

AN ARCHAEOLOGICAL SURVEY OF THE PROPOSED WIDENING/CURVE CORRECTION OF KY 32 IN ELLIOTT COUNTY, KENTUCKY (ITEM NO. 9-8802.00)



by
Brian G. DeCastello, RPA

Prepared for



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ABSTRACT

On April 26 and 27, 2017, Cultural Resource Analysts, Inc., personnel conducted an archaeological survey for the proposed major road widening and curve correction along KY 32 in central Elliott County, Kentucky (Item No. 9-8802.00). The survey was conducted at the request of David Waldner, Kentucky Transportation Cabinet, of the Division of Environmental Analysis.

The current project area encompasses an area measuring approximately 25.2 ha (62.2 acres) in size. The field methods used in the current survey were commensurate with the conditions observed, consisting of an intensive pedestrian survey supplemented by screened shovel testing in low visibility areas. Access to a portion of the project area measuring approximately 11.4 ha (28.1 acres) was denied by the current landowner. This area was not surveyed during the current investigations.

A records review, conducted at the Office of State Archaeology in April 2017, indicated that a small segment of the project area (.6 ha [1.6 acres]) had been previously surveyed along the western edge of the project area (i.e., Davis 1999). A single archaeological site (15E112) was partially situated within this previously surveyed segment. The site was a historic residence/farmstead dating to the mid-twentieth century and was considered not eligible for listing in the National Register of Historic Places. The previously surveyed area was not resurveyed as part of the current investigations. The records review also indicated that an additional 9 archaeological surveys and 14 archaeological sites were also included within the 2-km radius of the project area. The current field investigations did not resurvey this previously surveyed area.

No archaeological sites were recorded as a result of this survey. Therefore, no archaeological sites listed in, or eligible for listing in, the National Register of Historic Places will be affected by the proposed construction activities, and archaeological clearance is recommended for the portions of the project area that were surveyed by the current investigations. The denied portion of the project area will need to be surveyed for archaeological resources prior to the proposed road construction activities.

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I. INTRODUCTION

On April 25 and 26, 2017, Cultural Resource Analysts, Inc. (CRA), personnel conducted an archaeological survey for the proposed curve correction of KY 32 in central Elliott County, Kentucky (Figure 1). The project area is situated just southeast of the modern community of Sandy Hook, Kentucky. The survey was conducted at the request of David Waldner of the Kentucky Transportation Cabinet (KYTC). The field investigations were conducted by Brian G. DelCastello and Julia K. Gruhot. The fieldwork required approximately 32 person hours to complete. The survey was only conducted after landowner permission was obtained.

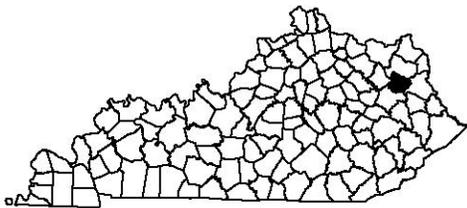


Figure 1. Map of Kentucky showing the location of Elliott County.

The project area measured approximately 25.2 ha (62.2 acres) in total size. Of this area, approximately .6 ha (1.6 acres) had been previously surveyed (i.e., Davis 1999) and was not resurveyed as part of the current investigations. In addition, approximately 11.4 ha (28.1 acres) could not be accessed due to landowner denial. The remaining portion of the project area was surveyed incorporating an intensive pedestrian survey supplemented by systematic shovel testing.

Office of State Archaeology (OSA) Geographic Information Systems (GIS) data was requested by CRA on March 23, 2017, and was returned on April 06, 2017. The results were researched by Heather Barras of CRA at the OSA on April 24, 2017. The OSA project registration number is FY17_9005.

Prior to the field investigations an 811 locate was submitted for the project area.

Several underground utilities were marked within the project area, and were found to be concentrated predominately along the existing portions of the KY 32 right-of-way (ROW). Shovel testing was not conducted within close proximity of the marked utilities. Parcels were only surveyed after landowner permission was granted.

Project Description

The project consists of a survey for the proposed major widening/curve correction of KY 32 (Brown Ridge Road) just southeast of Sandy Hook, Kentucky (see Figures 2 and 3). The current project entails the major widening and curve correction of a 1.6 km (1.0 mi) section of the road from mile marker 9.20 to mile marker 10.20. This project is part of a larger project that involves the reconstruction of various portions of KY 32 in Elliott County.

KY 32 is classified as a major rural road, carrying traffic to and from several surrounding communities. The proposed road construction project will improve the reliability of the road correcting a number of significant horizontal, vertical, and width deficiencies. This project will also improve the safety of this stretch of the road. Three vehicle crashes have been reported within the past five years (2011–2016) within this segment of KY 32. The proposed road construction project will address these safety issues.

While portions of both sides of KY 32 will be affected by the proposed realignment, the vast majority of the disturbances will be located along the southern side of KY 32. As described below, most of this area is moderately hilly and is predominately situated along the Butcher Branch floodplain.

Purpose of Study

This study was conducted to comply with Section 106 of the National Historic Preservation Act (NRHP). This transportation project is federally funded, and therefore considered an undertaking subject to 106 review.

