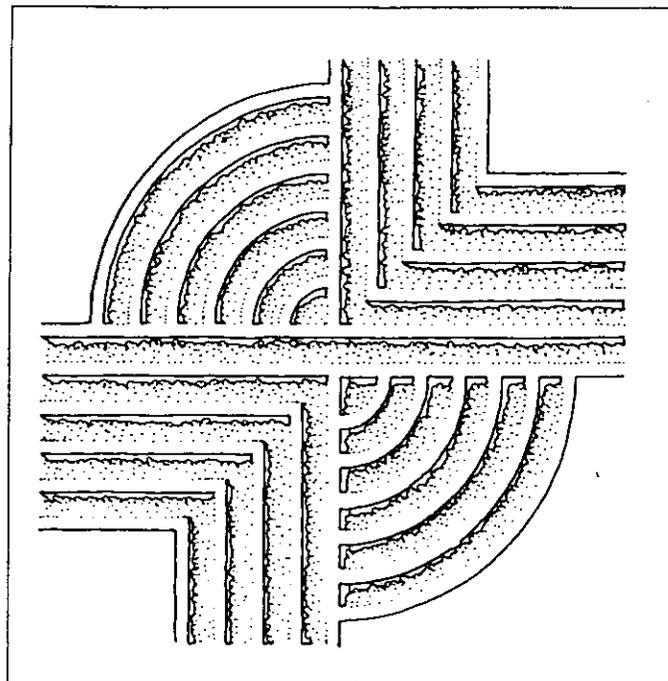


ARCHAEOLOGICAL SURVEY OF THE
GOOSE CREEK WATER MAIN EXTENSION,
BERKELEY COUNTY, SOUTH CAROLINA



CHICORA RESEARCH CONTRIBUTION 130

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**ARCHAEOLOGICAL SURVEY OF THE
GOOSE CREEK WATER MAIN EXTENSION,
BERKELEY COUNTY, SOUTH CAROLINA**

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Chicora Research Contribution 130

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Introduction

This investigation was conducted by Ms. Natalie Adams of Chicora Foundation, Inc. for Mr. Nick Roark of Sabine & Waters Land Management Consultants. The 40 feet wide, approximately 2.5 mile long corridor is located in Goose Creek in Berkeley County. The corridor begins just south of Old Mount Holly Road and travels south for approximately 1 mile. The corridor then turns east for about .5 miles following a drainage ditch. It then turns south again following the alignment of Etiwan Road, turning east at Brandywine Road, crossing U.S. Highway 52 and ending immediately east of that road (Figure 1).

The corridor is made up of grasslands, paved and unpaved commercial and residential roads, pine/ mixed hardwoods, and low swampy land. The corridor is intersected by two small drainages of Laurel Swamp.

The corridor is intended to be used as a sewer line right of way. Some landscape alteration (such as excavation, clearing and grubbing) will occur which will cause considerable damage to the ground surface.

Chicora was requested to submit a budgetary proposal for an intensive survey by Mr. Nick Roark of Sabine & Waters. A proposal was submitted on January 19, 1994 and accepted the same day.

This study is intended to provide a detailed explanation of the archaeological survey of the Goose Creek water main extension corridor and the findings. The statewide archaeological site files held by the South Carolina Institute of Archaeology and Anthropology were examined for information pertinent to the project area. In addition, the South Carolina Department of Archives and History was consulted about National Register properties in the area. No National Register properties were found to be located in the project area (Dr. Tracy Powers, personal communication, January 25, 1994). The field investigations were conducted on January 25, 1994 by Ms. Natalie Adams. This field work involved four person hours. Laboratory and report production were conducted at Chicora's laboratories in Columbia, South Carolina on January 25 and 26, 1994.

