

## **Appendix O**

# TRAIL OF TEARS LETTER REPORT

**Mantle Rock Solar LLC**

Livingston County, Kentucky

# MANTLE ROCK SOLAR PROJECT TRAIL OF TEARS RESEARCH, LIVINGSTON COUNTY, KENTUCKY

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## Project Description

On September 5, 2023, Cultural Resource Analysts, Inc. (CRA), personnel completed due diligence research on the possible association between the proposed Mantle Rock Solar Project area and the Northern Route of the Trail of Tears National Historic Trail in Livingston County, Kentucky (Figure 1). The research was requested by Marty Marchaterre of Copperhead Environmental Consulting, Inc. The proposed Mantle Rock Solar Project area encompasses approximately 277 ha (562 acres) and is located around the intersection of KY 135 and KY 1608 between the Communities of Hampton and Joy, Kentucky (Figure 2). The Northern Route of the Trail of Tears National Historic Trail is located approximately 3.5 km (2.2 mi) to the north, and the National Register of Historic Places (NRHP)-listed Mantle Rock Archeological District is located approximately 4.0 km (2.5 mi) to the northwest (see Figure 2).

An archaeological records review of the proposed Mantle Rock Solar Project area was previously conducted by CRA and determined that no previous archaeological survey areas or sites are located within or adjacent to the proposed project area (McAlpine 2023). A review of historic maps revealed that at least 13 historic structures over 50 years of age are also present within this area. Additionally, Alfisol soils within the proposed Mantle Rock Solar Project area have little to no potential to contain deeply buried archaeological deposits. However, a review by the State Historic Preservation Office (SHPO [Kentucky Heritage Council (KHC)]) did mention that the Trail of Tears traditional cultural area was located within or adjacent to the proposed project area. No exact location was provided by the KHC as it is a protected resource; however, the information on the trail outlined in the current research effort indicated it likely is not within or adjacent to the solar farm project area. A review of available resources regarding the Trail of Tears, the Northern Route through Kentucky, and the Mantle Rock Archaeological District was conducted. The results of the research, as well as recommendations about the potential impacts of the current project, are provided below.