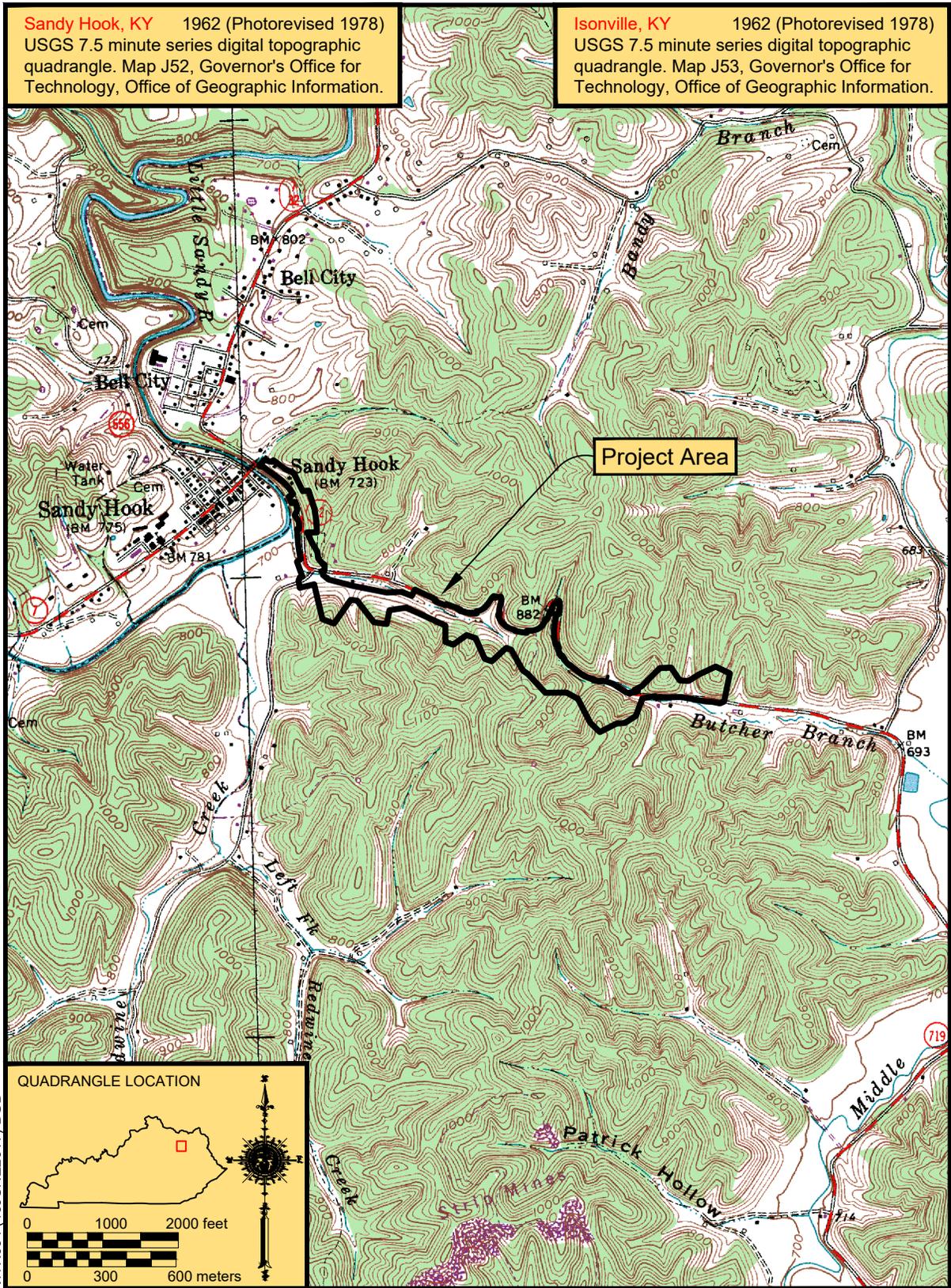
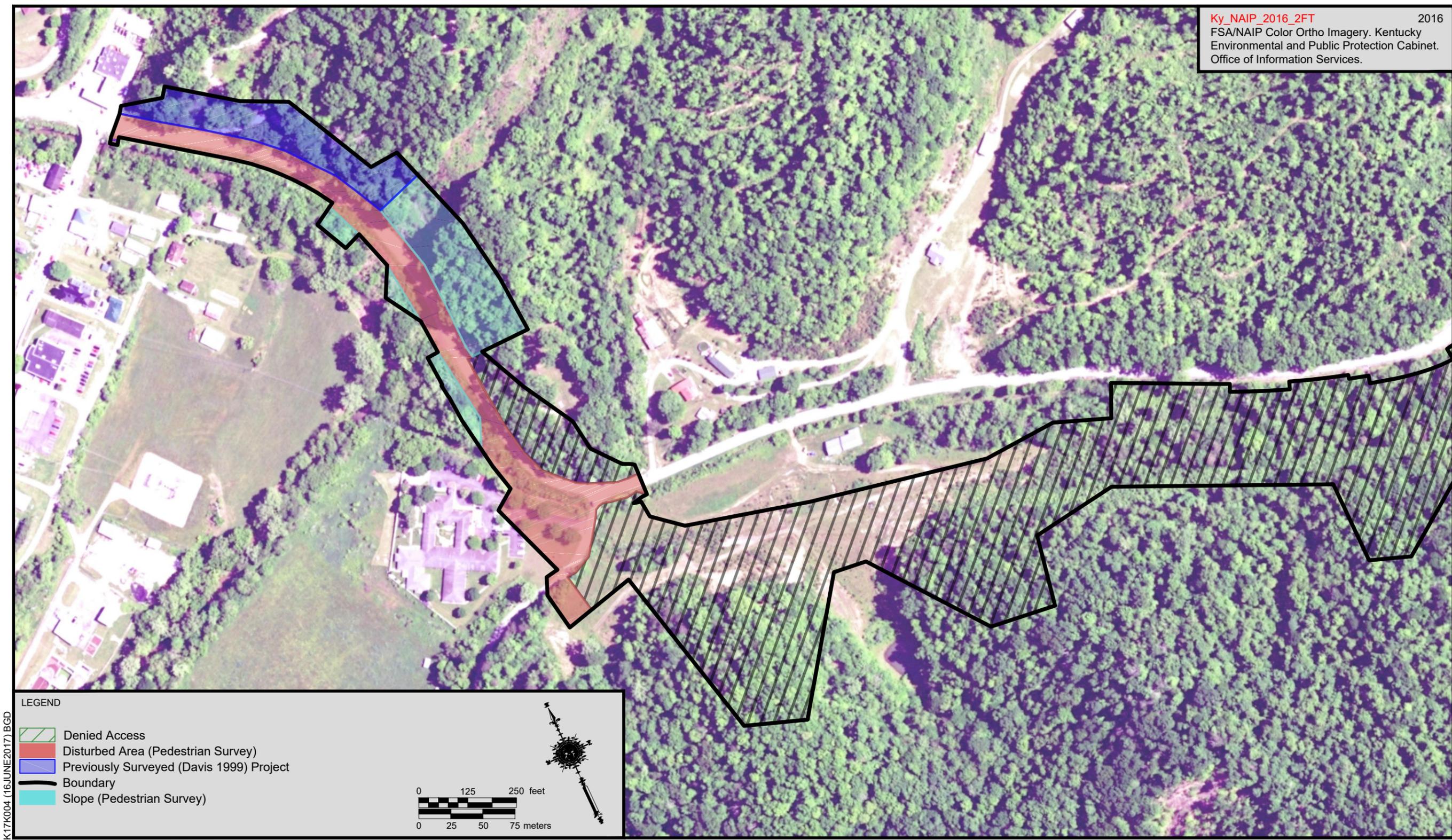
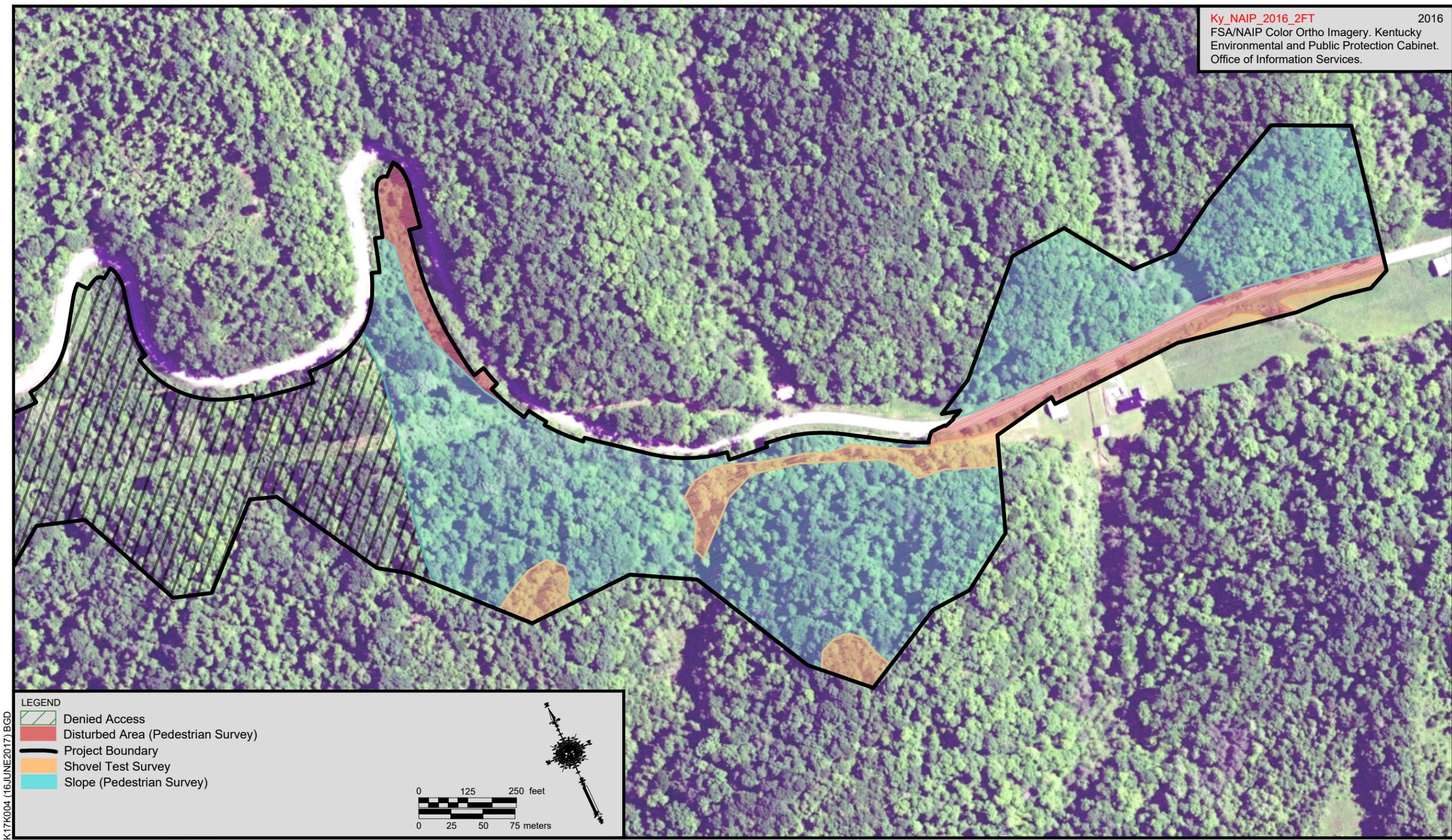


