PHASE I

ARCHAEOLOGICAL SURVEY FOR A BRIDGE REPLACEMENT ON KY 2021 OVER WILLARD CREEK, PERRY COUNTY, KENTUCKY (KYTC ITEM # 10-1103.00)

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Kentucky Office of State Archaeology Project Number:

FY15-8170

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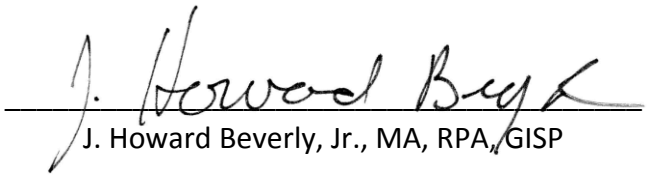

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Archaeology Report

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Abstract

In accordance with the Kentucky Heritage Council's *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment* (Sanders 2006), this is an abbreviated technical report describing a no-find resulting from a Phase I archaeological survey conducted on January 14, 2014, and the results of that survey.

CDM Smith was asked by the Kentucky Transportation Cabinet (KYTC), to conduct a Phase I archaeological survey for the bridge (Bridge ID # 097B00027N) on KY 2021 (MP 1.1) over Willard Creek at the intersection with Beech Nut Lane (CR 1213) in Perry County, Kentucky (KYTC Item Number 10-1103.00). The proposed right-of-way (ROW) extension and temporary construction easement to be surveyed totaled approximately 0.55 acre (0.22 ha).

The area of potential effect (APE) is defined as the ROW extension (0.18 acre, 0.07 ha) and temporary construction easement (0.37 acre, 0.15 ha) comprising of approximately 0.55 acre (0.22 ha).

The archaeological survey involved a visual inspection of the entire APE and shovel probing in areas of less than 15 percent slope. A grid interval of ten meters was used due to the high potential for encountering archaeological remains. Shovel probing revealed heavily disturbed areas, areas with a modern midden overlaying subsoil, and mixed historic/modern artifacts in burn layers most likely associated with modern destruction activities. Only a very small area was found to possess undisturbed stratigraphy when subjected to shovel probing, and these probes did not produce any cultural material. Visual inspection ruled out the possibility of rockshelters within the APE. A concrete foundation, visible in aerial photographs, was photographed; no other historic surface features were encountered.

No further archaeological work is recommended.

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Acknowledgements

The Principal Investigator for the archaeological survey was Mr. J. Howard Beverly, Jr., RPA. Field crew consisted of Dona Daugherty. Howard Beverly generated maps and formatted the report. Robert Ball provided support in Lexington.

Section 1 -

Introduction

In accordance with the Kentucky Heritage Council's *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment* (Sanders 2006), this is an abbreviated technical report describing a no-find Phase I archaeological survey.

CDM Smith was asked by the Kentucky Transportation Cabinet (KYTC), to conduct a Phase I archaeological survey for the bridge (Bridge ID # 097B00027N) on KY 2021 (MP 1.1) over Willard Creek at the intersection with Beech Nut Lane (CR 1213) in Perry County, Kentucky (KYTC Item Number 10-1103.00). The proposed right-of-way (ROW) extension and temporary construction easement to be surveyed totaled approximately 0.55 acre (0.22 ha).

1.1 Project Sponsor and Regulatory Authority

The state agency sponsoring this survey is the KYTC; the lead federal agency is the Federal Highway Administration. The survey was conducted in compliance with the guidelines established by the Kentucky Heritage Council Guidelines (Sanders 2001) and the National Historic Preservation Act of 1966 (P.L. 89-655; 80 Stat. 915, 16 U.S.C. 470 et seq), the National Environmental Policy Act of 1969 (P.L. 910190; 83 Stat. 852, 42 U.S.C. 4321 et seq), Procedures of the Advisory Council on Historic Preservation (36CFR800), Executive Order 11593, Protection and Enhancement of the Cultural Environment (16 U.S.C. 470; supp. 1, 1971).

1.2 Purpose and Scope of Work

KY 2021 is a local road that serves residents of the Big Willard community as well as the primary access to the Little Beech Historic Site. This route connects to KY 451 and then to the Hal Rogers Parkway and KY 80 corridors.

KY 2021 is a narrow two lane roadway with little to no shoulders. It has numerous substandard horizontal and vertical curves. The bridge is considered both structurally deficient and functionally obsolete. The purpose of the project is to replace a structurally deficient, functionally obsolete bridge in order to allow continued usage of the roadway for residents of the Big Willard area.

The area of potential effect (APE) is defined as the ROW extension (0.18 acre, 0.07 ha) and temporary construction easement (0.37 acre, 0.15 ha) comprising of approximately 0.55 acre (0.22 ha).

