CULTURAL RESOURCES SURVEY OF THE HAILE GOLD MINE 115kV TRANSMISSION LINE, LANCASTER COUNTY, SOUTH CAROLINA

CHICORA RESEARCH CONTRIBUTION 562

CULTURAL RESOURCES SURVEY OF THE 115KV HAILE GOLD MINE TRANSMISSION LINE, LANCASTER COUNTY, SOUTH CAROLINA

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ABSTRACT

This report provides the results of a cultural resources investigation of a 4.20 mile transmission line situated in the northeast portion of Lancaster County. The study was conducted by Andrew Hyder of Chicora Foundation for Mr. Tommy Jackson of Central Electric Power Cooperative and is intended to assist this client comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The corridor is to be used by Central Electric Power Cooperative for the construction of the Haile Gold Mine transmission line. The proposed corridor will start near an existing transmission line and run southeast to the proposed substation site.

The proposed route will require the clearing of the corridor, followed by construction of the proposed transmission line. These activities have the potential to affect archaeological and historical sites that may be in the project corridor. For this study an area of potential effect (APE) 500 feet around the proposed transmission line was assumed.

Lancaster County has received a comprehensive architectural and historical survey in 1986, as well as several additional studies associated with the development of the Haile Gold Mine. These studies have identified seven architectural sites in the APE or in close proximity (735, 736, 951, 952, 959, 1111, and 1112).

An investigation of the archaeological site files at the S.C. Institute of Archaeology and Anthropology failed to identify any previously recorded archaeological sites within the project's APE.

The archaeological study of the transmission line incorporated shovel testing at 100-foot intervals along the center line of the proposed corridor, which had been cut and staked at the time of this investigation. All shovel test fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study. A total of 233 shovel tests were excavated in the survey corridor.

One archaeological site (38LA764) was identified as a result of these investigations. The site includes a historic scatter, a brick foundation that fell outside of the corridor, a small animal pen, and windmill attached to a cistern. This site is recommended not eligible for the National Register.

A survey of public roads within 500 feet of the survey area was conducted in an effort to identify any architectural sites over 50 years old that also retained their integrity. No additional structures were found.

It is possible that archaeological remains may be encountered in the project area during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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INTRODUCTION

This investigation was conducted by Andrew Hyder of Chicora Foundation, Inc. for Mr. Tommy L. Jackson of Central Electric Power Cooperative. The work was conducted to assist Central Electric Power Cooperative to comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The project site consists of a 4.20-mile corridor to be used for the Haile Gold Mine 115kV Transmission Line in northeast Lancaster County (Figure 1). The project runs roughly northwest-southeast, beginning at a preexisting transmission line and running southeast for approximately 7,800 feet , crossing SC 983 and traveling 5,600 feet parallel with secondary road between SC 983 and US 601 (Haile Gold Mine Road). Crossing US 601, the corridor turns southwest for 1,400 feet and crosses SC 265. The corridor then turns west, traveling parallel with SC 601 for 3,100 feet before turning southeast for 4,000 feet to end at a proposed substation site (Figure 2).

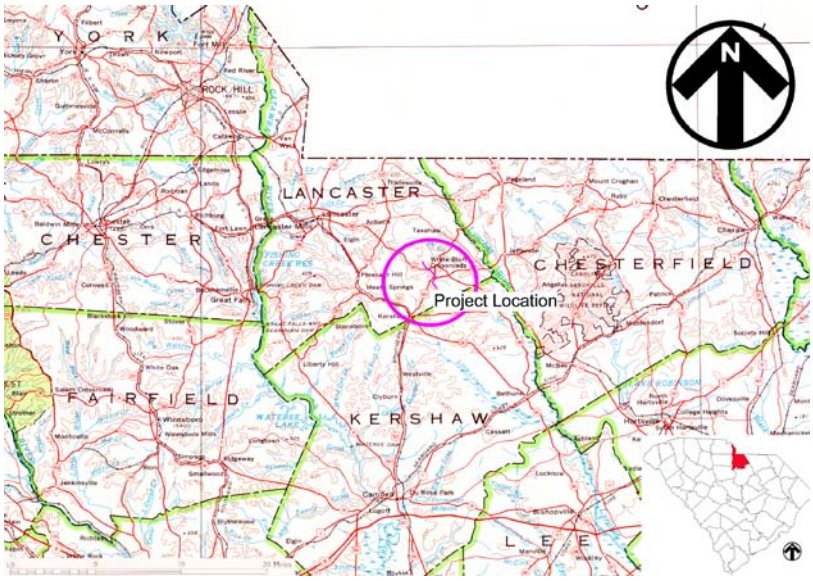

Figure 1. Project vicinity in Lancaster County (base map is USGS South Carolina 1:500,000).

The corridor exhibits variable topography, crossing ridge tops, ridge side slopes, and low creek areas. Much of the corridor is heavily eroded and the area throughout is in woods.

The proposed corridor, as previously mentioned, is intended to be used as a transmission line. Landscape alteration, primarily clearing and construction, including erection of poles, will damage the ground surface and any archaeological resources that may be present in the survey area. Construction and maintenance of the transmission line may also have an impact on historic resources in the project area.

The project will not directly affect any historic structures (since none are located on the survey corridor), but the completed facility may detract from the visual integrity of historic properties, creating what some consider discordant surroundings. As a result, this architectural survey uses an area of potential effect (APE) 500 feet around the proposed corridor.

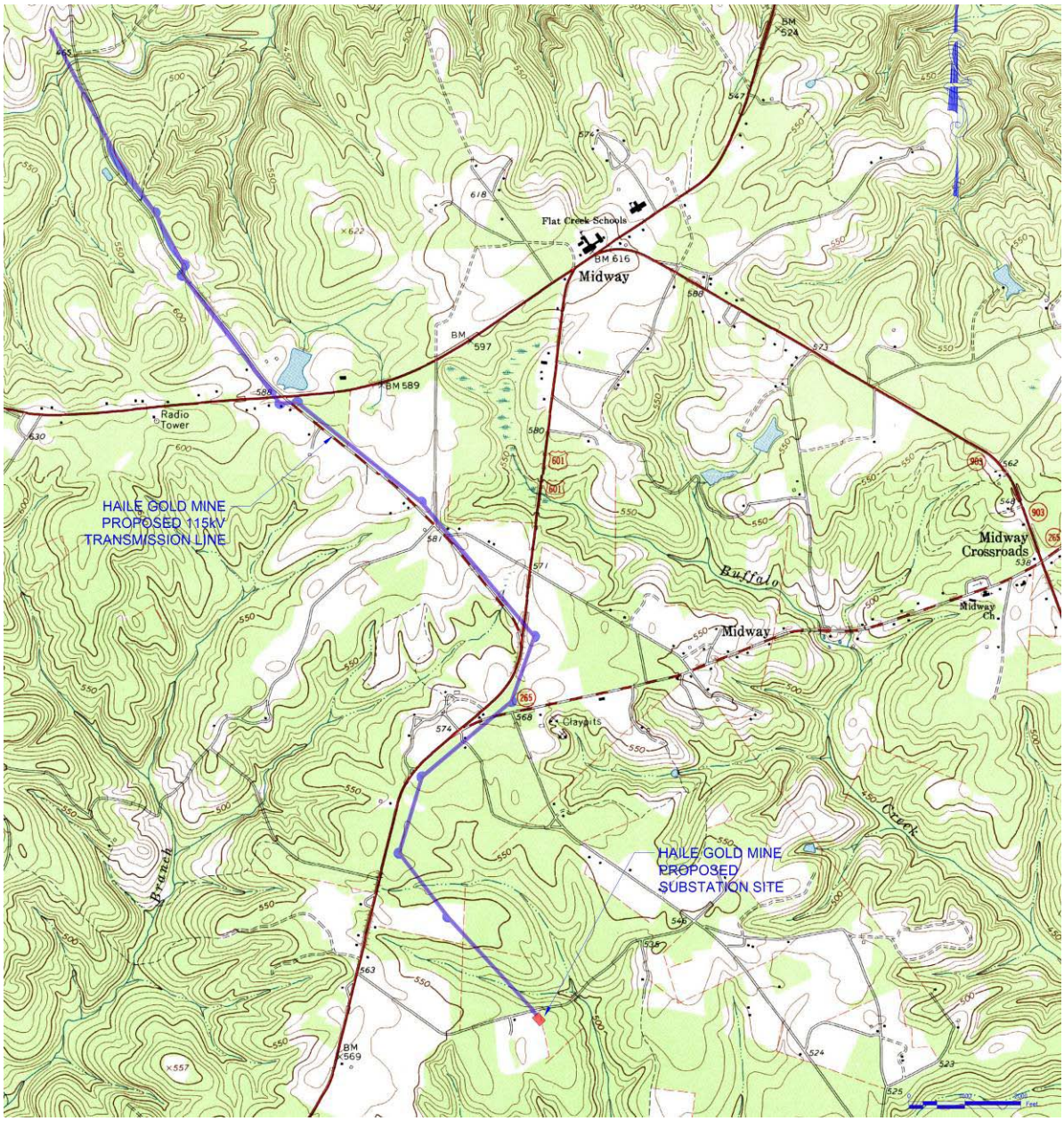

Figure 2. Portion of the 1:24,000 USGS Lancaster topographic map showing the project corridor.

