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An Archeological Survey of a Portion of the Charleston Innerbelt Freeway, Charleston County, South Carolina

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AN ARCHEOLOGICAL SURVEY OF A PORTION OF THE CHARLESTON INNERBELT FREEWAY, CHARLESTON COUNTY, SOUTH CAROLINA

by

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ABSTRACT

A survey of a 10 mile segment of the route of the proposed Charleston Innerbelt Freeway, from the intersection of U.S. 17 and South Carolina 7, west of Charleston, and Virginia Avenue (Road S-58) in North Charleston was carried out by the writers in July, 1975. The survey indicated that three archeological sites would be destroyed by the proposed construction. Though none of these sites are recommended for placement on the National Register of Historic Places, they may be considered none the less to have considerable scientific and historical value.

Collections of prehistoric cultural material from the Kinloch Site, 38CH109, suggest prehistoric Indian occupation during the time period of fiber tempered and Thoms Creek ceramics, roughly 2,000 to 1,000 B.C., and again during the period of Wilmington ceramics, roughly A.D. 500 to 1,000. These prehistoric components represent the earliest and latest extremes, respectively, of what Milanich (1972, 1973) has called the Coastal Tradition and that he has suggested represent a continuity in population and subsistence strategy adapted to the biotic resources of the Southeastern coastal plain. Intensive investigation of the prehistoric components at 38CH109 would be an opportunity to partially test Milanich's hypothesis and obtain much needed information on non-shell midden sites from this time range.

At 38CH109 and at the Dog Pound Site, 38CH262, are large quantities of eighteenth century artifacts which, in both cases, seem to represent farmsteads or plantations. No eighteenth century sites of this type have been intensively investigated in the South Carolina coastal area. Suggested problems for further research at these sites include investigation of (1) settlement variability in the Charleston area in Colonial times, (2) the growth and change of eighteenth century plantations and farmsteads, and (3) the social composition

of such settlements. It is also suggested that, if extensive documentary data on these sites are obtainable, this might be an opportunity to establish correlates between behavior and social groups represented in history and the content and structure of archeological sites. One of the analytical problems of interest to historic archeology which might be investigated at these sites is the role of Colono-Indian ceramics in Colonial society.

The remaining site, 38CH263, is a group of pits believed to have resulted from extraction of clay for brick manufacture at Ashley Hall Plantation during the eighteenth century. The historic significance of Ashley Hall has been recognized by the placement of the site on the National Register of Historic Places. Archeological information from these pits would be essential to a well-rounded picture of eighteenth century activities on this plantation.

It is recommended that a program of archeological research be carried out at these sites in order to mitigate the adverse effects of the building of the proposed Freeway. A two-stage intensive excavation program for both the prehistoric and historic components at 38CH109 and 38CH262 and a brief program of topographic mapping and trenching at 38CH263 are recommended.

INTRODUCTION

An archeological survey of a portion of the proposed Charleston Innerbelt Freeway was carried out by the Institute of Archeology and Anthropology, University of South Carolina, in July 1975. This is the first portion of the Freeway scheduled for construction. It lies between the intersection of U.S. 17 and South Carolina 7, west of Charleston and Virginia Avenue (Road S-58) in North Charleston, a distance of approximately 10 miles. The fieldwork was carried out by the writers on July 25 and 31, 1975.

The survey was intended to provide archeological information for the purpose of (1) estimating the impacts of the proposed construction upon the archeological resource base of the Charleston area, and (2) planning any needed mitigation of those impacts. The archeological resources under consideration include remains of prehistoric Indian, historic Indian, and non-aboriginal remains. This research is in compliance with the National Environmental Policy Act of 1969 and Executive Order 11593.

In addition to the field survey of the highway right-of-way, existing records were checked for sites which might be affected by the proposed construction. The Charleston area is known to be quite rich in remains of prehistoric Indian occupation and especially rich in remains of Colonial British settlement beginning in the late seventeenth century. Of particular interest was a determination of whether any locations on the National Register of Historic Places would be disturbed by the construction of the Freeway.

Subsequent to the gathering of the data, an intensive analysis of these data was carried out and an attempt was made to view the archeological resources

in the Freeway right-of-way in terms of the present state of prehistoric and historic archeological research in the Charleston area. Such careful evaluation of these resources is imperative for wise decisions concerning their management.

ACKNOWLEDGEMENTS

This report is the result of much cooperation, discussion, and sharing of knowledge and ideas among virtually the whole staff of the Institute of Archeology and Anthropology. Especially, we wish to collectively thank all of the staff who participated in an informal seminar discussing the Colonial sites located by the Charleston Beltway survey and the potential of Environmental Impact studies in historic archeology.

The records check included a visit to the South Carolina Department of Archives and History in Columbia. We wish to thank Miss Maryanne Eddy who aided us in searching the records of the National Register of Historic Places at the Department.

BACKGROUND

Environment

Environments on the Southeastern Coastal Plain have been summarized, recently from an archeological point of view, by Larson (1970) and Milanich (1972). The latter (Milanich 1970: 90) divides the Coastal Plain into two major biomes; the Coastal biome and the Pine Barrens biome. He subdivides the Coastal biome into 3 biotopes: the beach strand; lagoon, marsh, and barrier island strand; and the live oak forest strand. In terms of this set of divisions, the proposed beltway route would be within the live oak

forest strand, though intersecting some areas of marsh and estuary. The route would, however, be close to the major ecotone between the Coastal biome and the Pine Barrens biome.

