

APPENDIX E

ARCHAEOLOGICAL

OVERVIEW



10 November 2008

Mr. Tom Springer
Qk4, Inc.
815 West Market Street
Louisville, KY 40202

Re: Archaeological Resource Overview for an Alternative Study of US41A (Widen Green Street from US 60 to US41), Henderson, Henderson County, Kentucky
Item No. 2-140.00
AMEC Project No. 02-4124-2100

Dear Mr. Springer:

Attached please find AMEC Earth & Environmental's letter report for the archaeological resource overview for the scoping study. Our reviews indicated that three archaeological surveys have been conducted within the study area and an additional twelve surveys have been identified within a 1.24-mile (mi) (2-kilometer (km)) buffer around the study area (see **Figure 1**). Of the three archaeological surveys (Schock 1998, Moldenhauer et al 2001, and Koepfel and Lence 2002) only one (Moldenhauer et al 2001) identified an archaeological and cultural historic site (15HE864/He-67). The Mt. Zion Cemetery, Site 15HE864/He-67, is an African-American cemetery dating to the early twentieth century (see **Figure 2**). The cemetery is considered eligible for listing on the National Register of Historic Places (NRHP). The Mt. Zion Cemetery is located in the study area. No other archaeological sites have been identified within the study area.

ARCHAEOLOGICAL RESOURCE OVERVIEW

This archaeological resource overview identifies potential archaeological issues likely to require consideration during the scoping study of US 41A. The US 41A study area is approximately 4.2 miles (6.8 km) long approximately 300 ft (91 meters) wide and encompasses an approximate area of 152 acres (61.5 hectares). This overview summarizes the results of archaeological resource research, based upon available archival literature, the Office of State Archaeology site files, National Park Service and Kentucky Heritage Council databases, as well as historic map research. No fieldwork was conducted in association with this overview. This archaeological resource overview is for planning purposes only and does not provide a detailed analysis or assessment of any potential impacts to archaeological resources.

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TOPOGRAPHY AND GEOLOGY

Henderson County lies in the Western Coalfields Region of Kentucky which encompasses approximately 4,500 square miles (11,656 square km) and is separated from the Pennyroyal Region by low sandstone ridges. The area is a hilly upland of low to moderately high relief that is divided by streams that occupy wide, poorly drained and swampy valleys or numerous types of bottomland hardwood forests. The uplands and wetlands are both characterized by oak forests, although the species of these ecosystems are substantially different. Coal has been surface mined over vast areas in the region. The Western Coalfields are drained by the Green River and its tributaries and by the Tradewater River. The Ohio River forms valleys on its northern border.

PREHISTORIC AND HISTORIC CONTEXTS

The Paleoindian period (12,000-8,000 BC) of the southeastern prehistory is probably the least understood due to the paucity of archaeological sites with good context that have been systematically excavated. This period begins with the introduction of humans into Kentucky at the end of the Pleistocene epoch. Though the time of this introduction is uncertain, recent excavations indicate they took place prior to 12,000 BC (Bense 1994; Broster and Norton 1996). Paleoindian components in this area are characterized by Clovis and related fluted points, including Cumberland, Greenbriar, and Quad types (Broster and Norton 1996; Justice 1987). Also included in the tool kit is the Paleolithic blade/core technology.

The Early Archaic period occurs between 8,000-6,000 BC and is characterized by projectile points such as Kirk variants, Thebes, LaCroy, and Kanawaha points (Justice 1987). Early Archaic tool kits also include ground stone tools. The Middle Archaic (6,000-3,700 BC) is characterized by Morrow Mountain, Sykes-White Springs and Big Sandy points as well as the increase in intensity of settlements. The Late Archaic (3,700-450 BC) consists of three phases: Benton (3,700-3,000 BC) Ledbetter (3,000-1,200 BC), and Wade (1,200-450 BC). Wade phase sites are a transitional period between the Late Archaic and Early Woodland periods. The Late Archaic is marked by increased intensity of habitation areas as evidenced by the increased use of large storage pits and the first evidence of shelters (Bentz 1998; Stallings et al 2001).