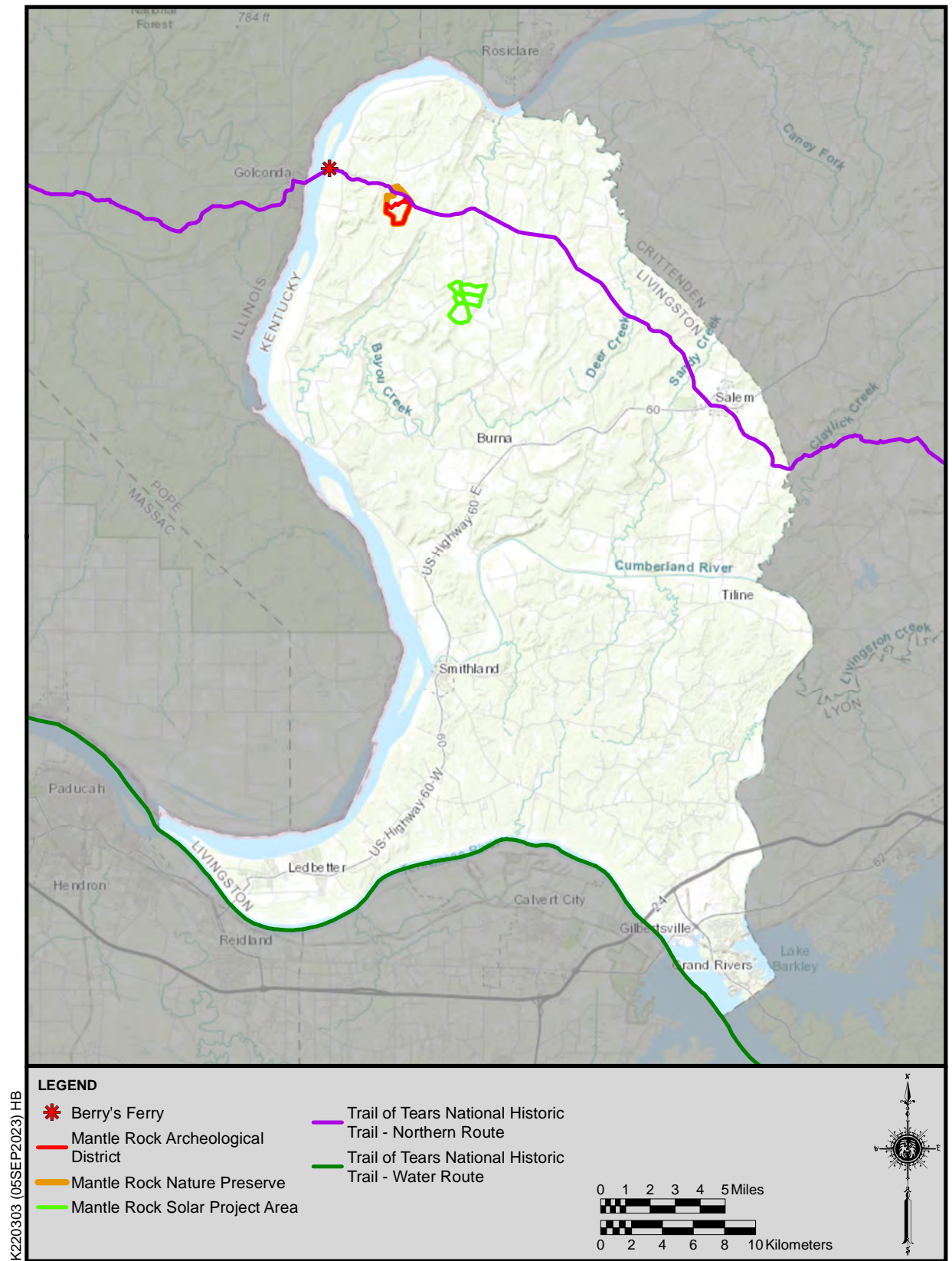


Figure 1. Map showing the Trail of Tears National Historic Trail in Livingston County, Kentucky.