Both Larson and Milanich have emphasized that the area of the Coastal biome would have been, in contrast to the Pine Barrens, especially rich in floral and faunal resources which are known to have been of importance to prehistoric and historic Indians. Milanich (1972: 108) suggests that habitation of the live oak strand biotope would have been especially advantageous because of the close proximity of not only the resources of the live oak zone, marshes, estuary and ocean but also the possible specialized resources in the nearby Pine Barrens.

Prehistoric and Historic Indian Occupation

Aboriginal occupation of this portion of the South Atlantic coast began as much as 12,000 years ago (Waring 1968; James L. Michie personal communication) and continued until the mid-eighteenth century when decimated remnants of virtually all of the Coastal Indian groups in the Carolinas were assimilated into Colonial society or the Indian groups of the interior (South 1972: 18).

Recent summaries of our knowledge of various aspects of the prehistory of South Atlantic Coastal area are presented in Williams (1968), Peterson (1971), Milanich (1972, 1973), Hemmings (1972), and Stoltman (1974). Historic information on the Indian tribes of the Carolina Coast has been briefly summarized by South (1972).

South (1973) has devised an Indian ceramic taxonomy for the South Carolina coast and Anderson (1974), using extant museum collections in South Carolina, has tentatively defined patterns in the distribution of aboriginal ceramics on the Coastal Plain. A probabilistic site survey of the Charleston County coast

has recently been carried out by Trinkley and Carter (n.d.). Most published research on the prehistory of the South Atlantic area has concentrated on ceramics and problems of culture history. Milanich (1972), Hemmings (1972), Marrinan (1975), Martinez (1975) and Trinkley (1975) however, present subsistence data and tentative inferences about the nature of prehistoric cultural adaptations in the area.

History and Historic Archeology in the Charleston Area

In 1670, the first permanent English settlement in South Carolina was established at Charles Towne Landing on the Ashley River, a few miles below where the proposed beltway would cross that river (South 1969: 2). This settlement was named "Charles Towne" but was soon superseded by another town site laid out on Oyster Point across the harbor. By the end of the seventeenth century, the original Charles Towne had been largely abandoned in favor of the second town which became modern Charleston (South 1969: 35). The history of the original Charles Towne settlement has been summarized by South (1969) and exploratory archeology at the site has been reported by South (1969) and Polhemus (1971a, 1971b). Further research at the site--including excavation of a late prehistoric Indian ceremonial center--has been described by South (1971). Basic sources on the early history of the Charleston area include the City of Charleston Yearbook (1883) and Meriwether (1940).

The 1695 Thornton and Morden map of South Carolina (copy on file at the Institute of Archeology and Anthropology) shows numerous farms and plantations in the country-side surrounding Charleston, chiefly along the tidal estuaries. One of these, Ashley Hall, the plantation of one of the original Charles Towne leaders, Stephen Bull, is located on the Ashley River immediately south of the

proposed right of way. This site, including standing structures from the late seventeenth and early eighteenth centuries, is on the National Register of Historic Places (Institute of Archeology and Anthropology site files).

With the exception of the work at Charles Towne Landing cited above, the historic archeological research in the Charleston area has largely been confined to military sites (South 1974, Carrillo 1973). Brief excavations were conducted in 1972 by Richard R. Polhemus of the Institute of Archeology and Anthropology at the Newington Plantation near Summerville (Polhemus 1972). Some excavation within the city of Charleston has recently been conducted by Elaine Herold of the College of Charleston but no reports on this work are yet available. The Institute of Archeology and Anthropology has also recently carried out some small scale EIS surveys involving historic sites in the area.

METHODS

Records Check

The site files of the Institute of Archeology and Anthropology indicated 2 previously-recorded archeological sites (38CH17 and 38CH109) in or very near the right of way of this portion of the proposed Freeway. Both sites were reported in 1972 by Mr. Robert Parler of Orangeburg, an amateur archeologist member of the Archeological Society of South Carolina.

Site 38CH17 is a brick kiln site associated with the early eighteenth century Ashley Hall Plantation. Thirty-eight acres of this plantation, including both prehistoric and early historic remains, have been placed on the National Register of Historic Places. Examination of records, pertinent to this site, in the files of the South Carolina Department of Archives and History reveal that the 38 acres on the Register lie primarily to the south

and east of Ashley Hall Lane, though there is an extension of the property along the lane almost to its junction with State Highway 61. The brick kiln site, 38CH17, is not on the 38 acres on the Register. It is possible that the proposed highway construction might affect the extreme south-western extension of the Register property along Ashley Hall Lane.

Site 38CH109 was found to be located on the right-of-way just south of Savage Road. An eighteenth century British component and a possible Colono-Indian component at this site were recognized by Mr. Parler.

The only historical source consulted during the records check was the 1695 Thornton and Morden map of the South Carolina colony. This indicated no plantations or settlements in the immediate proximity of the beltway route.

Field Survey

An intensive on-the-ground survey of the right-of-way was conducted in an attempt to discover possible unrecorded archeological sites in the right-of-way and to determine the precise relationship of the previously recorded sites to the right-of-way. Also, additional archeological data were gathered at the 2 previously-recorded sites.

This field survey was concentrated in the portion of the Freeway route south of Montague Road in North Charleston (Fig. 1). North of Montague Road, the right-of-way crosses an extensive strip mine and a solidly built-up and urbanized portion of North Charleston. It was considered unnecessary and impractical to survey this portion. South of Montague Road, all portions of the route were walked with the exception of the Ashley River and the adjacent areas of tidal marsh. Thus, of the total 10 miles of the Freeway route presently under consideration, about 5.5 miles were intensively surveyed.