The Early Woodland period extends from 450 BC to AD 0, and the appearance of pottery marks the beginning of the period of ceremonial mound building. The influence of Adena culture is seen in point styles, sand-tempered ceramics, and cord-marked and fabric impressed ceramics at the end of the period. Camps and small villages form the bulk of sites during this period and the large numbers indicate an increase in the population during the period. The Middle Woodland period extends from AD 1 to 500. This period is characterized by a flourishing interregional exchange network and a complex social system. This complexity allowed elites of the period to call together populations to construct large numbers of mounds and mound complexes (Bentz 1998). The Late Woodland period (AD 500-1000) forms a transitional period between the Middle Woodland and the Mississippian period. Late Woodland continues the transition of mobile bands into sedentary groups with an increased reliance on local resources (Stallings et al 2001).

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The Mississippian period (AD 1000-1500) is marked by the appearance of platform mounds and plazas, the adoption of more exotic and diverse pottery styles, and Madison, Fort Ancient, Levanna, and Nodena points (Justice 1987). Planned villages and the intensive use of cultigens allowed for a large increase in localized sedentary population. By AD 1500, Mississippian culture was in sharp decline.

The earliest documented European exploration of what was to become Kentucky was by the Frenchmen Marquette and Joliet, who passed by the mouth of the Ohio and western Kentucky in 1673 during their exploration of the Mississippi River (Alvord 1920:63-64). Other French, English, and Spanish traders and explorers may have passed through the territory in the late seventeenth century to mid-eighteenth century as well (McBride and McBride 1990:583). Early contact of Native Americans with Europeans in what is now Kentucky may have been indirect, with European trade goods and information about Europeans spread through the existing exchange systems. During the early part of the Contact period, access to the region by Europeans was almost exclusively from the south from Spanish Florida, (which extended into present-day Georgia and Alabama), and later from the north by the French in Illinois, who wrote of the Shawnee living on the Ohio River. The few surviving descriptions of inhabitants are indirect and vague.

Native American inhabitants of the Kentucky region during the Contact period probably consisted of diverse Algonquian or Iroquoian speaking groups that based their economies on a combination of horticulture, fishing, hunting, and gathering. Small encampments at scattered locations coalesced into larger villages on floodplains in the spring for the cultivation of corn, beans, squash, and a few other select plants, like tobacco. Typically during this period, the native cultures underwent acculturation, a virtual breakdown of their former way of life through replacement by or approximation of the cultural norms of the dominant culture. Traditional technologies such as lithic stone tool manufacture and clay ceramic manufacture were abandoned and replaced by European items such as metal knives, pots, and other trade goods. In addition, disease increasingly reduced native populations all over the central and eastern parts of the continent during this period. In this region, epidemics are documented from the last decades of the 1500s and into the mid-1600s.

The signing of the Greenville Treaty in 1795 marks the end of the Contact period. This document, signed by 1,100 Native American tribal chiefs, ceded virtually all land claims to the United States government in return for promises of territorial boundaries and other rights (Niles 1996:217). Native Americans were removed to small reservations to the north and west, leaving no Native American communities in Kentucky (Henderson et al. 1986:1-17).

Henderson County, the thirty-eighth county in order of formation of the state of Kentucky, is located in western Kentucky along the Ohio River. It is bordered by Daviess, McLean, Webster, and Union Counties and has an area of 438 square miles. A change in the Ohio River's course has isolated a small portion of the county on the opposite shore of the Ohio River from the rest of the county. The county was formed in 1798 from a section of Christian County and named to honor Col. Richard Henderson, founder of the Transylvania Company. In 1778 the heirs to Henderson's company were granted 200,000 acres of land in what would become Henderson

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County by the Virginia House of Delegates. Members of the company were among the area's first settlers beginning in 1798. The seat of Henderson County is the city of Henderson.

The topography of Henderson County varies from level floodplain to gently rolling land. Mineral resources include oil and coal. The county is very productive farming area with leading crops of corn, soybeans, wheat, and tobacco in addition to livestock production. In addition to the Ohio and Green rivers, there are numerous small streams that bisect the county including Lick, Canoe, Beaverdam, and Pond Creeks.