Figure 2. Location of project area on topographic quadrangle.



K17K004 (16JUNE2017).BGD

Figure 3a. Project area plan map.



K17K004 (16JUNE2017).BGD

Figure 3b. Project area plan map.

The purpose of this assessment was to locate, describe, evaluate, and make appropriate recommendations for the future treatment of any historic properties or sites that may be affected by the project. For the purposes of this assessment, a site was defined as “any location where human behavior has resulted in the deposition of artifacts, or other evidence of purposive behavior at least 50 years of age” (Sanders 2006:2).

The following report is a description of the project area, previous research and cultural history of the area, the field and laboratory methods used, and the results of this investigation. It conforms to the *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (Sanders 2006). Cultural materials, field notes, records, and site photographs will be curated with the Department of Anthropology at the University of Kentucky.

Summary of Findings

Prior to initiating the field investigations, a records review was conducted at the OSA. The OSA records revealed that 9 previous professional archaeological surveys have been conducted and 14 archaeological sites have been identified within a 2 km radius of the project area. The records review indicated that a portion of the current project area had been previously surveyed (i.e., Davis 1999). The records review also indicated that the Davis survey identified a single archaeological site within the current project area. The site, 15E112, was a historic residence/farmstead dating to the mid-twentieth century. The site was recommended not eligible for listing in the National Register of Historic Places (NRHP) (Davis 1999).

