

## APPENDIX L-5

### *Addendum Report: Description and Recommendations for the Historical WPA Quarry, Henderson County, Kentucky*

**Clarification Note:** This document was completed before the development of Central Alternative 1B Modified (Selected); therefore, the alternative is not included in the document. Applicable information regarding Central Alternative 1B Modified (Selected) is provided in the FEIS.



Andy Beshear  
Governor

Mike Berry  
Secretary

**TOURISM, ARTS AND HERITAGE CABINET  
KENTUCKY HERITAGE COUNCIL**

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Craig A. Potts  
Executive Director  
& State Historic  
Preservation Officer

March 24, 2020

Mr. Daniel R. Peake  
Division of Environmental Analysis  
Kentucky Transportation Cabinet  
200 Mero Street  
Frankfort, KY 40622

Re: **Architectural Survey Report: Addendum**  
I-69 Ohio River Crossing  
Henderson County, Kentucky  
**Item No. 2-1088**

Dear Mr. Peake,

Thank you for your submission of a letter, cultural historic survey and photographs for the above-listed project which is pursuant to Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f) and implementing regulations at 36 C.F.R. Part 800.

Our office understands that the above proposed project involves the identification and assessment of the eligibility of the above-ground historic resources of a quarry and dynamite magazine that was later discovered within the project area.

Based on our review, our office concurs that **the quarry (HE 982) and its two associated structures (982a and 982b)** do not appear to retain sufficient integrity or significance and as a result, we **Concur** with your official determination that these historic resources appear to be **Not Eligible** for listing on the NRHP.

Should you have any questions, please feel free to contact Matt Yagle of my staff at [matthew.yagle@ky.gov](mailto:matthew.yagle@ky.gov).

Sincerely,

Craig A. Potts,  
Executive Director and  
State Historic Preservation Officer

CP: my, KHC #57184  
CC: Jonna Mabelitini



# OHIO RIVER CROSSING

## **ADDENDUM REPORT: Description and Recommendations for the Historical WPA Quarry, Henderson County, Kentucky**

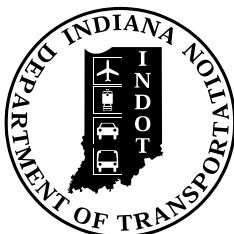
KHC No. FY17-2751

I-69 Ohio River Crossing Project  
Evansville, IN and Henderson, KY

February 28, 2020

Prepared by:  
Ryan Van Dyke  
Patrick O'Bannon

Lead Federal Agency: Federal Highway Administration DEIS No. 1601700  
Kentucky Transportation Cabinet  
Indiana Department of Transportation



## INTRODUCTION

Gray & Pape, Inc., under contract with Parsons, conducted Phase I archaeological and cultural historic surveys for the I-69 Ohio River Crossing Project Central Alternatives 1A and 1B corridor. Reporting for the cultural historic investigations was submitted in February of 2018 (Gray & Pape 2018) and the reporting for the archaeological survey investigations is currently under revision following review by the Kentucky Transportation Cabinet, Division of Environmental Analysis. During the archaeological survey, a historical archaeological site (15HE989) was identified in the Wolf Hills area, immediately south of the Ohio River floodplain. This resource, which is located within an entrenched drainage, was originally defined as two earthen embankments/dams, with two associated small stone-and-concrete structures (Figure 1). An inscription on one of the structures indicated an association with the Works Progress Administration (WPA) and a construction date of 1937. Site 15HE989 was originally assessed solely as an archaeological resource and, given the lack of intact archaeological contexts, was recommended as not eligible for listing in the National Register of Historic Places (NRHP).

Following the field investigations and submission of the report, additional documentary research revealed that the site, originally thought to be a series of impoundments, actually represents the remains of a WPA-era stone quarry (HE 982), with an associated dynamite magazine (HE 982a) and a small secondary structure (HE 982b). Because these above ground historical resources were identified after Gray & Pape's 2018 cultural history report was submitted and reviewed, this addendum report provides a description and evaluation of the resources with regard to their potential eligibility for inclusion on the NRHP (Gray & Pape 2018). This addendum report is provided as a supplement to the previous report addressing the architectural and historical elements of this resource.





## **DESCRIPTION OF THE RESOURCES**

As noted above, the resource was initially identified during the archaeological survey as consisting of two depressions, associated earthen embankments, and two small stone structures. The northern most depression was later identified as a quarry pit (HE 982), with an associated circa 1937 dynamite magazine (HE 982a) and a small secondary structure (HE 982b) (Figure 2). The two embankments noted during the archaeological survey appear to be associated with a secondary use of the location and were emplaced to create two small ponds, which are visible on a 1950 aerial photograph of the area (Figure 3). The northern pond appears to correspond to the quarry pit (HE 982), while the southern pond is south of the quarry (Figure 2).