The archaeological surveyors were prepared to shovel probe areas of less than 15% slope and to visually inspect the entire area. The purpose of this work was to identify any archaeological resources which might have existed within the APE and to record their extent, significance, and the potential impact of the proposed project on these cultural resources.

1.3 Project Area Description

The project location is in Perry County, Kentucky (Figure 1-1), and can be found on the Krypton, KY, USGS. 7.5' topographical map (Figure 1-2). It is located along KY 2012 at the bridge over Willard Creek at the intersection with Beech Nut Lane (CR 1213) (Figure 1-3).

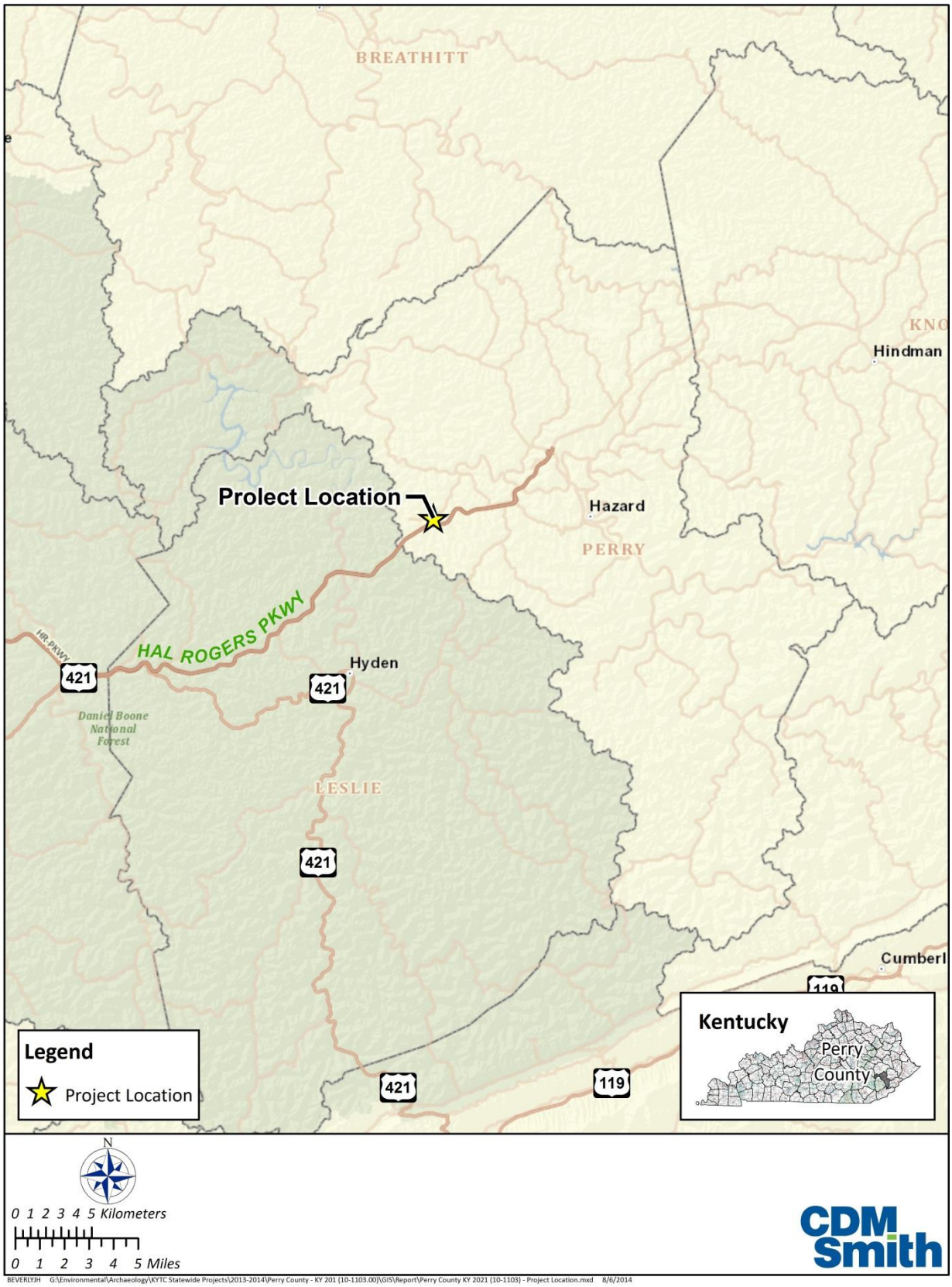

Figure 1-1. Project Location within Perry County.