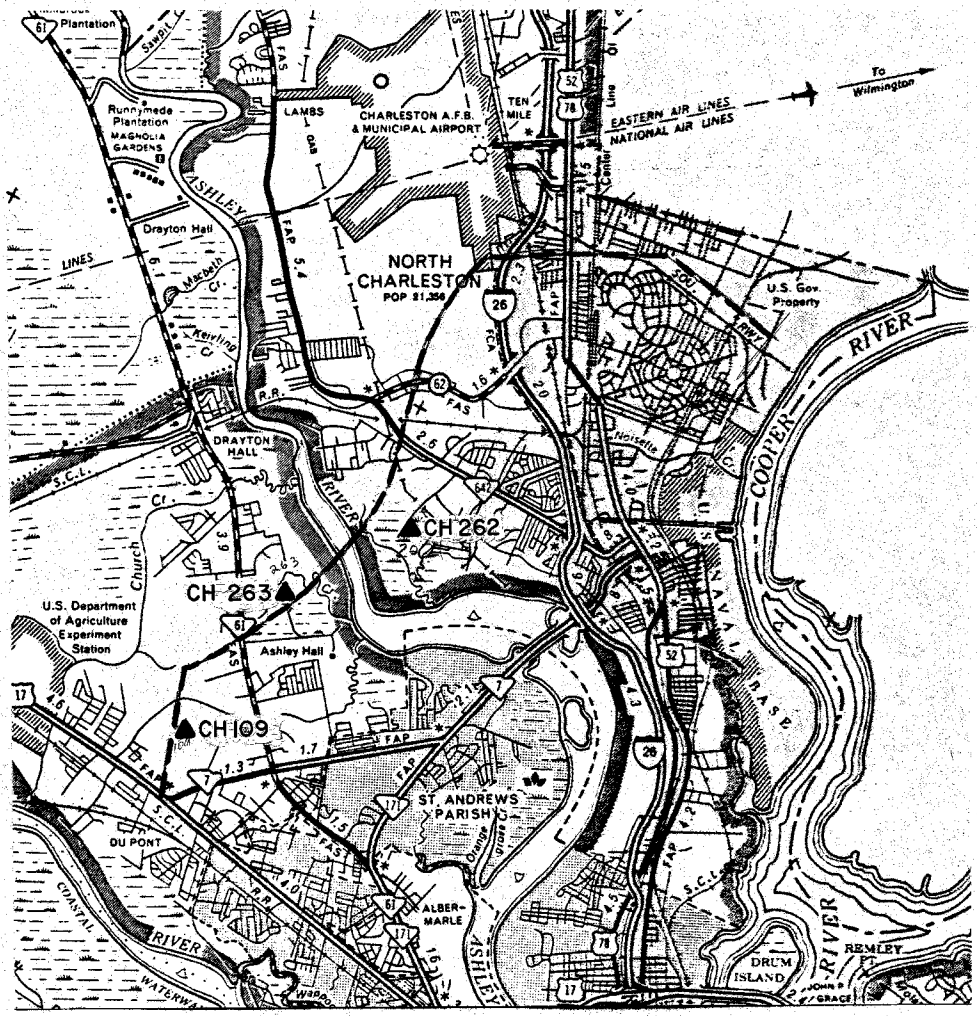

FIGURE 1. Locator map of archeological sites in the proposed Charleston Innerbelt Highway right-of-way.

The basic survey technique consisted of walking the right-of-way and observing the ground surface for prehistoric or early historic cultural material or early historic structural remains. A few cultivated fields were crossed but most of the route was through pasture or forest and ground surface visibility was poor. In these areas, special attention was paid to ditch banks, road cuts, eroded paths and areas of exposed soil. It is possible that, in spite of careful investigation, some archeological sites existing along the route remain undiscovered.

Over much of the route surveyed, the centerline was marked with stakes and a cleared lane through the woods. In some places however, the lane was overgrown and the stakes had rotted away or had been pulled up. Fortunately, on two separate occasions we met State Highway Department survey parties who showed us the location of the barely discernable centerline.

Some ambiguity existed as to the route of the Freeway immediately north of the Ashley River through the Charleston County Prison Farm. The line of stakes indicated a route along the edge of the woods in the north part of the farm but officials at the farm told us that, more recently, a line had been surveyed along the road to the pistol range. We investigated both routes.

The field survey resulted in the discovery of one previously-unrecorded site, 38CH262, and recognition that the clay pits associated with the Colonial brick kiln at Ashley Hall Plantation would be affected by the proposed construction. Also, a previously unrecognized Woodland component was discovered at 38CH109. (Fig. 1).

KNOWN ARCHEOLOGICAL RESOURCES ALONG THE PRESENTLY-SURVEYED PORTION OF THE CHARLESTON INNERBELT FREEWAY

38CH109, The Kinloch Site

The Kinloch Site was reported to the Institute of Archeology and Anthropology by Mr. Robert Parler in 1972. We observed large amounts of brick, glass, eighteenth and nineteenth century ceramics, Colono-Indian sherds, oyster shells and other debris in the northern part of an overgrown field a few hundred feet south of Savage Road. A small tributary of the Stono River lies about 200 feet south of the site and, in the woods between the field and Savage Road, is the crest of a low sandy rise. A few large brick fragments were observed in the edge of the woods on this rise. The nature and abundance of the debris in the field suggests a dump, or alternatively, the remains of a burned house containing a complete household inventory. The scattered brick suggests the possibility that brick structures, perhaps chimneys, were leveled and subsequently spread throughout this vicinity.