The first settlement in the county occurred around 1791 at what was then called Red Banks, the future site of the city of Henderson. Settlement of the area was slowed by the threat of Indians and later by outlaws. With the establishment of Henderson County in 1798 and a county court system the next year, the area became generally peaceful. By 1800 the population of the county had increased substantially, and numerous grist and carding mills were built. In 1801 Henderson was designated one of the state's tobacco inspection points, and much of the tobacco exported from the Green River Valley passed through there. A second inspection house was built in 1805 to handle the quantities of beef, pork, flour, and hemp that were shipped out. The 1837 construction of a dirt turnpike through the county, connecting Henderson with Hopkinsville, also helped to stimulate economic growth. The city of Henderson grew rapidly as a trading center amid scattered agricultural communities and river landings.

During the Civil War, no major battles took place in Henderson, although the county was subject to raids by Confederate partisan rangers and lawless guerrilla bands. Union forces occupied the county seat on at least two occasions. After the war, development of the county's resources began in earnest. In 1866 the Henderson and Union Petroleum Company struck oil on the headwaters of Highland Creek. Coal, which had been dug in small amounts since the 1820s, was extracted and shipped down the river in ever-increasing quantities.

The promise of economic growth attracted railroads to the county. In 1871 the Evansville, Henderson and Nashville Railroad (now part of CSX Transportation) completed a line through the county, and was followed by the Louisville, St. Louis and Texas Railroad in 1889. The railroads and other industrial activity accounted for rapid growth of some of the small villages in the county such as Corydon, Smith Mills, Zion, and Baskett.

On July 4th, 1932, the Audubon Memorial Bridge, also known as the Henderson-Evansville Bridge, was dedicated. Henderson County became a gateway to the south via U.S. 41, which was known as the Dixie B-Line, a main north-south road before the advent of interstate highways. With the increase in tourist traffic, county residents in 1934 began the establishment of what eventually became the John James Audubon State Park. In 1938 a museum was dedicated there to honor the painter and naturalist, who spent time in the area from 1808 to 1819.

The city of Henderson experienced industrial growth during World War II and the years afterward, while the rest of the county was engaged in oil or coal production or remained agricultural. By 1989, bituminous coal and lignite mining was a leading employer in the county. Crude oil production in 1989 was 817,648 barrels by 1990, Henderson County and the town of Henderson had a diversified economic base that included farm products, coal, and oil along with

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the manufacture of chemicals, aluminum, food products, automotive accessories, furniture, and clothing (Kleber 1992).

ARCHAEOLOGICAL RESOURCES

Document and database research revealed one previously recorded historic archaeological site (15HE864/He-67) adjacent to the study area. Site 15HE864/He-67 is an African-American Cemetery named the Mt. Zion Cemetery that dates to the early twentieth century (see **Figure 2**). The Mt. Zion Cemetery is considered eligible for listing on the NRHP as an archaeological site and has been assigned both an archaeological (15HE864) and cultural historic (He-67) site designations. The northern boundary of site 15HE864/He-67 is defined by the US 60 right-of-way. The graves face to the north.

The Mt. Zion Cemetery is the oldest African-American cemetery in Henderson County. Over 900 persons are buried in the cemetery. The majority of the cemetery's population was victims to the 1918-1919 influenza epidemics. Of the headstones recorded, the oldest interment death was in 1898. Several veterans of the Civil War, a veteran of the Spanish-American War, and a Buffalo soldier are buried in the cemetery. The Mt. Zion Cemetery is an important symbol of Henderson's African-American community as well as a source of ethnic pride and identity.

The Kentucky Transportation Cabinet and the State Historic Preservation Office determined in 2001 that the site is eligible for listing on the NRHP under the four following criteria:

- Criteria A: the evolution of burial practices of the Henderson African-American community from 1890 to 1960, especially during the influenza epidemic of 1918-1919.
- Criteria B: the last resting place of individuals who contributed to the defense of the Union in the Civil War, Indian Wars, and the Spanish-American War. The cemetery is considered a Traditional Cultural Property.
- Criteria C: the presence of over 900 interments and potentially a large number of grave markers suggest that the site embodies the distinctive characteristics of the community's attitude toward the death and the means by which the community remembers those who came before.
- Criteria D: a sample of the over 900 interments supports a determination that the cemetery has a great potential for containing scientific data, which may be employed in studying funerary practices and biological anthropology.