No archaeological sites listed in, or eligible for listing in, the NRHP will be affected by the proposed construction activities of the current project. Therefore, archaeological clearance is recommended.

II. DESCRIPTION OF THE PROJECT AREA

The proposed transportation project consists of the major widening and curve correction of a 1.6 km (1.0 mi) stretch of KY 32 (known locally as Brown Ridge Road) just southeast of the community of Sandy Hook, Kentucky (see Figures 2 and 3). The new reconstruction will improve traffic safety along this stretch of highway. The project area measures approximately 25.2 ha (62.2 acres) in total size.

The project area is reflective of the hilly nature of this portion of the Eastern Coal Field region of Kentucky, and consisted of moderately hilly, rolling terrain (Figures 4–7). This rolling topography is present throughout the project area, particularly in the southeastern section, where elevations range from approximately 206 m (1,005 ft) above mean sea level (AMSL) along the southern edge of the project area to approximately 232 m (760 ft) AMSL along KY 32 and Butcher Branch. The northwestern portion of the project area has a less-varied elevation change, ranging from 220 m (720 ft) AMSL along KY 32 to approximately 244 m (800 ft) AMSL near the northwestern edge of the project area. The Little Sandy River and its tributaries, particularly Butcher Branch, drain the project area.

Located within the dissected uplands, Elliott County, the project area supports an overstory of mixed trees, including both deciduous and evergreen species. Deciduous trees, however, make up the vast majority of the local species, and include such species as hickory, elm, maple, and black walnut. Underbrush consisted of a variety of mixed herbaceous plants and other weedy undergrowth (Figures 4–6). Overall, the project area had poor ground surface visibility due to the presence of vegetation.

Several disturbed areas were noted during the course of the current survey. Most of the disturbances are directly related to the construction and maintenance of KY 32.



Figure 4. Overview of the southeastern portion of the project area north of KY 32. Photo facing south-southeast towards KY 32.



Figure 5. Overview of the southeastern wooded portion of the project area south of KY 32. Photo facing northwest along Butcher Branch.



Figure 6. Overview of the southeastern non-wooded portion of the project area south of KY 32. Photo facing east-southeast along KY 32.



Figure 7. Overview of KY 32 showing land grading and benching along the road. Photo facing north.

Portions of the landscape surrounding the current KY 32 corridor display evidence of land grading, infilling, and benching related to the construction of KY 32 (Figure 7).

Additional portions within, and adjacent to, the current project area display disturbances associated with secondary construction activities. The southwestern portion of the project area near the intersection of KY 32 and Howards Creek Road (Figure 8) displays additional grading and benching associated with the construction of a nursing and rehabilitation center.

As previously discussed, a substantial portion of the current project area could not be accessed due to landowner denial (see Figure 3). This parcel, measuring approximately 46 percent of the project area (11.4 ha [28.1 acres]), is situated in the central portion of the project area and includes segments north and south of KY 32. This segment of the project area will need to be surveyed archaeologically prior to the proposed road construction.

Soils within the project area belong to two soil associations (Table 1). The western soils belong to the Rock-Land Monongahela-Pope Association; while the eastern soils have been assigned to the Muskingum-Montevallo-Ramsey Association (Weisenberger, et al 1965). Both associations are present throughout central and eastern Elliott County within the Little Sandy River drainage and surrounding environs.

The Rock-Land Monongahela-Pope Association is typically situated throughout the uplands along moderately steep hillsides and ridges (Weisenberger et al. 1965:2–3). These soils range from relatively shallow to moderately deep. Most of this association is situated within the Little Sandy River valley.

The Muskingum-Montevallo-Ramsey Association occurs throughout the both uplands and along the various alluvial settings that transverse the landscape (Weisenberger et al. 1965:3–4). These soils range from shallow soils in the uplands to deeper soils on toe slope and floodplain settings.



Figure 8. Land grading and other disturbances at the Elliott Nursing and Rehab Center. Photo facing east near the intersection of KY 32 and Howards Creek Road.

Table 1. Soil Families, Series, and Phases Identified in the Currently Defined Project Area.

Soil Family	Soil Series	Soil Phase	Soil Order	Approx Area Within Project Area (sq m)	Percent Area
Fine-loamy, mixed, active, mesic Typic Hapludults	Shelocta	Shelocta-Handshoe-Feds creek complex, 30 to 60 percent slopes, stony	Ultisol	2,022,617	74.66
Fine-loamy, mixed, active, mesic Aquic Hapludults	-NA-	Blairton-Cruze-Marrowbone complex, 12 to 25 percent slopes	Ultisol	491,980	18.16
Fine-loamy, mixed, active, nonacid, mesic Fluventic Endoaquepts	-NA-	Shelocta-Grigsby-Orrville complex, 2 to 15 percent slopes	Inceptisol	127,467	4.71
	-NA-	Udorthents-Urban land complex, 0 to 12 percent slopes	-NA-	41,368	1.53
Fine-loamy, mixed, active, mesic Typic Hapludults	Gilpin	Gilpin-Urban land complex, 0 to 25 percent slopes	Ultisol	15,170	0.56
Coarse-loamy, mixed, active, mesic Typic Hapludults	-NA-	Rigley-Rock outcrop complex, 30 to 70 percent slopes	Ultisol	6,807	0.25
Coarse-loamy, mixed, active, acid, mesic Fluventic Endoaquepts	Stokly	Stokly sandy loam, frequently flooded	Inceptisol	3,541	0.13
Coarse-loamy, mixed, active, mesic Dystric Fluventic Eutrudepts	Grigsby	Grigsby fine sandy loam, frequently flooded	Inceptisol	113	0.00
				2,709,063	100.00

The most commonly identified soil within the project area belongs to the Shelocta-Handshoe-Feds creek complex (30 to 60 percent slopes, stony) and accounts for approximately three-quarters of the total project area (Soil Survey Staff 2017). This complex has been classified as an Ultisol and is further subclassified as a Fine-loamy, mixed, active, mesic Typic Hapludult (Soil Survey Staff 1999). These soils are situated along the hillsides in the project area containing exposures of rock and locally steep landforms. Slopes range from 30 to 60 percent.