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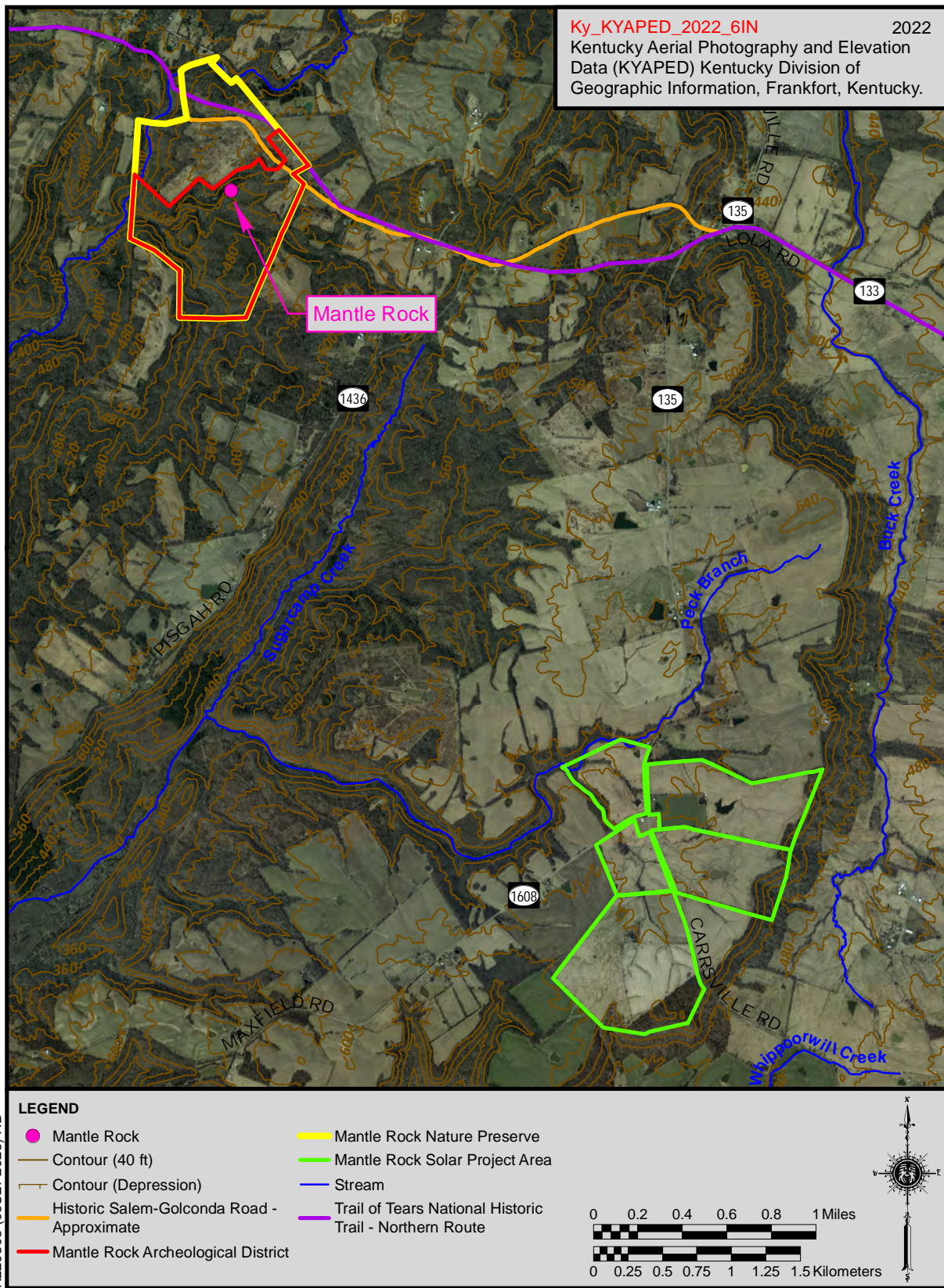


Figure 2. Aerial photograph depicting the location of the Mantle Rock Archeological District in relation to the Mantle Rock Solar Project area.

## Trail of Tears

Following the Indian Removal Act of 1830, a small group of Cherokee leaders signed the Treaty of New Echota on December 29, 1835, that gave the Cherokee \$5 million and land in present-day Oklahoma in exchange for their 7 million acres of ancestral land (North Carolina Department of Natural and Cultural Resources [NCDNCR] 2016). The treaty also ensured the relocation of the Cherokees to Indian Territory in the southwest, in present-day Oklahoma (United States Department of the Interior, National Park Service [NPS] 2020). Most Cherokees did not recognize the treaty and protested it, sending speakers across the United States, signing petitions, and lobbying Congress (Museum of the Cherokee Indian [MCI] 2023). Despite these efforts, including the petition of Principal Chief John Ross with more than 15,000 Cherokee signatures, the Senate ratified the treaty in March of 1836, and President Andrew Jackson signed it into law (Zotigh 2019). This treaty was the catalyst for the violent forced removal of the Cherokees between 1838 and 1839 along the route now known as the Trail of Tears.

While an estimated 2,000 Cherokees had voluntarily relocated by May 1838, most had refused to leave their homes (NCDNCR 2016). In response, the United States government sent federal troops and state militia members to forcibly remove the remaining estimated 15,000 Cherokees (NPS 2020) in a six-month, 1,200 mi trek beginning in October of 1838 (NCDNCR 2016). An estimated 6,000 Cherokees died along this route (National Library of Medicine 2023) due to disease, exhaustion, and the harsh winter conditions they were forced to march in (NCDNCR 2016). Many died before their journey west in emigrating depots due to devastating disease outbreaks (NPS 2020). While some Cherokees traveled to Indian Territory on boats and railroads, most traveled on foot through rough terrain, leaving behind a trail of unmarked graves (MCI 2023).