Fifteen previous surveys have been completed within the 1.24 (2 km) buffer around the study area, resulting in the location of nine additional archaeological sites, four prehistoric, one historic, and four archaeological sites with unknown affiliations (see **Figure 1**). The prehistoric sites consist of one Middle Archaic period (6,000-3,000 BC) to Woodland period (200 BC- AD 500) lithic scatters (a scatter of stone tools), a Mississippian period (AD 900-1700) village (a locus of settlement that is more permanent than an encampment) and two unidentified lithic scatters. One historic archaeological site (He-H-224), the Stewart House, a twentieth century residence (e.g. nails, window glass, and standing structures) was also documented. This site is located at 827 South Green Street (see **Figure 2**). The residence embodies the distinctive characteristics of a type of construction, known as pre-fabricated, that was manufactured by the

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Lustron Corporation between the late 1940s and early 1950s. Historic archaeological sites relating to this residence may be possible. It should be noted that archaeological sites may be present within the study area that have not been documented at this time.

CULTURALLY SENSITIVE LOCATIONS

Review of historic mapping revealed the following culturally sensitive locations in the study area: the previously mentioned Mt. Zion Cemetery, a second cemetery directly north of the Mt. Zion Cemetery, and one school (see **Figure 3**). No churches were present on the historic maps. However, since small family cemeteries are common throughout the state, additional unmarked cemeteries may be located within the study area associated with former structures and farms.

A review of the National Park Service database identified one site listed on the NRHP, the Stewart Residence (He-H-224). The Stewart Residence is located at 827 S. Green Street in Henderson, Kentucky. It was listed in 1998 and may have associated historic archaeological sites within its NRHP boundaries.

These culturally sensitive locations may have local or regional community significance and could also be protected by state and/or federal regulations. Future proposed projects in the study area should consider potential impacts to these cultural resources.

PREHISTORIC ARCHAEOLOGICAL RESOURCE PROBABILITY

Various factors must be considered when assessing the potential of an area to contain prehistoric and/or historic archaeological sites. Among these are topographic setting; proximity to water; location along major routes of transportation; and the extent of ground disturbances within the area resulting from erosion, construction, maintenance, or farming activities. While only three archaeological investigations have occurred within the study area, the study area has been assessed for the potential to discover prehistoric and/or historic archaeological sites. Various factors are considered in evaluating the potential for archaeological sites including topographic or landform setting (e.g., floodplains, hillsides); proximity to water; location along major routes of transportation; and the extent of ground disturbances within the area resulting from erosion, construction, or agricultural activities. The close proximity of the study area to the Ohio River, a major water way, suggests that this area is an ideal location for seasonal prehistoric archaeological sites and long term prehistoric habitations.

The study area has a high potential to contain significant prehistoric archaeological sites (**Appendix Figure 4**). Criteria for determining a high probability of archaeological sites included areas that have close proximity to water (Ohio River), are in close proximity to transportation routes (roads and navigable waterways), and exhibit moderate to level elevation ranges. The criteria for determining a low probability of discovering archaeological sites included areas with steep elevation ranges and areas not in close proximity to water (streams) or transportation routes. Medium probability areas are those areas that did not fall within the high or low probability areas.

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HISTORIC ARCHAEOLOGICAL RESOURCE PROBABILITY

The study area has a high potential to contain significant historic archaeological sites (**Appendix Figure 4**). Additionally, the long historic occupation of the county suggests the possible presence of historic archaeological sites relating to farmsteads and associated agricultural activities. Additionally, South Green Street (US 41) is a historic transportation route, thus suggesting a higher probability to locate historic archaeological resources along its course.

An examination of historic maps of the proposed alternative was conducted to determine if any extant historic structures depicted on the maps are still present. Historic map review (1950 Highway and Transportation Map of Henderson County) (see **Figure 3**) indicated approximately 25 historic structures with the potential for associated historic archaeological sites. In addition, the Sanborn Fire Insurance Maps from 1885, 1892, 1897, 1901, 1906, and 1913 were also consulted. Adjacent to the study area are cemeteries, historic structures and resources that could be eligible for listing on the NRHP and these cemeteries and structures/resources could have associated archaeological sites. Due to the documented Civil War activities in Henderson County, the potential exists for historic archaeological sites relating to Civil War raids or camp sites.