This study, however, does not consider any future secondary impact of the project, including increased or expanded development of this portion of Lancaster County.

We were requested by Mr. Tommy L. Jackson of Central Electric Power Cooperative to conduct the cultural resource study in early 2015, with the field investigations conducted by Mr. Andrew Hyder and Ms. Breanna Bigger on February 23 through February 26. The architectural survey and evaluations were conducted by Mr. Andrew Hyder at this same time.

These investigations incorporated a review of ArchSite and the site files at the South Carolina Institute of Archaeology and

Anthropology. As a result of that work, no previously recorded archaeological sites were identified in or close to the APE. We did identify seven previously reported architectural sites within or near the APE, including 735, 736, 952, and 959, identified by Schneider and Jackson (1986) with Preservation Consultants and determined not eligible. Also within the APE are sites 1111 and 1112 (Adams et al. 2011), also identified as not eligible. The final site, 951 was identified by New South (Adams et al. 2012) and requires additional evaluation because of its association with archaeological site 38LA641. This site is not, however, within the 500 foot APE. Moreover, all of the structures fell well outside of the 75 feet corridor impacted by the transmission line.

Archival and historical research was limited to a review of secondary sources available in the Chicora Foundation files and at the South Caroliniana Library.

The archaeological survey revealed one archaeological site – 38LA764. This site is recommended not eligible for the National Register of Historic Places.

The architectural survey of the APE, designed to identify any structures over 50 years in age that retain their integrity and that are potentially eligible for the National Register of Historic Places revealed no such structures. No previously unexamined structures were noted and, in fact six structures listed above fell well outside the 75 feet corridor impacted by the transmission line. The seventh site, which requires additional evaluation is over 600 feet from the corridor and therefore beyond the APE.

Report production was conducted at Chicora's laboratories in Columbia, South Carolina on April 6-10, 2015. The only photographic materials associated with this project are digital and will be retained by Chicora Foundation. All other field notes and the resulting collections will be curated at the South Carolina Institute of Archaeology and Anthropology.

ENVIRONMENTAL BACKGROUND

Physiographic Province

The project area is situated in northeast Lancaster County. The corridor runs from a preexisting transmission line southeasterly to SC 601 paralleling the highway until shifting southeast to the proposed substation. The northern third of the corridor runs along a ridge top down to the southern two-thirds that are dominated by bottom lands with pine forest and swampy drainages.

Lancaster County, forming part of South Carolina's north central boundary with North Carolina, is separated from Chesterfield County to the east by Lynches River and from Fairfield, Chester, and York counties to the west by the Catawba River. To the south Lancaster County is bordered by Kershaw County (see Figure 1).

The county is located within two distinct physiographic provinces – the Piedmont Plateau and the portion of the Atlantic Coastal Plain known as the Sand Hills. All but the southeastern corner of the county is found within the Piedmont, separated from the coastal plain by an irregular boundary, known as the Fall Line, that extends north from the vicinity of Camden in Kershaw County to just west of Kershaw where it loops westward taking in Heath Springs and Pleasant Hill before turning back to the south and running into Kershaw County. There the Fall Line again tends northward, crossing US 601 and extending to Taxahaw in Lancaster County. From Taxahaw it runs south, parallel to the west bank of Lynches River, for about 6 miles before crossing and extending back northward, taking in the town of Jefferson in Chesterfield County.

The project area is located exclusively in the Carolina Sand Hills. The topography is characterized by an area of discontinuous hilly topography with rounded hills and gentle slopes, moderate relief, and sandy soils. Although technically part of the Coastal Plain geology, the Sand Hills are distinct geographically. Much of the sand was blown into dunes during the Miocene, although weathered clays and very old river deposits are also present. In many cases these sandy deposits lie directly on the crystalline rocks of the Piedmont (Kovacik and Winberry 1987; Murphy 1995).

The project area, therefore, is in close contact with a range of physiographic regions. This provides a broad ecotone allowing access to a range of resources.

In the survey area the elevations range from about 450 to 600 feet above mean sea level (AMSL). Figure 3 profiles the corridor, revealing the variation in grades, rugged terrain, sandy-flat, and wet drainage areas. While there are areas with flat, level ridgetops, these are relatively uncommon. More prevalent are areas where grades range from 6 to 10% - reflecting gentle slopes, moderate relief, and sandy soils of the Coastal Plain geology.

Geology and Soils

Most of the rocks of the Piedmont are gneiss and schist, with some marble and quartzite (Hasselton 1974). Some less intensively metamorphosed rocks, such as slate, occur along the eastern part of the province from southern Virginia into Georgia. This area, called the Slate Belt, is characterized by slightly lower ground

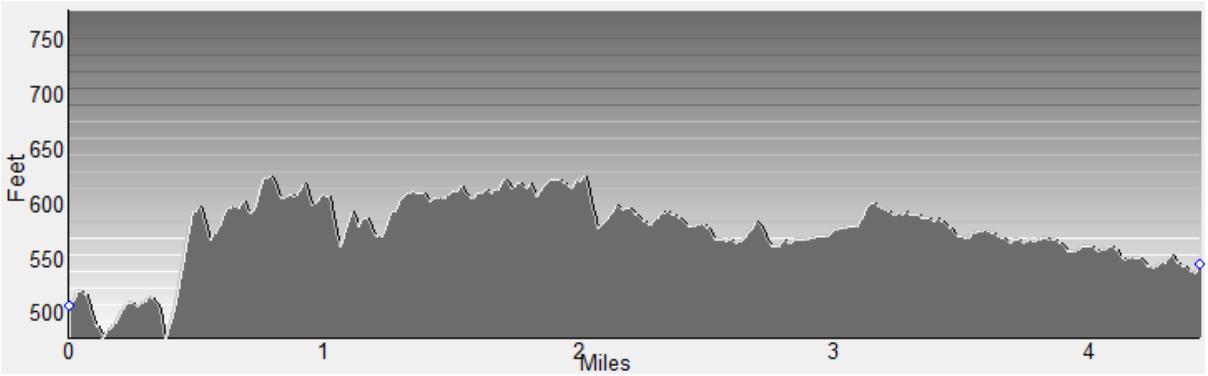

Figure 3. Profile of the survey corridor from northwest to southeast

with wider river valleys. Consequently, the Slate Belt has been favored for reservoir sites (Johnson 1970), as well as prehistoric occupation (see Coe 1964). In Lancaster County many of the Piedmont soils are weathered from argillites rich in silica and alumina. Other soils are formed in saprolite that weathered from crystalline rocks and "Carolina slates". Soils from the river floodplains formed in sediment that washed from the uplands of the Piedmont province.

The project crosses 13 different soil series and 16 soil types, itemized in Table 1. Of these 16 soils, accounting for 88.8% of the corridor, are classified as eroded or severely eroded. These soils exhibit losses ranging from 25% to 100% of the A horizon, often accompanied by gullies and galled areas. In some cases the erosion has progressed into the subsoil. Only two soils do not exhibit extensive erosion – two are found in bottomland contexts, Rutlege loamy sand and Blanton Sand.

Nearly a fifth of the corridor exhibits slopes in excess of 10%and an additional 14% of the soils are found on slopes between 6 and 10%.

