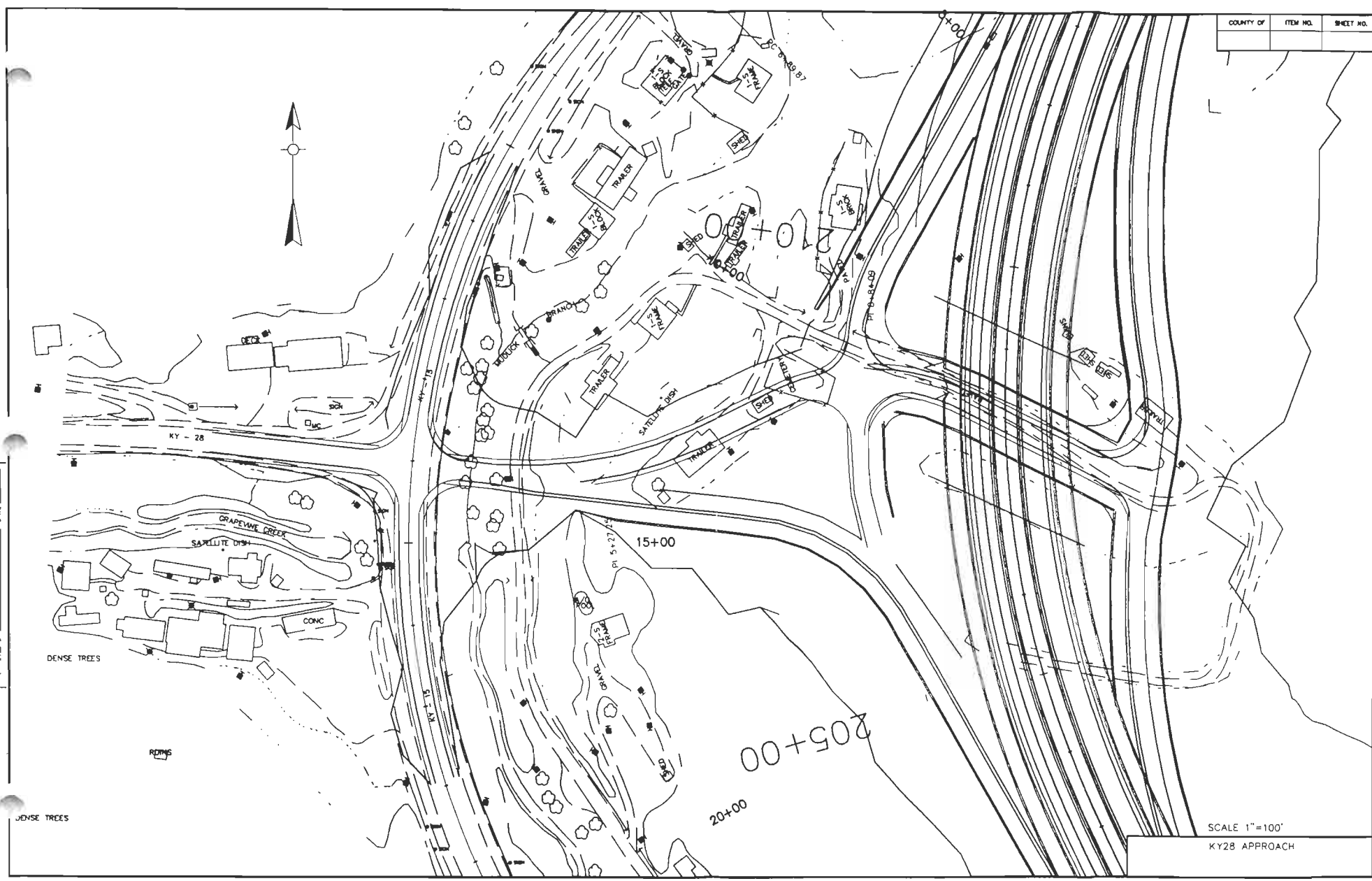
COUNTY OF	ITEM NO.	SHEET NO.
PERRY	10-269.10	R2



- ① WIDEN SHOULDER 2' FOR GUARDRAIL
- ② SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER.
- ③ CONSTRUCT SUPERELEVATED SHOULDERS TO STANDARD SUPERELEVATION EXCEPT NOT FLATTER THAN SLOPES INDICATED FOR NORMAL SHOULDERS

TYPICAL SECTIONS
KY 28

COUNTY OF	ITEM NO.	SHEET NO.



SCALE 1"=100'
KY28 APPROACH

APPENDIX C

**KYTC PERRY COUNTY TRAFFIC
FORECASTS**



Commonwealth of Kentucky
Transportation Cabinet
Frankfort, Kentucky 40622

James C. Codell, III
Secretary of Transportation


Clifford C. Linkes, P.E.
Deputy Secretary

Paul E. Patton
Governor

FILE
11652

INTRA-DEPARTMENTAL MEMO

TO: Donald Breeding, Chief District Engineer
District 10 – Jackson

FROM: Michael L. Hill, Director 
Division of Multimodal Programs

DATE: March 20, 2002

SUBJECT: Perry County Traffic Forecasts
Widening and Reconstruction of KY 15
Item # 10-269.01

This is in response to your January 18, 2002 request for the subject project. We are providing ADTs, truck percentages, and K-factors on the attached maps. Traffic estimates are given for the current year (2002), air quality year (2020) and design year (2025) for the build and no-build alternates.

If you have any questions, please call Rob Bostrom or Kong Ee of this Division.

MLH:NRB:KE

Attachments

c: Rob Bostrom w/attachments

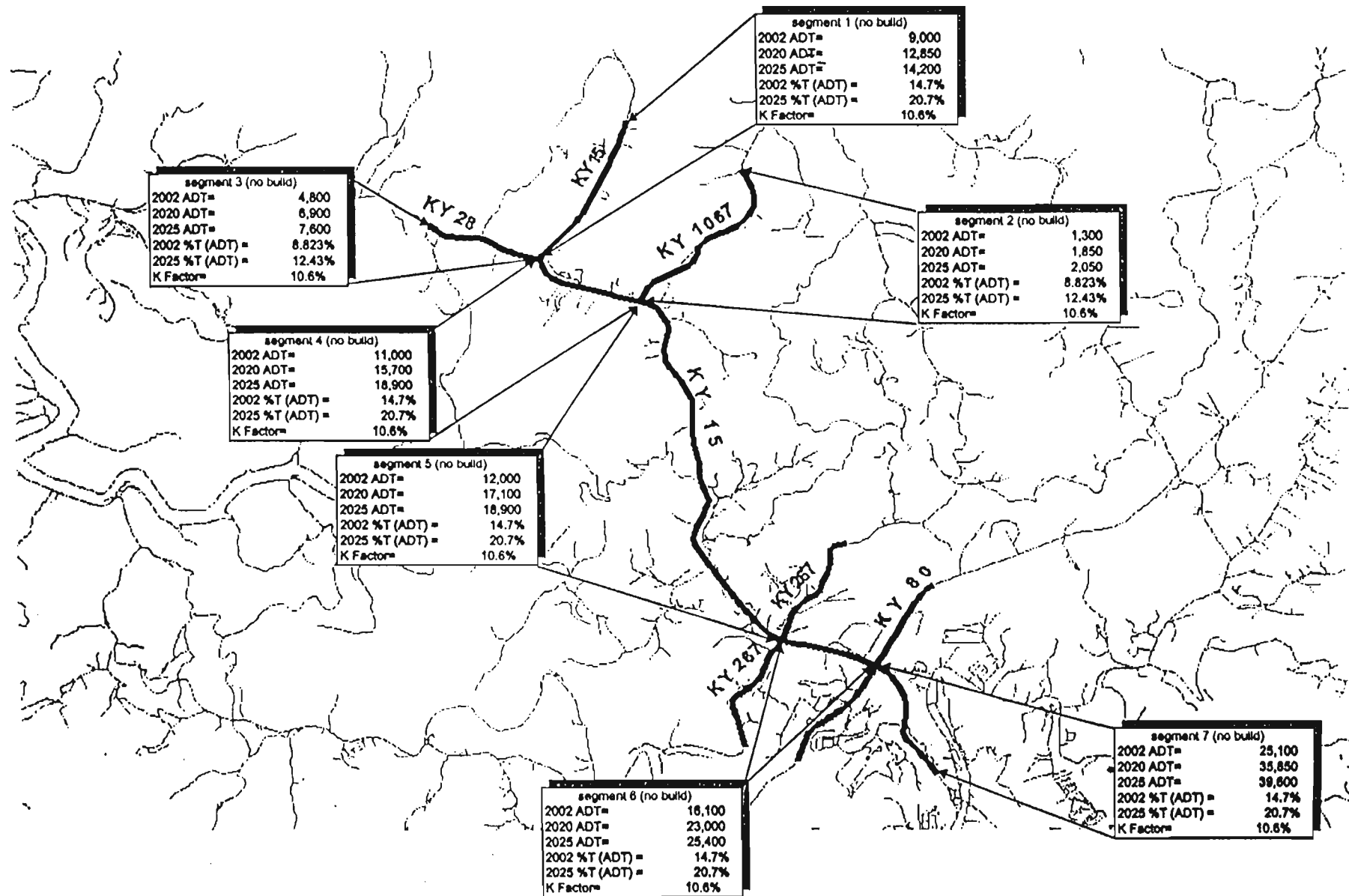
Ray Polly w/attachments

Chuck Danison w/attachments

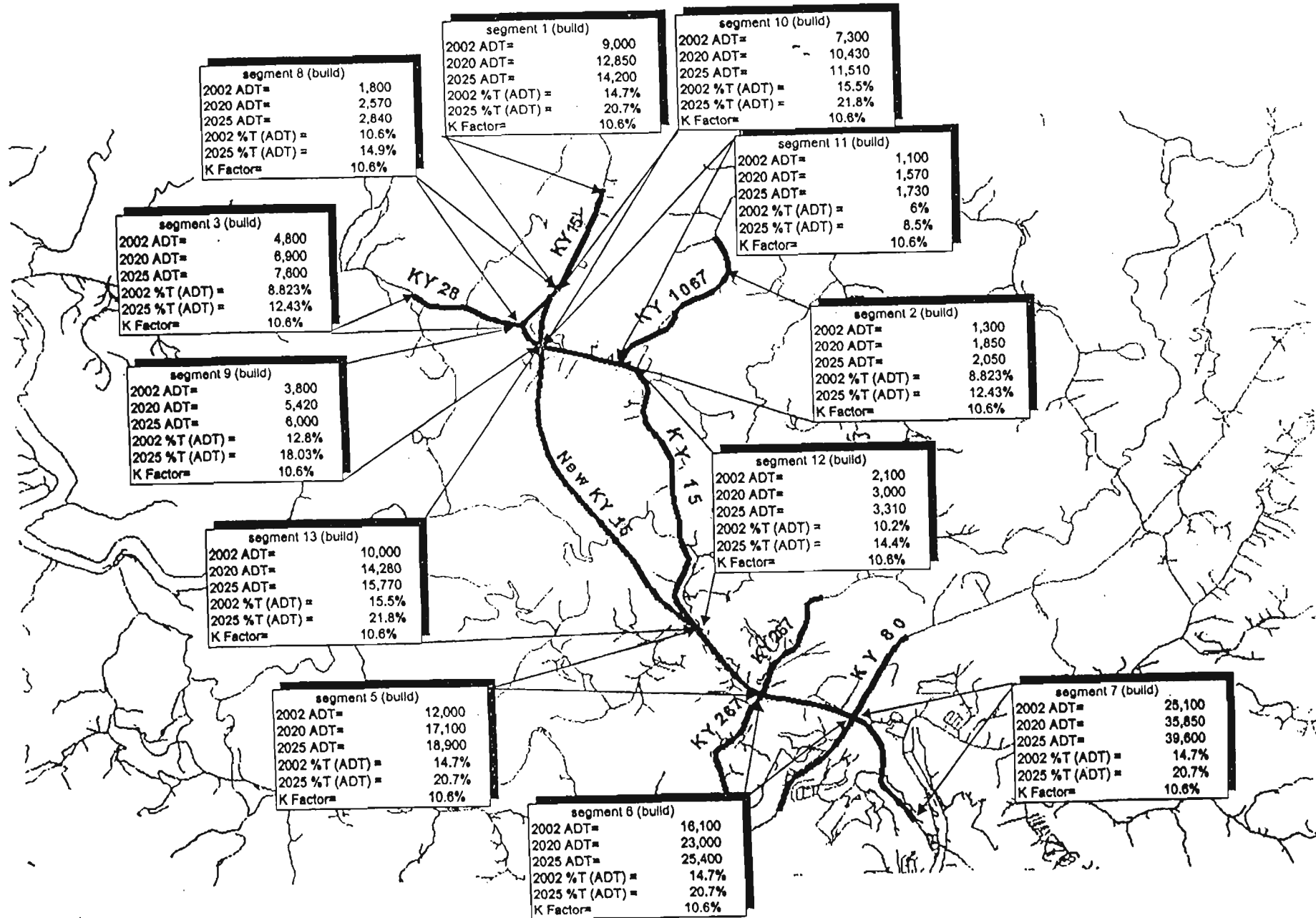
Steve Simonsen: Third Rock Consultants, LLC. w/attachments



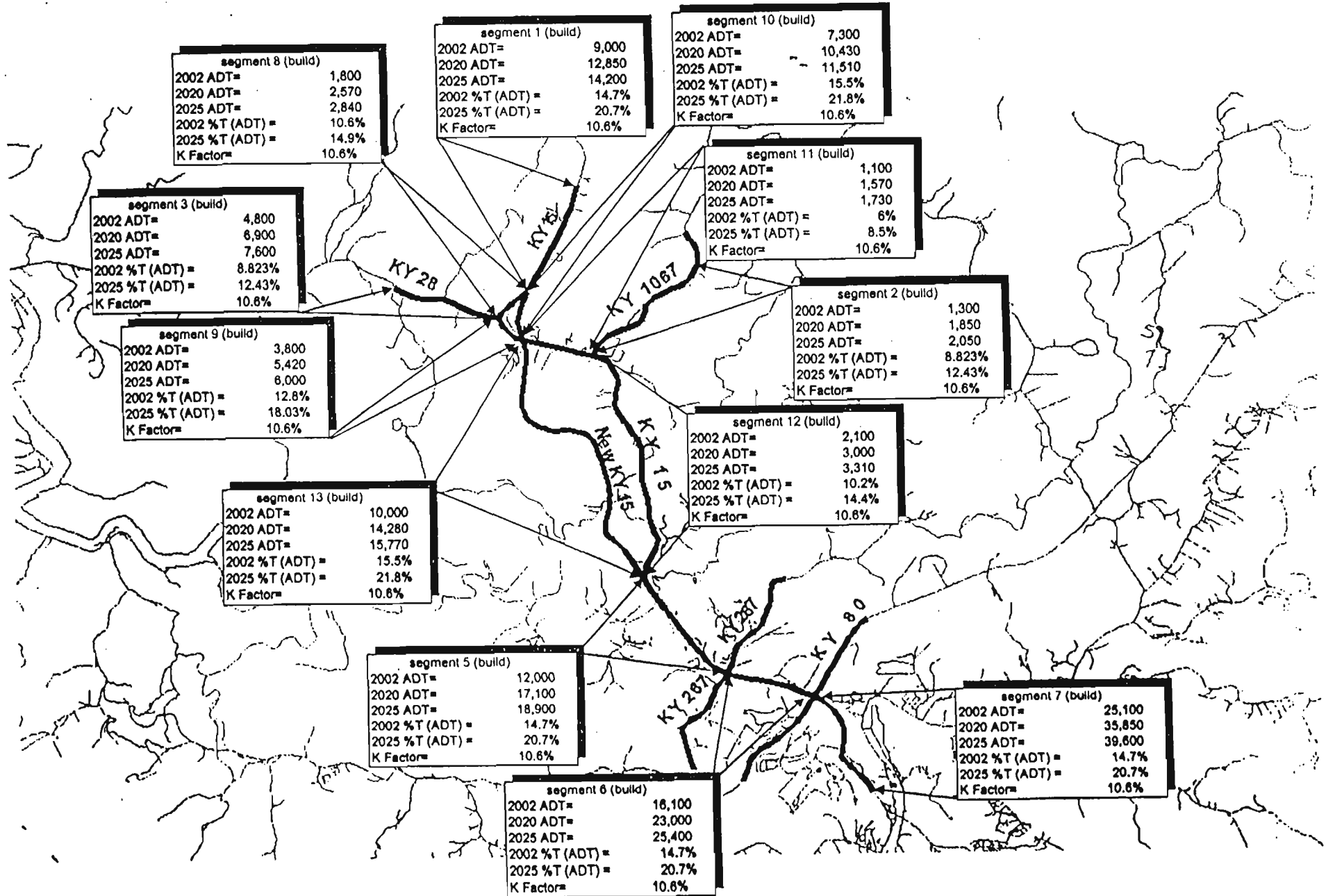
Reconstruct of KY 15 Item # 10-269.0 (No Build)



Reconstruct KY 15 Item # 10-269.01 (Alternate A; Build)



Reconstruct of KY 15 Item # 10-269.01 (Alternate B; Build)



HP OfficeJet K Series K80
Personal Printer/Fax/Copier/Scanner

Log for
Redwing Ecological Ser
(502) 625-3077
Oct 29 2003 3:57pm

Last Transaction

<u>Date</u>	<u>Time</u>	<u>Type</u>	<u>Identification</u>	<u>Duration</u>	<u>Pages</u>	<u>Result</u>
Oct 29	3:55pm	Fax Sent	16062480372	1:24	5	OK

APPENDIX D

**SHPO APPROVAL AND CLEARANCE
LETTERS**



Commonwealth of Kentucky
Transportation Cabinet
Frankfort, Kentucky 40622

James C. Codell, III
Secretary of Transportation

Paul E. Patton
Governor

Clifford C. Linkes, P.E.
Deputy Secretary

KOIR005

March 10, 2003

Kiersten Fuchs
Redwing Ecological Services, Inc.
129 South Sixth Street
Louisville, Kentucky 40202

SUBJECT: *Archaeological Reports: An Archaeological Survey of the KY 15 Reconstruction in Perry County, Kentucky (Item No. 10-269.01). By D. Randall Cooper.*

and

Addendum to an Archaeological Survey of the Proposed KY 15 Reconstruction in Perry County, Kentucky (Item No. 10-269.01). By C. Mathew Saunders and D. Randall Cooper

Dear Ms. Fuchs,

The staff of this Division and the staff of the State Historic Preservation Office (SHPO) have concurrently reviewed the referenced archaeological reports. Following final review, no substantial edits or comments have been identified and the reports have been accepted. Please find enclosed a copy of the SHPO clearance letter for each report.

Please note that although additional testing was recommended for site 15PE206, it will not be impacted by the current project alignment and therefore no further testing will be required for this project. Also note that three cemeteries, the Neace Cemetery (15PE207), the Campbell and Fugate Cemetery (15PE210), and the Miller Cemetery were identified during these surveys. Headstone locations and apparent cemetery boundaries were recorded for the Neace Cemetery and the Campbell and Fugate Cemetery. None of these cemeteries were determined to be eligible for the National Register; therefore, no further archaeological testing is required. These cemeteries should be relocated in accordance with state laws.



KENTUCKY TRANSPORTATION CABINET
"PROVIDE A SAFE, EFFICIENT, ENVIRONMENTALLY SOUND, AND FISCALLY RESPONSIBLE TRANSPORTATION SYSTEM
WHICH PROMOTES ECONOMIC GROWTH AND ENHANCES THE QUALITY OF LIFE IN KENTUCKY."
"AN EQUAL OPPORTUNITY EMPLOYER M/F/D"

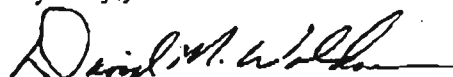
Perry County, Item 10-269.01

Page 2

03/10/03

Please advise this Division immediately should there be any changes to the alignment as surveyed since additional archaeological testing could be required. If you have any questions or comments, please contact Wayna Roach of my staff at (502) 564-7250.

Very truly yours,



David M. Waldner, P.E., Director
Division of Environmental Analysis

enclosures

DMW/wlr

c: David Morgan (KHC)
Anthony Goodman (FHWA) w/e
Charles Niquette (CR) w/e
Jeff Allen (D-10) w/e
Tom Kcos
Paul Rawlings
Archaeology Files



Education, Arts and Humanities Cabinet

KENTUCKY HERITAGE COUNCIL

The State Historic Preservation Office

Paul E. Patton
Governor
Marlene M. Helm
Cabinet Secretary

David L. Morgan
Executive Director and
SHPO

February 19, 2003

Mr. David M. Waldner, P.E.
Director
Division of Environmental Analysis
Transportation Cabinet
125 Holmes Street
Frankfort, KY 40622

Dear Mr. Waldner:

The State Historic Preservation Office has received for review and approval an archaeological report entitled "Addendum to An Archaeological Survey of the Proposed KY 15 Reconstruction in Perry County, Kentucky (Item No.10-269.01)" by C. Mathew Saunders and D. Randall Cooper.

During the course of the survey the Campbell and Fugate Cemetery (15Pe210) and the Miller Cemetery were recorded. The Campbell and Fugate Cemetery (15Pe210) contains at least 52 graves and dates between 1939 and 2000. The Miller Cemetery contains three graves that are less than 50 years of age and is not considered an archaeological site. Site 15Pe210 is not considered eligible for listing in the National Register of Historic Places. The authors recommends that both cemeteries be relocated in accordance with state laws. I concur with the author's findings and recommendations. In accordance with 36CFR Part 800.4 (d) of the Advisory Council's revised regulations our finding is that there are No Historic Properties Present within the undertaking's area of potential impact. Therefore, we have no further comments and the Transportation Cabinet's responsibility to consult with the Kentucky State Historic Preservation Officer under the Section 106 review process is fulfilled for archaeological sites. Should you have any questions, feel free to contact Charles Hockensmith of my staff at (502) 564-7005.

Sincerely,

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

Mr. Steven D. Creasman
Dr. George Crothers

300 Washington Street
Frankfort, Kentucky 40601
An equal opportunity employer M/F/D



Telephone (502) 564-7005
FAX (502) 564-5820
Printed on recycled paper

K01R005



Commonwealth of Kentucky
Transportation Cabinet
Frankfort, Kentucky 40622

James C. Codell, III
Secretary of Transportation

Paul E. Patton
Governor

Clifford C. Linkes, P.E.
Deputy Secretary

February 13, 2003

David Morgan, Director
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

SUBJECT: *Archaeological Report: Addendum to an Archaeological Survey of the Proposed KY 15 Reconstruction in Perry County, Kentucky (Item No. 10-269.01). By C. Mathew Saunders and D. Randall Cooper.*

Dear Mr. Morgan:

Enclosed please find a corrected title page and Figure 8 for the previously submitted copies of the subject report. The consultant has addressed the revisions that were requested as a result of concurrent review by this department and the KHC. The Division concurs with the recommendations and requires no further revision of the report. The submission of these pages fulfills the conditions of the acceptance letter. If you have any concerns or questions, please feel free to contact Wayna Roach at 564-7250.

Very truly yours,

David M. Waldner, P. E. Director
Division of Environmental Analysis

attachment
DMW/wlr

c: Kiersten Fuchs (Redwing)
Charles Niquette (CRAI)
Jeff Allen (D-3)
Tom Koos
Paul Rawlings
Archaeology files



KENTUCKY TRANSPORTATION CABINET
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Education, Arts and Humanities Cabinet

KENTUCKY HERITAGE COUNCIL

The State Historic Preservation Office

Paul E. Patton
Governor
Marlene M. Helm
Cabinet Secretary

David L. Morgan
Executive Director and
SHPO

Nov 4 2 45 PM '02

October 28, 2002

Mr. David M. Waldner, P.E.
Director
Division of Environmental Analysis
Transportation Cabinet
125 Holmes Street
Frankfort, KY 40622

Dear Mr. Waldner:

The State Historic Preservation Office has received for review and approval a revised archaeological report entitled "An Archaeological Survey of the Proposed KY 15 Reconstruction in Perry County, Kentucky (Item No. 10-269.01)" by D. Randall Cooper.

During the course of the investigations, three previously unrecorded archaeological sites (15Pe205-15Pe207) were recorded. These sites include two prehistoric rockshelters (15Pe205 and 15Pe206) and one historic cemetery (15Pe207). The author concluded that sites 15Pe205 and 15Pe207 were not eligible for listing in the National Register of Historic Places since 15Pe205 lacked intact deposits and 15Pe207 was a modern cemetery. Site 15Pe206 was considered potentially eligible for listing in the National Register of Historic Places and will require additional investigations to determine its significance. I concur with the author's evaluation of these sites.

We look forward to reviewing the results of the Phase II investigations at site 15Pe206. Should you have any questions, feel free to contact Charles Hockensmith of my staff at (502) 564-7005.

Sincerely,

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

Mr. Steven D. Creasman
Dr. George Crothers

300 Washington Street
Frankfort, Kentucky 40601
An equal opportunity employer M/F/D



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FAX (502) 564-5820
Printed on recycled paper



RECEIVED

JUL 25 2002

James C. Codell, III
Secretary of Transportation

Commonwealth of Kentucky
Transportation Cabinet

Frankfort, Kentucky 40622
July 19, 2002

Paul E. Patton
Governor

Clifford C. Linkes, P.E.
Deputy Secretary

Mr. Gregory S. Gabbard, P.E.
GRW Engineers, Inc.
801 Corporate Drive
Lexington, Kentucky 40503

Dear Mr. Gabbard:

SUBJECT: Cultural Resources Survey For The
Proposed Reconstruction of KY 15
Perry County, Kentucky
Item No. 10-269.01

Attached please find a copy of the concurrence letter from the State Historic Preservation Officer (SHPO) on the above subject project. The SHPO concurs that Sites 1-14 are not eligible for listing in the National Register of Historic Places. Therefore, there will be a No Historic Properties Effect finding for this undertaking.

If you have any questions please contact Rebecca Turner or me at 502-564-750.

Very truly yours,

David M. Waldner, P.E., Acting Director
Division of Environmental Analysis

c: K. Sperry, R. Dutton, P. Rawlings, J. Brown, D-10 (C. Allen, J. Allen), R.H. Turner,
CRAI, FHWA



KENTUCKY TRANSPORTATION CABINET
"PROVIDE A SAFE, EFFICIENT, ENVIRONMENTALLY SOUND, AND FISCALLY RESPONSIBLE TRANSPORTATION SYSTEM
WHICH PROMOTES ECONOMIC GROWTH AND ENHANCES THE QUALITY OF LIFE IN KENTUCKY."
"AN EQUAL OPPORTUNITY EMPLOYER M/F/D"



Education, Arts and Humanities Cabinet

KENTUCKY HERITAGE COUNCIL

The State Historic Preservation Office

Paul E. Patton
Governor
Marlene M. Helm
Cabinet Secretary

David L. Morgan
Executive Director and
SHPO

July 10, 2002

Mr. David M. Waldner, P.E., Director
Division of Environmental Analysis
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, Kentucky 40622

**Re: Cultural Historic Survey of the Proposed Reconstruction of KY 15 in Perry County,
Kentucky (Item No. 10-269.01)**

Dear Mr. Waldner:

The State Historic Preservation Office has received for review and approval the above referenced cultural historic survey. The survey identified 14 intact sites within the Area of Potential Effect over 50 years of age and concluded that all were ineligible for listing in the National Register of Historic Places. We concur that Site 1 (PE-15), Site 2 (PE-16), Site 3 (PE-17), Site 4 (PE-18), Site 5 (PE-19), Site 6 (PE-20), Site 7 (PE-21), Site 8 (PE-22), Site 9 (PE-23), Site 10 (PE-24), Site 11 (PE-25), Site 12 (PE-26), Site 13 (PE-27), and Site 14 (PE-28) are ineligible for listing individually or within the context of a historic district. Therefore, in accordance with 36CFR Part 800.4(d) of the Advisory Council's revised regulations, our finding is that there is **No Effect on Historic Properties** for this undertaking. It should be noted, however, that this project is not completely cleared by this office until the archaeological report is reviewed and commented upon. Should you have any questions, feel free to contact Craig Potts of my staff at (502) 564-7005 ext. 121.

Sincerely,

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

Cc: Karen Hudson, Ph.D (CRAI)

APPENDIX E

NATIVE AMERICAN CONSULTATION LETTERS



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735

October 30, 2002

Mr. Lee Edwards
Governor
Absentee-Shawnee Tribe of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Mr. Edwards:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

The Phase I archaeological survey covered two potential alternates for the realignment of KY 15 and resulted in the identification of two (2) sites that contained prehistoric/Native American components. Following a review by KYTC and the Kentucky State Historic Preservation Office (SHPO) one site, 15PE206, was recommended for additional Phase II testing if it could not be avoided by construction. Please find attached associated SHPO correspondence relating to the project.

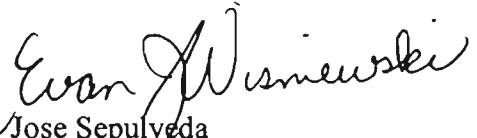
Since the production of this report, the plans for this project have been altered to avoid impacts to site 15PE206. Therefore, no Phase II excavation is planned for 15PE206. However, due to those alterations, a small amount of additional Phase I archaeological survey is being conducted. If you wish, you may elect to receive the addendum Phase I report which will detail the results of the additional Phase I survey.

In summary, all Phase I archaeological survey was conducted in accordance with accepted guidelines. A small amount of additional Phase I survey is underway. There was no evidence of prehistoric (Native American) human remains. Should evidence of prehistoric human remains be discovered, work will cease immediately pending notification of your tribe. Any and all findings will be properly secured and protected.

For your convenience, we have enclosed a response sheet and return envelope for this project. Please attach any additional comments. We would appreciate your response to this invitation within 30 days. If we do not hear from you within this time period, we will conclude that you have not identified any significant issues to your tribe and consider our archaeological process and findings for this project adequate. If you need additional information or would like an extension of the response time, please advise us in writing or with a telephone call.

We are looking forward to working with you on this project. Please direct your comments and/or inquiries to both Mr. Evan Wisniewski of my staff and our assignee with the KYTC, Ms. Wayna Roach, Archaeologist, State Office Building Annex, 125 Holmes Street A-1, Frankfort, Kentucky 40622.

Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr

Enclosure

c: Jennifer Makaseah (NAGPRA, Absentee-Shawnee Tribe of Oklahoma)
David Morgan (KY SHPO)
Evan Wisniewski (FHWA)
David Whitworth (FHWA)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing Ecological Services)
John Brown
Paul Rawlings
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

**330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735**

October 30, 2002

Mr. Charles D. Enyart
Chief
Eastern Shawnee Tribe of Oklahoma
127 West Oneida Street
Seneca, MO 64865

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Mr. Enyart:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

The Phase I archaeological survey covered two potential alternates for the realignment of KY 15 and resulted in the identification of two (2) sites that contained prehistoric/Native American components. Following a review by KYTC and the Kentucky State Historic Preservation Office (SHPO) one site, 15PE206, was recommended for additional Phase II testing if it could not be avoided by construction. Please find attached associated SHPO correspondence relating to the project.


Since the production of this report, the plans for this project have been altered to avoid impacts to site 15PE206. Therefore, no Phase II excavation is planned for 15PE206. However, due to those alterations, a small amount of additional Phase I archaeological survey is being conducted. If you wish, you may elect to receive the addendum Phase I report which will detail the results of the additional Phase I survey.

In summary, all Phase I archaeological survey was conducted in accordance with accepted guidelines. A small amount of additional Phase I survey is underway. There was no evidence of prehistoric (Native American) human remains. Should evidence of prehistoric human remains be discovered, work will cease immediately pending notification of your tribe. Any and all findings will be properly secured and protected.

For your convenience, we have enclosed a response sheet and return envelope for this project. Please attach any additional comments. We would appreciate your response to this invitation within 30 days. If we do not hear from you within this time period, we will conclude that you have not identified any significant issues to your tribe and consider our archaeological process and findings for this project adequate. If you need additional information or would like an extension of the response time, please advise us in writing or with a telephone call.

We are looking forward to working with you on this project. Please direct your comments and/or inquiries to both Mr. Evan Wisniewski of my staff and our assignee with the KYTC, Ms. Wayna Roach, Archaeologist, State Office Building Annex, 125 Holmes Street A-1, Frankfort, Kentucky 40622.

Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr

Enclosure

c: Roxanne Weldon (Eastern Shawnee Tribe of Oklahoma)
David Morgan (KY SHPO)
Evan Wisniewski (FHWA)
David Whitworth (FHWA)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing Ecological Services)
John Brown
Paul Rawlings
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

**330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735**

October 30, 2002

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Chief
Eastern Shawnee Tribe of Oklahoma
127 West Oneida Street
Seneca, MO 64865

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

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For your convenience, we have enclosed a response sheet and return envelope for this project. Please attach any additional comments. We would appreciate your response to this invitation within 30 days. If we do not hear from you within this time period, we will conclude that you have not identified any significant issues to your tribe and consider our archaeological process and findings for this project adequate. If you need additional information or would like an extension of the response time, please advise us in writing or with a telephone call.

We are looking forward to working with you on this project. Please direct your comments and/or inquiries to both Mr. Evan Wisniewski of my staff and our assignee with the KYTC, Ms. Wayna Roach, Archaeologist, State Office Building Annex, 125 Holmes Street A-1, Frankfort, Kentucky 40622.

Sincerely Yours,

for Evan Wisniewski
Jose Sepulveda
Division Administrator

JS/wlr

Enclosure

c: Roxanne Weldon (Eastern Shawnee Tribe of Oklahoma)
David Morgan (KY SHPO)
Evan Wisniewski (FHWA)
David Whitworth (FHWA)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing Ecological Services)
John Brown
Paul Rawlings
FHWA Project File w/e



U.S. Department
of Transportation
Federal Highway
Administration

Kentucky Division Office
Jose Sepulveda, Division Administrator

330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735

June 23, 2003

Mr. James C. Codell, III, Secretary
Kentucky Transportation Cabinet
Frankfort, Kentucky

Dear Mr. Codell:

Subject: Native American Coordination
Proposed KY 15 Reconstruction
Phase I Archaeological Results
Perry County, Kentucky
State Item Numbers 10-269.01

The coordination with the Native Americans has been completed. The response period has expired and we have received one response (enclosed). Please review the responses and take action as appropriate. This completes this phase of coordination for the project.

Sincerely yours,

/s/ A. Goodman

Anthony S. Goodman
Environmental Specialist

RESPONSE FORM
Native American
Invitation to Consult on Phase I Archaeological Findings

Attention: Jose Sepulveda, Division Administrator

Address: Federal Highway Administration
Kentucky Division
330 West Broadway
Frankfort, KY 40601

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

We have received your invitation to consult on the subject project (please check one).

☒ We have not identified any areas of cultural or religious significance to our tribe within the project area. We concur with your procedural methodology for the identified sites. We concur that no additional archaeological assessments are needed. No further consultation is required. Should intact cultural deposits such as deposits, features, or evidence of human remains be discovered, we require construction activities to cease and immediate notification be provided to this office/tribe.

☐ Our tribe has identified areas of cultural or religious significance within the project area, based on the information provided. We will contact you within 30 days to communicate our specific concerns.

Should evidence of prehistoric (Native American) human remains be discovered, work should cease immediately pending notification of our tribe. Any and all findings must be properly secured and protected.

Signed: Charles Emyant

Title: Chief

Tribes: Eastern Shawnee Tribe

Date: 5-9-03

RECEIVED	
MAY 12 2003	
TO	
HDA	
ADA	
HFA	
HPD	
HPE	
HMS	



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735

April 30, 2003

Mr. Dallas Proctor, Chief
United Keetoowah Band of Cherokee Indians
P.O. Box 746
Tahlequah, OK 74465

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Mr. Proctor:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

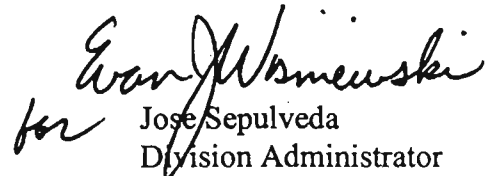
The Phase I archaeological survey identified no sites which contained prehistoric/Native American components. Following a review by KYTC and the Kentucky State Historic Preservation Office (SHPO), no additional archaeological work has been recommended. Please find attached the associated SHPO correspondence relating to the project.

In summary, all Phase I archaeological survey was conducted in accordance with accepted guidelines. Phase II archaeological testing has not been recommended for any prehistoric site. There was no evidence of prehistoric (Native American) human remains. Should evidence of prehistoric human remains be discovered, work will cease immediately pending notification of your tribe. Any and all findings will be properly secured and protected.

For your convenience, we have enclosed a response sheet and return envelope for this project. Please attach any additional comments. We would appreciate your response to this invitation within 30 days. If we do not hear from you within this time period, we will conclude that you have not identified any significant issues to your tribe and consider our archaeological process and findings for this project adequate. If you need additional information or would like an extension of the response time, please advise us in writing or with a telephone call.

We are looking forward to working with you on this project. Please direct your comments and/or inquiries to both Mr. Evan Wisniewski of my staff and our assignee with the KYTC, Ms. Wayna Roach, Archaeologist, State Office Building Annex, 125 Holmes Street A-1, Frankfort, Kentucky 40622.

Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr/crs

Enclosure

c: Archie Mouse, Assistant Chief
David Morgan (KY SHPO)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing)
Paul Rawlings (KYTC)
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735

April 30, 2003

Ms. Jennifer Makaseah
Absentee-Shawnee Tribe of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Ms. Makaseah:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.


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Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr/crs

Enclosure

c: Lee Edwards, Governor
David Morgan (KY SHPO)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing)
Paul Rawlings (KYTC)
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

**330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735**

April 30, 2003

Mr. Charles D. Enyart, Chief
Eastern Shawnee Tribe of Oklahoma
P.O. Box 350
Seneca, MO 64865

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Mr. Enyart:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

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We are looking forward to working with you on this project. Please direct your comments and/or inquiries to both Mr. Evan Wisniewski of my staff and our assignee with the KYTC, Ms. Wayna Roach, Archaeologist, State Office Building Annex, 125 Holmes Street A-1, Frankfort, Kentucky 40622.

Sincerely Yours,

for Evan Wisniewski
Jose Sepulveda
Division Administrator

JS/wlr/crs
Enclosure

c: David Morgan (KY SHPO)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing)
Paul Rawlings (KYTC)
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

**330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735**

April 30, 2003

Mr. James Bird, THPO
Eastern Band of Cherokee Indians
Cultural Resources Division
P.O. Box 455
Cherokee, NC 28719

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Mr. Bird:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

The Phase I archaeological survey identified no sites which contained prehistoric/Native American components. Following a review by KYTC and the Kentucky State Historic Preservation Office (SHPO), no additional archaeological work has been recommended. Please find attached the associated SHPO correspondence relating to the project.

In summary, all Phase I archaeological survey was conducted in accordance with accepted guidelines. Phase II archaeological testing has not been recommended for any prehistoric site. There was no evidence of prehistoric (Native American) human remains. Should evidence of prehistoric human remains be discovered, work will cease immediately pending notification of your tribe. Any and all findings will be properly secured and protected.

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We are looking forward to working with you on this project. Please direct your comments and/or inquiries to both Mr. Evan Wisniewski of my staff and our assignee with the KYTC, Ms. Wayna Roach, Archaeologist, State Office Building Annex, 125 Holmes Street A-1, Frankfort, Kentucky 40622.

Sincerely Yours,

for Evan Wisniewski
Jose Sepulveda
Division Administrator

JS/wlr/crs
Enclosure

c: David Morgan (KY SHPO)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing)
Paul Rawlings (KYTC)
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

**330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735**

April 30, 2003

Rebecca Hawkins, Historian
The Shawnee Tribe
P.O. Box 189
Miami, OK 74355

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Ms. Hawkins:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

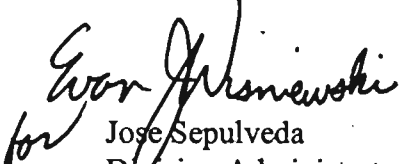
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We are looking forward to working with you on this project. Please direct your comments and/or inquiries to both Mr. Evan Wisniewski of my staff and our assignee with the KYTC, Ms. Wayna Roach, Archaeologist, State Office Building Annex, 125 Holmes Street A-1, Frankfort, Kentucky 40622.

Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr/crs

Enclosure

c: Ron Sparkman, Chairman
David Morgan (KY SHPO)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing)
Paul Rawlings (KYTC)
FHWA Project File w/e



U.S. Department
of Transportation
Federal Highway
Administration

Kentucky Division Office
Jose Sepulveda, Division Administrator

TRANSPORTATION CABINET
KENTUCKY
ENVIRONMENTAL ANALYSIS

330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735

FEB 2 11 19 AM '03

January 17, 2003

Mr. James C. Codell, III, Secretary
Kentucky Transportation Cabinet
Frankfort, Kentucky

Dear Mr. Codell:

Subject: Native American Coordination
Proposed KY15 Reconstruction
Perry County, Kentucky
Item No. 10-269.01

Mr. David Waldner's October 30, 2002, letter submitted correspondence for our coordination with the Native American Tribal Nations. The correspondence was mailed to the Nations the same day with a thirty-day response time. The response period has expired and we have received two responses (enclosed). With your compliance with these responses, this should complete the required coordination for this stage of the project.

Sincerely yours,

Michael M. Loyselle
Area Engineer

Enclosure

CC: David Waldner, KYTC (A-1)

RESPONSE FORM
Native American
Invitation to Consult on Phase I Archaeological Findings

Attention: Jose Sepulveda, Division Administrator

Address: Federal Highway Administration
Kentucky Division
330 West Broadway
Frankfort, KY 40601

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

We have received your invitation to consult on the subject project (please check one).

() We **have not** identified any areas of cultural or religious significance to our tribe within the project area. We concur with your procedural methodology for the identified sites. No further consultation is required. Should intact cultural deposits such as deposits, features, or evidence of human remains be discovered, we require construction activities to cease and immediate notification be provided to this office/tribe.

☒ We **have not** identified any areas of cultural or religious significance to our tribe within the project area. However, we do wish to receive the addendum Phase I archaeological report. We concur with your procedural methodology for the identified sites. Should evidence of human remains be discovered, we require construction activities to cease and immediate notification be provided to this office/tribe.

() Our tribe **has** identified areas of cultural or religious significance within the project area, based on the information provided. We will contact you within 30 days to communicate our specific concerns.

Should evidence of prehistoric (Native American) human remains be discovered, work should cease immediately pending notification of our tribe. Any and all findings must be properly secured and protected.

Signed: Korane N. Weldon

Date: 11-14-02

Title: Env. Director

Tribes: Eastern Shawnee Tribe

RESPONSE FORM
Native American
Invitation to Consult on Phase I Archaeological Findings

RECEIVED	
DEC 13 2002	
TO	
HDA	
ADA	
HFA	
HPD	
HPE	
HTS	

Attention: Jose Sepulveda, Division Administrator

Address: Federal Highway Administration
Kentucky Division
330 West Broadway
Frankfort, KY 40601

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

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☐ We have **not** identified any areas of cultural or religious significance to our tribe within the project area. **However, we do wish to receive the addendum Phase I archaeological report.** We concur with your procedural methodology for the identified sites. Should evidence of human remains be discovered, we require construction activities to cease and immediate notification be provided to this office/tribe.

☐ Our tribe **has** identified areas of cultural or religious significance within the project area, based on the information provided. We will contact you within 30 days to communicate our specific concerns.

Should evidence of prehistoric (Native American) human remains be discovered, work should cease immediately pending notification of our tribe. Any and all findings must be properly secured and protected.

Signed: Charles Enyat

Date: 12-10-02

Title: Chief

Tribes: Eastern Shawnee Tribe



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735

October 30, 2002

Mr. Leon Jones
Principal Chief
Eastern Band of Cherokee Indians
Qualla Boundary
Cultural Resources Division
Acquonia Road/Ginger Welch Blvd.
Cherokee, NC 28719

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Mr. Jones:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

The Phase I archaeological survey covered two potential alternates for the realignment of KY 15 and resulted in the identification of two (2) sites that contained prehistoric/Native American components. Following a review by KYTC and the Kentucky State Historic Preservation Office (SHPO) one site, 15PE206, was recommended for additional Phase II testing if it could not be avoided by construction. Please find attached associated SHPO correspondence relating to the project.

Since the production of this report, the plans for this project have been altered to avoid impacts to site 15PE206. Therefore, no Phase II excavation is planned for 15PE206. However, due to those alterations, a small amount of additional Phase I archaeological survey is being conducted. If you wish, you may elect to receive the addendum Phase I report which will detail the results of the additional Phase I survey.

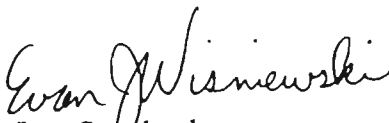
In summary, all Phase I archaeological survey was conducted in accordance with accepted guidelines. A small amount of additional Phase I survey is underway. There was no evidence of prehistoric (Native American) human remains. Should evidence of prehistoric human remains be

discovered, work will cease immediately pending notification of your tribe. Any and all findings will be properly secured and protected.

For your convenience, we have enclosed a response sheet and return envelope for this project. Please attach any additional comments. We would appreciate your response to this invitation within 30 days. If we do not hear from you within this time period, we will conclude that you have not identified any significant issues to your tribe and consider our archaeological process and findings for this project adequate. If you need additional information or would like an extension of the response time, please advise us in writing or with a telephone call.

We are looking forward to working with you on this project. Please direct your comments and/or inquiries to both Mr. Evan Wisniewski of my staff and our assignee with the KYTC, Ms. Wayna Roach, Archaeologist, State Office Building Annex, 125 Holmes Street A-1, Frankfort, Kentucky 40622.

Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr

Enclosure

c: James Bird (THPO, Eastern Band of Cherokee Indians) w/e
David Morgan (KY SHPO)
Evan Wisniewski (FHWA)
David Whitworth (FHWA)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing Ecological Services)
John Brown
Paul Rawlings
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

**330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735**

October 30, 2002

Mr. Jim Henson
Chief
United Keetoowah Band of Cherokee Indians
2450 So. Muskogee Avenue
Tahlequah, OK 74464

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Mr. Henson:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

The Phase I archaeological survey covered two potential alternates for the realignment of KY 15 and resulted in the identification of two (2) sites that contained prehistoric/Native American components. Following a review by KYTC and the Kentucky State Historic Preservation Office (SHPO) one site, 15PE206, was recommended for additional Phase II testing if it could not be avoided by construction. Please find attached associated SHPO correspondence relating to the project.

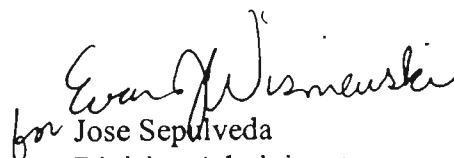
Since the production of this report, the plans for this project have been altered to avoid impacts to site 15PE206. Therefore, no Phase II excavation is planned for 15PE206. However, due to those alterations, a small amount of additional Phase I archaeological survey is being conducted. If you wish, you may elect to receive the addendum Phase I report which will detail the results of the additional Phase I survey.

In summary, all Phase I archaeological survey was conducted in accordance with accepted guidelines. A small amount of additional Phase I survey is underway. There was no evidence of prehistoric (Native American) human remains. Should evidence of prehistoric human remains be discovered, work will cease immediately pending notification of your tribe. Any and all findings will be properly secured and protected.