### **Quarry Pit (HE 982)**

Based upon the available LiDAR data (Figure 4), the quarry pit (HE 982) is roughly rectangular in plan and occupies an area of roughly 0.26 ha (0.64 ac.). During the archaeological survey, the quarry pit was a dry pond and the bottom and walls of the quarry pit were covered in vegetation (Figure 5). No exposed limestone was visible on the quarry walls. A small stream or drainage runs through the pit and a very small outcropping of limestone is visible.

At the north edge of the quarry pit is an earthen embankment measuring approximately 38 m (124 ft.) in length and 3 m (10 ft.) in height. A second embankment is located just south of the quarry pit and measures 65 m (207 ft.) in length and 2 m (6.5 ft.) in height (Figure 6).

### **Dynamite Magazine (HE 982a)**

The one-story, stone dynamite magazine (HE 982a) is located in the southernmost portion of the quarry area (Figure 2). The structure is set into the slope of a gentle rise and is surrounded by vegetation. The magazine measures approximately 3.2 m (10.5 ft.) in length, 2.3 m (7.5 ft.) in width, and 1.2 m (4 ft.) in height (Figure 7). The roof is a single poured in place concrete slab that is slightly gable shaped, with a center ridge. The structure is constructed of uncoursed rough limestone, with a cement mortar. The small entry opening is centered on the west façade and an inscription at the base of the entryway reads “WPA” followed by a date “4.9.37” (Figure 8). The cement mortar is cracked and weathered. The interior has an earthen floor. The interior mortar is more intact than the exterior (Figure 9) and the imprint from the wood boards used to create the forms for the poured concrete roof are visible on the ceiling. Only three facades of the structure are visible, the eastern façade being completely inset into the slope. The south corners of the roof have been broken off exposing the concrete aggregate.

### **Secondary Structure (HE 982b)**

The small secondary structure (HE 982b) is located approximately 54 m (177 ft.) northwest of the dynamite magazine (Figure 2). This structure measures approximately 79 cm (31 in.) by 66 cm (26 in.) and is 56 cm (22 in.) in height. The roof, floor, and sides of the structure consist of single limestone slabs assembled with cement mortar (Figure 10). The roof slab appears to have spalled off and has a separate piece inscribed with the words “ORVILLE DOUGLAS” (Figure 11). The function of the structure is unknown.