The second most commonly identified soil in the project area consists of the Blairton-Cruze-Marrowbone complex (12 to 25 percent slopes) (Soil Survey Staff 2017). This complex accounts for approximately one-fifth of the total project area (see Table 1). This soil complex is also classified as an Ultisol and is further classified as a Fine-loamy, mixed, active, mesic Aquic Hapludult (Soil Survey Staff 2017). These soils are generally situated at the higher elevations along the shoulder and upper side slope topographic positions. Slopes within this soil complex range from 12 to 25 percent.

The remaining soils composed increasingly smaller parts of the project area (Table 1). When combined, these soils total

approximately 19.4 ha (48 acres) and comprise approximately 7 percent of the project area.

III. RESULTS OF THE FILE AND RECORDS SEARCH AND SURVEY PREDICTIONS

Prior to initiating fieldwork, a search of records maintained by the NRHP (available online at: <http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome>) and the OSA (FY17_9157) was conducted to: 1) determine if the project area had been previously surveyed for archaeological resources; 2) identify any previously recorded archaeological sites that were situated within the project area; 3) provide information concerning what archaeological resources could be expected within the project area; and 4) provide a context for any archaeological resources recovered within the project area.

A search of the NRHP records indicated that no archaeological sites listed in the NRHP were situated within the current project. The OSA file search, however, did indicate the presence of a single previously recorded archaeological site within the current project boundary. This site, 15E112, will be described

in greater detail below. The OSA file search was conducted on April 18, 2017.

The work at OSA consisted of a review of professional survey reports and records of archaeological sites for an area encompassing a 2 km radius of the project footprint. To further characterize the archaeological resources in the general area, the OSA archaeological site database for the county was reviewed and synthesized. The review of professional survey reports and archaeological site data in the county provided basic information on the types of archaeological resources that were likely to occur within the project area and the landforms that were most likely to contain these resources. The results are discussed below.

Previous Archaeological Surveys

Heather D. Barras

OSA records revealed that nine previous professional archaeological surveys have been conducted within a 2 km radius of the project area. Fourteen archaeological sites have been recorded in this area also. An additional survey completed within the 2 km area has not yet been entered in the OSA GIS (Heideman 2016).

The records search revealed that 9 of the 14 sites in the file search area (15E19, 15E110, 15E112–15E116, 15E168, and 15E181) are historic farm/residences. Three of the sites (15E118, 15E119, and 15E169) are historic cemeteries. One site (15E176) is a prehistoric open habitation without mounds. The remaining site (15E117) is a multicomponent site with historic and prehistoric occupations. The 2 km radius included areas within the Isonville, Kentucky 7.5-minute topographic quadrangle.

On December 19, 1977, Arrow Enterprises personnel completed an archaeological survey of a proposed low income, multi-family housing site development in Elliott County, Kentucky (Schock and Weis 1977). At the request of Elliott County Judge David Blair, 7.1 ha (17.5

acres) were investigated with pedestrian survey supplemented with .6-x-.5 m (2.0-x-5.0 ft) test units. Three isolated prehistoric flakes were recovered during the project. No archaeological sites were documented and no further work was recommended.

On September 30, 1978, Arrow Enterprises completed an archaeological survey of a proposed housing subdivision in Sandy Hook, Elliott County, Kentucky (Schock 1978). At the request of Frontier Housing, Inc., 4.9 ha (12.0 acres) were investigated via pedestrian survey. No archaeological sites were identified and project clearance was recommended.

Between June 1 and 3, 1990, Betty J. McGraw conducted an archaeological survey of a proposed coal mining project area in Elliott County, Kentucky (McGraw 1990). At the request of Addington, Inc. (Permit Application Number 832-0038), 193.76 ha (478.79 acres) were investigated by pedestrian survey supplemented with shovel testing. No archaeological sites were identified and project clearance was recommended.

On May 20, 1993, Cultural Horizons, Inc., personnel completed an archaeological survey for the proposed construction of an electrical substation in Elliott County, Kentucky (Stallings and Ross-Stallings 1993). A total of .8 ha (2.0 acres) was investigated via screened shovel testing at the request of East Kentucky Power Cooperative. One archaeological site (15E19) was identified during the survey. Site 15E19 is a late-nineteenth- to early-twentieth-century historic farm/residence or possible historic dump. Cultural materials were limited to the plow zone. The site was considered ineligible for NRHP inclusion and no further work was recommended.

On February 28, 1994, CRA personnel completed an archaeological survey of the proposed North Wood Apartments project area in the town of Sandy Hook, Elliott County, Kentucky (Hand 1994). The survey was conducted at the request of North Wood Associates of Sandy Hook, Ky. Ltd., and approximately 1.0 ha (2.5 acres) were investigated via pedestrian survey

supplemented with shovel testing. One archaeological site (15E110) was documented during the survey. Site 15E110 was a mid-twentieth century farm/residence represented by rough cut sandstone foundation stones and a water well. Cultural materials recovered were sparse and no evidence of intact features or subsurface features was encountered. The site was considered ineligible for NRHP inclusion and no further work was recommended.

From September 22 to 25 and December 9 to 11, 1998, University of Kentucky's Program for Archaeological Research conducted an archaeological survey of three alternate routes for a proposed re-alignment of KY 7 from Sandy Hook to 1.0 km (.6 mi) south of KY 557 in Elliott County, Kentucky (Davis 1999). The survey was conducted at the request of Bernardin, Lochmueller and Associates, Inc., on behalf of the Kentucky Transportation Cabinet. An area of unspecified size was investigated via pedestrian survey supplemented with screened shovel testing. Eight archaeological sites (15E112–15E119) and one prehistoric isolated find were documented during the survey.

Sites 15E112–15E116 were historic farm/residences. Site 15E117 was a multicomponent prehistoric open habitation without mounds of indeterminate temporal affiliation and historic isolated find. Sites 15E118 and 15E119 were both historic cemeteries. None of the sites were considered eligible for NRHP inclusion and project clearance was recommended (Davis 1999).