Recent construction activities have brought to light a prehistoric Indian component at this site. Several prehistoric Indian sherds were found in the sides of a subdivision road cut through the low rise between Savage Road and the field. We collected several more prehistoric sherds, some prehistoric lithics, and some Colonial material from the large pile of spoil dirt at the end of the subdivision road. The collections made at the time of the present survey consist of grab samples made wherever cultural materials were visible on the site.

The horizontal extent of each of the components at the site could not be determined due to the heavy ground cover over most of the area. It appears quite likely, however, that both the prehistoric and historic components may

be concentrated on the high wooded area to the north of the field, exactly on the centerline of the Freeway route.

The prehistoric ceramics were quite varied and suggest occupation during a number of prehistoric culture stages. They include 1 fragment of a perforated "baked clay object," 1 fiber tempered sherd, several punctated and plain sherds of the Thoms Creek Ware group, 2 sherds with scraped interior surfaces suggesting affiliation with the Cape Fear Ware group, 2 Wilmington Fabric-or Cord-marked sherds, and a few coarse sand tempered plain sherds. The prehistoric lithics include 1 possible stemmed arrow point fragment and a number of biface thinning flakes. As it seems quite likely, the prehistoric component at this site is concentrated on the high ground in the woods, it may have been relatively well protected from modern agricultural disturbance.

The sherd sample from this site represents 2 major stages in the prehistory of the South Atlantic coast. The fiber tempered and Thoms Creek Ware group sherds indicate occupation during the second millenium B.C., if not earlier. The Wilmington sherds and the possible Cape Fear sherds suggest occupation in the middle or latter parts of the first millenium A.D. (South 1973). It should be emphasized, however, that the sherd sample is quite small and may not represent the total range of ceramic variability at the Kinloch Site. The baked clay object is similar to specimens found at Charles Towne Landing and considered by South (1971 - Figures 42 & 43) to date to the second millenium B.C.

The historic material includes a number of artifact classes suggesting that the initial occupation was in the eighteenth century. The grab sample collected mainly from the north edge of the field includes several sherds of lead glazed yellow slip ware, Westerwald stoneware, oriental porcelain, and

light yellow creamware. Also collected were single sherds of North Devon gravel tempered ware, molded salt glazed stone ware, Nottingham ware, pearlware, and Astbury ware (Noël Hume 1970; Miller and Stone 1970). A number of fragments of white kaolin smoking pipes and green glass bottles were found. Numerous sherds of fine sand-tempered Colono-Indian Ware were also collected.

The density of eighteenth century material on the site suggests prolonged and intensive habitation during the eighteenth century. The presence of sherds of white-ware and other nineteenth century ceramics suggest that the eighteenth century house which presumably stood on the site may have been occupied well into the nineteenth century.

38CH262, the Dog Pound Site

The Dog Pound Site is a scattering of Colonial and Colono-Indian cultural material in a cultivated field on a high, well-drained area beside a small tidal creek which flows into the Ashley River. The site is on the Charleston County Prison Farm, about 200 feet southwest of the County dog pound.(Fig. 1).

There is a large quantity of small, eroded brick fragments scattered over a large area but no intact structural remains were observed. Some nineteenth and twentieth century debris is present in the site area. A small area about 20 feet in diameter produced a large amount of Colonial glass and ceramics including about a dozen fragments of white kaolin smoking pipes. This area is interpreted as a dump.

In addition to the pipe fragments, the eighteenth century material from this site includes sherds of Westerwald stoneware, lead glazed yellow slip ware, porcelain, and 11 sherds of Colono-Indian Ware. Green glass bottle fragments were also quite plentiful. Three pieces of probable English flint were found but none were recognizable as fragments of gun flints. A prehistoric

component at this site is suggested by 2 sherds of coarse sand tempered pottery and a single biface thinning flake of heat treated chert.

The historic artifact assemblage suggests a mid-eighteenth century date for the initial occupation of site 38CH262. The brick fragments and the presence of a defined dump area suggest that a permanent structure stood on the site.

This site is over 200 yards east of the presently-staked highway centerline. If, however, the route will approximately follow the present road to the pistol range--as indicated by the prison farm officials--all of site 38CH262 will be in the right of way.

38CH263, Ashley Clay Pits Site

Site 38CH263 consists of a group of large borrow pits attributed by Mr. Robert Parler (I.A.A. site files) to extraction of clay during Colonial times for the manufacture of bricks at the nearby brick kiln of the Ashley Hall Plantation (site 38CH17). The pits are interconnected and cover an acre of more. They are overgrown with timber, indicating considerable age, and there is some standing water in the lower portions of the pits.

The site is on a presently wooded area on the edge of a tidal marsh. No Colonial artifacts were found in the immediate vicinity, perhaps due to the heavy ground cover, but some brick fragments were observed in the general area. The centerline of the proposed beltway route passes through this area of pits.

Other Data

In addition to the above sites, a few other indications of relevant past activity were observed along the right-of-way:

1. A single sherd of Colono-Indian Ware was observed along the edge of a borrow pit about 200 yards north of Savage Road.

2. Scattered oyster shell, suggesting sparse Indian habitation, was observed on the point of high ground on Bull Creek at the edge of the marsh just south of where the Freeway route crosses the Ashley River. A single prehistoric Indian, coarse, sand tempered, sherd was found about 200 yards to the southeast.