As a part of the National Trails System Act of 1968, the Trail of Tears National Historic Trail is a 2,200 mi system of routes designated by Congress in 1987 to commemorate the Cherokees who traversed these routes in their journey to Oklahoma between 1838 and 1839 (NPS 1992). The National Trails System Act defines National Historic Trails as “extended trails which follow as closely as possible and practicable the original trails or routes of travel of national historic significance” (United States Department of Agriculture, United States Forest Service [USFS] 2023). On the Trail of Tears, 46 historic sites and six route segments have been identified “that have the potential to provide opportunities to interpret the trail’s historical significance and to provide high-quality visitor experiences” (NPS 1992).

### *Trail of Tears in Kentucky*

Three routes of the Trail of Tears National Historic Trail pass through Kentucky and consist of the Benge Route, the Water Route, and the Northern Route (NPS 2023b). The Benge Route, named after John Benge, crossed over the western portion of Kentucky and consisted of one detachment of approximately 1,100 Cherokees (NPS 2007). The group had entered Kentucky from Tennessee around Dukedom in Graves County and crossed the Missouri River near Columbus-Belmont State Park in Hickman County.

Four detachments used the Water Route, though they could not complete it solely by boat (NPS 2007). The Tennessee River was utilized for passage through Kentucky, passing the east side of Calloway County and crossing through Paducah in McCracken County. The Tennessee River has undergone many landscape changes due to the Tennessee Valley Authority (NPS 1992), which has modified the river through “the development of chemical, paper, and petroleum plants, as well as urban areas” (NPS 1992), leaving behind a dramatically different landscape than the one navigated during the Trail of Tears. This includes the formation of Kentucky Lake.

Most Cherokee detachments traveled the Northern Route, which entered Kentucky west of Guthrie on Port Royal Road in Todd County (Thomason and Parker 2003). Here, they camped at Gray’s Inn (the Stagecoach Inn). The route roughly followed the existing route of US 41 north from Guthrie, through Trenton in Todd County, Pembroke in Christian County, and then to Hopkinsville in Christian County (NPS 1992). In this location, the Cherokee made camp and stopped for rations (NPS 2023b). This campsite is

now the Trail of Tears Commemorative Park. From Hopkinsville, the route generally followed the approximate route of KY 91 to Princeton and then to Fredonia in Caldwell County (NPS 1992). An additional campsite for the Trail of Tears is located at Big Springs Park in Princeton (Thomason and Parker 2003). From there, the route continued northwestward along the approximate path of KY 133 to Salem in Livingston County. From Salem, the route continued northwestwardly and followed the approximate path of KY 133 (the historic Salem-Golconda Road) through Joy and then to Berry's Ferry, located on the Ohio River in Livingston County (Thomason and Parker 2003). Berry's Ferry is located south of Rondeau Island and connected Kentucky with Golconda, Illinois, on the Ohio River's west bank.

## Mantle Rock

Mantle Rock is a 9 m (30 ft) high natural sandstone arch spanning 57 m (188 ft) with bluffs, shelters, and honeycomb formations (The Nature Conservancy 2023). It is located in the floodplain of McGilligan Creek, approximately 3.4 km (2.1 mi) west of Joy and 4.0 km (2.5 mi) east of Berry's Ferry (Thomason and Douglass 2004).

Eleven of the 13 Cherokee detachments traveling along the Northern Route on the historic Salem-Golconda Road, located approximately 600 m (1,969 ft) to the northeast of the sandstone arch, camped at Mantle Rock from mid-November into December 1838 while waiting to cross the Ohio River at Berry's Ferry (Thomason and Douglass 2004). However, it is unclear if these detachments camped at Mantle Rock, as this information is uncited and cannot be verified. While most of the detachments would have remained at Mantle Rock for only a few days, the last and largest detachment of Cherokees, led by Peter Hildebrand and containing approximately 1,700 individuals, was forced to camp at Mantle Rock for almost two weeks due to ice on the Ohio River that forced Berry's Ferry to close (Thomason and Douglass 2004). Peter Hildebrand's detachment was finally able to cross the Ohio River during the second week of January 1839 (Thomason and Douglass 2004).

