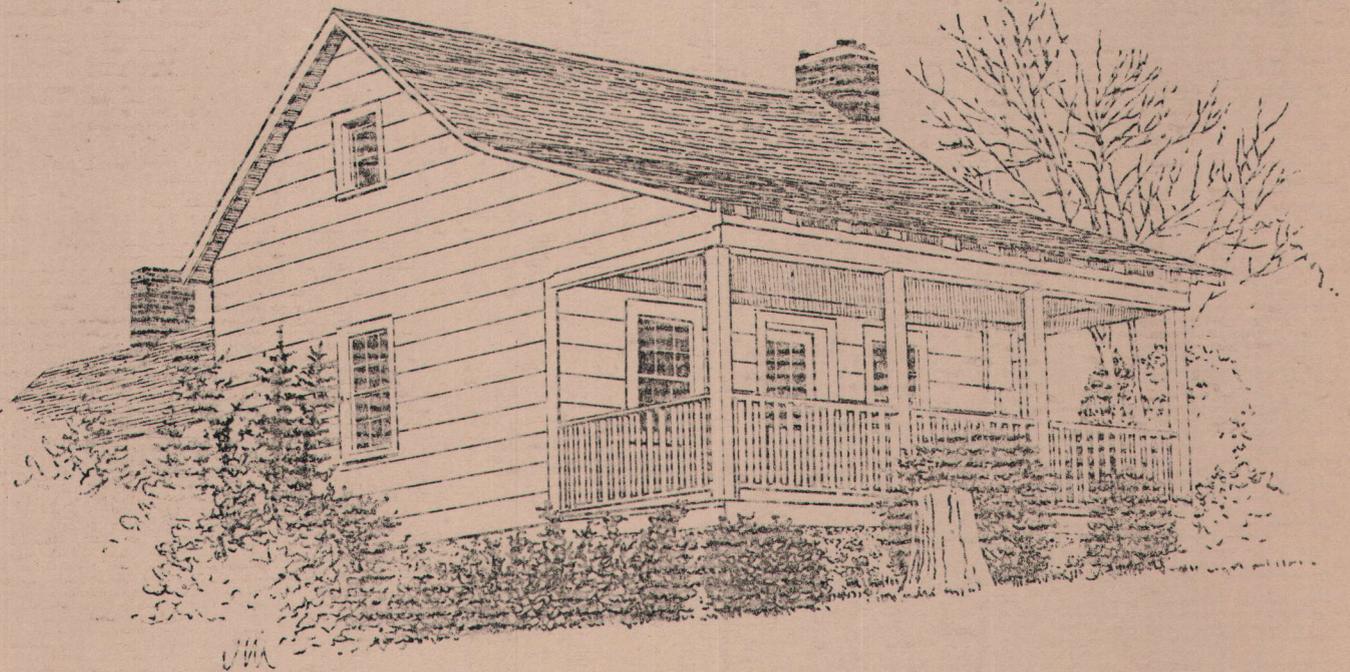


**A PHASE II ARCHAEOLOGICAL  
RECORDS CHECK  
AND SURVEY OF A PROPOSED  
KERNERSVILLE, NORTH CAROLINA  
LANDFILL SITE**

*Cameron Johnson*  
Fac/Permi/Co ID # 34-06 Date 8/9/13 Doc ID# DIN



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OF A PROPOSED KERNERSVILLE, NORTH CAROLINA  
LANDFILL SITE**

**Submitted to:  
WASTE MANAGEMENT OF NORTH AMERICA, INC.**

**Submitted by:  
GARROW & ASSOCIATES, INC.**

*Lisa D. O'Steen*

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**January 7, 1987**



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34-06 8/9/83  
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## TABLE OF CONTENTS

CHAPTER	PAGE
ACKNOWLEDGEMENTS	i
TABLE OF CONTENTS	ii
LIST OF FIGURES	iv
LIST OF TABLES	v
I. INTRODUCTION	1
II. METHODS	4
Literature Search	4
Field Methods	4
Laboratory Methods	5
III. ENVIRONMENTAL CONTEXT	7
Physiography	7
Soils	8
Climate	9
Flora and Fauna	9
Paleoenvironment	10
Full Glacial	10
Late Glacial	11
Post Glacial	11
Historic	12
Summary	12
IV. CULTURAL HISTORY	14
Prehistoric Overview	14
PaleoIndian	15
Archaic	18
Woodland	22
Mississippian	24
Historical Overview	25
Summary	32
V. RESULTS	33
FY86-1 (Field Site 1)	33
FY86-2 (Field Site 2)	38
FY86-3 (Field Site 3)	42
FY86-4 (Field Site 4)	46
FY86-5 (Field Site 5)	49
FY86-6 (Field Site 6)	49
FY86-7 (Field Site 7)	55
Summary	62

VI. SUMMARY AND RECOMMENDATIONS	64
REFERENCES CITED	67
APPENDIX I. RESUME OF KEY PERSONNEL	
APPENDIX II. LITHIC ANALYSIS FORM	

## LIST OF FIGURES

FIGURE	PAGE
1. Kernersville Landfill Survey-Project Area Map showing Topography, Vegetation, and Archaeological Site Locations	2
2. Site 1, looking Southwest	34
3. Site 1, Plan Map	35
4. Selected Artifacts from the Kernersville Survey	36
5. Site 2, looking East	39
6. Site 2, Plan Map	40
7. Site 3, looking North	43
8. Site 3, Plan Map	44
9. Site 4, looking Northeast	47
10. Site 4, Plan Map	48
11. Site 5, looking East	50
12. Site 5, Plan Map	51
13. Site 6, looking South-Southeast	52
14. Site 6, Plan Map	53
15. Site 7, Front of Potentially Significant Main Log Structure, looking North	56
16. Site 7, West side of Potentially Significant Main Log Structure showing Mid-Twentieth Century rear additions and cinderblock outbuilding, looking East	56
17. Site 7, Barns across road from Main Log Structure, looking Southeast	57
18. Site 7, Log Tobacco Barns, looking Northwest	57
19. Site 7, Potentially Significant Partial Log and Wood Frame Structure, looking East	58
20. Site 7, Twentieth Century cinderblock outbuilding and wooden barn, looking Northeast	58
21. Site 7, Plan Map	59

## LIST OF TABLES

TABLE

PAGE

1. Identified Sites, Identified Components, and Recommendations  
from the Kernersville Landfill Survey

65

## I. INTRODUCTION

A Phase II Archaeological Records Check and Survey of a Waste Management of North America, Inc. proposed landfill site near Kernersville, North Carolina was carried out between November 17 and 20, 1986 by Garrow & Associates, Inc. The study area comprises 100 acres along a 0.4 mile stretch of a tributary of East Belews Creek. The 100 percent field survey coverage of this area involved deep shovel testing along alluvial features and in wooded areas, and surface collection of cleared/fallow fields, tree falls, bank cuts, eroded areas, and road cuts that had surface exposures. Screened shovel tests were excavated in each discovered site. The field crew consisted of Field Director and Principal Investigator Lisa O'Steen, and technician James Errante, of Garrow & Associates, Inc., Atlanta, Georgia. Laboratory analysis and North Carolina State site forms were completed by Marian Roberts of Garrow & Associates, Inc.