For your convenience, we have enclosed a response sheet and return envelope for this project. Please attach any additional comments. We would appreciate your response to this invitation within 30 days. If we do not hear from you within this time period, we will conclude that you have not identified any significant issues to your tribe and consider our archaeological process and findings for this project adequate. If you need additional information or would like an extension of the response time, please advise us in writing or with a telephone call.

We are looking forward to working with you on this project. Please direct your comments and/or inquiries to both Mr. Evan Wisniewski of my staff and our assignee with the KYTC, Ms. Wayna Roach, Archaeologist, State Office Building Annex, 125 Holmes Street A-1, Frankfort, Kentucky 40622.

Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr

Enclosure

c: Archie Mouse (Assistant Chief, United Keetoowah Band of Cherokee Indians)
David Morgan (KY SHPO)
Evan Wisniewski (FHWA)
David Whitworth (FHWA)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing Ecological Services)
John Brown
Paul Rawlings
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

**330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735**

October 30, 2002

Mr. Jim Henson
Chief
United Keetoowah Band of Cherokee Indians
2450 So. Muskogee Avenue
Tahlequah, OK 74464

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Mr. Henson:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

The Phase I archaeological survey covered two potential alternates for the realignment of KY 15 and resulted in the identification of two (2) sites that contained prehistoric/Native American components. Following a review by KYTC and the Kentucky State Historic Preservation Office (SHPO) one site, 15PE206, was recommended for additional Phase II testing if it could not be avoided by construction. Please find attached associated SHPO correspondence relating to the project.

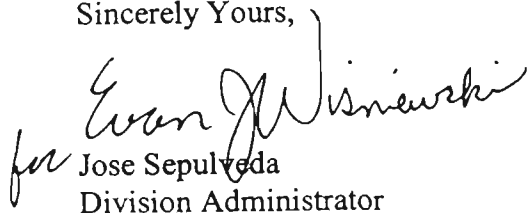
Since the production of this report, the plans for this project have been altered to avoid impacts to site 15PE206. Therefore, no Phase II excavation is planned for 15PE206. However, due to those alterations, a small amount of additional Phase I archaeological survey is being conducted. If you wish, you may elect to receive the addendum Phase I report which will detail the results of the additional Phase I survey.

In summary, all Phase I archaeological survey was conducted in accordance with accepted guidelines. A small amount of additional Phase I survey is underway. There was no evidence of prehistoric (Native American) human remains. Should evidence of prehistoric human remains be discovered, work will cease immediately pending notification of your tribe. Any and all findings will be properly secured and protected.

For your convenience, we have enclosed a response sheet and return envelope for this project. Please attach any additional comments. We would appreciate your response to this invitation within 30 days. If we do not hear from you within this time period, we will conclude that you have not identified any significant issues to your tribe and consider our archaeological process and findings for this project adequate. If you need additional information or would like an extension of the response time, please advise us in writing or with a telephone call.

We are looking forward to working with you on this project. Please direct your comments and/or inquiries to both Mr. Evan Wisniewski of my staff and our assignee with the KYTC, Ms. Wayna Roach, Archaeologist, State Office Building Annex, 125 Holmes Street A-1, Frankfort, Kentucky 40622.

Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr

Enclosure

c: Archie Mouse (Assistant Chief, United Keetoowah Band of Cherokee Indians)
David Morgan (KY SHPO)
Evan Wisniewski (FHWA)
David Whitworth (FHWA)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing Ecological Services)
John Brown
Paul Rawlings
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

**330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735**

October 30, 2002

Mr. Lee Edwards
Governor
Absentee-Shawnee Tribe of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Mr. Edwards:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

The Phase I archaeological survey covered two potential alternates for the realignment of KY 15 and resulted in the identification of two (2) sites that contained prehistoric/Native American components. Following a review by KYTC and the Kentucky State Historic Preservation Office (SHPO) one site, 15PE206, was recommended for additional Phase II testing if it could not be avoided by construction. Please find attached associated SHPO correspondence relating to the project.


Since the production of this report, the plans for this project have been altered to avoid impacts to site 15PE206. Therefore, no Phase II excavation is planned for 15PE206. However, due to those alterations, a small amount of additional Phase I archaeological survey is being conducted. If you wish, you may elect to receive the addendum Phase I report which will detail the results of the additional Phase I survey.

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Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr

Enclosure

c: Jennifer Makaseah (NAGPRA, Absentee-Shawnee Tribe of Oklahoma)
David Morgan (KY SHPO)
Evan Wisniewski (FHWA)
David Whitworth (FHWA)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing Ecological Services)
John Brown
Paul Rawlings
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

**330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735**

October 30, 2002

Ron Sparkman
Chairman
The Shawnee Tribe
P.O. Box 189
Miami, OK 74355

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

Dear Mr. Sparkman:

The Federal Highway Administration (FHWA), in partnership with the Kentucky Transportation Cabinet (KYTC), invites you, as a federally recognized Indian Tribe, to consult on a federally funded transportation project. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties of significance to Indian tribes. We are requesting your assistance in identifying areas with potential cultural and/or religious significance to your tribe, which may be impacted by this federal-aid transportation project.

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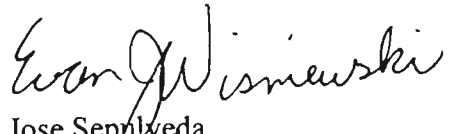
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Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr

Enclosure

c: Rebecca Hawkins (Historian, The Shawnee Tribe) w/e
David Morgan (KY SHPO)
Evan Wisniewski (FHWA)
David Whitworth (FHWA)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing Ecological Services)
John Brown
Paul Rawlings
FHWA Project File w/e



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division Office
Jose Sepulveda, Division Administrator

**330 West Broadway
Frankfort, KY 40601
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October 30, 2002

Ron Sparkman
Chairman
The Shawnee Tribe
P.O. Box 189
Miami, OK 74355

Subject: Invitation to Consult on Transportation Impacts to Native American Sites
Phase I Archaeological Results
Proposed KY 15 Reconstruction, Perry County, Kentucky
State Item Number 10-269.01

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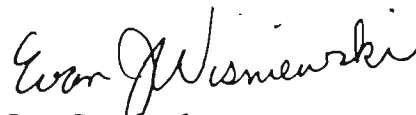
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Sincerely Yours,


for Jose Sepulveda
Division Administrator

JS/wlr

Enclosure

c: Rebecca Hawkins (Historian, The Shawnee Tribe) w/e
David Morgan (KY SHPO)
Evan Wisniewski (FHWA)
David Whitworth (FHWA)
Jeff Allen (KYTC District 10)
Kiersten Fuchs (Redwing Ecological Services)
John Brown
Paul Rawlings
FHWA Project File w/e

APPENDIX F

AGENCY COORDINATION LETTERS



REDWING
ECOLOGICAL SERVICES, INC.

833 West Main Street • Suite LL105 • Louisville KY 40202 • Phone 502.625.3009 • Fax 502.625.3077

FILE

May 10, 2001

Mr. Wayne Davis
Kentucky Division of Fish and Wildlife Resources
1 Game Farm Road
Frankfort, Kentucky 40601

Subject: **Request for Information on Protected Species**
KY Hwy 15
Perry County, Kentucky
Redwing Project 01-018

Dear Mr. Davis:

The Kentucky Transportation Cabinet is proposing the expansion of KY Hwy 15 (KY 15) from north of Hazard to KY 28 in Perry County, Kentucky. The purpose of this letter is to request information regarding protected species, or their critical habitat, for the project area. The project includes an expanded study area adjacent to KY 15 in the northern portion of the project and the entire KY 15 corridor, as shown on the enclosed 7.5 minute topographic quadrangle map. Any specific comments or concerns that you may have about this project would be appreciated.

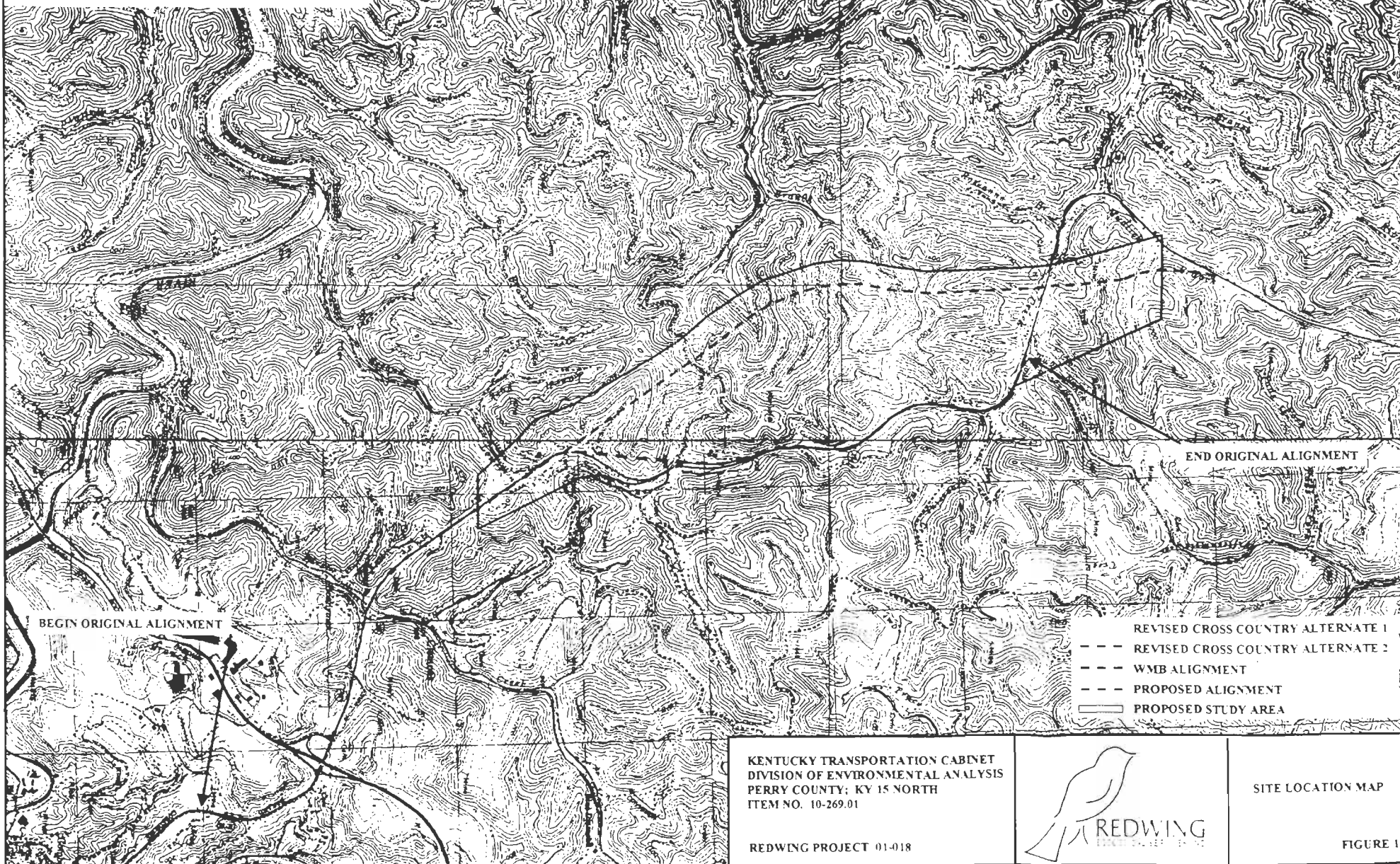
If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

Sincerely,

Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
File: 01-018/ky15kdfwr

Ronald L. Thomas
Principal
Senior Ecologist

Enclosure: Site Location Map





REDWING
ECOLOGICAL SERVICES, INC.

833 West Main Street • Suite LL105 • Louisville KY 40202 • Phone 502.625.3009 • Fax 502.625.3077

FILE

May 10, 2001

Mr. George Spicer
Kentucky Division of Forestry
P.O. Box 702
Hazard, Kentucky 41702

Subject: **Request for Information on State Champion Trees
KY Hwy 15
Perry County, Kentucky
Redwing Project 01-018**

Dear Mr. Spicer:

The Kentucky Transportation Cabinet is proposing the expansion of KY Hwy 15 (KY 15) from north of Hazard to KY 28 in Perry County, Kentucky. The purpose of this letter is to request information regarding state champion trees for the project area. The project includes an expanded study area adjacent to KY 15 in the northern portion of the project and the entire KY 15 corridor, as shown on the enclosed 7.5 minute topographic quadrangle map. Any specific comments or concerns that you may have about this project would be appreciated.

If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

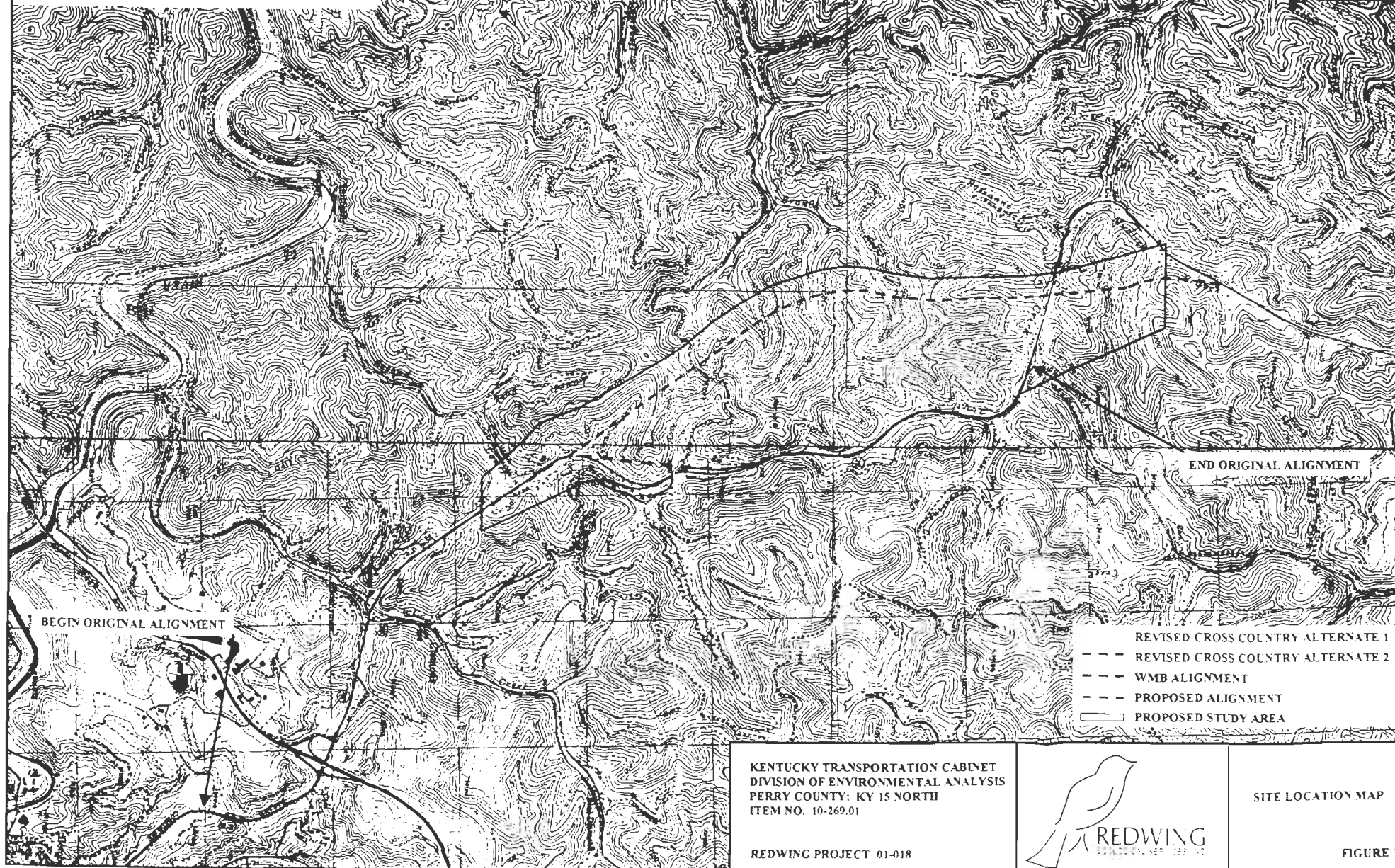
Sincerely,

Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
File: 01-018/ky15kdof

Ronald L. Thomas
Principal
Senior Ecologist

Enclosure: Site Location Map

SOURCE: DELORME 3-D TOPOQUADS U.S. GEOLOGICAL SURVEY,
7.5 MINUTE SERIES (TOPOGRAPHIC), NORTH HAZARD
AND KRYPTON, KENTUCKY QUADRANGLE





833 West Main Street • Suite LL105 • Louisville KY 40202 • Phone 502.625.3009 • Fax 502.625.3077

FILE

May 10, 2001

Mr. Terry Anderson
Branch Manager
Kentucky Division of Water
Water Quality Branch
Frankfort Office Park
14 Reilly Road
Frankfort, Kentucky 40601


Subject: **Request for Information on Outstanding Resource Waters
or Wild Rivers
KY Hwy 15
Perry County, Kentucky
Redwing Project 01-018**

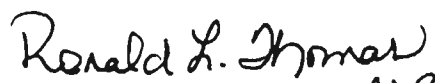
Dear Mr. Anderson:

The Kentucky Transportation Cabinet is proposing the expansion of KY Hwy 15 (KY 15) from north of Hazard to KY 28 in Perry County, Kentucky. The purpose of this letter is to request information regarding outstanding resource waters or wild rivers for the project area. The project includes an expanded study area adjacent to KY 15 in the northern portion of the project and the entire KY 15 corridor, as shown on the enclosed 7.5 minute topographic quadrangle map. Any specific comments or concerns that you may have about this project would be appreciated.

If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

Sincerely,


Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
File: 01-018/ky15kdow


Ronald L. Thomas
Principal
Senior Ecologist

Enclosure: Site Location Map





REDWING
ECOLOGICAL SERVICES, INC.

833 West Main Street • Suite LL105 • Louisville KY 40202 • Phone 502.625.3009 • Fax 502.625.3077

FILE

May 10, 2001

Mr. Will Lacy
Natural Resources Conservation Service
625 Memorial Drive Suite 101
Hazard, Kentucky 41701

Subject: **Request for Information on Prime and Unique Farmland
KY Hwy 15
Perry County, Kentucky
Redwing Project 01-018**

Dear Mr. Lacy:

The Kentucky Transportation Cabinet is proposing the expansion of KY Hwy 15 (KY 15) from north of Hazard to KY 28 in Perry County, Kentucky. The purpose of this letter is to request information regarding prime and unique farmland for the project area. The project includes an expanded study area adjacent to KY 15 in the northern portion of the project and the entire KY 15 corridor, as shown on the enclosed 7.5 minute topographic quadrangle map. Any specific comments or concerns that you may have about this project would be appreciated.

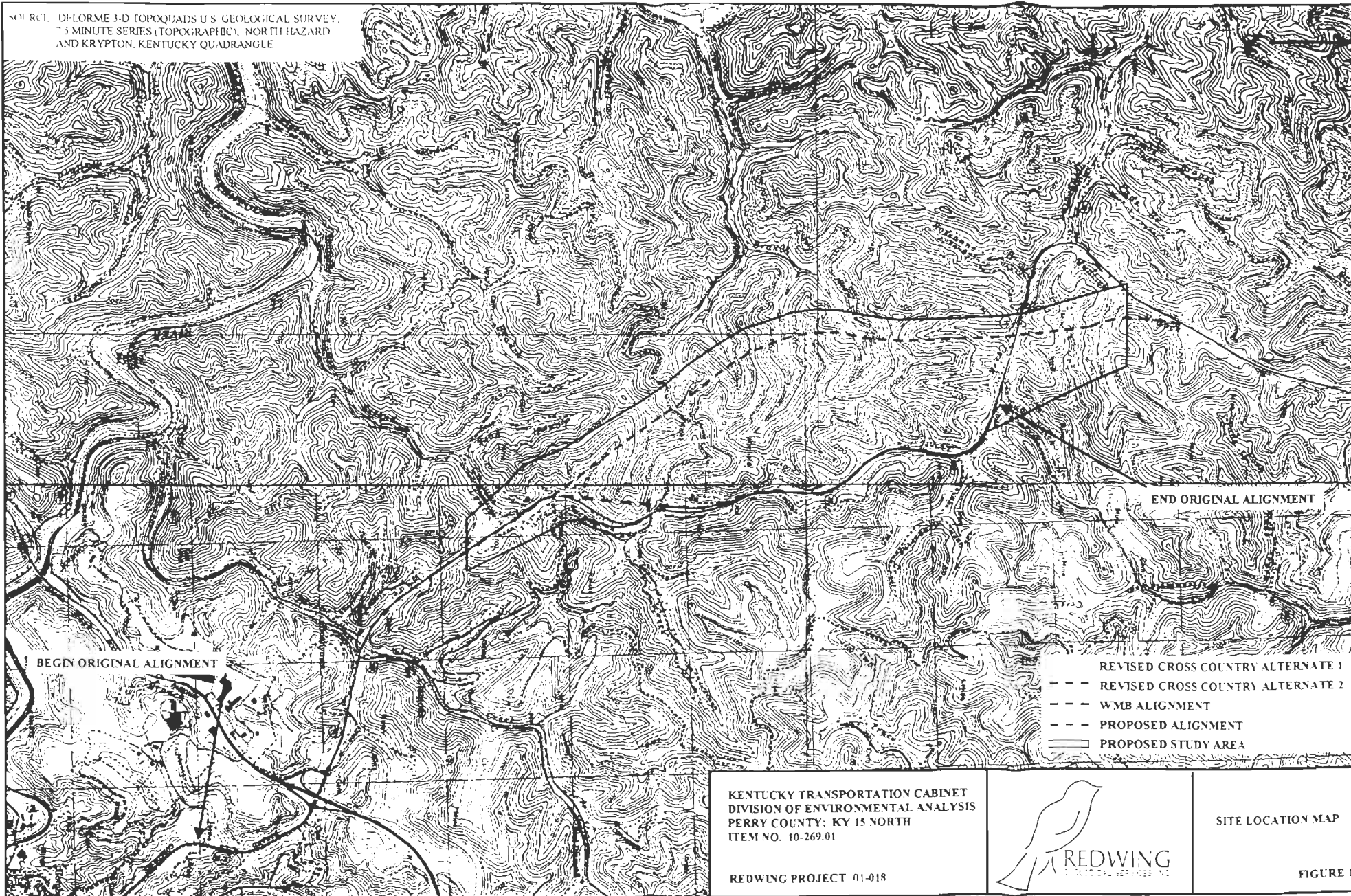
If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

Sincerely,

Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
File: 01-018/ky15nrcs

Ronald L. Thomas
Principal
Senior Ecologist

Enclosure: Site Location Map



SOURCE: DELORME 3-D TOPOQUADS U.S. GEOLOGICAL SURVEY,
7.5 MINUTE SERIES (TOPOGRAPHIC), NORTH HAZARD
AND KRYPTON, KENTUCKY QUADRANGLE



KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY, KY 15 NORTH
ITEM NO. 10-269.01

REDWING PROJECT 01-018



SITE LOCATION MAP

FIGURE 1



REDWING
ECOLOGICAL SERVICES, INC.

833 West Main Street • Suite LL105 • Louisville KY 40202 • Phone 502.625.3009 • Fax 502.625.3077

FILE

May 10, 2001

Ms. Sara Hines
Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, Kentucky 40601-1403

Subject: **Request for Information on Protected Species
KY Hwy 15
Perry County, Kentucky
Redwing Project 01-018**

Dear Ms. Hines:

The Kentucky Transportation Cabinet is proposing the expansion of KY Hwy 15 (KY 15) from north of Hazard to KY 28 in Perry County, Kentucky. The purpose of this letter is to request information regarding protected species, or their critical habitat, for the project area. The project includes an expanded study area adjacent to KY 15 in the northern portion of the project and the entire KY 15 corridor, as shown on the enclosed 7.5 minute topographic quadrangle map. Any specific comments or concerns that you may have about this project would be appreciated.

If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

Sincerely,

Kiersten R. Fuchs
Principal
Senior Wildlife Biologist

File: 01-018/ky15ksnpe

Ronald L. Thomas
Principal
Senior Ecologist

Enclosures: Site Location Map
Data Request Form

Kentucky Natural Heritage Program Data Services
Data License (ver 10.95)

Project Title: KY 15
Project Description: KYTC is preparing the expansion of KY Hwy 15 from N. of Hazard to KY 28
Requester: Kiersten Fuchs
Affiliation: Ecological Consultant
Address to send data: 833 W. Main St Suite 44105
Louisville, KY 40202
Address to send bill (if different):
Phone: (502) 625-3009
When is response needed? ASAP
Do you need 24 hour service? Yes ☐ No ☒ (note the higher fee)
Mode of delivery (check one)
☒ U.S. Mail
☐ Fax Number: _____
☐ Other: _____

For KSNPC use:

Number: _____

Date received: _____

Date sent: _____

Services requested (check all that apply—report descriptions are on the reverse side)
☒ Standard Occurrence Report ☐ Standard Element Report ☒ County List Report (free of charge)
☐ Standard Managed Area Report ☐ Copy of the KSNPC monitored plant and animal list (free of charge).
☐ Custom Data Services (contact KSNPC firm)

Geographic extent of request (check one)

☒ Map provided
☐ County. Name: _____
☐ 7.5 minute quadrangle. Name: _____
☐ EPA watershed. Name: _____
☐ Radius: _____ mile(s). Center latitude: _____ Center longitude: _____
☐ Rectangle. N latitude: _____ S latitude: _____ E longitude: _____ W longitude: _____

Format desired (check one)

☒ Paper ☐ ASCII ☐ Diskette size: _____

Map production (complete only if you want KSNPC to manually map locations on a 7.5 minute topographic map)

☐ Element occurrence locations marked on 7.5 minute topographic maps (does not apply for standard element report).
☐ Managed area boundaries marked on 7.5 minute topographic maps.
☐ Maps provided by requester (must be 7.5 minute topographic map or smaller scale).
☐ Have KSNPC purchase necessary maps (billed to requester).

Fees

Data services cost \$45.00 per hour. There is a one hour minimum charge and an additional fee is assessed for the actual costs of maps. Standard requests require an average of one to two hours. It normally takes less than two weeks to answer a request. Twenty-four hour service is available for \$90.00 per hour. Fax charges are \$2 per page. Government agencies, non-profit organizations, students, and researchers are provided two hours of data services a month free of charge.

Acceptance of Stipulations Concerning Preliminary Mapping and Database Products from the Kentucky State Nature Preserves Commission

The undersigned, in accepting preliminary mapping and database products, hereby acknowledges the limitations of such rare species attribute and locational information and the following restrictions on use:

1. The database from which these information products are developed is in preliminary form, subject to change and regular updates. This map or database product was produced and maintained by the Kentucky State Nature Preserves Commission for its internal purposes only. The Kentucky State Nature Preserves Commission makes no representation or warranty as to its accuracy, and in particular, its accuracy as to labeling, dimensions, boundaries, or placement or location of any map features thereon. The Kentucky State Nature Preserves Commission MAKES NO WARRANTY OF MERCHANTABILITY OR WARRANTY FOR FITNESS FOR A PARTICULAR PURPOSE, EXPRESS OR IMPLIED, WITH RESPECT TO THIS MAP PRODUCT. Any user of this map or database product accepts the same AS IS, WITH ALL FAULTS, and assumes all responsibility for the use thereof, and further covenants and agrees to hold the Kentucky State Nature Preserves Commission harmless from and against any damage, loss, or liability arising from any use of the map or database product.
2. This product and database has been copyrighted by the Kentucky State Nature Preserves Commission. The Kentucky State Nature Preserves Commission hereby reserves all rights thereto, and neither this product, database, nor any portion thereof, may be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission except for the reproduction or reporting in any project-related document or correspondence. Locational information for sensitive plants, animals, and natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. The products are provided on a temporary basis for the express project (described above) of the requester below, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schoenfel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).
3. When such information is used the following disclaimer and waiver of liability shall be included and displayed prominently so as to alert any person viewing or utilizing this information:
NOTICE: It is understood that, while the Kentucky State Nature Preserves Commission and its suppliers of information have no indication or reason to believe that there are inaccuracies or defects in information incorporated in the base map or database, the Kentucky State Nature Preserves Commission and its suppliers make NO REPRESENTATIONS OF ANY KIND, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, NOR ARE ANY SUCH WARRANTIES TO BE IMPLIED, WITH RESPECT TO THE INFORMATION OR DATA, FURNISHED HEREIN.
4. A permanent access structure for the Natural Heritage database, derivative products, Geographic Information System, and other information management resources is being developed by the Kentucky State Nature Preserves Commission, and this license to use of the system is deemed to be temporary, revocable, and valid for only the period indicated, or until a final Information Resource access policy is established.
5. Documents incorporating Kentucky State Nature Preserves Commission data and data products shall include explicit reference to the Commission as a source to be cited as follows: "Information provided by the Kentucky State Nature Preserves Commission. Further information is available by contacting the Data Manager, KSNPC."
6. Any use, display or incorporation of Commission data or information products shall include the date on which such information was provided.

ACCEPTANCE: I hereby certify that the above stipulations are understood and accepted, and I declare that I am authorized to execute this statement on behalf of the Agency or Company identified below:

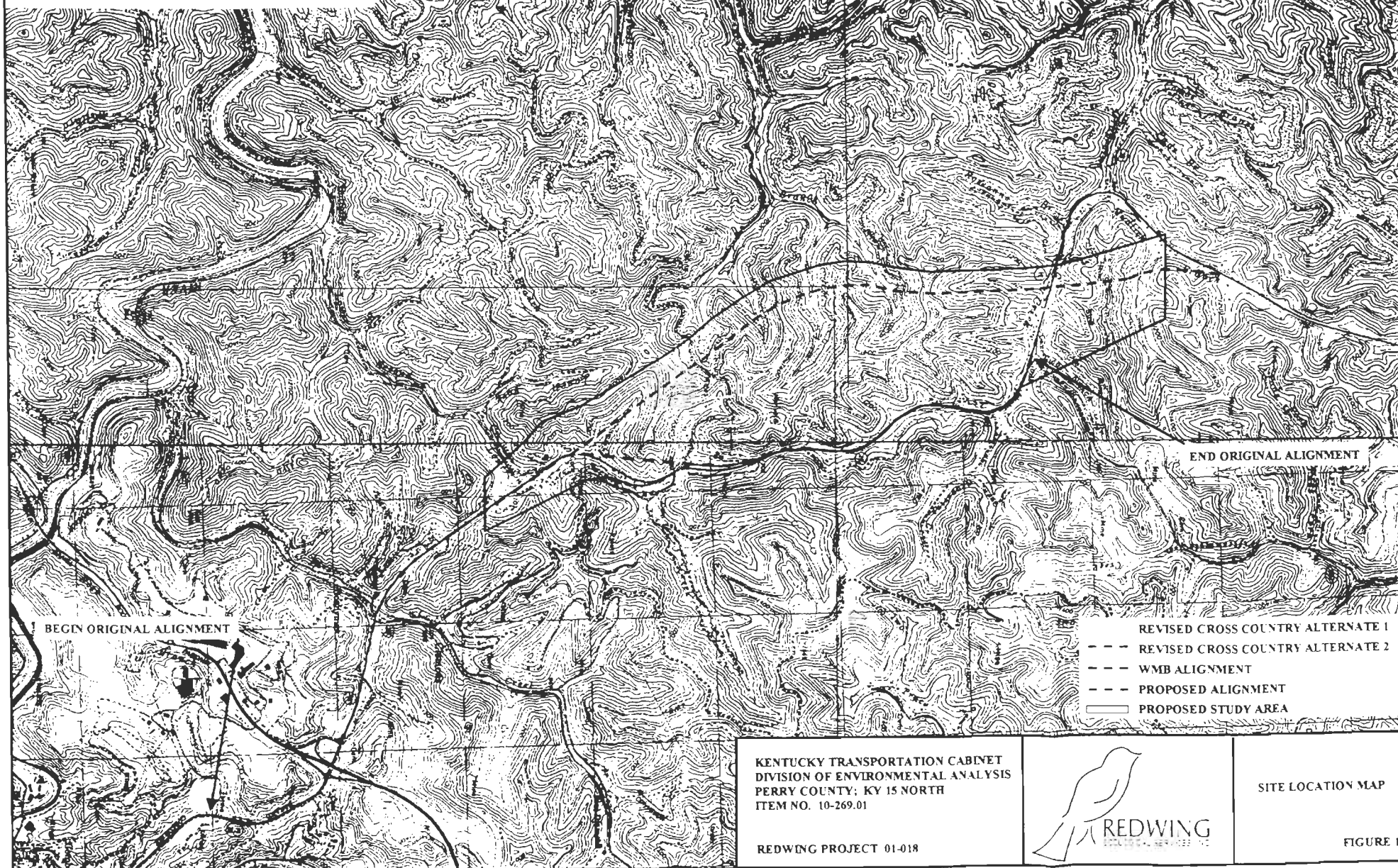
Kiersten Fuchs
Requester Signature

Rocking Ecological Services
Agency or Company

5/10/01
Date Signed

Send request to: Data Manager, KSNPC, 801 Schoenfel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886. Fax: (502) 573-2355.

SOURCE: DELORME 3-D TOPOQUADS U.S. GEOLOGICAL SURVEY,
7.5 MINUTE SERIES (TOPOGRAPHIC); NORTH HAZARD
AND KRYPTON, KENTUCKY QUADRANGLE





REDWING
ECOLOGICAL SERVICES, INC.

833 West Main Street • Suite LL105 • Louisville KY 40202 • Phone 502.625.3009 • Fax 502.625.3077

FILE

May 10, 2001

Dr. Lee Barclay
United States Department of Interior
Fish and Wildlife Service
446 Neal Street
Cookeville, Tennessee 38501

Subject: **Request for Information on Protected Species
KY Hwy 15
Perry County, Kentucky
Redwing Project 01-018**

Dear Dr. Barclay:

The Kentucky Transportation Cabinet is proposing the expansion of KY Hwy 15 (KY 15) from north of Hazard to KY 28 in Perry County, Kentucky. The purpose of this letter is to request information regarding protected species, or their critical habitat, for the project area. The project includes an expanded study area adjacent to KY 15 in the northern portion of the project and the entire KY 15 corridor, as shown on the enclosed 7.5 minute topographic quadrangle map. Any specific comments or concerns that you may have about this project would be appreciated.

If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

Sincerely,

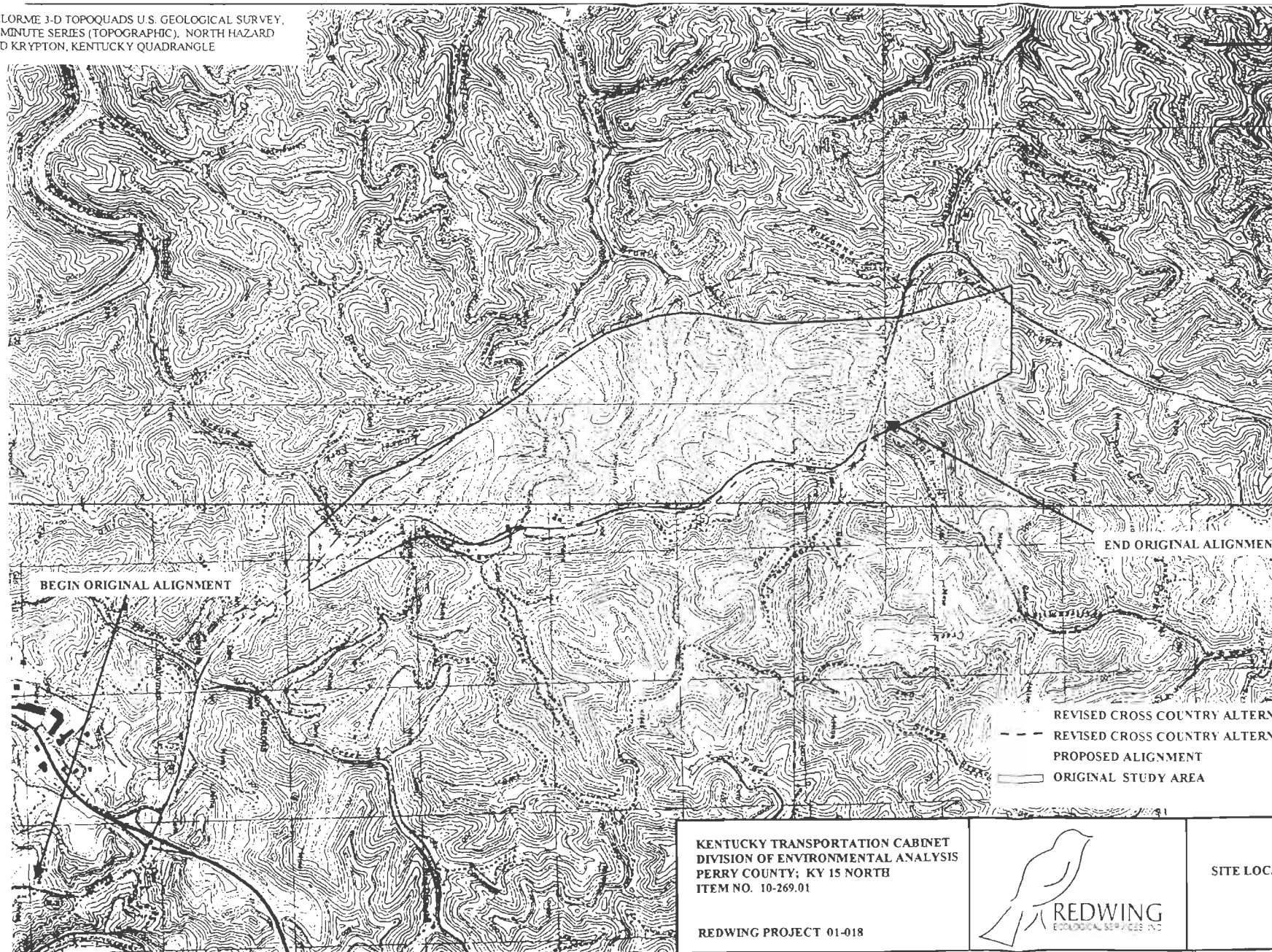
Kiersten R. Fuchs

Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
File: 01-018/ky15usfws

Ronald L. Thomas
by 8/5/03

Ronald L. Thomas
Principal
Senior Ecologist

Enclosure: Site Location Map



KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY; KY 15 NORTH
ITEM NO. 10-269.01

REDWING PROJECT 01-018



SITE LOCATION MAP

FIGURE 1



REDWING
ECOLOGICAL SERVICES, INC.

129 South Sixth Street • Louisville, Kentucky 40202 • Phone 502.625.3009 • Fax 502.625.3077

FILE

February 4, 2002

Mr. Wayne Davis
Kentucky Division of Fish and Wildlife Resources
1 Game Farm Road
Frankfort, Kentucky 40601

Subject: **Additional Request for Information on Protected Species
KY Highway 15
Perry County, Kentucky
KYTC Item No. 10-269.01
Redwing Project 01-018**

Dear Mr. Davis:

This letter is to update you on the proposed expansion of KY Highway 15 (KY 15) in Perry County, Kentucky by the Kentucky Transportation Cabinet (KYTC). We submitted an initial letter to you dated May 10, 2001 requesting information on protected species for an expanded study area adjacent to KY 15. We would like to inform you that this alignment has shifted to the west, as shown on the enclosed 7.5 minute topographic quadrangle map. We would appreciate any additional specific comments or concerns that you may have about this project.

If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

Sincerely,

Kiersten R. Fuchs
Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
File: 01-018/ky15kdfwr-2002

Ronald L. Thomas
By *SSB*
Ronald L. Thomas
Principal
Senior Ecologist

Enclosure: Site Location Map



REDWING
ECOLOGICAL SERVICES, INC.

129 South Sixth Street • Louisville, Kentucky 40202 • Phone 502.625.3009 • Fax 502.625.3077

FILE

February 4, 2002

Dr. Lee Barclay
United States Department of Interior
Fish and Wildlife Service
446 Neal Street
Cookeville, Tennessee 38501

Subject: **Additional Request for Information on Protected Species
KY Highway 15
Perry County, Kentucky
KYTC Item No. 10-269.01
Redwing Project 01-018**

Dear Dr. Barclay:

This letter is to update you on the proposed expansion of KY Highway 15 (KY 15) in Perry County, Kentucky by the Kentucky Transportation Cabinet (KYTC). We submitted an initial letter to you dated May 10, 2001 requesting information on protected species for an expanded study area adjacent to KY 15. We would like to inform you that this alignment has shifted to the west, as shown on the enclosed 7.5 minute topographic quadrangle map. We would appreciate any additional specific comments or concerns that you may have about this project.

If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

Sincerely,

Kiersten R. Fuchs
Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
File: 01-018/kyl5usfws-2002

Ronald L. Thomas
yds
Ronald L. Thomas
Principal
Senior Ecologist

Enclosure: Site Location Map



REDWING
ECOLOGICAL SERVICES, INC.

129 South Sixth Street • Louisville, Kentucky 40202 • Phone 502.625.3009 • Fax 502.625.3077

FILE

February 4, 2002

Ms. Sara Hines
Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, Kentucky 40601-1403

Subject: **Request for Information on Protected Species
KY Highway 15
Perry County, Kentucky
KYTC Item No. 10-269.01
Redwing Project 01-018**

Dear Ms. Hines:

This letter is to update you on the proposed expansion of KY Highway 15 (KY 15) in Perry County, Kentucky by the Kentucky Transportation Cabinet (KYTC). We submitted an initial letter to you dated May 10, 2001 requesting information on protected species, or their critical habitat, for an expanded study area adjacent to KY 15. We would like to inform you that this alignment has shifted to the west, as shown on the enclosed 7.5 minute topographic quadrangle map. We would appreciate any additional specific comments or concerns that you may have about this project.

If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

Sincerely,

Kiersten R. Fuchs
Principal
Senior Wildlife Biologist

File: 01-018/ky15ksnpc-2002

Ronald L. Thomas
Principal
Senior Ecologist

Enclosures: Site Location Map
Data Request Form

**Kentucky State Nature Preserves Commission
Kentucky Natural Heritage Program Data Services
Data License (ver 6.99)**

*Data requests may also be submitted via the Internet at <http://www.kynaturepreserves.org/request.html>

Project Title: KY 15 Highway KYTC Item No. 10-269.01
Project Description: Highway Expansion
Requester: Kiersten Fuchs, Redwing Ecological Services, Inc.
Affiliation: Subcontractor, preparing EOWST

Address to send data: Redwing Ecological Services, Inc.
129 S. Sixth St. 2
Louisville, KY 40002

Address to send bill (if different)

For KSNPC use:
Number: _____
Date received: _____

Phone: (502) 625-3009

When is response needed? (Standard requests are filled within one to two weeks of receipt) ASAP

Do you need 24-hour service? ____ Yes (note the higher fee) ✓ No

Mode of delivery (check one)

☐ U.S. Mail
☐ Fax Number (note \$2.00/page charge for faxed requests):
☒ Email Address: Kfuchs@redwing.wva.net
☐ Other: _____

Services requested (check all that apply--report descriptions are on the reverse side)

☒ Standard Occurrence Report Standard Element Report County List Report (free of charge)
☐ Standard Managed Area Report Copy of the KSNPC monitored plant and animal list (free of charge).
☐ Custom Data Services (contact KSNPC first)

Geographic extent of request (check one)

☒ Map provided
☐ County. Name: _____
☐ 7.5 minute quadrangle. Name: _____
☐ EPA waterbody. Name: _____
☐ Radius: mile(s). Center latitude: Center longitude: _____
☐ Rectangle. N latitude: S latitude: E longitude: W longitude: _____

Format desired (check one)

☐ Paper ☒ Excel 97 spreadsheet (email) ☐ text file (email) ☐ ASCII

Map production (complete only if you want KSNPC to manually map locations on a 7.5 minute topographic map)

☐ Element occurrence locations marked on 7.5 minute topographic maps (does not apply for standard element report).
☐ Managed area boundaries marked on 7.5 minute topographic maps.
☐ Maps provided by requester (must be 7.5 minute topographic map or smaller scale).
☐ Have KSNPC purchase necessary maps (billed to requester).

Fees

The fee for data services is \$45.00 per hour. There is a one hour minimum charge for all requests, and an additional fee is assessed for the actual costs of maps (if purchased). The fee for data services over the first hour is billed at \$0.75 per minute for standard requests, or \$1.50 per minute for 24-hour requests. Standard requests require an average of one to two hours. It normally takes less than two weeks to answer a request. Twenty-four hour service is available for \$90.00 per hour. Fax charges are \$2 per page. Government agencies, non-profit organizations, private individuals, students, and researchers are provided two hours of data services a month free of charge.

Acceptance of Stipulations Concerning Preliminary Mapping and Database Products from the Kentucky State Nature Preserves Commission

Requests for information from KSNPC will not be filled unless this form is signed and dated. The undersigned, in accepting preliminary mapping and database products, hereby acknowledges the limitations of such rare species attribute and locational information and the following restrictions on use:

1. The database from which these information products are developed is in preliminary form, subject to change and regular updates. This map or database product was produced and maintained by the Kentucky State Nature Preserves Commission for its internal purposes only. The Kentucky State Nature Preserves Commission makes no representation or warranty as to its accuracy, and in particular, its accuracy as to labeling, dimensions, boundaries, or placement or location of any map features thereon. The Kentucky State Nature Preserves Commission MAKES NO WARRANTY OF MERCHANTABILITY OR WARRANTY FOR FITNESS OF USE FOR A PARTICULAR PURPOSE, EXPRESS OR IMPLIED, WITH RESPECT TO THIS MAP PRODUCT. Any user of this map or database product accepts the same AS IS, WITH ALL FAULTS, and assumes all responsibility for the use thereof, and further covenants and agrees to hold the Kentucky State Nature Preserves Commission harmless from and against any damage, loss, or liability arising from any use of the map or database product.
2. Data and data products received from the Kentucky State Nature Preserves Commission including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission. The exact location of plants, animals, and natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester below, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).
3. When such information is used the following disclaimer and waiver of liability shall be included and displayed prominently so as to alert any person viewing or utilizing this information:

NOTICE: It is understood that, while the Kentucky State Nature Preserves Commission and its suppliers of information have no indication or reason to believe that there are inaccuracies or defects in information incorporated in the base map or database, the Kentucky State Nature Preserves Commission and its suppliers make NO REPRESENTATIONS OF ANY KIND, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, NOR ARE ANY SUCH WARRANTIES TO BE IMPLIED, WITH RESPECT TO THE INFORMATION OR DATA, FURNISHED HEREIN.

4. A permanent access structure for the Natural Heritage database, derivative products, Geographic Information System, and other information management resources is being developed by the Kentucky State Nature Preserves Commission, and this license to use of the system is deemed to be temporary, revocable, and valid for only the period indicated, or until a final Information Resource access policy is established.

5. Documents incorporating Kentucky State Nature Preserves Commission data and data products shall include explicit reference to the Commission as a source to be cited as follows: "Information provided by the Kentucky State Nature Preserves Commission. Further information is available by contacting the Data Manager, KSNPC."