### *Mantle Rock Archaeological District*

Archaeologists from the University of Louisville first recorded Mantle Rock as a looted rockshelter (Site 15Lv37) on November 16, 1977 (Figure 3). A. Gwynn Henderson from the University of Kentucky revisited the site on December 6, 1986. During her visit, she encountered a trespassing looter who had dug up many prehistoric artifacts in the rockshelter, including numerous projectile points, lithic flakes, burned bone, nutshells, and pottery. On the revisit site form for Mantle Rock, Henderson stated that the site was significant for its stratified archaeological deposits and its association with the Trail of Tears. While not nominated by SHPO for inclusion in the NRHP in 1986, Henderson emphasized the significance of both Site 15Lv37 and the Mantle Rock area to the Kentucky Nature Preserves Commission in a letter attached to the site form. Henderson wrote: "I wanted you to be aware of how unique this place is, not only for its biological features, but for its archaeological features and for the unique historical event which took place there."

On November 26, 2004, Mantle Rock was listed in the NRHP (Thomason and Douglass 2004). On the NRHP nomination form, Mantle Rock had been expanded beyond the rockshelter (Site 15Lv37) into the Mantle Rock Archaeological District to include the 87 ha (215 acres) property owned by the Kentucky Nature Conservancy. This district included the natural sandstone arch (the rockshelter) that is Mantle Rock (Site 15Lv37), the wooded area and springs on the property, and a section of the historic Salem-Golconda Road, which had been used during the Trail of Tears. The Mantle Rock Archaeological District was considered eligible for the NRHP under Criteria A for its significance during the Trail of Tears march and the associated property type of "Campsites" and "Roadbeds" as outlined in the Multiple Property Documentation Form, "The Historic and Historic Archaeological Resources of the Cherokee Trail of Tears, 1837–1839" (Thomason and Douglass 2004; Thomason and Parker 2003).