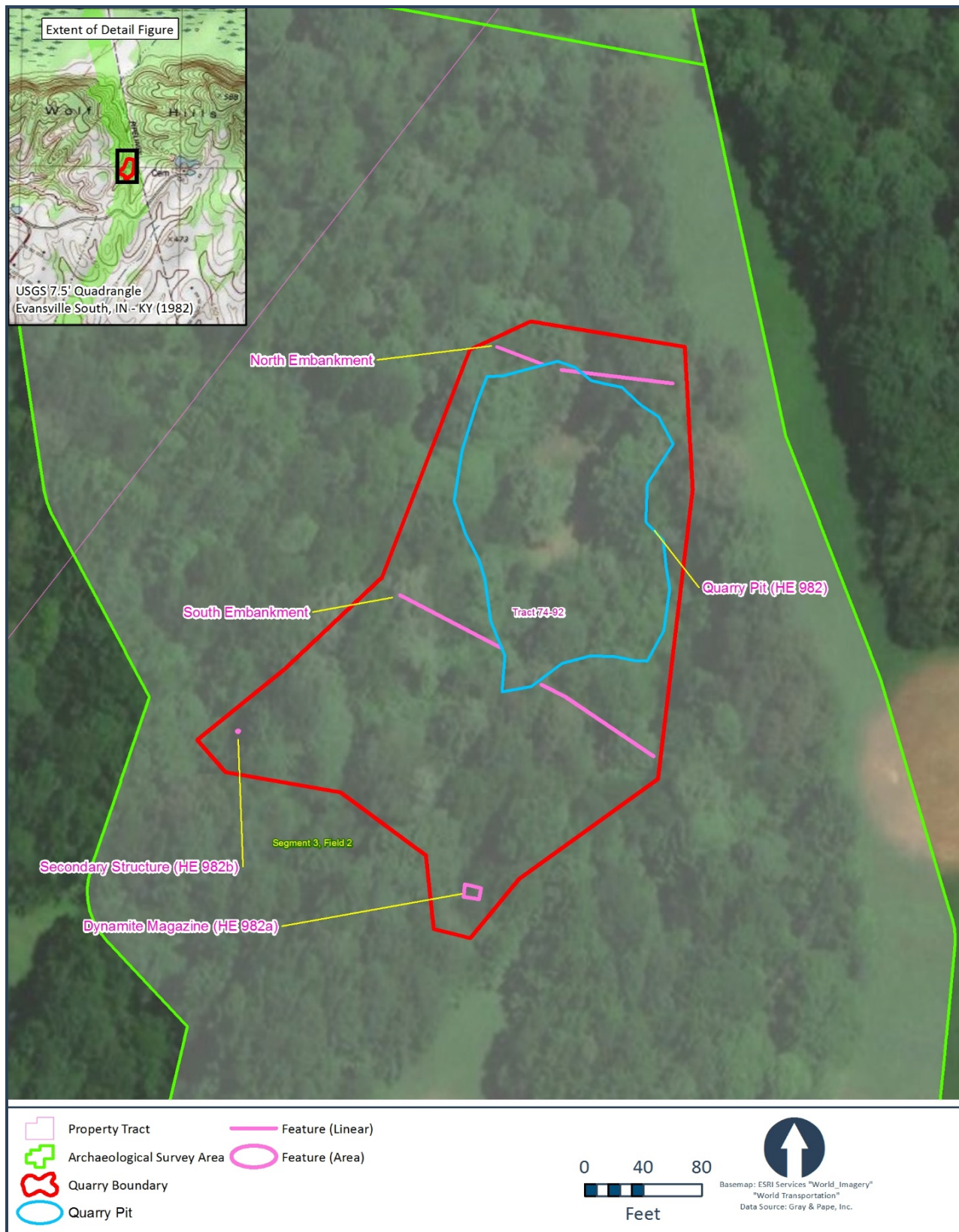


Figure 2. Plan View of WPA Quarry in Henderson (Site HE 982)