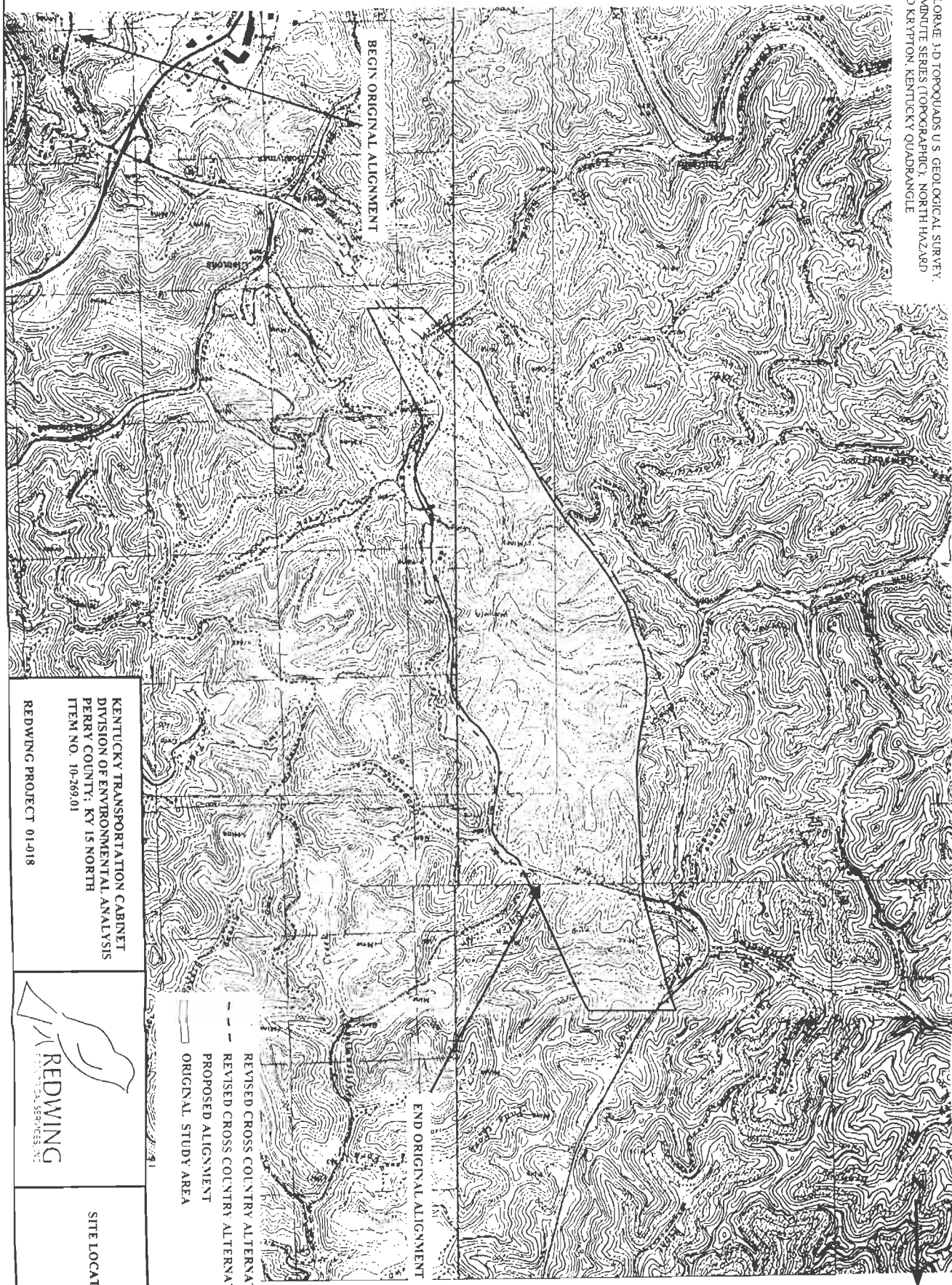
6. Any use, display or incorporation of Commission data or information products shall include the date on which such information was provided.

ACCEPTANCE: I hereby certify that the above stipulations are understood and accepted, and I declare that I am authorized to execute this statement on behalf of the Agency or Company identified below:

Requester Signature Keith P. Zuck Agency or Company Redwing Technology Services, Inc. Signed 2/4/02

Send request to: Data Manager, KSNPC, 801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886. Fax: (502) 573-2355.

SOURCE: DELORME 1:250,000 U.S. GEOLOGICAL SURVEY
7.5-MINUTE SERIES (TOPOGRAPHIC), NORTH HAZARD
AND KAYTON, KENTUCKY QUADRANGLE



KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY, KY 15 NORTH
ITEM NO. 10-269.01

REDWING PROJECT 01-018



SITE LOCATION MAP

FIGURE 1

SOURCE: DELORME 3-D TOPOQUADS U.S. GEOLOGICAL SURVEY.
7.5 MINUTE SERIES (TOPOGRAPHIC), NORTH HAZARD
AND KRYPTON, KENTUCKY QUADRANGLE



KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY; KY 15 NORTH
ITEM NO. 10-269.01

REDWING PROJECT 01-018



SITE LOCATION MAP

FIGURE 1



REDWING
ECOLOGICAL SERVICES, INC.

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FILE

February 4, 2002

Mr. George Spicer
Kentucky Division of Forestry
P.O. Box 702
Hazard, Kentucky 41702

Subject: **Additional Request for Information on State Champion Trees
KY Highway 15
Perry County, Kentucky
KYTC Item No. 10-269.01
Redwing Project 01-018**

Dear Mr. Spicer:

This letter is to update you on the proposed expansion of KY Highway 15 (KY 15) in Perry County, Kentucky by the Kentucky Transportation Cabinet (KYTC). We submitted an initial letter to you dated May 10, 2001 requesting information on state champion trees for an expanded study area adjacent to KY 15. We would like to inform you that this alignment has shifted to the west, as shown on the enclosed 7.5 minute topographic quadrangle map. We would appreciate any additional specific comments or concerns that you may have about this project.

If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

Sincerely,

Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
File: 01-018/ky15kdof-2002

Ronald L. Thomas
Principal
Senior Ecologist

Enclosure: Site Location Map





REDWING
ECOLOGICAL SERVICES, INC.

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FILE

February 4, 2002

Mr. Terry Anderson
Branch Manager
Kentucky Division of Water
Water Quality Branch
Frankfort Office Park
14 Reilly Road
Frankfort, Kentucky 40601

Subject: **Additional Request for Information on Outstanding Resource
Waters or Wild Rivers
KY Highway 15
Perry County, Kentucky
KYTC Item No. 19-269.01
Redwing Project 01-018**

Dear Mr. Anderson:

This letter is to update you on the proposed expansion of KY Highway 15 (KY 15) in Perry County, Kentucky by the Kentucky Transportation Cabinet (KYTC). We submitted an initial letter to you dated May 10, 2001 requesting information on outstanding resource waters or wild rivers for an expanded study area adjacent to KY 15. We would like to inform you that this alignment has shifted to the west, as shown on the enclosed 7.5 minute topographic quadrangle map. We would appreciate any additional specific comments or concerns that you may have about this project.

If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

Sincerely,

Kiersten R. Fuchs
Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
File: 01-018/ky15kdow-2002

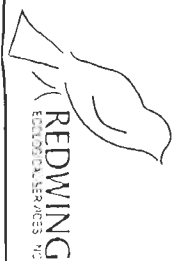
Ronald L. Thomas
by *RLT*
Ronald L. Thomas
Principal
Senior Ecologist

Enclosure: Site Location Map



KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY, KY 15 NORTH
ITEM NO. 10-269-01

REDWING PROJECT 01-018



SITE LOCATION MAP

FIGURE 1



FILE

129 South Sixth Street • Louisville, Kentucky 40202 • Phone 502.625.3009 • Fax 502.625.3077

February 4, 2002

Mr. Will Lacy
Natural Resources Conservation Service
625 Memorial Drive Suite 101
Hazard, Kentucky 41701

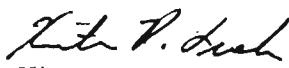
Subject: **Additional Request for Information on Prime and Unique Farmland
KY Highway 15
Perry County, Kentucky
KYTC Item No. 10-269.01
Redwing Project 01-018**

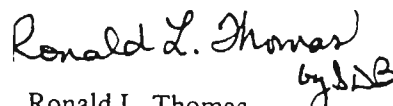
Dear Mr. Lacy:

This letter is to update you on the proposed expansion of KY Highway 15 (KY 15) in Perry County, Kentucky by the Kentucky Transportation Cabinet (KYTC). We submitted an initial letter to you dated May 10, 2001 requesting information on prime and unique farmland for an expanded study area adjacent to KY 15. We would like to inform you that this alignment has shifted to the west, as shown on the enclosed 7.5 minute topographic quadrangle map. We would appreciate any additional specific comments or concerns that you may have about this project.

If you have any further questions, please feel free to contact Kiersten Fuchs or Ron Thomas at (502) 625-3009. Thank you very much for your assistance.

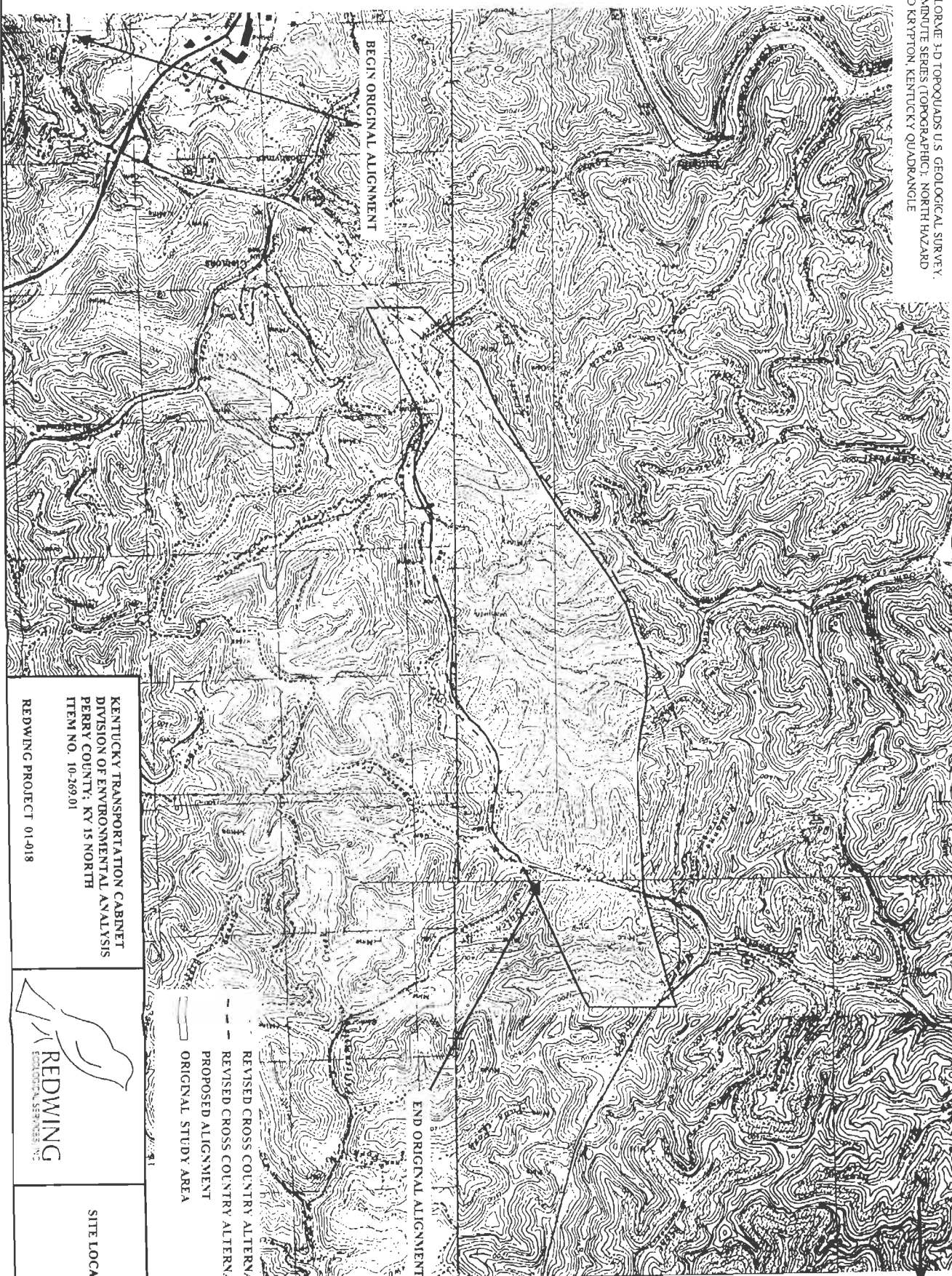
Sincerely,


Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
File: 01-018/ky15nrccs-2002


Ronald L. Thomas
Principal
Senior Ecologist

Enclosure: Site Location Map

SOURCE: DELORME 1:10,000 U.S. GEOLOGICAL SURVEY
7.5 MINUTE SERIES (TOPOGRAPHIC), NORTH HAZARD
AND KRYPTON, KENTUCKY QUADRANGLE



KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY, KY 15 NORTH
ITEM NO. 10-269.01

REDWING PROJECT 01-018



SITE LOCATION MAP

FIGURE 1

FISH & WILDLIFE COMMISSION

Mike Boatwright, Paducah
Tom Baker, Bowling Green, Chairman
Allen K. Gailor, Louisville
Charles E. Bale, Hodgenville
Dr. James R. Rich, Taylor Mill
Ben Frank Brown, Richmond
Joug Hensley, Hazard
Dr. Robert C. Webb, Grayson
David H. Godby, Somerset



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF FISH AND WILDLIFE RESOURCES
C. THOMAS BENNETT, COMMISSIONER

May 15, 2001

Kiersten R. Fuchs
Principal Senior Wildlife Biologist
Redwing Ecological Services, Inc.
833 West main Street Suite LL105
Louisville, KY 40202

Re: Threatened/Endangered species review; KY Highway 15 Expansion from
Hazard to KY 28, Redwing Project No. 01-018, Perry County, Kentucky

Dear Mr. Fuchs:

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 no federally threatened or endangered species are known to occur in the Hazard North and Krypton 7.5 minute USGS quadrangle(s). Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

The KDFWR recommends the following for any portion of the project that will be instream or near streams:

1. Development/excavation during a low flow period to minimize disturbance;
2. Proper placement of erosion control structures below highly disturbed areas to minimize entry of silt to the stream;
3. 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;
4. Return all disturbed instream habitat to its original condition upon completion of construction in the area, and;
5. Preservation of tree canopy overhanging the stream.



Arnold L. Mitchell Bldg. #1 Game Farm Road Frankfort, Ky 40601
An Equal Opportunity Employer M/F/D

Page Two
Mr. Fuchs
May 15, 2001

I hope this information will be helpful to you. Should you require additional information, please contact me at (502) 564-7109, ext. 367.

Sincerely,

A handwritten signature in black ink, appearing to read "Marla T. Barbour". The signature is fluid and cursive, with a long horizontal stroke at the end.

Marla T. Barbour
Fisheries Biologist III

cc: Environmental Section File

FISH & WILDLIFE COMMISSION

Mike Boatwright, Paducah
Tom Baker, Bowling Green, Chairman
Allen K. Gailor, Louisville
Charles E. Bale, Hodgenville
Dr. James R. Rich, Taylor Mill
Ben Frank Brown, Richmond
Doug Hensley, Hazard
Dr. Robert C. Webb, Grayson
David H. Godby, Somerset



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF FISH AND WILDLIFE RESOURCES
C. THOMAS BENNETT, COMMISSIONER

February 8, 2002

Kiersten R. Fuchs
Redwing Ecological Services, Inc.
129 South Sixth Street
Louisville, KY 40202

Re: Threatened/Endangered species review: Additional Request for Information on
Protected Species, KY Highway 15, Perry County, Kentucky

Dear Mr. Fuchs:

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 no federally threatened or endangered species are known to occur in the Krypton and Hazard North 7.5 minute USGS quadrangle(s). Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

Based on the information and map provided, KDFWR cannot determine the 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.

The KDFWR also recommends the following for any portion of the project that will be instream or near streams:

1. Development/excavation during a low flow period to minimize disturbance;
2. Proper placement of erosion control structures below highly disturbed areas to minimize entry of silt to the stream;
3. 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;
4. Return all disturbed instream habitat to its original condition upon completion of construction in the area;
5. Use of existing transportation corridors as the main crossing of streams during bridge construction if possible to minimize impacts to the aquatic resources, and;
6. Preservation of tree canopy overhanging the stream.



Arnold L. Mitchell Bldg. #1 Game Farm Road Frankfort, Ky 40601
An Equal Opportunity Employer M/F/D

Page Two
Kiersten Fuchs
February 8, 2002

I hope this information will be helpful to you. Should you require additional information, please contact me at (502) 564-7109, ext. 367.

Sincerely,

A handwritten signature in black ink, appearing to read "Marla T. Barbour". The signature is fluid and cursive, with a long horizontal stroke at the end.

Marla T. Barbour
Fisheries Biologist III

cc: Environmental Section File
Alex Barber

DONALD S. DOTT, JR.

DIRECTOR

Data Request 01-232

May 16, 2001

Page 1



PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
KENTUCKY STATE NATURE PRESERVES COMMISSION

801 SCHENKEL LANE
FRANKFORT, KENTUCKY 40601-1403
(502) 573-2886 VOICE
(502) 573-2355 FAX

May 16, 2001

Kiersten Fuchs
Redwing Environmental Services, Inc.
833 W. Main Street, Suite LL105
Louisville, Ky. 40202

Data Request **01-232**

Dear Ms. Fuchs:

This letter is in response to your data request of May 11, 2001 for the Ky 15, Perry County project. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Kentucky State Nature Preserves Commission occur in the area specified on the Hazard North and Krypton, Ky. USGS quadrangles. Based on our most current information, we have determined that two occurrences of the plants or animals and no occurrences of the exemplary natural communities that are monitored by KSNPC are reported as occurring in the specified area.

Accipiter striatus (Sharp-shinned Hawk, KSNPC special concern) can be found in a variety of habitats from semi-open farmland to woodland openings and borders. This species typically nests in areas of extensive forest, especially areas with some evergreen trees.

You should be aware that *Myotis sodalis* (Indiana myotis, federally endangered, KSNPC endangered) has been reported from Harlan and Letcher counties, which are counties adjacent to your project area. Suitable roost and winter sites include sandstone and limestone caves, rockhouses, cliffhines, and abandoned mines. Summer foraging habitats include upland forests, bottomland forests, and riparian corridors. In order to avoid impacts to bats, a thorough survey should be conducted. The survey should include a search for potential roost and winter sites, and a mistnetting census at numerous points within the proposed corridor, particularly in preferred summer habitat.

I would like to take this opportunity to remind you of the terms of the data request license, which you agreed upon in order to submit your request. The license agreement states "Data and data products received from the Kentucky State Nature Preserves Commission, including any portion

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Data Request 01-232

May 16, 2001

Page 2

thereof, may not be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission." The exact location of plants, animals, and natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).

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

If you have any questions or if I can be of further assistance, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Sara Hines".

Sara Hines
Data Manager

ALC/SGH

Enclosures: Data Report and Interpretation Key
Endangered, Threatened, and Special Concern Plants and Animals of Kentucky
Plants and Animals Presumed Extinct or Extirpated from Kentucky



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KENTUCKY STATE NATURE PRESERVES COMMISSION

801 SCHENKEL LANE, FRANKFORT, KY 40601-1403

PHONE: 502-573-2886 - FAX: 502-573-2355

www.kynaturepreserves.org

nrepc.ksnpcemail@mail.state.ky.us

February 28, 2002

Kiersten Fuchs
Redwing Ecological Services, Inc.
129 S. Sixth St
Louisville, KY 40202

Data Request 02-136

Dear Ms. Fuchs:

This letter is in response to your data request of February 5, 2002 for the Item No. 10-269.01 KY 15 North, Perry County project. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Kentucky State Nature Preserves Commission occur near the project area as shown on the map provided on the Hazard North and Krypton USGS Quadrangles. Based on our most current information, we have determined that four occurrences of the plants or animals and no occurrences of the exemplary natural communities that are monitored by KSNPC are reported as occurring in the specified area. Please see the attached report for more information.

In addition to the species noted in the report, *Myotis sodalis* (Indiana myotis, federally listed endangered, KSNPC endangered) is known to occur in adjacent Harlan and Letcher Counties. A thorough survey for this species should be conducted by a qualified biologist. The survey should include a search for potential roost and winter sites, and a mistnetting census at numerous points within the proposed corridor, particularly in preferred summer habitat. Summer foraging habitats include upland forests, bottomland forests and riparian corridors. Suitable roost and winter sites include sandstone and limestone caves, rockhouses, clifflines, and abandoned mines. In order to avoid impacts to bats, bottomland forests and riparian corridors, particularly near caves, should not be disturbed.

I would like to take this opportunity to remind you of the terms of the data request license, which you agreed upon in order to submit your request. The license agreement states "Data and data products received from the Kentucky State Nature Preserves Commission, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission." The exact location of plants,



animals, and natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question.

They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

If you have any questions or if I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Sara Hines
Data Manager

Enclosures: Data Report and Interpretation Key



United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, TN 38501

June 7, 2001

Ms. Kiersten R. Fuchs
Redwing Ecological Services
833 West Main Street
Suite LL105
Louisville, Kentucky 40202

Dear Ms. Fuchs:

Thank you for your letter and enclosure of May 10, 2001 concerning the proposed expansion and reconstruction of State Route 15 in Perry County, Kentucky. The Fish and Wildlife Service (Service) has reviewed the information submitted and we offer the following comments in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The Service is concerned that highway projects frequently accelerate erosion and sedimentation in streams, resulting in adverse effects to the aquatic environment. The use of heavy equipment to move earth and existing vegetation disrupts natural drainage patterns and exposes large areas of disturbed soil to erosion. Excessive sedimentation can clog stream channels and contribute to increased flooding. It can also increase water temperatures and cause oxygen demands which can damage or destroy fish and invertebrate populations. Deposition of sediment on the channel bottom also degrades aquatic habitat by filling in substrate cavities, burying demersal eggs, and smothering bottom organisms. In addition, turbidity, as induced by accelerated erosion and sedimentation, results in further damage to aquatic systems. Increased particulate matter suspended in the water column may drive fish from the polluted area by irritating the gills, concealing forage, and/or destroying vegetation that may be essential for spawning and cover habitat for particular species. Turbidity also degrades water quality by reducing light penetration, pH and oxygen levels, and the buffering capacity of the water. Degraded water quality may continue far downstream from the point where the erosion occurs.

Prevention of excessive sedimentation can occur only through application of Best Management Practices during daily construction activities. Rigid application of your agency's construction erosion control standards can preclude most sedimentation problems; however, in some cases additional measures will need to be taken by on-site inspectors and construction representatives.

Upon review of the proposed project, we find that the information provided is insufficient to determine if the proposed actions will require U.S. Army Corps of Engineers' permits. Since permit applications could more thoroughly reveal the extent of construction activities affecting aquatic resources, we will provide additional comments during the 404 review process should the project necessitate Corps' permits. However, we would likely have no objection to the issuance of permits if any necessary stream channel work is held to a minimum and Best Management Practices are utilized and enforced, effectively controlling erosion, sedimentation, and other potential hazards. The following conditions are specifically recommended:

1. Erosion and sediment control measures, including but not limited to the following, should be implemented on all vegetatively denuded areas:
 - a. Preventive planning: A well-developed erosion control plan which entails a preliminary investigation, detailed contract plans and specifications, and final erosion and sediment control contingency measures should be formulated and made a part of the contract.
 - b. Diversion channels: Channels should be constructed around the construction site to keep the work site free of flow-through water, and should be lined with plastic or plastic filter fabric to minimize soil erosion.
 - c. Silt barriers: Appropriate use should be made of silt fences, hay bale and brush barriers, and silt basins in areas susceptible to erosion. These structures should be regularly maintained (sediment removal) to prevent undermining.
 - d. Temporary seeding and mulching: All cuts and fill slopes, including those in waste sites and borrow pits, should be seeded as soon as possible.
 - e. Limitation of instream activities: Instream activities, including temporary fills and equipment crossings, should be limited to those absolutely necessary.
2. Concrete box culverts should be placed in a manner that prevents any impediment to low flows or to movement of indigenous aquatic species (e.g., native fish). We recommend that drainage structures be designed to accommodate bankfull discharge and that overflow or "equalizer" pipes be placed in the floodplain to accommodate flood events.
3. Channel excavations required for pier placement should be restricted to the minimum necessary for that purpose. Overflow channel excavations should be confined to one side of the channel, leaving the opposite bank and its riparian vegetation intact.

4. All fill should be stabilized immediately upon placement.
5. Streambanks should be stabilized with riprap or other accepted bioengineering technique(s).
6. Existing transportation corridors should be used in lieu of temporary crossings where possible.

Efficient management practices can minimize adverse impacts associated with construction. It is important that these and other measures be monitored and stringently enforced. This will aid in preserving the quality of the natural environment and in minimizing adverse impacts to aquatic resources.

Two of the alternative alignments involve extensive segments of new location through areas that have been previously mined. Old mines can serve as roost habitat for federally endangered Indiana bats (*Myotis sodalis*) and Rafinesque's big eared bat (*Corynorhinus rafinesquii*), a federal Species of Management Concern. You should assess potential impacts to the Indiana bats and determine if the proposed project may affect them. A "may affect" finding may necessitate formal consultation. We recommend that you submit a copy of your assessment and finding to this office for review and concurrence. Rafinesque's big-eared bat is a rare species that is currently afforded no federal protection, but whose status is being monitored by the Service. We would appreciate any measures to avoid or minimize impact to this species.

Thank you for giving us the opportunity to comment on this action. If you have any questions, please contact Rob Tawes of my staff at 931/528-6481, ext. 213.

Sincerely,



Lee A. Barclay, Ph.D.
Field Supervisor



United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, TN 38501

February 13, 2002

Ms. Kiersten R. Fuchs
Principal Senior Wildlife Biologist
Redwing Ecological Services, Inc.
129 South Sixth Street
Louisville, Kentucky 40202

Re: FWS# 2002-1016
KY 15 Re-alignment


Dear Ms. Fuchs:

Thank you for your letter and enclosure dated February 4, 2002, regarding the proposed expansion and realignment of KY 15 in Perry County, Kentucky. The Fish and Wildlife Service (Service) has reviewed the information submitted and we offer the following comments in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat.401, as amended; 16 U.S.C. 661 *et seq.*) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Although the proposed alignment for KY 15 has shifted slightly to the west, our original comments remain valid. These comments were sent to you in a letter dated June 7, 2001 (FWS# 2001-2398). A copy of that letter is enclosed for your convenience.

Thank you for the opportunity to comment on this action. If you have any questions or need further assistance, please do not hesitate to contact Sherry Williams of my staff at 931/528-6481, ext. 203.

Sincerely,


for Lee A. Barclay, Ph.D.
Field Supervisor

Enclosure



United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, TN 38501

June 7, 2001

Ms. Kiersten R. Fuchs
Redwing Ecological Services
833 West Main Street
Suite LL105
Louisville, Kentucky 40202

Dear Ms. Fuchs:

Thank you for your letter and enclosure of May 10, 2001 concerning the proposed expansion and reconstruction of State Route 15 in Perry County, Kentucky. The Fish and Wildlife Service (Service) has reviewed the information submitted and we offer the following comments in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The Service is concerned that highway projects frequently accelerate erosion and sedimentation in streams, resulting in adverse effects to the aquatic environment. The use of heavy equipment to move earth and existing vegetation disrupts natural drainage patterns and exposes large areas of disturbed soil to erosion. Excessive sedimentation can clog stream channels and contribute to increased flooding. It can also increase water temperatures and cause oxygen demands which can damage or destroy fish and invertebrate populations. Deposition of sediment on the channel bottom also degrades aquatic habitat by filling in substrate cavities, burying demersal eggs, and smothering bottom organisms. In addition, turbidity, as induced by accelerated erosion and sedimentation, results in further damage to aquatic systems. Increased particulate matter suspended in the water column may drive fish from the polluted area by irritating the gills, concealing forage, and/or destroying vegetation that may be essential for spawning and cover habitat for particular species. Turbidity also degrades water quality by reducing light penetration, pH and oxygen levels, and the buffering capacity of the water. Degraded water quality may continue far downstream from the point where the erosion occurs.

Prevention of excessive sedimentation can occur only through application of Best Management Practices during daily construction activities. Rigid application of your agency's construction erosion control standards can preclude most sedimentation problems; however, in some cases additional measures will need to be taken by on-site inspectors and construction representatives.

Upon review of the proposed project, we find that the information provided is insufficient to determine if the proposed actions will require U.S. Army Corps of Engineers' permits. Since permit applications could more thoroughly reveal the extent of construction activities affecting aquatic resources, we will provide additional comments during the 404 review process should the project necessitate Corps' permits. However, we would likely have no objection to the issuance of permits if any necessary stream channel work is held to a minimum and Best Management Practices are utilized and enforced, effectively controlling erosion, sedimentation, and other potential hazards. The following conditions are specifically recommended:

1. Erosion and sediment control measures, including but not limited to the following, should be implemented on all vegetatively denuded areas:
 - a. Preventive planning: A well-developed erosion control plan which entails a preliminary investigation, detailed contract plans and specifications, and final erosion and sediment control contingency measures should be formulated and made a part of the contract.
 - b. Diversion channels: Channels should be constructed around the construction site to keep the work site free of flow-through water, and should be lined with plastic or plastic filter fabric to minimize soil erosion.
 - c. Silt barriers: Appropriate use should be made of silt fences, hay bale and brush barriers, and silt basins in areas susceptible to erosion. These structures should be regularly maintained (sediment removal) to prevent undermining.
 - d. Temporary seeding and mulching: All cuts and fill slopes, including those in waste sites and borrow pits, should be seeded as soon as possible.
 - e. Limitation of instream activities: Instream activities, including temporary fills and equipment crossings, should be limited to those absolutely necessary.
2. Concrete box culverts should be placed in a manner that prevents any impediment to low flows or to movement of indigenous aquatic species (e.g., native fish). We recommend that drainage structures be designed to accommodate bankfull discharge and that overflow or "equalizer" pipes be placed in the floodplain to accommodate flood events.
3. Channel excavations required for pier placement should be restricted to the minimum necessary for that purpose. Overflow channel excavations should be confined to one side of the channel, leaving the opposite bank and its riparian vegetation intact.

4. All fill should be stabilized immediately upon placement.
5. Streambanks should be stabilized with riprap or other accepted bioengineering technique(s).
6. Existing transportation corridors should be used in lieu of temporary crossings where possible.

Efficient management practices can minimize adverse impacts associated with construction. It is important that these and other measures be monitored and stringently enforced. This will aid in preserving the quality of the natural environment and in minimizing adverse impacts to aquatic resources.

Two of the alternative alignments involve extensive segments of new location through areas that have been previously mined. Old mines can serve as roost habitat for federally endangered Indiana bats (*Myotis sodalis*) and Rafinesque's big eared bat (*Corynorhinus rafinesquii*), a federal Species of Management Concern. You should assess potential impacts to the Indiana bats and determine if the proposed project may affect them. A "may affect" finding may necessitate formal consultation. We recommend that you submit a copy of your assessment and finding to this office for review and concurrence. Rafinesque's big-eared bat is a rare species that is currently afforded no federal protection, but whose status is being monitored by the Service. We would appreciate any measures to avoid or minimize impact to this species.

Thank you for giving us the opportunity to comment on this action. If you have any questions, please contact Rob Tawes of my staff at 931/528-6481, ext. 213.

Sincerely,



Lee A. Barclay, Ph.D.
Field Supervisor

JAMES E. BICKFORD
SECRETARY



PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
14 REILLY RD
FRANKFORT KY 40601

May 11, 2001

Kiersten R. Fuchs, Principal
Redwing Ecological Services, Inc
833 West Main Street, Suite LL105
Louisville, Kentucky 40202

RE: KY 15, Perry County
Redwing Project 01-018

Dear Ms. Fuchs:

The Water Quality Branch has reviewed your request for information about the referenced area. There are no Outstanding Resource Waters or Wild Rivers within the proposed corridor. Wetland field delineation should be done prior to final site selection, to avoid impact to wetland areas. If wetlands cannot be avoided, any wetland losses must be mitigated.

For future reference, information on Special Use Waters can be found on the Division of Water web site (<http://water.nr.state.ky.us/dow/dwhome.htm>). Click on **Topics and Programs within the Division**, then scroll down and click on **Special Use Waters**. This list is frequently updated as new streams are added.

If you have any questions or need further information on biological communities, ORWs or wetlands, please contact me by phone (502/564-3410) or e-mail (mike.mills@mail.state.ky.us).

Sincerely,

A handwritten signature in cursive script, appearing to read "Michael R. Mills".

Michael R. Mills, Supervisor
Ecological Support Section

c: File
Enclosure



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**United States
Department of
Agriculture**

**Natural Resources
Conservation
Service**

**625 Memorial Dr.
Hazard, KY
41701**

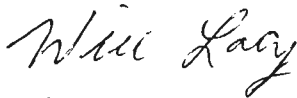
Subject: Prime and Unique Farmland
Request - Redwing Project 01-018

Date: May 18, 2001

To: Redwing Ecological Services, Inc.
Attn: Ronald L. Thomas / Kiersten R. Fuchs
833 West Main Street
Suite LL105
Louisville, KY 40202

After reviewing the information submitted to this office regarding the above subject project and after consulting the 1982 Perry/Leslie County Soil Survey, I have concluded that no prime or unique farmland soils exist along the proposed project alignments or alternatives.

Please feel free to contact me at (606) 436-3731 if you have questions or comments regarding these findings or if you require further assistance in the matter.



Will Lacy
District Conservationist

cc: file

United States Department of Agriculture



NRCS

Natural
Resources
Conservation
Service

625 Memorial Drive
Suite 101
Hazard, KY 41701-1380

February 6, 2002

Redwing Ecological Services, Inc.
Attn: Ronald L. Thomas / Kiersten R. Fuchs
129 South Sixth Street
Louisville, KY 40202

Subject: Additional Request for Prime
and Unique Farmland Information
Redwing Project 01-018

Upon reviewing the information submitted to this office relating to the alignment shifting of the subject project, I have concluded that no important, prime or unique farmland will be impacted along the proposed corridor.

Please feel free to contact me again if I can be of further assistance in this matter.

Will Lacy
District Conservationist

cc: file

JAMES E. BICKFORD
SECRETARY



PAUL E. PATTON
GOVERNOR

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR NATURAL RESOURCES
DIVISION OF FORESTRY
LEAH W. MACSWORDS, DIRECTOR

March 25, 2002

Ms. Kiersten R. Fuchs
Principal
Senior Wildlife Biologist
129 South Sixth Street
Louisville KY 40202

Dear Ms. Fuchs,

Thank you for the information on the proposed expansion of Kentucky Highway 15 in Perry County.

I sincerely apologize for taking so long to reply. I have been off work for some time.

There are no state champion trees in the area outlined.

Again, thank you for your patience and contact our office any time we may be of assistance.

Sincerely,

A handwritten signature in cursive script that reads "George W. Spicer".

George W. Spicer
District Forester
KY Division of Forestry
P O Box 702
Hazard KY 41702



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APPENDIX G

**CONCEPTUAL STAGE RELOCATION
REPORT**

**SELECTED ALTERNATIVE
(ALTERNATIVE 2)**

DATED FEBRUARY 27, 2004



ERNIE FLETCHER
GOVERNOR


KENTUCKY TRANSPORTATION CABINET
Department of Highways, District Ten
Highway 15 South, P.O. Box 621
Jackson, Kentucky 41339
606/666-8841 (Fax) 606/666-7074
WWW.KENTUCKY.GOV


MAXWELL C. BAILEY
SECRETARY

MEMORANDUM

TO: Tom Kerns, Assistant Director
Division of Right of Way

ATTENTION: Jan Wright, Relocation Branch Manager
Right of Way / Central Office

FROM: Bruce K. Napier, R/W Supervisor 
District No. 10 – Jackson

BY: Edgar Raleigh II 
Relocation Assistance Agent

DATE: February 27, 2004

SUBJECT: Perry County; Item No. 10-0269.01
Reconstruct from 0.7 MI North of Ky-550
to 0.6 MI North of Ky-28
Hazard – Mountain Parkway
Revised

CONCEPTUAL STAGE RELOCATION REPORT PREFERRED ALTERNATE

Based upon a request from Jan Wright, and in accordance with the Relocation Assistance Guidance Manual, Chapter one, Section 62-01.1100, Paragraph A; A conceptual stage relocation study has been made for the subject project.

The project will pass through mixed rural and semi-urban areas of Perry County for approximately 7.5 miles. The project will consist of an estimated (36) thirty-six residential family units to be acquired. Of these thirty-six residential family units: (22) twenty-two are single family dwellings, and (14) fourteen are mobile homes. There is also (6) six businesses, and (2) two non-profit church/schools on the proposed project.

It is estimated that of the (36) thirty-six residential units there will be approximately one hundred (100) occupants. It is estimated that there are no minorities affected by the proposed project.

There are (14) fourteen mobile homes acquired on the proposed project. It is estimated that all can be moved. Mobile home sites in the area are scattered but not scarce. Six available lots were located along the area of the project, and ten (10) more were located in and around the Hazard area. The available lots in the area give reason to believe that an adequate number can be found in the area to effectively relocate the ten units effected by the proposed project. The prices on the mobile home lots which are for sale ranged from \$5,000.00 to \$25,000.00; the prices for rental lots ranged from \$75.00 per month to \$175.00 per month. The problem associated with the move of rural mobile homes is the availability of improved sites. There are also several unimproved lots available in the area, however, the owners of these lots are unwilling to add septic and water to these lots at their own expense. The generally low rental rates and the generally perceived notion that a mobile home lot is a poor investment makes many owners of vacant land unwilling to improve the lots. This is a common problem in this area. If the number of available improved lots turns out to be insufficient for the relocation of the effected mobile homes in the area it may become necessary to resort to some other means. One of which is, having the renters pay for the improvements and then having the cost deducted from the rent until settled. The owner pays for the improvements and absorbs the cost by raising the rent to recover said cost. In the case of last resort it may become necessary for the State to waive its regulations and pay for the improvements to the lot, if forced to use this last alternative, proper legal safeguards would be needed.

The proposed project will also affect (6) six businesses: a salvage yard and garage building, a storage facility with approximately (20) twenty units, a small owner operated tack shop located on a residential property, a bowling alley, a land lease company, and a truck garage. Each will be eligible for relocation assistance, which includes advisory assistance in locating a replacement site, and reimbursement for moving and certain related expenses.

Moving of the (2) two church facilities will be handled like the businesses, with advisory assistance in finding a new location as well as reimbursement for moving and other related expenses. Leaders of each of the church facilities have been contacted. One plans on building a new facility on their remaining property, and there are numerous other sites available in the direct surrounding area for the other church to relocate.

There will be approximately four (4) miscellaneous moves: four (4) sheds. All of the miscellaneous moves can be handled by staff estimates.

No diverse effects are foreseen on established neighborhoods. The majority of properties affected by the project are scattered along each side of the current highway and thus do not form a continuous neighborhood area. The total impact of the project upon the area as a whole is expected to be minimal and the surrounding areas should be able to absorb the displaced residences with a minimum of disruption. While any relocation project of this scope will result in unexpected problems, it is not foreseen that there is any proposed relocation which will present any insurmountable obstacles to the completion of the project.

The area to be affected by the project is predominately rural, and located between Jackson and Hazard, which is the largest urban area. The majority of the displacees are most likely to relocate in the surrounding area with some relocating to Hazard and other smaller towns. The exact destination of the displacees is undeterminable at this time. However, experience in this area has shown that most displacees will stay close to the project area.

Last resort funds will be made available for this project whenever comparable decent, safe and sanitary housing is not available. All requests for providing Last Resort Housing must be adequately justified on a case by case basis detailing the means of providing housing under Last Resort.

Individual parcels are not known at this time. Inspection of the properties show that the price range of the acquired homes will fall between \$15,000.00 to \$150,000.00.

Houses for sale in the general area of Hazard – Perry County at this time range as follows:

• \$15,000.00	to	\$30,000.00	-	5
• \$30,000.00	to	\$45,000.00	-	12
• \$45,000.00	to	\$60,000.00	-	8
• \$60,000.00	to	\$75,000.00	-	5
• \$75,000.00	to	\$90,000.00	-	5
• \$90,000.00	to	\$105,000.00	-	4
• \$105,000.00	to	\$130,000.00	-	8
• \$130,000.00	to	over	-	6

There are approximately thirteen (13) rental units available in the project area in a price range of \$150.00 to \$900.00 per month. Rental unit availability changes rapidly.

Preliminary study indicates there is adequate housing available within the perceived financial capabilities of all the proposed displacee's without discrimination. If any unforeseen problems should arise, last resort housing would be implemented. The use of last resort, while not foreseen at this time, can become a factor if income, family makeup, or other special needs arise that will require above anticipated assistance. The relocation agent is prepared to assist the displacee's in finding adequate replacement housing, in contacting lending agencies and approved moving firms, and in processing claims for payment and appeals. The Relocation Agent will assist the displacee's in any way, within the law, and his capability to relocate into adequate replacement housing with a minimum of disruption to family routine.

The above findings are based upon personal inspection of alignments, discussion of the housing market in the area with realtors and local officials, as well as reviews of listing books and newspapers.

It appears that the displacees can be relocated into decent safe and sanitary replacement housing within the financial means and without regard to race, color, religion, sex, national origin, of handicap, if sufficient lead tome is provided.

There are no other projects in the area that would compete with the available replacement housing, and the moves can be made without any measurable adverse effect on the economy in the area.

It is anticipated that a project of this size would require approximately eighteen to twenty-four months to complete the necessary relocation.

APPENDIX H

USDA LESA FORM

FARMLAND CONVERSION IMPACT RATING

ART I (To be completed by Federal Agency)		Date Of Land Evaluation Request 3-1-02	
Name Of Project KYTC Item No. 10-269.01		Federal Agency Involved FHWA	
Proposed Land Use Proposed widening of KY 15 to a four-lane highway		County And State Perry County, Kentucky	
PART II (To be completed by NRCS)		Date Request Received By NRCS 3-4-02	
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
		Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount Of Farmland As Defined in FPPA Acres: %	
Name Of Land Evaluation System Used	Name Of Local Site Assessment System	Date Land Evaluation Returned By NRCS	

PART III (To be completed by Federal Agency)	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	0.0	0.0	0.0	0.0

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				

PART V (To be completed by NRCS) Land Evaluation Criterion				
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	0	0	0	0

PART VI (To be completed by Federal Agency)	Maximum Points			
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))				
1 Area In Nonurban Use				
2 Perimeter In Nonurban Use				
3 Percent Of Site Being Farmed				
4 Protection Provided By State And Local Government				
5 Distance From Urban Builtup Area				
6 Distance To Urban Support Services				
7 Size Of Present Farm Unit Compared To Average				
8 Creation Of Nonfarmable Farmland				
9 Availability Of Farm Support Services				
10 On-Farm Investments				
11 Effects Of Conversion On Farm Support Services				
12 Compatibility With Existing Agricultural Use				
TOTAL SITE ASSESSMENT POINTS	160	0	0	0

PART VII (To be completed by Federal Agency)				
Relative Value Of Farmland (From Part V)	100	0	0	0
Total Site Assessment (From Part VI above or a local site assessment)	160	0	0	0
TOTAL POINTS (Total of above 2 lines)	260	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>
Reason For Selection:		

APPENDIX I

ENVIRONMENTAL ASSESSMENT

**KENTUCKY HIGHWAY 15 – MORTON
BOULEVARD TO KY 1067
PERRY COUNTY, KENTUCKY**

DATED SEPTEMBER 1999

ENVIRONMENTAL IMPACT PROFILE

FEDERAL-AID PROJECTS

ITEM NO: KTC 10-269.01

NHS or NON NHS

COUNTY: Perry County, Kentucky

TYPE PROJECT: (Describe) Highway expansion

Please provide a detailed overview of the environmental impacts which will result from the proposed improvement.

Potential Environmental Impacts	✓	COMMENTS
Type documentation level (CE/EA/EIS/etc.)		EA
Date for each approval.		
Preferred Alignment & or Design changes		New northern terminus to accommodate redesigned KY 28 interchange
Right of Way		32 residences, 2 businesses to be relocated
No. Parcels	✓	(residential and commercial illegal encroachments)
No. Relocations		no disproportionate impacts
Env. Justice		rev. relocation plan prior to FONSI
Air Quality		Attainment area
* Attainment Status:	✓	In compliance with STIP
Is it in the TIP/STIP?		
Noise		Exceedence at 4 of 10 receptor sites; no noise barriers recommended due to open-access design of roadway
Is there EXCEEDANCE? Walls needed?		
Biological Assessment (BA)	✓	BA for IN bat, r.c. woodpecker, b.s. dace
* List Species/Last record/date		
UST/Haz Mat Mitigation	✓	Six sites recommended for Phase II (invasive) assessment
How many sites need tested or cleaned?		
Farmland Impacts		No farmlands exist in Project Corridor
AD 1006 form		
Floodplain (No rise certification) & FEMA coordination		No 100-year floodplain exists within Project Corridor
Wetlands	✓	0.08 hectare (0.2 acre) potentially impacted
* Acres Impacted		delineation followed COE 1987 Manual
* COE Coordination		
River/Stream involvement	✓	4,404 meters (14,450 feet) of stream channel changes
Channel changes (Linear ft.)		EA to COE for coordination
Permits:		401 required from KDOW
401 WQ	✓	404 required from COE
404 WQ		KPDES
Coast Guard		
106 Requirements; Section 4f/6f:	✓	20 grave sites at 2 cemeteries to be relocated
* Archeology		adequate cemeteries and plots available
* Historic Dist. or Structures		
* Public parks, or recreation etc.		
SHPO Concurrence/Date/MOA/P4F/4f*		9-16-93; 4-26-99
Public Hearing/Information Meeting		
Unresolved Issues/"SPECIAL NOTES"		None

Signature

Date:

ENVIRONMENTAL ASSESSMENT
KENTUCKY HIGHWAY 15 – MORTON BOULEVARD
TO KY 1067
PERRY COUNTY, KENTUCKY

Item No. 10-269.01

Submitted Pursuant to 42 U.S.C. 4332 (2) (c) by the
U.S. Department of Transportation
Federal Highway Administration
and
Kentucky Transportation Cabinet

September 1999

ENVIRONMENTAL ASSESSMENT
KENTUCKY HIGHWAY 15 – MORTON BOULEVARD
TO KY 1067
PERRY COUNTY, KENTUCKY

Item No. 10-269.01

Submitted Pursuant to 42 U.S.C. 4332 (2) (c) by the
U.S. Department of Transportation
Federal Highway Administration
and
Kentucky Transportation Cabinet

9/27/99
Date of Approval


For Kentucky Transportation Cabinet

9/27/99
Date of Approval


For FHWA

The following persons may be contacted for additional information concerning this document:
Review and approval of EA is based upon commitment of KYTC for addressing environmental impacts.