On February 27 and March 16, 2007, AMEC Earth & Environmental personnel conducted an archaeological survey for the replacement of a bridge and approaches over Middle Fork Creek, Elliott County, Kentucky (Hunter 2007). At the request of the Kentucky Transportation Cabinet (Item Number 9-1058.00), approximately 1.7 ha (4.1 acres) were investigated by pedestrian survey supplemented with screened shovel testing. One new archaeological site (15E168), which is located within the 2 km radius of the current project area, was documented during the Hunter (2007) survey. Site 15E168 was a

nineteenth- to twentieth-century historic farm/residence consisting of an extant log cabin, a privy, a chicken coop, and an unidentified collapsed stone structure. No evidence of subsurface deposits or features was encountered. The site was considered ineligible for NRHP inclusion. Since the entire site was located outside of the survey area and was not going to be impacted by the proposed bridge replacement, the site was not recommended for further work.

On March 23 and April 1, 2009, Kurt Fiegel conducted an archaeological survey for a proposed contour mine of the Little Caney coal seam, as well as access roads to the mine in Elliott County, Kentucky (Fiegel 2009). The survey was conducted at the request of Michael Potter of Harold, Kentucky, on behalf of Red Bush Coal, LLC. The project area consisted of 30.7 ha (75.8 acres) and was investigated via pedestrian survey supplemented with screened shovel testing. Two new archaeological sites (15E169 and 15E170) were documented.

Site 15E169 is located within a 2 km radius of the current project area. Site 15E169, "Bays Cemetery," is a late-nineteenth-century cemetery. The site was to be avoided by construction and no further work was recommended. The NRHP status of the site was not assessed (Fiegel 2009).

On December 10, 2010, Wilbur Smith Associates personnel completed an archaeological survey of a proposed cell tower location east of the community of Sandy Hook in Elliott County, Kentucky (Daugherty 2010). At the request of Dynamic Environmental Associates, Inc., .2 ha (.4 acre) was investigated via pedestrian survey supplemented with screened shovel testing. No archaeological sites were encountered during the survey and no further archaeological work was recommended.

Between November, 2015, and January, 2016, CRA personnel conducted an archaeological survey for the proposed reconstruction of KY 7 between the towns of Wrigley and Sandy Hook in Morgan and Elliott Counties, Kentucky (Heideman 2016). The survey was conducted at the request of

Mitch Green of HMB Professional Engineering, Inc., on behalf of the KYTC (Item No. 9-228.00). Of the approximate 132 ha (325 acre) survey area, approximately 117.8 ha (291.2 acres) were surveyed. The remaining 13.7 ha (33.8 acres) could not be surveyed due to landowner denial of permission. Field methods consisted of intensive pedestrian survey supplemented with screened shovel testing. One previously recorded site (15E111), 10 previously unrecorded sites (15E176–15E181 and 15Mo174–15Mo177), and 5 isolated finds were documented during the survey.

Sites 15E176 and 15E181 are located within a 2 km radius of the current project area. Site 15E176 was a prehistoric open habitation without mounds of indeterminate temporal affiliation. Site 15E176 was considered ineligible for NRHP inclusion and no further work was recommended. Site 15E181 was a historic farm/residence dating from the mid-nineteenth to the mid-twentieth century. Because it was possible that the site extended beyond the project boundaries, Site 15E181 could not be assessed. However, the portion of the site within the project area was recommended for no further work (Heideman 2016).

During the records review, a discrepancy was noted between the mapping provided by OSA and KYTC. The differences are depicted in Figure 3. The OSA mapping depicts a narrow stretch of the current project area south of KY 32 as being previously surveyed by Davis (1999) along with the location of Site 15E112 north of the road at the western end of the project area. Excluding KY 32, the area situated within the current project area measured approximately .1 ha (.3 acres) in size. In contrast, mapping provided by KYTC indicated that the current project area north of KY 32 in the vicinity of Site 15E112 as being previously surveyed by Davis (1999). This area measured approximately .64 ha (1.58 acres).

As shown in Figure 3, the stretch south of KY 32 was surveyed by a pedestrian survey due to the sloped conditions and the disturbances associated with the construction

of KY 32. The portion of the project area corresponding to the KYTC map, was not resurveyed as this area was surveyed after the implementation of modern survey methods. In addition, the site was recommended not eligible for listing the in the NRHP.

Archaeological Site Data

Based on OSA data provided in Table 2, a total of 70 archaeological sites have been recorded in Elliott County. The data indicates that rockshelters (n = 26; 37.14 percent) are the most numerous archaeological site type identified in the county. Other site types identified include open habitations without mounds (n = 22; 31.43 percent), and historic farms/residences (n = 15; 21.43 percent). The remaining site types account for increasingly fewer sites (see Table 2).

According to the OSA records, most of the archaeological sites in Elliott County have been documented throughout the uplands along hillside (n = 25) and dissected upland (n = 16) settings. Other landforms were predominantly alluvial (or lower elevation) settings, including both terrace (n = 12) and floodplain (n = 10).

Table 2. Summary of Selected Information for Previously Recorded Archaeological Sites in Elliott County, Kentucky. Data Obtained from OSA and May Contain Coding Errors.

Site Type	N	%
Rockshelter	26	37.14
Open Habitation without Mounds	22	31.43
Historic Farm/Residence	15	21.43
Cemetery	5	7.14
Petroglyph/Pictograph	1	1.43
Quarry	1	1.43
Total	70	100
Time Periods Represented	N	%
Indeterminate Prehistoric	49	54.44
Historic	28	31.11
Late Prehistoric	7	7.78
Archaic	4	4.44
Woodland	4	4.44
Total	90*	100
Landform	N	%
Hillside	25	35.71
Dissected Uplands	16	22.86
Terrace	12	17.14
Floodplain	10	14.29
Other	7	10
Total	70	100

*One site may represent more than one time period.