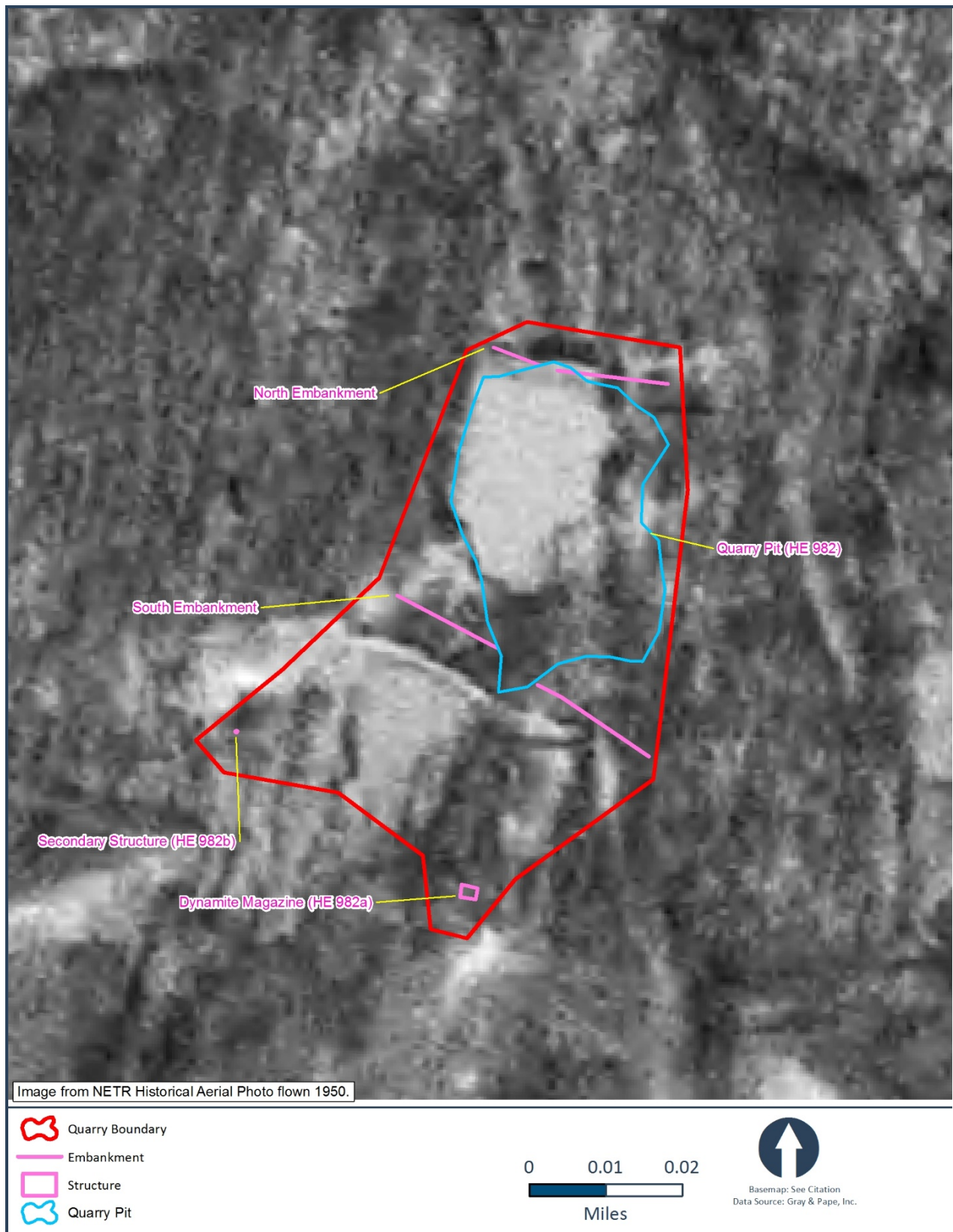
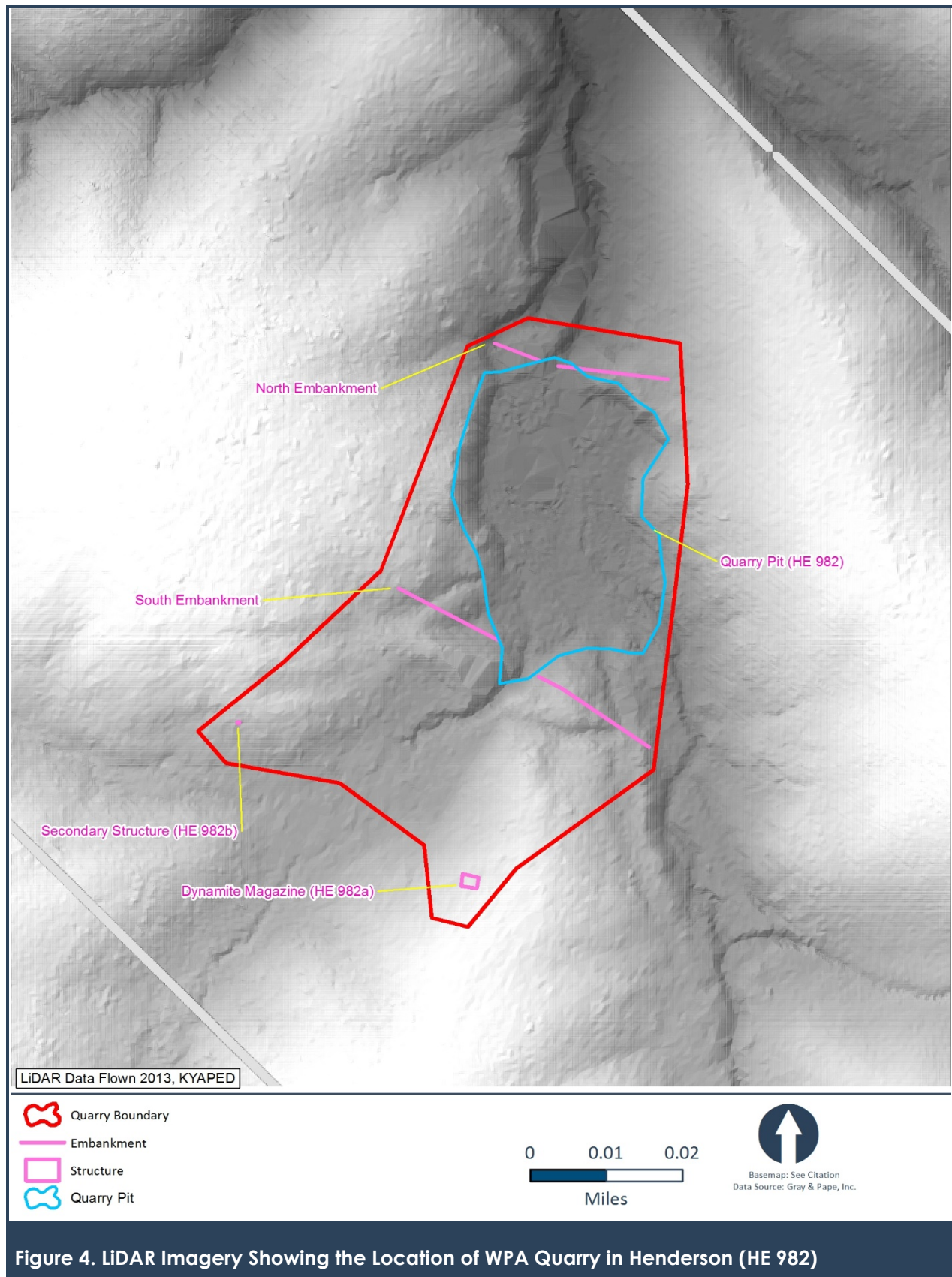


Figure 3. 1950 Aerial Map showing location of WPA Quarry in Henderson (HE 982)







**Figure 5. Quarry pit, HE 982, View to the North**



**Figure 6. Quarry pit, HE 982, South Embankment, View to the West**





Figure 7. Dynamite magazine (HE 982a), View to the East



Figure 8. Inscription at the Base of the Dynamite Magazine (HE 982a)





Figure 9. Interior of the Dynamite Magazine (HE 982a), View to the East



Figure 10. Secondary Stone Structure (HE 982b), View to the West



Figure 11. Inscription Visible at the Secondary Structure (HE 982b), View to the Northwest

## **HISTORIC CONTEXT: NEW DEAL RELIEF EFFORTS IN KENTUCKY**

The Great Depression began with the collapse of the stock market on October 29, 1929. The resulting economic chaos brought financial disaster, massive unemployment, and social unrest (Blakely 1986). The breakdown of local assistance programs spurred the federal government to intervene with relief efforts. President Herbert Hoover refused to act decisively and commit the full weight of the federal government. Instead, on July 21, 1932, three years after the stock market collapse and the onset of the Great Depression, the Hoover administration passed the Emergency Relief and Construction Act, which made \$300,000,000 available to the Reconstruction Finance Corporation (RFC). The RFC would then make the money available for loans to state and local governments through a comparable state agency. Ruby Laffoon, Kentucky's governor, requested \$15 million in loans for the state; however, he was rebuffed and a reduced request of \$1.1 million was approved (Blakely 1986).