The field phase identified one historic site, and six prehistoric archaeological sites, one of which was an isolated find (Figure 1). One possibly eighteenth through twentieth century historic farmstead was identified. Four prehistoric Woodland, one prehistoric Early Archaic, and two unidentified prehistoric lithic components were also identified on these sites. The horizontal extent and vertical character of each site was assessed in the field (when possible). Because of erosion, borrowing activities, agricultural terracing, and pond construction, preservation of prehistoric sites in the study area was poor, and none of the discovered prehistoric sites contain potentially significant archaeological resources. Thirteen standing structures are also located in the study area, consisting of eight barns/sheds, three modular homes, and two other houses. Eight of these structures, a log house, two log barns, and five other associated outbuildings, are potentially significant. Additional architectural and historical documentation, and archaeological testing, is



USGS TOPOGRAPHIC QUADRANGLE MAP, 7.5' SERIES - BELEWS CREEK, N.C. QUAD

**FIGURE 1**  
Project Area Map with Sites.

- PROJECT AREA BOUNDARY
- ▣ PRIVATE LAND LOTS WITHIN PROJECT AREA
- ▨ BORROW AREAS
- PROJECT SITES (SI - S7)
- ▨ SHADED AREAS SHOVEL TESTED
- UNSHADED AREAS SURFACE COLLECTED

recommended for these structures. Four of the houses and one barn appear to be less than 50 years old, and are not considered significant. All standing structures in the study area were documented photographically.

The report is organized into four major data categories. Chapter II, Field and Laboratory Methods, presents research methods employed on this project.

Chapter III, Environmental Context, discusses the physiography, climate, fauna and flora, paleoenvironment, and soils that are present in or near the study area. This section was derived from an environmental survey conducted by Garrow & Associates, Inc. (Bauer 1986) simultaneously with the archaeological survey, and from published data.

Chapter IV, Prehistoric and Historic Cultural Context, presents an overview of prehistoric and historic research in Piedmont North Carolina. The data presented was gleaned from published data collected during a background literature and records search at the North Carolina State Site Files at the Archaeology Branch, Division of Archives and History, and files at the State Historic Preservation Office in Raleigh, North Carolina. This chapter also contains a discussion of temporal placements of prehistoric components, based on research conducted in the Piedmont of North Carolina.

Chapter V, Results, describes and discusses the cultural properties and isolated find identified during this study. Temporal placement, functional dimensions, spatial distribution, environmental location, and degree of preservation are addressed in this discussion. Criteria for eligibility to the National Register of Historic Places are included under each appropriate site or isolated find. Potential or current sources of adverse impact are also presented in this chapter.

## **CHAPTER II. METHODS**

### **LITERATURE SEARCH**

Prior to field research, the North Carolina State Site Files at the Archaeology Branch, Division of Archives and History in Raleigh, North Carolina were checked for previously recorded archaeological sites and publications pertaining to sites in the study area. In addition, other published books and papers and the results of unpublished studies were consulted.

### **FIELD METHODS**

One hundred percent survey coverage of the study area was accomplished using 30 cm diameter screened shovel tests and surface inspection. Approximately half of the study area is forested, with the remainder in fallow, overgrown fields, pasture, or residential lawns. While lack of surface exposure in wooded areas necessitated screened shovel testing at 30 m intervals, the fallow fields provided enough ground surface exposure for surface collection of 10 m transects. Shovel tests were excavated at 30 m intervals along a tributary of East Belews Creek to determine if buried cultural deposits were present in alluviated areas. Screened shovel tests, spaced at 30 m intervals, were excavated in all sites, to determine stratigraphy, soil types, and degree of site preservation. Soil types and Munsell soil colors were recorded for all shovel tests. Since no artifacts were recovered from shovel tests, site boundaries were determined from the extent of surface artifacts. The locations of shovel tests were recorded on sketch maps of each site.

Cultural material from each site was bagged separately. Temporary field numbers were assigned to all sites, and their locations were recorded on the 7.5 Minute USGS topographic map of Belews Creek Quadrangle. All sites and standing structures in the study area were photographed in black and white and color print film.

## LABORATORY METHODS

### Lithic Analysis

A detailed analysis of lithics should allow for the reconstruction of ordered stages of lithic production, use, and discard processes. Different stages have different outputs that can be modified or discarded in different ways. Importantly, these outputs, and variations in the process, can be compared to indicate differential adaptations. Lithic analysis procedures were developed to recognize and characterize the specific outputs of expected stages. Blanton (1985: App. F) has developed a general model of lithic production, use, and discard that was used to allow inferences of technical level and adaptive strategies, as well as activities carried out (site function). A number of detailed morphological/functional categories were developed to provide standard data that could be used to evaluate this or other similar models. These categories and attributes are presented in Appendix B. Special forms appropriate to the analysis were designed, and all lab personnel were trained to recognize these attributes.

For purposes of this study the terms primary, secondary, and tertiary are used to classify the amount of cortex present on flakes. A primary flake contains 90 percent or more cortex, a secondary flake exhibits 25 to 90 percent cortex, and a tertiary flake exhibits less than 25 percent cortex. Heat alteration is not listed in artifact inventories unless present. Metric measurements are used for all lithic attributes.

## **Ceramic Analysis**

Attributes of ceramics, such as temper, vessel shape (based on rim form), and vessel size were recorded when possible. The sample of ceramics from the survey was too small to make any significant conclusions about vessel shape and function. At this level of analysis, the major focus is on identification of the ceramic types present, and their comparison with known typologies for the Piedmont (e.g., Claggett and Cable 1982; Claggett et al. 1978; Scheitlin et al. 1979; Coe 1964).