Table 1.
Soils in the Survey Corridor

Soil	%	Comments
Blanton Sand 0-6%	53.5	Sandy-flat areas
Blanton Sand 6-15%	7.1	Wetlands areas
Chewacla soils	0.5	Deep, poorly drained bottomland soil
Congaree soils	0.3	Eroded side slopes
Georgeville silt loam 2-6%, eroded	5.4	Ridges and side slopes
Georgeville silty clay loam 2-6%, severely eroded	4.6	Side slopes, all A horizon eroded
Georgeville silty clay loam 6-10%, severely eroded	0.1	Ridges and side slopes, gullies and galled areas
Herndon silt loam 2-6%, eroded	1.1	Broad side slopes
Herndon silt loam 6-10%, eroded	1.0	Broad side slopes, gullies, galled areas common
Herndon silty clay loam 6-10% severely eroded	2.8	Drainageways, all A horizon eroded
Rutlege loamy sand	7.8	Low stream terraces
Tatum loam 10-15%, eroded	0.5	Narrow ridges and side slopes
Tatum loam 15-25%, severely eroded	6.2	Narrow ridges
Vacluse and Blaney loamy sand 6-10%	0.7	Sandy-flat areas
Water	0.8	
Wagram sand 2-6%	0.7	Sandy-flat areas
Worsham fine sandy loam	1.2	Sandy-flat areas

Consequently, it is not surprising that extensive erosion has been noted.

M.W. Lowry's *Reconnaissance Erosion Survey of the State of South Carolina*, conducted in 1934, characterized the project area as exhibiting moderate sheet erosion with occasional gullies. Given the more recent soil survey, it appears that conditions continued to deteriorate over the following 30 to 40 years, probably the result of intensive logging operations. Logging will result in the loss of 0.36 tons of soil per acre per year and mechanical site preparation, perhaps used in the mid-1950s to convert the agricultural fields back to woods, might have resulted in the loss of nearly 6.7 tons of soil per acre per year (U.S. Department of Agriculture 1983:25).

Although classified by Trimble (1974:15) as being part of the Mixed Farming Area with generally low erosive land use, the project sits at the edge of the agricultural area that experienced very high erosive land use during the antebellum, with postbellum continuation. The study area apparently lost, on average, between 0.8 and 1.0 foot of soil (Trimble 1974:3).

The two most common soils found in the survey corridor are the Blanton Sand loams (53.5% of the corridor) and Rutlege loamy sand (7.8% of the corridor). The Georgeville soils, where not preserved, exhibit a heavily eroded profile of the A horizon consisting of a red (2.5YR4/8) clay loam on surface.

The Tatum silty clay loam exhibits an A horizon of 0.2 foot of light-brown (7.5YR6/4) sandy loam. This overlies a B21t horizon of light yellowish-brown (5YR5/4) sand clay loam to a depth of 0.6 feet. The B22t horizon, to a depth of 1.7 feet, consists of a red (2.5YR5/6) sandy clay loam.

These data suggest that the corridor has probably gone through cycles of soil erosion and deposition, with erosion occurring during logging and cultivation, while soils likely built up during periods of forestation. Today we found that red clay (signifying the subsoil) would often be found within 0.1 to 0.3 foot of the surface of our shovel tests.

In 1826 Robert Mills provided a very succinct description of the soils, noting that although they varied from "a rich loam to a barren sand," the "lands to the east and south of Cain Creek . . . are mostly stony and gravelly" while to the "north and west of Cain creek, the soil is much more fertile, generally clay and loam" (Mills 1826:596). This division along Cain Creek, between the fertile bottomland soils and the less fertile upland Piedmont and Sand Hills soils, is the exact same division between Trimble's Cotton Plantation Area (with high antebellum erosive land use and a postbellum continuation) and the General Farming Area (with its lower rate of erosion).

For many of the neighboring districts Mills expressed his concern over the treatment lands received. Less than 20 years later Edmund Ruffin had a similar opinion of the sand hills and the wasteful cultivation of the land, yet it seems to have had little impact on the planters he met. He observed that:

> The lands through Richland, of middling quality, or rather below. Surface moderately undulating, & sandy mostly. Oak growth more in proportion to the pine than lower. No very good culture or land seen by me (Mathew 1992:261).

In spite of these early warnings, the South Carolina Department of Agriculture, Commerce, and Immigration, as late as 1907, found no reason to remark on the threat of erosion, noting only that "elevated flats can be brought to a high state of fertility by proper methods of farming" and that the soils are "superior for peanuts, sweet potatoes, sorghum, watermelons and the staples, oats, cotton, corn, and some wheat" (Watson 1907:255). Lancaster County boasted of only one cotton seed oil mill – about on par with the single mills operating in surrounding Chester, Chesterfield, Fairfield,

Figure 4. Staked corridor through sandy flats and mixed hardwoods.

Kershaw, and Sumter counties (Watson 1907:269, 288).

Climate

Elevation, latitude, and distance from the coast work together to affect the climate of South Carolina, including the Piedmont. In addition, the more westerly mountains block or moderate many of the cold air masses that flow across the state from west to east. Even the very cold air masses which cross the mountains are warmed somewhat by compression before they descend on the Piedmont and adjacent Sand Hills.

Consequently, the climate of Lancaster County is temperate. The winters are relatively mild and the summers warm and humid. Rainfall in the amount of about 46 inches is adequate, although less than in some neighboring counties. About 22 inches of rain occur during the growing season, with periods of drought not uncommon during the summer months. As Hilliard illustrates, these droughts tended to be localized and tended to occur several years in a row, increasing the hardship on those attempting to recover from the previous year's crop failure (Hilliard 1984:16). Perhaps the best wide-scale example of this was the drought of 1845, which caused a series of very serious grain and food shortages throughout the state. Rogers (1973:124) mentions two droughts in the Lancaster area during the first half of the twentieth century.

The average growing season is about 225 days, although early freezes in the fall and late frosts in the spring can reduce this period by as much as 30 or more days (Rogers 1973:125). Consequently, most cotton planting, for example, did not take place until early May, avoiding the possibility that a late frost would damage the young seedlings.

Floristics

Piedmont forests generally belong to the Oak-Hickory Formation as established by Braun (1950), while she classifies the Sand Hills as part of the Southeast Evergreen Forest Region. Regardless, the potential natural vegetation of the project area is the Oak-Hickory-Pine forest, composed of medium tall to tall forests of broadleaf deciduous and needleleaf evergreen trees (Küchler 1964). The major components of this ecosystem include hickory, shortleaf pine, loblolly pine, white oak, and post oak.

Although John Berry rightly comments that "a walk through the most xeric stages of the fall line sandhills would probably be very boring" dominated by turkey oaks, scrubby post oaks, and broad expanses of open sandy soil, the Piedmont – when not heavily affected by human interaction – appears more varied. In the submesic to mesic midslopes there are white oak, black oak, and red oak, along with blackgum, post oak, red maple, and various hickories. The understory will contain dogwood, red cedar, and various pines. The ridgetops, especially those that are south and west facing or that have thin soils, tend to be xeric. There the dominant species will be pine, red cedar, blackjack oak, white oak, black gum, and hickories (Barry 1980:78-85).

Figure 5. Cut corridor down a side slope and into a bottomland area. Vegetation is primarily small, second growth hardwoods.

The project area, therefore, can exhibit considerable ecological diversity, further affected by the small creeks that cross through the corridor. There would also be shrub layers that are very attractive to a diverse range of mammals, including deer, opossum, and raccoon. It is this diversity that probably made the project area attractive to Native Americans, who saw the site area as providing a range of different environmental zones in close proximity.

Today, however, extensive cultivation followed by either abandonment or the planting of pine forests has created a very different environment. In some areas of the corridor the diversity has been replaced by monotonous uniformity. There are many areas of second growth – found around old house sites, in old fields, and taking over pastures. Through-out there is evidence of erosive land use.