3. Scattered early nineteenth century ceramics and oyster shell were observed on the grounds of the pistol range at the Charleston County Prison Farm.

DISCUSSION: SIGNIFICANCE OF THE RESOURCES

Summary of Project Impacts

The survey just described indicates that the construction of the 10 miles of Freeway presently under consideration would result in the destruction of 1 prehistoric Indian component and 3 sites of eighteenth century Colonial occupation. It can also be predicted that the indirect effects of the Freeway construction would include accelerated construction of gas stations, shopping centers, residential areas and other urban growth along the Freeway route. This, of course, would entail destruction of many additional archeological sites.

Given our present limited knowledge of both the prehistoric and historic archeological resource bases in the Charleston area, it is impossible to reliably assess the significance of a given site relative to other sites in the region. In the following discussion of significance, then, sites will be evaluated primarily in terms of their estimated potential to yield data relevant to current research problems in the archeology of the region.

Prehistoric Occupation at the Kinloch Site, 38CH109

The collections made at 38CH109 indicate prehistoric Indian occupation during at least 2 major stages in the prehistory of the South Carolina coast. The Thoms Creek or Awendaw Ware group ceramics and the fiber tempered sherd

and baked clay object indicate occupation probably during the second millenium B.C.; the Wilmington and possible Cape Fear ceramics suggest an occupation during the middle to latter parts of the first millenium A.D. Though these occupations may be as much as 3,000 years apart, they are both included by Milanich (1972: 112-114, 1973: 51-53) in the Coastal Tradition. Milanich hypothesizes that the Coastal Tradition represents a continuity in population and basic lifeway adapted to the biotic resources of the Coastal biome--and possibly the Coastal-Pine Barrens ecotone--from at least the time of the earliest fiber tempered pottery, before 2,000 B.C., until the apparent development of a horticultural Mississippian lifeway in parts of the region during the Savannah Period, after about A.D. 1,000. The distribution of sites assignable to the Deptford Phase within the Coastal Tradition encompasses not only the Coastal biome but also some of the larger stream valleys within the Pine Barrens. Milanich (1972: 111-112, 1973: 56) suggests that this distribution reflects transhumance, the seasonal movement of the population for optimal exploitation of seasonally available resources within a territory. Caldwell (1958: 14) notes that even into historic times, some of the Indian groups of the South Atlantic coast made seasonal movements into the interior.

Investigation of the prehistoric components at 38CH109 would probably yield settlement and subsistence data pertinent to testing Milanich's hypothesis about Coastal Tradition lifeways. Some questions which might be partially answered by excavations at this site are: Was this the site of prolonged habitation or merely sporadic camping? What maintenance activities were carried out at this site, and what plant foods were being utilized by the prehistoric inhabitants of the site? Relevant classes of data would include the spatial patterning in ceramics and lithics; proportions of various classes

of lithic, and perhaps shell, debitage; subsurface features such as post holes, hearths, and refuse filled pits; and charred floral material. Faunal material tends to be poorly preserved in non-shell midden sites in the region due to prevailing acid soil conditions but recent research by Michael Trinkley (1975, personal communication) at a non-shell midden site on the South Carolina coastal plain indicates that charred floral material and midden staining in features may be well preserved in such sites.

It is unlikely that stratigraphic separation of the Fiber Tempered Horizon material and the late Woodland material will be possible at 38CH109. There may be, however, differences in the horizontal distribution of the two components, and features associated with each component may be distinguishable. The presence of pottery and the baked clay object suggests fairly permanent habitation and whole-kin group activity. It seems quite likely that archeological evidence of permanent structures, perhaps similar to the Deptford house excavated by Milanich on Cumberland Island (1972: 62-73, Figure 11) may be present.

With consistent application of various data recovery techniques and appropriate sampling strategies, it may prove possible to measure change in a number of cultural variables--consumption of acorns, for instance through time at the Kinloch Site. Thus it might be possible to partially test Milanich's (1973: 55-56) hypothesis of continuity and change within the Coast Tradition. Of course, such hypotheses cannot be confirmed or disconfirmed within the context of a single site but research at 38CH109 could test the implications of hypotheses in a single case and identify relevant archeological variables for future research on this problem. The site will undoubtedly be capable of producing data informative of camp or community patterns, techno-functional patterns, and site environment relationships. Such data are known

to be fruitful for the formulation of hypotheses about hunting-fishing-gathering adaptations world-wide. Some specific research strategies for this site will be outlined below in the "Recommendations" section of this report.

Colonial Archeology; the Eighteenth Century Components in the Right-of-Way.

On the basis of available data, the historic components at 38CH109 and 38CH262 seem to represent similar cultural behavior at approximately the same time. The presence of numerous brick fragments and habitational debris suggests that both sites represent locations of dwellings, probably associated with farms or plantations. The ceramics suggest a date in the mid-eighteenth century as at least the beginning date of these occupations. No documentary research relative to these sites, however, has yet been carried out.

Both of these sites have been wholly or partially subjected to cultivation so any structural remains in the top 0.5 foot of the site may be disturbed. Investigation of the horizontal distribution of various classes of material in this upper zone, however, might still yield meaningful patterning (cf. Redman and Watson 1970, Goodyear and Anderson in preparation). At site 38CH109, the initial stage of sampling of both the historic and prehistoric components could proceed simultaneously.