## **Historic Artifact Analysis**

Laboratory analysis focused primarily on dating of recovered materials. For historic ceramics the primary tool utilized was the Mean Ceramic Date formula, as developed by Stanley South (1977). This formula uses mean manufacture dates in a regression analysis that provides a mean occupation date for a given ceramic assemblage. Techniques of glass manufacture and various marks left by different techniques can be applied to the dating of glass containers; Toulouse (1971) was used as a standard for dating glass. The historic materials recovered consist of historic ceramics and glass fragments; no historic metal artifacts were recovered during the survey.

## CHAPTER III. ENVIRONMENTAL CONTEXT

This chapter provides information on the physiography, paleoenvironment, soils, climate, and floral and faunal resources present in or near the survey area. Paleoenvironmental studies from locales in South Carolina, Georgia, and Tennessee were consulted [Delcourt et al. (1980), Watts (1971, 1975, 1980), Wright (1971), Whitehead (1965, 1973), Carbone (1974), Olafson (1971), and Bryson et al. (1970); Delcourt and Delcourt 1983, 1985], and had to be generalized to the study area.

### PHYSIOGRAPHY

The survey area is located in eastern Forsyth County in the Piedmont Plateau region of North Carolina, near the divides between the Yadkin, Dan, and Cape Fear Rivers. The uplands are cut by the larger streams into major divides, that are in turn subdivided by the smaller streams, until the whole region is a series of ridges, the surface varying from undulating to gently rolling, with well-rounded hills. The Piedmont extends from the mountains to the Fall Line, and has an average width of 125 miles. The elevation ranges from 1,000-2,000 feet AMSL in the west and 200-400 feet AMSL in the east (Stuckey and Steel 1953). The elevation in the study area (the western Piedmont) ranges from 740 to 840 feet AMSL, and consists of ridgetop, ridgeslope, and stream floodplain areas. The study area is located along a permanent tributary of East Belews Creek. Permanent and intermittent streams in the study area are characterized by frequent riffles and pools with silty or sandy bottoms.

North Carolina has been divided into two major geologic divisions: (1) the eastern Coastal Plain, and (2) the western Piedmont and Mountain Regions. The Piedmont is underlain in general by gneisses, schists, slates, and metamorphosed volcanics into which have intruded at many places minor masses of basic igneous rocks (Stuckey and Steel 1953).

## SOILS

Soils in the study area belong to the Wilkes-Enon and Madison-Pacolet Associations. Wilkes-Enon soils are well drained, brownish, loamy, upland soils that have a yellowish clay subsoil. Madison-Pacolet soils are also well drained, reddish and brownish, loamy, upland soils with a reddish clay subsoil (Zimmerman 1976). Poorly drained Chewacla and Wehadkee soils occur in the small floodplain area along the tributaries of East Belews Creek. The sites recorded in the study area are located on Vance, Madison, and Wilkes sandy loam with 6 to 10 percent slopes (Zimmerman 1976:16, 23, 28).

## CLIMATE

The average daily maximum temperature is 70 °F and the average minimum temperature 49°F in Forsyth County (Zimmerman 1976:63). The average length of the frost-free season is 200 days, lasting from the second week in April until about November 1. Some snow falls in Forsyth County every winter, but total amounts range from one inch to two feet, with an average of nine inches per winter. The average total rainfall is 44.2 inches per year. There are no distinct wet or dry seasons, and measurable rain falls on an average of one to three days per week (Zimmerman 1976:62-63).

## FLORA AND FAUNA

GP-JO-05 is situated within the Oak-Pine Forest zone that is characteristic of the southern Piedmont (Braun 1950:213). Oaks and hickories are prevalent in this forest, with white oak being the most common species. Pines are also widespread in this zone (Braun 1950:36,259). The present forest vegetation differs substantially. The uplands in the study area are characterized today by former agricultural land that has reforested, primarily in shortleaf, loblolly, and Virginia pine and small upland deciduous trees, with flowering dogwood, honeysuckle, and greenbriar in the understory (Webster et al. 1985). Some mammals characteristic of these areas are white-tailed deer, gray squirrels, southern flying squirrels, eastern chipmunks, gray foxes, raccoons, short-tailed shrews, and white-footed mice (Webster et al. 1985:6). The old field and forest edge habitats that are prevalent in the lower elevations of the study area today support many species of mammals, including white-tailed deer, striped skunks, eastern cottontail rabbits, and woodchucks (Webster et al. 1985:8). The fallow agricultural fields in the study area are utilized for tobacco production.

A variety of reptiles, birds, and fish would also be available in these habitats. Reptile species include frogs, toads, a variety of turtles, and snakes. Bird species include year-round residents such as the pied-billed grebe, wood duck, ruffed grouse, common bobwhite, Cooper's hawk, red-tailed hawk, red-shouldered hawk, black vulture, American kestrel, turkey vulture, common screech owl, barred owl, barn owl, great horned owl, mourning dove, hairy woodpecker, common flicker, pileated woodpecker, red-headed woodpecker, belted kingfisher, downy woodpecker, eastern phoebe, American crow, blue jay, white-breasted nuthatch, Carolina chickadee, tufted titmouse, Carolina wren, brown thrasher, northern mockingbird, eastern bluebird, American robin, loggerhead shrike, red-winged blackbird, brown-headed cowbird, European starling, common grackle, eastern meadowlark, house sparrow, northern cardinal, American goldfinch, field

sparrow, rufous-sided towhee, vesper sparrow, and song sparrow (Peterson 1980:305-370). The North Carolina Piedmont is also the breeding and winter range of several other bird species (Bauer 1986; Peterson 1980:305-370). Fish species include catfishes, sunfishes, minnows, and suckers. An environmental survey of the study area documents the species expected in these habitats, and those that are documented at the present time (Bauer 1986).