Democratic presidential candidate, Franklin D. Roosevelt, promised immediate assistance from the federal government as part of his campaign platform. Once he was elected, the Roosevelt administration inaugurated several key programs that would become the foundation of the New Deal program, including the Civilian Conservation Corps (CCC), the Tennessee Valley Authority (TVA), and the Federal Emergency Relief Administration (FERA). These agencies were all established between March 9 and June 16, 1933, a period known as the "100 days," when the majority of the New Deal was enacted (Schlesinger 1958). The Public Works Administration (PWA), Civil Works Administration (CWA), Works Progress Administration (WPA), and the National Youth Administration (NYA) were in place by 1935.

Harry Hopkins, director of three of the federal relief agencies (FERA, CWA, and the WPA), was a career social worker and believed that relief was a right of the people that should not need to be coerced from the federal government. The CWA was the first large-scale work relief effort, established in 1933; however, the CWA proved short lived and was terminated in 1934. Federal relief work continued with the WPA, created on May 6, 1935 by Presidential Executive Order 7034 (Natural Resources Planning Board 1939). Originally, the WPA was conceived as a work relief program to provide jobs to the unemployed on relief rolls. The work was provided through public projects sponsored by federal, state, and local agencies. These public projects ranged from public building and facility construction to "white collar" projects, including educational, clerical, and artistic-related undertakings. By 1943, when the WPA was dissolved, it had become one of the nation's largest and most expensive relief programs (Blakely 1986).

The WPA was designed to enable local and state governments to sponsor projects, these sponsored projects became one of the agency's defining characteristics. The sponsors were responsible for outlining the basic plans and drawing up the specifications, including the complete project description, cost estimate, and labor requirement. These plans were then submitted to the state WPA branch for approval. If approval was granted, matching federal funds were allocated at the national level. Congress stipulated that no WPA project could compete with private businesses. Locally available materials and unemployed workers were emphasized, and the use of local materials became a hallmark of New Deal architecture (Brent 1991).



The WPA work in Kentucky was extensive, and included 90 new athletic fields; 320 new bridges; 310 new schools; 173 new libraries; over 59,276 miles of new roadways; 116 miles of new sidewalks; 20 new swimming pools; and 46,528 hours per month for city traffic surveys (Kennedy and Johnson 2005). In addition, sewing projects, art projects, and writing projects represented part of WPA relief efforts. By 1938, over \$56 million in federal funds had been spent on WPA projects, and an additional \$13,807,414 was approved (Kennedy and Johnson 2005). Kentucky's state director of the WPA, George H. Goodman, was owner of the *Paducah News Democrat* and former director of Kentucky Emergency Relief Administration (KERA). The headquarters of the state WPA office was located in Louisville. The state was divided into districts and projects were approved for all 120 of Kentucky's counties (Blakely 1986).

The WPA often worked hand-in-hand with another major New Deal relief program, the CCC. Established in 1933 and disbanded in 1942, the CCC was a voluntary public work relief program initially intended for unemployed, unmarried men between the ages of 18 and 25 (extended to ages 17 to 28). CCC camps, run by United States Army reserve officers, were established throughout the country. Each camp consisted of approximately 200 largely unskilled overseen and directed by older, more experienced civilian employees. A major component of CCC work involved the construction and improvement of facilities at state and national parks, camps, and picnic grounds (Paige 1985).

## RESOURCE HISTORY

The quarry and its associated structures appear to have been constructed circa 1937 by the WPA to extract building material used in the construction of buildings, structures, and roads at John James Audubon State Park (located approximately 2.5 miles west of the quarry). The only evidence to support this date of construction is the incised date in the parged concrete sill of the dynamite magazine. Circumstantial evidence in support of this date includes the 1973 geological quad map (Johnson 1973), which depicts a quarry at this location and indicates that the quarry area is comprised of calcareous sandstone from the Lisman Formation (Figure 12). The map's Economic Geology legend states that a "1 ½-foot-thick bed of light-gray to light-olive-gray calcareous sandstone of the Lisman Formation was quarried during the 1930s for building stone used in Audubon Park. Minor quarrying was done years ago along the outcrop of the Madisonville Limestone Member on the north side of Audubon Park" (Johnson 1973). Additionally, the *Geology and Groundwater Resources of the Henderson Area, Kentucky* by Edward J. Harvey (1956) notes that several small pit quarries were opened to extract sandstone and limestone in the vicinity of the John James Audubon State Park and north of the City of Henderson. The materials from these pit quarries were used in construction of the park buildings and crushed stone was used for road material (Harvey 1956).