In terms of temporal/cultural affiliation, most of the sites in the county were identified as Indeterminate Prehistoric (n = 49; 70 percent). These sites lacked the presence of temporally sensitive artifacts precluding a more precise temporal assignment. The second most common time period present was Historic (n = 28). The remaining time spans account for smaller number of sites: Late Prehistoric (n = 7) and four examples of both Archaic and Woodland. No Paleo-Indian sites have been identified in the county.

Map Data

In addition to the OSA file search, a review of the available maps were initiated to assist with identifying potential historic properties (i.e., structures) or historic archaeological site locations within the proposed project area. The following maps were reviewed during the current investigations.

1937 Highway and Transportation Map of Elliott County, Kentucky (Kentucky Department of Highways [KDOH]);

1950 Isonville, Kentucky, 7.5-minute series topographic quadrangle (United States Geological Survey [USGS]);

1951 General Highway Map of Elliott County (Kentucky State Highway Department [KSHD]);

1959 General Highway Map of Elliott County (KDOH).

The reviewed historic maps provided useful information concerning the general locations of current and former structures located within, and adjacent to, the project area. All areas near possible map structures (i.e., MS) were investigated for archaeological deposits according to accepted survey methods, as described in the Field Methods section of this report. Several map structures were identified within and adjacent to the current project area.

The earliest map consulted as part of the current field investigations was the 1937 Highway and Transportation Map of Elliott County, Kentucky (KDOH 1937). Based on the scale of this county-wide map and the inherent difficulty in obtaining an accurate

georeferencing for this map, this map is not included in this report.

The earliest map to accurately depict the location of map structures within and adjacent to the current project area is the 1950 7.5-minute series Isonville, Kentucky topographic map (USGS 1950). A total of four map structures and a single cemetery are present on this map (see Figure 9). Three of the map structures (MS 1–MS 3) are located along the western end of the project area situated on the immediate edge of Sandy Hook and were depicted as occupied residences on the quadrangle. The furthest western map structure (MS 1) comprises Site 15E112, a mid-twentieth century historic residence/farmstead situated along the northern edge of KY 32. The remains of this structure, consisting of a sandstone foundation, overlook the location of the modern Marathon Gas Station and McDonalds. The second map structure (MS 2) is situated approximately 90 m (295 ft) southeast of MS 1 and consists of an extant abandoned residence. The third map structure (MS 3) is located along the southern edge of KY 32 just outside of the current project area. No evidence of this former structure was identified during the field investigations. The fourth structure (MS 4) is depicted as an unoccupied structure and was likely a barn (or other outbuilding). No evidence of this structure was identified during the current investigations.

Several additional structures were also noted in close proximity to the project area. However, these latter structures were either situated outside, or (in many cases) along the opposite side of KY 32 from the project area.

In addition to the map structures, the 1950 quadrangle depicts a single cemetery immediate adjacent to the project area. This cemetery is largely located outside of the project area (see Figure 9); however, a small portion of the southwest corner may be situated within the project area. As the cemetery was located within the denied parcel (see above), it was not documented. The cemetery will need to be investigated once access to the parcel is obtained.