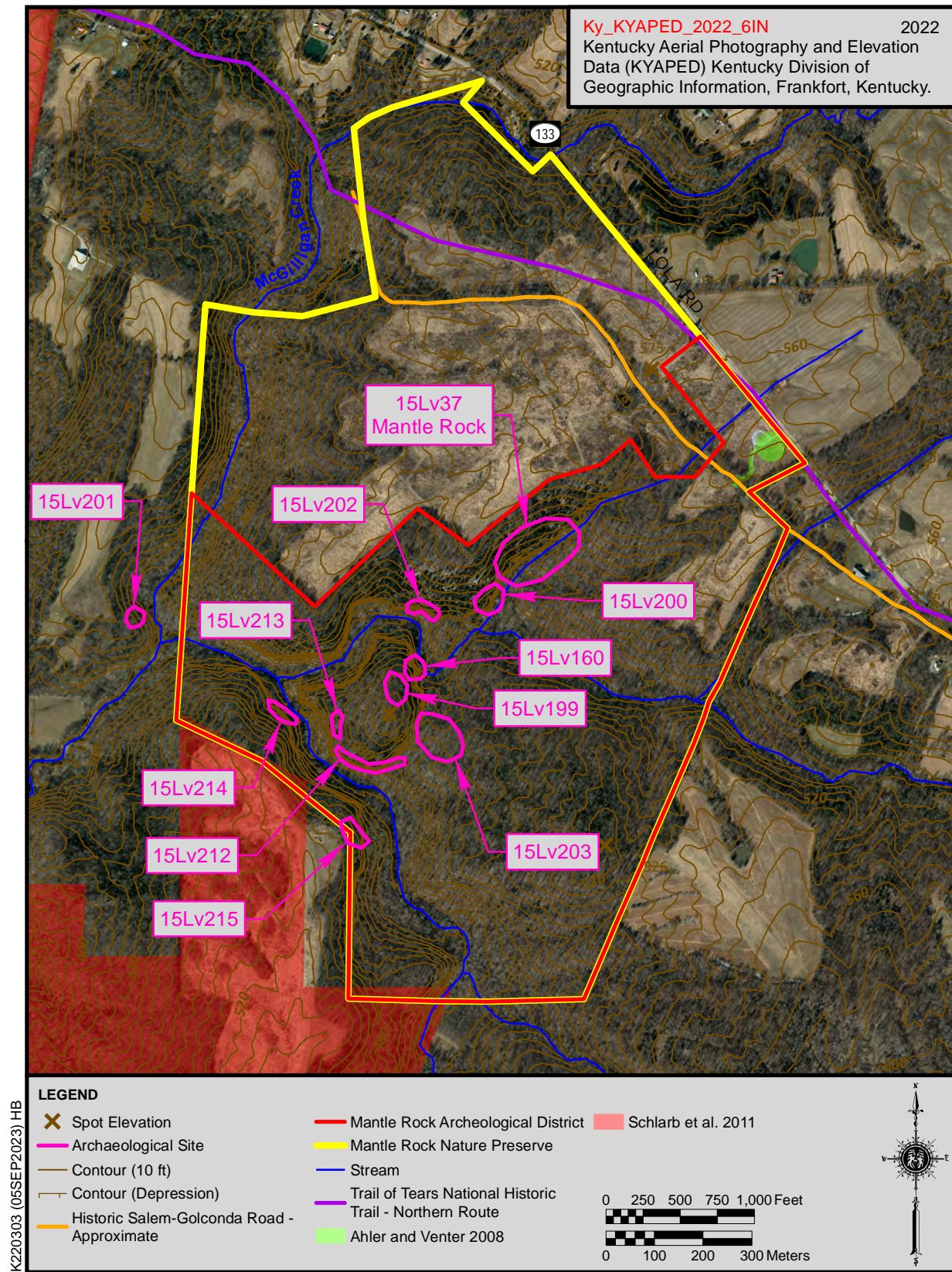


Figure 3. Aerial photograph depicting archaeological sites and known resources of the Mantle Rock Archaeological District.

The Mantle Rock Archaeological District contains 10 prehistoric archaeological sites, as reported in Office of State Archaeology (OSA) data (see Figure 3). These sites included seven rockshelters (15Lv37, 15Lv200, 15Lv202, and 15Lv212–15Lv215), one petroglyph (15Lv160), a prehistoric cemetery (15Lv199), and one stone mound (15Lv203). However, there are discrepancies between available OSA data and information on the NRHP form. While the OSA only contains data on 10 archaeological sites within the district, the NRHP nomination form states there are 15 (Thomason and Douglass 2004). This discrepancy is likely due to a report written by A. Gwyn Henderson and David Pollack (1996), cited in the NRHP nomination and listed as on file at the KHC. Both the OSA and the SHPO (KHC) were contacted to obtain a copy of this report. However, the report could not be located. None of these 10 sites are associated with the Northern Route of the Trail of Tears nor the various detachments that may have camped around Mantle Rock. According the NRHP form, the archaeological district only includes the area's historic association with the Trail of Tears, not the archaeological sites.

The NRHP form states that the Peter Hildebrand detachment contained 1,700 individuals, over 100 wagons, and numerous livestock (Thomason and Douglass 2004). Firsthand witness accounts from December 1838 and January 1839 indicate that this detachment camped along the road for about 4.8 km (3.0 mi) (NPS 2023a). There are many discrepancies in the interpretation of where the Peter Hildebrand detachment camped during their two-week stop at Mantle Rock. While first-hand witness accounts agree that the detachment camped along the road, the exact portion of the road where they camped is not specified. While the Salem-Golconda Road followed during the Trail of Tears march appears to be generally aligned with KY 133 through Livingston County today, the current and historic roads differ west of Joy. Beginning near Joy and continuing west toward Berry's Ferry, the geometry of KY 133 has been improved to incorporate a straighter route, abandoning the historic Salem-Golconda Road. Over 3.21 km (2.0 mi) of the historic road parallels KY 133 between Joy and Berry's Ferry. The historic roadbed is highly defined on the landscape, ranging from 2.4 m to 3.0 m (8.0 to 10.0 ft) wide, with embankments up to 1.5 m (5.0 ft) high, and meets registration requirements for listing in the NRHP (Thomason and Parker 2003). Approximately 137 m (450 ft) of the historic roadbed within the Mantle Rock Nature Preserve is listed as a contributing resource to the Mantle Rock Archaeological District (Thomason and Douglass 2004).