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1.0 PROJECT DESCRIPTION

1.1 THE EXISTING FACILITY

Kentucky Highway 15 (KY 15) is a state route which runs northwest/southeast through a large portion of eastern Kentucky. Its southern-most terminus is at Ermine in Letcher County near the Virginia state border, from which it extends north through the city of Hazard and terminates in Winchester (central Clark County, east of Lexington). KY 15 represents a major roadway through Perry County by providing a northwest/southeast traffic route to both eastern and central Kentucky and is the primary north/south route around the city of Hazard, Kentucky via the KY 15 By-pass. The intersection of KY 15 with KY 80 (Daniel Boone Parkway) just north of Hazard provides access to a major east/west intrastate highway.

Despite its importance for both local and regional transportation, KY 15 is inadequate for meeting present and future traffic needs. Current safety and design concerns are related to the existing characteristics, which include: two-lane width; sharp curves; steep grades; and essential lack of median and shoulders.

1.2 THE PROPOSED PROJECT

The Kentucky Transportation Cabinet (KYTC) proposes to widen a section of KY 15 in Perry County, Kentucky. The Project Corridor is an approximately 9.7 km (6.1 mi) section of KY 15 located just north of Hazard, Kentucky connecting Hazard with KY 28 (Exhibit 1). The southern terminus is at Morton Boulevard which is approximately 1,067 m (3,500 ft) north of the KY 15-KY 550 intersection, and the northern terminus is KY 1067 (Exhibit 2).

The northern terminus for this project previously extended to the actual intersection of KY 15 with KY 28 but has been shortened to the KY 15/KY 1067 intersection in order to accommodate a redesign of the KY 15/KY 28 interchange. This realignment was chosen due to the fact that the

previous design of widening the existing KY 15 corridor at the KY 28 intersection is incompatible with truck traffic and would entail a large number of residential and commercial relocations. The new interchange will reduce curve angle and grade, increase site distance, and significantly decrease relocation impacts. The new interchange realignment is being evaluated in the EA for Item No. 285-286: KY 476 to north of KY 28 (Exhibit 3), and the remaining bypassed portion of KY 28 remain unaltered.

This EA will address potential environmental impacts resulting from the:

- No-Build Alternative
- Build Alternative with logical termini at the intersection of Morton Boulevard and KY 15 in the south, extending to the northern terminus at the intersection of KY 15 and KY 1067.
- Alternatives considered-but-eliminated, including cross-country alternative route locations, and alternative roadway design.

1.3 DESIGN FEATURES

Much of the Project Corridor consists of residential and commercial development with frequent on and off traffic in a setting of mountainous terrain. Further congestion is caused by heavy truck traffic associated with coal and timber operations in the immediate vicinity.

This project is proposed to widen KY 15 from a predominantly two-lane roadway (Exhibit 4) to a four-lane divided highway in order to alleviate heavy traffic conditions (Exhibit 5). Presently, north of the interchange with KY 550, KY 15 is a two-lane roadway with a narrow raised median. A typical section of the KY 15 roadway varies between two, three, and four lanes, with the third and fourth lanes being present as truck lanes to accommodate the high volume of coal truck traffic. Other proposed improvements include a 4.2 m (14 ft) flush median, wider pavement, wider shoulders, and an increased design speed.

1.4 STATUS OF TRANSPORTATION PROJECTS ALONG KY 15

The improvement of the overall KY 15 corridor in the region is being accomplished under several distinct KYTC assessment/design projects. This EA document (Item No. 10-269.01) has been approved by the KYTC and the U.S. Federal Highway Administration (FHWA). Other KYTC projects which are currently underway for the KY 15 corridor are described in Table 1 and Exhibit 3. They include:

- Item No. 10-285, 286: KY 476 to north of KY 28, which includes the cross-country realignment and transition zone of KY 1067 to north of KY 28;
- Item No. 10-270.11: KY 15, Vancleve to Haddix;
- Item No. 10-281: interchange reconstruction at Bethany on Mountain Parkway and KY 15.

Future projects proposed along the KY 15 corridor include Item No. 10-11.00: KY 15, Vancleve to Campton. Although these projects combine to improve the overall transportation network of the region, they are each stand along projects with discrete logical termini.

This EA addresses impacts from two design segments (Exhibit 2). Segment 1 begins at the Interchange of KY 15 with Morton Boulevard and ends approximately 1,220 m (4,000 ft) north of the KY 267 Intersection. Segment 2 begins at the end of Segment 1 and continues to the northern terminus of the Project Corridor at the intersection of KY 15 with KY 1067 at the south end of the redesigned Interchange between KY 15 and KY 28.

2.0 PURPOSE AND NEED FOR THE PROPOSED PROJECT

The purpose of the proposed project is to improve system linkage and alleviate existing safety, congestion and other traffic-related problems along the KY 15 project corridor. This will be accomplished through widening of the existing, predominantly two-lane KY 15 roadway in Perry County, Kentucky from Morton Boulevard north to KY 28 to a four-lane divided roadway with a flush median. KY 15 is classified as a rural arterial existing in mountainous terrain. The need for this improvement is based on its importance in the existing transportation system for the state. It will help remedy poor existing conditions by bringing the road up to current design and safety standards. These existing poor conditions include:

- The inadequate existing roadway geometry and design features;
- The current breakdown or choked traffic flow Level-of-Service "F" along the corridor;
- Roadway deficiencies causing increased congestion from increasing traffic volumes due to present increasing residential, commercial, and industrial development;
- The decrease of public safety along the Project Corridor.

The need for the project is further supported by: the independent utility of the project; the importance of the Project Corridor as system linkage to other major routes in the region and across Kentucky; and the increasing social and economic demands for the project. These issues as they exist within the Project Corridor and relate to the proposed project will be addressed in the following sections.

2.1 PROJECT STATUS

This project (Item 10-269.01) is a vital link to meeting the overall need for transportation improvement within the broader KY 15 corridor. The 1992 Legislative Research Commission Report No. 258 identified the KY 15 Corridor from Campton to Whitesburg as needing development. In August 1995, KYTC prepared an EA for the proposed widening of KY 15 in Perry County, Kentucky. The EA presented the project and assessed Build and No-Build Alternatives. In December 1996, Bernardin, Lochmueller and Associates, Inc. and American Consulting Engineers, PLC submitted a Scoping Study for KY 15 from the town of Jeff to Grapevine in Perry County, Kentucky. In this document, the segment of KY 15 from Jeff to Grapevine was designated as a vital link in the KY 15 (Campton to Whitesburg) corridor.

On November 21, 1996 at a District Highway Officials Interdisciplinary meeting discussing alternatives and long-range improvements for KY 15, it was stated that "the only available option for improving Level-of-Service north of the Daniel Boone Parkway would require construction of a four-lane facility." Four alternatives have been considered for the section of KY 15 addressed in this EA (Morton Boulevard to KY 28), and include: the No-Build Alternative, the Build Alternative, a northern by-pass alternative, and an alternative to the existing alignment design. The northern by-pass alternative was eliminated primarily due to the high construction costs and maintenance of two highways. The first alignment alternative included improving the existing alignment to a four-lane facility with a 40-ft depressed median and the second alternative called for a 14-ft flush median. The alignment design alternative with the 40-ft depressed median was eliminated due to the large number of relocations and environmental disturbance that this alternative would have resulted in. Thus, it was resolved that the only reasonable and prudent alternative for this project is an alternative that includes the construction of a four-lane facility with a 14-ft flush median (per guidelines of Technical Advisory T 6640-8A: *Guidance for Preparing and Processing Environmental and Section 4 (F) Documents*). The Build Alternative, No-Build Alternative, and alternatives considered but eliminated are discussed in greater detail in Section 3.

A travel analysis conducted within the Scoping Study for KY 15 identified "a very definite set of priority improvements that best address the needs of the Hazard community and the motorists using KY 15". Priority Two (Morton Boulevard to KY 28) of this list stated that the segment of KY 15 between Morton Boulevard and KY 28 exhibited increasing congestion and turning volumes and was lacking left-turn storage. The Level-of-Service for this segment of KY 15 was operating at a level "F".

This EA document (Item No. 10-269.01), first prepared in August 1995, has been updated and approved by the KYTC and the FHWA. The purpose of this EA is to examine the Build and No-Build Alternatives for a segment of KY 15 from Morton Boulevard to just north of KY 1067 (KY 28 interchange), and evaluate potential environmental impacts of the alternatives.

This portion of the larger, overall KY 15 roadway improvement plan exhibits independent utility and has logical termini of Morton Boulevard and KY 1067, at the KY 28 interchange. This segment exists as a stand alone project independent of future connecting elements that may be constructed within or adjacent to the corridor (see Table 1). Morton Boulevard and KY 28 interchanges generate a large amount of traffic along KY 15 adding difficulty to traffic movement along an already bogged down KY 15. The expansion of KY 15 to a four-lane roadway will function to widen the existing roadway and will relieve congestion and improve traffic flow over a segment of KY 15 having logical termini and independent utility.

2.2 ROAD GEOMETRICS

The section of KY 15 within the Project Corridor has been classified as a rural/urban principal arterial with mountainous terrain. The existing two- to four-lane roadway has a width varying from 7.2 to 14.4 m (24 to 48 ft) wide with 1.8 to 3.6 m (6 to 12 ft) shoulders. It has grades over 7% extending for distances of 915 to 1,220 m (3,000 to 4,000 ft) throughout the corridor, resulting in increased traffic congestion especially from coal and lumber trucks that frequently use this route. Guardrails protect vehicles from steep side slopes.

Based on existing road geometrics, the number of adequacy points, and the amount of development along the corridor, the 1996 Adequacy Rating of KY 15 was 60.8 to 88.5 out of a possible 100 points. This section of KY 15 is presently congested, with inadequate left-turn storage for the high turning volumes along the roadway. These existing road geometrics do not allow for safe, efficient travel along the Project Corridor. In addition, with projected increasing traffic, this congestion and related traffic and safety issues will only get worse.

The proposed improvements to KY 15 will result in four lanes with a pavement width of 14.4 m (48 ft.) throughout the Project Corridor; 10.8 m (36 ft.) shoulders; and a 4.2 m (14 ft.) flush median. Grades will be limited to no greater than 6.5%. Thus, this project will bring the existing road geometrics up to existing design and safety standards.

2.3 LEVEL-OF-SERVICE AND TRANSPORTATION CAPACITY

A highway Level-of-Service defines a driver's freedom to operate, and is primarily a function of highway geometrics, highway capacity, traffic flow, and congestion. Levels-of-Service range from "A-level" (free-flow conditions) to "F-level" (breakdown or choked traffic flow). The American Association of State Highway Transportation Officials (AASHTO) recommends that a rural arterial highway in mountainous terrain be designed for a minimum Level-of-Service of "C".

The section of KY 15 within the Project Corridor (Morton Boulevard to KY 1067) is currently operating at a Level-of-Service "F" with three of the main intersections operating at the breakdown or choked traffic level, as reported in the traffic analysis performed for the Scoping Study:

Intersections*	Current Level-of- Service	No-Build in 2020 Level-of-Service	Build in 2020 Level-of- Services
KY 15 at Morton Boulevard	F-	F-	C
KY 15 at Daniel Boone Parkway (South)	F-	F-	C
KY 15 at Daniel Boone Parkway (North)	B	D-F	B
KY 15 at KY 267 (Bonnyman)	F	F	B
KY 15 at KY 28	A	F	B

Source: Bernardin et al. 1996.

* Intersections are depicted in Exhibit 6

The traffic analysis of the Project Corridor indicated that the current Level-of-Service "F" will not change and that modest improvement (less than expansion to full four-lane) would not significantly contribute to improved traffic service. The only means of improving the Level-of-Service is to provide a four-lane roadway section with a median wide enough to accommodate left turning vehicles. The No-Build Alternative will result in a highway well over capacity at Level-of-Service "F" by the year 2020. If the proposed widening of KY 15 (Build Alternative) is implemented:

- The Level-of-Service for the Project Corridor will increase from an "F" to a "B" and overall traffic congestion will be reduced;
- The intersections at Morton Boulevard and Daniel Boone Parkway (South) will be raised to a Level-of-Service "C";
- The intersection of KY 15 at KY 267 (Bonnyman) will be raised to a Level-of-Service "B".

The ideal capacity for a two-to three-lane rural highway, such as KY 15, has been exceeded due to the high traffic volumes, a high percentage of large coal and lumber trucks, and the lack of safety measures such as turning lanes and ample paved shoulder areas. Therefore, the capacity of the existing facility is inadequate to serve today's traffic volume.

2.4 TRAFFIC VOLUME

Table 2 summarizes the results of a traffic survey performed on November 25, 1997 and projection to the year 2020 of the KY 15 Project Corridor (Morton Boulevard to KY 28) in Perry County, Kentucky as provided by the KYTC Division of Transportation Planning. Exhibit 6 illustrates the location of each segment used in the traffic survey. Average Daily Traffic (ADT) volumes along the Project Corridor are presently between 10,000-23,400 vehicles per day. Projected year 2020 average daily traffic ranges from 16,100 to 40,500 depending on whether average growth or high growth scenarios are used.

A recent traffic forecast performed for the intersection of Morton Boulevard and KY 15 on August 8, 1998 determined a range of ADT volumes from 18,200 (north of Morton Boulevard) to 26,200 (south of Morton Boulevard) vehicles along KY 15 per day. The estimated 2020 ADT for this intersection ranges between 31,400 (north) and 45,200 (south) vehicles per day. These 2020 ADT values estimated in 1998 for this intersection alone have shown an increase from the 2020 ADT estimated in the 1997 forecast. This increase in the projected traffic demand cannot be adequately served by the existing facility and indicates a need for a four-lane roadway between Hazard and KY 28.

2.5 CONGESTION POINTS AND ROADWAY DEFICIENCIES

Traffic congestion occurs, generally, when traffic volume approaches highway capacity and individuals cannot pass or otherwise maneuver (i.e. Level-of-Service "E" or "F"). More specifically, congestion occurs at certain locations where traffic must slow or stop, such as highway

access points, frontage roads and intersections, and points of poor visibility (hills, curves, or poor intersection angles). The Project Corridor is also deficient in design features such as turning lanes and pavement markers as well as horizontal and vertical alignments. The absence of turning lanes is very critical due to the high volume of traffic and the amount of residential and commercial development along the highway.

General congestion along the Project Corridor is caused by: high traffic volume; high industrial truck volume including coal and lumber; transitions between two-lane and four-lane roadway; and inadequate left turn lane opportunities. There are many congestion points along the Project Corridor especially at intersections. High congestion occurs particularly at intersections with Morton Boulevard, Daniel Boone Parkway (KY80), KY 267 at Bonnyman, and KY 28 (Exhibit 6). These roadway intersections were analyzed in the Scoping Study as follows:

- "Morton Boulevard (non-signalized) - This intersection has four legs but only Morton Boulevard and KY 15 have any measurable traffic. Morton Boulevard serves extensive apartment complexes and numerous commercial establishments and the local hospital. Considerable congestion exists with traffic on the Morton Boulevard approach due to high volumes of traffic on KY 15.
- Daniel Boone Parkway South and North Ramp terminals (signalized) - The south intersection is the most congested due to the ramp volume entering KY 15. The northbound KY 15 traffic is also very congested due to the existence of only one lane northbound. The north intersection experiences some congestion due to the volume of traffic on the off-bound loop. It appears that these two intersections should be interconnected.
- KY 267 at Bonnyman (not-signalized) - A yellow/red flasher exists at this intersection to alert motorists. No turn bays presently exist and the high volume of traffic on KY 15 makes egress from 267 difficult with long delays.
- KY 28 (non-signalized) - This route is the principle entrance to Buckhorn Lake State Park and several mining operations and small communities. This is a 'tee' intersection in a horizontal curve. A left turn bay exists on KY 15. Although traffic on both KY 15 and KY 28 are rather heavy, the delay to motorists seems minimal."

Future congestion problems may develop with the present system at the intersection with KY 28. A new industrial park is being proposed to be built just north of the KY 15/KY 28 intersection adjacent to KY 15 (Exhibit 6). If built, it will generate a significant volume of entrance and exit traffic to the complex, as well as increased traffic on KY 15, adding to the already congested traffic conditions. The expansion of the east side of the Perry County Airport north of the KY 15/KY 28 interchange will also increase traffic and congestion in the northern portion of the Project Corridor. Additional future congestion problems include the Morton Boulevard intersection due to hospital expansion and other business development on the northern side of Hazard.

2.6 HIGHWAY ACCIDENTS AND SAFETY

According to the Accident Analysis data for KY 15, from January 1, 1995 to October 1, 1998, a total of 193 accidents (including 2 fatalities and 183 injuries) occurred along KY 15 with recorded milepoints between Morton Boulevard and KY 28. However, this number is likely higher due to the fact that this analysis did not include accidents that were reported within Perry County along KY 15 without recorded milepoints. Heavy congestion, coupled with the lack of left turning lanes are strong contributing factors to the rate of accidents occurring along the KY 15 corridor. The proposed widening of KY 15 to a four-lane roadway with adequate turning lanes will alleviate traffic congestion and handle traffic volumes more readily, thereby increasing public safety and the safety of motorists using the roadway.

2.7 LOGICAL TERMINI

The logical termini for this project originally consisted of a southern terminus at Morton Boulevard and a northern terminus at KY 28. The southern terminus at Morton Boulevard has remained the same, but the northern terminus has been shortened to KY 1067 to accommodate a redesign of the KY 15/KY28 interchange. From this new northern terminus (KY 1067), KY 15 has been redesigned to run northeast cross-country until the route ties into KY 15 northeast of KY 28. This new interchange with KY 28 will be evaluated, along with the transition zone from KY 15 to the

cross-country route, in EA Item No. 285-286. This realignment was chosen due to the fact that the existing design is incompatible with truck traffic and would encompass a large number of relocations. KYTC-District 10 has stated that the new interchange will significantly decrease relocation impacts, reduce curve angle and grade, and increase site distance along KY 15 north of KY 1067. The remaining bypassed portion of KY 28 will be left unaltered.

As described in the Scoping Study, the Project Corridor segment running from Morton Boulevard to KY 28 along KY 15 has been included as part of a larger roadway improvement plan (KY 15 from Jeff to Grapevine). This section of the larger KY 15 roadway improvement plan exhibits independent utility and has logical termini beginning at Morton Boulevard and ending at KY 1067 (at the beginning of the KY 15/KY 28 interchange). This segment exists as a stand alone project independent of future connecting elements or proposed improvements that may be constructed within or adjacent to the corridor (see Table 1). The expansion of KY 15 from Morton Boulevard to KY 1067 to a four-lane roadway will function to widen the existing roadway and will relieve congestion and improve traffic flow over a segment of KY 15 from several interchanges including Morton Boulevard, Daniel Boone Parkway, KY 267, and KY 28.

This project will have independent utility, regardless of whether any portion of KY 15, or any other city or county road is extended or improved. These termini will permit the Project Corridor to function as a four-lane roadway with access to the Daniel Boone Parkway, and will function to widen the existing roadway and will relieve congestion and improve traffic flow over a segment of KY 15 having discrete termini, and therefore will stand on its own as a project.

2.8 SYSTEM LINKAGE

KY 15 is a major northwest/southeast state primary highway in eastern Kentucky. It is also a main highway through the city of Hazard and has key interchanges with the four-lane intrastate highway KY 80 (Daniel Boone Parkway) which services a large portion of eastern and central Kentucky, and major state highways such as KY 28. As such, it is the only primary route linking the county seats

of Letcher (Whitesburg), Perry (Hazard), Breathitt (Jackson), Wolfe (Campton), Powell (Stanton), and Clark (Winchester) Counties. KY 15 is also a major route linking the community of Hazard and surrounding areas with recreational sites such as Buckhorn Lake State Park and the North Fork Kentucky River. The corridor is thus an important element in linking Perry County and the eastern Kentucky region with the commercial, industrial, health care, recreational, and educational facilities of other areas in eastern and central Kentucky.

Other KYTC projects which are currently underway for the KY 15 corridor (Table 1 and Exhibit 3) include:

- Item 285-286: KY 476 to north of KY 28, which includes the cross-country realignment of KY 1067 to north of KY 28;
- Item No. 10-270.11: KY 15, Vancleve to Haddix;
- Item No. 10-281: interchange reconstruction at Bethany on Mountain Parkway and KY 15.
- Item No. 10-11.00: KY 15, Vancleve to Campton (future project).

The proposed widening of KY 15 will enable traffic along this important intrastate linkage to move more safely and efficiently between Hazard and the other communities of Perry County and the surrounding counties. It will also provide improved safety and traffic flow at interchanges with KY 80 (Daniel Boone Parkway), KY 267, and KY 28.

2.9 OTHER POTENTIAL TRAFFIC-INDUCING DEVELOPMENT

Major commercial and residential development has occurred and is proposed within the Project Corridor adjacent to KY 15. In addition, proposed development within the city of Hazard and north of the KY 15/KY 28 intersection will add to the present traffic congestion along the Project Corridor. This development includes: a veterans hospital, nursing home, hospital headquarters and additions to the hospital in Hazard; residential development along the Corridor; a proposed 100-

acre industrial park just north of the KY 15/KY 28 interchange (Exhibit 6); an extension of the eastern side of the Perry County Airport north of KY 28; and the potential for a bridge connecting the proposed industrial park and the expanded airport.

The Perry County Planning Commission is interested in promoting tourism for the area as well as to recruit industry, and promote educational and commercial development in the area. This agenda for the future of Perry County will also substantially increase traffic along KY 15 through Hazard and Perry County, resulting in an increase in the use of the Project Corridor.

As summarized in Section 2.4, the present ADT for this segment of KY 15 is between 10,000-23,400 vehicles daily, whereas it has been projected that based on projected high growth in and adjacent to the Project Corridor, the ADT values in 2020 will double to 21,400 to 40,500 vehicles per day. The present transportation system cannot handle an increase of this size without major improvements to the present roadway.

2.10 SOCIAL DEMANDS FOR THE PROJECT AND ECONOMIC BENEFITS

State and county officials have addressed the traffic problem in and around Hazard, Kentucky and have described KY 15 as a roadway in need of improvement. The proposed widening of KY 15 would help:

- relieve the congestion and accidents along the roadway;
- increase the efficiency of transportation for industrial vehicles without impeding other traffic flow;
- increase efficiency of transportation for vehicles supplying safety services such as ambulances, police cars and fire trucks;
- enhance the role of the area's transportation system in economic development;
- make the area a more attractive site for future business, industrial recruitment, and recreational use.

The Perry County Planning Commission is interested in increasing the economic vitality of the area by boosting access to recreational opportunities in the region as well as increasing commercial, industrial, and educational development of the county. This project is thus crucial to the county's future economic development.

3.0 ALTERNATIVES

The KY 15 expansion project has been proposed to widen 9.6 km (6.1 mi) of the highway starting at Morton Boulevard north to KY 1067 to a four-lane highway. The original design for this Project Corridor involved the project extending to the KY 15/KY 28 intersection but a realignment of the KY 15/KY 28 interchange (under Item No. 10-285, 286) moved the northern terminus to the KY 15/KY 1067 intersection.

The State Congestion Management Plan and Transportation System Management (TSM) Alternatives were not considered in the evaluation of alternatives because they do not apply to this project. No mass transit alternatives were considered for this project due to Perry County's sparse population and rural character. Mass transit alternatives are more appropriate in densely populated urban areas where the development of new or wider roads might contribute to congestion and there are enough consumers to make mass transit economically viable.

Four alternatives were originally considered for this project including the No-Build Alternative, the Build Alternative, and two alternatives considered but eliminated early in the planning process. The alternatives considered but eliminated include a cross-county by-pass alternative and an alternative to the existing alignment design. All four of the originally proposed alternatives are discussed below.

3.1. NO-BUILD ALTERNATIVE

The No-Build Alternative would preserve the existing conditions of the KY 15 corridor with no future improvements. KY 15 would remain as a predominantly two-lane roadway with narrow shoulders. The roadway's Level-of-Service would continue essentially at an "F". During peak flows, traffic would remain congested and the accident rate would likely increase with the increased traffic volumes projected for the future. Along with the wide variety of commercial and residential development that presently exists along the corridor, future industrial, commercial and residential

development would be expected to further aggravate existing traffic problems along KY 15. There would be no cost for residential or commercial relocation; however, the benefits of increased economic development and better travel conditions would not be achieved.

3.2 BUILD ALTERNATIVE

Although several Build Alternatives were initially considered, only one Build Alternative was evaluated for this study. This Alternative consists of the widening of the present roadway into a divided four-lane highway with a 14-ft (4.2 meters) flush median along the 9.6 km (6.1 mi) of the existing KY 15 corridor between Morton Boulevard and the KY 1067 (KY 28 interchange).

With the implementation of the Build Alternative the Level-of-Service for the Project Corridor would be elevated to a "B" Level reducing overall traffic congestion and increasing the capacity of the existing facility to handle increased traffic volumes. The construction of the four-lane highway with adequate turning lanes would also alleviate traffic congestion, handle traffic volumes more efficiently, and increase public safety and the safety of the motorists using the roadway. Although the Build Alternative has been identified as the preferred Alternative, final selection of an Alternative will not be made until after the consideration of impacts and the public hearing comments.

3.3 ALTERNATIVES CONSIDERED BUT ELIMINATED

The feasibility of constructing both divided and undivided highways within the existing KY 15 corridor and of constructing a highway in a new cross-county corridor were evaluated in relation to estimated construction cost, capability of handling existing and projected traffic flow, and safety. Of the original four alternatives considered for this project, the cross-country by-pass alternative with new northern and southern corridors and the alignment design alternative with a 40-ft depressed median were eliminated due to safety, environmental impact, and economic

considerations. The evaluation of these two alternatives considered but eliminated is summarized as follows:

Factor	Cross-Country Alternative	Alignment Design Alternative
Project Purpose and Need	No; traffic/safety issues remain on existing KY 15	Yes
Traffic Handling	Same on new road; but issues remain on existing KY 15	Slightly improved traffic
Safety	Same on new road; but issues remain on existing KY 15	Slightly improved safety
Environmental Impacts	Increased	Increased
Construction Costs	Substantially increased	Substantially increased

Note: All comparisons are based on proposed Build Alternative.

3.3.1 CROSS-COUNTRY BY-PASS ALTERNATIVE

A cross-country by-pass alternative was proposed as an alternative to the widening of the existing KY 15 roadway. It consisted of new, cross-country routes in both the southern Segment 1 and northern Segment 2 of the project (Figure 2). Construction of the proposed project in a new road corridor would involve substantially greater excavation and right-of-way acquisition, and would more than triple construction costs over highway construction within the existing KY 15 corridor. Environmental impacts, particularly in terms of land-use, surface waters, wildlife and natural habitats, and visual resources would be substantially greater with the construction of cross-country routes compared to the proposed widening of the existing roadway. In addition, this alternative would require the maintenance of two roadways, as the existing KY 15 could not be abandoned. Overall, the cross-country by-pass alternative does not meet the purpose and need for the proposed project as it will not address current design and safety issues on the existing KY 15 corridor.

3.3.2 ALIGNMENT DESIGN ALTERNATIVE

In the development of the proposed project, two alignment designs were considered for the widening of KY 15 to a four-lane highway. The first involved a 40-ft depressed median and the second a 14-ft flush median. These alignment design alternatives were evaluated in a Value Engineering Study performed by the KYTC in May 1996. Although the 40-ft depressed median design offered slightly greater safety benefits by controlling access on and off the road, it also involved substantially more socioeconomic and environmental impacts, and substantially higher costs.

The advantages/disadvantages of the proposed alignment designs is strongly influenced by the characteristics of the Project Corridor. Key characteristics include the type and close proximity of development to the roadway, and the adjacent steep terrain. The alignment alternative with a 40-ft depressed median would have required a much larger number of commercial and residential relocations than the 14-ft median alignment. The 40-ft. median alternative would also involve substantially greater right-of-way acquisition needs and construction costs, based on excavation, right-of-way purchase, and retaining walls. The 1996 KYTC Value Engineering study estimated that the 14-ft. median alternative would provide a cost savings of approximately 40% over the 40-foot median alternative. The Value Engineering Team for the 1996 study recommended the 14-ft. median alternative based on its substantial decrease to project costs, right-of-way needs, and residential/commercial takings. The 40-ft median alignment within the existing corridor was considered to be not economically feasible or socioeconomically acceptable, and was eliminated from further consideration.

4.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

The proposed Project Corridor for the Build Alternative passes through mountainous topography typical of the Eastern Kentucky-Appalachian area. Perry County lies in a physiographic region referred to as the Cumberland Plateau and Mountains (Eastern Coalfields) covering 35 counties and 10,500 square miles characterized by cliffs and valleys with steep walls. Geologic formations within the Cumberland Plateau and Mountains region are predominantly sedimentary of the Pennsylvanian system; the geologic formation existing within the Project Corridor being the Breathitt Formation. The soils of the area fall predominantly into two types: the Shelocta-Gilpin association (50%) and the Shelocta-Cutshin association (40%), with small pockets of Fairpoint soils (8%) and the Delkalb-Rock Outcrop-Latham association (2%) found along the Project Corridor.

The following are brief descriptions for various components of the Project Corridor's environment. Detailed base reports of air quality, noise, terrestrial environment, aquatic environment, hazardous materials, socio-economic characteristics, and archaeological and cultural resources have been prepared and are on file with the KYTC-Division of Environment Analysis.

4.1 LAND USE

The existing patterns of land use for Perry County are dominated by coal mining throughout the county and commercial establishments located in or near the city of Hazard. Due to the geologic/topographic make-up of the area, development is located primarily in either lowlands adjacent to stream channels or on ridge tops. KY 15 is utilized as a major northwest/southeast arterial through Hazard with residential and commercial development scattered throughout the Project Corridor.

The predominant land uses along the Project Corridor includes a mosaic of commercial and residential developments, mixed deciduous and coniferous forests, exposed rock surfaces at

highway cuts, and highway maintained grassed roadsides as presented in Exhibit 7. Developed land, which includes light commercial and residential development and grassed roadsides constitutes the largest percentage (56%) or the primary land use within the Project Corridor. A small percentage (2%) of the corridor exists as exposed rock where the original highway was constructed. The remainder of the Project Corridor (42%) exists as mixed deciduous and coniferous forest.

4.2 SOCIAL AND ECONOMIC FACTORS

The city of Hazard, Kentucky, just south of the proposed widening of KY 15, contains the greatest concentration of population and economic activity in Perry County and is also the main job provider for the area. The Project Corridor exhibits (is consistent with) the economic and population trends of the county, as described in the following sections.

4.2.1 Demographics

In a 1997 population estimate for Perry County, KY, the county's population was 31,115 persons compared to 30,283 in 1990. Population projections for the year 2020 indicate approximately 30,000 people, a slightly declining population at the rate of 0.9% for Perry County. Perry County's population is comprised of 59% persons age 18 to 64 years. Of the remaining population, 30% are under 18, and 11% are 65 and over. Minorities comprise 2.4% of the Perry County's population. This statistic is lower than Kentucky's minority population of 7.8%. African Americans comprise 76% of the minority population and 1.8% of the total population. Hispanics, American Indians, Eskimos or Aleuts, and Asians or Pacific Islanders comprise 0.8% of the population. The population of city of Hazard, KY has increased from 5,416 in 1990 to 5,730 in 1994. The increasing population of Hazard has a direct impact on traffic congestion along KY 15 and future projections of growth for the hazard area make a further justification for the widening of the roadway to a four-lane facility.

In 1990, the median family income for Perry County and the city of Hazard were \$19,119, and \$21,094, respectively. Both the median family incomes for Hazard and Perry County were below the recorded value for the state of Kentucky in 1990 (\$27,028).

The 1990 poverty figures show that 32.1% of Perry County families and 28.9% of families living in Hazard are below the poverty level compared to state-wide poverty level figures (16%). However, the per capita income for Perry County more than doubled, from \$7,914 in 1990 to \$15,153 in 1996. This increase in per capita income may be attributed to increased commercial and industrial development in Perry County. Future plans to increase commerce in Perry County will likely continue to increase per capita income. Median family income and poverty level statistics for Perry County as a whole are not representative of the Project Corridor. Because KY 15 is a major route through Perry County and the region, the Project Corridor exhibits a range of incomes and successful commercial and industrial development that more closely matches statewide statistics than those for Perry County.

4.2.2 Neighborhood Cohesion and Community Resources

Interviews with property owners along the Project Corridor and local governmental agencies characterize the corridor as a homogeneous community. A feeling of unity and establishment is present in the town of Bonnyman which includes community resources such as an entertainment complex including a water park, swimming pool, movie theater, bowling alley, restaurant and roller skating rink. The unincorporated community of Bonnyman has a post office and several churches. Residents along the project route consider themselves residents of Bonnyman, and even though the settlement of the project area is diverse, Bonnyman provides a sense of cohesion.

In addition, the city of Hazard also supplies community resources that are readily available to the residents of Perry County. As the county seat, Hazard is the location of many state, federal, and local governmental buildings including City Hall, the Chamber of Commerce, the U.S. Regional Post Office, and the Perry County Courthouse; the center for emergency services for the county

with the Hazard Appalachian Regional Hospital; and the location of the Hazard-Perry County Regional Airport. Eight schools, Hazard Community College, and Catholic, Baptist, Presbyterian and Episcopalian churches can be found within the Hazard city limits, as well as several small shopping centers. Recreational resources are also abundant within Hazard and Perry County, including Perry County Park, Hazard Pavilion, the North Fork Kentucky River, and Buckhorn Lake State Resort Park.

There are two cemeteries within the Project Corridor neither of which is considered historic in nature. The first cemetery, located on the east side of KY 15 northwest of First Creek (Exhibit 8), has six grave sites that exist within the proposed right-of-way for the project (Exhibit 11). The second cemetery (the Hensley Cemetery), all of which is within the construction zone of the roadway, is located on the west side of KY 15 near Sta. 350+00 (Exhibits 8 and 12). This cemetery is a small family cemetery consisting of 14 gravesites, half of which are modern sites and half of which are turn of the century plots. Based on current design plans, the entire cemetery will be impacted and all 14 gravesites will need to be relocated per state regulations. Adequate cemetery plots exist in the area to accommodate these relocations (see Section 6.2.5).

4.2.3 Travel Patterns

KY 15 is the only major northwest/southeast state primary highway that passes through the city of Hazard. The highway is also a main interchange with the four-lane intrastate highway KY 80 (Daniel Boone Parkway) which services a large portion of eastern and central Kentucky. KY 15 also serves as an important roadway for industrial traffic, primarily coal and timber. The corridor is thus an important element in linking Perry County residents and businesses with the commercial, industrial, health care, recreational, and educational facilities of the county and with other areas of the state.

4.2.4 Housing and Business Characteristics

The Project Corridor exhibits a mix of residential and commercial areas along KY 15. Growth is limited along the corridor and in the county by the steep topography and lack of land available for development. Recently, abandoned strip mines have created flat areas that were not present before.

These areas are being used for new commercial, industrial, and residential development, but there are a limited number of these areas within Perry County and few within the Project Corridor.

Housing Characteristics

The residences along the corridor are a mixture of primarily single family households and mobile homes. In the immediate project area, there are no known minorities which would require unusual relocation considerations. The residents are evenly mixed economically with low, medium, and high income levels throughout. The residents also cover all age groups.

The 1990 U.S. Census lists Perry County as containing a total of 11,565 housing units (including vacant and seasonal). In Perry County 10,598 (92%) of the housing units are occupied. Of the occupied units, 68.7% (7,947) are owner-occupied while 22.9% (2,651) are renter-occupied. Interviews with local realtors updated real estate prices from 1995 to 1999. Presently, the project area has a mixture of lower value and higher value homes ranging between \$25,000 to greater than \$300,000, with the average single family residence selling for approximately \$60,000 to \$85,000 (depending on the number of bedrooms, location, age and condition of the house). An average house in Hazard is currently selling for \$85,000 to \$100,000. In 1998, there were approximately 100 to 150 houses for sale in Perry County. An average time for a house to be on the market in Perry County in 1998 was six to nine months. Presently, a single-wide mobile home with property is selling for approximately \$30,000 to \$35,000 and a double-wide mobile home with property sells for approximately \$50,000 to \$60,000.

New residential areas along the corridor are scarce because of the lack of available land but there are new housing developments and mobile home parks being developed adjacent to or nearby the corridor within the county. The availability of apartments in Perry County is also good. Average new houses cost \$80,000 to \$100,000 and average new single-wide mobile homes cost between \$18,000 and \$20,000. New double-wide mobile homes cost between \$30,000 and \$40,000. Rent for a mobile home in 1998 ran between \$200 and \$500 per month depending on the location and condition of the mobile home. Rental rates for apartments in Perry County and the city of Hazard are currently between \$300 (studio) to \$575 (2-bedroom townhouse) to \$700 for a luxury apartment.

Business Characteristics

A variety of businesses are present in the project area including gas stations/convenience stores, small restaurants, small commercial businesses, a large recreational complex, and institutions such as a post office and churches. The only heavy industrial business located in Perry County is the bituminous coal mining business. The top income producing business in the county in 1989 was mining followed by personal services.

There do not appear to be any unique business attributes within the Project Corridor such as specialized clientele, cultural orientation, and/or individual characteristics of the businesses that will be impacted; however, as stated in a memo on March 21, 1995 from the KYTC, there are limited sites "for businesses to relocate in a like manner". It has been documented that there are few economically-feasible, commercially-developable areas in Perry County. Strip mine "bench" areas that have been leveled off or scraped out are becoming available both adjacent to the Project Corridor along nearby highways and near Hazard. The price for this land is currently at a premium, averaging between \$150,000 to \$220,000 an acre for the remaining land available along KY 15 and up to \$275,000 an acre along the Hazard By-pass. These costs will likely continue to rise if the project is initiated. A potential economic loss to the community is anticipated if

businesses cannot afford to relocate due to the high cost of purchasing and/or developing replacement sites/buildings.

4.2.5 Employment and Tax Base

1990 Employment figures indicate that retail trade, mining, and educational services employed the largest number of people in Perry County. Perry County's civilian labor force, defined as those people over 16 years old, was 22,662 in the 1990 Census. Of those people, 13.2% were unemployed and seeking work in 1990. This statistic is higher than Kentucky's 1990 unemployment rate of 7.4%.

The Perry County School District has a tax rate of \$8.74 per \$1,000 of assessed value for real property and \$11.15 per \$1,000 assessed value for tangible property. All property owners inside the Hazard city limits are assessed an additional \$3.55/\$1,000 assessed value to help finance additional city services. Total general property tax revenue for Perry County in 1991 was \$2,072,338. The 19% increase in sales tax and use tax collection figures for Perry County from 1989-1991 County demonstrates a relatively strong county economy when compared to the state's average of 14%.

4.3 PEDESTRIAN AND BICYCLE FACILITIES

Currently there is an existing bicycle facility in Perry County. The bicycle facility runs from Buckhorn Lake State Park south along KY 28 to KY 15 and proceeds south along KY 15 to Whitesburg. Due to the mountainous terrain, the winding curves in the existing roadway, and the high volumes of traffic along KY 15, the use of KY 15 as a bicycle facility is limited, and the widening of KY 15 to a four-lane roadway will only enhance the safety of the existing bicycle facility.

4.4 WATER RESOURCES

Surface water drainage along the Project Corridor includes First Creek, Lower Second Creek, Grapevine Creek, Mudlick Branch, and various smaller unnamed tributaries and drainages. All drainage areas in the project area are located within either the North Fork Kentucky or Middle Fork Kentucky watersheds, and all are located within the greater watershed of the Kentucky River. Approximately 4,404 meters (14,450 linear feet) of the identified jurisdictional streams are designated as either perennial or intermittent "blue-line" streams on the Hazard North and Krypton, Kentucky USGS 7.5-minute Topographic Quadrangle maps (see Section 3.5).

The municipal water supply for the city of Hazard and much of Perry County is located within Hazard at the Hazard Water Plant. The intake tower for the water plant is located on the eastern bank of the North Fork Kentucky River approximately 91 m (300 ft) upstream of the Woodland Park Bridge, and approximately 137 m (450 ft) upstream of the water works dam; however, this is not within the Project Corridor. Areas outside of the Hazard water district, including the Project Corridor, receive water through private wells.

4.4.1 Aquatic Resources

Aquatic resources associated with this project consist of streams and smaller drainages that dissect the study area throughout the KY 15 Project Corridor. The results of an aquatic baseline survey (Exhibit 8), conducted to assess the current condition of existing aquatic communities in the project area, revealed a general lack of fish species diversity. This low diversity is indicative of streams impacted by pollution sources. Although biological indices calculated for benthic macroinvertebrate populations indicated abundant and diverse communities, these populations were largely comprised of pollution tolerant species. *In-situ* water quality measurements of DO and pH indicated generally good quality waters and analytical water quality data did not reveal any anomalies. Stream habitat was described as having good substrate and in-stream cover, good

channel morphology characteristics, and good riparian and bank structure at all four sample stations.

4.4.2 Beneficial Uses of Surface Waters

The beneficial uses of the two perennial streams (First Creek and Lower Second Creek) located within the corridor include drainage ways for surface runoff and habitat for aquatic organisms. The streams are too small for large scale fishing and boating, and thus provide for minimal recreational use. The five intermittent streams located within the corridor provide occasional aquatic habitat for organisms after heavy rains and as drainage ways for surface runoff.

4.5 WETLANDS

Approximately 0.08 hectares (0.2 acres) of jurisdictional wetlands were identified within the KY 15 Project Corridor (Exhibit 8). All wetlands within the project area are located above the headwaters (average flow of less than 5 cubic feet per second or 0.14 cubic meters per second on a given stream). They do not represent rare or unique natural habitats.

The jurisdictional wetlands are located in four isolated pockets ranging from 0.004 to 0.04 ha (0.01 to 0.1 ac) in size. These wetland areas all exhibited hydric soils and wetland hydrology characteristics including inundation and saturated soil, and were dominated by hydrophytic plant species in all vegetative strata. The four wetlands are located adjacent to stream habitat and serve as retention areas for overflow from stream and surface runoff as well as habitat for aquatic organisms; however, the small size of these wetlands and the adjacency to the present roadway severely restricts the wetland functions and values they provide.

4.6 WILDLIFE

The Project Corridor is located in the Mixed Mesophytic Forest of the Eastern Deciduous Forest Ecosystem within the Cumberland Mountains. Approximately 56% of the landscape within the Project Corridor is considered developed (commercial and residential areas, and grassed roadsides) and approximately 43% of the landscape is forested with mixed deciduous and coniferous species. One small rockhouse and cave were identified within the study area. They are located on the west side of KY 15 near survey station 346. Wildlife known to occur within the Project Corridor include the typical species found in this region. Due to the mountainous topography, most mammal migration would occur within the forested areas, along streams, or occasionally nocturnal movement throughout developed areas and across the roadway.

4.7 FLOODPLAIN

No portion of the Project Corridor encroaches upon the mapped 100-year floodplain as described in the 1985 FEMA map for Perry County, KY. Thus, no impacts to floodplains will occur as a result of this project.

4.8 WILD AND SCENIC RIVERS

According to the National Park Service Homepage and through coordination with the Kentucky Division of Water, no designated Wild and Scenic Rivers are located in the project area.

4.9 RARE, THREATENED AND ENDANGERED SPECIES

Through coordination with KSNPC, USFWS and KDFWR (see Response letters in the Appendix A), rare, threatened or endangered species that were identified to potentially occur within the project area (Table 6), included three federally listed species: the black-sided dace (*Phoxinus cumberlandensis*), the red cockaded woodpecker (*Picoides borealis*), and the Indiana myotis

(*Myotis sodalis*), as well as two species of concern: the eastern woodrat (*Neotoma floridana magister*) and the southeastern big-eared bat (*Plecotus rafinesquii*). Although field investigations revealed potential habitat for these species within the study area, no individuals, or evidence of their presence, were observed.

Two state species of concern, the arrow darter (*Etheostoma sagitta spilotum*), and white walnut (*Juglans cinerea*) monitored by KSNPC and KDFWR also occur near the project area. Although the arrow darter has been collected in several streams near the study area and may occur in streams draining the project area, no individuals were collected during the aquatic survey. Although potential habitat for white walnut may exist along the Project Corridor, it is not known to occur there and none were identified during the terrestrial habitat survey.

4.10 HISTORIC AND ARCHAEOLOGICAL RESOURCES

A historic and archaeological resources literature review and field assessment of the Project Corridor (Exhibit 8) was conducted in accordance with Section 106 of the National Historic Preservation Act to investigate moderate to high probability areas for cultural resources within the Project Corridor.

No prehistoric or historic resources were detected within the proposed KY 15 road expansion corridor. Although historic maps indicated that structures were present as early as 1911, these sites are either outside the corridor or have been destroyed by earlier road construction activities. Past road construction related impacts may account for the lack of prehistoric sources on the area. Letters of correspondence with the Kentucky Heritage Council are found in the Appendix A.

4.11 VISUAL RESOURCES

The KY 15 corridor passes through rural mountainous topography typical of the Eastern Kentucky-Appalachian area with the majority of the Project Corridor consisting of small pockets of mixed

hardwoods and coniferous forests among areas of residential and commercial development. The Project Corridor encompasses an area of natural beauty and appealing viewsheds and vistas, but no sensitive visual resources have been identified within the Project Corridor.

4.12 HAZARDOUS WASTE

A Phase I Site Investigation for Underground Storage Tanks (UST) and Hazardous Material (HazMat) was conducted of the Project Corridor. This study was conducted by utilizing available federal and state databases, Right-of-Way/Alternative drawings, field reconnaissance/investigation, and interviews of site owners. During the course of the preliminary study, 47 commercial sites were identified. Twenty-three were identified for a Phase I study.

Based on project realignment, 11 Phase I sites are located in or immediately adjacent to the current Project Corridor (Table 11 and Exhibit 9). These sites contained USTs or exhibited signs of possible contamination from petroleum or other regulated substances. Six of these 11 sites were recommended for further (Phase II) study. A Phase II study will be conducted upon receipt of legal right of entry.

5.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ALTERNATIVES

The potential environmental impacts associated with the proposed KY 15 expansion project were evaluated for the Build and No-Build Alternatives. Final engineered plans, including exact location of the proposed roadway within the existing corridor, are yet to be completed. Thus, under the Build Alternative, the maximum potential impact (worst-case) scenario for placement of the road within the existing KY 15 corridor was assumed. Careful final design of the proposed road expansion within the existing corridor could significantly reduce the potential environmental impacts of the Build Alternative. Potential environmental impacts under the Build Alternative are summarized in Table 7.

5.1 LAND USE

Residential and commercial growth in Perry County has not changed significantly since the last major road construction project in 1967, which spurred light commercial development and some residential growth. The Perry County Planning Commission does not have a comprehensive development plan for the project area due to the area not being zoned or regulated for any particular type of development. Current land use along KY 15 is commercial and residential developments intermixed with pockets of hardwood forest. The proposed project is intended to help meet both existing and future traffic needs with minimal land use disturbance.

5.1.1 No-Build Alternative

Land use along KY 15 is not expected to change appreciably in the near future given the geologic/topographic limitations of the land. The natural terrain will only allow limited development without extensive excavation. If the No-Build Alternative is selected, light commercial and residential development may increase along the heavily traveled roads such as KY 15 and KY 80, and the proposed industrial park just north of the Project Corridor may be developed. However, the present and, future projected, heavy traffic and congestion on KY 15 with

the present transportation system will likely inhibit most additional development along the corridor and its immediate vicinity.