## **PALEOENVIRONMENT**

Major vegetation shifts are known to have occurred in the project area, and the Southeast in general, during the past 25,000 years in response to worldwide climatic shifts. The reconstruction of extinct forest landscapes in the southeastern United States is hampered by gaps in the fossil pollen record and by extremely acidic soil conditions that limit the preservation of floral remains. Most of the data that has been recovered is geographically removed from the project area. Given these gaps in the available data, it is only possible to describe general trends in basic forest composition for the project area. These climatic and vegetational changes are discussed below in terms of four major time divisions. This discussion is based on work by Delcourt and Delcourt (1983), Watts (1971, 1975, 1980), Wright (1971), Whitehead (1965, 1973), Carbone (1974), Olafson (1971), and Bryson et al. (1970). The results of this research, primarily dealing with pollen rain from various strata of lake sediments, can be interpolated to generally characterize the prehistoric environment in the study area.

### **Full Glacial**

The full glacial period of 23,000 to 13,000 B.C. was characterized by a boreal, northern hardwood forest over most of the Southeast. While deciduous trees, including oaks, were present, pines and spruce were dominant. Temperatures were about 15 degrees Centigrade lower than today during

winter, and moisture levels were somewhat lower as well (Whitehead 1973; Delcourt and Delcourt 1983).

### **Late Glacial**

From 13,000 to 8,000 B.C. (the late Wisconsin glacial period), northern hardwoods (hemlock, oak, hickory, beech, birch, elm) began to replace pine and spruce, and by the end of the period were dominant and relatively stable in the Piedmont (Watts 1971, 1980). Temperatures were warming, and precipitation levels increasing (Watts 1971, 1980; Whitehead 1965; and Bryson et al. 1970).

### **Post Glacial**

The post-glacial period of 8,000 to 3,000 B.C. is characterized by continued warming, but also by an apparent drying, especially in the middle of the period. The effect and extent of this cycle, generally referred to as the Altithermal, is still debated. It was apparently not as intensive or extensive within the Southeast as in the Southwest, Plains and Midwest (Bryson et al. 1970; Watts 1975). In the Southeast, the oak-hickory forest reached its maximum in terms of pollen representation during this period (Whitehead 1963; Watts 1975).

The recent period of 3,000 B.C. to the present has witnessed a probable slight cooling and a possible increase in precipitation. Rising water tables, associated with sea rise and possible precipitation increase, may have led to an increase in lowland vegetation. Pollen studies indicate a shrinkage of the oak-hickory upland forest, with an increased mixture of pine. Stands of pure yellow pine were documented by early European explorers, although it is uncertain how much of this was maintained as subclimax by natural or Native American burning (Wharton 1978:196).

## Historic

During the historic period, poor agricultural practices contributed to erosion of soils in the Piedmont, and the Piedmont became one of the most severely eroded agricultural areas in the United States (Trimble 1974). The fertile bottomland soils were depleted first and abandoned, then the hills and ridges were cleared, farmed, and also abandoned as erosion became more and more severe. Eroding soils from the uplands filled river and stream channels with sediment, and created wet, swampy conditions in areas that had been prime agricultural land (Trimble 1974). Trimble (1974:1) estimates that the North Carolina Piedmont has lost an average of 5.5 inches of soils to erosion since the early eighteenth century.

The impact of agriculture and erosion on Piedmont archaeology is very important for understanding site discovery and degree of preservation. Many bottomland sites are now deeply buried beneath alluvium, while many upland sites have become surface scatters with little spatial integrity or associational context (Phelps et al. 1983).

## Summary

Palynological and paleoenvironmental studies in North Carolina, Georgia, South Carolina, and Tennessee indicate that between 22,000 and 12,000 years B.P. the cool, dry climate favored a mixture of northern conifers and cool-temperate hardwoods. In contrast, the early Holocene forests of the region became dominated by less mesic species of oak, hickory, and southern pine. All evidence indicates the establishment of essentially modern floral communities in the Piedmont of Georgia by 9,000 to 10,000 years B.P. However, gradual warming of the climate and increased precipitation during the Late Pleistocene and early Holocene periods favored the deciduous

elements, including beech, birch, ironwood, elm, red ash, hemlock, elder, black walnut, sycamore, chestnut, and holly.

Historic land use patterns have greatly modified the vegetation communities of the southeastern Piedmont Province (Trimble 1974); whereas major, worldwide paleoclimatic shifts caused the previously described vegetative changes. In prehistoric times, the upland hardwoods category appears stable through most of the Holocene, with variability in hardwood species composition (frequency) and in admixture of pines (Whitehead 1965; and Watts 1975). During historic times, other types of changes have resulted in the near destruction of the upland hardwoods category, and its replacement by areas of urbanization, agriculture, and silviculture.

## CHAPTER IV. CULTURAL HISTORY

### PREHISTORIC OVERVIEW

The record of prehistoric human occupation in the South Atlantic Piedmont in the general vicinity of Kernersville (Forsyth County), North Carolina, is currently known in broad outline, although there is agreement among archaeologists that the development of a culture history and sequence for the region is far from complete. Several major syntheses of the archaeological evidence for this record of occupation have appeared in recent years (Goodyear et al. 1979; Claggett 1982; Ward 1983), and it is from these sources that much of the following synopsis is drawn.

Woodall has conducted much of the prehistoric and historic archaeological work in the vicinity of the study area. These investigations include excavation of the prehistoric Donnaha Site in Yadkin County (Woodall 1984), excavation of the historic Vawter-Swaim Cemetery in Forsyth County (Woodall et al. 1983), the Randleman Reservoir survey in Randolph and Guilford Counties (Woodall et al. 1977), the Alamance County Complex 201 Facilities survey (Woodall 1976), and several small sewer and road surveys in Forsyth County. Spielman (1976) compiled data on eighty-eight Archaic Period sites in Forsyth County based on amateur collections and archaeological resurvey of thirty-three of these sites. These studies, in combination with more extensive investigations conducted in nearby portions of North and South Carolina, provide the basis for the general cultural sequence that follows. Coe's (1964) excavations at sites such as Hardaway (31St4), Doerschuk (31Mg22), and Town Creek (31Mg3), in Montgomery and Stanly Counties, just to the east of the study area, have provided information about virtually the entire span of prehistoric occupation in the region. More recent large scale survey and/or excavation

projects elsewhere in the Piedmont of North and South Carolina have complemented, and built upon Coe's seminal investigations (e.g., House and Ballenger 1976; Goodyear et al. 1979; Claggett and Cable 1982; Anderson and Schuldenrein 1985). This work, coupled with investigations in adjoining physiographic regions, such as in the Blue Ridge/Appalachian Summit area of western North Carolina (e.g., Dickens 1976, Keel 1976), and in the Atlantic Coastal Plain of Georgia, South Carolina, and North Carolina (e.g., DePratter 1979; Anderson et al. 1982; Phelps et al. 1983; Blanton et al. 1986), has permitted the development of the cultural sequence presented below.