Using the purported length of 4.8 km (3.0 mi) for the encampment, Hildebrand's detachment could have camped as far west as Berry's Ferry on the historic Salem-Golconda Road or east on KY 133 just past KY 135. It is possible that while people camped along the road, some may have camped further into the Mantle Rock area and were not visible to onlookers traveling on the road. Because "no contemporary accounts or descriptions of this detachment's experience at Mantle Rock have yet to be identified," according to the NRHP nomination form (Thomason and Douglass 2004), where precisely the Cherokees camped at Mantle Rock during the winter of 1838 remains unclear. No archaeological investigations have been conducted in an attempt to locate these encampments within the Mantle Rock Nature Preserve or along the known Trail of Tears route.

Regardless of where precisely the Cherokees camped at and around Mantle Rock, the Mantle Rock Archaeological District serves as a place that the Cherokees can visit today to pay respect to their ancestors who walked the Trail of Tears (The Nature Conservancy 2023). Mantle Rock is one of several places on the Trail of Tears National Historic Trail that allows all visitors to learn about the hardships the Cherokees endured during this part of American history. Mantle Rock Archaeological District could also be considered an ethnographic landscape (KHC 2010:79), containing various natural and cultural features that modern Cherokees may define as heritage resources.

## Implications

Given the known information about Mantle Rock and the Trail of Tears, no supporting evidence exists that the Mantle Rock Solar Project encroaches onto the Northern Route of the Trail of Tears. The Trail of Tears National Historic Trail, established by the NPS in Livingston County, mostly follows KY 133, which runs east to west. A 4.8 km (3.0 mi) buffer can be examined using Mantle Rock as an established central



encampment location. The Mantle Rock Solar Project area is located approximately 3.7 km (2.3 mi) south of the intersection of KY 133 and KY 135 in Joy and approximately 6.9 km (4.3 mi) away by road south of Mantle Rock. It is unlikely that any of the detachments traveling along the historic Salem-Golconda Road would detour 2.33 mi (3.75 km) off the route to camp, nor is there any historical evidence that any of the detachments camped on KY 135. Logically, detachments would not take such a significant detour when an ideal place to camp, Mantle Rock, is already on the route.

Three previous archaeological surveys (Ahler and Venter 2008; Henry and Schlarb 2006; and Schlarb and Istok 2010) conducted near the Mantle Rock Archaeological District identified 12 archaeological sites (15Lv203–15Lv239 and 15Lv215–15Lv261). However, none of these sites are associated with the Northern Route of the Trail of Tears. No previous archaeological survey areas or sites are located within or adjacent to the proposed Mantle Rock Solar Project area. An archaeological survey of the proposed project area may identify additional archaeological sites, but it is unlikely they would be associated with the Northern Route of the Trail of Tears.

In addition to the historic research, a viewshed analysis was conducted to determine if the Northern Route of the Trail of Tears, the Mantle Rock Archaeological District, or the historic Salem-Golconda Road would be visible from the proposed Mantle Rock Solar Project area (Figure 4). Using a bare earth Light Detection and Ranging (LiDAR) digital elevation model (DEM), it was determined that small portions of the Mantle Rock Archaeological District are visible, as well as parts of the Northern Route of the Trail of Tears and portions of the historic Salem-Golconda Road.

Because no previous archaeological surveys have identified any known areas where the Cherokee detachments camped, both within and outside of Mantle Rock Archaeological District, it is unknown if and where possible archaeological resources associated with the Trail of Tears that may be present. Without the foundational knowledge of the documented encampment at Mantle Rock, locating and interpreting possible encampments outstretched from this central location is difficult. There are likely no encampments associated with the Northern Route of the Trail of Tears located in the Mantle Rock Solar Project area. What is known is the significance of the Mantle Rock Archaeological District to our cultural landscape and our understanding of the historical significance of the Trail of Tears.