PREHISTORIC AND HISTORIC SYNOPSIS

Prehistoric Overview

Overviews for South Carolina's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared. There are, in addition, some "classic" sources well worth attention, such as Joffre Coe's *Formative Cultures* (Coe 1964), as well as some new general overviews (such as Sassaman et al. 1990 and Goodyear and Hanson 1989). Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Sassaman and Anderson (1994) for the Middle and Late Archaic and by Anderson et al. (1992) for the Paleoindian and Early Archaic. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the study areas. For those desiring a more general synthesis, perhaps the most readable and well balanced is that offered by Judith Bense (1994), *Archaeology of the Southeastern United States: Paleoindian to World War I*. Figure 6 offers a generalized view of South Carolina's cultural periods.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points; side scrapers; end scrapers; and drills (Coe 1964; Michie 1977; Williams 1965). Oliver (1981, 1985) has proposed to extend the Paleoindian dating in the North Carolina Piedmont to perhaps as early as 14,000 B.P., incorporating the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, as representatives of the terminal phase. This view, verbally suggested by Coe for a number of years, has considerable technological appeal.[1] Oliver suggests continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is somewhat dated, but has been summarized by Charles and Michie (1992). They reveal a widespread distribution across the state (see also Anderson 1992b: Figure 5.1) with at least several concentrations relating to intensity of collector activity. What is clear is that points are found fairly far removed from the origin of the raw material. Charles and Michie suggest that

[1] While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

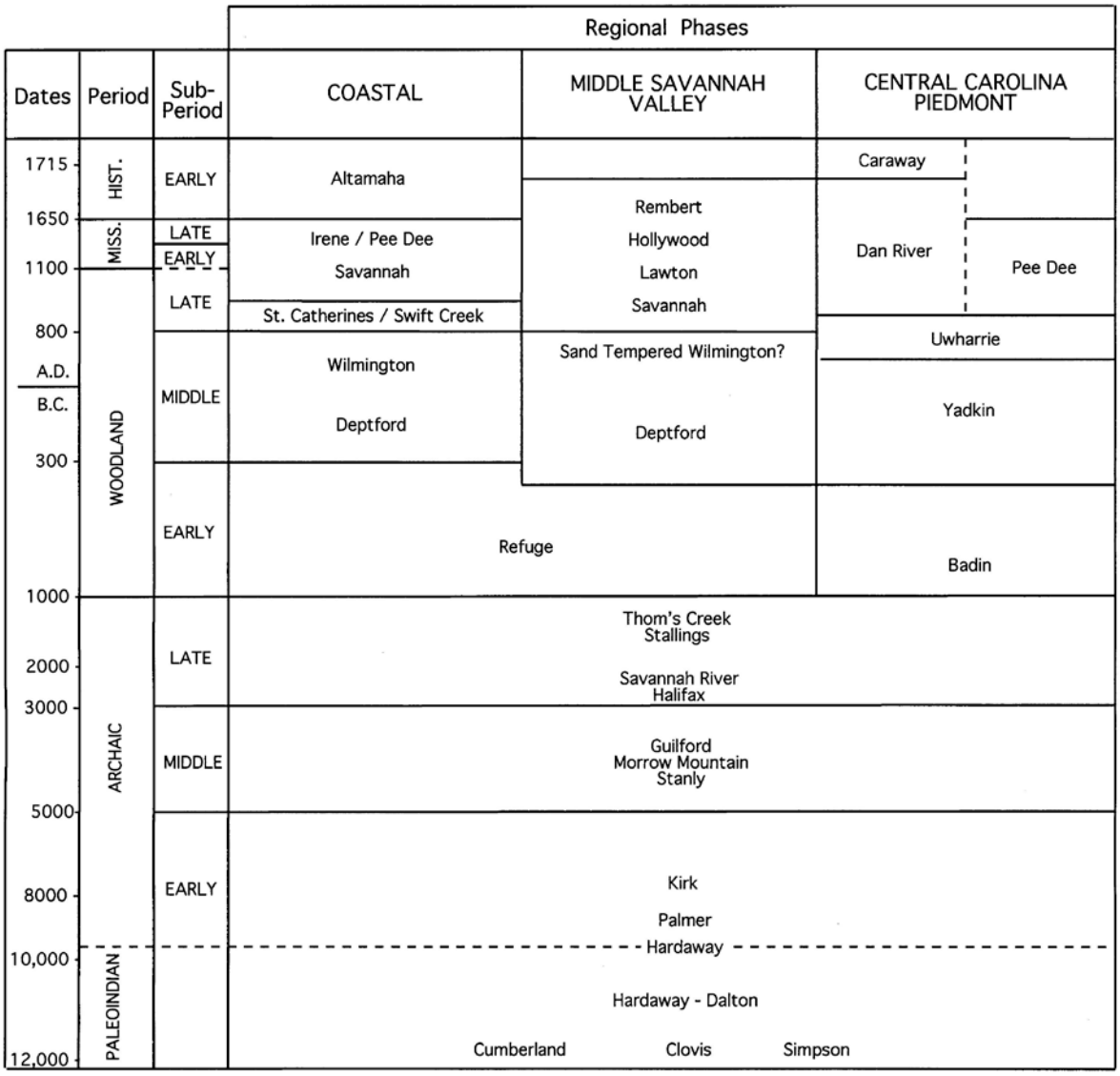

Figure 6. Generalized cultural sequences for South Carolina.

this may "imply a geographically extensive settlement system" (Charles and Michie 1992:247).

Although data are sparse, one of the more attractive theories that explains the widespread distribution of Paleoindian sites is the model tracking the replacement of a high technology forager (or HTF) adaptation by a "progressively more generalized band/microband foraging adaptation" accompanied by increasingly distinct regional traditions (perhaps reflecting movement either along or perhaps even between river drainages) (Anderson 1992b:46).

Distinctive projectile points include lanceolates such as Clovis, Dalton, perhaps the Hardaway, and Big Sandy (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps

(1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992a) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often not conclusively proven by stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[2], does not form a sharp break with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Many researchers have reported data suggestive of a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few very large, and apparently intensively occupied, sites that can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts – these are the "network of tracks" mentioned by Ward (1983:65). The base camps

[2] The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether pottery, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods" (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period. The importance of the issue in the nearby Sand Hills, unfortunately, is not well known.

produce a wide range of artifact types and raw materials that has suggested too many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Stanly, and Halifax projectile points. Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

Among the most common of all Middle Woodland artifacts is the Morrow Mountain Stemmed projectile point that was originally divided into two varieties by Coe (1964:37,43) based primarily on the size of the blade and the stem. Morrow Mountain I points had relatively small triangular blades with short, pointed stems. Morrow Mountain II points had longer, narrower blades with long, tapered stems. Coe suggested a temporal sequence from Morrow Mountain I to Morrow Mountain II. While this has been rejected by some archaeologists, who suggest that the differences are entirely related to the life-stage of the point, the debate is far from settled and Coe has considerable support for his scenario.

The Morrow Mountain point is also important in our discussions since it represents a departure from the Carolina Stemmed Tradition. Coe has suggested that the groups responsible for the Middle Archaic Morrow Mountain (and the later Guilford points) were intrusive ("without any background" in Coe's words) into the North Carolina Piedmont, from the west, and were contemporaneous with the groups producing Stanly points (Coe 1964:122-123; see also Phelps 1983:23). Phelps, building on Coe, refers to the Morrow Mountain and Guilford as the "Western Intrusive horizon." Sassaman (1995) has recently proposed a scenario for the Morrow Mountain groups that would support this west-to-east time-transgressive process. Abbott and his colleagues, perhaps unaware of Sassaman's data, dismiss the concept, commenting that the shear distribution and number of these points "makes this position wholly untenable" (Abbott et al. 1995:9).

The controversy surrounding Morrow Mountain also includes its posited date range. Coe (1964:123) did not expect the Morrow Mountain to predate 6500 B.P., yet more recent research in Tennessee reveals a date range of about 7500 to 6500 B.P. Sassaman and Anderson (1994:24) observe that the South Carolina dates have never matched the antiquity of their more western counterparts and suggest continuation to perhaps as late as 5500 B.P. In fact they suggest that even later dates are possible since it can often be difficult to separate Morrow Mountain and Guilford points.

A recently defined point is the MALA. The term is an acronym standing for Middle Archaic and Late Archaic, the strata in which these points were first encountered at the Pen Point site (38BR383) in Barnwell County, South Carolina (Sassaman 1985). These stemmed and notched lanceolate points were originally found in a context suggesting a single-episode event with variation not based on temporal variation.

The original discussion was explicitly worded to avoid application of a typology, although as Sassaman and Anderson (1994:27) note, the "type" has spread into more common usage. There are possible connections with both the Halifax points of North Carolina and the Benton points of the middle Tennessee River valley, while the "heartland" for the MALA appears confined to the lower middle Coastal Plain of South Carolina.

The available information has resulted in a variety of competing settlement models. Some argue for increased sedentism and a reduction of mobility (see Goodyear et al. 1979:111). Ward argues that the most appropriate model is one that includes relatively stable and sedentary hunters and gatherers "primarily adapted to the varied and rich resource base offered by the major alluvial valleys" (Ward 1983:69). While he recognizes the presence of "inter-riverine" sites, he discounts explanations that focus on seasonal rounds, suggesting "alternative explanations . . . [including] a wide range of adaptive responses." Most importantly, he notes that:

> the seasonal transhumance model and the sedentary model are opposite ends of a continuum, and in all likelihood variations on these two themes probably existed in different regions at different times throughout the Archaic period (Ward 1983:69).