Effective Environment

Berkeley County is situated in the lower Atlantic Coastal Plain of South Carolina. Containing about 1,100 square miles, it is bordered by Georgetown County to the northeast, Charleston County to the southeast and southwest, Dorchester County to the west, Orangeburg County to the northwest, and Clarendon and Williamsburg counties to the

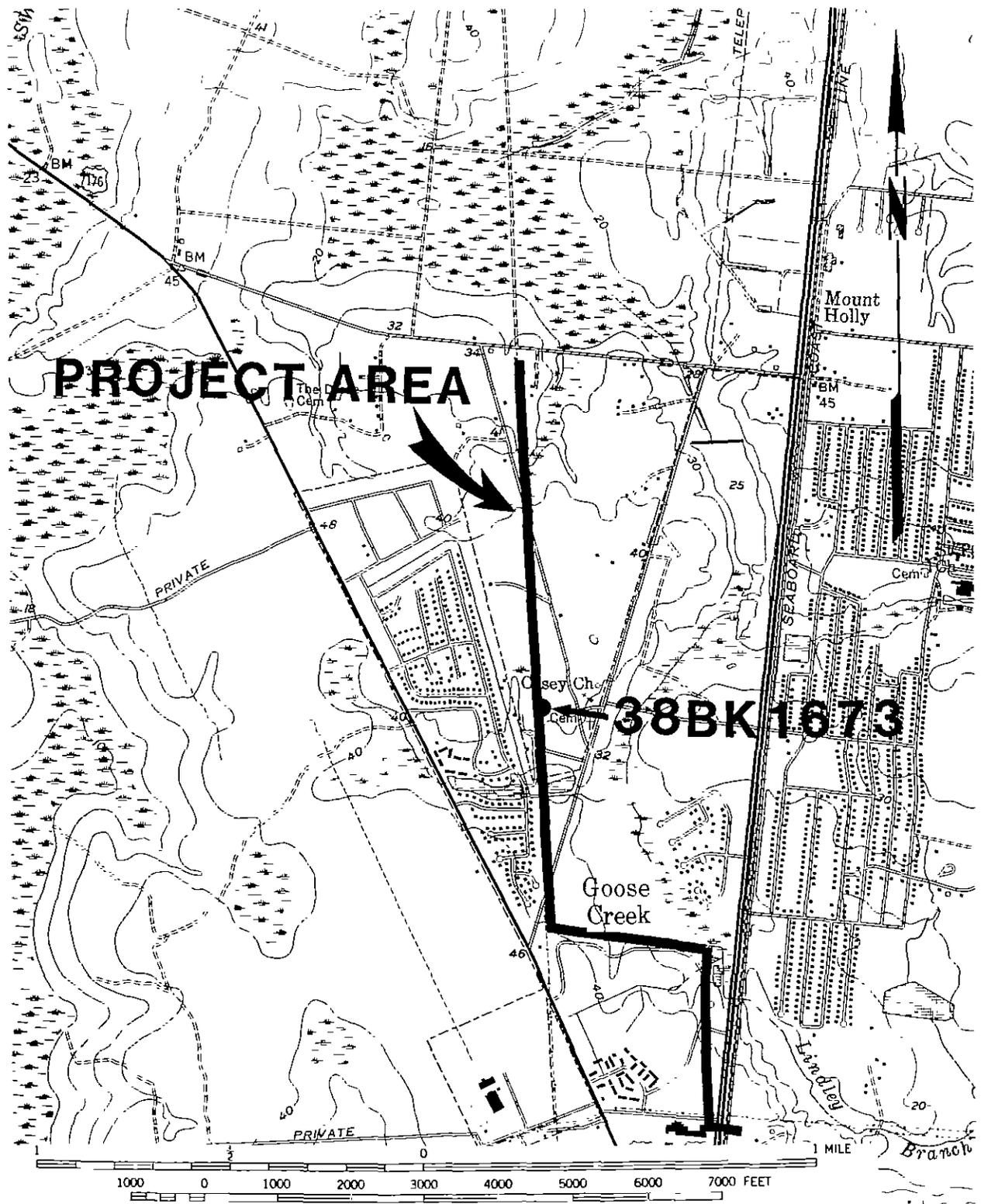


Figure 1. Vicinity of the survey corridor on the 1979 Mount Holly USGS topographic map.

north.

The topography of the country is characterized by subtle undulation characteristic of beach ridge plains. The elevations range from sea level to approximately 105 feet above mean sea level (MSL). In the vicinity of the corridor the elevations range from about 20 to 40 feet MSL. The topography is generally level although somewhat more rolling near the swamp drainages.