5.1.2 Build Alternative

Land use along the KY 15 Project Corridor and in Hazard is expected to undergo significant changes in the future, with increasing residential and commercial development in the area and associated increasing traffic congestion. The development of the proposed industrial park immediately north of the Project Corridor will also increase pressure on the existing transportation system. Widening KY 15 through the Build Alternative will ease traffic congestion and alleviate heavy traffic volumes within the Project Corridor. The improved roadway will also increase the attractiveness of the corridor for future development.

State and county officials have addressed the traffic problem along KY 15 and have described the highway as a "roadway in need of fixing". At the local level, the proposed project has support from the City of Hazard Planning Commission and the Perry County Planning Commission, and is consistent with their goals and objectives for the expanding city of Hazard and the growth of the county.

The City of Hazard Planning Commission approves of the proposed road widening because the project will relieve traffic congestion along KY 15. It has addressed some congestion problems along KY 15, especially at Morton Boulevard, but these changes are only temporary and the whole roadway is in need of improvement. The Perry County Planning Commission plans to recruit industry and business, and promote tourism, educational, recreational, and commercial development of the area, which can only be accomplished with the traffic/road improvements provided by the Build Alternative. At the regional level, traffic problems along the existing KY 15 corridor have been recognized, as the No-Build Alternative is not a reasonable answer to the projected future regional growth. On November 21, 1996 at a District Highway Officials Interdisciplinary Meeting discussing alternatives and long-range improvements for KY 15, it was

stated that "the only available option for improving LOS [Level-of-Service] north of the Daniel Boone Parkway would require construction a four-lane facility." Regional and local planning support has been demonstrated for this project because it is significantly less expensive than any bypass alternative considered, it maximizes the use of existing roadways, and it addresses existing and future capacity and safety concerns along KY 15 as the region expands.

5.2 FARMLAND

In July 1993, the U.S. Department of Agriculture, Perry County Field Office of the Natural Resources Conservation Service (NRCS) indicated that the LESA process would not need to be used on the proposed KY 15 expansion because no alternative route was being considered. The NRCS also indicated that construction of the project would not affect any prime farmland. In December 1994, and again in December 1997, the NRCS re-confirmed that no unique or prime farmlands would be impacted by construction of the proposed project (Appendix A).

5.3 SOCIAL AND ECONOMIC FACTORS

A number of factors were used to evaluate the potential socioeconomic impacts of the Build and No-Build Alternatives. Table 8 shows the overview of the assessed impacts of the evaluated alternatives. The table describes impacts as negligible, minor adverse, major adverse, or beneficial to the people, economic structure and environment of the project area.

5.3.1 No-Build Alternative

Choosing the No-Build Alternative for the proposed project will leave area businesses and residences with a highway facility which is inadequate for both present and future transportation needs. More specifically, the following problems with the present KY 15 facility have been established (see Section 2):

5.3.2 Build Alternative

Although relocations and construction may temporarily inhibit social and economic interactions and growth in the corridor, the expanded KY 15 will improve these interactions and encourage community growth. The rural nature of this corridor consists of small groups of single family residences and businesses scattered throughout the corridor, interspersed with relatively large undeveloped wooded tracts. Due to this dispersal of residences, few adverse social, economic or community impacts are anticipated. The only recognizable neighborhood/community in or near the Project Corridor is Bonnyman, located just southwest of KY 15 along Route 267. Impacts to the Bonnyman community will be negligible. No churches, schools, government offices, or other institutional entities vital to the community will be effected. In addition, there will be no disruption in existing mobility of residents within the community as there is currently little/no pedestrian traffic across the existing KY 15 highway. Mobility will in fact be improved by the proposed project through providing enhanced and safer exit and entrance from the highway. Though relocations may disrupt some individual community members, it is anticipated that most people would relocate nearby. Sufficient housing in the area appears to be available and within the appropriate price range of the potential relocatees. The construction of the project will provide more direct access for the public to community resources and commercial and recreational establishments across the Corridor, the county, and eastern Kentucky.

The Build Alternative will enable KY 15 to serve its users in a safe and efficient manner. Widening the roadway to four lanes will reduce driver stress caused by congestion and heavy traffic. The addition of medians, widening of the shoulders, and addition of left turn lanes and passing lanes will help improve public safety by alleviating congestion and more efficiently handling increased traffic volumes, particularly for slow moving vehicles (i.e. coal and lumber trucks). Decreasing congestion and improving safety will contribute to increasing accessibility throughout the Project Corridor, Perry County and the region.

The Build Alternative will also impact economic vitality in the project area. Initially, business relocations may be problematic for owners. However, the 1968 expansion of KY 15 yielded an economic growth period both residentially and commercially for the project area. The Build Alternative will provide better, safer transportation for commuting to jobs, shipping of raw materials to industry, shipping of finished goods to markets, and decreased shipping costs. These factors greatly influence the acquisition of new industrial employers. Thus, the Build Alternative also has major beneficial impacts through stimulation of commerce throughout Perry County, and supports the Perry County Planning Commission's agenda to enhance the economic vitality of the area by making it more appealing for future commercial, industrial and residential development.

5.4 ENVIRONMENTAL JUSTICE

This document is bound by *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The purpose of Executive Order 12898 is to identify, address and avoid disproportionately high and adverse human health and environmental effects on minority and low-income communities. Its goals are to promote nondiscrimination in Federal programs affecting human health and the environment, and to provide minority and low-income communities access to public information and an opportunity to participate in matters relating to the environment and human health.

Based on the composition of populations affected by this project, no disproportionately high and adverse human health or environmental effects on minority or low-income populations are anticipated. There are no minorities within the Project Corridor and approximately 30% of the corridor residents and relocatees are low-income per KYTC District 10 right-of-way personnel. In addition, these low-income sites are scattered throughout the corridor, intermixed with non-low-income residences.

The Project Corridor along KY 15 is a major roadway through Perry County and the region. It exhibits a wide range of resident income levels that is relatively evenly distributed between various

income classes and geographically intermixed through the corridor. This is evidenced from private residence values along the Project Corridor that range from \$30,000 to \$300,000. This project will impact a broad range of economic groups that are scattered throughout the corridor, no more than 30% of which are considered low-income and none of which are minority.

Several relocation impacts have been avoided due to the redesign of the corridor alignment, primarily at the KY 15/KY 28 interchange. Businesses and residences that will be taken will be paid the value of the property and assistance will be provided in finding a replacement site for the business adjacent to or nearby the corridor. Relocations that will not fit into this category are those that are considered illegal encroachments. Illegal encroachments are dealt with through a separate process and are discussed in greater detail in Section 5.5.

5.5 PROJECT DISPLACEMENT AND ACQUISITION

A number of residential and commercial displacements, as well as illegal encroachments, will result for this project if the Build Alternative is selected. As stated in the above Environmental Justice section (5.4), this project is not believed to have a disproportionate impact on any one economic group (in this case, low-income families). It has been addressed that the corridor exhibits characteristics that are different from Perry County on the average and that the corridor has a wide range of economic groups with different income levels living within the corridor. It is believed that this project will impact a variety of economic groups as opposed to one specific low income or minority group.

The No-Build Alternative would require no taking of property or displacement of people or businesses. Illegal encroachments will be the same for the Build Alternative, although there will be no relocation requirements. If the Build Alternative is selected, residential and commercial displacements will be a major impact of this project on the communities adjacent to KY 15 in Perry County. The following sections address project displacement issues under the Build Alternative,

including: residential and commercial displacement, illegal encroachments, and acquisitions procedures.

5.5.1 Residential and Commercial Displacements

If the Build Alternative is chosen, a number of residences and commercial businesses existing within the proposed right-of-way will be displaced (taken). The Build Alternative consists of two segments. Segment 1 begins on the north side of Hazard at the intersection of KY 15 and Morton Boulevard and ends approximately 1,219 m (4,000 ft) north of the KY 267 intersection. Segment 2 begins at the end of Segment 1 and extends to the northern terminus approximately 61 m (200 ft) north of the intersection of KY15 and KY 1067 (Exhibit 2).

The potential residential and commercial impacts are discussed in three memos from KYTC dated March 21, April 26, and July 24, 1995 respectively, concerning the Conceptual Stage Relocation Assistance Report (Appendix A). Based on recent modifications to Segments 1 and 2 of the Build Alternative and re-evaluations of the existing right-of-way, the estimated number of residential and commercial displacements has substantially decreased from the 1995 Conceptual Stage Relocation Assistance Report.

Displacements, or takings, include any commercial building or residence that is not within the existing right-of-way but exists within the proposed right-of-way and will be impacted by the project. Buildings found within the existing right-of-way are considered illegal encroachments and are tabulated separately.

The total number of commercial and residential takings and illegal encroachments are presented in the table below. These numbers only include buildings that, if removed, would constitute a loss of a residence or business. The Office of Legal Counsel for the KYTC has addressed illegal encroachments as any man-made permanent structure within the existing right-of-way, and a

complete list of all takings and illegal encroachments for the Project Corridor including parking areas, sheds, canopies, and other secondary structures is attached in Appendix B.

IMPACTS			
Displacements		Commercial	Residential
Segment 1	Takings	0	11
	Illegal Encroachments	4	3
Segment 2	Takings	2	21
	Illegal Encroachments	9	7
Total for Corridor	Takings	2	32
	Illegal Encroachments	13	10

Based on recent realignment design of Segments 1 and 2, the Build Alternative will involve approximately 34 displacements: 2 commercial buildings and 32 residences. Illegal encroachments in the existing right-of-way include 13 commercial buildings and 10 residences.

Residential Displacements

In the Project Corridor, the estimated number of residences that will be taken is 32 with 10 illegal encroachments for a total of 42 potential residential displacements within the Project Corridor (see Appendix B for complete list). Illegal encroachments are handled through a process separate to the acquisition of property not located within the existing right-of-way but will need to be relocated in several areas of the project. The 32 residential displacements include:

- 13 mobile homes
- 5 two-story houses
- 14 one-story houses

while the 10 illegal encroachments include:

- 6 mobile homes
- 4 one-story houses

Approximately 22 of the 32 residences to be relocated are owner occupants and approximately 10 are tenants. Based on the Conceptual Stage Relocation Assistance Report (Appendix A), and KYTC District 10 right-of-way personnel, approximately 5 (15%) of the displaced households are deemed to be substandard or non-DS&S (Decent, Safe, and Sanitary) housing; 24 (75%) are considered to be average quality DS&S housing; and the remaining 3 (10%) are thought to be higher quality housing. It should be noted that the majority of the non-DS&S housing is not rated as such based on structure quality but on having an unacceptably high family size to numbers of buildings ratio. All displaced residents will be relocated to DS&S housing, as required by federal regulation, even if their current residence is non-DS&S (mobile home or house). As stated in 49 CFR Part 24, a DS&S residence shall:

- be structurally sound, weathertight, and in good repair
- contain a safe electrical wiring system adequate for lighting and other devices
- contain a heating system capable of sustaining a healthful temperature
- be adequate in size with respect to the number of rooms and area of living space needed to accommodate the displaced person
- contains unobstructed egress to safe, open space at ground level
- for a displaced person who is handicapped, be free of any barriers which would preclude reasonable ingress, egress, or use of the dwelling by such displaced person

Currently, within the Project Corridor, the availability of DS&S housing for displaced residences is limited by land availability; however, within the county, availability for DS&S housing increases. There are currently several large mobile home parks, four to five small mobile home parks, and

several residential housing subdivisions being developed within Perry County. Flattened, former strip-mined areas are being utilized for both residential and commercial development at various locations near the Project Corridor. The availability of apartments in Perry County is also good.

Presently, the Project Corridor exhibits a mixture of low and high value homes ranging between \$30,000 and \$300,000, with the average single family residence selling for approximately \$60,000 to \$85,000 (depending on the number of bedrooms, location, age and condition of the house). An average house in Hazard is currently selling for \$85,000 to \$100,000. In 1998, there were approximately 100 to 150 houses for sale in Perry County. An average time for a house to be on the market in Perry County in 1998 was six to nine months. Presently, a single-wide mobile home with property is selling for approximately \$30,000 to \$35,000 and a double-wide mobile home cost approximately \$50,000 to \$60,000. On the average, new houses cost \$80,000 to \$100,000 and average new single-wide mobile homes cost between \$18,000 and \$20,000. New double-wide mobile homes cost between \$30,000 and \$40,000, with an average of \$30,000. Rent for a mobile home in 1998 ran between \$200 and \$500 per month depending on the location and condition of the mobile home. Rental rates for apartments in Perry County and the city of Hazard are currently between \$300 (studio) to \$575 (2-bedroom townhouse) to \$700 for a luxury apartment.

Commercial Displacements

In the Project Corridor, the estimated number of businesses that will be displaced is 2 with 13 illegal encroachments for a total of 15 potential commercial displacements within the Project Corridor (see Appendix B for complete list). Most businesses with the Project Corridor are not primarily reliant on the traffic flow along KY 15, with the exception of service stations/convenience stores. The relatively low number of employees at each business to be displaced will keep the project from having a major impact on county employment. According to the Conceptual Stage Relocation Assistance Report (Appendix A), the majority of these businesses are owner occupied with a few businesses on leased properties, and almost all are small businesses with fewer than ten employees. The 2 commercial displacements include:

- Parcel 324: Howard and Hoskins Frame and Body Shop – 2-4 employees
- Parcel 374:- BP – 4-6 employees

The 13 illegal encroachments include:

- Parcel 15: Boone Lounge/Daniel Boone Coffee Shop – 4-6 employees
- Parcel 15: Double Kwik BP (Canopy and USTs) – 4-6 employees
- Parcel 50: Creation Station (mobile home) – 1-3 employees
- Parcel 54: Watts Mobile Homes – 4-6 employees
- Parcel 305: Olan's Lumber Company – 10-15 employees
- Noble: Noble's Liquor – 2-4 employees
- Parcel 321: Fugate's Pool and Entertainment Center – 4-6 employees
- Parcel 321: Fugate's Main Building – 4-8 employees
- Parcel 324: Howard Hoskins Auto Sales – 2-4 employees
- Parcel 324: Howard & Hoskins Office – 2-3 employees
- Parcel 347: Apache Mining Company Office – 3-6 employees
- Parcel 349: 1-story block commercial building
- Parcel 357: Finishing Touch Crafts – 2-3 people

As previously stated, a portion of the businesses along KY 15 are dependent to a large degree on the traffic flow along the highway, and there will be other minor adverse impacts to businesses not located within but adjacent to the proposed right-of-way, such as decreased parking space. In the case of a few gasoline stations operating along the roadway, a number of the pump islands and/or USTs may need to be moved or closed, depending on highway design and exact site layout. This could adversely impact the economic viability of the businesses severely enough to force them to close.

5.5.2 Illegal Encroachments

Illegal encroachments include man-made structures that are located within the existing right-of-way of KY 15. These structures can include buildings, mobile homes, parking lots, driveways, sheds, billboards, signs, etc. and are not subject to the same property acquisition regulations as structures that are adjacent to but are not in the existing right-of-way. Presently, encroachment letters have been sent to people who own/rent structures that are defined as illegal encroachments and these matters are being dealt with by the KYTC Office of General Counsel. The General Counsel is currently resolving many of these cases legally without litigation and may considerably reduce the number of illegal encroachments that will go to court.

5.5.3 Acquisition Procedures

Acquisition of property that is to be taken for this project follows federal regulations as stated fully in 49 CFR Part 24 which include: a notice to the owner of acquisition; a fair appraisal of the property; a written offer of compensation for the property; administrative negotiations and settlement; and payment by the agency prior to taking the property.

5.6 RELOCATION MEASURES

The relocation assistance and payment program, as stated under 49 CFR Part 24, was established to provide guidance to agencies and the public for the acquisition and relocation of properties for government projects. The regulations state general requirements governing the provision of relocation payments and relocation assistance. Relocation assistance includes: providing general information notices to people to be displaced which describe the agency's relocation program; notices of relocation eligibility; ninety-day notices before moving; and the availability of a comparable replacement dwelling(s) before displacement. The acquisition and relocation program is conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and relocation resources will be available to all residential and

business relocatees without discrimination in accordance with the Civil Rights Act of 1964, Title VI.

Relocation planning, advisory services and coordination are carried out through the KYTC and the FHWA. Relocation planning encompasses the collection of information on displaced properties and the availability of properties for relocation, information that is included in this EA. The KYTC, as required by the federal regulations, provides relocation assistance advisory services, which include: determining the relocation needs and preferences of displaced people and explaining the relocation payments and other assistance for which people may be eligible; providing current and continuing information on the availability, purchase prices, and rental costs of comparable replacement dwellings, suitable commercial properties, and farm locations; providing counseling and other available sources to minimize hardships of relocation; and supplying people to be displaced with the appropriate information concerning federal and state housing programs, programs administered by the Small Business Administration, and other federal and state programs offering assistance to displaced people and technical help for people applying for such assistance.

The relocation payment program handled at the state level provides a variety of services for relocation payments from claims, to advance payments and deductions from relocation payments, to payments for moving and related expenses. These services are available for all relocated properties including households, farms, commercial properties, and tenants (paid in the form of a rental assistance payment). Assistance is also offered if major problems (as defined in the regulations) occur during the process of relocation, such as a disaster, death of displaced person, or delay in construction of replacement housing, to help displaced people through the relocation process.

5.6.1 Residential Relocation

For residential households located along the Project Corridor, many of structures are located on small to medium tracts with limited space for dwelling relocation or new construction. Due to the geologic/topographic nature of the area, considerable excavation would be needed to relocate on or adjacent to existing property. For the many residential lots that do not have available space for on-site relocation to another site is the only option. Based on current project design, 32 residential dwellings will be displaced and relocated. This total does not include the potential 10 illegal encroachments. These relocations will not all happen in the same year, and the KYTC estimates that there will be approximately five to ten per year for the life of the project.

In 1995, the KYTC Division of Right-of-Way and Utilities (DORW) conducted an in-depth study of available residences for sale, rent and planned/ongoing residential construction. The DORW Study (April 26, 1995) was conducted by interviewing realtors, rental agents, builders and housing authority personnel in the Hazard and Perry County areas. The study showed that during the period of April 1 through 10, 1995, adequate single family homes (58) were for sale and there was sufficient rental property (3 houses and 40 apartments) in the Hazard/Perry County area. The study also shows that adequate mobile homes were available for rent or sale to house their displaced families.

In 1998-1999, local realtors and rental agents confirmed that there were numerous residences and rental apartments available in the town of Hazard, but indicated that very few (2 to 3 single family residences) are available along the actual Project Corridor. In 1998, 100 to 150 houses were sold in Perry County. A number of mobile home parks and new residential subdivisions are being developed within Perry County and will be able to provide needed relocation properties.

As stated in the DORW study, in all probability, housing will be available over the period of time it will take to complete the project. It has been stated by KYTC-District 10 that available DS&S housing should not be an issue with this project because it will take time to appraise all properties

that need to be relocated and all of the relocations will not happen at once. The relocations will be spread out over at least two to three years which will make DS&S housing available for all relocations.

5.6.2 Commercial Relocation

Under current roadway design plans, only two businesses will need to be displaced, but 13 businesses exist as illegal encroachments. As mentioned in the previous sections, land for commercial development along the Project Corridor is very limited, with the exception of land adjacent to Daniel Boone Parkway or along the Hazard By-pass. The types of businesses that would require relocation from the Build Alternative are considered light commercial with a modest work force. The majority of the businesses are the convenience store/gas station type. Strip mined areas that have been leveled off are becoming available at several locations within or nearby the Project Corridor. The price for this land is currently at a premium, averaging between \$150,000 to \$220,000 an acre for the remaining land available along KY 15 and up to \$275,000 an acre along the Hazard By-pass. It is likely that a portion of the businesses will choose not to reestablish themselves due to the high cost of purchasing land and developing replacement buildings.

In 1995, the owners of the respective businesses were contacted to discuss the effects relocation would have on their establishments. The majority of the gas station owners stated that they would relocate in the same area due to the available market produced by the high traffic flow. One owner commented that he would be forced to close his business due to the unavailability of a nearby suitable location. Another business owner stated that a new improved highway would stimulate business and be very beneficial.

5.6.3 Last Resort Housing

As is stated in 49 CFR Part 24, whenever a project cannot proceed on a timely basis because comparable replacement dwellings are not available within the monetary limits for owners or

tenants, the state/federal government shall provide additional or alternative assistance as Last Resort Housing (LRH) under provisions listed in the regulations. A person cannot be displaced from their current dwelling unless a comparable replacement dwelling has become available. Furthermore, LRH situations are handled on a case-by-case basis and can include: a replacement housing payment or rental subsidy, rehabilitation or addition to existing dwelling, the construction of a new replacement dwelling, a direct loan, the relocation/rehabilitation of an existing dwelling, the purchase of land, the removal of barriers to the handicapped, or the change in status of a tenant to a homeowner.

Based on redesign of the Project Corridor, residential and commercial relocations have been decreased significantly and it is the present position of the KYTC-District 10 that although LRH has the potential to be used for this project, the need for the LRH program is unlikely based on the time period that it takes to relocate businesses and residences. KYTC District 10 officials have stated that it will take time to appraise all properties to be relocated and that all relocations will not occur at the same. In actuality, relocations will occur over a period of years as the project progresses and there should be ample residential housing available so that the LRH program would not need to be implemented.

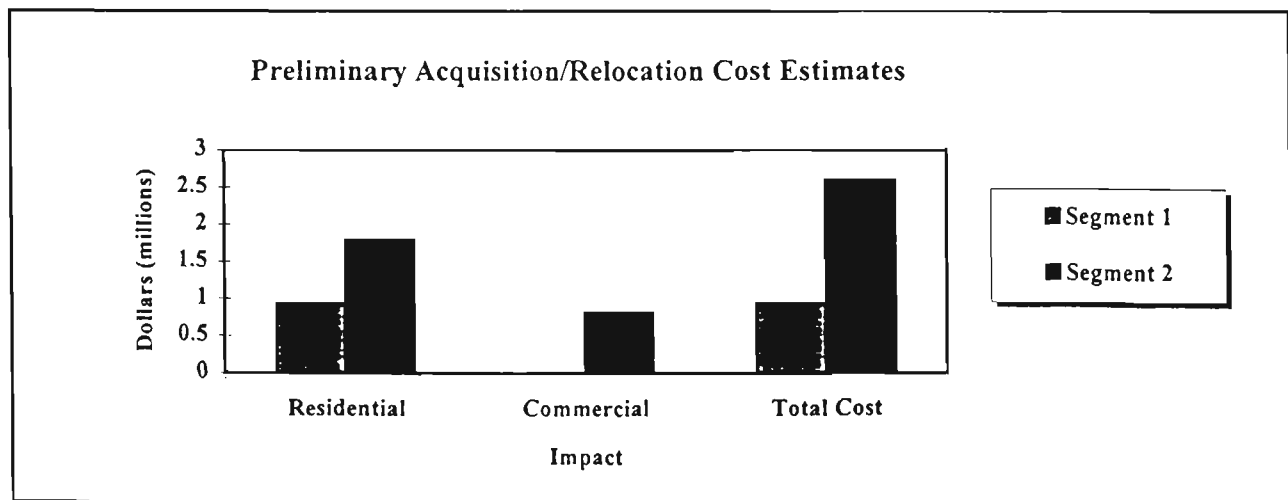
5.6.4 Acquisition and Relocation Cost Estimates

A portion of the costs of the proposed project are associated with the acquisitions/relocation of displaced private residences and businesses for the Build Alternative. Based on realignment of the project corridor, total acquisition of properties for the Project Corridor includes 2 commercial properties and 32 residential dwellings. These numbers do not include the 23 illegal encroachments (12 commercial and 10 residential) that exist for the project, and are not incorporated in the acquisition and relocation cost estimates. Although there will be costs associated with the illegal encroachments which may include lawyer and litigation fees and/or settlements, it is not possible to accurately estimate them at this time.

This following cost estimate has separated acquisition cost and relocation cost, and is based on the following assumptions:

- The value of residential dwellings displaced/relocated was computed from the 1997 average of those in the community of \$85,000.
- The value of businesses displaced/relocated was computed using the average dollar/acre of available commercial land within the Project Corridor (\$190,000/acre), and the cost of closing and/or moving pump islands and/or USTs at approximately \$50,000.
- There would be no relocation or decreased value for businesses located adjacent to or just beyond the proposed right-of-way, since, according to the Relocation Department of the KYTC, most businesses prefer to be closer to roads to increase visibility and accessibility.
- Last Resort Housing will not be implemented for this project

The estimated acquisition/relocation costs for houses and businesses for the Project Corridor, as well as a combined cost total for the project, are presented below:



For the Build Alternative, it is estimated that it will cost a total of approximately \$2,720,000 to relocate displaced residents and tenants. The estimated cost for business acquisition/relocation is a

total of approximately \$820,000. Therefore, the total estimated relocation costs for the Build Alternative is approximately \$3,540,000. These estimates do not include the relocation of utilities and other potential issues that may arise.

The cost of implementing the LRH program, if needed, is estimated to be \$100,000 for owner occupants and \$150,000 for tenants as established in the Relocation Assistance/EA Report KYTC memo (Appendix A).

5.6.5 Cemetery Relocation

Two cemeteries are located within the Project Corridor, neither of which is considered historic. A portion of the southern-most cemetery, located on the east side of KY 15 northwest of First Creek (Exhibit 8), exists within the proposed right-of-way for the project (Exhibit 11). There is the potential for six grave sites to be adversely impacted if the Build Alternative is chosen. The second cemetery (the Hensley Cemetery), located west of KY 15 near Sta. 350+00, is within the construction zone of the roadway (Exhibits 8 and 12). This cemetery consists of 14 grave sites and is probably a one family cemetery. The expansion of the roadway will impact the entire cemetery and all of the gravesites will need to be relocated, per state requirements if the Build Alternative is chosen.

Impacts to both cemeteries have been avoided and minimized to the greatest extent feasible by the proposed road widening Build Alternative. Further avoidance is not possible, due to corridor topography and adjacent development. Avoiding the cemeteries in question would require redesign of the proposed project such that substantially greater right-of-way and excavation would be required. Avoiding the cemeteries would also result in substantially greater socioeconomic impacts in terms of business and residence takings. According to a December 1997 Phase I Design Report for Segment 1, a preliminary design that avoided the southernmost cemetery entirely would result in impacts to an additional eight commercial buildings, two residential buildings, and an apartment building.

Relocation should be done in accordance with state law and KYTC standard operating procedures and an attempt should be made to locate and notify all family members and apprise them of the proceedings (Section 6.2.6). For the southern-most cemetery, the grave sites may be able to be relocated to other plots within the same cemetery but out of the proposed right-of-way. However, the entire Hensley Cemetery will need to be relocated as it is located within the construction zone of the Build Alternative. Adequate cemetery plots exist in the area to accommodate these grave relocations. Twelve cemeteries with over 630 vacant plots exist in the Perry County area. In addition, there are approximately 1,500 to 2,000 vacant cemetery plots in the Jackson, Kentucky area (see 6.2.5).

5.7 JOINT DEVELOPMENT

No opportunities for joint development would be possible for the No-Build Alternative. As a result, activities, that could potentially be coupled with the development of the project, would be undertaken independently and at a greater individual expense. At this time there are no definite plans for joint development measures to be pursued if the Build Alternative is chosen; however, extension of existing utility (water, sewer, electric, gas) lines could be incorporated into highway construction plans to serve expected expanded development north of Hazard along the Project Corridor. Additionally, the construction of other KY 15 expansion projects in the region (see Table 1 and Exhibit 3) could occur simultaneous with this project.

5.8 PEDESTRIAN AND BICYCLE FACILITIES

Currently there is an existing bicycle facility in Perry County. The bicycle facility runs from Buckhorn Lake State Park south along KY 28 to KY 15 and proceeds south along KY 15 to Whitesburg. Due to the mountainous terrain, the winding curves in the existing roadway, and the high volumes of traffic along KY 15 the use of this facility is extremely limited and, the widening of KY 15 to a four-lane roadway will only enhance the safety of the existing bicycle facility.

5.9 AIR QUALITY

For the air quality study, the KY 15 corridor was divided into two sections. Segment 1 is the southern section and Segment 2 is the northern section (Exhibit 2). For the purposes of this study, air quality analyses were conducted for the existing year (1997 data) and Build and No-Build Alternatives for the design year 2020.

Review of the Air Quality analyses for the project corridor indicated the following carbon monoxide (CO) concentrations:

- maximum calculated one-hour concentration was 6.5 ppm for the year 1997
- maximum predicted one-hour concentration is 6.2 ppm for the 2020 No-Build Alternative
- maximum predicted one-hour concentration is 6.2 ppm for the 2020 Build Alternative
- maximum calculated eight-hour concentration was 4.4 ppm for year 1997
- maximum predicted eight-hour concentration is 4.1 ppm for the 2020 No-Build Alternative
- maximum predicted eight-hour concentration is 4.1 ppm for the 2020 Build Alternative

The maximum one-hour (Table 3) and eight-hour (Table 4) CO concentrations for year 1997, the 2020 No-Build Alternative, and the 2020 Build Alternative occur at Receptor 7 located near the western traffic signal at the northwest corner of the intersection of KY 15 and KY 80 at a wind direction of 200 degrees.

Traffic volumes are expected to increase from the current year to the design year. The total free flow emissions of carbon monoxide, nitrogen oxides, total hydrocarbons and particulates (both

exhaust/tirewear and reentrained) are expected to increase for both the No Build and the Build Alternative (Table 5).

This project is located within Perry County in the Appalachian Intrastate Air Quality Control Region of eastern Kentucky, which is classified pursuant to the Clean Air Act Amendments of 1990 as an attainment area for all of the transportation related pollutants. According to the calculated existing and future emissions of CO, HC, NO_x, and particulates (Table 5) the proposed widening and realignment of KY 15 is not expected to add to the pollutant burden of the area.

All existing and predicted carbon monoxide concentrations are below the one hour standard of 35 ppm and the eight hour standard of 9.0 ppm. It has been demonstrated that Perry County is in conformity pursuant to the amended final conformity guidance procedures issued by both the U.S. Department of Transportation and the U.S. Environmental Protection Agency, which are in effect as of September 15, 1997. Based on the air quality analysis, the proposed project is in compliance with the Kentucky State Implementation Plan for the Attainment and Maintenance of National and State Ambient Air Quality Standards.

Concurrence with this finding of conformity was set forth by the Kentucky Department for Environmental Protection, Division For Air Quality in a letter dated November 9, 1993. A copy of this letter is presented in Appendix A of this document.

According to the Environmental Control Manager, Kentucky Department for Environmental Protection, Division for Air Quality, Perry County, Kentucky is not a nonattainment or maintenance area for any of the transportation-related criteria pollutants which are listed above. Therefore, the interim EPA/DOT Conformity Guidance of June 7, 1991 does not apply.

5.10 NOISE IMPACTS

The noise impact study was conducted on the KY 15 corridor using the traffic noise prediction model STAMINA 2.1 (Florida Department of Transportation) to evaluate the existing noise levels and predict levels for the design year 2020. Ten locations were selected along the study corridor to serve as noise receptor sites (Exhibit 10). The description of the receptor locations are presented in Table 9, along with the LEQ noise levels. The results of the analysis indicated that the predicted noise levels for the Build Alternative are generally lower than the predicted levels for the No-Build Alternative (Table 9).

In accordance with 23 CFR Part 772 and the Noise Abatement Policy of the KYTC, noise abatement measures for minimizing noise impacts were evaluated. The impacts are determined on the basis of a substantial increase in the Build and No-Build Alternatives. There was no substantial increases (greater than 10 dBA) as defined by the KYTC.

The Federal Highway Administration Category B Noise Abatement Criteria (NAC) of 67dBA is exceeded at sites 5, 6, 8, and 10 for both the No-Build and the Build Alternatives. As required by 23 CFR Part 772 and the Noise Abatement Policy of the KYTC, abatement measures that were considered at sites 5, 6, 8, 9, and 10 included: traffic management measures; alteration of horizontal and vertical alignments; acquisition of property rights for construction of noise barriers; construction of noise barriers; acquisition of property for a buffer zone; and insulation of a structure. Due to the small projected increases at sites 5, 6, 8, and 10 (-0.2 to 1.9 dBA over Existing; -3.7 to 1.7 dBA in Build over No-Build) and more importantly due to the proposed multiple access for the project (requiring numerous openings, which would negate barrier effectiveness), no noise abatement techniques are recommended for inclusion as part of the design for the Build Alternative. Noise generated by construction activities may effect some land uses and activities to varying degrees. These construction-related noise impacts will be mitigated as outlined in Section 6.1 of this report.

5.11 WATER QUALITY

The Scoping Study for KY 15 states that municipal and residential (straight pipe and faulty septic system) discharges, coal mine run-off, and urban run-off are contributing non-point sources of fecal coliform bacteria contamination, sediment loads, and nutrient/organic enrichment in the North Fork Kentucky River subbasin. KPDES permitted facilities discharging into the North Fork Kentucky River or its tributaries within Perry County as of 1994 include: the Hazard and Vicco wastewater treatment plants, the Hazard Water Plant, nine schools, the Hazard yards of L&N Railroad, and 2-3 miscellaneous subdivision and small sewage discharges. These potential sources of pollution represent existing conditions and will remain the same for the Build and No-Build Alternatives. The proposed Build Alternative will not exacerbate current water quality conditions.

5.11.1 No-Build Alternative

The No-Build Alternative will not affect water quality in addition to any existing problems. Existing waterways will not need to be re-routed and potential erosion/sedimentation impacts that may occur during construction activities for widening KY 15 will not be present.

5.11.2 Build Alternative

The Build Alternative will have no long-term detrimental impacts to surface or ground water quality. The Project Corridor for the expansion of KY 15 lies downstream of known water intakes and it is likely that the proposed construction (Build Alternative) will have no impact on the public water supply. There is potential for short-term water quality impacts due to siltation in adjacent streams from erosion and sedimentation caused during construction activities. In addition, soil disturbance during construction may produce chemical changes in storm water runoff from the project site which may temporarily impact water quality of the streams.

In their review of the proposed project by KDFWR, USFWS, and KDOW showed no objection to the project but reiterated that mitigation measures were necessary for the implementation of the project, especially for stream channelization and erosion control (Letters of correspondence in the Appendix A). Careful planning in the final road design phases will play a major role in minimizing adverse impacts to streams and the aquatic environment within the Project Corridor. The USFWS, KDFWR, and KDOW recommended the implementation of best management practices (BMP's) for erosion and sedimentation control and stream water runoff management to further minimize impacts to streams and aquatic fish and wildlife resources during project construction. Mitigation measures listed in correspondence with USFWS, KDFWR and KDOW are addressed in Sections 6.2.3 and 6.2.4.

5.12 WETLANDS AND WATERS OF THE U.S.

5.12.1 No-Build Alternative

The No-Build Alternative will have no impacts to the wetlands and waters of the U.S. within the Project Corridor.

5.12.2 Build Alternative

Approximately 4,404 meters (14,450 linear feet) of jurisdictional stream exists within the Project Corridor and could potentially be impacted by the Build Alternative (Exhibit 8). Construction of the Build Alternative will involve approximately seven culverted stream crossings where the corridor crosses the stream perpendicularly. The remaining impacts will involve relocation of existing streambed from adjacent to the existing road to a new channel near the right-of-way perimeter.

Only approximately 0.08 ha (0.2 ac) of jurisdictional area is comprised of wetlands. In general, the wetlands and the bed and bank streams within the study area have been severely impacted by

previous activities associated with road construction and adjacent commercial and residential development. Also, these water/wetland habitats are common in the project vicinity and project impacts will not result in the loss of any rare or unique habitat types. The KDOW and USFWS recommended that a wetland delineation be performed prior to route selection to avoid wetland areas. Attempts will be made to minimize impacts to wetlands, and those that are impacted will be permitted and mitigated (Section 6.2.3). Stream crossings may require a Section 404 permit from the USACE and Section 401 Water Quality Certification from KDOW. Coordination with both the USACE and KDOW will be required to determine: the exact location and extent of jurisdictional water/wetlands within the corridor; permitting requirements under sections 404 and 401 of the Clean Water Act for any proposed impacts; and the type and extent of mitigation required to compensate for unavoidable impacts.

5.13 FLOODPLAIN IMPACTS

Both the Build and the No-Build Alternatives will result in no encroachments into the 100-year floodplain, as none exists within the Project Corridor.

5.14 WILD AND SCENIC RIVERS

According to the National Park Service Homepage, no designated Wild and Scenic Rivers are located in the project area. The large distance between the project area and the two closest Wild and Scenic Rivers (the Red River, located in eastern Kentucky, and the Bluestone River, located in southern West Virginia) will make the project's impacts on these rivers minimal to nonexistent.

5.15 RARE, THREATENED AND ENDANGERED SPECIES

No federally listed protected species are known to occur in the Project Corridor. Present information indicates that no federally protected species, or their preferred habitats, will be impacted by the proposed project as stated by KDFWR, KSNPC, and USFWS.

The lack of mature open pine forests within the corridor indicates the lack of habitat for the red-cockaded woodpecker, a federally endangered species. The hardwood slope forests (e.g., beech-oak, oak-slope, or yellow poplar forests) are potential habitat for the eastern wood rat, which is a candidate for federal listing. This species prefers to inhabit wooded slopes where it typically nests in rockhouses, caves, or rocky ledges. Although wooded hardwood slopes having a rockhouse and cave occur within the study area, no individuals of either species or evidence of their presence were observed during biological surveys of the Project Corridor.

The riparian areas and the small rock house cave within Perry County are potential habitats for the Indiana myotis, a federally endangered species, and the rockhouse may also be potential habitat for the southeastern big-eared bat, a state threatened species and a candidate species for federal listing. However, no individuals of either species or evidence of their presence were observed during field surveys.

Potential habitat for the arrow darter, listed as a state species of special concern, and the black-sided dace, a federally threatened species, occurs in the streams within the project boundaries. However, no individuals of this species were found during the aquatic sampling survey. Stream relocation activities and culverting necessary for road construction may impact these species if it is present within the project area.

Any biological assessments required for Section 7 compliance will be prepared by the KYTC-Division of Environmental Analysis at the appropriate stage of project development and the project will be re-coordinated with the USFWS prior to the project entering the right-of-way phase.

5.16 HISTORIC AND ARCHAEOLOGICAL PRESERVATION

As a result of the Cultural Resources Analysis conducted as part of the overall study, no historical structures were encountered or identified. In correspondence with the Kentucky Heritage Council, the State Historical Preservation Office (SHPO) indicated that there was no need for submittal of a

formal architectural/historical survey report. This letter dated June 22, 1993 is included in Appendix A of this report. This conclusion was confirmed and updated in a SHPO letter of April 26, 1999 (Appendix A).

A cultural resources literature review and field assessment was conducted along the Project Corridor in compliance with Section 106 of the National Historic Preservation Act. The literature review process included interviews with SHPO, Office of State Archeology and the Kentucky State Archives staffs. Various maps and available aerial photographs were researched and reviewed. Four known archaeological sites were described north of the Project Corridor adjacent to KY 80 and two known sites were described south of the Project Corridor near the North Fork of the Kentucky River (Exhibit 8), but no known archaeological sites were found to be listed within the Project Corridor. The review identified five possible historic structures in the vicinity of the KY 15 corridor (Exhibit 8).

Based upon the literature review, an extensive surface and subsurface survey was initiated. This survey included traversing the area on foot looking for any visible signs of "historic" evidence. While walking the transect lines, periodic shovel test pits were dug to investigate for presence of historic artifacts. The result of these surveys indicated that no prehistoric or historic resources were present. Due to these findings, it is the opinion of the investigators that no cultural resources eligible for the NRHP will be impacted by the proposed project. This finding was concurred to by the SHPO in a letter dated September 16, 1993 and included in Appendix A of this report.

5.17 VISUAL

The Project Corridor encompasses an area of natural beauty and pleasing viewsheds. The No-Build Alternative would detract from enjoyment of the striking natural setting due to the inadequacy of the facility to provide a safe, efficient, and economical travel route.

Although the Build Alternative could lead to short-term adverse impacts on the aesthetics of the area during construction, for the long-term, the proposed Build Alternative will provide an improvement in the aesthetics of the area for both facility users and residents of the region by improving safety, reducing traffic congestion and opening the area for viewing.

5.18 HAZARDOUS WASTE

At the request of the KYTC Division of Environmental Analysis (DEA), a Phase I Site Investigation for Underground Storage Tanks (UST) and Hazardous Material (HazMat) was performed along the KY 15 Project Corridor. This study was conducted by utilizing available federal and state databases, Right-of-Way/Alternative drawings supplied by project design engineers, and field reconnaissance/investigation and interviews of site owners. During the course of the preliminary study, 47 commercial sites were identified. Twenty-three of the sites were identified for a Phase I study. A 1998 drive-through of the corridor was performed to update the HazMat information for the EA and revealed that two of the parcels on the original HazMat list had changed businesses. These two commercial sites were: 1) Parcel 345 which previously was the Kat-A-Pult Company has changed to Kentucky Freightliners, Inc.; and 2) Parcel 352 which was previously Darlene's Beauty Shop is now Kids Stuff and Us.

The recently defined Project Corridor only includes 11 of the original 23 Phase I sites, six of which were recommended for further study. These sites contained USTs or exhibited signs of possible contamination from petroleum or other regulated substances (Exhibit 9). Table 11 lists the 11 sites in the corridor and the six recommended for further (Phase II) study.

It is recommended that the project be designed so as to avoid as many as possible of the locations having known, suspected, or potential hazardous materials and USTs (listed above). The UST/Hazardous Material sites (Exhibit 9) are described as follows and presented in Table 11:

- **Parcel 15:** This parcel currently includes a convenience store and gas station with fuel pumps; gasoline, kerosene, and diesel tanks; and an oil tank. This site will be completely included in the proposed right-of-way of the Build Alternative, and further study of this property is recommended.
- **Parcel 27:** This site is presently a gas station/convenience store with four USTs in use. Previous USTs are a concern because of the age, construction and potential for having leaked petroleum product. This site is located within the proposed right-of-way and further site investigation is recommended.
- **Parcel 48:** This site is an auto and tire repair shop. The site has two above ground tanks containing diesel and gasoline, and has stored solvents. Past activities may include improperly stored hazardous materials, and several drums were found on the property containing hazardous waste. This site is in close proximity to but outside of the right-of-way and further study is not recommended.
- **Parcel 51:** This site is currently an auto repair shop with six USTs that potentially have been drained, as well as possible site contamination from junked cars. There is concern over the age, construction, and potential for leakage of the tanks. This site is in close proximity to but outside of the right-of-way and further site investigation is not recommended.
- **Parcel 57:** This site is presently a truck repair shop with one diesel UST and two to three drums of waste oil. This site is not in the proposed right-of-way and further site investigation is not recommended.
- **Parcel 313:** This site is presently a gas station/convenience store with three USTs. Junk auto parts and empty solvent and oil containers were observed on the site. Realignment of the design plan has moved the area of impact away from this parcel and there may not be any impact to this property. Due to its location outside the proposed right-of-way further study is not recommended for this site.
- **Parcel 324:** This site is presently an auto body shop with junk auto parts, scrap tires, fuel, and empty cans on the property. This site is 50 ft west of the proposed right-of-way, and further study is not recommended.
- **Parcel 348:** This parcel is presently a lumber hauling business, and formerly a sawmill. The site contains three above-ground storage tanks (two containing diesel), two above-ground tanks at the old sawmill containing an unknown fuel product and unidentified steel drums that were suspected to be leaking. These areas are located in the proposed right-of-way and further site investigation is recommended.

- **Parcel 352:** This site is currently a small supply shop and was formerly a beauty shop and before that, a gas station. The site has two inactive USTs and evidence of petroleum and vehicle solvent stains in the garage. This site is located within the proposed right-of-way and further site investigation is recommended.
- **Parcel 374A:** This site is currently a restaurant and is a suspected UST site that may have never been filled with fuel. This parcel is completely within the proposed right-of-way and because of the environmental concern of the UST potentially still on the property, a further site assessment is recommended.
- **Parcel 374B:** This site is currently a gas station/convenience store with five USTs in use containing gasoline, diesel, and kerosene. This site is within the proposed right-of-way, and because of the location of the USTs, further site investigation is recommended.

5.19 ENERGY

The No-Build Alternative would see increased energy consumption as traffic congestion continues to escalate. A reduction in energy costs should be facilitated by the Build Alternative due to improved access, travel time and safety. The reduced traffic congestion and travel time of the Build Alternative will provide reduced energy expenditures by vehicles, over the No-Build Alternative.

Additional energy costs and requirements can be anticipated from construction operations of the Build Alternative. The amount of energy required in the short-term for construction of this road project could be quite substantial, but is temporary in nature and will generally lead to lower long-term operational costs. The Build Alternative should be expected to compensate for the construction energy costs via improved access, travel time, safety and decreased traffic congestion.

5.20 CONSTRUCTION

During construction of this project, the contractor will be required to meet environmental and related requirements in the latest addition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction as well as any additional specifications the Design

Engineer may require for this specific project. These environmental and related requirement include air quality, noise, erosion, water quality and sedimentation, traffic congestion and safety and are addressed in the table below.

POTENTIAL CONSTRUCTION IMPACTS	
Environmental or Related Factor	Potential Impact
Air Quality	Burning, drilling, blasting, production, hauling of material, and dust from construction
Noise	Noise transmission associated with construction equipment and activities
Soil Erosion	Erosion from areas of cut and fill; and earth disturbance for culvert construction can cause encroachment into relocated waterways and groundwater resources within the corridor
Water Quality and Sedimentation	Sedimentation in stormwater runoff from large areas of exposed soils can cause a disturbance of benthic habitat and siltation of aquatic habitat areas in streams; sediment deposition into waterways can degrade aquatic habitats by destroying habitat, filling substrate cavities, smothering breeding areas and substrate organisms, and by increasing both site and downstream turbidity
Traffic Congestion	Congestion caused by general construction activities and temporary detours, crossovers, lane closures, and slower speed zones
Safety	Decreased safety in areas of heavy construction, hazardous debris, construction vehicles entering and exiting the roadway, and traffic congestion

Mitigation measures for these impacts and others are addressed in Section 6.0. Implementation of appropriate sedimentation and erosion control plans and storm water management plans will help minimize those impacts. The U.S. Fish and Wildlife Service (USFWS) recommends rigidly following the Kentucky Transportation Cabinet's Specific Specifications for Road and Bridge Construction and Federal Highway Administration Best Management Practices for Erosion and Sediment Control. Specific erosion control suggestions include the development of a detailed erosion control plan, digging diversion channels around construction sites, installing silt barriers such as silt fences and hay bales, and stabilizing streambanks with riprap. The USFWS and KDFWR offer additional suggestions in their correspondence located in Appendix A.

It is recommended that the proposed project be designed so as to avoid as many as possible of the locations having known, suspected, or potential hazardous materials and USTs. Disposal of all waste material including USTs and hazardous material sites will include completing a site characterization study and mitigation plan for each UST site identified, completing a site characterization study and mitigation plan for each HazMat site identified, securing all required permits, and complying with all federal, state and local regulations governing the disposal of waste material.