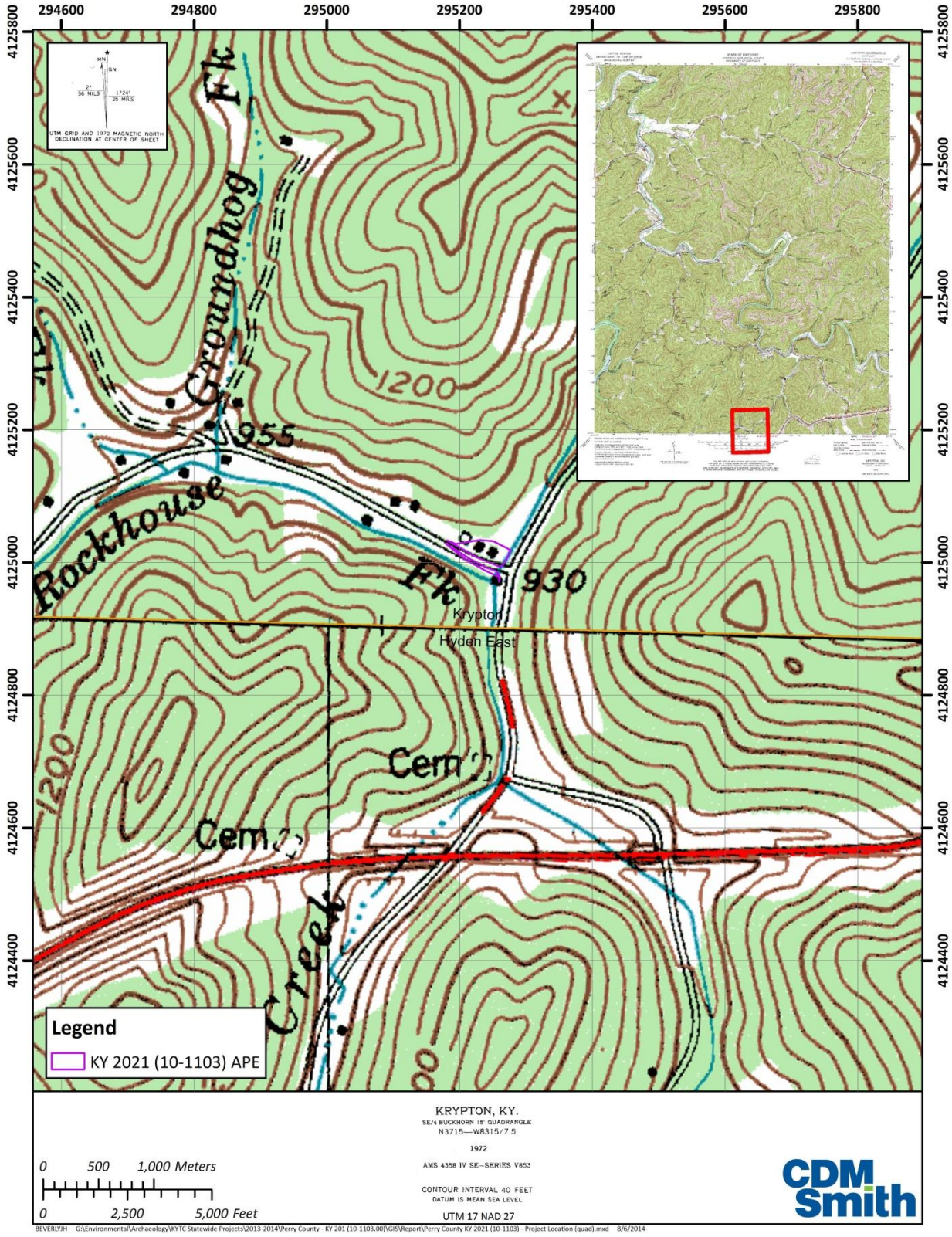

Figure 1-2. USGS Topographical Map showing Project Location.

Figure 1-3. Aerial Map showing Project Location.

The APE can be reached by traveling 2.3 miles south on KY 2021 (Big Willard Road) from that road's T-intersection with KY 451 near the community of Busy. The bridge to be replaced is located at the intersection of Big Willard Road and Beech Oak Road, which is also the confluence of Rockcastle Fork with Big Willard Creek. The project area is located in the steeply dissected uplands of the Eastern Coal Field physiographic region of Kentucky. The area is situated at 960 ft. above mean sea level in a moderately sized floodplain triangle at the confluence of Rockcastle Fork (east flowing) with Big Willard Creek (north flowing) and is immediately adjacent to both creeks. KY 2021 bisects the project area such that a larger section (0.4 acre, 0.16 ha) lies north of the road, and the smaller remaining section (0.2 acre, 0.08 ha) lays to the south along the Rockcastle Fork - Big Willard Creek confluence (Figure 1-4 and Figure 1-5).

Figure 1-4. General project area, north side of KY 2021, looking northwest.

Figure 1-5. General project area, south side of KY 2021, looking east.