Berkeley is drained by three significant river systems: the Santee, Wando, and Cooper rivers. The Santee has a large freshwater discharge and forms the northern boundary with neighboring Georgetown County. The Wando is a coastal river, being dominated by tidal action. The Cooper River, which flows through the center of the County, was also originally a tidal river, but it has been modified by a large volume of fresh water diverted from the Santee through Lakes Marion and Moultrie. In addition, there are a number of broad, low-gradient interior drainages that are present either as extensions of tidal streams or flooded bays and swales.

Significant drainages to corridor are Laurel Swamp and Lindley Branch, which eventually feed into Goose Creek. There are approximately 17,500 acres of freshwater marsh and 4,300 acres of impounded marsh in Berkeley County. Much of this acreage was related to the production of upland rice. Examination of aerial photographs coupled with USGS topographic maps reveals an extensive network of dikes and ditches associated with upland rice cultivation.

As previously mentioned, Berkeley County is made up of one broad physiographic area, often called the lower Atlantic Coastal Plain or the Atlantic Coast Flatwoods. The surface soils are almost entirely sedimentary and were transported into the area from elsewhere. The geology of Berkeley County is characteristic of the region; the formations covering the surface date from the Pleistocene and include sands, clays, gravels, and phosphates.

In general the soils in lower Berkeley are part of the Wahee-Duplin-Lenoir association. They tend to be somewhat poorly to moderately well drained and have a loamy surface layer with a clayey subsoil. Seven soil series are found in the corridor area. These include Bethera loam, Duplin fine sandy loam, Goldsboro loamy sand, Lenoir fine sandy loam, Lynchburg fine sandy loam, Meggett loam, and Norfolk loamy sand. Of these soils, Bethera and Meggett are poorly drained, Lenoir and Lynchburg are somewhat poorly drained, Duplin and Goldsboro are moderately well drained, and Norfolk is well drained. Poorly drained to somewhat poorly drained soils make up approximately 80 percent of the corridor (see Long 1980: Map Sheets 81 and 87) .

Berkeley County has a subtropical climate, characterized by warm summers, mild winters, and adequate precipitation fairly evenly spread throughout the year. Except in the summer, when maritime tropical air controls the climate of the area, the daily weather

patterns are controlled by west to east moving pressure systems and associated fronts.

Yearly precipitation averages 47 inches, but ranges from 39 to 55 inches. The growing season, from April to September, receives an average of 31 inches or about 66% of the yearly total. The average length of the freeze-free growing season is approximately 260 days, although frosts can occur as early as October 26 and as late as April 15 (Long 1980:46).

Mills remarked in 1826 that Carolina was similar to European climates, lying at a similar latitude. He noted that:

in comparing the climate of South Carolina, with similar climates in Europe, we find it lying under the same atmospheric influences with Aix, Rochelle, Montpellier, Lyons, Bordeaux, and other parts of France; with Milan, Turin, Padua, Mantua, and other parts of Italy (Mills 1972 [1826]:133).

The coastal region is a moderately high risk zone for tropical storms, with 169 hurricanes being documented from 1686 to 1972 (0.59 per year) (Mathews et al. 1980:56). One of the most devastating in the eighteenth century was the hurricane of September 15, 1752. One report listed 92 people drowned, although the death toll, especially among the African American slaves was likely much higher. The storm also had considerable long-term effects and Calhoun notes that:

the destruction of trees was severe; one plantation owner's loss was assessed at \$50,000 and many of those trees which survived were "heart-shaken," and unfit for use. Crops were even more damaged as the storm followed a severe drought. It was necessary to enact laws to regulate the exportation and sale of corn, "Peafe," and small rice, so that "the poor may be able to purchase Provisions at a moderate Price" (Calhoun 1983:9).

Speaking of the coastal plain Braun observed that:

the vegetation of this region is in part warm temperate-subtropical, in part distinctively coastal plain, and in part temperate deciduous. It is made up of widely different forest communities - coniferous, mixed coniferous and hardwood, deciduous hardwood, and mixed deciduous and broad-leaved evergreen hardwood - interrupted here and there by swamps, bogs, and prairies. The large number of unlike communities is related to the diverse environmental conditions of the region (Braun 1974:282)

Indeed, an examination of the region around Berkeley County reveals tremendous diversity. One detailed study revealed a mosaic including the oak-hickory-pine forest common to upland areas, oak-gum-bald cypress forest typical of the southern floodplains, pine forests found in mesic to xeric upland sites, mesophytic broadleaved forests on more mesic slope sites, old rice fields, and a variety of swamp forests such as the tupelo-cypress, low

hardwood, and ridge hardwoods (Federal Power Commission 1977). All of these forest types have different dominants and different understory vegetation (see Barry 1980).