RECOMMENDATIONS

Even though a potential for intact archaeological sites has been projected, the study area has not been subjected to a Phase I archaeological investigation and the presence of currently unidentified archaeological sites within sections of the proposed alternatives are highly likely. As future projects are developed in the US 41A study area, a Phase I archaeological survey should be conducted when federal funds or a federal permit is involved. The Phase I survey will identify archaeological sites and help determine whether a site is eligible for listing on the NRHP to comply with Section 106 of the National Historic Preservation Act of 1966 (as amended), 16 U.S.C. 470(f), and Presidential Executive Order 11593, Protection and Enhancement of the Cultural Environment. A Section 4(f) evaluation should be conducted and avoidance options considered if the right of way overlaps any NRHP listed or eligible for listing archaeological sites requiring preservation in place (e.g., a burial site or areas of a Civil War battlefield).

If you have any questions or would like additional information, please contact Hank McKelway or Marty Marchaterre at (859) 231-0070.

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Sincerely,

A handwritten signature in black ink, appearing to read "John A. Hunter".

John A. Hunter RPA
Project Archaeologist

A handwritten signature in blue ink, appearing to read "Henry S. McKelway".

Henry S. McKelway Ph.D. RPA
Cultural Resource Manager

Enclosures

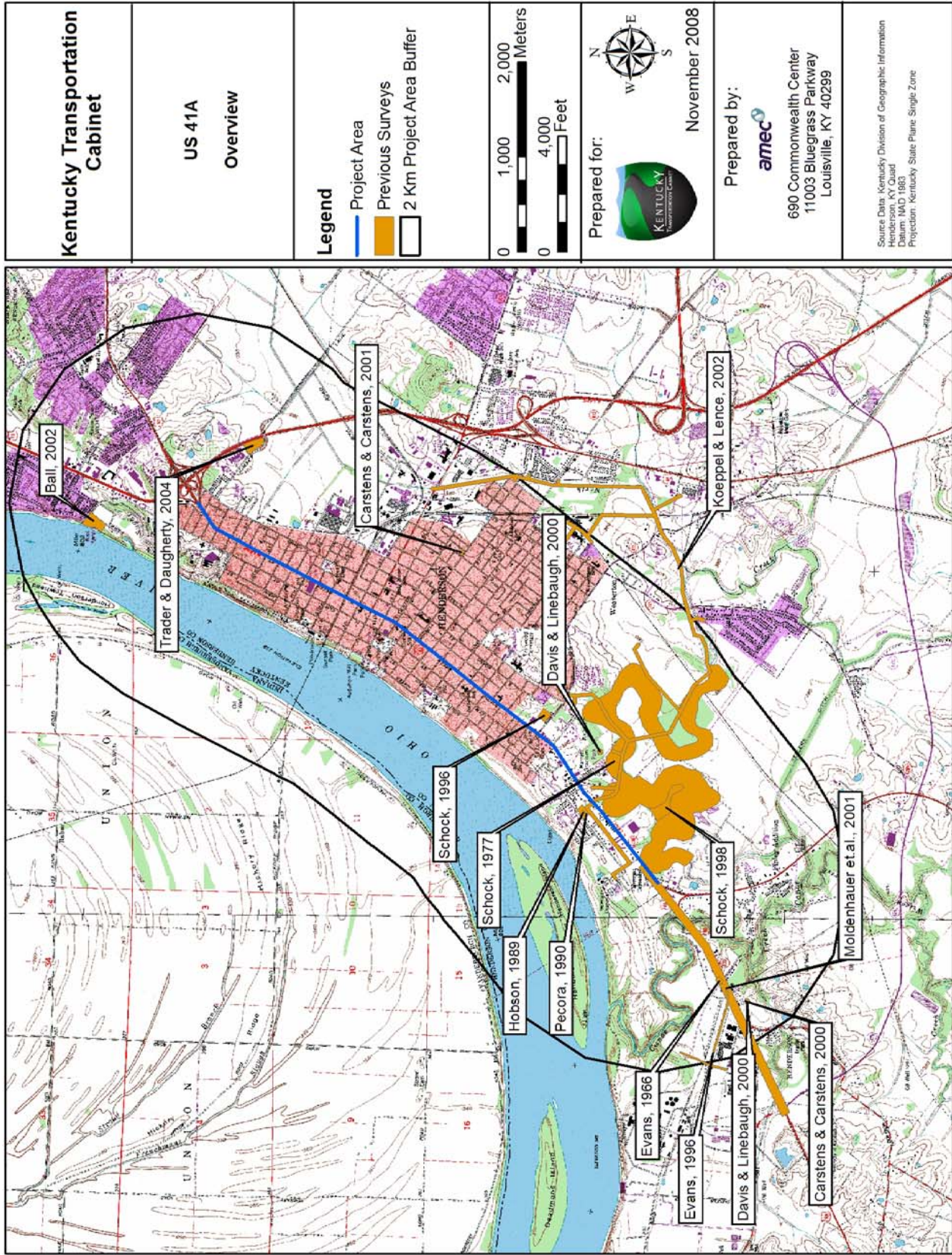


Figure 1. Previous Archaeological Surveys Within the Project Area.