Vegetation within the APE consisted of very dense secondary growth scrub, vines, grasses, briars, and blackberry bushes and some secondary growth trees within the temporary easement portion of the project area north of KY 2021. The corner property on the south side of KY 2021 and at the intersection of that road with Beech Oak Road was kept in mown lawn. The ground between the southern edge of KY 2021 and Rockcastle Fork was grown up in tall grasses.

1.4 OSA Records Research

On July 25, 2014, the site files and survey records at the Office of State Archaeology (OSA) were accessed and researched.

1.5 Principal Investigator

The principal investigator for the project was J. Howard Beverly, Jr., MA, RPA, GISP.

1.6 Field and Laboratory Crew

The field crew consisted of Ann Wilkinson. Howard Beverly prepared the final maps and formatted the report. The fieldwork took approximately 4 person hours to complete.

1.7 Curation

A copy of this report will be curated at the William S. Webb Museum of Anthropology, University of Kentucky, in Lexington.

1.8 Summary of Investigations

At the request of the Kentucky Transportation Cabinet, archaeologists from CDM Smith conducted a Phase I archaeological survey for the bridge replacement (Bridge ID # 097B00027N) on KY 2021 (MP 1.1) over Willard Creek at the intersection with Beech Nut Lane (CR 1213) in Perry County, Kentucky (KYTC Item Number 10-1103.00).

The archaeological survey involved a visual inspection of the entire APE and shovel probing in areas of less than 15 percent slope. A grid interval of ten meters was used due to the high potential for encountering archaeological remains. Shovel probing revealed heavily disturbed areas, areas with a modern midden overlaying subsoil, and mixed historic/modern artifacts in burn layers most likely associated with modern destruction activities. Only a very small area was found to possess undisturbed stratigraphy when subjected to shovel probing, and these probes did not produce any cultural material. Visual inspection ruled out the possibility of rockshelters within the APE. A concrete foundation, visible in aerial photographs, was photographed; no other historic surface features were encountered.

Archaeological resources were absent from the APE. No further archaeological work is necessary within the APE.

Section 2 -

Previous Investigations and Summary of Known Sites

In this chapter a summary is provided of all previous archaeological investigations in the area and all previously recorded archaeological sites are described. The research methodology involved archival research at the Office of State Archaeology and research of previous studies of archaeological sites.

2.1 Historical Documentation

A review of historic maps was conducted online and at the University of Kentucky's Geological Sciences Library and Map Collection. Available were the 1937 Highway and Transportation Map of Perry County, Kentucky; the 1955 Rural Highway Series, Perry County, Kentucky; the 1969 County Road Series Map, Perry County, Kentucky; the 1954, 1961, and 1972 7.5-minute Krypton, KY, USGS topographical maps; and the 1913 15-minute Buckhorn, KY, USGS topographical maps. Each of these maps indicates some structures resembling houses and a barn in the portion of the APE along the north side of KY 2021. The USGS aerial photograph used with the 2011 Krypton, KY 7.5-minute topographic quadrangle map shows only one building foundation remaining within the project area.

The 1913 and 1937 maps both indicate one structure at the location. The 1954 map indicates two structures, the 1955 and 1969 maps indicate two structures, a residence and a barn, and the 1961 and 1972 maps indicate two residential structures and one barn. Although the maps show that several structures were located in the near and even inside the APE, whether they were within the APE itself is questionable giving the accuracy of the maps at the various scales. At 1:24,000 scale (7.5-minute series maps), the accuracy is 1/50th of an inch or 40 feet (12.2 meters) (USGS 1999). As the scale of the maps increase so does the accuracy exponentially. Thus, the potential for encountering historic cultural resources was considered high.

2.2 Previous Archaeological Investigations

The survey reports at the Office of State Archaeology were consulted on July 25, 2014. Within a two kilometer buffer of the current survey area, three previously conducted surveys were identified: Baltz (2004), Kreinbrink (2005), and Barrett (2008) (Figure 2-1).

In 2004, at the request of Terracon Consulting, Inc., a Phase I archaeological investigation for a proposed wireless communications tower site near Hal Rogers Parkway, northeast of Hyden, was conducted in Perry County, Kentucky by Gray & Pape, Inc. out of Cincinnati, Ohio. The proposed project area consisted of a 30 m by 30 m (100 ft. by 100 ft.) area. No new or previously recorded archaeological material was identified during the survey, and no further work was recommended (Baltz 2004).