6.0 SUMMARY OF MITIGATION COMMITMENTS

The potentially adverse impacts from the construction of the Build Alternative will be substantially averted by requiring design and construction of the project in accordance with both the general Kentucky Department of Highways Standard Specifications (KDHSS) and other project-specific and general measures. The primary long-term mitigation needs for this project include:

- Phase II investigations of six sites within the Project Corridor for UST and Hazmat Contamination.
- Implementation of control measures for noise impacts within the Project Corridor to limit the effect of noise on the community.
- An Individual Permit (Section 404 Clean Water Act) from the USACE and Water Quality Certification (Section 401 Clean Water Act) from the KDOW.
- Potential compensatory mitigation for wetland and stream impacts through creation, enhancement or restoration of additional wetland acreages and aquatic stream habitats.
- The relocation of 32 residences and 2 businesses.
- The relocation of 14 gravesites at the Hensley Cemetery and six gravesites from the southern-most cemetery.

Following the public hearing for this project and prior to the acceptance of the FONSI, KYTC will refine issues related to community impact, environmental justice, relocations, and stream permitting/mitigation. This will be accomplished through:

- Sending a copy of the approved EA to the U.S. Army Corps of Engineers for coordination of stream impacts;
- revising the Conceptual Stage Relocation Report, if necessary; and,
- revising community impact and environmental justice sections, if necessary.

The following sections summarize the mitigation measures applicable to this project in terms of KDHSS Standard Specifications and project specific measures.

6.1 KDHSS STANDARD SPECIFICATIONS FOR MITIGATION PROCEDURES

The KDHSS specifications for Road and Bridge Construction address routine mitigation procedures to be required of any highway project. Following are the applicable environmental measures:

REQUIRED MITIGATION PROCEDURES		
Impact Area	KDHS Section(s)	Mitigation Measures Required
Air Quality	107.01.04	Controls on burning, drilling, blasting, production and hauling of materials. Includes spraying for dust suppression and keeping engines in tune.
Noise	107.01.06	Provide sound-deadening equipment devices, shields, barriers, etc. necessary to restrict noise transmission at sensitive sites, noise monitoring.
Soil Erosion	213	Use of berms, dikes, dams, fiber mats, netting, mulches, grasses, slope drains. Progressive seeding and mulching of exposed soil areas.
Aquatic Impacts (Water Quality, Sedimentation)	213	Use of berms, dikes, dams, sediment basins, silt fences, ditch checks, and gravel; and coordination with erosion control features.
Traffic Congestion	104.04	Construction of temporary detour roadways, crossovers, lane closures; use of flagmen, use of signs; incorporation of traffic maintenance plan including project phasing.
Safety	107.01.01, 107.08	Limit blasting to times of lowest traffic volumes; halt traffic during blasting; remove hazardous debris; minimum drop-off elevations; barrier walls and crash cushions.

6.2 PROJECT SPECIFIC MITIGATION MEASURES

Certain design and construction measures will be developed or adapted for this particular project including plans for disposal and removal of Underground Storage Tanks (USTs) and hazardous

materials; mitigation for impacts to wetlands and streams; Best Management Practices to control soil erosion; and a residential/business relocation plan.

6.2.1 USTs and Hazardous Materials

During a Phase I investigation of the Project Corridor, six sites were recommended for Phase II study due to the presence of USTs within the proposed right-of-way. The Kentucky Division of Transportation (KYDOT) Design Memorandum 6-89 (Division of Design) requires identifying the exact location, and completely describing, each tank on project plans; showing the number of tanks; bidding tank removal as a separate item; and including a cautionary statement to the contractor to use extreme caution in the work; to comply with all federal, state, and local regulations; and to secure all require permits with certified personnel to do the work. Listed below are specified standards for mitigation measures concerning USTs and hazardous materials.

REQUIRED MITIGATION PROCEDURES FOR USTs AND HAZMAT		
Impact Area	Standard Specification	Methods Required
USTs	Standard practice following selection of Preferred Alternative KYDOT Design Memorandum 6-89	Complete site characterization study and mitigation plan for each site identified
Hazardous Material Sites	Standard practice following selection of Preferred Alternative	Complete site characterization study and mitigation plan for each site identified
Hazardous Spill Sites	Standard practice following selection of Preferred Alternative	Locate all spill sites. Complete site characterization study, and if required, a mitigation plan.

6.2.2 Noise Impacts

Because of the small projected increase (0.3 dBA) in noise levels and due to the proposed multiple access design for the project (requiring numerous openings which would negate barrier effectiveness), no permanent noise barriers are recommended for inclusion as part of the design for the Build Alternative. However, vegetation screening may be employed to minimize noise impacts in select areas.

Noise generated by construction activities may effect some adjacent land uses and activities to varying degrees in the short term. These construction related noise impacts will be mitigated through the use of sound-deadening equipment devices, shields and barriers. The required specifications for noise impacts by KDHSS and other control measures that can be implemented for this project to limit the effect of noise on the community during construction activities are listed below:

- Establish and publicize a visible and responsive communication process with the local community. A telephone number should be posted at construction sites for inquiries regarding project activity.
- With the exception of certain required situations, construction should be limited in the vicinity of sensitive areas to hours between 7 AM and 6 PM. The contractor should not work on Sundays or legal holidays, unless written permission is obtained from the resident engineer.
- Equipment should be garaged in an area away from residences.
- Provide sound-proof housings or enclosures for stationary noise producing machinery.
- Provide efficient silencers on air intakes of equipment.
- Provide efficient intake and exhaust mufflers on internal combustion engines.
- Perform proper maintenance on all noise producing equipment to prevent excessive rattling and vibration of metal surfaces.

- In the event the above restrictions are not adequate to keep construction noise to an acceptable level (as determined by the resident engineer), the engineer may direct the use of other controls and abatement measures.
- The contractor shall be informed of the noise sensitive sites as identified in this report, as well as the contractor's responsibility for complying with local, state and federal noise regulations and ordinances.

6.2.3 Mitigation Measures for Impacts to Wetlands and Waters of the U.S.

Impacts to jurisdictional waters/wetlands, if they occur, would not exceed 0.08 ha (0.2 ac) of wetland and 4,404 meters (14,450 linear feet) of stream. These impacted waters/wetlands are primarily located above-the-headwaters and do not represent unique aquatic habitats. Careful final design of the roadway within the identified right-of-way could avoid substantial stream impacts and minimize permitting and mitigation requirements.

Prior to the initiation of construction activities, the following measures will be required:

- A Section 404 Individual Permit will be required from the USACE due to total project impacts to over 500 linear feet of stream.
- A Section 401 Water Quality Certification will be required from the KDOW due to total project impacts to over 200 linear feet of stream.
- Mitigation of impacts through enhancement, restoration or creation of wetland and/or stream habitat.

The USFWS, KDOW, and KDFWR have all recommended mitigative measures for impacts to wetlands and streams which should be employed for the proposed project (see letters in Appendix A). These measures include:

- Clearing of existing trees and other vegetation should be restricted to the minimum amount necessary for new construction in stream and riparian zones.

- All access roads should be constructed of non-erodible fill material and possess culverts of sufficient hydraulic capacity to pass normal high flows, all stream crossings should be located perpendicular to stream flow, and all in-stream work should be conducted during low flow periods.
- Stream channelization activities should be restricted to one side of the channel, or in long reaches, alternate sides; and stream channel relocations should incorporate structural and non-structural enhancement measures.
- Banks and fill areas should be re-vegetated following construction activities with vegetation similar to that in the vicinity.

Additional stream mitigation measures will be determined by the USACE and KDOW during permitting. These will likely include stream habitat improvement through creation of riffle-pool sequences, tree planting to provide canopy cover to relocated channels, and introduction of terrestrial and aquatic plant species of high wildlife value. Overall erosion and sedimentation impacts must be minimized through a combination of methods including: limiting work to low flow periods, minimizing exposure of soil, and implementation of erosion control structures.

6.2.4 Erosion and Water Quality Controls

Land areas and waterways disturbed will be protected by the following measures:

- A strict erosion control plan, including such features as minimal soil disturbance, drainage ditches lined with rock, and use of progressive seeding and mulching.
- Sedimentation controls, such as settling basins; and silt checks, traps, and fences; and diversion channels.
- Limitation of instream activities including temporary fill and equipment crossings to the absolute minimum.

In addition, disturbance of 2.02 ha (5 ac) or more during construction activities will require a Kentucky Pollutant Discharge Elimination System (KPDES) permit. A Storm Water Best

Management Plan, in keeping with the General Storm Water Permit for construction activities, will also be prepared and a Notice of Intent (NOI) will be submitted to KDOW.

6.2.5 Relocation Impacts

Relocation is a major mitigation issue for the Build Alternative due to the 32 residences and 2 businesses (does not include illegal encroachment) to be displaced and 2 cemeteries to be relocated. The Kentucky Transportation Cabinet will coordinate the acquisition of property and the relocation of families displaced by the Build Alternative. DS&S replacement housing will be found for all displaced families. Last Resort Housing will be used only if necessary. Relocation issues for the illegal encroachments are currently being handled by the KYTC Office of General Counsel. Displaced businesses will be compensated for their loss and provided assistance in locating acceptable relocation sites. Some businesses may be closed, either by choice or necessity, due to the lack of available commercial property or the high cost of same along the KY 15 corridor.

Potential impacts to six grave sites of one cemetery within the proposed right-of-way and 14 graves sites at the Hensley Cemetery within the construction zone will require mitigative procedures. Avoidance of both cemeteries is recommended; however, if relocation is necessary, it should be done in accordance with state law and KYTC standard operating procedures. An attempt should be made to locate and notify family members and apprise them of the proceedings. A qualified archaeologist should monitor the removal. If skeletal material is encountered within the grave shaft, a physical anthropologist should excavate and analyze the remains. The six grave sites may be able to be relocated to other plots within the same cemetery but out of the proposed right-of-way. Adequate cemetery plots exist in the area to accommodate these relocations. Twelve cemeteries with over 630 vacant plots have been identified in the Perry County area. These cemeteries, with their number of vacant plots, include: Neace (100), Miller (30), unnamed Bryant/Miller (25), unnamed Neace (25), unnamed Neace (150), unnamed Smith (10), Neace and Noble (50), Fugate/Smith (5), Roberts (200), Weldon (25), Abrer (2), and Haddix (15). In addition, there are approximately 1,500 to 2,000 vacant cemetery plots in the Jackson, Kentucky area.

7.0 COMMENTS AND COORDINATION

7.1 PROJECT SUMMARY

The proposed project is to widen a section of KY 15 from a predominantly two-lane roadway to a four-lane divided highway with a flush median, in order to alleviate heavy traffic conditions in Perry County, Kentucky. The Project Corridor is an approximately 9.7 km (6.1 mi) section of KY 15 located north of Hazard, Kentucky. The southern terminus is at Morton Boulevard which is approximately 1,067 m (3,500 ft) north of the KY 15-KY 550 interchange, and the northern terminus is located at the intersection of KY 15 and KY 1067 (at the KY 15/KY28 interchange). This Environmental Assessment evaluates the potential environmental for both the Build Alternative and the No-Build Alternative.

7.2 AGENCY COORDINATION AND MEETINGS

Early coordination was carried out with various state and federal regulatory agencies including the KYTC-DEA, KYTC-District 10, KYTC-Office of General Council, FHWA Kentucky Division of Forestry, the Kentucky Department of Fish and Wildlife Resources, the Kentucky Division of Water, the Kentucky Heritage Council, the Kentucky State Nature Preserves Commission, the U.S. Fish and Wildlife Service, and the Natural Resources Conservation Service prior to field investigations and throughout the preparation of the various base reports. Letters documenting this coordination are presented in Appendix A. These letters represent initial coordination and comments for preparation of this EA with additional comments and coordination anticipated as the document review and public participation process continues.

7.3 SOCIAL, ECONOMIC AND ENVIRONMENTAL IMPACTS

The primary impact of the No-Build Alternative is that it will leave Hazard and Perry County residents and businesses with a transportation system which is inadequate for both the area's

present and future transportation needs. Heavy congestion and increasing traffic volumes in addition to the lack of left-turn storage make the roadway a growing obstacle to safe travel along KY 15, as well as a growing problem for local access to business, industrial, recreational and medical facility sites. Unless major improvements are made in the existing transportation system, the conditions along KY 15 will remain at a Level-of-Service "F" posing a threat to business development, industrial recruitment, public health and the general economic development of the community.

Many of the potential adverse impacts from the construction of the Build Alternative will be minimized through the implementation of proper mitigation measures. These impacts are briefly summarized in Table 7.

7.4 PUBLIC HEARING

A Public Hearing for this project will be held in the project area following approval of this Environmental Assessment by the Federal Highway Administration.

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TABLES

Table 1. Status of Existing KYTC Projects Along KY 15.

Item No.	Termini	Environmental Status
10-11.00	KY 15: Vancleve to Campton	Unknown
10-270.11	KY 15: Vancleve to Haddix	EA Approved 4 10 98 Conditional Housing Plan
10-281	I-Reconstruction @ Bethany on Mountain Parkway and KY 15	PCE 6/4/98
10-285 and 10-286	10-285 - KY 15: Hazard to Jackson (from south end of 10-270 to Lost Creek) 10-286 - KY 15: Hazard to Jackson (from south end of 10-285 at Lost Creek to KY 1067)	EA to be submitted in 1999
10-269.00	KY 15: Hazard to Jackson (KY 1067 to KY 550 @ Hazard)	EA to be resubmitted in 1999 for FHWA review

Table 2. Traffic Forecast for the KY 15 Project Corridor for 1997 and the Design Year, 2020. Perry County, Kentucky.

Segment	Location	1997 Traffic Volume		Projected 2020 Traffic Volume (Average Growth)		Projected 2020 Traffic Volume (High Growth)	
		ADT*	DHV*	ADT	DHV	ADT	DHV
A	KY 15 from Morton Boulevard to Daniel Boone Parkway (South)	23,400	2,600	37,300	4,140	40,500	4,680
B	KY 15 from Daniel Boone Parkway (North) to KY 267	15,400	1,700	24,900	2,770	29,300	3,540
C	KY 15 from KY 267 to Second Creek	13,700	1,500	22,300	2,490	27,600	3,410
D	KY 15 from Second Creek to KY28	10,000	1,100	16,100	1,810	21,400	2,730

Source: Kentucky Transportation Cabinet, Intra-departmental Memo, Perry County Traffic Forecast, November 25, 1997.

*ADT = Average Daily Traffic

*DHV = Design Hour Volumes

Table 3. One-Hour Carbon Monoxide Concentrations (parts per million)*.

Receptor I.D.	1997 Existing	2020 No-Build	2020 Build
1	2.8	2.9	3.0
2	3.5	3.7	3.2
3	3.9	4.2	4.6
4	3.1	3.5	3.5
5	5.0	4.2	4.2
6	4.6	4.9	5.0
7	6.5	6.2	6.2
8	4.5	5.6	5.6
9	2.9	3.2	3.7
10	3.4	4.2	3.8
11	2.4	2.4	2.5
12	3.2	3.6	3.2
13	2.3	2.4	2.4
14	3.9	4.4	3.3
15	3.6	4.0	3.8
16	2.2	2.2	2.2
17	2.2	2.2	2.4
18	2.7	3.1	3.3
19	2.2	2.4	2.3
20	2.7	3.2	2.8
21	2.2	2.2	2.3
22	2.6	3.0	2.6
23	2.4	2.8	3.1
24	2.4	2.6	2.5
25	2.2	2.4	2.4
26	3.9	4.8	3.6
27	2.2	2.2	2.4
28	2.5	2.8	2.7
29	2.2	2.4	2.4
30	2.4	2.6	2.5

*Includes one-hour background concentration of 2.0 ppm

Entered by: MBE 4-28-98

Checked by: JFG 4-29-98

Table 4. Eight-Hour Carbon Monoxide Concentrations (parts per million)*.

Receptor I.D.	1997 Existing	2020 No-Build	2020 Build
1	1.8	1.8	1.9
2	2.3	2.4	2.0
3	2.5	2.7	3.0
4	2.0	2.3	2.3
5	3.3	2.7	2.7
6	3.0	3.2	3.3
7	4.4	4.1	4.1
8	3.0	3.7	3.7
9	1.8	2.0	2.4
10	2.2	2.7	2.5
11	1.5	1.5	1.6
12	2.0	2.3	2.0
13	1.4	1.5	1.5
14	2.5	2.9	2.1
15	2.3	2.6	2.5
16	1.3	1.3	1.3
17	1.3	1.3	1.5
18	1.7	2.0	2.1
19	1.3	1.5	1.4
20	1.7	2.0	1.8
21	1.3	1.3	1.4
22	1.6	1.9	1.6
23	1.5	1.8	2.0
24	1.5	1.6	1.6
25	1.3	1.5	1.5
26	2.5	3.2	2.3
27	1.3	1.3	1.5
28	1.6	1.8	1.7
29	1.3	1.5	1.5
30	1.5	1.6	1.6

*Includes eight-hour background concentration of 1.2 ppm

Entered by: MBE 4-28-98

Checked by: JFG 4-29-98

Table 5. Free Flow Pollutant Emission Factors.

Emission Factors, Grams Per Kilometer* (grams per mile)												
							Particulates					
Alternatives	CO		HC		NOx		Exhaust and Tirewear		Reentrained			
1997 Existing 55 MPH	10.01	(16.1)	1.12	(1.80)	2.00	(3.21)	0.25	(0.4)	2.18	(3.5)		
1997 Existing 50 MPH	9.94	(16.0)	1.14	(1.83)	1.73	(2.79)	0.25	(0.4)	2.18	(3.5)		
1997 Existing 35 MPH	12.62	(20.3)	1.37	(2.21)	1.53	(2.46)	0.25	(0.4)	2.18	(3.5)		
2020 No-Build 55 MPH	5.97	(9.6)	0.79	(1.27)	1.50	(2.41)	0.19	(0.3)	2.18	(3.5)		
2020 No-Build 35 MPH	8.95	(14.4)	0.98	(1.57)	1.18	(1.90)	0.19	(0.3)	2.18	(3.5)		
2020 Build 55 MPH	5.97	(9.6)	0.79	(1.27)	1.50	(2.41)	0.19	(0.3)	2.18	(3.5)		
2020 Build 35 MPH	8.95	(14.4)	0.98	(1.57)	1.18	(1.90)	0.19	(0.3)	2.18	(3.5)		
Total Free Flow Emissions, Kilograms Per Day (tons per day)												
Alternatives	CO		HC		NOx		Exhaust and Tirewear		Reentrained		Particulates (total)	
1997 Existing	1,379.46	(1.52)	155.68	(0.17)	253.13	(0.28)	33.98	(0.04)	297.34	(0.33)	331.32	(0.36)
2020 No-Build	1,625.81	(1.79)	213.14	(0.23)	398.19	(0.44)	49.94	(0.05)	582.59	(0.64)	632.52	(0.70)
2020 Build	1,628.53	(1.79)	213.50	(0.23)	398.88	(0.44)	50.02	(0.06)	583.58	(0.64)	633.60	(0.70)
* CO emission factors based on winter months HC and Nox emission factors based on summer months for most conservative estimates												

Entered by: MBE 4-28-98

Table 6. Federal and State Listed Species Reported for Perry County, Kentucky.

Species Scientific Name	Species Common Name	Status Code*	Habitat
<u>Plants</u> <i>Juglans cinerea</i>	White Walnut	S	Grows on ravine slopes and rich mesophytic woods
<u>Fish</u> <i>Etheostoma sagitta spilotum</i>	Arrow Darter	S	Occurs in the upper Kentucky and Cumberland River drainages in Kentucky and Tennessee
<i>Phoxinus cumberlandensis</i>	Black-sided Dace	T	Occurs in the upper Cumberland River drainages in Kentucky
<u>Birds</u> <i>Picoides borealis</i>	Red-cockaded Woodpecker	E	Inhabits mature open pine woodlands
<u>Mammals</u> <i>Myotis sodalis</i>	Indiana Myotis	E	Inhabits mostly riparian and floodplain areas of small to medium size in the summer, and hibernates in caves in the winter
<i>Neotoma floridana magister</i>	Eastern Woodrat	C2	Occurs in a variety of habitats: lowland hardwoods, rocky cliffs, marshes, mountains, coastal plains, swamps and grassland
<i>Plecotus rafinesquii</i>	Southeastern Big-eared Bat	C2	Inhabits forested regions, may be found in abandoned or collapsed buildings and rarely found in caves in the summer; and may hibernate in caves for the winter

Note: Species list compiled from information received from the Kentucky State Nature Preserves Commission, the U.S. Fish and Wildlife Service, and the Kentucky Division of Fish and Wildlife.

*Status: E = Federally Endangered
 T = Federally Threatened
 C2 = Federal Species of Concern
 S = State Species of Concern

Table 7. Summary of Potential Environmental Impacts of the KY 15 Environmental Assessment.

Impacted Resource	Potential Impact
Terrestrial Habitat	Minor temporary negative impacts to upland habitats from road construction activities.
Farmland	There is no farmland within the Project Corridor.
Socio-economic Resources	There is the potential for significant positive and negative impacts to socio-economic resources. The primary negative impacts will occur during the relocation process.
Air Quality	There will be no adverse impacts to air quality. CO, HC, NOx and vehicular particulate emissions are expected to be within NAAQS standards.
Noise	There may be minor temporary negative impacts. The FHWA Noise Abatement Criteria are exceeded at four of ten sites along the Project Corridor.
Water Quality	There is the potential for negative short-term impacts to water quality from construction activities including siltation, erosion and sedimentation. There will be no long-term impacts to water quality.
Wetlands and Water of the U.S.	There is the potential for wetlands short and long-term impacts to 0.08 ha (0.2 ac) of wetland and 4.404 m (14,450 linear ft.) of stream.
Floodplain	There are no impacts to the encroachment of the 100-year floodplain within the Project Corridor.
Rare, Threatened, and Endangered Species	There is potential habitat for three federally listed species within the Project corridor.
Historic and Archaeological Resources	There is a potential for impacts to 6 grave sites at the southernmost cemetery and all 14 graves at the Hensley Cemetery.
Hazardous Waste	There is a potential for impacts to the environment from hazardous waste. Six locations within the Project Corridor have been designated for further study.

Table 8. Summary of Socio-economic Impacts of the KY 15 Environmental Assessment.

IMPACT	No-Build	Segment 1*	Segment 2*
Socio-economic Interaction	MaP	B	B
Road User Costs	MaP	B	B
Economic Activities	MaP	B	B
Underground Storage Tanks	N	MP-M	MP-M
Mobility	MaP	B	B
Land Use Improvements	N	N	N
Safety	MaP	B	B
Residential Displacement	N	MP-M	MaP-M
Commercial Displacement	N	MP-M	MaP-M
Construction Impacts	N	MT-M	MaT-M
Energy Impacts	MaP	B	B
Educational Impacts	MaP	B	B
Medial Costs/Availability	MaP	B	B
Agricultural	N	N	N
Disadvantaged Groups Impacts	MP	N	N
Aesthetic Impacts	MP	B	B
<p>N = None/Negligible</p> <p>MT-M = Minor Adverse, Temporary but can be Mitigated</p> <p>MP-M = Minor Adverse, Permanent but can be Mitigated</p> <p>MP = Minor Adverse, Permanent</p> <p>MaT-M = Major Adverse, Temporary but can be Mitigated</p> <p>MaP-M = Major Adverse, Permanent but can be Mitigated</p> <p>MaP = Major Adverse, Permanent</p> <p>B = Beneficial</p>			

*Segment 1 = Morton Boulevard to KY 267

Segment 2 = KY 267 to (just south of) KY 28

Table 9. Existing LEQ Exterior Noise Levels (dBA).

Site Number	Distance from centerline meters (feet)	Distance from Build Alternative Centerline meters (feet)	Description	Receptors	Measured 1993 Existing LEQ
1	225 (740)	225 (740)	Apartments	25-30 units	60.0
2	116 (380)	116 (380)	Motel	Motel, Restaurant and Gas	54.6
3	30 (98)	*	SF Home	3 SF Homes	60.1
4	49 (160)	49 (160)	SF Home	3 SF Homes	58.2
5	24 (78)	41 (135)	Church of God	1 Church	68.8
6	56 (185)	75 (245)	Bible Baptist Church/ School	1 Church School	63.2
7	37 (120)	*	SF Home	3 SF Homes	60.6
8	34 (112)	46 (150)	SF Home	6 SF Homes	66.5
9	110 (360)	101 (330)	Eversole Cemetery	Cemetery, 3 SF Homes, Fugates Entertainment Center	59.2
10	43 (140)	55 (180)	SF Home	7 SF Homes	63.7

* Receptor is removed in the Build Alternative

Entered By: MBE 2-12-98

Checked By: JFG 2-12-98

Table 10. Summary of Noise Analysis.

Site Number	Activity Category	Measured 1993 Existing (LEQ)	Modeled 1997 (LEQ)	Modeled 2020 No Build (LEQ)	Modeled 2020 Build (LEQ)	2020 Build minus 1997 (LEQ)	2020 Build minus No Build (LEQ)
1	B	60.0	62.7	65.2	65.2	2.5	0.0
2	B	54.6	58.6	61.1	61.1	2.5	0.0
3	B	60.1	62.6	65.2	*	*	*
4	B	58.2	60.2	63.7	59.6	-0.6	-4.1
5	B	68.8	71.5	75.0	71.3	-0.2	-3.7
6	B	63.2	67.2	69.8	67.1	-0.1	-2.7
7	B	60.6	62.9	66.5	*	*	*
8	B	66.5	69.6	73.2	69.8	0.2	-3.4
9	B	59.2	62.1	65.7	66.0	3.9	0.3
10	B	63.7	66.2	69.8	68.1	1.9	-1.7

*Receptor is removed in the Build Alternative.

Bold type values exceed the Noise Abatement Criteria (67 dBA)

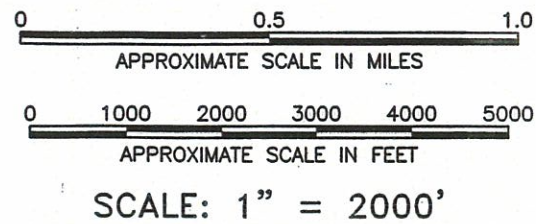
Entered By: MBE 2-12-98
 Checked By: JFG 2-12-98

Table 11. Summary of Potential Hazardous Material Sites Within the Project Corridor.

Parcel	Description	Location	Hazard Type	Recommendations
15	Gas Station/ Convenience Store	Hazard Kwik Mart (BP)	Gasoline, oil, UST	Additional site-specific investigation
27	Gas Station/ Convenience Store	Highwayman Chevron	Gasoline, oil, UST	Additional site-specific investigation
48	Auto Tire and Repair	Combs Tire Service	Solvents, oil, gasoline, potential hazardous waste	No further study
51	Auto Repair	Combs Garage (Combs Marathon)	Gasoline, diesel, UST	No further study
57	Truck, Heavy Equip. Repair	Pollard Truck Repair	Diesel, oil, UST	No further study
313	Gas Station/ Convenience Store	Lee's Mini Mart	Gasoline, potential oil and solvents	No further study
324	Auto Body Repair and Wrecker Service	Howard & Hoskins Body Shop	Oil, potential fuel	No further study
348	Lumber Hauling (Former Sawmill)	D & S Lumber Company	Fuel, diesel, potential hazardous materials	Additional site-specific investigation
352	Supply Store (Former Beauty Shop and Gas Station)	Kids Stuff and Us	Fuel, UST	Additional site-specific investigation
374A	Restaurant (Suspect UST Site)	Fast Break Restaurant	Potential fuel, UST	Additional site-specific investigation
374B	Gas Station/ Convenience Store	BP/Gulf Super Mart	Gasoline, kerosene, oil, potential hazardous materials, UST	Additional site-specific investigation

EXHIBITS

SOURCE: U.S. GEOLOGIC SURVEY; 7.5 MINUTE SERIES (TOPOGRAPHIC) HAZARD NORTH, KENTUCKY QUADRANGLE, DATED 1992; AND KRYPTON, KENTUCKY QUADRANGLE, DATED 1972.



NORTH

END PROJECT
STA. 455+00

BEGIN PROJECT
STA. 135+00

MORTON BLVD.

SEGMENT 1

SEGMENT 2

LEGEND

PROPOSED BUILD ALTERNATIVE

CROSS COUNTRY ALTERNATIVES
CONSIDERED BUT ELIMINATED

PROPOSED KY 15/KY 28 INTERSECTION
REALIGNMENT (ITEM NO. 10-285+286)

KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY; KY 15 NORTH
ITEM NO. 10-269.01
PROJECT NO. 50545-7-2263



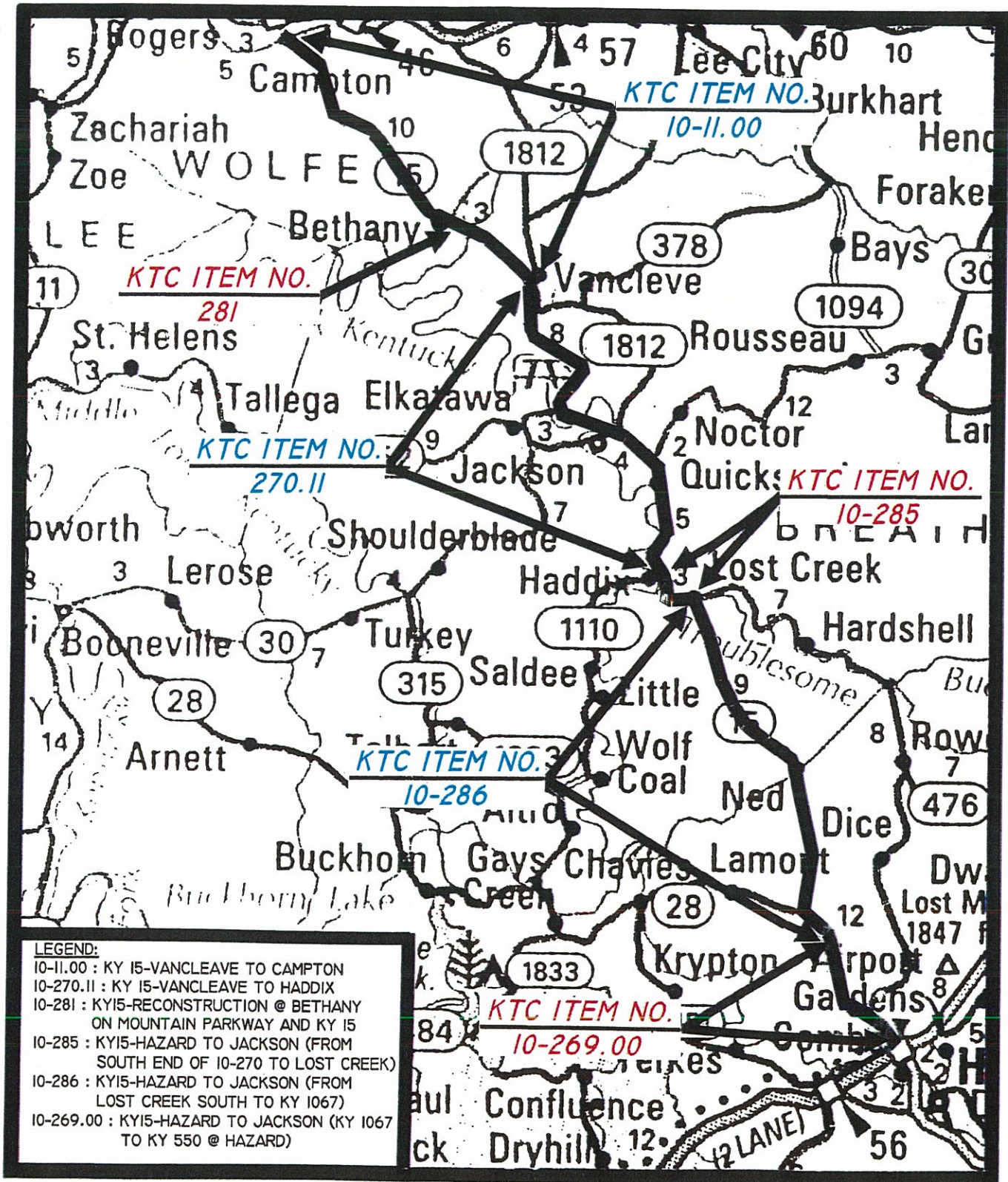
LAW

ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

9810 BLUEGRASS PARKWAY
LOUISVILLE, KENTUCKY
40299

(502) 495-5800
FAX (502) 495-5801

PROJECT LOCATION MAP



KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY; KY 15 NORTH
ITEM NO. 10-269.01

PROJECT NO. 50545-7-2263



LAW

ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

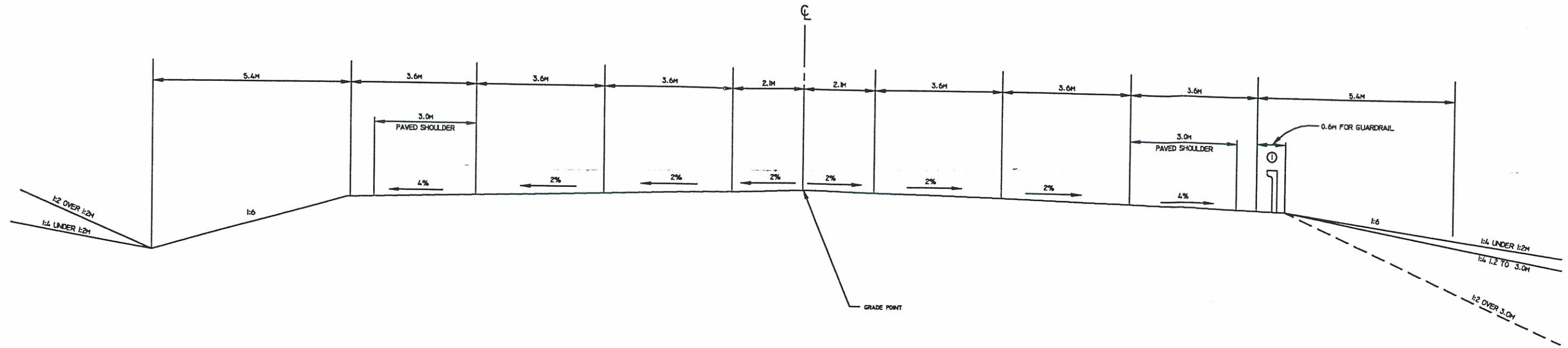
9810 BLUEGRASS PARKWAY
LOUISVILLE, KENTUCKY
40299

(502) 495-5800
FAX (502) 495-5801

EXISTING KTC PROJECT ALONG KY 15

CADD FILE: 970664SM
PLOT DATE: 1/12/98

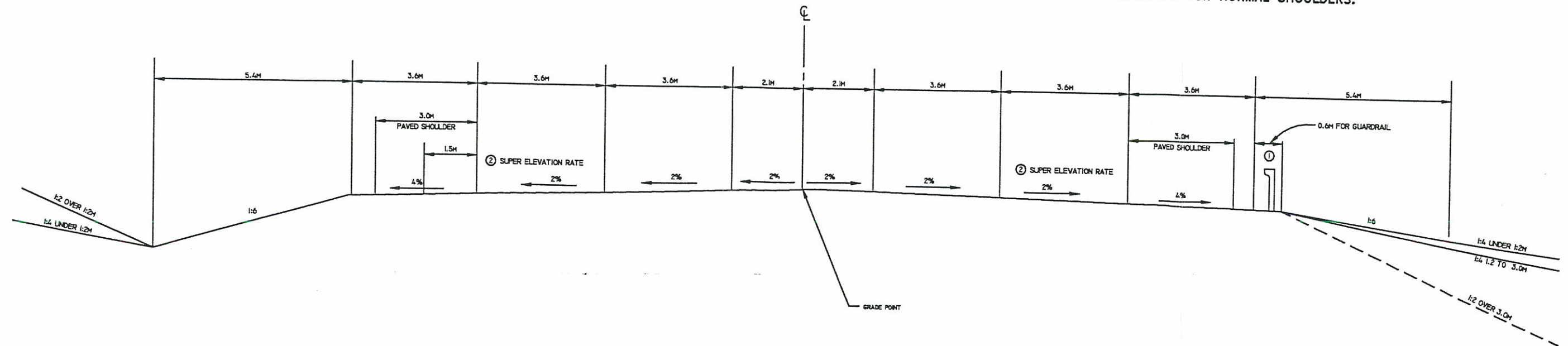
EXHIBIT 3



NORMAL CUT / FILL SECTION

NOTE: SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER.

- ① SHOULDERS SHALL BE WIDENED 0.6M WHERE GUARDRAIL IS TO BE INSTALLED
- ② SUPERELEVATED SHOULDERS SHALL BE CONSTRUCTED TO SUPERELEVATION. EXCEPT NOT FLATTER THAN THE SLOPES INDICATED FOR NORMAL SHOULDERS.



SUPERELEVATED SECTION

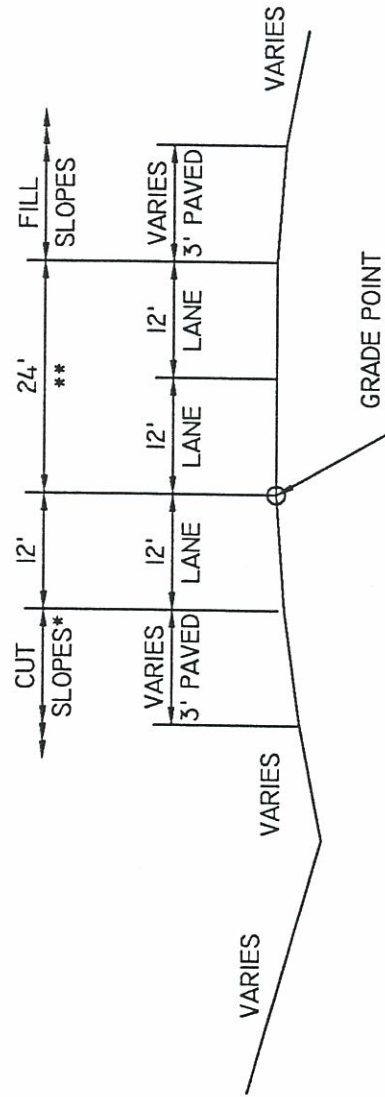
NOTE: DRAWINGS ARE NOT TO SCALE

KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY; KY 15 NORTH
ITEM NO. 10-269.01
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9810 BLUEGRASS PARKWAY
LOUISVILLE, KENTUCKY 40299
(502) 495-5800
FAX (502) 495-5801

TYPICAL SECTION
BUILD ALTERNATIVE

SOURCE: GRW ENGINEERS, INC. 1995.



EXISTING TYPICAL SECTION

SCALE: 1"=20'-0"

* ROCK CUT SLOPES VARY
UP TO 20:1.
** 2 - 12' LANES ON
UPGRADE SEGMENTS.

KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY, KY 15 NORTH
ITEM NO. 10-269.01
PROJECT NO. 50545-7-2263

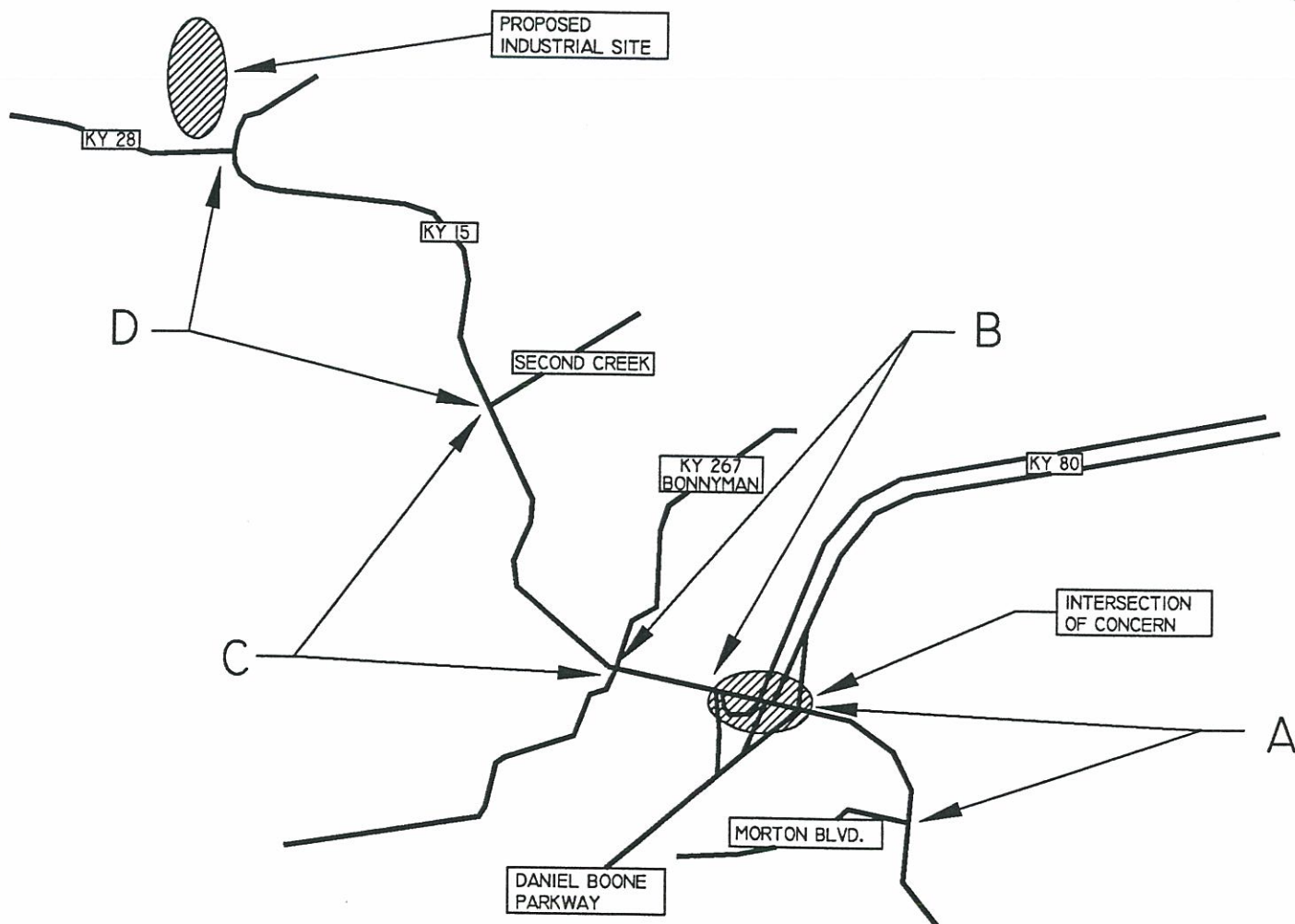
LAW
ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
9910 BLUEGRASS PARKWAY
LOUISVILLE, KENTUCKY 40299
(502) 496-5800
FAX (502) 496-5801

EXISTING TYPICAL SECTION

CADD FILE: 980027
PLOT DATE: 20 JAN 98

DRAWN BY: D. KLINE
EXHIBIT 5

SOURCE: KENTUCKY TRANSPORTATION CABINET.
 INTRA - DEPARTMENTAL MEMO.
 PERRY COUNTY TRAFFIC FORECAST. 25 NOVEMBER 1997.



LEGEND:

- A - KY 15 FROM MORTON BOULEVARD TO DANIEL BOONE PARKWAY (SOUTH).
- B - KY 15 FROM DANIEL BOONE PARKWAY (NORTH) TO KY 267.
- C - KY 15 FROM KY 267 TO SECOND CREEK.
- D - KY 15 FROM SECOND CREEK TO KY 28.