Background Research

The English established the first permanent settlement in what is today South Carolina in 1670 on the west bank of the Ashley River. Like other European powers, the English were lured to "new World" for reasons other than the acquisitions of land and promotion of agriculture. The Lords Proprietors, who owned the colony until 1719-1720, intended to discover a staple crop whose marketing would provide great wealth through the

By 1680 the settlers of Albermarle Point had moved their village across the bay to the tip of the peninsula formed by the Ashley and Cooper rivers. This new settlement at Oyster Point would become modern-day Charleston. The move provided not only a more healthful climate and an area of better defence, but:

the situation of this Town is so convenient for public Commerce that it rather seems to be the design of some skillful Artist than the accidental position of nature (Mathews 1954:153).

The early settlers of the Carolina colony came from other mainland colonies, England, and the European continent. But the future of Carolina was largely directed by the large number of colonists from the English West Indies. This Caribbean connection has been discussed by Waterhouse (1975), who argues that the Caribbean immigrants were largely from old families of economic and political prominence which formed the Barbados élite. Waterhouse observes that while elsewhere in the American colonies the early settled families were displaced from their established positions of power and economic superiority by newcomers, this did not occur in South Carolina. In Carolina:

a relatively large proportion of those who, in the middle of the eighteenth century, were among the wealthier inhabitants, were descended from those families who had arrived in the colony during the first twenty years of its settlement (Waterhouse 1975:280).

This immigration turned out to be a significant factor in the stability and longevity of South Carolina's colonial élite. It also firmly established the foundations of slavery and cash crop plantations.

Many of these Barbadian immigrants settled in the Goose Creek area, forming one of the most influential political and economic groups in the colony (Stoney 1938:19). The "Goose Creek Men" included individuals such as Maurice Mathews, James Moore and John Boone. They favored increased Indian slavery, trade with the pirates or privateers that sailed the Carolina coast, and generally ignored the efforts of the Lords Proprietors to control the Colony's economic and political future. While the political power of the Goose Creek

faction peaked in the 1720s, it continued to evidence considerable economic power well into the late 1740s (see Morgan 1980; Sirmans 1966).

Early agricultural experiments which involved olives, grapes, silkworms, and oranges were less than successful. While the Indian trade was profitable to many of the Carolina colonies, it did not provide the Proprietors with the wealth they were expected from the new colony. This trade was also limited since the Indian population was so dramatically reduced by European disease, the sale of alcohol, and slavery.

Cattle raising also was an easy way to exploit the region's land and resources, offering a relatively secure return for very little capital investment. Few slaves were necessary to manage the herd. The mild climate of the low country made winter forage more abundant and winter shelters unnecessary. The salt marshes on the coast, useless for other purposes, provided excellent grazing and eliminated the need to provide salt licks. More interior swamps found similar vegetation and provided a constant water supply (Coon 1972; Dunbar 1961). Production of cattle, hogs, and sheep quickly outstripped local consumption and by the early eighteenth century beef and pork were principal exports of the Colony to the West Indies (Ver Steeg 1975:114-116). This allowed the ties between Carolina and the Caribbean to remain strong, and provided essential provisions to the large scale, single crop plantations.

Rice and indigo both competed for the attention of Carolina planters. Although introduced at least by the 1690s, rice did not become a significant staple crop until the early eighteenth century. At that time it not only provided the Proprietors with the economic base the mercantile system required, but it was also to form the basis of South Carolina's plantation system -- slavery.

South Carolina's economic development during the pre-Revolutionary War period involved a complex web of interactions between slaves, planters, and merchants. By 1710 slaves were starting to be concentrated on a few, large slave-holding plantations. By the close of the eighteenth century some South Carolina plantations had a ratio of slaves to whites that was 27:1 (Morgan 1977). And by the end of the century over half of eastern South Carolina's white population held slaves. With slavery came, to many, unbelievable wealth. Coclanis notes that:

on the eve of the American Revolution, the white population of the low country was by far the richest single group in British North America. With the area's wealth based largely on the expropriation by whites of the golden rice and blue dye produced by black slaves, the Carolina low country had by 1774 reached a level of aggregate wealth greater than that in many parts of the world even today. The evolution of Charleston, the center of the low-country civilization, reflected not only the growing wealth of the area but also its spirit and soul (Coclanis 1989:7).