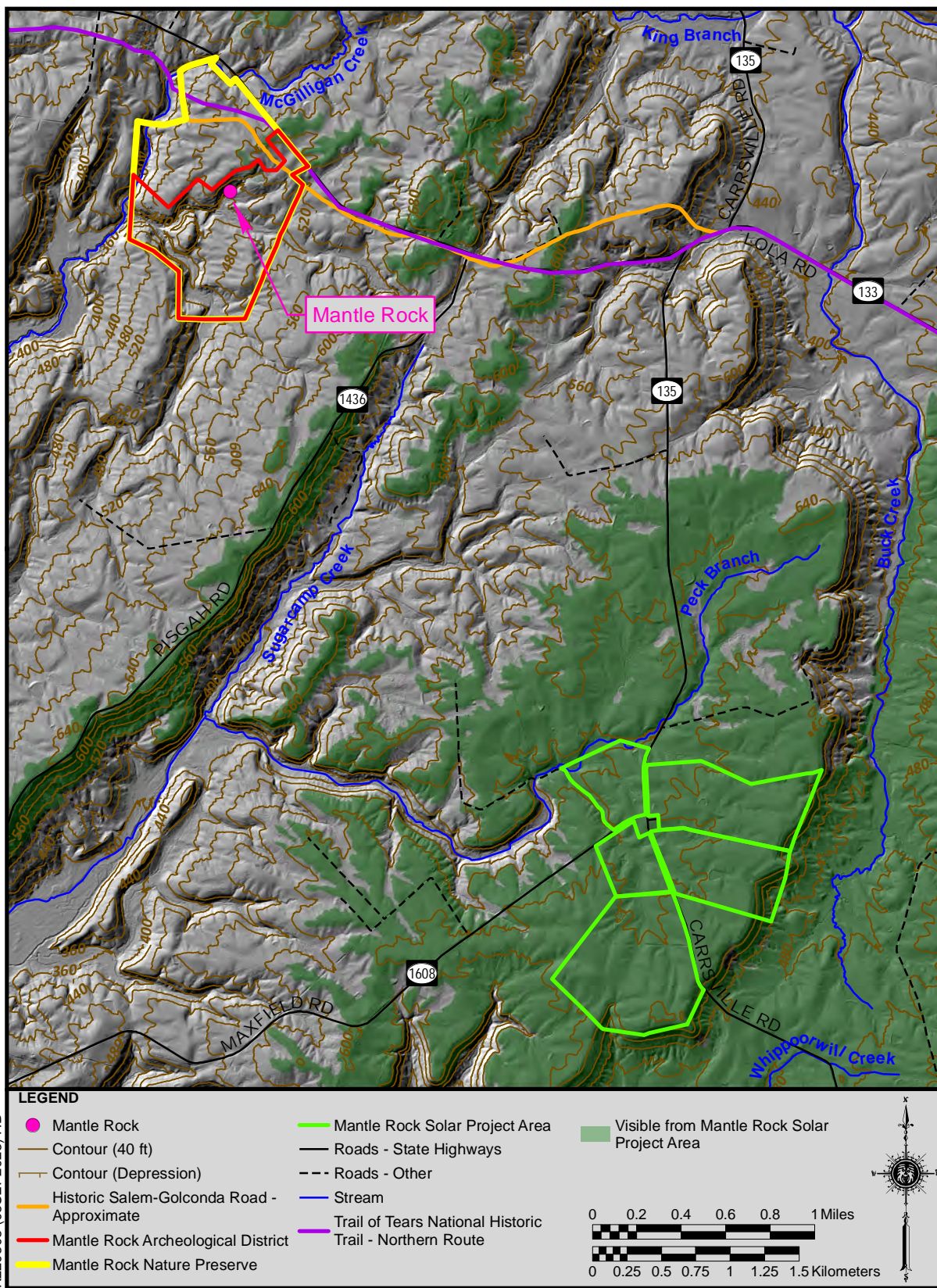


Figure 4. Viewshed analysis.

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