#### PALEOINDIAN PERIOD (ca. 11,500-10,000 Before Present)

The age of the earliest human occupation of the New World is a matter of considerable controversy in American archaeology. While some investigators believe that the human occupation of the Beringia region of Alaska and the Yukon territory may date as early as 30,000 B.P. (years Before Present), at the present there is no unequivocally accepted evidence for human occupation south of the Canadian ice sheets prior to more than 12,000 years ago (Haynes 1982; Owen 1984). The first indisputable evidence for human occupation in the Southeastern United States is during the PaleoIndian era, from approximately 11,500 to 10,000 BP, with the appearance of lanceolate fluted and unfluted projectile points in the archaeological record. Most of our knowledge about the earlier part of the PaleoIndian period in the Southeast, when fluted points were the dominant form, has come from surface finds gathered by archaeologists and collectors, rather than from controlled excavations (Williams and Stoltman 1965; Brennan 1982; Meltzer 1984). Comparatively few actual sites of this period, with extensive artifact assemblages in secure context, are known from this part of the Southeast. The Thunderbird site in the Shenandoah Valley, Virginia (Gardner 1974, 1983) and the Harney Flats site near Tampa, Florida (Daniel and Wisenbaker 1984) remain

the only well-documented terrestrial sites of this time level from this general area.

Three hundred and twenty nine fluted points are currently reported from North Carolina; however, none were reported in Forsyth County (Brennen 1982:35-36). Descriptions of 83 of these points have been published by Perkinson (1971; 1973:38-39). Almost all of these points were from surface context, and as a result interpretation of fluted point PaleoIndian occupations locally is difficult. While the hunting of late Pleistocene megafauna, specifically mammoth, mastodon, bison, and other now-extinct species is suspected, evidence for PaleoIndian period exploitation of animals of any kind is rare in the Southeast. Equivocal associations of artifacts with mammoth remains have been reported from Florida (Hoffman 1983), together with more secure associations with Bison antiquus and giant land tortoise Geochelone crassiscutata ( Clausen et al. 1979; Webb et al. 1984) . While megafauna may well have been hunted, it is highly likely that a more diversified subsistence strategy was followed, particularly as the Pleistocene floral and faunal assemblages were replaced by more modern, Holocene assemblages. In all probability PaleoIndian subsistence economy included the hunting of smaller mammals and the collection of some plant foods.

Over the course of the PaleoIndian period fluted point forms underwent a general reduction in size, and true fluting gave way to basal thinning. Terminal PaleoIndian assemblages locally are identified by Hardaway/Dalton projectile point forms, broad, thin, triangular bifaces with deeply concave bases and shallow side notches (Coe 1964:64), which are thought to date from ca. 10,500-9,800 B.P. (Goodyear 1982). The Hardaway complex, consisting of Dalton-like points and preforms, has been found in the lowest levels of the Hardaway and Haw River sites in the Piedmont of North Carolina (Coe 1964; Claggett and Cable 1982). These assemblages are the earliest, well documented remains excavated to date in secure context in North Carolina area. Another site of this period, Baucom, located along the Rocky River in Union County, North Carolina, to the southeast of the general project area, has recently been reported in preliminary

fashion (Peck and Painter 1984). Although hundreds of Dalton points are known from surface context in North and South Carolina, the type is not appreciably more common than the earlier lanceolate PaleoIndian forms. The Hardaway/Dalton complex is thought to represent "a regionalized technological modification of PaleoIndian projectile point style" (Oliver 1985:197), possibly reflecting a change in adaptive strategies, away from the hunting of megafauna and towards the utilization of small game, and the increased collection of plant resources (McNett et al 1977). Oliver (1985:199) has suggested that such an inference is supported by an apparent decrease in point size from the Hardaway/Dalton to subsequent Early Archaic Palmer projectile point forms.

Overall population density during the PaleoIndian period is thought to have been fairly low, as shown by the infrequent occurrence of sites, and the low numbers of artifacts, at least when compared with later periods. Climate and vegetation were changing rapidly at this time, as the continental ice sheets retreated to the north. Initial PaleoIndian groups probably encountered a mixed coniferous forests/ parklands vegetational mosaic, which was gradually being replaced by northern hardwoods (summarized in Clagget and Cable 1982). The retreat of the glaciers coincided with a marked rise in sea-level, resulting in the flooding of large areas of the Coastal Plain. Ward (1983:64) has suggested that the generally spatially restricted site distribution and the low density of cultural materials suggests a low level of sociopolitical information. In actuality, however, fairly sophisticated information exchange and mating networks would have had to exist for such low density populations to remain reproductively viable (Wobst 1974, 1976; Anderson and Hanson 1985), suggesting a greater complexity to these societies than is traditionally inferred.

## ARCHAIC PERIOD (ca. 10,000 - 3,000 B.P.)

With the introduction of warmer Post-Pleistocene climate the Southeastern megafauna, which were probably exploited at least to some extent, became extinct. In its most common expression, the Archaic period is viewed as one in which the assumed predominantly big-game hunting, focal adaptation of the PaleoIndian period was replaced by a more generalized or diffuse hunting and gathering way of life (Griffin 1967; Cleland 1976). The Archaic period formally begins with the onset of Holocene, post-glacial, climatic conditions in the east, and has been subdivided into three sub-periods, the Early, Middle, and Late Archaic. The Archaic was a relatively long and successful foraging adaptation, with subsistence based on hunting, fishing, and the collection of wild plant resources. Diagnostic projectile points form the primary criteria used to identify and date these occupations in the South Atlantic area.

The technology of the Archaic peoples of the Southeast appears to have been somewhat more diversified than that evident in the preceding PaleoIndian tradition. Over the course of the Archaic, for example, increasing numbers of artifact and tool types appear, such as ground stone woodworking and plant processing implements, carved and polished stone bowls, atlatl weights, and stone pipes and beads (Griffin 1967; Jennings 1975:127-129). Regional differentiation in projectile point and other artifact styles also occurs, suggesting the emergence and elaboration of local cultures or cultural traditions. This cultural variability is thought to be partially related to localized differences in environment and subsistence resources, and to an increasing regional population base, with a concomittent circumscription of group territories and mobility (Ford 1974).