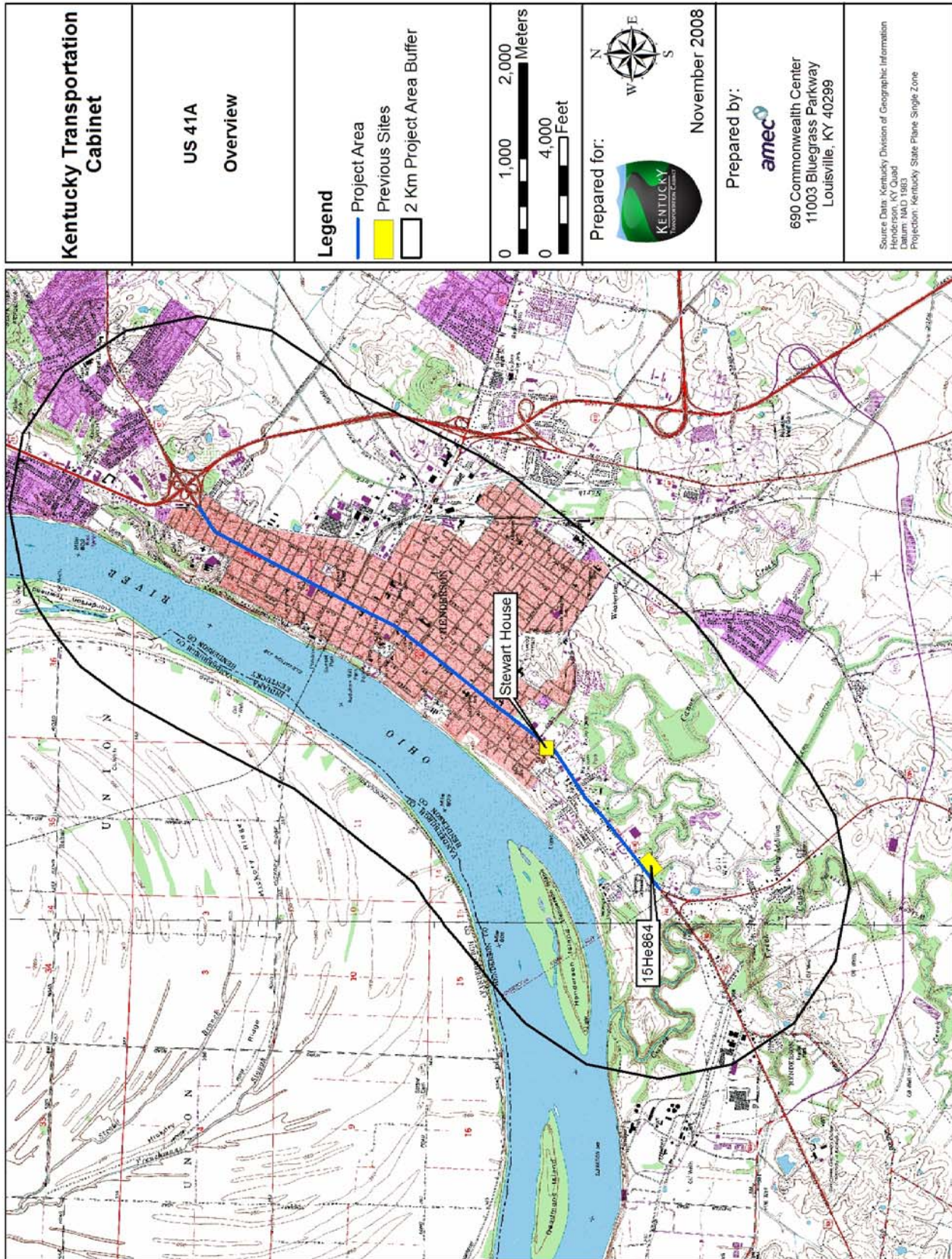


Figure 2. Location of the Historic Mt. Zion Cemetery (15He864) and Stewart House

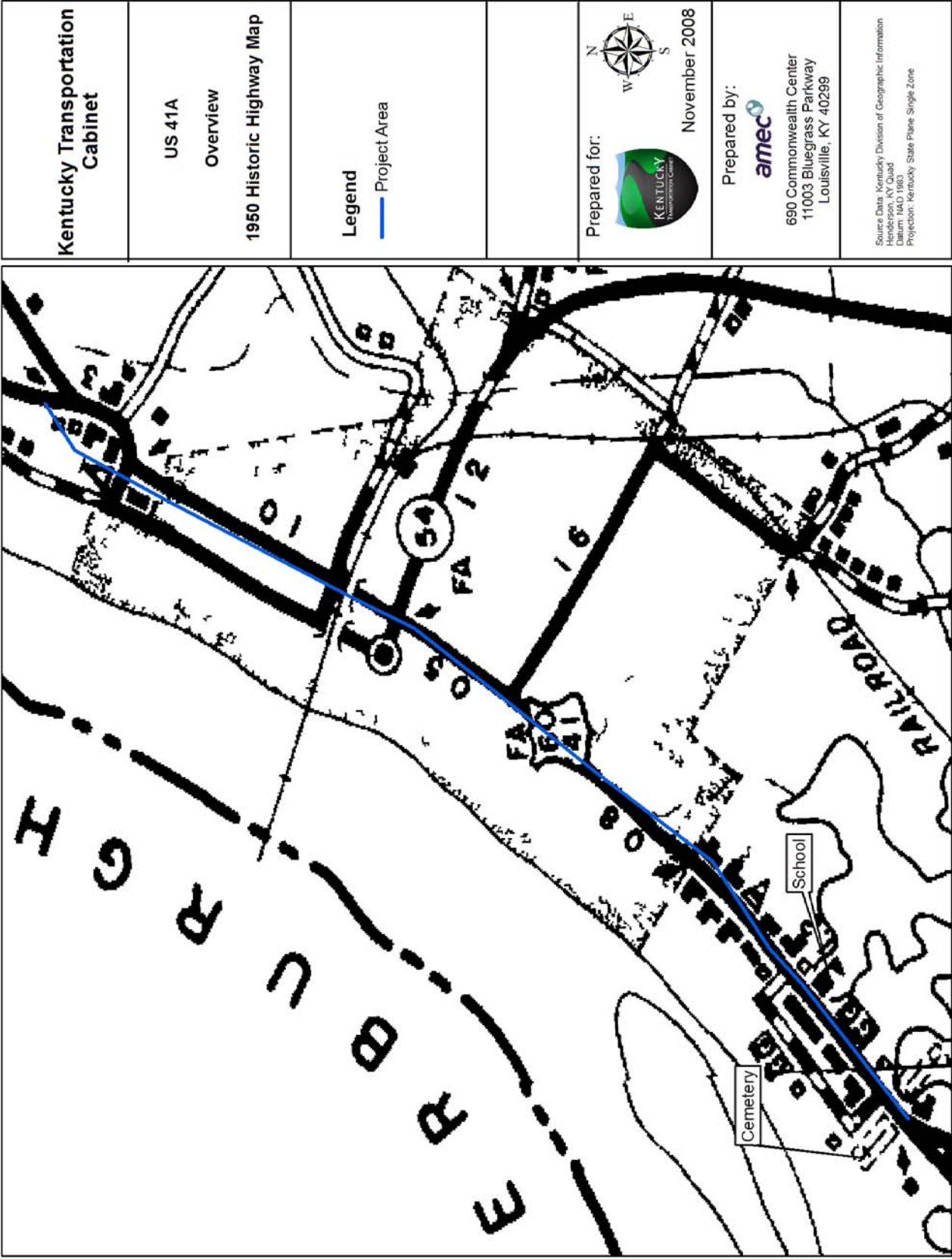


Figure 3. 1950 Kentucky Highway Map.