These sampling programs could be expected to yield data pertinent to a number of research goals. First, data on the spatial distribution of historic artifacts, brick, ceramics, glass, metal etc., might delineate functionally distinct areas of the site. Some areas might be dumps, others might have high concentrations of architectural materials such as nails and window glass. Sparse scatters of ceramics, bottle glass, etc., would be interpretable as representing primary refuse where materials were discarded at the location

of use (Wilkins, Hunter and Carrillo, 1975). Based on surface distributions of material and limited subsurface sampling, more extensive excavation could be undertaken to expose and more thoroughly sample such subsurface features as foundations, refuse pits, and privey pits.

Other potential research problems would relate to the social composition of the groups represented. If these sites, in fact, represent plantations, living areas of owners and slaves might be distinguishable archeologically.

One of the major analytical questions in the Colonial archeology of South Carolina is the meaning of the "Colono-Indian ceramics" found on eighteenth century sites. Trade of aboriginally-made ceramics to colonists has been documented as beginning in the seventeenth century (Baker 1972: 8-10, South 1969: 18) and is known to have become a major economic activity of the Catawba by the early nineteenth century (Baker 1972: 11-16). Large amounts of Colono-Indian Ware were found in both British and American contexts at Fort Moultrie near Charleston (South 1974: 181-188) and quantities of this ware have been found in mid-eighteenth century context at Brunswick Town and Bath in North Carolina (South 1960: 55-63), at Charles Towne Landing (South 1971: 102) and elsewhere in the southern Colonies. Noël Hume (1962: 12) and South (1974: 187-188) have suggested Colono-Indian pottery was largely purchased and used by persons of low socio-economic status such as slaves, or possibly, in the case of Fort Moultrie, enlisted men in the American and British armies. Baker (1972: 13-14), on the other hand, suggests that the use of Indian-manufactured pottery cross-cut class and racial lines and that these vessels may have even been preferred for the preparation of certain dishes. It is possible that these alternative hypotheses would be testable with archeological data.

The samples collected at 38CH109 and 38CH262 suggest that large quantities of Colono-Indian sherds are present at both sites. The distribution of Colono-Indian sherds at these sites may prove to be one of the more useful indicators of social differentiation among the past inhabitants and serve to identify living and refuse areas associated with each group. In any event, intensive investigation of these sites would probably yield much badly-needed information on the function of Colono-Indian ceramics in mid-eighteenth century society in the southern Colonies.

Artifact data from these two sites might be used to partially test the applicability to Colonial society in South Carolina of Deetz's (1972) model of ceramics and Colonial lifeway change at Plymouth, Massachusetts. Such data would also be useful in testing and further refining South's (n.d.) Carolina Artifact Pattern.

It should be emphasized that no previous archeological research in the South Carolina coastal area has been directed specifically toward elucidation of settlement variability and relating this variability to understanding Colonial society as a functioning social system. If extensive documentation pertinent to these sites exists, archeological investigation would be an excellent opportunity to establish correlates between kinds of behavior and social divisions recorded historically and the content and structure of the archeological record. In this aspect of the historic study of Colonial society, as in many other aspects, archeological and documentary research will prove the complementary lines of evidence.

The old, wooded, borrow pits recorded during the present survey as site 38CH263 have been attributed to clay extraction for brick manufacture at the nearby Colonial kiln site associated with the Ashley Hall Plantation. This, however, has not been firmly established. To do so would require either

excavation or documentary research, or both.

To the writer's knowledge, no archeological work in the South Carolina coastal area has been directed toward brick kilns or any other industrial or manufacturing sites. The historical significance of the Ashley Hall Plantation has been recognized by the placement of the site on the National Register of Historic Places. If the plantation is ever investigated archeologically, some investigation of the brick kiln site might take place. Estimates of the quantity of clay extracted vs. the quantity of bricks in plantation structures would provide a measure of the extent to which the plantation may have imported or exported bricks. It is also possible that the pits might have served for refuse disposal after they ceased to be used for clay extraction.

Charleston was the initial English settlement in South Carolina and, from the time of its founding in the late seventeenth century until the early nineteenth century, was the chief focus of communication, commerce, and settlement in South Carolina and much of the back country to the west and south. Though no systematic surveys of historic archeological sites have ever been carried out in this vicinity, it is probable that scores of plantation or farm sites such as 38CH109 and 38CH262--and possibly brick manufacturing sites, as well--existed in the Charleston area. It is fortunate that structures of some of these plantations have been preserved and set aside on the National Register.

We do not know, however, the extent to which these preserved sites are representative of eighteenth century plantations in the area. It is unlikely in fact, that these establishments, landmarks even in their own day, are representative of the total colonial settlement pattern in the country side around Charleston. In evaluating the sites threatened by the

Freeway, two considerations must be borne in mind: (1) There exists no archeological data base from sites of this sort in Coastal South Carolina against which to evaluate the threatened sites; and (2) these sites, in any event, should not be evaluated against the original resource base since scores of Colonial sites in the Charleston area have undoubtedly already been destroyed by urbanization and strip mining.

These three threatened historic sites, 38CH109, 38CH262, and 38CH263, represent part of a dwindling remanent of the historic archeological resource base in an area which played a key role in the early history of the southern Colonies. It is almost certain, in fact, that among the indirect impacts of the construction of the Freeway would be accelerated destruction of this remnant as accelerated urbanization takes place in the Charleston area.