Others suggest increased mobility during the Archaic (see Cable 1982). Sassaman (1983) has suggested that the Morrow Mountain phase people had a great deal of residential mobility, based on the variety of environmental zones they are found in and the lack of site diversity. The high level of mobility, coupled with the rapid replacement of these points, may help explain the seemingly large numbers of sites with Middle Archaic assemblages. Curiously, the later Guilford phase sites are not as widely distributed, perhaps suggesting that only certain micro-environments were used (cf. Ward [1983:68-69] who would likely reject the notion that substantially different environmental zones are, in fact, represented).

Recently Abbott et al. argue for a combination of these models, noting that the almost certain increase in population levels probably resulted in a contraction of local territories. With small territories there would have been significantly greater pressure to successfully exploit the limited resources by more frequent movement of camps. They discount the idea that these territories could have been exploited from a single base camp without horticultural technology. Abbott and his colleagues conclude, "increased residential mobility under such conditions may in fact represent a common stage in the development of sedentism" (Abbott et al. 1995:9).

From excavations at a Sand Hills site in Chesterfield County, South Carolina, Gunn and his colleague (Gunn and Wilson 1993) offer an alternative model for Middle Archaic settlement. He accepts that the uplands were desiccated from global warming, but rather than limiting occupation, this environmental change made the area more attractive for residential base camps. Gunn and Wilson suggest that the open, or fringe, habitat of the upland margins would have been attractive to a wide variety of plant and animal species.

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups with, the bulk of our data for this period coming from the Uwharrie region in North Carolina.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type and a small variant from Gaston (South 1959:153-157),

developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery.

This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts at the same time they express concern with the application of this typology outside the North Carolina Piedmont (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in the uplands of South or North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine that reduced the oak-hickory nut masts that previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Sand Hills of South Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery. Under this scenario the Early Woodland may begin as early as 4,500 B.P. and continued to about 2,300 B.P. Diagnostics would include the small variety of the Late Archaic Savannah River Stemmed point (Oliver 1985) and pottery of the Stallings and Thoms Creek series. Sand tempered Thoms Creek wares are decorated using punctations, jab-and-drag, and incised designs (Trinkley 1976). Also potentially included is Refuge wares, also characterized by sandy paste, but often having only a plain or dentate-stamped surface (Waring 1968). Others would have the Woodland beginning about 3,000 B.P. and perhaps as late as 2,500 B.P. with the introduction of pottery that is cord-marked or fabric-impressed and suggestive of influences from northern cultures.

There remains, in South Carolina, considerable ambiguity regarding the pottery series found in the Sand Hills and their association with coastal plain and piedmont types.

In the Piedmont, the Early Woodland is marked by a pottery type defined by Coe (1964:27-29) as Badin.[3] This pottery is identified as having very fine sand in the paste with an

[3] The ceramics suggest clear regional differences during the Woodland that seem to only be magnified during the later phases. Ward (1983:71), for example, notes that there are "marked distinctions" between the pottery from the Buggs Island and Gaston Reservoirs and that from the south-central Piedmont.

occasional pebble. Coe identified cord-marked, fabric-marked, net-impressed, and plain surface finishes. Beyond this pottery little is known about the makers of the Badin wares and relatively few of these sherds are reported from South Carolina sites.

Somewhat more information is available for the Middle Woodland, typically given the range of about 2,300 B.P. to 1,200 B.P. In the Piedmont and even into the Sand Hills, the dominant Middle Woodland ceramic type is typically identified as the Yadkin series. Characterized by a crushed quartz temper the pottery includes surface treatments of cord-marked, fabric-marked, and a very few linear check-stamped sherds (Coe 1964:30-32). It is regrettable that several of the seemingly "best" Yadkin sites, such as the Trestle site (31AN19) explored by Peter Cooper (Ward 1983:72-73), have never been published.

Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least 1650 B.P. coexisted with this Triangular Tradition. The Yadkin in South Carolina has been best explored by research at 38SU83 in Sumter County (Blanton et al. 1986) and at 38FL249 in Florence County (Trinkley et al. 1993)

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of the Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

Historic Overview

Like many South Carolina counties, Lancaster lacks anything that might be called a thorough history. Most of the available documents focus on genealogical research associated with various families or cemeteries and the *Historic Site Survey, Lancaster County* prepared by the Catawba Regional Planning Council in 1976 offers only a brief introduction to the history of the region. A more comprehensive survey is offered by Schneider and Jackson (1986).

Mills (1826:595) notes that the earliest settlement in Lancaster was by immigrants from Pennsylvania and Virginia about 1745 at a place called Waxhaws, near the Catawba settlements. While sheltered by the Catawba, settlement to the west, toward the Cherokee lands was slow and the area was not intensively settled until after 1761 – after the series of three "wars" waged by South Carolina on the Cherokee (see Hatley 1993). Although the area was largely claimed by the Catawba, this created little concern and Mills noted that the Waxhaw settlers became "rid of their powerful and dangerous neighbors" through a smallpox epidemic about 1750 (Mills 1866:595).

Mouzon's 1775 *An Accurate Map of North and South Carolina* (Figure 7) shows virtually no settlement along what was known then as the West Branch of Lynches Creek. The project area is, however, is in close proximity to the main road leading north from Camden. In contrast there are a number of settlements on the uplands of the East Branch of the Lynches, probably attracted to the area by the broad alluvial floodplains suitable for cultivation.

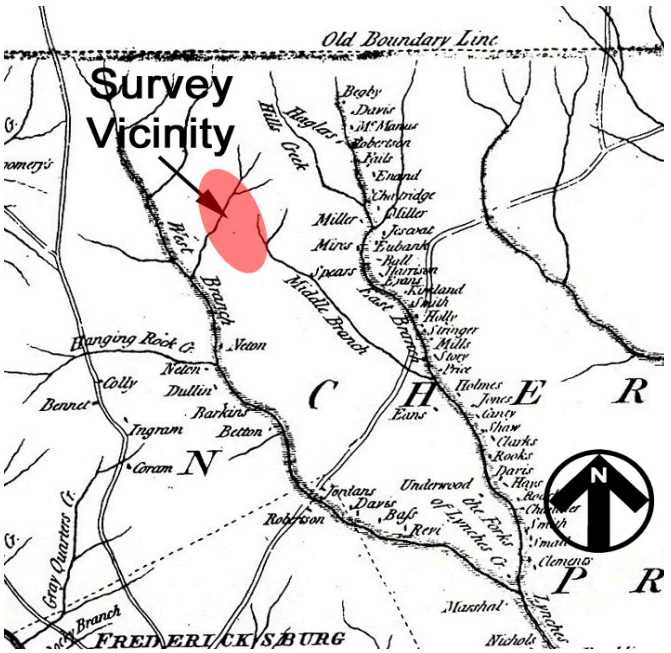

Figure 7. Portion of Mouzon's 1775 map of South Carolina showing the project area.

Like much of the upcountry, the American Revolution was characterized a bloody series of partisan skirmishes in Lancaster. On May 29, 1780 the Battle of the Waxhaws, also known as Buford's Massacre, occurred near the City of Lancaster. A regiment of Virginians, under Colonel Abraham Buford, had been on their way to reinforce patriot forces at Charleston when they heard that the city had fallen and turned back. They were intercepted by Colonel Banastre Tarleton, whose troops slaughtered the Americans as they attempted to surrender. This exceptional cruelty ended the passiveness of many backcountry settlers and began an aggressive backcountry campaign on both sides. Additional battles were fought at Hanging Rock (on July 30, 1780 and August 6, 1780) where the Americans successfully captured British supplies and at Waxhaw Church (on April 10, 1781).

After the Revolution, settlement in the area grew slowly, primarily as small communities were established along both overland trails and along the navigable rivers. Originally part of the Camden District, Lancaster was created in 1785, encompassing what are today Lancaster and Kershaw counties. Kershaw was split off only six years later, in 1791.

By the 1820s Lancaster's main town, Lancasterville, boasted 30 buildings and about 260 residents. Among the more impressive buildings were the court house, a jail (both built in 1823), and what Mills described as a "handsome brick academy" (Mills 1826:597). County-wide there were 5848 whites and 4473 African American slaves in 1820 – clear evidence of the importance of cotton, especially along the Catawba River. Cotton, of course, was greatly promoted in the South Carolina piedmont by the invention of the cotton gin in 1790.