In 2005, Natural & Ethical Environmental Solutions conducted a Phase I archaeological survey for a Singular wireless cell tower known as Dark Hollow Cell Tower. The proposed project area consisted of a 32 m by 32 m (100 ft. by 100 ft.) area situated at the top of a steep mountain just southeast of the Daniel Boone Parkway. One shovel probe was excavated during the survey, but no cultural material

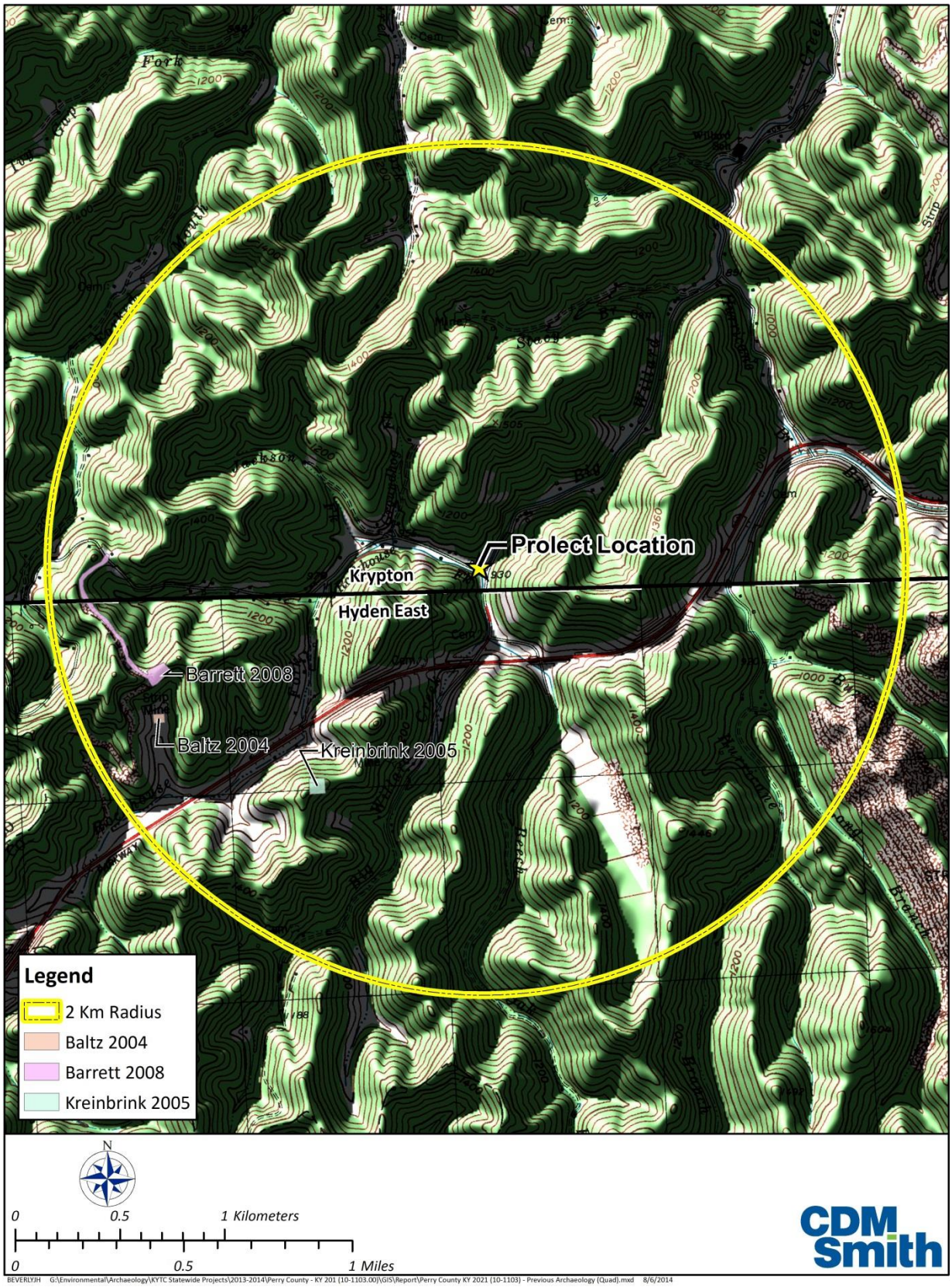

Figure 2-1. Previous Archaeological Surveys within 2km of Project Area.

was recovered. No evidence of rock overhangs/rockshelters was identified. No further work was recommended (Kreinbrink 2005).

In October of 2008, at the request of Terracon of Louisville, KY, TRC conducted a Phase I archaeological survey for the proposed construction of the Dark Hollow communication tower and access road located southwest of the community of Yerkes in Perry County, Kentucky. The proposed project area consisted of 0.95 acres (0.38 hectares). No archaeological material was identified during the survey, and no further work was recommended (Barrett 2008).

2.3 Known Archaeological Sites

The archaeological site files at the Office of State Archaeology were consulted on July 25, 2014. No archaeological sites were recorded within a two-kilometer buffer of the current project area at the time of research.

Section 3 -

Field Methods

In this section, the field methods employed during the course of this study is described. These methods include the fieldwork activities, their application in different portions of the project area reflecting conditions encountered, and an evaluation of their effectiveness.