### **Early Archaic (ca. 10,000 - 8,000 B.P.)**

During the Early Archaic, from ca. 10,000 - 8,000 B.P., the regional vegetation matrix was still changing fairly rapidly, as the remnants of the late Pleistocene mixed coniferous forest were replaced by mixed hardwood communities dominated by oak, hemlock, beech, and maple (Claggett and Cable 1982:212). A fully modern faunal assemblage was in place, following the extinction of the Pleistocene megafauna. In the Piedmont North Carolina area the Early Archaic is subdivided into earlier Corner-Notched and later Bifurcate traditions, named for the shapes of the projectile points used to recognize these occupations. Corner-Notched Tradition (ca. 9,800-9,000 B.P.) components are identified by the presence of Palmer and Kirk projectile points, while Bifurcate Tradition (ca. 9,000-8,000 B.P) assemblages are identified by a range of bifurcate-based forms, including the succeeding St. Albans, LeCroy, and Kanawha types (Gardner 1974; Chapman 1975; Claggett and Cable 1982). Low regional populations densities, coupled with a continued high degree of group mobility, is inferred for this period, although actual settlement patterns, and technological organizational strategies, remain the subject of some discussion (Claggett and Cable 1982).

### **Middle Archaic (8,000 - 5,000 B.P.)**

During the Middle Archaic in the study area, from ca. 8,000-6,000 B.P., the cooler, dryer conditions of the early Holocene gave way to the warmer, wetter climate of the mid-Holocene Hypsithermal interval. Extensive estuarine marshes and riverine swamps began to emerge throughout the region as sea level slowly stabilized. The northern hardwoods vegetational matrix was replaced by an oak-hickory forest, which was in turn replaced by a southern hardwoods-pine forest, characterized by the species occupying the region today (Claggett and Cable 1982:212-216;

Delcourt and Delcourt 1985). Subsistence economies became increasingly diversified, and the first use of estuarine shellfish resources and possibly anadromous fish may have begun at this time. Archaeologically, the transition from the Early Archaic to the Middle Archaic is characterized by the appearance of stemmed rather than notched projectile points, and an increased incidence of ground stone tools, including atlatl weights, axes, and grinding implements. Three sub-periods within the Middle Archaic are recognized in the general region. These are identified by the presence of Stanly Stemmed (ca. 8,000-7,000 B.P.), Morrow Mountain I and II (ca. 7,000-6,200 B.P.), and Guilford Lanceolate (ca. 6,000-5,000 B.P.) projectile points, following the classic Archaic sequence first identified by Coe (1964).

#### **Late Archaic (ca. 5,000 - 3,000 B.P.)**

During the Late Archaic period, from ca. 6,000-3,000 B.P., regional population appears to have grown markedly, and to have concentrated in riverine and estuarine settings. Climatic conditions were warm and dry, and by the end of this interval an essentially modern vegetational matrix had emerged. Sea level appears to have been relatively stable, rising to within ca. two to four m of its present stand; only minor fluctuations on the order of one to a few meters occurred (Colquhoun and Brooks 1986). Grinding implements, polished stone tools, and carved soapstone bowls become fairly common, suggesting increased use of plant resources, and possibly changes in subsistence strategies and cooking technologies. Although evidence locally is minimal, the first experiments with horticulture probably occurred at this time, with the cultivation of plants such as squash, sunflower, and chenopodium (Ford 1981; Cowan 1985). Sites occur in a wide range of environmental zones, suggesting considerable intensification in the use of the area. Settlements appear to have been occupied for longer periods of time than in earlier periods, and the existence of formal residential base camps occupied seasonally or longer is inferred, together with a range of

smaller, resource exploitation sites such as hunting, fishing, or plant collecting stations (Mathis 1979; Claggett 1982; Ward 1983).

The Late Archaic in the South Atlantic area has been divided into a series of sub-periods or phases, identified primarily by the presence of diagnostic projectile points. The basic outlines for this sequence in the general North Carolina area were first developed at the Doerschuck, Gaston, and Lowders Ferry sites by Joffre Coe (1964). Terminal Middle Archaic/initial Late Archaic occupations (ca. 6,000-5,000 B.P.) are marked by the presence of Guilford Lanceolate (Coe 1964:43-44) projectile points, characterized by a long, narrow, thick blades and straight, rounded, or concave bases. Contemporaneous or slightly later are side and corner notched stemmed forms, variously described as Halifax in eastern North Carolina (Coe 1964; Oliver 1985), and MALA (which are somewhat larger than the Halifax type) in South Carolina (Sassaman 1985). Beginning around ca. 5,000 B.P., and lasting until ca. 3,500 B.P. the distinctive Savannah River Stemmed type appears, a large, broad-bladed, square stemmed point. Sites dating to the Late Archaic period in the North and South Carolina Piedmont are found in a wide range of environmental zones, with major settlements in riverine bottoms, suggesting intensive use of a wide range of resources (White 1982; Ward 1983:).

The terminal Archaic/initial Woodland occupation of the region, ca. 3,500-2,500 B.P., is identified by the presence of smaller stemmed point forms, variously described as Otarre Stemmed, Swannanoah Stemmed (Keel 1976), Small Savannah Rivers, and Gypsy Stemmed (Oliver 1985). A reduction in the size of these stemmed forms, on the average, is clearly indicated over the course of the Late Archaic/initial Woodland in the region (Oliver 1981, 1985), although a standardized, widely accepted typology remains to be adopted. Soapstone vessels are in use at this time in some areas and, towards the end of this interval, pottery appears. A continuation of previous Late Archaic subsistence and settlement strategies, with the addition of pottery, seems to have occurred.

## WOODLAND PERIOD (ca. 3,000 - 1000 B.P.)

The Woodland period began about 1,000 B.C. and continued until the appearance of the Mississippian adaptation in the general study area around A.D. 1200. Across the eastern Woodlands the period is marked by the appearance of pottery, a greatly increased role for horticulture in subsistence economies, and an elaboration of mortuary ceremonialism, including the appearance of burial mounds (Griffin 1967:180). The first pottery in the North and South Carolina Piedmont is the fiber tempered Stallings series material, which becomes progressively infrequent to the north and east of the Savannah River drainage. Dating from ca. 4,500 - 3,000 B.P., Stallings ceramics, and the related, sand tempered Thom's Creek series, occur only in extremely trace amounts in this portion of the South Atlantic Piedmont. The first widespread appearance of pottery in the region occurs in the Early Woodland period, with the appearance of the Baden series.