Mills' *Lancaster District* shows that the road network continued to expand and with it settlements oriented to these access routes. At least one settlement, a mill, and a general store are shown along the project corridor (Figure 8).

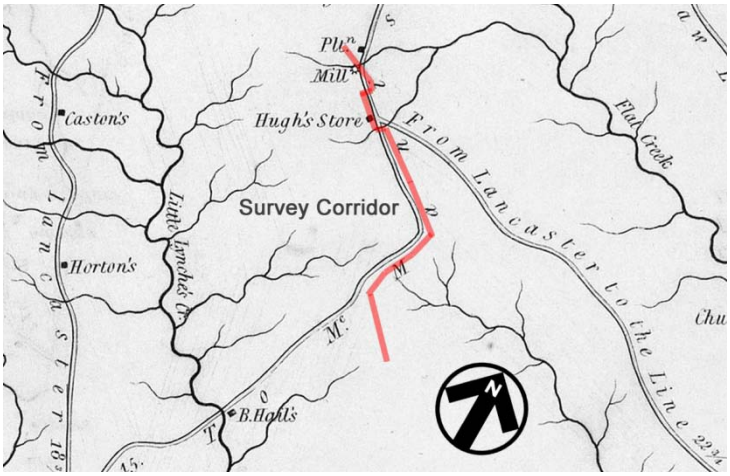

Figure 8. Portion of Mills' 1826 *Atlas* showing the project area in Lancaster District

While the region's history focuses on cotton, there was another side of equal interest:

> Lancaster's history has been tinged with many religious vagaries, including legal recognition of witchcraft, and the Waxhaw Revival. Early in the nineteenth century a poor girl of Lancaster testified that Barbara Powers had converted her into a horse and had ridden her so incessantly that her health had suffered. The case was thrown out of court. At about the same time the Waxhaw Revival, offshoot of the Nationwide Great Revival, threw many of the county's staid Presbyterians into trances and ecstatic shouting (Writers' Program, Work Projects Administration 1941:310).

By 1850 the white population had held steady at 5,857 while the African American slave population had increased to 5,014 (DeBow 1854:302). It ranked 18th in cotton production, with 8,661 bales. This was far less than produced by neighboring York, Chester, Fairfield, or even Kershaw, but surpassed the production of Chesterfield County to the east, again documenting Lancaster's division between profitable upland cotton farms and the subsistence farms of the sand region. When the agricultural statistics are examined, Lancaster proves to be a leader in none of the various categories.

The 1865 Coast Survey Map of North and South Carolina primarily reveals the increase in mills and gold mines – reflecting the Carolina gold boom of the early to mid-nineteenth century.

Lancaster was largely quiet during the Civil War until Sherman's troops cut across the county just south of the project area on March 1, 1865 (*Atlas to Accompany the Official Records of the Union and Confederate Armies*, Plate 70, numbers 5 and 6). This undoubtedly caused considerable terror in the local community, as well as considerable loss of property.

In the aftermath of the Civil War, Lancaster County made efforts to diversify into textiles, but was never as successful as its neighbor, Chester County. In fact, by 1907 there was only one mill in the County – the Lancaster Cotton Mills, operated by LeRoy Springs – that had been formed in 1895. While not huge, the Lancaster operation was among the larger concerns in South Carolina, tied for fifth place for capital stock value and seventh in cotton consumed.

Nevertheless, farming continued to dominate the local economy. Although nearly 50,000 acres were planted in cotton, it was not the county's primary crop, ranking in bottom third of producers. In general, the county appears to be diversified, with farms producing orchard crops, corn, wheat, and oats (Watson 1907:576).

Lancaster County is at the edge of what has traditionally been called the Black Belt – the area of large plantations that formed the nucleus of tenancy. Heavily dominated by African Americans, this region was hardest hit by the effects of tenancy, both before and after the Great Depression (Goldenweiser and Truesdell 1924; Woofter 1936:3). Just west, however, was the Upper Piedmont, where plantations were "few, scattered, and small" (Woofter 1936:3) and tenancy was somewhat ameliorated.

The different history of the two areas is reflected by the average size of plantations in the Upper Piedmont and Black Belt – 211 acres compared to 275 acres. There was also a clear difference in owner incomes. In the Upper Piedmont the average net income for the owner was $1,710, compared to $1,462 for Black Belt owners.

Tenancy was also heavier in the Black Belt, accounting for 73% of the farmers, compared to only 63% in the Upper Piedmont.

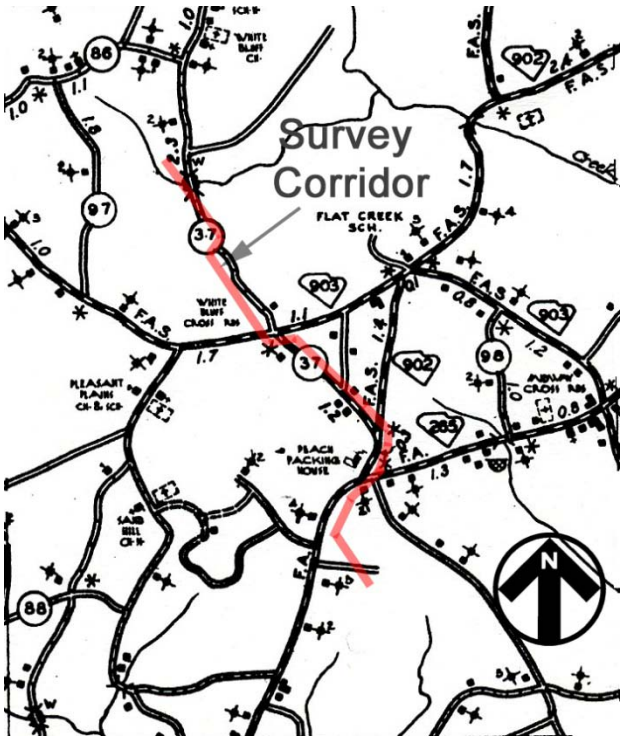

Figure 9. Portion of the 1937 Transportation and General Highway Map of Lancaster County showing the project corridor.

This, however, did not translate directly into income levels for tenants. In the Upper Piedmont croppers or sharecroppers had a net yearly income of $104, while share tenants' income was $170.[4] In the Black Belt, croppers did better, earning $127 per family, while the sharecroppers did appreciably worse, earning only $106 per year (Woofter 1936).

[4] Cropper or share-croppers furnished their labor and half of the fertilizer necessary. The landlord furnished the land, a house, fuel, tools, working stock, seed and feed, and the other half of the fertilizer. The crop, minus advances, was split evenly between the cropper and owner. In contrast, share tenants or share renters, provided not only their labor and usually at least two-thirds of the fertilizer, but also the work stock, seed and feed, and tools. The owner provided the land, a house, fuel, and the remainder of the fertilizer. In such arrangements the owner received between one-fourth and one-third of the crop, typically tied to the amount of fertilizer provided, while the tenant received the remainder.

The 1937 *General Highway and Transportation Map* for Lancaster (Figure 9) reveal that much of the project area was more densely settled than along the corridor. There were several farm units at the western origin of the transmission line, and a several farm units are found along the corridor in the central portion. There are also several highways including 265, 903 and 902 (today being 601) in use during this time period.

As South Carolina gradually recovered from the depression of the 1930s (spurred on by World War II), Lancaster turned to industry. Much of the agricultural land was allowed to grow up in timber. Seven piedmont counties, including Lancaster, combined account for nearly 43% of the state's factory workers, although they hold only 30% of its population (Kovacik and Winberry 1987:193).

Previous Archaeological Studies

Lancaster has received relatively little archaeological attention. Derting and his colleagues, for example, list only 34 reports associated with the county, with 29 of these (or 85%) representing highway, transmission line, reservoir, or sewer surveys (Derting et al. 1991). Although dated, this indicates that the attention has been focused on relatively narrow, constrained corridors, with only minor attention devoted to the area's rich prehistoric and protohistoric resources.

As previously mentioned, no archaeological sites were identified within the 500 foot APE. This, however, only speaks to the infrequency of archaeological studies. The only previous project in this immediate area, in fact, is archaeological investigation conducted for Haile Gold Mine property holdings compliance with section 106.