Only certain areas of the low country, however, were suitable for rice production.

During the early years rice was grown as an upland crop, in small fields adjacent to freshwater streams where water could be easily impounded and applied to the crop. By the early 1700s planters found that upland swamps, such as those in the Goose Creek area, were even better suited for rice, although the soils were quickly exhausted (Meriwether 1940; Sellers 1934). These upland swamps, distinct from well-drained uplands, remained the focus of Carolina rice agriculture during the entire Colonial period.

Hewat, writing in 1779, describes the process of upland swamp rice cultivation:

after the planter has obtained his tract of land, and built a house upon it, he then begins to clear his field of that load of wood with which the land is covered. Having cleared his field, he next surrounds it with a wooded fence, to exclude all hogs, sheep, and cattle from it. This field he plants with rice . . . year after year, until the lands are exhausted, or yield not a crop sufficient to answer his expectations. Then it is forsaken, and a fresh spot of land is cleared and planted, with is also treated in like manner, and in succession forsaken and neglected (Hewat 1836:514).

This rather simplistic commentary failed to observe the engineering feat that upland swamp rice cultivation really was. Clearing, which alone was a monumental undertaking, was followed by the construction of dams, dikes, and trenches. By one estimate, a 500 acre rice field required 60 miles of dikes and ditches (Gunn 1976:1-16). Fields were carefully leveled to ensure that they could be completely covered by water. Rice was planted during two periods -- March 10 to April 10 and June 1 to June 10 -- avoiding May since vast migrations of "rice birds" passed through the state during that period and could destroy a crop. Rice was harvested in late August.

By 1730 the majority of the population of the colony, both rural and urban, was black (Wood 1974). By 1850, 46% of Charleston District's population (which included today's Berkeley County) consisted of African American slaves (DeBow 1854:302), although Hilliard (1984:37) indicates that more than 60% of the Charleston slaveholders by 1860 owned fewer than 10 slaves. Regardless, there remained vast plantations where the owner's wealth was achieved by the labor of black slaves.

During the eighteenth century the profits to be gained from rice were extraordinary, ranging from a 12% to nearly 28% net return on the investment, well exceeding other cash crops, such as tobacco or indigo (see Coclanis 1989:141). Charleston was the mecca around which the economic, political, and social world of Carolina revolved. Charleston provided the essential opportunity for conspicuous consumption, a mechanism which allowed the display of wealth accumulated from the plantation system.

By the end of the eighteenth century, beginning of the nineteenth century, the rate of return on rice had been reduced, at best, to about 2%, and many years the rate of return was a staggering -3% to -7%. In 1859, just before the Civil War, the return is reported to

have been -28%. As Coclanis observes:

the economy of the South Carolina low country collapsed in the nineteenth century. Collapse did not come suddenly - many feel, for example, that the area's "golden age" lasted until about 1820 - but come it did nonetheless. By the late nineteenth century it was clear that the forces responsible for the area's earlier dynamism had been routed, the dark victory of economic stagnation virtually complete (Coclanis 1989:111).

Mills' Atlas shows several taverns in the vicinity of the project area. It appears that these taverns are located adjacent to what is now U.S. Highway 52 and U.S. Highway 176 (Figure 2).

Previous archaeological investigations in Berkeley County consist of a number of surveys including the work by Brooks and Scurry (1979) at the Amoco Realty property. Excavations at prehistoric sites in the county are few. Most notable are the works by Anderson et al (1982) and Brooks and Canout (1984). Trinkley (1980; 1990) provides a synthesis of Coastal Plain Woodland Period occupation. This previous research has shown that prehistoric sites in the region tend to be located on elevated, well drained soils, or near the margins of swamps.