### Early Woodland (ca. 3,000 - 2,400 B.P.)

Initial Woodland occupations (ca. 3,000-2,400 B.P.), which are thought to reflect a more-or-less unchanged continuation of preceding Late Archaic lifeways, are characterized by sand tempered cord marked, fabric marked, net impressed, and plain Baden series pottery (Coe 1964:27-29). The Early Woodland occupation of the region continues into the subsequent Middle Woodland Yadkin phase (ca. 2,400-1,600 B.P.), which is characterized by cord marked, fabric impressed, and (rarely) linear check stamped crushed quartz tempered pottery (Coe 1964: 30-32). Site density appears to increase considerably over previous periods and a settlement pattern characterized by relatively permanent riverine base camps and interior specialized exploitation camps is inferred (Mathis 1979; Ward 1983).

### **Middle Woodland (ca. 2,400 - 1,200 B.P.)**

The Middle Woodland period, from ca. 2,400 to 1,200 B.P., is characterized by an intensification of long distance trade throughout the eastern Woodlands, although evidence for direct participation of local groups in the classic Hopewell interaction sphere exchange network remains minimal. Horticulture is thought to assume increasing importance, and the cultivation of maize may have been initiated at this time, although it did not assume importance until the subsequent Late Woodland and Mississippian periods. Numerous large and small sites have been found dating to this period, suggesting periodic aggregation and dispersion, or some kind of a village/base camp-specialized resource extraction station settlement dichotomy. Diagnostic artifacts dating to this period include sand and crushed quartz tempered fabric impressed and cord marked ceramics, usually described as Yadkin (see Blanton et al. 1986:9-20 for a discussion of what is meant by "Yadkin" in the South Atlantic Piedmont), as well as lesser quantities of material resembling Connestee series wares from the Appalachian Summit (Keel 1976, Dickens 1976), and Deptford series types from the Coastal Plain and lower Piedmont.

### **Late Woodland (ca. 1,200 - 800 B.P.)**

The Late Woodland period (ca. 1,200 - 400 B.P.) in the general study area saw the emergence of sedentary village life based on intensive maize agriculture, and the development of complex tribal and chiefdom-level political forms. Located at the fringe of the area occupied by groups characterized by the generalized Southeastern Mississippian culture and adaptation, the late prehistoric occupations of the study area can be characterized as reflecting a continuation of the Woodland tradition, with an admixture of Mississippian cultural elements in some areas and on some sites. Specific diagnostics useful for unequivocally identifying sites of this period are difficult to pin down. The later Woodland cultural sequence across the North and South Carolina

Piedmont, particularly in the immediate project area, is very poorly documented and described at the present (Goodyear et al. 1979; Claggett 1982:47-48; Ward 1983). Sites dating to the earlier part of the Late Woodland, ca. A.D. 800-1200, are identified by the presence of localized Yadkin-like and, later in time, Uwharrie wares, as well as small amounts of Connestee-like ceramics resembling materials from the Appalachian Summit area to the west (Dickens 1976, Keel 1976). Later Late Woodland components locally are identified by the presence of sand tempered net impressed Uwharrie ceramics, which are thought to replace earlier wares around 600 B.P. (Claggett 1982:48). Except where Mississippian components have been identified, evidence for the intensive cultivation of maize remains minimal, suggesting continued reliance on wild plant and animal resources (Claggett 1982:48).

#### Mississippian (ca. 800 - 400 B.P.)

Mississippian occupations in the Southeastern United States are characterized by the intensive cultivation of maize; the presence of a ranked, typically chiefdom-level social organization; settlement in permanent villages, frequently associated with large public constructions, including truncated pyramidal mounds fronting on plazas; and, in the South Appalachian area, the presence of complicated stamped pottery. Although most or all of these attributes appeared during the preceding Woodland period in the South Appalachian region, they do not become widespread until after ca. A.D. 1000. Ferguson (1971, 1975) has observed that the appearance of Mississippian culture occurs progressively later as one moves east over the South Appalachian area, and he further suggests that the development of this culture in the Carolinas reflects an expansion from established centers to the southwest, in Georgia. In addition, although agriculture was an important source of food, analyses of floral and faunal remains from Mississippian sites in the general region document the persistence of wild resources as a major component of the diet.

Although the project area lies at the extreme fringes of the Mississippian cultural area, some evidence for this adaptation has been found locally. Small Mississippian ceremonial centers are located to the south of the Kernersville area, for example, at the Town Creek site on a tributary of the Yadkin River in Montgomery County, North Carolina. Outlying sites, presumably villages, hamlets, and other specialized activity sites related to the occupation of these centers are known, although few have received more than brief examination or reporting. Most Mississippian sites found in the immediate Piedmont area appear to occur along major drainages. House and Ballenger (1976) found only a single Mississippian site in the I-77 corridor, and other major southern Piedmont surveys report similar, low Mississippian site densities in the interriverine zone (Kelly 1972; Rodeffer 1979; Goodyear et al. 1979). Mississippian sites appear to be fairly infrequent in the immediate study area (Claggett 1985). Diagnostic artifacts indicating the presence of Mississippian components in the general region include both PeeDee and Pisgah Complicated Stamped ceramics (Reid 1967; Dickens 1976). Small triangular arrow points, while indicative of a late prehistoric occupation (i.e., probably post-dating A.D. 1000), occur locally both on sites with Mississippian pottery, and on late sites with Woodland tradition ceramics present, and hence are not reliable Mississippian diagnostics. The relationships between these presumably local, contemporaneous populations remains unknown. European conquest brought an end to the Mississippian and local late Woodland lifestyle, although many relics of the material culture, belief systems, and social structure of classic Mississippian societies lingered into the eighteenth century.

## **HISTORICAL OVERVIEW**

### **The North Carolina Piedmont and Forsyth County**

European contact brought an end to the Late Woodland-Mississippian lifestyles, although many

aspects of the material culture, such as small triangular points, belief systems, and social structure continued among historic Indian groups into the eighteenth century.