Previous Architectural Surveys

While there was an early historic survey of the county by the Catawba Regional Planning

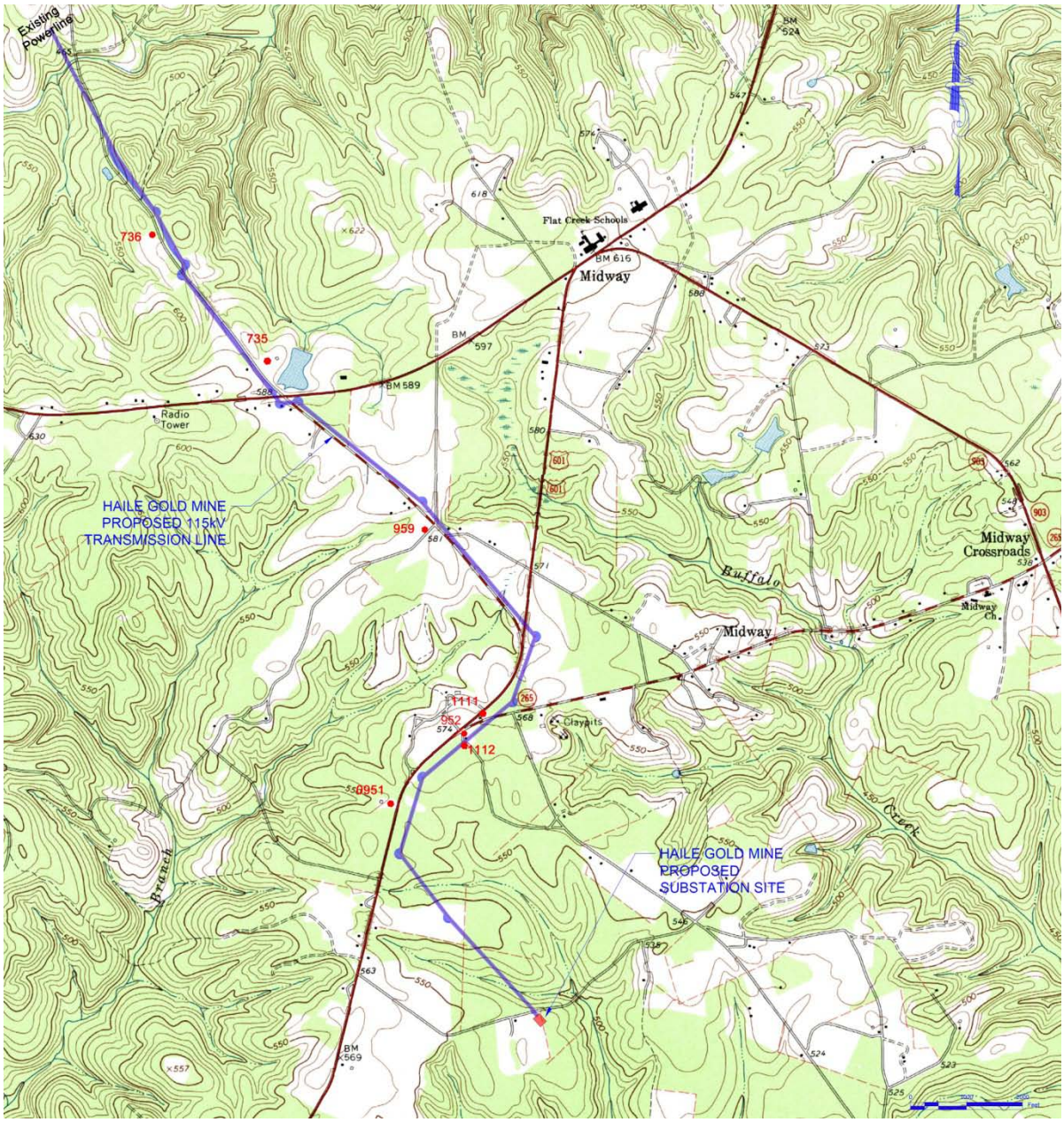

Figure 10. Previously identified architectural sites in or adjacent to the 500 foot APE.

Council in 1976, a comprehensive architectural survey was not conducted until the 1986 work by Preservation Consultants (Schneider and Jackson 1986). That study recorded four structures (735, 736, 952, and 959) – all were determined not eligible for inclusion on the National Register.

An additional three structures were identified during projects associated with the Haile Gold Mine, including 1111 and 1112 (Adams et al. 2011) and 951 (Adams et al. 2012).

METHODOLOGY

Archaeological Field Methods

The initially proposed field techniques involved the placement of shovel tests at 100-foot intervals along the centerline of the corridor, which was staked at the time of the survey. Since the corridor is only 75 feet in width, a single transect was deemed satisfactory. Shovel tests at the substation lot would be excavated at 100 foot intervals on transects spaced 100 feet apart.

All soil would be screened through ¼-inch mesh, with each test numbered sequentially along the corridor (corresponding to the station number). Those in the substation lot would be numbered sequentially. Each test would measure about 1 foot square and would normally be taken to a depth of at least 1.0 foot or until subsoil was encountered. All cultural remains would be collected, except for mortar and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered.

Should sites (defined by the presence of three or more artifacts from either surface survey or shovel tests within a 50 feet area) be identified, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. For small or very recent sites these tests would be placed at 25 to 50 feet intervals in a simple cruciform pattern until two consecutive negative shovel tests were encountered. For larger sites or sites where we felt there was a potential for National Register eligibility, shovel tests would incorporate the entire site within the project corridor. Again, shovel tests would be placed at 25 to 50 foot intervals.

The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigator.

These proposed techniques were implemented with no modifications. A total of 233 shovel tests were excavated along the centerline of the corridor. No shovel tests were excavated in the substation lot since that area was entirely cleared and provided 100% visibility.

The GPS positions were taken with a Garmin GPS Oregon 550t that tracks up to twelve satellites, each with a separate channel that is continuously being read. The benefit of parallel channel receivers is their improved sensitivity and ability to obtain and hold a satellite lock in difficult situations, such as in forests or urban environments where signal obstruction is a frequent problem. This was a vital concern for the study area.

GPS accuracy is generally affected by a number of sources of potential error, including errors with satellite clocks, multipathing, and selective availability. Satellite clock errors can occur when the satellite's clock is off by as little as a millisecond, or when a slightly askew orbit results in a distance error. Multipathing occurs when the signal bounces off trees, chain-link fences, or bodies of water. Multipathing was probably a significant source of error for this study since much of the site corridor was in a forest of pines and hardwoods. The source of most extreme GPS errors is selective availability

Figure 11. Shovel testing through planted pines.

(SA), the deliberate mistiming of satellite signals by the Department of Defense. This degradation results in horizontal errors of up to 100 m 95% of the time, although the error may be as much as 300 m. Nevertheless, the DOD has turned off selective availability. We have previously determined the 3D[1] and DGPS readings with the Garmin Oregon 550t were identical. Therefore, we relied on 3D navigation mode, with expected potential horizontal errors of 6-10 m or less.

Architectural Survey

As previously discussed, we elected to use a 500 foot area of potential effect (APE). The architectural survey would record buildings, sites, structures, and objects that appeared to have been constructed before 1950. Typical of such projects, this survey recorded only those which have retained "some measure of its historic integrity" (Vivian n.d.:5) and which were visible from public roads.

For each identified resource we would complete a Statewide Survey Site Form and at least two representative photographs were taken. The Survey Staff of the S.C. Department of Archives and History would assign permanent control numbers at the conclusion of the study. The Site Forms for the resources identified during this study would be submitted to the S.C. Department of Archives and History.

Site Evaluation

Archaeological sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead federal agency, in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

> the quality of 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, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or

[1]A basic requirement for GPS position accuracy is having a lock on at least four satellites, which places the receiver in 3D mode. This is critical B as an example, positions calculated with less than four satellites can have horizontal errors in excess of a mile, or over 1,600 m.

> c. that 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; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

> ▪ identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;
>
> ▪ identification of the historic context applicable to the site, providing a framework for the evaluative process;
>
> ▪ identification of the important research questions the site might be able to address, given the data sets and the context;
>
> ▪ evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and
>
> ▪ identification of important research questions among all of those that might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered. As a result, some aspects of the evaluative process have been summarized, but we have tried to focus on an archaeological site's ability to address significant research topics within the context of its available data sets.

For architectural sites the evaluative process was somewhat different. Given the relatively limited architectural data available for most of the properties, we focus on evaluating these sites using National Register Criterion C, looking at the site's "distinctive characteristics." Key to this concept is the issue of integrity. This means that the property needs to have retained, essentially intact, its physical identity from the historic period.