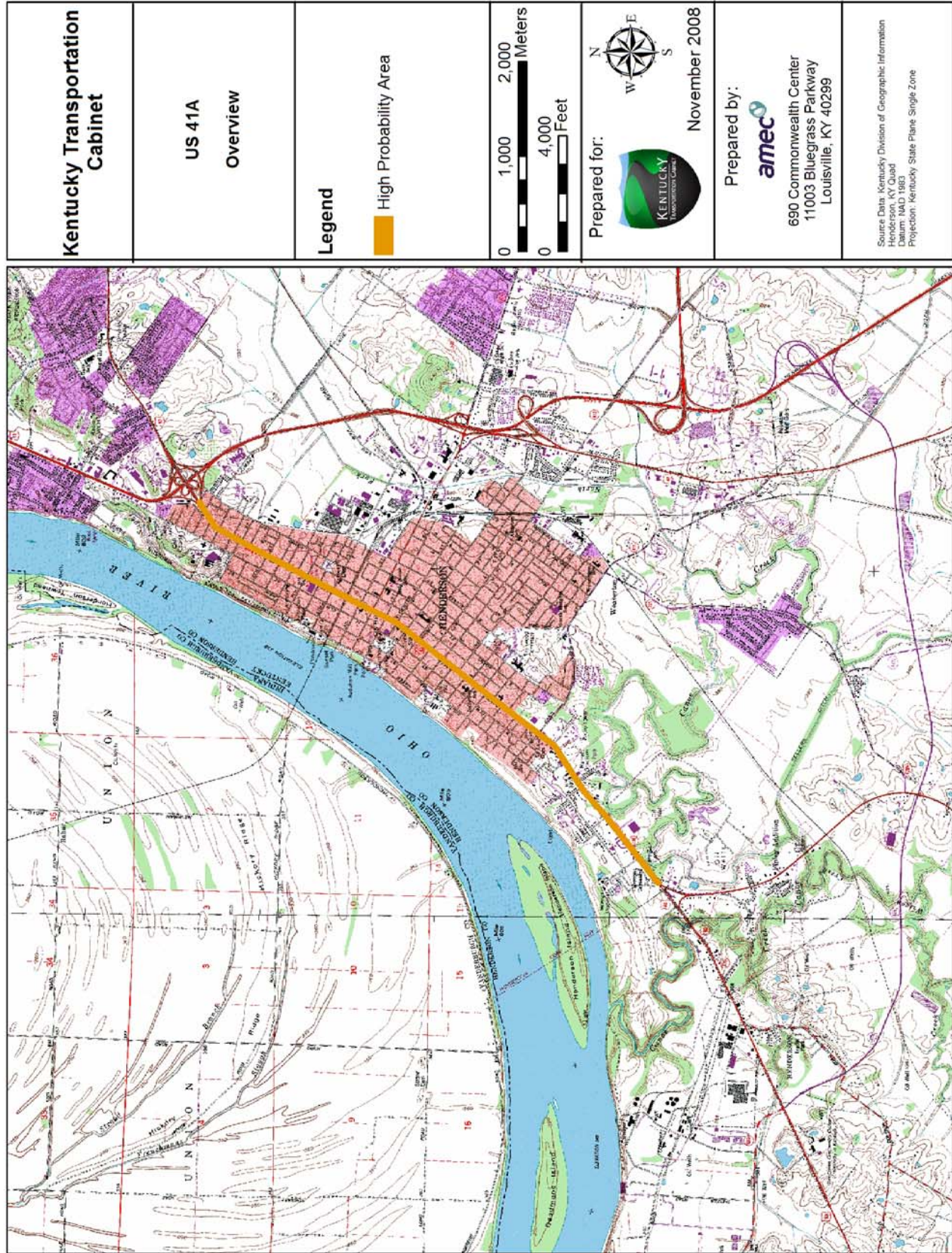


Figure 4. Map Showing Area of High Probability