No Sites Recommended to the National Register

We do not recommend any of the three sites located during the present survey for placement on the National Register of Historic Places. This decision is based on the following criteria. First, the sites have primarily a scientific value; none are known to have major historical, national, social or psychological importance. Second, although the sites may be considered to have great scientific or anthropological value, such resources would be best used in the course of an intensive scientific study which would elucidate their value to social science. Third, it is highly probable that any alternative beltway route in this locality would threaten a comparable number of similar sites.

Outline of Recommended Research

The data gathered during the present survey indicate a high probability that the three sites in the Innerbelt Freeway right-of-way could, upon

excavation, yield an abundance of archeological data. And it is probable that any other route which might be chosen would intercept a comparable number of sites. For these reasons--and because very little is known at this time about the total archeological resource base in the Charleston area--we recommend a program of intensive excavation and documentary research to mitigate the destruction of these sites. We believe that this program can and should be integrated, on a number of different levels, into a multistage framework for both prehistoric and historic research in the Charleston area (cf. Goodyear 1975, Redman 1973).

First, this 10 miles is only the first of three and perhaps four segments of the Charleston Innerbelt Freeway which will require archeological investigation. The results of research on this segment can be used to define problems and devise methods for survey and mitigation on these other segments at a later time. And the results of a completed program of research on the Charleston Innerbelt Freeway will provide a data base for planning archeological research--both of a "contract" or "salvage" nature and of a "pure research" nature--in the Charleston area.

On the intrasite level we are recommending two stages of sampling for both the prehistoric and historic sites located during the present survey. Sampling Stage I would consist of collection of data from a large number of dispersed random sampling units throughout the site area. This would serve the purpose of defining the site spatially and revealing gross patterning in the distribution and density of various classes of material and features within the site. Stage II would consist of more intensive investigation of certain areas within the site to test hypotheses generated from the results of Stage I and to investigate any functionally specialized areas which might become apparent.

It is, of course, essential that processing and at least preliminary analysis of the data from Stage I occur before the research program for Stage II is finalized. Indeed, the processing should proceed during the field work so that there could be a constant feedback of information from the laboratory to the field. It is possible that large quantities of data would be obtained during Sampling Stage I. If so, analytical techniques appropriate to the recognition of patterning in the data might include graphic techniques such as SYMAP or SYMVU computer programs or factor analysis (Redman and Watson 1970, Goodyear and Anderson, in preparation).

This generalized strategy would be appropriate to the investigation of a large variety of sites. Within this framework, the selection of specific techniques, sampling schemes and fractions, and relevant data classes is a function of the specific problems under investigation. Specific methodological recommendations for each site in the right-of-way will be presented below.

Recommendations for Investigation of the Prehistoric Components at 38CH109

The goals of the proposed research on the prehistoric components at 38CH109 would be four-fold: (1) control over the prehistoric sequence at the site, (2) reconstruction of past activities, (3) recovery of environmental data, and (4) comparison of components along a number of behavioral dimensions. The methods outlined here are related to these goals.

Sampling stage I would consist of excavation of 36 unaligned randomly-placed 5 x 5 foot units in a 300 x 300 foot area stratified by a frame of 50 x 50 foot arbitrary strata for purposes of dispersal. This would constitute a 1% sample of the 300 x 300 foot area, hopefully adequate for gross parameter estimation and pattern recognition and for the discovery of all significant prehistoric components. This excavation would probably best be carried out in

arbitrary levels with the use of 1/2-inch mesh screening. This screen size can be varied according to the level of sampling required; 1/2-inch is a good size for extensive excavation designed to both explore and collect usable data.

Relevant data at this sampling stage would include evidence of such aboriginal features as pits and post holes; ceramic materials such as sherds and "baked clay objects;" and lithic (and perhaps marine shell) tools and debitage. In addition, a series of soil samples for chemical and physical analysis should be taken to provide for analysis of chemical patterning in the site which may refer to chemical residues produced from various subsistence related activities (Eidt 1974). This sampling program should also include systematic collection of historic archeological data and would thus also constitute the Stage I sampling of the historic component at 38CH109.

Stage II would consist of more intensive excavation of certain portions of the site, which on the basis of the Stage I data, seem to approximate past behavior spaces (cf. Schiffer 1975). We would, in other words, be trying to collect archeological data which is predicted to be produced and formed according to expected activities. This investigation might proceed by more intensive sampling or by stripping of large areas, the latter especially if house remains are discerned. It is recommended that at least 5,000 square ft. be investigated at this level of intensity. This figure is arrived at by estimation of the area required to expose two house patterns and associated activity areas on the order of known Deptford (Milanich 1972: Fig. 11) and Weeden Island (Milanich 1974: Fig. 7) houses. Based on ceramics and the baked clay object, there is a strong probability of a camp pattern on this ridge. Given the two different cultural periods (Thoms Creek and Wilmington)

there is a strong possibility of two or more such community or camping patterns. Therefore, the design should aim for a conservative two camp pattern which should be elucidated through the excavation of 5,000 square ft. at the site.

In these stripped or intensively sampled areas, screening through 1/2-inch mesh would probably be an adequate recovery technique for most of the fill. A systematic series of samples within the area, however, should be water-screened through window-screening or some other comparably fine mesh for recovery of small-scale charred floral material and lithic micro-debitage. Experiments in the field would establish the amounts of soil per sample needed for recovery of adequate specimens of these classes. In addition, samples of fill from all features should be water floated (Struever 1968) for more complete recovery of charred floral material. Additional soil samples should be taken for chemical and physical soils analysis and for potential recovery of preserved pollen.