Particular attention would be given to the integrity of design, workmanship, and materials. Design includes the organization of space, proportion, scale, technology, ornamentation, and materials. As *National Register Bulletin* 36 observes, "Recognizability of a property, or the ability of a property to convey its significance, depends largely upon the degree to which the design of the property is intact" (Townsend et al. 1993:18). Workmanship is evidence of the artisan's labor and skill and can apply to either the entire property or to specific features of the property. Finally, materials – the physical items used on and in the property – are "of paramount importance under Criterion C" (Townsend et al. 1993:19). Integrity here is reflected by maintenance of the original material and avoidance of replacement materials.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories. These materials have been catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. The site forms for the identified archaeological sites have been filed with the South Carolina Institute of Archaeology and Anthropology. Field notes have been prepared for curation using archival standards and will be transferred to that agency as soon as the project is complete. Photographic materials are either digital or color print and are not archival – they are being retained by Chicora Foundation.

Analysis of the collections followed professionally accepted standard with a level of intensity suitable to the quantity and quality of the remains. In general, the temporal, cultural, and typological classifications of prehistoric materials were defined by such authors as Coe (1964), Yohe (1996), Blanton et al. (1986), and Oliver et al. (1986). Historic materials, generally late nineteenth or early twentieth century, were classified using such authors as Jones and Sullivan (1980) for glass and Adams (1980), Bartovics (1978), and Price (1979) for ceramics.

SURVEY RESULTS

The substation area had been heavily disturbed (Figure 12) and as a result no shovel tests were excavated. The tract was, however, subjected to a careful pedestrian survey. No historic remains were identified.

Figure 12. View of disturbances in the substation lot.

The archaeological survey of the transmission corridor identified one site, 38LA764, which is recommended not eligible for inclusion on the National Register of Historic Places.

The architectural survey of the APE, designed to identify any structures over 50 years in age that retain their integrity and that are potentially eligible for the National Register of Historic Places revealed no such structures. No previously unexamined structures were noted and, in fact all 6 structures listed (735, 736, 951, 952, 959, 1111, and 1112) all fell well outside the 75 feet corridor impacted by the transmission line.

38LA764

Site 38LA764 is a surface historic scatter with three associated standing structures: a wood animal pen, a house foundation, and a windmill attached to a cistern. All structures fell outside of the 75 feet corridor; therefore only four radials were excavated. The site is located in a sandy and mixed hardwood area that runs parallel with Haile Gold Mine Road (US 601), approximately 100 feet east of US 601 at UTM 542594E 3829918N which is the location of STP 164-00 (Figure 13).

Shovel tests in this area produce Blanton sandy loams. These soils have an A horizon of yellowish brown (10YR5/4) sandy loam to a depth of 0.3 foot over a light yellowish brown (10YR4/4) sandy loam 1.2 foot in depth. It appears there has been significant

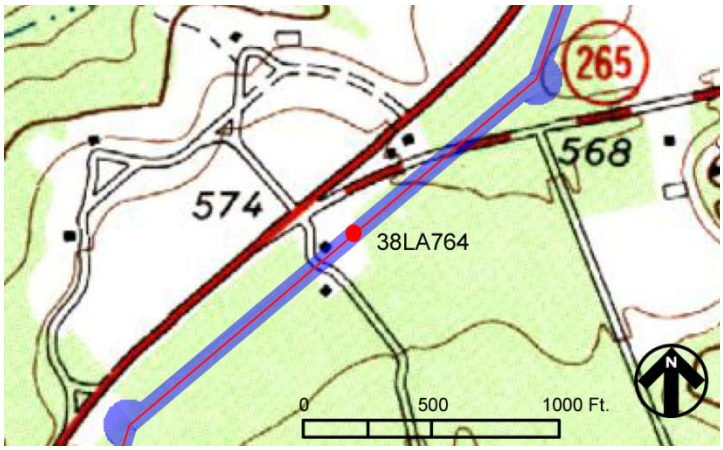

Figure 13. Location of 38LA764 on the Taxahaw USGS topographic map.

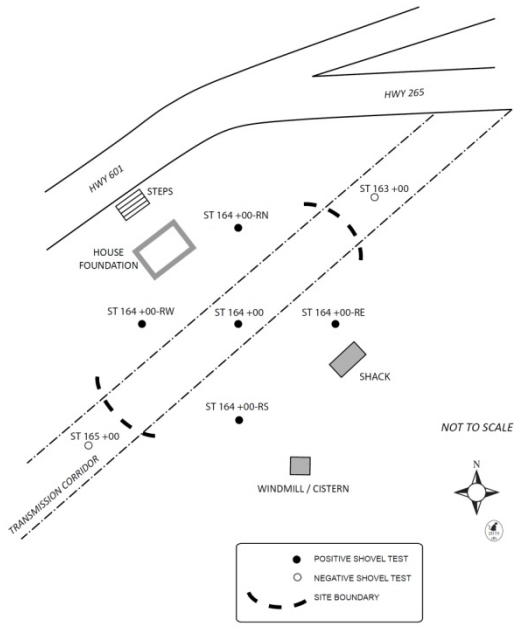

Figure 14. Sketch plan of 38LA764.

erosion over the entire site. Artifacts were found in the top strata at 0.1 to 0.3 foot of soil.

Table 2.
Artifacts from 38LA764

	Bottle Glass	Wire Nails	UID Metal	Buckle	Paint Brush	Bottle Cap	Total
Shovel Test Numbers	3	1		1			
164-00							
164-00-RN	19						
164-00-RS	10	2	1				
164-00-RE	1				1	1	
164-00-RW	2		16				
Total	35	3	17	1	1	1	58

As mentioned earlier, four radials were excavated in the cardinal direction from STP 164-00 (Figure 14). Although the site extended beyond these test further radials would have fallen outside of the 75 feet corridor.

Each of the radials were given the same number as the original STP with the label 'R' for radial followed by the cardinal direction in which they fell from the original location of STP 164-00 (i.e., N=north, S=South, E=east, W=west) Table 2 shows all artifacts recovered from shovel test excavations. A total of 58 artifacts were

Figure 15. Site 38LA764. Upper photo shows a remnant foundation. Middle photo shows an animal pen. Lower photo shows the windmill and cistern.

recovered: bottle glass (n=35), wire nails (n=3), unidentifiable metals (n=17), a buckle (n=1), a paint brush (n=1), and a bottle cap (n=1). All of these remains are consistent with a mid- to late-twentieth century origin.

38LA746 is not recommended for inclusion in the National Register of Historic Places because of its recent origin. Moreover, the

standing structure, which this site represents, was determined not eligible for inclusion in the National Register. The archaeological remains fail to address any significant research questions. Finally, the structure and its remains lack integrity, with all of the collections being recovered in the upper 0.3 foot of the site.

CONCLUSIONS

This study involved the examination of 4.20 miles of corridor proposed for the use of a transmission line for Haile Gold Mine, in northeast Lancaster County, South Carolina. This report, conducted for Mr. Tommy Jackson of Central Electric Power Cooperative, provides the results of the investigation and is intended to assist the company comply with their historic preservation responsibilities.

As a result of this investigation one archaeological site, 38LA764, was identified within the study corridor. This is a single component historic site with a brick foundation, wood animal pen, and windmill/cistern structure associated with the historic artifact scatter. This site is recommended not eligible for inclusion on the National Register as it lacks significant research potential and clear integrity.

Lancaster County has received a comprehensive architectural survey coupled with several more recent examinations specific to the proposed Haile mine and this study reviewed those sites previously identified for any change in their eligibility status and also conducted additional survey to determine if other structures worthy of recordation might be identified.

The South Carolina Department of Archives and History GIS was consulted to check for any NRHP buildings, districts, structures, sites, or objects in the study area. No properties in or near the project area have been determined eligible for the National Register of Historic Places. However, seven numbered sites fall in or close to the project 500 foot APE (735, 736, 951, 952, 959, 1111, and 1112). All of these structures except for 951 were evaluated as not eligible for inclusion on the National Register of Historic Places. Site 951 requires additional evaluation because of its potential association with archaeological site 38LA641. This site, however, is not within the proposed APE.

No additional structures were identified and there are areas in the project vicinity where manufactured housing is becoming more common. Often these new housing units are replacing older family homes.

It is possible that archaeological remains may be encountered in the area during construction. As always, the utility's contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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