3.1 Implemented Field Methods

The field methods implemented for the Phase I investigations conform to the Kentucky Heritage Council's specifications for conducting a Phase I survey (Sanders 2006). Systematic shovel test probes (STPs) were to be excavated where possible and areas of 15 percent or greater slope were visually inspected for surface remains and potential rock shelters.

The APE consists of the proposed 0.6 acre (0.24 ha) ROW extensions and temporary construction easement for the proposed bridge replacement on KY 2021 over Big Willard Creek, and is located on a floodplain of that creek at 960 ft AMSL (Figure 3-1 and Figure 3-2). The physical setting of the APE is shown in Figure 3-3 through Figure 3-19. Prior to reconnaissance, the APE was known from historic maps to have been the location of at least one residence during the early twentieth century, with additional residences and even a barn indicated at different times throughout the twentieth century.

3.1.1 Shovel Testing

Within the temporary construction easement part of the APE on the north side of KY 2021, shovel probing was executed on a 10 m interval grid due to the high potential for locating historic subsurface features (Figure 3-1 and Figure 3-2). Eleven shovel probes were excavated in this portion of the project area, and seven of these revealed modern disturbance (STPs 2, 4-7, 9, and 11). Disturbances were generally of three types: heavily graveled topsoil (e.g. STP 2); clearly disturbed topsoil with mixed soils, subsoil inclusions, coal, and historic and modern artifacts (STP 7); and a thick layer of burned material (modern and historic), coal, and natural sandstone (e.g. STP 5). The remaining four shovel probes (STPs 1, 3, 8, and 10) displayed natural stratigraphy with modern cultural material in the top level.

The proposed ROW extension portions of the APE, both north and south of KY 2021, were almost entirely steeply sloping (Figure 3-2). One level area at the intersection of KY 2021 and Beech Oak Road (Figure 3-10), on the south side of KY 2021, was shovel probed (STP 11) and found to be heavily disturbed with road construction debris and gravel. Another probe (STP 12) was excavated just up from the intersection on the south side of KY 2021 in a very narrow, level area of the APE (Figure 3-2). This area, too, was heavily disturbed (Figure 3-12). Similarly, west of the structure foundations on the north side of KY 2021 was a level area, but it was part of a graveled and concreted pull-off (Figure 3-4). The proposed ROW extension area east of the foundations on the north side of KY 2021was very steeply sloped down to the floodplain and the creek bed (Figure 3-5). No shovel probes were placed in these areas.

3.1.2 Visual Inspection

Rock overhangs were present over Rockcastle Fork and were visually inspected. These overhangs were low to the ground, shallow, and did not offer any floor that was not part of the active creek bed nor did they have any other cultural features on the walls or ceilings.