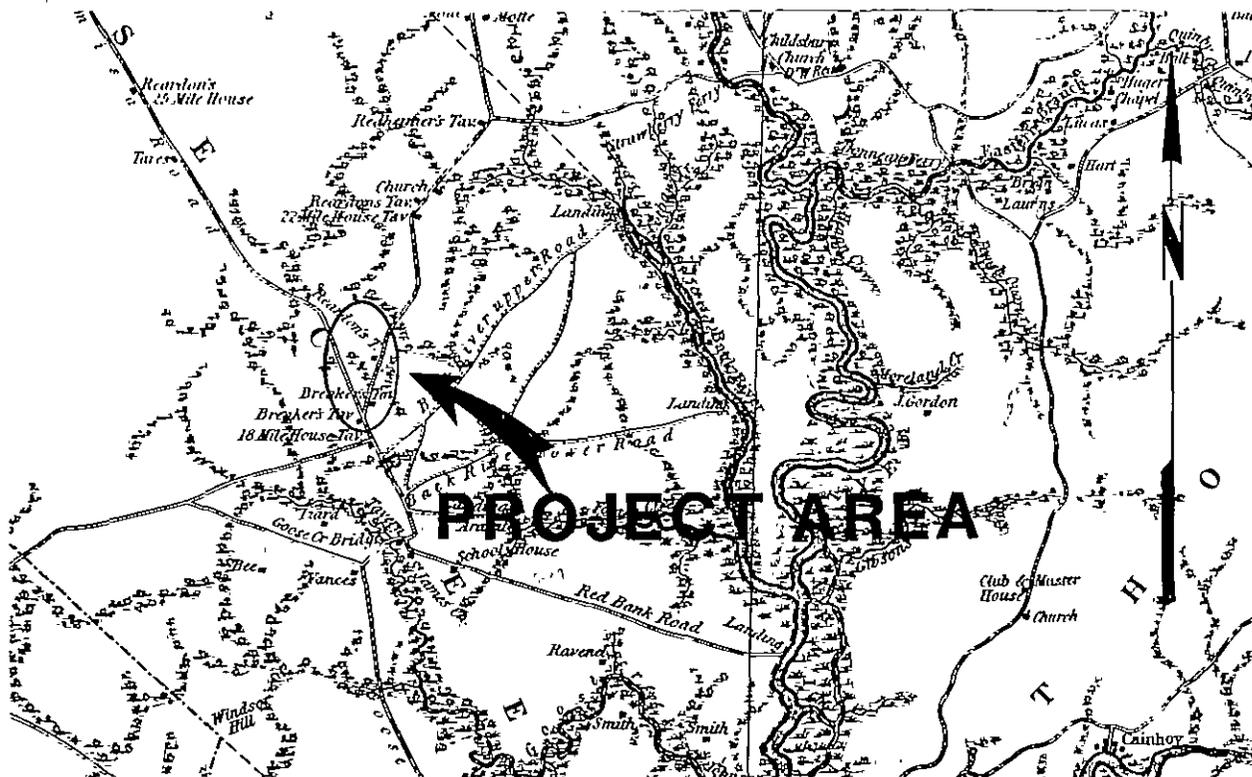


Figure 2. Mills Atlas of 1825 showing the vicinity of the project area.

Brooks and Scurry (1979) found that the bulk of the sites components will be Middle to Late Woodland, since the high sea level stands during these periods are thought to have restricted the dispersion of resources such as large mammals and forest products. Also, sites are expected to be small and exhibit low artifact diversity since the use of extractive sites is brief, the sites represent a narrow range of activities, and group size was small. A reconnaissance survey of Mt. Holly Plantation by Poplin et al. (1978) located few prehistoric sites. Poplin et al. (1978:18) believed that the poor quality of soils in the area may have attributed to the low density of occupation. Based on the locations of prehistoric sites on the Crowfield development tract, Elliot (1987) concluded that freshwater swamp and swamp margin resources were the main attraction resulting in settlement adjacent to the swamp.

For historic sites, South and Hartley (1980) found plantations to be located on high ground adjacent to deep water. This type of topography does not exist in the survey area which is characterized by small swamp creeks. However, the survey of portions of Mt. Holly Plantation (Poplin et al. 1978) and the Crowfield development tract (Elliot 1987), both located nearby, revealed that plantations are generally found on terrace edges adjacent to the swamps where the inland swamp rice would have been grown.

Because of the presence of large areas of poorly drained soils located away from major swamps or creeks, much of the project area was believed to have a relatively low potential for containing both historic and prehistoric archaeological sites.