Though it would perhaps be premature--at this stage in archeological research on the South Carolina coast--to outline hypotheses and test implications in this context, these sampling strategies and recovery techniques should produce much data relevant to the research problems outlined above. The Stage I sampling should produce a reliable sample of sherds and other culturally diagnostic artifacts indicating the approximate horizontal distribution of components within the site. It should also produce some minimal information on past behavior spaces, number, and distribution of structures and other features. Lithic and shell debitage, collected during both sampling stages might also provide a measure of the degree to which the site was a base settlement <u>versus</u> an extraction camp.

Data on structures and other features would be relevant to inference of a number of important systemic variables. The density, distribution and size of house remains associated with each component would be an indicator of the social composition and organization of the past communities that utilized the site. Of particular interest would be the possible presence of pits attributable to food storage, a cultural variable which may be causally related to demographic change and the development of sedentism (cf. Binford 1968).

Environmentally relevant data would be relevant to inference of both patterns of site utilization and the nature of past environments. Physical and chemical soils analysis can be an indicator of both cultural and non-cultural variables (cf. Cook and Heizer 1975, Butzer 1964, Ahler 1973, Eidt 1974). Information on floral utilization and subsistence can be derived from charred floral remains recovered from hearths and pits. In addition, floral data can be an indicator of seasonality of occupation. Pollen is typically poorly preserved in sites in eastern North America but certain special depositional environments--which are at present poorly understood--can result in relatively good pollen preservation (King, Klippel, and Duffield 1975). It is recommended that soil samples from this and other sites be analyzed for the presence of pollen in hopes of eventually acquiring a data base on which to generate predictions for preservation versus non-preservation of pollen in archeological sites on the South Atlantic coast.

Recommendations for the Investigation of Two Colonial Settlements

We recommend intensive archeological investigation of the two apparent eighteenth century plantation or farmstead sites located in the Freeway right-of-way, the prehistoric component at the Kinloch Site, 38CH109, and the Dog Pound Site, 38CH262. Some preliminary suggestions for sampling these sites

will be outlined at this time.

We feel that this program of research should be designed and carried out by an archeologist with special interests and expertise in Colonial archeology and Colonial history. The research program should, if at all possible, be well integrated into an on-going study of Colonial society in the Charleston area. It should include: (1) intensive documentary research, and (2) the writing of a research design for Colonial archeology in the country-side around Charleston. These portions of the research should take place before the plans for Stage II investigation of these sites are finalized.

Given that these two sites lack standing structures and have been wholly or partially subjected to cultivation, the Stage I sampling strategy outline above would probably be useful for delineating the boundaries of the sites, locating dumps and scatters of primary refuse, and locating concentrations of structural debris such as brick fragments, window glass fragments, and nails. Such sampling might also reveal differential distribution among various classes of material reflecting habitation areas associated with different social segments at the settlements and shifting of the location of activities through time.

As noted above, Stage I sampling of the historic component at 38CH109 could be readily combined with the Stage I sampling of the prehistoric component. At site 38CH262, which is cleared and readily cultivated, it would be possible to sample the site with a program of intensive controlled surface collection. This program of intensive surface collection could be followed by a series of test pits corresponding in location to the surface collection units.

This would provide an empirical basis for estimating the reliability of controlled surface collections as an indicator of the subsurface of historic sites (cf. Redman and Watson 1970, Goodyear 1975). This is a technical question which would be of considerable importance to historic archeological research in this area.

Recommendations for the Investigation of the Ashley Clay Pits

Site 38CH263, the probable clay pits for the eighteenth century brick kiln at the Ashley Hall Plantation, could probably be investigated adequately with a minimal amount of research funds and energy. The pits should be carefully mapped in such a way that the amount to clay extracted from them could be estimated. It would also be useful to have information on the natural stratigraphy of the bluff on which the site is located. A few strategically-placed back hoe trenches would determine whether or not the abandoned clay pits had ever been used for refuse disposal.

The bottoms of the pits are only slightly above sea level and are apparently water-filled much of the time. Because of the lack of oxygen in such waterlogged depositional environments, there is a high probability that pollen would be preserved in silt deposits at the bottom of these pits. A series of soil samples from the pits should, therefore, be taken and analyzed for the presence of pollen. Representative pollen profiles from the early eighteenth century would provide a useful baseline for the interpretation of pollen samples from prehistoric sites. A series of eighteenth century pollen profiles might also provide a valuable record of ecological change in the Charleston area during Colonial times.

Scheduling of Proposed Mitigation Research

Though the exact budgetary and time requirements of the proposed mitigation work cannot be specified at this early stage, it is suggested that the

completion of this program of research may require as much as one year. A month or more should be devoted to the document search and formulation of research designs before the Stage I sampling is initiated. It is possible that Stage I sampling at both the Kinloch Site and the Dog Pound Site would run concurrently for four or five weeks.

Following the Stage I sampling, a minimum of six weeks of analysis of the resulting data would be required for finalization of the research designs for the Stage II investigation at these sites. The Stage II sampling, in turn, would require three or four months of field work at each site. The suggested field work at the Ashley Clay Pits Site, however, could probably be accomplished in a few days. Following the completion of all of the field work, approximately six months will be needed for the analysis of the data and for the writing and editing of the final report.

In total, then, at least a year should be allowed between the time funds for mitigation become available and the due date for the final report. Data gathering in the field would take place only within roughly the first half of this year. A minimum of seven months, therefore, should be allotted between the beginning of this program of archeological research and the beginning of construction on this segment of the Charleston Innerbelt Freeway.

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