Civilian Conservation Corps (CCC) workers from Camp SP-9, also known as Camp Cromwell, began work on John James Audubon State Park on October 3, 1934. The CCC workers drained swamps, built lakes, developed trails, constructed shelters, and with workers from the WPA, constructed the park's museum. CCC crews from Camp Cromwell also worked on erosion control, roadway construction, and archaeological excavation projects in Henderson County. Camp Cromwell closed on November 13, 1942 and the camp's equipment was transferred to Fort Knox (Boyett 2018).

John James Audubon State Park was listed as a historic district on the NRHP in 1987. The district is significant under NRHP eligibility Criterion A, for its association with the history of conservation in Kentucky and for its associations with the WPA and the CCC during the economic crisis of the 1930s. It is also significant under Criterion C for the outstanding quality of its architecture and the high quality of craftsmanship found in its buildings and landscape design. The NRHP defines the boundary of the historic property as the original park boundary as established in the 1930s. The nomination is focused solely upon the publicly accessible park, not on the construction camps, quarries, sawmills, or other facilities that supported construction of the park and its facilities.

The park's museum is constructed of uncoursed, rough limestone in the Norman Revival-style. The tea house is a three-story building also constructed in the Norman Revival-style with uncoursed, rough limestone on the first story and half-timbering with coursed brickwork on the second and third stories. The NRHP nomination form and local newspapers indicated that the limestone used in the park was quarried locally in Henderson County and from a CCC quarry in



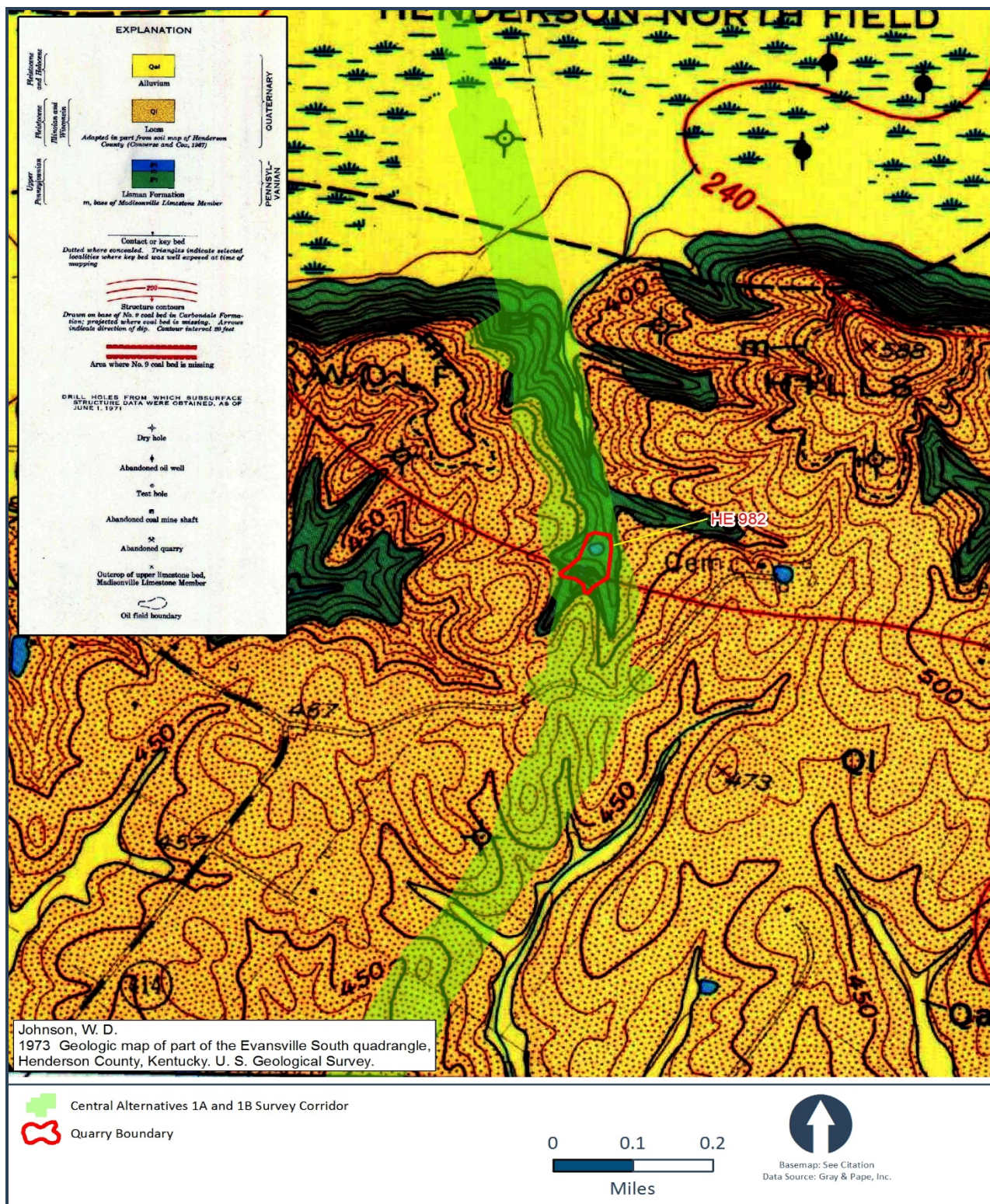


Figure 12. Section of the Geologic Map of Part of the Evansville South Quadrangle, Henderson County, Kentucky (Johnson 1973) Showing Location of WPA Quarry in Henderson (HE 982)