KENTUCKY TRANSPORTATION CABINET
 DIVISION OF ENVIRONMENTAL ANALYSIS
 PERRY COUNTY; KY 15 NORTH
 ITEM NO. 10-269.01

PROJECT NO. 50545-7-2263



LAW

ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

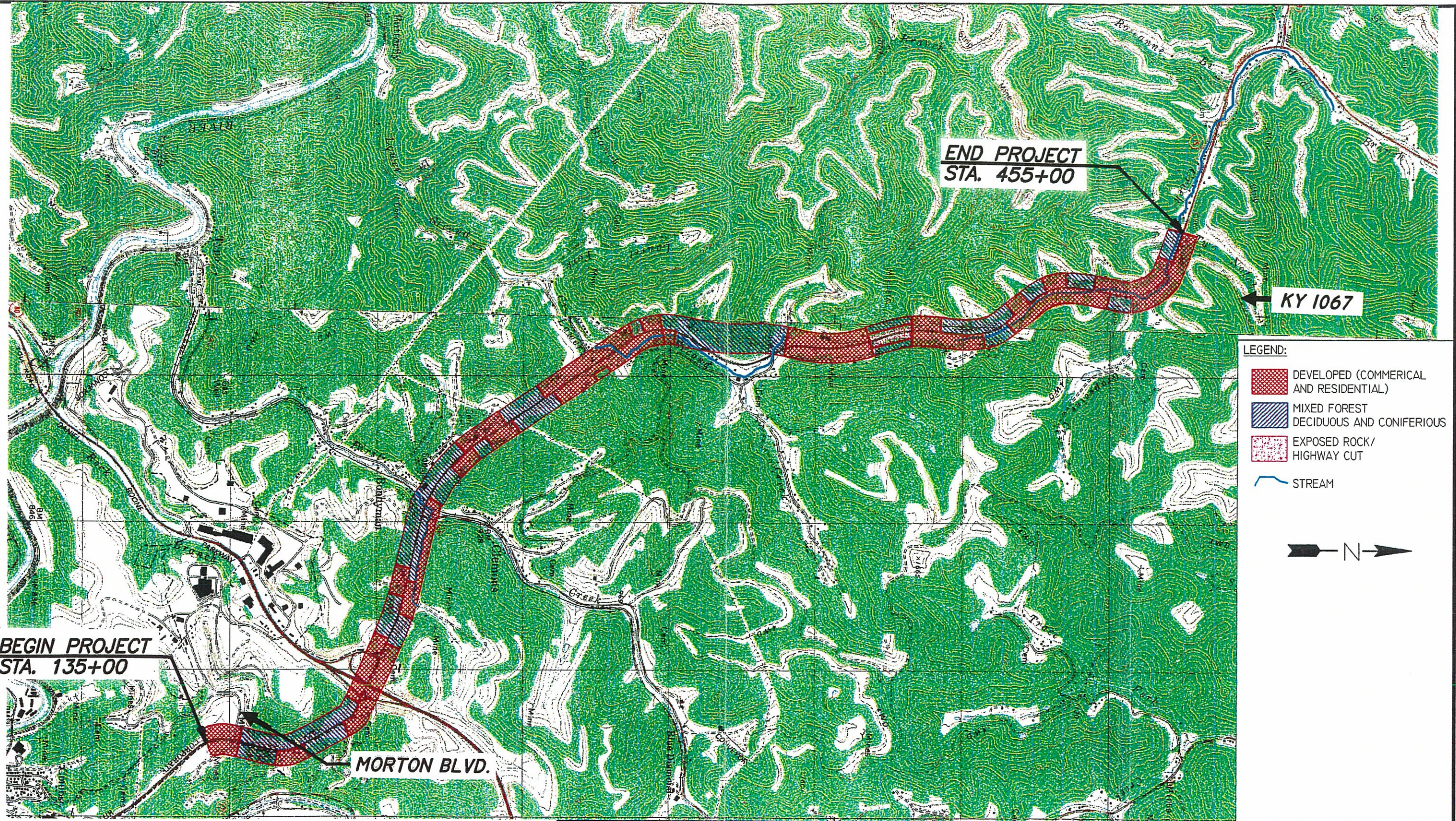
9810 BLUEGRASS PARKWAY
 LOUISVILLE, KENTUCKY
 40299

(502) 495-5800
 FAX (502) 495-5801

TRAFFIC SURVEY LOCATIONS
 KY 15 FROM MORTON BOULEVARD
 TO KY 28

CADD FILE: 970664
 PLOT DATE: 12/5/97

EXHIBIT 6



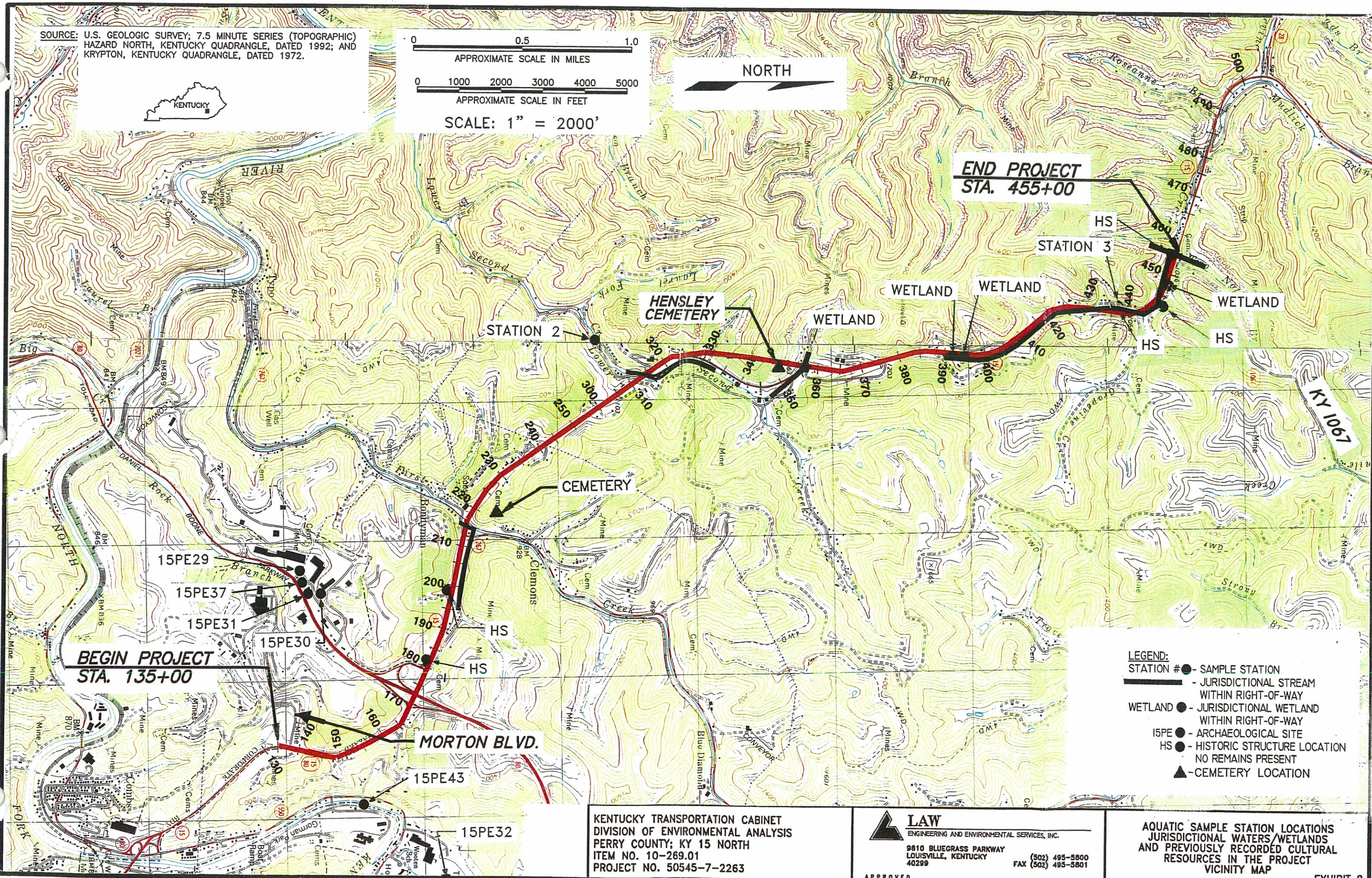
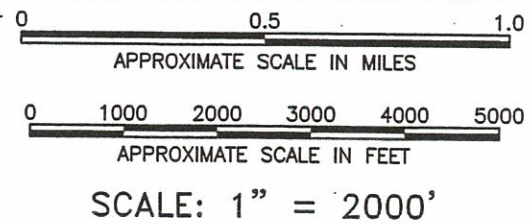
KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY; KY 15 NORTH
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TERRESTRIAL HABITAT MAP

EXHIBIT 7

SOURCE: U.S. GEOLOGIC SURVEY; 7.5 MINUTE SERIES (TOPOGRAPHIC) HAZARD NORTH, KENTUCKY QUADRANGLE, DATED 1992; AND KRYPTON, KENTUCKY QUADRANGLE, DATED 1972.



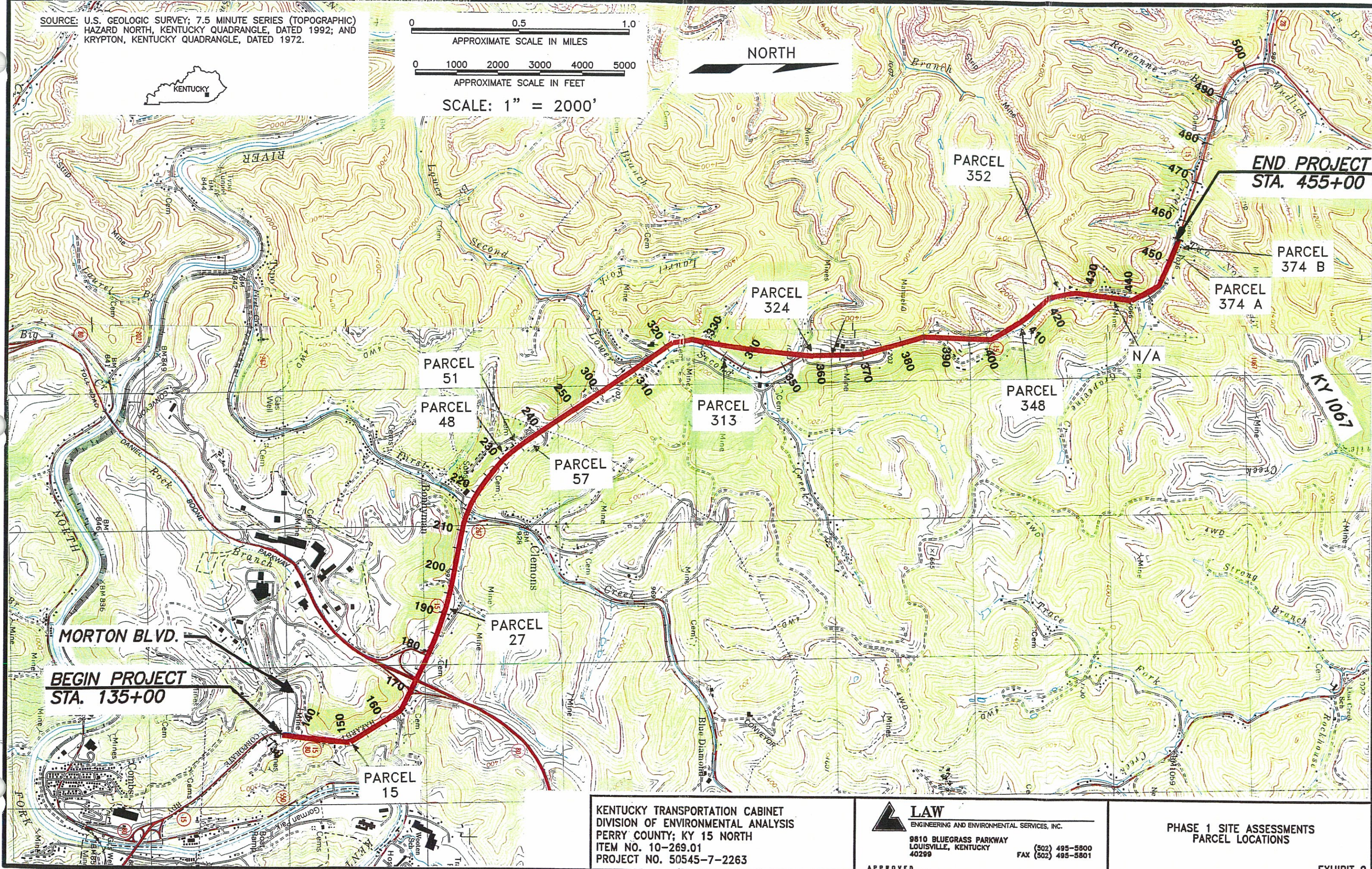
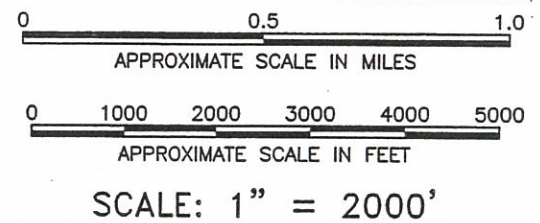
- LEGEND:**
- STATION # ● - SAMPLE STATION
 - JURISDICTIONAL STREAM WITHIN RIGHT-OF-WAY
 - WETLAND ● - JURISDICTIONAL WETLAND WITHIN RIGHT-OF-WAY
 - 15PE ● - ARCHAEOLOGICAL SITE
 - HS ● - HISTORIC STRUCTURE LOCATION NO REMAINS PRESENT
 - ▲ - CEMETERY LOCATION

KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY; KY 15 NORTH
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AQUATIC SAMPLE STATION LOCATIONS
JURISDICTIONAL WATERS/WETLANDS
AND PREVIOUSLY RECORDED CULTURAL
RESOURCES IN THE PROJECT
VICINITY MAP

SOURCE: U.S. GEOLOGIC SURVEY; 7.5 MINUTE SERIES (TOPOGRAPHIC)
HAZARD NORTH, KENTUCKY QUADRANGLE, DATED 1992; AND
KRYPTON, KENTUCKY QUADRANGLE, DATED 1972.

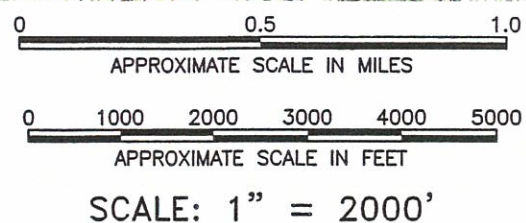


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LOUISVILLE, KENTUCKY 40299
(502) 495-5800
FAX (502) 495-5801

PHASE 1 SITE ASSESSMENTS
PARCEL LOCATIONS

SOURCE: U.S. GEOLOGIC SURVEY; 7.5 MINUTE SERIES (TOPOGRAPHIC)
HAZARD NORTH, KENTUCKY QUADRANGLE, DATED 1992; AND
KRYPTON, KENTUCKY QUADRANGLE, DATED 1972.



NORTH

END PROJECT
STA. 455+00

BEGIN PROJECT
STA. 135+00

MORTON BLVD.

LEGEND:
① NOISE ANALYSIS SITE

KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY; KY 15 NORTH
ITEM NO. 10-269.01
PROJECT NO. 50545-7-2263



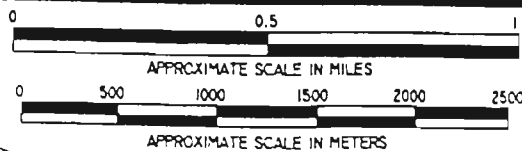
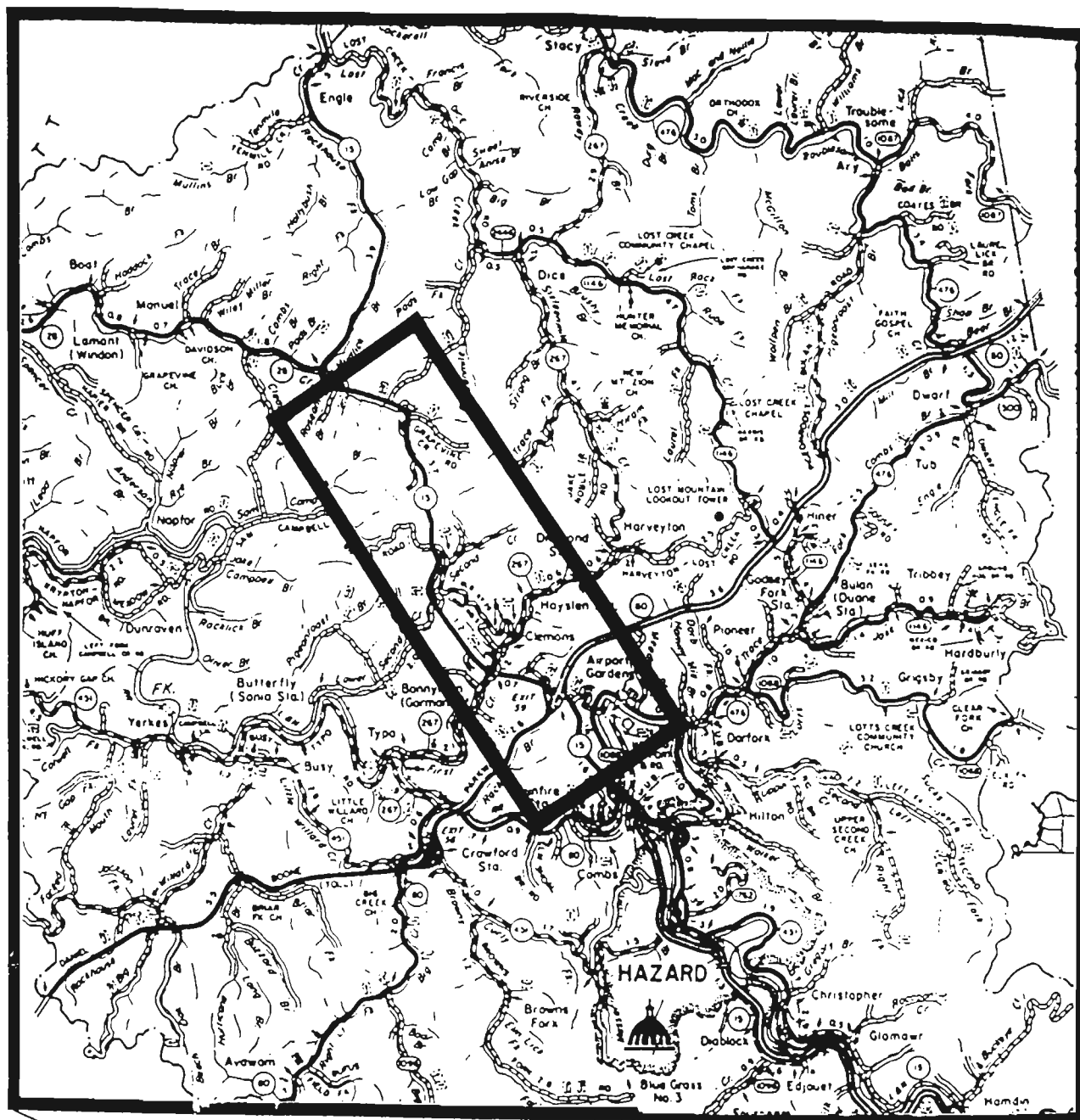
LAW
ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
9810 BLUEGRASS PARKWAY
LOUISVILLE, KENTUCKY 40299
(502) 495-5800
FAX (502) 495-5801

NOISE ANALYSIS SITE LOCATION MAP

EXHIBIT 10

SOURCE: KENTUCKY COUNTY MAPS, PERRY COUNTY. C.J. PUETZ THOMAS PUBLICATIONS, LTD.
LYNDON STATION, WIS.

N



DRAWN BY: D. KLINE

APPROVED:

KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY; KY 15 NORTH
ITEM NO. 10-269.01
PROJECT NO. 50545-7-2263



LAW

ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

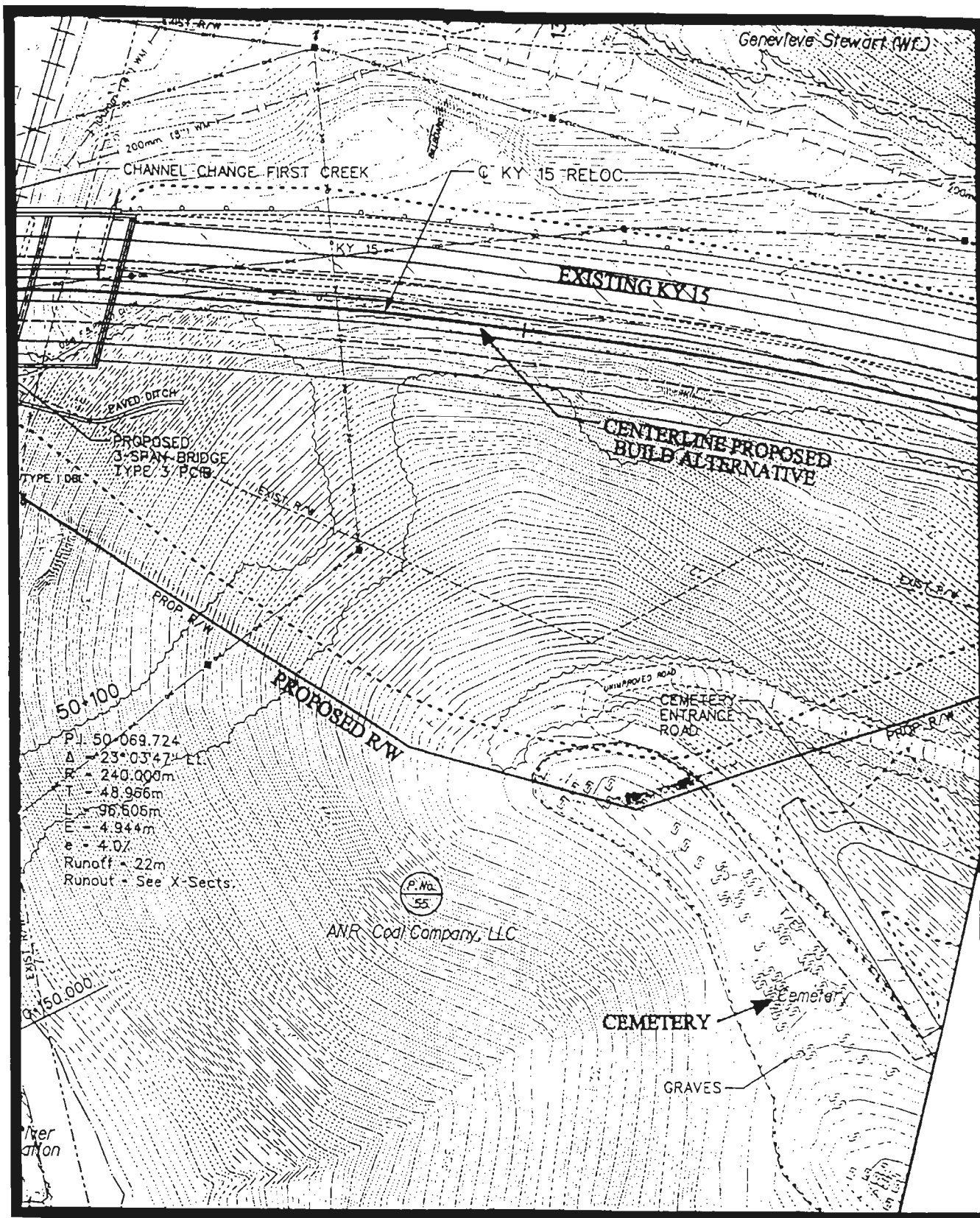
9810 BLUEGRASS PARKWAY
LOUISVILLE, KENTUCKY 40299

(502) 495-5800
FAX (502) 495-5801

SITE LOCATION MAP

CADD FILE: 970663
PLOT DATE: 20 JAN 98

EXHIBIT I



KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY, KY 15 NORTH
ITEM NO. 10-269.01

PROJECT NO. 50545-7-2263

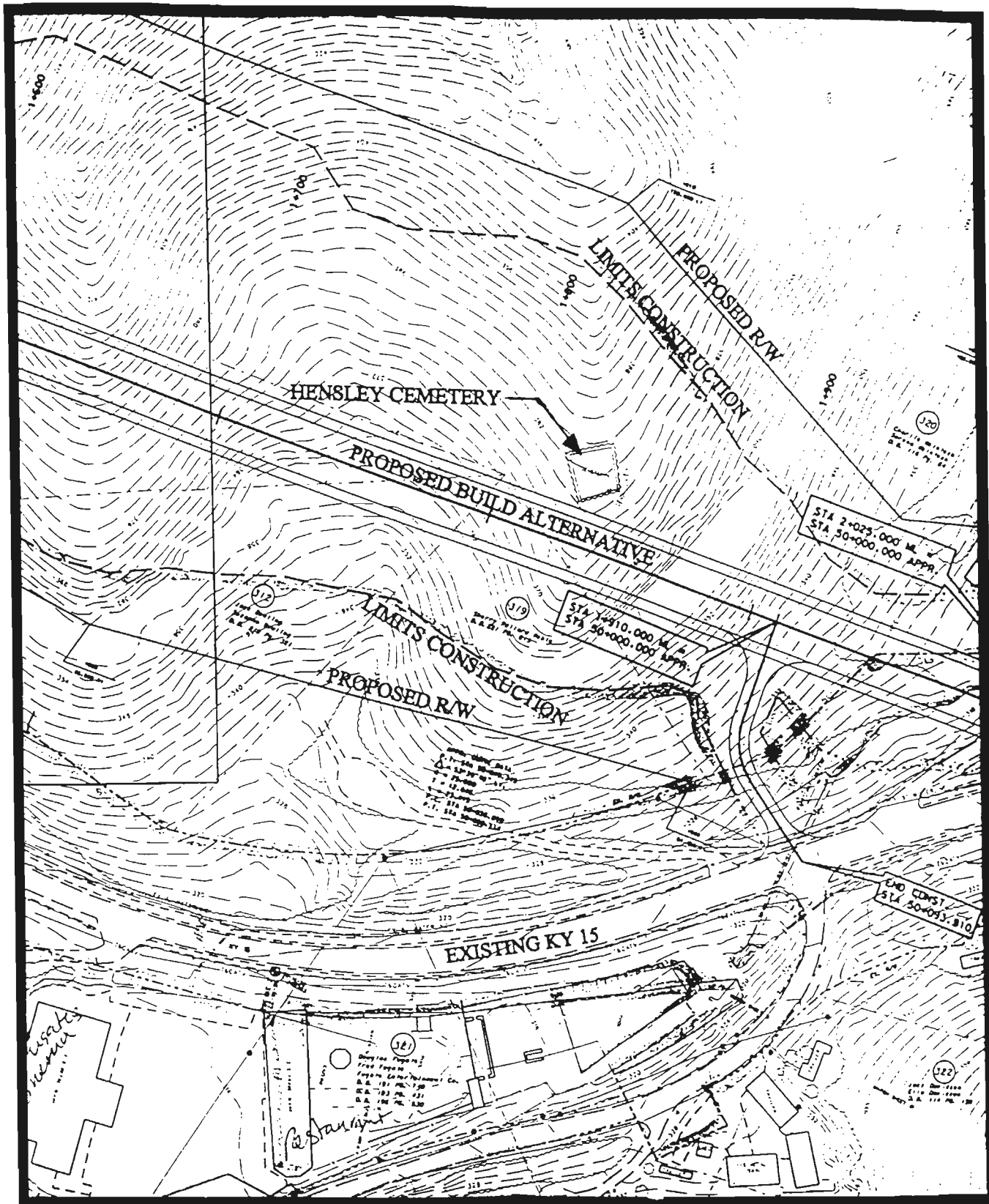


LAW
ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
9810 BLUEGRASS PARKWAY
LOUISVILLE, KENTUCKY 40299
(502) 495-5800
FAX (502) 495-5801

**SOUTHERN MOST CEMETERY
LOCATION MAP**

CADD FILE: 980027_3
PLOT DATE: 04/07/99

EXHIBIT 11



KENTUCKY TRANSPORTATION CABINET
DIVISION OF ENVIRONMENTAL ANALYSIS
PERRY COUNTY; KY 15 NORTH
ITEM NO. 10-269.01

PROJECT NO. 50545-7-2263



LAW
ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
9810 BLUEGRASS PARKWAY
LOUISVILLE, KENTUCKY 40299
(502) 495-5800
FAX (502) 495-5801

**HENSLEY CEMETERY
LOCATION MAP**

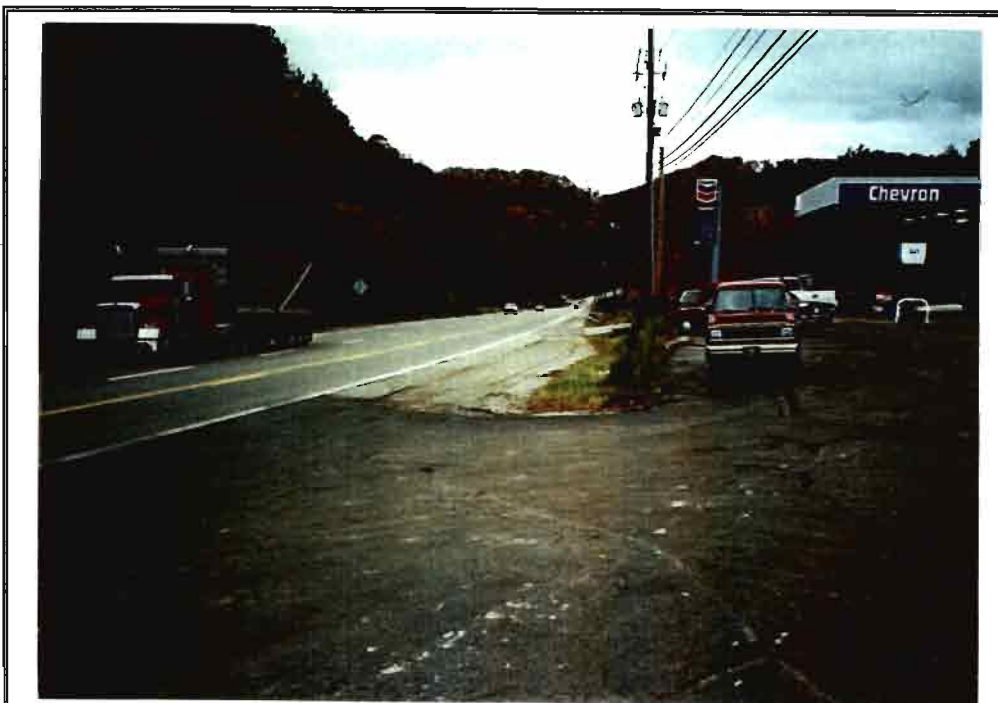
CADD FILE: 980027_3
PLOT DATE: 04/07/99

EXHIBIT 12

PHOTOGRAPHS



Photograph 1: KY 15, north of intersection with Hwy 80 (Daniel Boone Parkway) from the Daniel Boone Coffee Shop parking lot, looking north. KY 15 Environmental Assessment. November 7, 1997.



Photograph 2. Commercial development along KY 15, looking north from the Chevron parking lot. KY 15 Environmental Assessment. November 7, 1997.



Photograph 3. Second Creek, running behind Lee's Mini Mart and Noble's Liquor on the eastern side of Kentucky 15, looking south. KY 15 Environmental Assessment. November 7, 1997.



Photograph 4: A roadside ditch along the western side of KY 15 towards the northern end of the Project Corridor, looking north. KY 15 Environmental Assessment. November 7, 1997.



Photograph 5. A small wetland area adjacent to KY in the Project Corridor. KY 15 Environmental Assessment. March 24, 1993.



Photograph 6. Hensley Cemetery, facing northwest. KY 15 Environmental Assessment. January 11, 1999.

APPENDIX A

COMMENTS AND COORDINATION CORRESPONDENCE

1. Kentucky Heritage Council – 6/22/93	A-1
2. Kentucky Heritage Council – 8/4/93	A-2
3. Kentucky Heritage Council – 9/16/93	A-3
4. Kentucky State Nature Preserves Commission – 12/19/93	A-4
5. Kentucky State Nature Preserves Commission – 12/17/97	A-6
6. Kentucky Department of Fish and Wildlife Resources – 1/93	A-8
7. Kentucky Department of Fish and Wildlife Resources – 7/12/94	A-11
8. Kentucky Department of Fish and Wildlife Resources – 12/24/97	A-13
9. Kentucky Division of Water – 8/22/94	A-15
10. Kentucky Division of Water – 12/18/97	A-17
11. Kentucky Division of Water – 12/22/97	A-22
12. Kentucky Division of Air Quality – 11/9/93	A-23
13. Kentucky Division of Forestry – 12/18/97	A-26
14. USDA Soil Conservation Service – 12/9/97	A-27
15. USDA Natural Resources Conservation Service – 12/16/97	A-28
16. U.S. Fish and Wildlife Service – 1/27/93	A-29
17. U.S. Fish and Wildlife Service – 10/20/93	A-30
18. U.S. Fish and Wildlife Service – 1/27/98	A-35
19. Conceptual Stage Relocation Assistance Report – 3/21/95	A-37
20. Conceptual Stage Relocation Assistance Report – 4/26/95	A-39
21. Conceptual Stage Relocation Assistance Report – 7/24/95	A-43
22. Kentucky Heritage Council – 4/26/99	A-45



RECEIVED

JUN 28 1993

Education and Humanities Cabinet

KENTUCKY HERITAGE COUNCIL

The State Historic Preservation Office

Breereton C. Jones
Governor
Sherry K. Jelsma
Cabinet Secretary

David L. Morgan
Executive Director
and SHPO

June 22, 1993

Mr. Carlos Solis
Senior Archaeologist
Law Environmental, Inc.
112 Townpark Drive
Kennesaw, Georgia 30144-5599

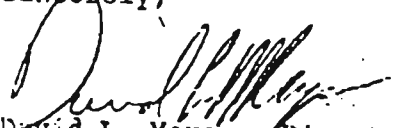
53-3512

Dear Mr. Solis:

Thank you for your letter of May 26, 1993 concerning the standing structures within the right-of-way for the Highway 15 Expansion Corridor in Perry County, Kentucky. You note that the project area only contains recent structures less than 50 years of age consisting of mobile homes, prefabricated homes, and concrete block structures. In light of this information, I do not feel that it is appropriate to require a survey by a professional architectural historian and request the submission of a formal architectural/historic survey report.

Should you have any questions, feel free to contact Charles Hockensmith of my staff at (502) 564-7005.

Sincerely,


David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

DLM/cdh





Education and Humanities Cabinet

KENTUCKY HERITAGE COUNCIL

The State Historic Preservation Office

Brereton C. Jones
Governor
Sherry K. Jelsma
Cabinet Secretary

David L. Morgan
Executive Director
and SHPO

August 4, 1993

Mr. D. W. Lambert, Director
Division of Environmental Analysis
Transportation Cabinet
419 Ann Street
Frankfort, Kentucky 40622

Dear Mr. Lambert:

The State Historic Preservation Office has received for review and approval an archaeological survey report entitled "Draft Base Report of Cultural Resources Assessment for the Kentucky Highway 15, Hazard-Jackson Road, Perry County, Kentucky" by Law Environmental.

Our initial review indicates that the report generally follows the "Specifications for Archaeological Fieldwork and Assessment Reports". However, the title page does not list the author, lacks the Principal Investigator's dated signature, lacks the lead Federal agency and does not contain the address and phone number for Law Environmental. Further, the photographs should either be originals or a better quality reproduction. We look forward to receiving two copies (one copy on acid free paper) of the final draft of the referenced report.

Should you have any questions, feel free to contact Charles Hockensmith of my staff at (502) 564-7005.

Sincerely,

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

DLM/cdh





53-3512

Education and Humanities Cabinet

KENTUCKY HERITAGE COUNCIL

Brereton C. Jones
Governor
Sherry K. Jelsma
Cabinet Secretary

The State Historic Preservation Office

David L. Morgan
Executive Director
and SHPO

September 16, 1993

Mr. D. W. Lambert, Director
Division of Environmental Analysis
Transportation Cabinet
419 Ann Street
Frankfort, Kentucky 40622

Dear Mr. Lambert:

The State Historic Preservation Office has received for review and approval an archaeological survey report entitled "Cultural Resources Assessment, Kentucky Highway 15 Expansion Corridor, Perry County, Kentucky" by M. Craig Hadley and Robert S. Webb.

The survey found no evidence of prehistoric or early historic occupation in the project area. Consequently, the proposed project will have no effect on any property listed in or eligible for listing in the National Register of Historic Places and I have no objection to its construction.

Should you have any questions, feel free to contact Charles Hockensmith of my staff at (502) 564-7005.

Sincerely,

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

DLM/cdh

cc: Mr. Robert S. Webb



Robert McCance, Jr.
Director



BRERETON C. JONES
GOVERNOR

COMMONWEALTH OF KENTUCKY
KENTUCKY STATE NATURE PRESERVES COMMISSION

407 BROADWAY
FRANKFORT, KENTUCKY 40601
(502) 564-2886

February 19, 1993

Mr. Stephen Washburn
Law Environmental, Inc.
9410 Bunsen Parkway, Suite 300
Louisville, Kentucky 40220

Re: Environmental Review 327

Dear Mr. Washburn:

This letter is in response to your request of January 21, 1993 for environmental review of the Kentucky Highway 15, Hazard-Jackson Road project in Perry County, Kentucky. We have reviewed our Natural Heritage Database to determine if any of the endangered, threatened, or special concern species or unique and/or sensitive natural areas monitored by the Kentucky State Nature Preserves Commission (KSNPC) occur near the project area. Based on our most current information, we have determined that two of the species of plants and/or animals and none of the unique and/or sensitive natural areas that are monitored by the KSNPC are known to occur in the vicinity of this project. The Arrow darter (*Etheostoma sagitta spilatum*, KSNPC Special Concern) has been collected from several streams in the general vicinity of this project, and the species may occur in streams draining the project area. Rockhouses, small caves, and clifflines within the project area may harbor rare organisms, as well. The Rafinesque's big-eared bat (*Plecotus rafinesquii*, KSNPC Threatened and Federal C2 candidate for listing) has been documented from the general vicinity of the project and may occur in suitable habitat within the project area.

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new species of plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations

S. Washburn, Law Environmental, Inc.
February 19, 1993
Page Two

in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

An invoice for the foregoing environmental review service is enclosed. If you have any questions or I can be of further assistance, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Brainard Palmer-Ball, Jr.".

Brainard Palmer-Ball, Jr.
Field Representative

ROBERT McCANCE, JR.
DIRECTOR



DEC 13 1997

PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
KENTUCKY STATE NATURE PRESERVES COMMISSION

801 SCHENKEL LANE
FRANKFORT, KENTUCKY 40601-1403
(502) 573-2886 VOICE
(502) 573-2355 FAX

December 17, 1997

Kiersten Fuchs
LAW Engineering and Environmental Services, Inc.
9810 Bluegrass Parkway
Louisville, KY 40299

Data Request 98-123

Dear Ms. Fuchs:

This letter is in response to your data request of December 16, 1997 for the KY Highway 15 Environmental Assessment project. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Kentucky State Nature Preserves Commission occur in the area specified on the Hazard North and Krypton, Ky. quadrangles. Based on our most current information, we have determined that no occurrences of the plants or animals and no occurrences of the exemplary natural communities that are monitored by KSNPC are reported from the specified area.

You should be aware of two species monitored by KSNPC that are in close proximity to your project area. *Etheostoma sagitta spilotum* (Arrow darter, KSNPC special concern) and *Juglans cinerea* (White walnut, KSNPC special concern) both occur in areas close to your project site, but not within it. Because of the similarity in habitat between these areas and your project area, it is possible that one or both of these species may occur in your area of interest. We recommend that a thorough search of the project site be conducted by a qualified biologist prior to any construction activity, and that measures are taken to protect any rare species found in the area.

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of

Data Request 98-123

December 17, 1997

Page 2

Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

If you have any questions or I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Sandy Vasenda
Data Manager

SKV/alc

Enclosures: Endangered, Threatened, and Special Concern Plants and Animals of Kentucky
Plants and Animals Presumed Extinct or Extirpated from Kentucky

species KNOWN TO OCCUR IN HAZARD A Quad -- 22 JAN 1993

NAME	SCI.NAME	FEDERAL END.	FEDERAL THREAT.	FEDERAL CANDIDATE END.	STATE THREAT.	STATE CONCERN	SPECIAL CONCERN
45 Opossum, Virginia	Didelphis virginiana	-	-	-	-	-	-
50 Cottontail, eastern	Sylvilagus floridanus	-	-	-	-	-	-
52 Beaver	Castor canadensis	-	-	-	-	-	-
52 Muskrat	Ondatra zibethicus	-	-	-	-	-	-
46 Bat, Norway	Battus norvegicus	-	-	-	-	-	-
51 Woodchuck	Marmota monax	-	-	-	-	-	-
53 Squirrel, gray	Sciurus carolinensis	-	-	-	-	-	-
53 Squirrel, fox	Sciurus niger	-	-	-	-	-	-
57 Chipmunk, eastern	Tamias striatus	-	-	-	-	-	-
49 Coyote	Canis latrans	-	-	-	-	-	-
70 Fox, gray	Urocyon cinereoargenteus	-	-	-	-	-	-
72 Fox, red	Talpes vulpes	-	-	-	-	-	-
76 Bobcat	Lynx rufus	-	-	-	-	-	-
79 Otter, river	Lutra canadensis	-	-	-	-	-	-
84 Weasel, long-tailed	Mustela frenata	-	-	-	-	-	-
88 Mink	Mustela vison	-	-	-	-	-	-
93 Badger	Taxidea taxus	-	-	-	-	-	-
5 Raccoon	Procyon lotor	-	-	-	-	-	-
71 Deer, white-tailed	Odocoileus virginianus	-	-	-	-	-	-
8 Caribou, moose	Alces americanus	-	-	-	-	-	-
3 Snake, water	Carphophis amoenus	-	-	-	-	-	-
1 Racer	Coluber constrictor	-	-	-	-	-	-
3 Snake, eastern milk	Lampropeltis triangulum triangulum	-	-	-	-	-	-
3 Snake, northern water	Nerodia sipedon	-	-	-	-	-	-

Species KNOWN TO OCCUR in ELKHEAD K Quad -- 22 JAN 1993

NAME	SCI. NAME	FEDERAL END.	FEDERAL THREAT.	FEDERAL CANDIDATE	STATE END.	STATE THREAT.	SPECIAL CONCERN
95 Opossum, Virginia	Didelphis virginiana	-	-	-	-	-	-
100 Cottontail, eastern	Sylvilagus floridanus	-	-	-	-	-	-
103 Beaver	Castor canadensis	-	-	-	-	-	-
122 Muskrat	Ondatra zibethicus	-	-	-	-	-	-
146 Bat, Norway	Myotis myotis	-	-	-	-	-	-
151 Woodchuck	Marmota monax	-	-	-	-	-	-
153 Squirrel, gray	Sciurus carolinensis	-	-	-	-	-	-
155 Squirrel, fox	Sciurus niger	-	-	-	-	-	-
157 Chipmunk, eastern	Tamias striatus	-	-	-	-	-	-
66 Coyote	Canis latrans	-	-	-	-	-	-
70 Fox, gray	Urocyon cinereoargenteus	-	-	-	-	-	-
72 Fox, red	Vulpes vulpes	-	-	-	-	-	-
76 Bobcat	Lynx rufus	-	-	-	-	-	-
79 Otter, river	Lutra canadensis	-	-	-	-	-	-
84 Weasel, long-tailed	Mustela frenata	-	-	-	-	-	-
88 Mink	Mustela vison	-	-	-	-	-	-
93 Badger	Taxidea taxus	-	-	-	-	-	-
95 Raccoon	Procyon lotor	-	-	-	-	-	-
97 Deer, white-tailed	Odocoileus virginianus	-	-	-	-	-	-
99 Dart, arrow	Rheosaurus sagitta	-	-	-	-	-	-
105 Snake, worm	Carphophis amoenus	-	-	-	-	-	-
1 Racer	Coluber constrictor	-	-	-	-	-	-
13 Snake, eastern milk	Lampropeltis triangulum triangulum	-	-	-	-	-	-
5 Snake, northern water	Nerodia sipedon	-	-	-	-	-	-

FISH & WILDLIFE COMMISSION

Mike Boatwright, Paducah
Sam C. Potter, Jr., Bowling Green
George H. Foster, Louisville
Charles E. Bale, Hodgenville
Dr. James R. Rich, Taylor Mill
Frank Brown, Richmond
Paul Lyon, Salyersville
Jr. Roland L. Burns, Rush
David H. Godby, Somerset



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JUL 25 1994

LAW ENVIRONMENTAL INC.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF FISH AND WILDLIFE RESOURCES
C. THOMAS BENNETT, COMMISSIONER

July 12, 1994

Mr. Greg M. Schoen
LAW Environmental, Inc.
9410 Bunsen Parkway, Suite 300
Louisville, KY 40220

Re: Aquatic and Water Quality Analysis Base
Study, Kentucky Highway 15 Project,
County, Kentucky.

Dear Mr. Schoen:

Members of my staff have reviewed the information regarding the above-referenced project. Accordingly, we offer the following comments and recommendations.

The Kentucky Department of Fish and Wildlife (KDFWR) does not object to the project. KDFWR concurs with the findings of the aquatic survey, but would like to reiterate that mitigative measures are necessary to offset any impacts to the stream as a result of construction. KDFWR recommends the following measures essential for stream channelization. We feel that the implementation of these items would offset the negative impacts of stream channelization and would be beneficial to the local fish and wildlife resources. These items are:

- 1) Dimensions of the relocated channel should be similar in width and depth to the original channel:
- 2) Riffle-pool sequences should be maintained in the relocation portion as the existed in the original channel:
- 3) Habitat improvement structures should be constructed within the relocation channel:
- 4) Excavated material should be placed upland and protected in such a manner to prevent unnecessary erosion and siltation:

Page Two
Mr. Schoen
July 12, 1994

5) Banks and fill areas should be revegetated following construction activities with vegetation similar to that in the vicinity or as recommended by project personnel:

6) Access sites and/or launching ramps should be constructed in conjunction with bridge construction where needed.

In addition, KDFWR recommends the following practices to maximize stream protection.

- 1) Work near streams only during low flow periods to minimize disturbance.
- 2) Utilize erosion control structures below disturbed areas.
- 3) Avoid disturbance of tree canopy that overhangs the stream.

Members of my staff will be available to discuss our comments and provide technical guidance on any study design. Please contact Wayne L. Davis, Environmental Section Chief (502/564-5448) for further information.

We appreciate the opportunity to comment.

Sincerely,



C. Thomas Bennett
Commissioner

CTB/JDC

xc: Edwin F. Crowell, Asst. Director, Division of Fisheries
Dan Wilson, Eastern Fishery District Biologist
Jack Wilson, Director, Division of Water
Lee A. Barclay, USFWS, Cookeville, TN
Eva Long, USEPA, Atlanta, GA
Environmental section files

FISH & WILDLIFE COMMISSION

Mike Boatwright, Paducah
George E. Warren, Sebre
Tony Brown, Brandenburg
Charles E. Bale, Hodgenville
James R. Rich, Taylor Mill
n Frank Brown, Richmond
oug Hensley, Hazard
Dr. Roland L. Burns, Rush
David H. Godby, Somerset



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF FISH AND WILDLIFE RESOURCES
C. THOMAS BENNETT, COMMISSIONER

December 24, 1997

Kiersten R. Fuchs
Biologist
LAW Engineering and Environmental Services, Inc.
9810 Bluegrass Parkway
Louisville, KY 40299

RE: Endangered/threatened species review for the Kentucky Highway 15, Hazard-Jackson Road Project, Perry County, Kentucky

Dear Ms. Fuchs:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) has received your request for the above-referenced information. Please find enclosed the printout from our Kentucky Fish and Wildlife Information System (KFWIS) listing the known federally endangered/threatened fish and wildlife for Perry county. Please be aware that our system is a dynamic one and that it only represents our current knowledge of the various species distributions.

The federally endangered Indiana bat (*Myotis sodalis*) is known to inhabit the area. The species hibernates in caves during the winter months and forms maternity colonies where it roosts with its young under the bark of trees in both riparian and upland areas. Disturbance of trees with exfoliating bark, dead limbs or cavities should be avoided between October 15 and March 31.

It may interest you to know that species distribution information is available directly from our web site at: www.kfwis.state.ky.us.

I hope this information will be helpful to you. Should you require additional information, feel free to contact the Environmental Section at (502) 564-5448.

Sincerely,

Steven T. Beam

Steven T. Beam
Wildlife Biologist

xc: Environmental Section Files

Federally Threatened and Endangered Species Reported from PERRY County

Common Name	Scientific Name	Status Code	Reference
Dace, blackside	Phoxinus cumberlandensis	223,102,601,999	
Woodpecker, red-cockaded	Picoides borealis	223,101,601,121	
Myotis, Indiana	Myotis sodalis	223, 101, 108, 601	

This list was created through the Kentucky Fish and Wildlife Information System.



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AUG 26 1994

BRERETON C. JONES
GOVERNOR

LAW ENVIRONMENTAL INC.

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
14 REILLY ROAD
FRANKFORT, KENTUCKY 40601

August 22, 1994

Mr. Greg M. Schoen, Project Manager
Law Environmental, Inc.
9410 Bunsen Parkway, Suite 300
Louisville, KY 40220

RE: Aquatic and Water Quality Analysis Base
Study for Kentucky Highway 15 Project
(Project No. 53-3512); Perry County

Dear Ms. Schoen:

The Division of Water has completed its review of the above referenced projects submitted by correspondence dated May 16, 1994. The methodologies and results of the aquatic resource and water quality analyses appear acceptable to the Division. The Division will provide general mitigative options which should be employed for the above referenced project. These options are as follows:

1. The Division supports the selection of design route alternatives which minimize, to the maximum extent possible, all adverse impacts to stream and riparian zone habitat.
2. Clearing of existing trees and other vegetation should be restricted to the minimum amount necessary for surveys and new construction. All access roads should be constructed of non-erodible fill material and possess culverts of sufficient hydraulic capacity to pass normal high flows. All stream crossings should be located perpendicular to stream flow. All in-stream work should be conducted during low flow periods.

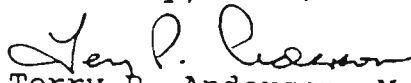


Mr. Greg M. Schoen
August 22, 1994
Page Two

3. Stream channelization activities should be restricted to one side of the channel, or, in long reaches, to alternate sides. Additional channel capacity can be accomplished by construction of an overflow channel, thereby allowing base flow to remain in the natural channel.
4. Stream channel relocations should incorporate structural and nonstructural enhancement measures. Structural enhancement measures include wing-wall deflectors, low-head dams, digger logs, constructed pools, and riffle structures. Riprap should be placed along all outside bends and supplemented with a planting of a diverse mixture of grasses and woody vegetation above the high flow line. Non-structural enhancement measures include the maintenance and/or reestablishment of a minimum 25 foot vegetated buffer zone along the stream channel in the project area.
5. All revegetation efforts should include a diverse mixture of endemic species, including woody vegetation. Revegetation success will provide long term bank stability, stream canopy, wildlife habitat, nutrient input, and enhanced aesthetic values.
6. Best management practices for erosion and sedimentation control should be implemented and effectively maintained during all project construction activities.