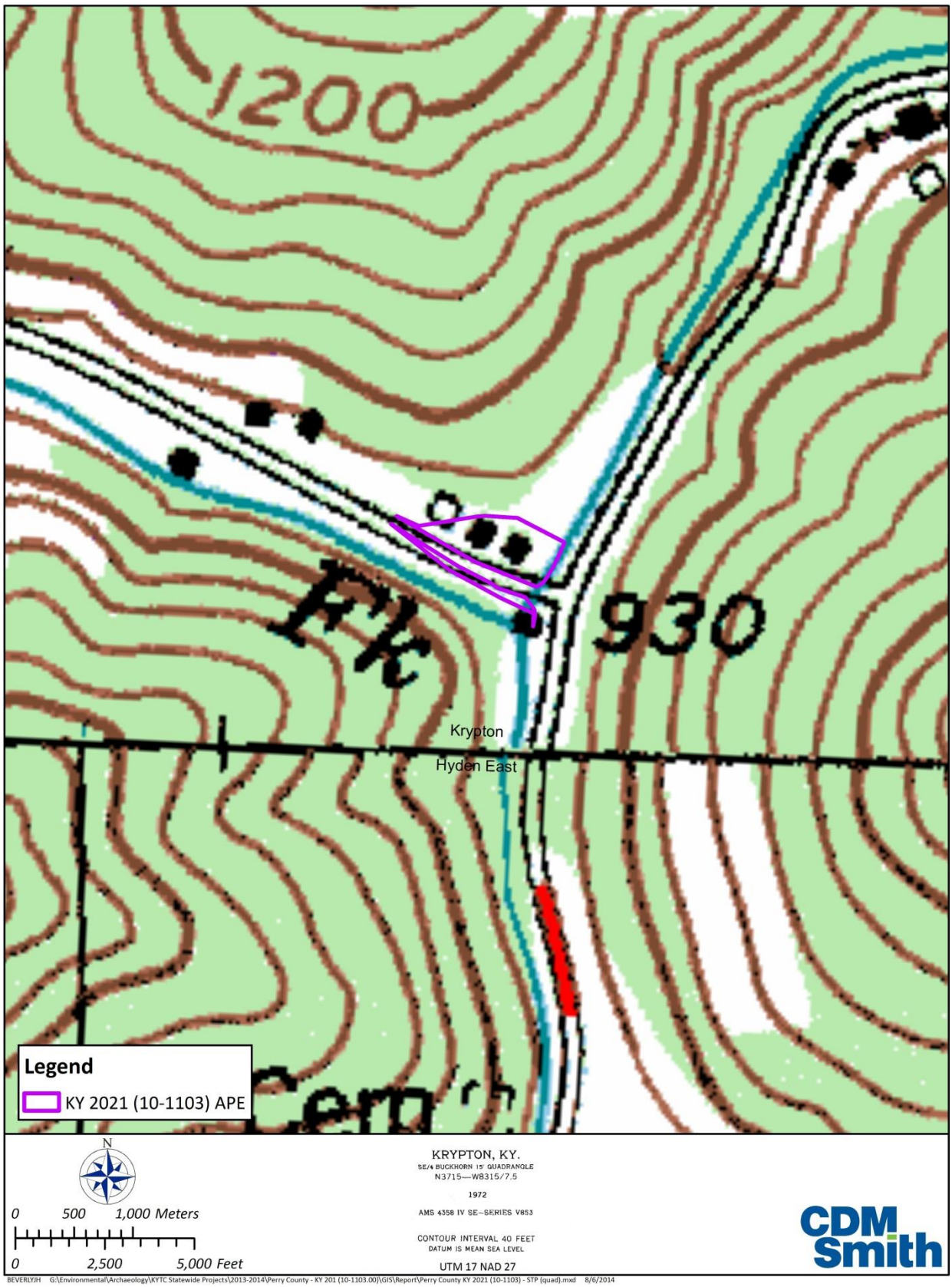

Figure 3-1. Location of APE on USGS Topographical Map.