Webster County (*The Courier-Journal* 2005; Posgrove 1987). The nomination form specifically states that the limestone for the museum and tea house was quarried from a nearby Henderson site. The nomination and other sources identify other stone structures within the park by the generic term “stone,” rather than specifying limestone or other materials. In addition, flagstone paths and courtyards are noted in the nomination form, but the material used for the paths is not specifically identified.

WPA and CCC construction projects were required to use locally available materials, including stone, brick, and wood. If a privately-owned local quarry did not exist, the government would establish their own. These quarries provided stone for construction of buildings, as well as for roads and for use as concrete aggregate. It seems likely that many of the approximately 85 CCC camps in Kentucky operated one or more small quarries to provide their work crews with building stone, crushed stone, and aggregate. Indeed, the web site *Stone Quarries and Beyond* (Perazzo 2016) lists nearly four dozen WPA operated quarries in Kentucky. While largely unidentified by previous survey efforts, it seems clear that quarries associated with Depression Era federal construction projects, particularly those in rural areas, are not a rare resource type.

Most quarrying operations would include a dynamite magazine, a building designed to store explosives safely. Magazines tend to be small, utilitarian buildings located at a distance from other buildings and areas of activity, in order to minimize damage in the event of an explosion. A magazine would not exist by itself but would always be associated with other buildings, structures, and areas of activity. Kennedy & Johnson’s “The New Deal Builds: A Historic Context of the New Deal in East Kentucky, 1933 to 1943” (2005) identified several dynamite magazines, largely built as part of a Civilian Conservation Corps (CCC) camp, in their limited surveys and case studies.

The standard texts on WPA and CCC architecture do not mention dynamite magazines, though it seems likely that many of these agencies’ construction sites would have included a building designed to store explosives. The reason these buildings are not documented in the texts that address the design of public facilities is that they were intended to be temporary, utilitarian buildings without architectural embellishment. The siting and design of a magazine was not an aesthetic decision but was based upon practical considerations. The magazines identified in Kennedy & Johnson are all utilitarian stone or concrete buildings.

## THE NATIONAL REGISTER OF HISTORIC PLACES

The NRHP, which is administered by the National Park Service, is the official Federal list of districts, sites, buildings, structures, and objects (defined below) significant in American history, architecture, archaeology, engineering, and culture. NRHP properties have significance to the prehistory or history of their community, State, or the Nation.

Properties listed in the NRHP possess significance in American history, architecture, archaeology, engineering, and culture, is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. Significance may be found in four aspects of American history:

- **Criterion A:** Association with events that have made a significant contribution to the broad patterns of our history;
- **Criterion B:** Association with the lives of persons significant in our past;
- **Criterion C:** Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and
- **Criterion D:** Yield, or may be likely to yield, information important in prehistory or history.

As noted above, the NRHP recognizes five resource types, defined below:

- **Building:** A resource created to shelter any form of human activity, such as a house, barn, church, hotel, or similar construction. The term “building” may refer to a historically and functionally related unit, such as a courthouse and jail or a house and barn.
- **Site:** The location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historical, cultural, or archaeological value regardless of the value of any existing structure.
- **Structure:** Used to distinguish from “building” those functional constructions made for purposes other than creating human shelter. Examples include bridges, tunnels, canals, dams, silos, kilns, mounds, and systems of roadways and paths.
- **Object:** Used to distinguish from “buildings” and “structures” those constructions that are primarily artistic in nature or are relatively small in scale and simply constructed. Examples include sculptures, monuments, boundary markers, and fountains.
- **District:** A geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development.

Integrity is the ability of a resource to convey its significance. Listing in the NRHP requires that a resource not only be significant, but also have integrity. Resources either retain their integrity, and therefore convey their significance, or they do not. The NRHP recognizes seven aspects or

qualities that, in various combinations, define integrity. A resource that retains integrity will always possess several, and usually most, of these aspects. The seven aspects of integrity are:

- **Location:** the place where the historic property was constructed or the place where the historic event occurred.
- **Design:** the combination of elements that create the form, plan, space, structure, and style of a property.
- **Setting:** the physical environment of a historic property.
- **Materials:** the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- **Workmanship:** the physical evidence of the crafts of a particular culture or people during any given period of history or prehistory.
- **Feeling:** a property's expression of the aesthetic or historic sense of a particular period of time.
- **Association:** the direct link between an important historic event or person and a historic property.