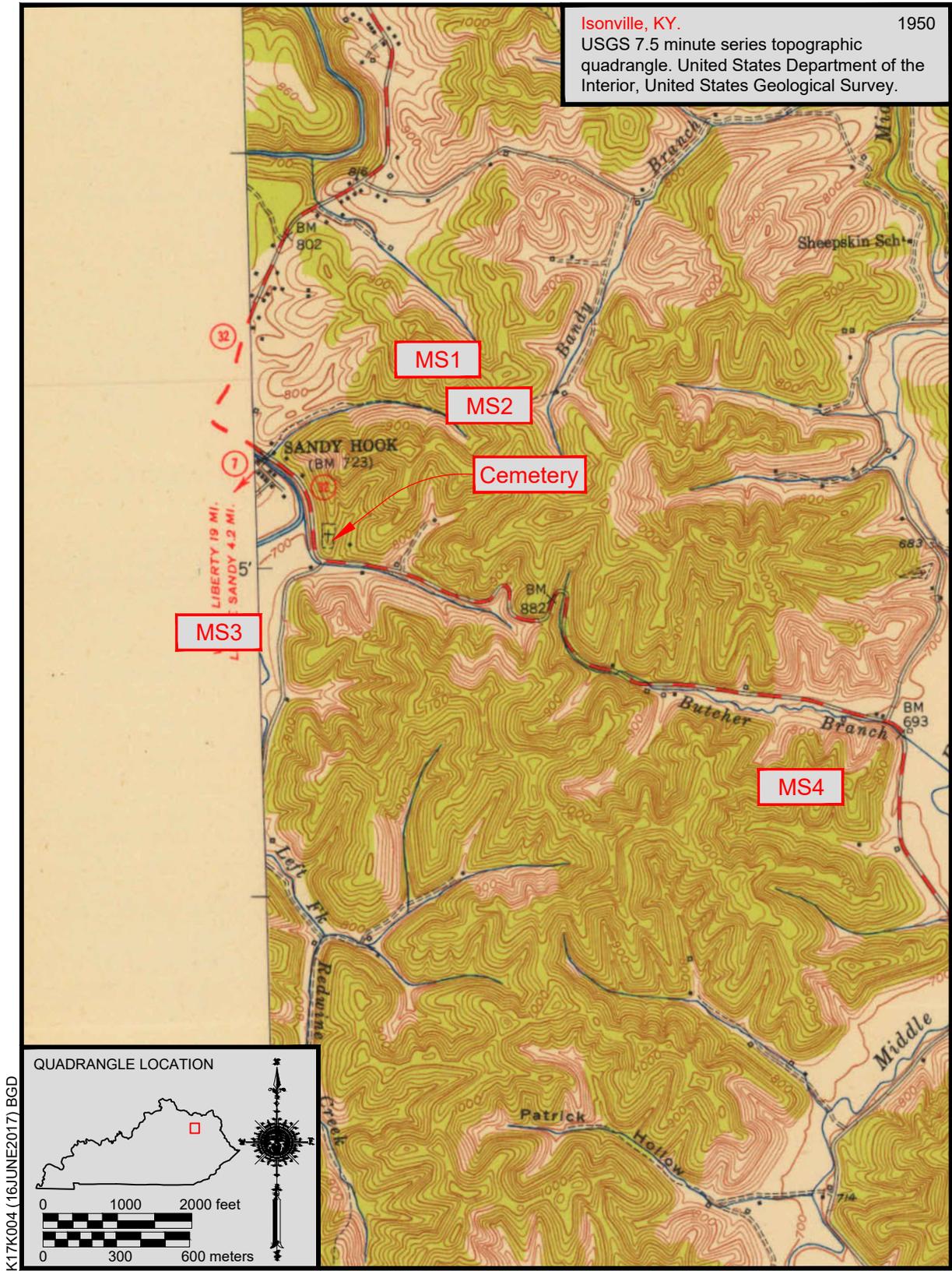


Figure 9. The 1950 Isonville, Kentucky 7.5-minute series topographic quadrangle depicting MS1-4.

The next maps consulted were the 1951 and 1959 Elliott County highway maps (KSHD 1951; KDOH 1959). While these maps have similar problems as the earlier 1937 map, these maps depict the increasing construction and settlement along KY 32. In terms of the current project area, these maps illustrate the same four map structures, suggesting that the continuing development along the KY 32 corridor was not occurring at a rapid rate along this stretch of the highway. It should be noted that the cemetery shown on the 1950 quadrangle is not depicted on either of these county highway maps.

Survey Predictions

Considering the known distribution of archaeological sites in Elliott County, the available information on site types recorded, the reviewed map data, and the nature of the present project area, certain predictions were possible regarding the kinds of sites that might be encountered within the project area. Both rockshelters and open habitations without mounds are expected given their commonplace throughout the county. Historic farm/residences are also expected given the project area's close proximity to the Sandy Hook community.

IV. FIELD METHODS

Prior to the survey, CRA was provided with mapping of the project area. This mapping depicted the project boundary, contours, and other natural and cultural features. An iPad mini running HD Kit GPS software unit was used to record pertinent archaeological data. The location of the project area was also determined by its relative position along KY 32, Howards Creek Road, and other ancillary secondary roads and structures. The project area was also examined based on aerial photographs, satellite imagery, and historic maps.

The entire project was subjected to an intensive pedestrian supplemented by systematic screened shovel testing (see Figure 3). All undisturbed, relatively flat terrain

possessing poor surface visibility within the project was subjected to screened shovel testing. These included the pasture along the southeastern portion of the project area along Butcher Branch. A total of approximately .8 ha (2.2 acres) was shovel tested during the current investigations.

All slopes greater than 15 percent also were subjected to intensive pedestrian survey. These latter areas included portions of the project area along both the north and south sides of KY 32. Most of these areas were heavily wooded. Areas of disturbances, including land grading and benching, existing impervious surfaces (such as roads), and underground utility corridors, were also subjected to pedestrian survey. No shovel testing was conducted within close proximity to the underground utilities. Approximately 12.3 ha (30.4 acres) was subjected to pedestrian survey and included both sloped areas as well as disturbed portions of the project area (including extant infrastructure and other disturbed areas).

Shovel tests were excavated at 20 m intervals with spacing of transects set at 20 m. In all cases, shovel tests measured not less than 35 cm in diameter and extended well into the subsoil. Shovel tests were excavated in levels. The topsoil was removed as one level. After the topsoil was removed, 10 cm (4 in) arbitrary levels within natural horizons were excavated. All fill removed from the tests was screened through .64 cm (.25 inch) mesh hardware cloth, and the sidewalls and bottoms were examined for cultural material and features. All artifacts recovered from shovel tests were bagged by test number and level.

As previously stated, a small portion (approximately .6 ha [1.6 acres]) of the project area had been previously surveyed. This segment begins at the western edge of the project area and extends approximately 221 m (725 ft) to the east along KY 32. This area was not resurveyed as part of the current field investigations as it was originally surveyed after the establishment of modern survey standards.

A portion of the project area measuring approximately 11.4 ha (28.1 acres) could not be surveyed due to denial of a single property owner. This parcel was situated along KY 32 in the central portion of the current project area. This unsurveyed parcel will need to be surveyed archaeologically prior to the construction of the road.

No cultural materials, artifacts, or features were identified as a result of the current archaeological investigations.

V. CONCLUSIONS AND RECOMMENDATIONS

Note that a principal investigator or field archaeologist cannot grant clearance to a project. Although the decision to grant or withhold clearance is based, at least in part, on the recommendations made by the field investigator, clearance may be obtained only through an administrative decision made by the lead federal agency in consultation with the State Historic Preservation Office (Kentucky Heritage Council).

CRA personnel completed an archaeological survey for the proposed road widening and curve correction along KY 32 east of Sandy Hook, Kentucky. The project area measured approximately 25.2 ha (62.2 acres) in total size. With the exception of the denied property (as discussed above), the remaining portions of the project area were surveyed in their entirety. This latter area will need to be surveyed prior to the proposed road construction.

The OSA site file search indicated that a small portion of the project area measuring approximately .6 ha (1.6 acres) had been previously surveyed (Davis 1999). This area was not resurveyed as part of the current investigations as it was surveyed after the implementation of current archaeological field standards. Site 15E112, identified during the previous survey, was considered not eligible for listing in the NRHP (Davis 1999).

The project area was investigated through the use of an intensive pedestrian survey supplemented by systematic screened shovel tests in low-visibility areas. Areas of marked slope and disturbed areas were examined by pedestrian survey. Relatively flat areas along Butcher Branch were subjected to shovel testing.

No archaeological resources were identified as a result of the current investigations. Because no sites listed in, or eligible for, the NRHP will be affected by the proposed construction, cultural resource clearance is recommended.

If any previously unrecorded archaeological materials are encountered during construction activities, the KHC should be notified immediately at (502) 564-6662. If human skeletal material is discovered, construction activities should cease, and the KHC, the local coroner, and the local law enforcement agency must be notified, as described in KRS 72.020.

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