Field Methods

The initially proposed field techniques involved the placement of shovel tests at intervals ranging from 100 to 200 feet (depending on topography, soils, drainage, and associated factors). These tests were placed along the centerline of the corridor, with all fill being screened through ¼ inch mesh. One transect was used since the corridor is only 40 feet wide.

The survey corridor was divided into seven transects. Transect 1 began at Old Mount Holly Road and headed south for about 1600 feet, ending at a dirt residential road. Transect 2 began south of the dirt road, continuing south for 1600 feet, ending at another dirt residential road. Transect 3 began south of the dirt road and continued south for about 2000 feet, ending at a paved residential road. Transect 4 began at Old Monck's Corner road and headed north for about 1200 feet where it ended at Transect 4. Transect 5 began south of Old Monck's Corner road and headed east for about 1600 feet. Transect 6 began at the south end of Etiwan Road and headed north and west for 3000 feet. Transect 7 began at the south end of Etiwan Road and ended 1200 feet to the east, just east of U.S. Highway 52. As a result of the survey of the approximately 2.5 mile Goose Creek water main extension corridor, a total of 79 shovel tests (or one for every 164 feet) were placed in the right of way.

Should sites (defined by the presence of two or more artifacts from either surface survey or shovel tests within a 25 feet area) be identified by shovel testing, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. 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 investigators.

All soil would be screened through ¼ inch mesh, with each test numbered sequentially. Each test would measure about 1 foot square and would normally be taken to a depth of at least 1 foot. All cultural remains would be collected, except for shell, mortar, and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered.

Surface visibility was poor throughout most of the study area. In addition to shovel testing the actual corridor, areas containing good surface visibility adjacent to the corridor were subject to pedestrian survey.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories on January 25 and 26, 1994. These materials are being catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. Site forms have been filed with the South Carolina Institute of Archaeology and Anthropology. Field notes and photographic materials have been prepared for curation using archival standards and will be transferred to the South Carolina Institute of Archaeology and Anthropology as soon as the project is complete. Analysis of the collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains.

Results

The intensive shovel testing and pedestrian survey identified one site (38BK1673) in the Goose Creek water main extension corridor.

38BK1673 is located underneath a transmission line right of way approximately 700 feet west of Casey Church. This area appears to have been used by local children as a dirt bike track and there is evidence that heavier vehicles (such as cars or trucks) have been used on this track. As a result, the area is deeply rutted and, therefore, badly disturbed. Surface visibility was excellent and a complete collection was made. Surface collected were two undecorated whitewares, one silk screened Coca-cola bottle glass, and one green milk glass glazed over clear green glass. Five shovel tests were excavated at the site in cardinal directions from a center test at 25 foot intervals. None yielded subsurface remains.

The central UTM coordinates are E589100 N3653660 and the soils are moderately

well drained Duplin fine sandy loam. The site measures approximately 20 feet by 20 feet and soil profiles consisted of a maximum of 0.4 feet of grayish brown (10YR5/2) fine sandy loam overlying yellowish brown (10YR5/6) clay loam. In much of the area, the subsoil was exposed.

The artifacts collected suggest a mid-20th century occupation. Silk screening on Coca Cola bottles was used from 1965 to the present (Jeter 1987:42) and whitewares have a long span of manufacture and are still manufactured today (Bartovics 1981). In addition, the popularity of the milk green glazed glass reached its height after World War II (Spillman 1982).

General research oriented toward the mid-20th century occupation of the Goose Creek area could include settlement patterning, the effects of Charleston urban sprawl on rural areas, and trash disposal practices. 38BK1673 has a very sparse assemblage of artifacts and, therefore, very limited data sets. An examination of the surrounding area indicated no evidence of nearby house ruins which the material could be associated with. As a result, 38BK1673 is recommended as not eligible for inclusion on the National Register of Historic Places since it can not address significant research questions, is not linked with events or broad patterns of events, is not associated with an important person, and there is no distinctive and important architectural aspects.

Summary and Recommendations

As a result of the archaeological survey of the Goose Creek water main extension corridor, one archaeological site (38BK1673) was identified. This site consisted of a small surface scatter of historic remains and is recommended as not eligible for inclusion on the National Register.

It is possible that other archaeological remains may be encountered in the survey tract 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 South Carolina State Historic Preservation office or to the client's archaeologist. No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist.

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