## **NATIONAL REGISTER EVALUATION**

The quarry pit (HE 982) and its two associated structures (HE 982a and HE 982b) represent a potential historic district because they constitute a concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development. The quarry pit and the two associated structures do not meet NRHP eligibility criteria and is therefore recommended not eligible for the NRHP as a historic district.

The district is assumed to be associated with the construction of John James Audubon State Park by the WPA and CCC in the 1930s, though the evidence for this association is limited to the incised date in the parged door sill of the dynamite magazine. Limited documentary evidence suggests that the WPA and CCC may have opened more than one quarry during construction of Audubon State Park (Harvey 1956). While assumed to be associated with the WPA and the CCC, federal agencies significant in New Deal era construction projects throughout the United States, the district is an example of a relatively common resource type (a stone quarry) widely associated with New Deal construction projects. Documentary evidence suggests that at least four dozen quarries operated by the WPA and/or the CCC operated in Kentucky during the period from 1934 to 1942. Accordingly, the district does not appear to meet NRHP Criterion A.

The district is not associated with the lives of persons significant in our past, and therefore does not meet NRHP Criterion B. Likewise, it does not embody the distinctive characteristics of a type, period, or method of construction and therefore does not meet NRHP Criterion C, and is unlikely to yield information important in prehistory of history, so does not meet NRHP Criterion D.

The district does not retain its integrity and is unable to convey significance. The design, setting, materials, workmanship, feeling, and association of the quarry pit have been significantly compromised by the addition of two large earthen embankments. These embankments, constructed after the quarry closed, were intended to create ponds. Their presence prevents the district from conveying its significance as a stone quarry.

If the resource does not meet NRHP eligibility criteria as a historic district, it may be argued that a single resource associated with the district would likewise not be NRHP eligible. The dynamite magazine without the quarry is a resource with no context. It is removed from the historic activity that necessitated its construction and use. While there are examples of NRHP-eligible resources that have lost much of their historic context, these are generally the principal resources associated with a property, or resources of architectural distinction – a farmhouse without its outbuildings or an architecturally significant office building associated with a destroyed industrial plant. Accordingly, the dynamite magazine (HE 982a) is recommended not eligible for the NRHP as an individual resource.

## References Cited

### Blakely, George T.

1986 *Hard Times and New Deal in Kentucky: 1929–1939*. University Press of Kentucky, Lexington.

### Boyett, Frank

2018 “Boyett: Camp Cromwell converted for war effort in 1943.” *The Gleaner*. March 17, 2018

### Brent, Joseph E.

1991 “New Deal Era Buildings in Western Kentucky.” National Register of Historic Places/Multiple Property Documentation Form. Frankfort, May 14, 1991.

### The Courier-Journal

2005 “Recalling a Past Era.” *The Courier-Journal*. November 13, 2005:B1.

### Gray & Pape, Inc.

2018 *History/Architecture Survey for Henderson, Henderson County, Kentucky 1-69 Ohio River Crossing Project Evansville, Indiana and Henderson Kentucky*. Report on file with the Kentucky Transportation Cabinet, Frankfort.

### Harvey, Edward J.

1956 *Geology and Groundwater Resources of the Henderson Area Kentucky*. Geological Survey Water-Supply Paper 1356. United States Government Printing Office, Washington, D.C.

### Johnson, William D., Jr.

1973 *Geological Map of Part of the Evansville South Quadrangle, Henderson County, Kentucky*. Department of the Interior, United States Geological Survey, Washington, DC.

### Kennedy, Rachel and Cynthia Johnson

2005 *The New Deal Builds: A Historic Context of the New Deal in East Kentucky, 1933 to 1943*. Kentucky Heritage Council, State Historic Preservation Office, Frankfort, Kentucky.

### Natural Resources Planning Board

1939 *Federal relations to local planning*. Natural Resources Planning Board, Washington, D.C.

### Paige, John C.

1985 “The Civilian Conservation Corps and the National Park Service, 1933-1942: An Administrative History.” National Park Service, U.S. Department of the Interior, Washington, D.C.

**Perazzo, Peggy B.**

- 2016 Stone Quarries and Beyond: Quarries in Kentucky & Quarry, & Related Business Links, Photographs, and Articles. <https://quarriesandbeyond.org/states/ky/ky-photos.html>. Accessed February 17, 2020.

**Posgrove, Robert M.**

- 1987 "John James Audubon State Park." National Register of Historic Places/Inventory Form. Frankfort, September 4, 1987.

**Schlesinger, Arthur M.**

- 1958 *The Coming of the New Deal: 1933–1935, The Age of Roosevelt, Volume 2*. Houghton Mifflin Company, New York.

**Thornbury, William D.**

- 1965 *Regional Geomorphology of the United States*. John Wiley & Sons, Inc., New York, London, Sydney.