Although these recommendations are general, the Division is available to provide site specific recommendations when design route alternatives are finalized. Should you have any questions or need further assistance, please contact Steve Alexander of my staff at (502)564-3410.

Sincerely,


Terry P. Anderson, Manager
Water Quality Branch

TPA:SRA:dh

c: Dan Evans, COE: Louisville
Gene Blair, DOW: Hazard Regional Office
Tom Welborn, EPA: Atlanta
Lee Barclay, USFWS: Cookeville
Wayne Davis, KDFWR: Frankfort
Doug Lambert, DEA: Frankfort

JAMES E. BICKFORD
SECRETARY



PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

FRANKFORT OFFICE PARK

14 REILLY RD

FRANKFORT KY 40601

December 18, 1997

RECEIVED

DEC 23 1997

LA 111 187 3-01 110

Ms. Kiersten R. Fuchs
Law Engineering and Environmental Services, Inc.
9810 Bluegrass Parkway
Louisville, KY 40299

Dear Ms. Fuchs:

Enclosed is information you requested regarding Perry County in your letter dated December 12.

I hope this is satisfactory.

If you have any questions, please contact me at (502) 564-3410.

Sincerely,

A handwritten signature in cursive script that reads "Dionne Fields".

Dionne Fields
Water Quantity Management Section
Water Resources Branch
Division of Water

DF:df



KY DIVISION OF WATER / WATER WITHDRAWAL PERMIT FILE

PERMIT FACILITY NAME/ADDRESS:
 0276 DEPT OF PARKS
 BUCKHORN LAKE STATE PARK
 BUCKHORN KY 41721

PERMIT INFORMATION:

DATE ISSUED: 09/15/66 COUNTY: PERRY
 LAST REVISED: 03/29/83 DISTRICT: 10 HAZARD
 STATUS: ACTIVE PWS ID: 0972316
 INACTIVATED: NONE SIC CODE: 9512
 CONDITIONS: NONE
 CROSS REFERENCE:

CONTACT PERSON: ED DEATON

(606) 398-7510

WATER USE INFORMATION:

SOURCE: SURFACE
 RIVER BASIN: 04 KENTUCKY
 USE CATEGORY: WATER SUPPLIER

LATITUDE: 0371815
 LONGITUDE: 0832653
 TOPO MAP NO: 0753

MEASURING METHOD: METER
 MEASURING DEVICE:
 QUADRANGLE:

DESCRIPTION:
 W/D FROM MIDDLE FK. KY. RIVER OPP. MI. 47.89L (BUCKHORN RESERVOIR) PERRY CO

AVERAGE MONTHLY WATER WITHDRAWALS IN MILLION GALLONS PER DAY

PERMIT NUMBER	YEAR	JAN/ DAYS	FEB/ DAYS	MAR/ DAYS	APR/ DAYS	MAY/ DAYS	JUN/ DAYS	JUL/ DAYS	AUG/ DAYS	SEP/ DAYS	OCT/ DAYS	NOV/ DAYS	DEC/ DAYS	AVG	MAX MONTH
0276 A-18	1988	0.020	0.022	0.027	0.030	0.046	0.047	0.050	0.050	0.045	0.042	0.040	0.038	0.038	0.050
	1989	0.020	0.034	0.037	0.032	0.034	0.040	0.050	0.046	0.040	0.037	0.039	0.034	0.037	0.050
	1990	0.047	0.030	0.037	0.036	0.035	0.037	0.042	0.039	0.034	0.032	0.029	0.025	0.035	0.047
	1991	0.022	0.010	0.015	0.018	0.029	0.032	0.030	0.028	0.030	0.025	0.022	0.021	0.023	0.032
	1992	0.024	0.021	0.020	0.023	0.033	0.030	0.038	0.030	0.030	0.031	0.022	0.018	0.027	0.038
	1993	0.021	0.020	0.020	0.025	0.025	0.026	0.025	0.029	0.028	0.026	0.022	0.015	0.023	0.029
	1994	0.012	0.009	0.017	0.018	0.026	0.023	0.029	0.027	0.024	0.027	0.026	0.021	0.022	0.029
	1995	0.019 20	0.023 20	0.021 20	0.016 25	0.017 30	0.013 30	0.020 31	0.023 31	0.021 30	0.020 31	0.020 17	0.021 15	0.019 15	0.022
1996	0.016 12	0.018 17	0.013 12	0.019 19	0.026 23	0.031 30	0.027 31	0.025 31	0.025 30	0.027 31	0.019 20	0.023 19	0.028	0.040	
1997	0.024 22	0.023 19	0.021 29	0.029 30	0.033 31	0.040 30									
PERMITTED WITHDRAWAL		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040		

REMARKS:

KY DIVISION OF WATER / WATER WITHDRAWAL PERMIT FILE

PERMIT FACILITY NAME/ADDRESS:

1359 FELTNER'S TRAILOR COURT
RR2-172 BOX 30
HAZARD KY 41701

PERMIT INFORMATION:

DATE ISSUED: 03/25/96 COUNTY: PERRY
LAST REVISED: DISTRICT: 10 HAZARD
STATUS: ACTIVE PWS ID: 0970839
INACTIVATED: SIC CODE: 4941
CONDITIONS: SEE REMARKS
CROSS REFERENCE:

CONTACT PERSON: ROGER DEAN FELTNER

(606) 439-2385

WATER USE INFORMATION:

SOURCE: GROUND
RIVER BASIN: 04 KENTUCKY
USE CATEGORY: WATER SUPPLIER

LATITUDE: 0371713
LONGITUDE: 0830827
TOPO MAP NO: 0755

MEASURING METHOD: METER
MEASURING DEVICE: ROCKWELL SR2
QUADRANGLE: HAZARD NORTH

DESCRIPTION:

ONE WELL LOCATED APPROXIMATELY 1500 FEET WEST OF GRIGSBY ALONG HIGHWAY 1088 ADJACENT TO MILE 4.4 OF LOTTS CREEK

AVERAGE MONTHLY WATER WITHDRAWALS IN MILLION GALLONS PER DAY

PERMIT NUMBER	YEAR	JAN/ DAYS	FEB/ DAYS	MAR/ DAYS	APR/ DAYS	MAY/ DAYS	JUN/ DAYS	JUL/ DAYS	AUG/ DAYS	SEP/ DAYS	OCT/ DAYS	NOV/ DAYS	DEC/ DAYS	AVG	MAX MONTH
1359	1996			0.018	0.018	0.017	0.020	0.016	0.019	0.018	0.019	0.015	0.030	0.019	0.030
				29	30	31	30	30	31	30	30	31	30		
	1997	0.009	0.001	0.006	0.005	0.003	0.005							0.005	0.009
		31	28	31	30	31	31								

PERMITTED
WITHDRAWAL 0.017 0.017 0.017 0.017 0.017 0.017 0.017 0.017 0.017 0.017 0.017 0.017 0.017

REMARKS: IF W/DRAWALS HAVE ADVERSE EFFECT ON OTHER USERS, FACILITY MUST REDUCE RATES

KY DIVISION OF WATER / WATER WITHDRAWAL PERMIT FILE

PERMIT FACILITY NAME/ADDRESS:

0026 HAZARD WATER DEPARTMENT
CITY HALL/P. O. BOX 420
HAZARD KY 41701

PERMIT INFORMATION:

DATE ISSUED: 06/17/66 COUNTY: PERRY
LAST REVISED: 02/19/97 DISTRICT: 10 HAZARD
STATUS: ACTIVE PWS ID: 0970184
INACTIVATED: SIC CODE: 4941
CONDITIONS: SEE REMARKS
CROSS REFERENCE:

CONTACT PERSON: KENNETH COUCH

(606) 439-3870

WATER USE INFORMATION:

SOURCE: SURFACE
RIVER BASIN: 04 KENTUCKY
USE CATEGORY: WATER SUPPLIER

LATITUDE: 0371475
LONGITUDE: 0831052
TOPO MAP NO: 0655

MEASURING METHOD: METER
MEASURING DEVICE: HEINRICHS METRON TECH/PIT573FX
QUADRANGLE: HAZARD SOUTH

DESCRIPTION:

SURFACE WATER INTAKE LOCATED AT RMI 361.23 OF THE NORTH FORK OF THE KENTUCKY RIVER

AVERAGE MONTHLY WATER WITHDRAWALS IN MILLION GALLONS PER DAY

PERMIT NUMBER	YEAR	JAN/ DAYS	FEB/ DAYS	MAR/ DAYS	APR/ DAYS	MAY/ DAYS	JUN/ DAYS	JUL/ DAYS	AUG/ DAYS	SEP/ DAYS	OCT/ DAYS	NOV/ DAYS	DEC/ DAYS	AVG	MAX MONTH
J026 A-20	1988	1.971	1.704	1.693	1.767	1.924	2.390	2.016	2.069	1.919	1.861	1.774	1.726	1.901	2.390
	1989	1.616	1.601	1.617	1.625	1.671	1.723	1.980	1.985	2.055	2.135	1.895	2.145	1.837	2.145
	1990	2.035	1.945	1.818	1.806	1.812	1.975	2.095	2.191	2.272	2.208	2.207	2.172	2.045	2.272
	1991	2.201	2.159	2.143	2.089	2.194	2.268	2.354	2.377	2.362	2.355	2.197	2.262	2.247	2.377
	1992	2.342	2.376	2.178	2.158	2.298	2.427	2.559	2.401	2.403	2.381	2.341	2.636	2.375	2.636
	1993	2.246	2.365	2.378	2.340	2.345	2.424	2.742	2.757	2.853	2.854	2.645	2.650	2.550	2.854
	1994	2.993	2.709	2.558	2.496	2.495	2.743	3.093	2.841	2.664	3.178	3.361	3.552	2.890	3.552
	1995	3.539 31	3.127 28	3.146 31	3.350 30	3.287 31	3.340 30	3.363 31	3.473 31	3.232 30	3.157 31	3.345 30	3.373 31	3.311	3.539
	1996	3.344 31	3.522 29	3.184 31	2.953 30	3.042 31	3.115 30	2.912 31	3.512 31	3.930 30	3.829 31	3.419 30	3.620 31	3.365	3.930
	1997	3.746 31	3.413 28	3.372 31	3.268 30	3.390 31	3.199 30							3.398	3.746
PERMITTED WITHDRAWAL		3.750	3.750	3.750	3.750	3.750	3.750	3.750	3.750	3.750	3.750	3.750	3.750		

REMARKS: IF FLOW IMMED. BELOW INTAKE IS 5 CFS OR LESS, W/DRAWALS MUST REDUCE OR STOP

KY DIVISION OF WATER / WATER WITHDRAWAL PERMIT FILE

PERMIT FACILITY NAME/ADDRESS:

1372 JAMESTOWN VILLAGE, INC.
277 E HIGH STREET, STE 100
LEXINGTON KY 40507-1409

PERMIT INFORMATION:

DATE ISSUED: 01/23/97 COUNTY: PERRY
LAST REVISED: DISTRICT: 10 HAZARD
STATUS: ACTIVE PWS ID: 0600129
INACTIVATED: SIC CODE: 4941
CONDITIONS: SEE REMARKS
CROSS REFERENCE:

CONTACT PERSON: LEROY B. LACKY, JR. (606) 259-3686

WATER USE INFORMATION:

SOURCE: GROUND LATITUDE: 0372050 MEASURING METHOD: METER
RIVER BASIN: 04 KENTUCKY LONGITUDE: 0830742 MEASURING DEVICE: PRECISION 2"
USE CATEGORY: WATER SUPPLIER TOPO MAP NO: 0755 QUADRANGLE: HAZARD NORTH

DESCRIPTION:
FROM A FIELD OF TWO (2) WELLS LOCATED TO THE NORTHEAST OF THE MOUTH OF BEARBRANCH AT TROUBLESOME CREEK

AVERAGE MONTHLY WATER WITHDRAWALS IN MILLION GALLONS PER DAY

PERMIT NUMBER	YEAR	JAN/ DAYS	FEB/ DAYS	MAR/ DAYS	APR/ DAYS	MAY/ DAYS	JUN/ DAYS	JUL/ DAYS	AUG/ DAYS	SEP/ DAYS	OCT/ DAYS	NOV/ DAYS	DEC/ DAYS	AVG	MAX MONTH
1372	A-21 1997	0.024 30	0.024 27	0.020 30	0.020 30	0.020 31	0.017 30							0.021	0.024
PERMITTED WITHDRAWAL		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040		

REMARKS: IF W/DRAWALS HAVE ADVERSE EFFECT ON OTHER USERS, FACILITY MUST REDUCE RATES

JAMES E. BICKFORD
SECRETARY



PAUL E. PATTON
GOVERNOR

RECEIVED

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
14 REILLY RD
FRANKFORT KY 40601

DEC 24 1997

WET-1

December 22, 1997

Ms. Kiersten R. Fuchs
Law Engineering and Environmental Services, Inc.
9810 Bluegrass Parkway
Louisville, Kentucky 40299

RE: KY 15, Hazard-Jackson Rd.

Dear Ms. Fuchs;

The Water Quality Branch has reviewed your request for information about the referenced area. There are no Outstanding Resource Waters or Wild Rivers within the proposed corridor. A wetland field delineation should be done prior to route selection, to avoid those areas. If wetlands cannot be avoided, any wetland losses must be mitigated. Any stream crossing may require a Section 404 permit from the US Army Corps of Engineers and a WQC from the Division of Water.

If you have any questions or need further information on ORWs or wetlands, please contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Michael R. Mills".

Michael R. Mills, Supervisor
Ecological Support Section
Water Quality Branch

MRM:dh

c: File





COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION FOR AIR QUALITY
316 St. Clair Mall
Frankfort, Kentucky 40601

November 9, 1993

D. W. Lambert, CEP REP LA, Director
Division of Environmental Analysis
Transportation Cabinet
State Office Building
Frankfort, Kentucky 40622

Dear Mr. Lambert:

We have reviewed the Air Quality Analysis for the projected widening of the Hazard-Jackson Road, KY 15, from a 3-lane undivided highway to a 4-lane divided highway, in Perry County, Item No. 10-269.00, dated April 1993. We have found both the analysis and the project to be consistent with Kentucky's State Implementation Plan (SIP).

There are some minor points in the report which would not make the project inconsistent with Kentucky's SIP, but which we ask you to note.

- (1) The lengths of the two sections being widened are given respectively as 2.96 miles and 7.2 miles, while the total length is given as 9.16 miles (page 2). The sum of the parts does not equal the total.
- (2) In Table 2, the projected increase in traffic volume in 2011 is consistently about one and a half times the 1991 traffic volume, except in Section 1C. There the "Build" scenario, for Links 8 and 9 (along KY 267), instead projects a decrease to three quarters the 1991 traffic volume. No explanation for the inconsistency is given.
- (3) The MOBILE4.1 model is used, but the document guiding its use is *User's Guide to MOBILE4* (EPA-AA-TEB-89-01), instead of the updated *User's Guide to MOBILE4.1* (EPA-AA-TEB-91-01). As a result, the fuel parameters provided in Section 3.1.1.3 use the MOBILE4 terminology and requirements instead of the MOBILE4.1 equivalents.

Thank you for the opportunity to review this project. If you have any questions, please call Uriel Smith at (502) 564-3382, extension 340.

Sincerely,

A handwritten signature in dark ink, appearing to read "Kenneth M. Hines", written over a horizontal line.

Kenneth M. Hines, Manager
Program Planning and Administration Branch

KMH/hdus



November 8, 1993

Air Quality Analysis:

Project: Ky Hwy 15, Hazard-Jackson Rd

Location: Perry County

Identification: Item No. 10-269.0

1. Is construction in an attainment or non-attainment area:
Attainment for all criteria pollutants.
2. CO concentration compared with National Ambient Air Quality Standard (Table 4, 8 pages):
8-hour average: 10 mg/m³ (9 ppm); 1-hour average: 40 mg/m³ (35 ppm).

Existing 1991: 1.2-3.5 ppm (8-hr avg); 2.0-5.3 ppm (1-hr avg);

No-build 2011: 1.2-2.2 ppm (8-hr avg); 2.0-3.4 ppm (1-hr avg);

Build 2011: 1.2-2.0 ppm (8-hr avg); 2.0-3.4 ppm (1-hr avg).

3. Factors for model: (pp. 2-13)
 - (a) Urban or rural? Rural.
 - (b) Length of construction. 10.16 miles (given as: 9.16 miles).
 - (b1) Design speed: 55 mph; Present speed: Section 1: 50 mph; Section 2: 55 mph.
 - (b2) Traffic volume:
 - (i) Average daily traffic: Not given.
 - (ii) Vehicles per hour: Section 1: 1991: 106-887; 2011: 160-1330;
Section 2: 1991: 220-627; 2011: 330-940.
 - (c) Wind speed: 1.0 m/sec varied through 36 10° intervals over 360°.
 - (d) Stability: Class D. (Usually, this is for urban. Rural is usually E.)
 - (e) Mixing height: 1000 m.
 - (f) Temperature: Ambient, Min & Max: 46.1 °F for CO (average for year);
Ambient, 83.2; Max 92.1; & Min 65.5 °F for HC & NO_x (for 10 highest ozone days).
 - (g) Number of monitors (theoretical): CO receptors along the constructed hwy:

Section 1A:	1991: 9;	2011 build: 16.
Section 1B:	1991: 20;	2011 build: 18.
Section 1C:	1991: 20;	2011 build: 18.
Section 2A:	1991: 20;	2011 build: 20.
 - (h) Roughness length: 283 cm (fir forest) (CAL3QHC, App. B, at end).
 - (i) Emission control programs: none (rural attainment area).
 - (j) Summer Fuel volatility: 9.0 psi RVP.
 - (k) Models: MOBILE 4.1 & CAL3QHC.

4. Monitors (Jerry Sudduth 2150):

PM₁₀ Closest monitor at Hazard, Perry County

(> 150µg/m³): ArMean: 31µg/m³; Max: 1st: 58µg/m³; 2nd: 57µg/m³; 3rd: 53µg/m³.

TSP Closest monitor at Riverview, Greenup County (50mileaway)

(> 150µg/m³): ArMean: 54µg/m³; Max: 1st: 148µg/m³; 2nd: 135µg/m³; 3rd: 129µg/m³.

SO₂ Closest monitor at Hazard, Perry County (40 miles away)
(> .14ppm 24-hr): ArMean: .003ppm; Max: 1st: .023ppm; 2nd: .019ppm.
(> .50ppm 3-hr): ArMean: .003ppm; Max: 1st: .045ppm; 2nd: .040ppm.
CO Closest monitor at Middlesboro, Bell County (50 miles away)
(> 35ppm 1-hr): Max: 1st: 13.8ppm; 2nd: 11.9ppm;
(> 9ppm 8-hr): Max: 1st: 5.4ppm; 2nd: 5.2ppm.
O₃ Closest monitor at Hazard, Perry County
(> .12ppm 1-hr): Max: 1st: .096ppm; 2nd: .092ppm; 3rd: .084ppm; 4th: .082ppm.
NO_x Closest monitor at Ashland, Boyd County (50 miles away)
(> .053ppm ann): ArMean: .013ppm;
24-hr: Max: 1st: .040ppm; 2nd: .035ppm;
1-hr: Max: 1st: .113ppm; 2nd: .110ppm.

5. Are emission factors within a reasonable range?

I have no reason to doubt the conclusion that neither the "build" nor the "no-build" scenario will lead to any violation.

6. Are conclusions and summary consistent with data?

Some of the data are inconsistent.

(a) Section 1 is 2.96 miles long, and section 2 is 7.2 miles long, yet this combined length is given as 9.16 miles, instead of 10.16 miles (p. 2).

(b) The surface roughness (z_0) is given as 283 cm, to represent rural conditions, corresponding to a fir forest (p. 6), while the atmospheric stability class is given as 4 (or D) (p. 7), which applies to an urban area. Since section 1 is largely urban, it should have a surface roughness of between 108 cm (single family residential) and 127 cm (park), with atmospheric stability D. Section 2, being largely rural, should have $z_0 = 283$ cm, and atmospheric stability E.

(c) In Table 2 the estimated traffic volume for 2011 is, for both the "build" and "no-build" scenarios, everywhere 1.5 times the 1991 traffic volume rounded to the nearest decade, except for:

(i) Free-flow 1B, Link 10 (1330, instead of 1300) for both "build" and "non-build".

(ii) Free-flow 1C "build", for Link 8 (140, instead of 280).

(iii) Free-flow 1C "build", for Link 9 (80, instead of 160).

(d) The manual for MOBILE 4.1 is identified as the MOBILE 4 manual, and the terminology used in section 3.1.1.3 follows the MOBILE 4 terminology (instead of the MOBILE 4.1 language) (p.5).

None of these are sufficient to conclude that the conclusions and summary are inconsistent with the data.

JAMES E. BICKFORD
SECRETARY



PAUL E. PATTON
GOVERNOR

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET

DEPARTMENT FOR NATURAL RESOURCES

DIVISION OF FORESTRY

MARK MATUSZEWSKI, DIRECTOR
P.O. Box 702, Hazard, KY 41702

DEC 22 1997

December 18, 1997

Mr. Ronald L. Thomas
Certified Ecologist, Principal
LAW Engineering & Environmental Services Inc
9810 Bluegrass Parkway
Louisville KY 40299

Dear Mr. Thomas:

I received your request for information on state champion trees that might be located in the Kentucky Highway 15, Hazard-Jackson Road, Project No. 10-2690.

I have no knowledge of any national or state champion big trees being located in the particular area involved in this highway project.

If you have any questions, please feel free to contact me at (606) 435-6077.

Sincerely,

A handwritten signature in cursive script that reads "David Percy".

David Percy
District Forester

DP:max



United States
Department of
Agriculture

Soil
Conservation
Service

825 High Street
Hazard, Kentucky
41701

December 9, 1994

Greg M. Schoen
Law Environmental, Inc.
9410 Bunsen Pkwy.
Suite 300
Louisville, KY 40220

Highway 15 Widening Project
Perry County, Kentucky
Item No. 10-269.00

Dear Mr. Schoen:

At your request I have conducted a study with regard to the subject highway project.

This study revealed that there are no unique or prime farmlands along the proposed corridor. In addition, there are no sites in the study area which support hydrophytic vegetation or contain hydric soils.

If I can be of further assistance, please feel free to contact me at (606) 436-3731.

Sincerely,

Will Lacy
District Conservationist



United States
Department of
Agriculture

Natural Resources
Conservation
Service

625 Memorial Drive
Hazard, KY 41701

DEC 18 1997

LAW Engineering and Environmental
Services, Inc.
9810 Bluegrass Parkway
Louisville, KY 40299

Date: 12-16-97

Subject: Kentucky Transportation Cabinet
Project Number 10-269.0

Dear Sir:

Your request for an environmental assessment regarding prime and unique farmland along the corridor of the above named project in Perry County, Kentucky has been received and reviewed by this office.

Our determination is that no prime, unique or important farmland will be impacted by the proposed construction activities along this route.

Please correspond with this office again if we may be of further assistance to you.

Will Lacy

Will Lacy
District Conservationist



United States Department of the Interior

TAKE
PRIDE IN
AMERICA

FISH AND WILDLIFE SERVICE

446 Neal Street

Cookeville, TN 38501

January 27, 1993

Mr. Stephen Washburn
Staff Engineer
Law Environmental, Inc.
9410 Bunsen Parkway, Suite 300
Louisville, Kentucky 40220

Dear Mr. Washburn:

This is in response to your letter and enclosures of January 21, 1993, regarding a proposal for a four-lane widening of Kentucky Highway 15 between Kentucky Highway 550 and Kentucky Highway 28 in Perry County, Kentucky. The Fish and Wildlife Service (Service) has reviewed the information submitted and offers the following comments.

Review of the Hazard and Krypton quadrangles of the Service's National Wetlands Inventory maps reveals that there are no forested, emergent, or scrub-shrub wetlands in the vicinity of the proposed project. Therefore, the Service anticipates that there will be no project-related adverse impacts to valuable wetland resources.

We have also reviewed the proposed project with regard to endangered species. According to our records, there are no federally listed or proposed endangered or threatened species in the project impact area. Therefore, requirements of Section 7 of the Endangered Species Act are fulfilled. However, there are species that, although not presently listed or proposed, are being considered for listing in the future. Status review (candidate) species that might occur in the vicinity of the proposed project are:

Southeastern big-eared bat (Plecotus rafinesquii) (SR)
Eastern woodrat (Neotoma floridana magister) (SR)

These species are not legally protected under the Endangered Species Act, and consultation and biological assessment requirements of Section 7 of the Act does not apply to them. However, they are under consideration for listing and we would appreciate any measures you might implement to avoid impacting them.

Thank you for the opportunity to comment on this action. If you have questions, please contact Steve Carter of my staff at 615/528-6481.

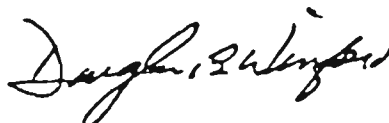
Sincerely,

Lee A. Barclay, Ph.D.
Field Supervisor

Efficient management practices can minimize adverse impacts associated with construction. It is important that these and other measures be monitored and stringently enforced. This will aid in preserving the quality of the natural environment. The attached list indicates whether or not federally listed or proposed endangered or threatened species may occur in the project impact areas. You should assess potential impacts to listed species and determine if the proposed projects may affect them. A "may affect" finding may necessitate formal consultation. Candidate species are not presently listed or proposed, but they are under consideration for listing. They are not legally protected, but we would appreciate anything you might do to avoid impacting them.

Thank you for giving us the opportunity to comment on these actions. If you have any questions, please contact Jim Widlak of my staff at 615/528-6481.

Sincerely,



Douglas B. Winford
Acting Field Supervisor

xc: Director, KNPC, Frankfort, KY
Wayne Davis, KDFWR, Frankfort, KY
Director, FHWA, Frankfort, KY

<u>COUNTY</u>	<u>ROUTE NUMBER</u>	<u>DESCRIPTION</u>
1. Union (1913)	US 60	Morganfield Bypass Item No. 2-294.0
2. Warren (1914)	KY 234	Widen Cemetery Road Item No. 3-252.0
3. Breckinridge (1915)	US 60	Cloverport to Hardinsburg Item No. 4-116.0
4. Meade (1916)	US 60	From KY 144 to KY 1882 Item No. 4-178.0
5. Taylor (1917)	KY 7153	Campbellsville Bypass Item No. 4-248.0
6. Grayson (1918)	KY 259	Leitchfield Bypass Item No. 4-1013.0
7. Garrard (1919)	KY 52	Lancaster East to KY 954 Item No. 7-302.0
8. Pulaski (1920)	US 27	Cumberland River Bridge Item No. 8-138.0
9. Adair & Cumberland (1921)	KY 61	Jones Chapel to Sparksville Item No. 8-158.0
10. Perry (1922)	KY 15	Hazard to Jackson Road Item No. 10-269.0
11. Estill (1923)	KY 52	Irvine Bypass Item No. 10-1008.0

7. Construction on KY 52 from Lancaster East to KY 954, Item
Number 7-302.0, Garrard County. FWS #94-0072.

(1919)

LISTED SPECIES

Gray bat - Myotis grisescens (E)

STATUS REVIEW SPECIES

Eastern woodrat - Neotoma floridana magister

8. Construction on the Cumberland River Bridge (U.S. 27), Item
Number 8-138.0, Pulaski County. FWS #94-0073.

(1920)

NO LISTED, PROPOSED, OR STATUS REVIEW SPECIES

9. Construction on KY 61 from Jones Chapel to Sparksville, Item
Number 8-158.0, Adair and Cumberland Counties. FWS #94-
0074.

(1921)

LISTED SPECIES

Gray bat - Myotis grisescens (E)

Indiana bat - Myotis sodalis (E)

STATUS REVIEW SPECIES

Eastern big-eared bat - Plecotus rafinesquii

- (1922) 10. Construction on KY 15 from Hazard to Jackson, Item Number ←
10-269.0, Perry County. FWS #94-0075.

NO LISTED OR PROPOSED SPECIES

STATUS REVIEW SPECIES

Eastern woodrat - Neotoma floridana magister

Eastern big-eared bat - Plecotus rafinesquii



United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, Tennessee 38501

January 27, 1998

Ms. Kiersten R. Fuchs
LAW Engineering and Environmental
Services, Incorporated
9810 Bluegrass Parkway
Louisville, Kentucky 40299

Re: FWS #98-0493

Dear Ms. Fuchs:

Thank you for your letter and enclosure of December 12, 1997, regarding the proposed widening of KY 15 in Perry County, Kentucky. The Fish and Wildlife Service (Service) has reviewed the information submitted and offers the following comments.

Information available to the Service does not indicate that wetlands exist in the vicinity of the proposed project. However, our wetland determination has been made in the absence of a field inspection and does not constitute a wetland delineation for the purposes of Section 404 of the Clean Water Act or the wetland conservation provisions of the Food Security Act. The Corps of Engineers or the Natural Resources Conservation Service should be contacted if other evidence, particularly that obtained during an on-site inspection, indicates the potential presence of wetlands.

Endangered species collection records available to the Service do not indicate that federally listed or proposed endangered or threatened species occur within the impact area of the project. We note, however, that collection records available to the Service may not be all-inclusive. Our data base is a compilation of collection records made available by various individuals and resource agencies. This information is seldom based on comprehensive surveys of all potential habitat and thus does not necessarily provide conclusive evidence that protected species are present or absent at a specific locality. However, based on the best information available at this time, we believe that the requirements of Section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. Obligations under Section 7 of the Act must be reconsidered if: (1) new information reveals that the proposed project may affect listed species in a manner or to an extent not previously considered, (2) the proposed project is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed project.

Thank you for the opportunity to comment on this project. If you have any questions, please contact Jim Widlak of my staff at 931/528-6481.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert T. Barclay".

for Lee A. Barclay, Ph.D.
Field Supervisor



DON C. KELLY, P.E.
SECRETARY OF TRANSPORTATION

JERRY D. ANGLIN
DEPUTY SECRETARY
AND
COMMISSIONER OF HIGHWAYS

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS, DISTRICT TEN
HIGHWAY 15, P. O. BOX 621
JACKSON, KY 41339
606-666-8841
PHIL LAMBERT
CHIEF DISTRICT ENGINEER

BRERETON C. JONES
GOVERNOR

MEMORANDUM

TO: Ralph Divine, Director
Division of Right of Way & Utilities

ATTENTION: Lyle C. Craycroft, Branch Manager Relocation

FROM: Bruce K. Napier, R/W Supervisor *B. K. N.*
District #10 - Jackson

DATE: March 21, 1995

SUBJECT: Perry County; Item Nos. 10-0269.00 & 10-0269.01
Jackson-Hazard Road (KY 15)
KY 550 to KY 28
Conceptual State Relocation Assistance Report

A review of the subject projects was completed 20 March 1995 and the following are the results of that review:

1. The estimated total number of households that will be displaced is 94 of which 63 are considered to be owner occupants with the remaining 31 being tenants. Of these numbers, approximately 50% are deemed to occupy substandard or non DS&S housing; 25% are considered to occupy average quality DS&S housing with the remaining 25% occupying higher quality and priced housing. Virtually all of the units thought to be tenant occupied are non DS&S, usually due to sizes of the families and/or the projected income level of the families.
2. The housing market in the area in general and Perry County in particular is a relatively depressed/stagnant one with little development taking place except in and around Hazard and the area of the junction of KY 15, KY 80 & the DB Parkway. Most of this development is either for commercial purposes or very high end housing. Most of the housing available on the market is located (with respect to price), at the extremes of the market in both size and price, with the lower priced units often not meeting DS&S specifications.

KENTUCKY TRANSPORTATION CABINET MISSION
"PROVIDE A SAFE, EFFICIENT, ENVIRONMENTALLY SOUND, AND FINANCIALLY RESPONSIBLE TRANSPORTATION
SYSTEM WHICH PROMOTES ECONOMIC GROWTH AND ENHANCES THE QUALITY OF LIFE IN KENTUCKY."
"AN EQUAL OPPORTUNITY EMPLOYER M/F/H/V"

Memo to Lyle C. Craycraft

March 21, 1995

Page 2

3. Due to the virtual nonexistence of comparable replacement housing, much more time than usual will be necessary to carry out the relocation of the displacees on these projects. At some point it may be necessary to wait for development to take place (i.e. housing/subdivision developments) in order to have adequate, available DS&S housing. There is no doubt that Last Resort Housing will not only be necessary but will also be an integral part of the relocation assistance program on these projects.
4. There are currently 19 businesses which will be displaced on these projects. The majority are owner occupied businesses with a few appearing to be leased properties. Most are smaller businesses with fewer than 10 employees. Almost all of these businesses are of the type that are dependent to a large degree on traffic flow along the front of their business. As such there is essentially no available sites for them to relocate to in a like manner. As stated earlier, the only land being developed is along either KY 15, KY 80 and the DB Parkway at their junction or along the Hazard Bypass. This is probably the only area available where it is economically feasible to develop commercial property and the price for these sites is currently at a premium and will become even more so when these project is initiated. It is likely that many of the businesses will choose not to reestablish themselves to the high cost of purchasing and /or developing replacement sites/buildings.
5. It should be noted that since the estimates on this project were made on February 2, 1993 there have been 5 new residences constructed and occupied; 2 mobile homes set up and occupied; 2 new businesses constructed and occupied and a church built, all within the proposed right of way. The development in Perry County is somewhat slow, but that development, which is occurring almost always, takes place along existing major roadways. KY 15 will continue to be an area of some development due in part to the fact that the land is somewhat cheaper to purchase and develop than it is along KY 80, the Hazard Bypass or the DB Parkway.

The acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and relocation resources will be available to all residential and business displacees with our discrimination.

If further information is needed, please advise.



DON C. KELLY, P.E.
SECRETARY OF TRANSPORTATION

JERRY D. ANGLIN
DEPUTY SECRETARY
AND
COMMISSIONER OF HIGHWAYS

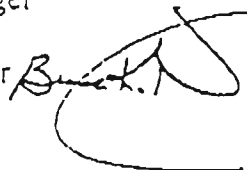
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PHIL LAMBERT
CHIEF DISTRICT ENGINEER

BRERETON C. JONES
GOVERNOR

MEMORANDUM

TO: Ralph Divine, Director
Division of Right of Way & Utilities

ATTENTION: Lyle C. Craycroft, Branch Manager

FROM: Bruce K. Napier, R/W Supervisor 
District #10 - Jackson

DATE: April 26, 1995

SUBJECT: Perry County; Item Nos. 10-0269.00 & 10-0269.01
Jackson-Hazard Road (KY 15)
KY 550 to KY 28 - Housing Study
Conceptual Stage Relocation Report

In accordance with your memo dated March 30, 1995, on the subject projects, this office has completed a detailed housing study in the Hazard-Perry County area. This study supplements my memo on the same subject dated March 21, 1995.

In conducting this study the following people in Hazard and Perry County were contacted and interviewed:

Martha Greer	-	Realtor
Bill & Alois Moore	-	Realtors
Lisa Bersaglia	-	Housing Authority
Earl Smith	-	Housing Inspector
Julia Gilley	-	PVA Office
Jimmy Sills	-	Mobile Home Park Manager (Coal Ridge)
Glenna Patrick	-	Hall Real Estate
Mike Shell	-	Vannarsdell Construction Co.

Memo to Lyle C. Craycroft

April 26, 1995

Page 2

General Housing Information

- (1) There is no multiple listing service in the Hazard - Perry County area.
- (2) Three realtors, located in Hazard, handle approximately 60% of all residential sales in Perry County. These realtors are Martha Greer Realty, Moore Realty, and Mountain Realty. Approximately 5% of sales are handled by 3-4 smaller companies. The other sales are sold by private transactions.
- (3) The majority of residential rentals are handled by two people. Bill Hall, of Hall Properties, has 120-150 rental units. These are mainly efficiencies and apartments. Ron and Lisa Bersaglia, of the Housing Authority Office in Hazard, have approximately 100 apartments and houses they privately own and rent out.
- (4) There is no planning or zoning in the county. Unlike the city, no permit is needed for the construction of new houses.
- (5) We were unable to obtain any housing information from the P.V.A. office.
- (6) The housing inspector is Earl Smith who issues permits for all housing constructed in the city.

Current Availability of Housing

During the period of April 1-10, the following housing was available for sale or rent:

Single Family Residences

Approximately 58 single family houses were for sale. The asking prices were \$35,000 and higher. Some of these houses, especially those outside the city, were in the \$40,000 - \$50,000 range. This does not include housing sold privately.

Rentals

There are 3 houses for rent in the \$250-\$400 range. There are 40-50 efficiencies, townhouses, and apartments for rent. The apartments have up to 3 bedrooms. Some of the apartments owned by Bill Hall rent for \$500-\$600. However, a majority of the rental units rent for \$200-\$400 per month. Some efficiencies rent for approximately \$200 per month. Most of the rentals do not include utilities expense.

Memo to Lyle C. Craycroft
April 26, 1995
Page 3

Mobile Homes & Sites

Of the estimated 94 displacements on these projects, approximately 20 are mobile homes. Of the 20 mobile homes, it is estimated 5 are owners of the land and mobile home; 5 own the mobile home and rent the site; and 10 rent the site and mobile home. A majority of these mobile homes are probably non-DS&S because of condition of the mobile homes, family sizes, and income. It will probably be necessary to exceed the normal monetary limits to accomplish these relocations.

In the Shopper Stopper Publication of April 1-8, there are 4 mobile homes for rent. Two of the mobile homes rent for \$300 and \$325 per month plus utilities expense. One doublewide is for rent and one furnished mobile home is for rent. Five (5) used mobile homes on sites are for sale. The asking price of one of the mobile homes is \$10,000. One (1) mobile home site is for rent. This site has city water and sewer and cable TV.

There are two large mobile home parks in Perry County. These are Jamestown Village and Airport Gardens. Each contains 75-100 spaces that rent for \$90-\$100 per month plus utilities expense. Another mobile home park on Coal Ridge Road, which is 1/2 mile off of KY 15 between KY 550 and KY 28, is being developed. This park, named Coal Ridge Park, has 37 spaces already developed. At this time there are 19 spaces available for rent. All utilities are available. The spaces rent for \$125 and \$145 for a doublewide plus utilities expense. Another 35-40 spaces will be developed in the near future. There are other smaller mobile home parks in or near Hazard. These parks are located at Lothair, Jeff, Christopher, and Walkertown and contain a total of approximately 50-60 spaces.

History of Housing Sales and Rentals

As previously discussed, 60% of residential sales in Perry County are handled by three realtors. I personally interviewed two of the three, namely Martha Greer and Alois Moore. Ms. Greer's sales for four years (1991-1994) were a total of approximately 80 houses at an average sales price of approximately \$45,000. In 1994 Ms. Greer sold 22 houses for \$1,020,000. The majority of Ms. Greer's sales are in the county.

Moore Realty sold approximately 90 houses over the four year period. They deal with higher priced housing and their average is estimated in the \$65,000-\$80,000 range.

Glenna Patrick works for Bill Hall Properties. I discussed rental availability of 1-3 bedroom units over the four year period (1991-1994). Ms. Patrick indicated they have an average turnover of approximately 30 apartments per year. The rental range is approximately \$225-\$550 per month plus utility expense.

Memo to Lyle C. Craycroft

April 26, 1995

Page 4

Earl Smith, building inspector for the city of Hazard, was interviewed concerning the number of building permits issued for residential housing over the four year period. Twenty two (22) permits for single family houses were issued over this period. All of these houses are in the city. Most of these houses are in the higher price ranges. Five of the houses are in the \$35,000-\$55,000 range. These figures do not include land value. Permits were issued for 6 apartments. These units contained from 4-12 apartments.

Dickie Vannarsdall, of Vannarsdell Construction Company, has plans to develop a subdivision and build 135 houses. This development is right off KY 15 near KY 28. His office manager, Mike Shell, indicated the price of the houses would be in the range of \$65,000. It should be noted that water must be provided to the site before development commences.

Summary

This housing study indicates that in all probability housing will be available over the period of time it will take to complete the projects. However, the relocation costs are going to be very high because of the low grade housing that must be acquired on the projects. Some of the housing will be non-DS&S with large families, lifestyles, low income, etc.

Indications are that it will take 5-8 years from the time acquisition begins to relocate the displacees. If the projects are combined and a sufficient number of personnel are assigned to carry out the relocation program and no major delays are encountered, it is very possible the project can be completed in approximately 5 years. If the projects are not combined and a sufficient number of personnel are not available, it will probably take the full 8 years to complete the project.

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BRERETON C. JONES
GOVERNOR

MEMORANDUM

TO: Ralph Divine, Director
Division of Right of Way & Utilities

ATTENTION: Lyle C. Craycroft
Branch Manager - Relocation

FROM: Bruce K. Napier, Right of Way Supervisor
District #10 - Jackson

DATE: July 24, 1995

SUBJECT: Perry County; Item No. 10-0269.01
Hazard-Jackson Road (KY 15)
Relocation Assistance / EA Report

In response to the July 18, 1995 request from Douglas W. Lambert for additional information relative to Last Resort Housing, the following is submitted as a supplement to my memo of April 26, 1995.

The April 26 memo was a summation of an in-depth study of the real estate market in Perry County. In view of this study, the amount of Last Resort Housing necessary to successfully complete the subject project is considered to be much less than originally anticipated.

Last Resort Housing will be implemented by the Transportation Cabinet on an as needed basis. The methods that will be used to implement LRH will be predominantly with respect to exceeding the regulatory limits with respect to replacement housing payments but will also be used to rehabilitate existing structures and, if absolutely necessary, to construct new dwellings. The actual anticipated need to construct dwellings is considered to be very slight.

Memo to Lyle C. Craycroft

July 24, 1995

Page 2

Currently, there are 63 owner occupants and 31 tenants of single family residences and mobile homes (and/or sites). Of these numbers it is estimated that 16% of the owner occupants and 65% of the tenants will have to be relocated via LRH; almost exclusively through the use of RHP computations in excess of the established regulatory limits. The actual costs involved in implementing the LRH based on the current number of owners and tenants is estimated to be \$100,000 and \$150,000 for the owners and tenants respectively, in additional funds.

The Transportation Cabinet has in the past, and will in the future, continue to implement the use of Last Resort Housing after an all out effort to relocate displacees has been made and the situation, as determined on an individual basis, dictates its use. While this use has and will primarily consist of exceeding regulatory limits on RHPs, the rehabilitation of existing structures will also be considered where it is prudent to do so, and when absolutely necessary the Cabinet will consider the construction of new homes in order to ensure all displaced persons are relocated into decent, safe, and sanitary housing.

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Education, Arts and Humanities Cabinet

KENTUCKY HERITAGE COUNCIL

The State Historic Preservation Office

Paul E. Patton
Governor
Marlene M. Helm
Cabinet Secretary

David L. Morgan
Executive Director and
SHPO

April 26, 1999

James F. Gries
Project Biologist
LAW Engineering & Environmental Services, Inc.
9810 Bluegrass Parkway
Louisville, KY 40299

Re: Environmental Assessment for Ky Highway 15 Hazard-Jackson Road

Dear Mr. Gries:

Our review of the above referenced project indicates that it will have no effect on any property listed in or eligible for listing in the National Register of Historic Places. If you need additional information or assistance, please feel free to contact Thomas Sanders at (502) 564-7003.

Sincerely,

David L. Morgan, Director
Kentucky Heritage Council, and
State Historic Preservation Officer

ts/11353

APPENDIX B

PROJECT ACQUISITION AND ILLEGAL ENCROACHMENTS

APPENDIX B PROJECT ACQUISITION AND ILLEGAL ENCROACHMENTS

Segment 1

Illegal Encroachments within the Existing Right-of-Way*

<i>Parcel No. or Owner Name</i>	<i>Structure</i>	<i>Category of Encroachment</i>
11	Billboard	C
12	Greenhouse	C
12	Billboard	C
15	1-story frame	C
15	Parking lot	C
15	Gas station canopy and USTs	C
15	Sign	C
17	Satellite dish	R
26	1-story frame and metal canopy	R
27	Tank	C
27	Parking lot	C
28	Frame shed	R
29	Parking area	C
31	Shed	R
36	Mobile Home and driveway	R
36	Mobile home and 2 sheds	R
40	Billboard	C
48	Sign	C
48	Parking lots	C
49	Parking lot	C
50	Parking lot	C
50	Mobile home	C
52	Shed	R
54	Frame garage and driveway	R
54	1-story metal	C
57	Parking lot	C

* Encroachments taken from latest design plan and coordination with KYTC Office of General Counsel

Segment 1--Continued

Takings within Proposed Right-of-Way*

<i>Parcel No. or Owner Name</i>	<i>Structure</i>	<i>Category of Taking</i>
14	Mobile Home	R
14	2-story brick and shed	R
29	Parking lot	C
31	Mobile home	R
33	2-story frame	R
38	1-story frame and shed	R
38	1-story frame	R
38	1-story frame and garage	R
56	1-story brick	R
57	1-story frame	R
57	2-story metal and parking lot	R
61	Mobile home	R

* Encroachments taken from latest design plan and coordination with KYTC Office of General Counsel

Segment 2

Illegal Encroachments within the Existing Right-of-Way*

Parcel No. or Owner Name	Structure	Category of Encroachment
300	Driveway	R
Church of God	Parking lot	I
Ronald Fugate	1-story house and fenced yard	R
305	Parking area and metal building	C
Thelma Gayhart	Fence and parking area	R
Carol Sampsell	Parking area	R
Cinda Noble	1-story block and parking lot	C
John Burgett	Fence and yard	R
Carol Sampsell	Trailer	R
321	Pool and entertainment center	C
321	Fugate's main building	C
324	Trailer	R
324	Building	C
324	Building	C
325	Gate	C
326	Gate	C
327	Garage and out building	R
Raymond Hatton	2 sheds	R
334	Garage and parking area	R
337	1-story frame	R
338	Fence, yard and parking	R
347	Trailer, fence, parking and tank	C
348	2 Sheds, fence and parking	R
346	Billboard	C
350	2 signs	C
352	Sign and parking	C
349	Trailer	R
349	1-story block and parking lot	C
356	1-story frame	R
357	Trailer and sign	C
368	Trailer, parking, and shed	R
374	Canopy	C

* Encroachments taken from latest design plan and coordination with KYTC Office of General Counsel

Segment 2--Continued

Takings within Proposed Right-of-Way*

<i>Parcel No. or Owner Name</i>	<i>Structure</i>	<i>Category of Taking</i>
308	2-story brick with 2 sheds	R
310	Trailer	R
310	Trailer and building	R
318	Trailer and shed	R
311	1-story brick and pool	R
320	1-story frame and shed	R
320	1-story building	R
Betty Coghill	Trailer	R
Betty Coghill	Trailer	R
324	1-story metal	C
340	2 sheds	R
348	1-story brick	R
349	Trailer and shed	R
356	1-story frame	R
357	Trailer	R
358	1-story brick	R
359	1-story brick	R
361	Trailer	R
369	1-story brick	R
373	1-story brick	R
373	2-story brick, pool and shed	R
366	Trailer and shed	R
374	Trailer	R
374	1-story block	C

* Encroachments taken from latest design plan and coordination with KYTC Office of General Counsel