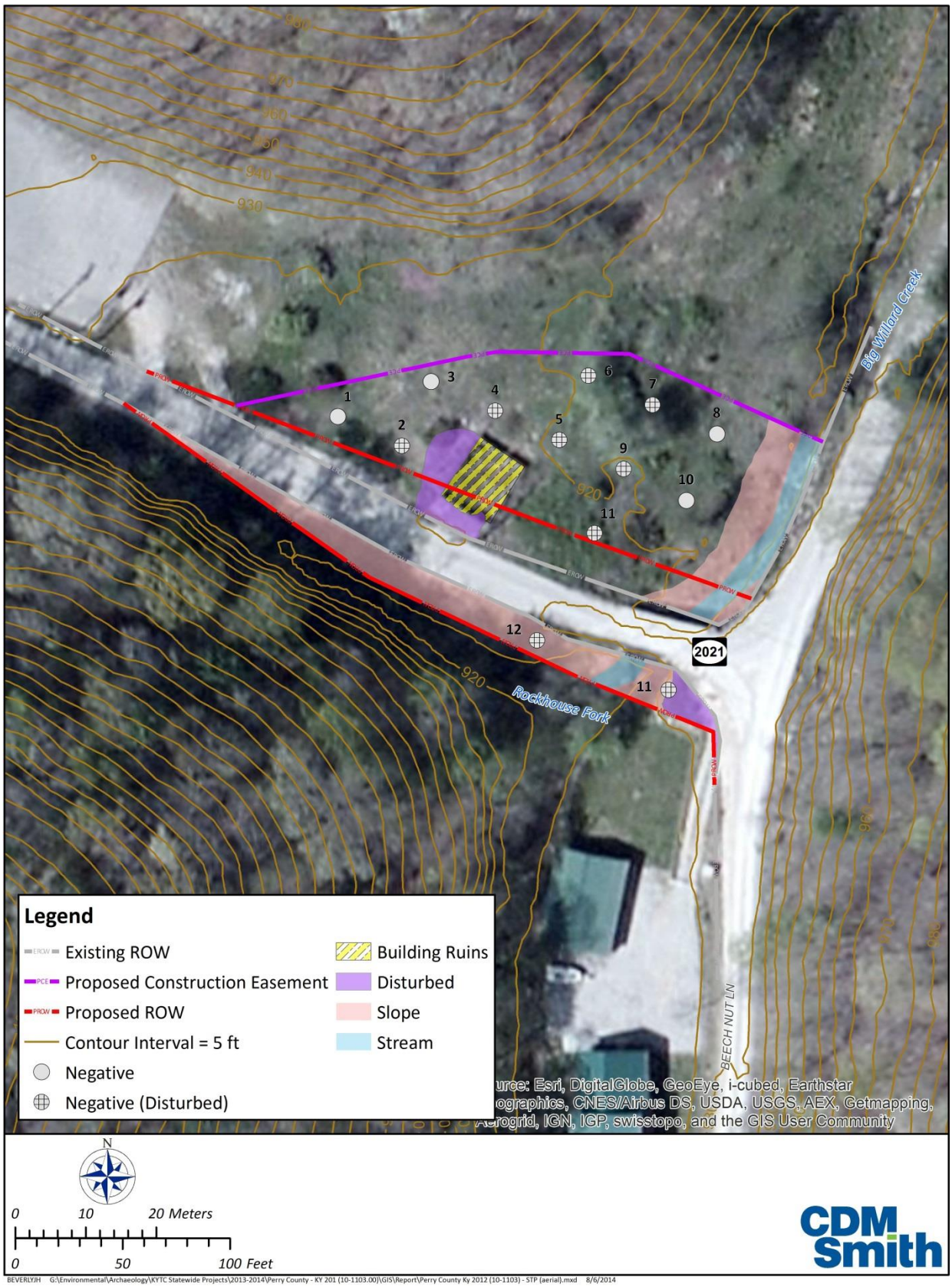

Figure 3-2. Location of SPTs on Aerial Photograph.

Figure 3-3. View of existing KY 2021 Bridge, looking northwest.

Figure 3-4. View of APE, looking northeast.

Figure 3-5. View of APE, temporary construction easement, looking north.

Figure 3-6. View of APE, historic foundation, looking north by east.

Figure 3-7. Historic foundation detail.

Figure 3-8. View of APE, historic foundation, looking southwest.

Figure 3-9. Historic foundation detail.

Figure 3-10. View of APE, proposed ROW extension, south side KY 2021, at Beech Oak Road intersection.

Figure 3-11. View of APE proposed ROW extension, south side of KY 2021, eastern end, looking east.

Figure 3-12. View of APE proposed ROW extension, south side of KY 2021, looking west.

Figure 3-13. View of APE ROW extension, south side of KY 2021, looking east.

Figure 3-14. View of APE ROW extension, north side of KY 2021, looking east.

Figure 3-15. View of APE ROW extension, north side of KY 2021 west of foundation, looking east.

Figure 3-16. View of APE ROW extension, north side of KY 2021 east of foundation, looking east.

Figure 3-17. View of APE, Big Willard Creek north of KY 2021 Bridge, looking northeast.

Figure 3-18. View of APE, proposed ROW extension, north side KY 2021, looking southwest.

Figure 3-19. View of APE, overhang over Rockcastle Fork, looking southeast.

The foundation remains within APE were photographed (Figure 3-6 - Figure 3-9). No other surface features were present.

3.2 Evaluation of Field Methods

Visual inspection successfully ruled out the possibility of rockshelters within the APE. A concrete foundation, visible in aerial photographs, was photographed by the surveyor; no other historic surface features were encountered. Shovel probing successfully documented the level of modern disturbance to the project area and did not identify any intact prehistoric or historic cultural deposits. All historic artifacts were recovered from disturbed levels in association with modern artifacts. As a result, it was determined that the APE does not have any archaeological remains intact from the historic occupation indicated on twentieth century maps, and no further work is recommended.

Section 4 -

Summary and Recommendations

4.1 Summary

At the request of the Kentucky Transportation Cabinet, archaeologists from CDM Smith conducted a Phase I archaeological survey for the bridge replacement (Bridge ID # 097B00027N) on KY 2021 (MP 1.1) over Willard Creek at the intersection with Beech Nut Lane (CR 1213) in Perry County, Kentucky (KYTC Item Number 10-1103.00). The area of potential effect (APE) is defined as the ROW extension (0.18 acre, 0.07 ha) and temporary construction easement (0.37 acre, 0.15 ha) comprising of approximately 0.55 acre (0.22 ha).

Historic maps indicate that the property on the north side of KY 2021 has been utilized since at least 1913 to the late 1950s or early 1960's into the 1970's. These maps show residential structures and a barn in or near the APE. The buildings have since been razed and the property has set vacant.

The archaeological survey involved a visual inspection of the entire APE and shovel probing in areas of less than 15 percent slope. A grid interval of ten meters was used due to the high potential for encountering archaeological remains. Shovel probing revealed heavily disturbed areas, areas with a modern midden overlaying subsoil, and mixed historic/modern artifacts in burn layers most likely associated with modern destruction activities. Only a very small area was found to possess undisturbed stratigraphy when subjected to shovel probing, and these probes did not produce any cultural material. Visual inspection ruled out the possibility of rockshelters within the APE. A concrete foundation, visible in aerial photographs, was photographed; no other historic surface features were encountered.

4.2 Recommendation

No further archaeological work is recommended.

Section 5 -

References

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