Although the Carolina colony was under European control in the seventeenth century, settlement did not really occur beyond the coastal areas until the eighteenth century. In two successive charters (1663 and 1665), eight men were made Lord Proprietors of Carolina which extended south to Florida and west to the Pacific Ocean. These men were involved in a financial venture as proprietors of the colony. Basically they possessed crown-like rights over their grant area, and each expected to accrue sizable profits as landlords, as speculators and as owners of expansive land reserves set aside for future development in their name. A certain measure of political freedom was available, since the proprietors, hoping to attract colonists from already established areas, promised a representative assembly. Only one religious dictum was set concerning colonists; all colonists were welcomed as long as they worshipped as Christians. Carolina was involved with the slave trade from the outset, due to the financial commitment of four of the Proprietor's to the trade. Settlers were given extra acreage for each black bondsman or woman brought into the colony (Current et al. 1975:44-45).

The colony under the Proprietors lasted until 1728, when most of the land was returned to the crown. Under their auspices, the colony developed in two areas: the Albemarle Sound in the northeast of the colony, and the area around the Ashley and Cooper rivers in the south. The northern settlement area was inhabited by small, tobacco-growing farmers and few communal settlements characterized the early settlement pattern. The southwest settlement area evolved differently making use of its geographic location at the confluence of the two rivers and its harbor, and in 1680 Charleston was established at this spot. Large planters and merchants were very much a part of the cosmopolitan Charleston scene. Thus, by 1728, the two Carolinas were already distinct economically and culturally and this distinction was formally made when the two were

divided into two separate colonies (Current et al.1975:44-45).

The Piedmont of North Carolina has been historically defined during the colonial period as belonging to the Carolina backcountry. Euroamerican colonization of the North Carolina backcountry occurred in the early 1740s, when early settlers began to infiltrate the North Carolina Piedmont, desirous of land and the opportunity to prosper. The land open for settlement had once been peopled by members of the Siouan tribes, the Catawba in the southern Piedmont, and smaller Siouan groups to the north (Wilson 1977). The latter, in comparison with the Tuscaroras that inhabited the eastern part of the state, proved to be less hostile to white settlers than their eastern counterparts, which was an added inducement to settlement in the interior (Blower 1984:156, Sumner 1985:3). Disease, wars, and the balance of power within the North Carolina tribes created a void in the Piedmont ripe for settlement unlike the frontier situations encountered in Ohio, Pennsylvania, and Virginia (Blower 1984:183).

Immigration to the Piedmont continued throughout the 1740s, yet the region still remained sparsely populated. It has been estimated that no more than 100 adult males lived in the entire North Carolina Piedmont in 1746. Even if this figure is extended to include good-sized families for each of those individuals, that implies a population of 600 to 700 for an area of incredible size (Blower 1984:158).

The sparcity of development which characterized the first half of the 1700s in the Piedmont changed radically after 1750. Between 1753 and 1769, the population of the colony increased by 127 percent, while the population in the western region grew by 427 percent within that same period. Thus within 16 years, the western half of the colony "went from virtually vacant land to home to twenty percent of the population of North Carolina" (Blower 1984:161).

Two patterns seemed to predominate among these early settlers; first, that the Carolina back country was the second or final leg of their emigration, or secondly, that they were the offspring of immigrants to other American colonies. Many of the Scotch-Irish and German settlers followed the Great Wagon route from Lancaster, Pennsylvania through the Shenandoah Valley and into what became Forsyth County, North Carolina via the Dan River route (Fries et al. 1976).

Many factors enter into an explication of why the North Carolina backcountry was settled. The lack of hostility of the Native American groups towards the settlers has been discussed. Another factor was that the Pennsylvania backcountry was beginning to fill up by the 1740s. Philadelphia acted as the major port of entry for many of the immigrants prior to the Revolution and the hinterlands around the city became the destination for those immigrants interested in farming and husbandry. With the filling up of the agricultural lands around Philadelphia and western Pennsylvania and with the rising cost of living within those areas, the North Carolina Piedmont began to attract the attention of first and second generation American agriculturalists and other like-minded colonists. North Carolina's main attraction--inexpensive, available, arable land--remained the single greatest factor in the Piedmont's settlement. Land in the backcountry was sold for as little as one shilling per acre in 1747. In 1761, one speculator sold land for £5 to £12 per hundred acres which comes to 1s. to 2s. 5d per acre. One historian estimates that a farmer could purchase a minimum of ten acres of land in Orange County, North Carolina for every one acre in Lancaster County, Pennsylvania during this period (Blower 1984:190).

Would-be colonists were also spurred on by the boosterism of North Carolinians or by promotional tracts composed by visitors. Blower (1984:192) referenced the following quote of John Lawson, who offered this enthusiastic description in his New Voyage to Carolina:

Here is plenty of good Timber, and especially, of Scaly-bark'd Oak; And as there is Stone enough in both Rivers, and the Land is extraordinarily Rich, no Man that will be

content within the Bounds of Reason, can have any grounds to dislike it. And they that are otherwise, are the best neighbors, when farthest (off).

Lawson's tract was translated into German in 1712 and was reprinted several times in the eighteenth century in England. The author of American Husbandry, written in 1775, also characterized the back country of Carolina as fertile and rich. In short, he described the area as being one of the finest countries in America (Blower 1984:194). Thus, the agricultural reputation of the Carolina backcountry grew, and farmers, either of Scotch-Irish or German ethnic background, usually in family groups, formed the core of immigrants flocking to the Piedmont. This influx included an exploratory party of Moravians in 1752, traveling from Bethlehem, Pennsylvania on instructions received from church leaders in England. Their mission was to locate a large tract of land for the establishment of a Moravian settlement in North Carolina. They eventually located approximately 98,000 acres, which Brother Joseph Spangenberg (Fries et al. 1976:12) described as:

...about ten miles long and eleven miles wide...Each piece has water, wood, meadow, and farm land.

Everybody that knows the country says that this is the only place where we could find so much good land together, and decidedly the best land yet vacant. Our impression is the same.

On October 8, 1753, after negotiations between Lord Granville, a Proprietor who retained his land after 1728, and the church authorities had been completed, twelve unmarried Moravian Brethren set out from Bethlehem, Pennsylvania bound for the newly purchased tract named "Wachovia". This group settled into an abandoned cabin, planted crops, and constructed a mill. The population of Moravians increased in 1755 with the arrival of seven married couples and ten single men. During 1755 and 1756 Indian unrest necessitated the building of a stockade around this first settlement at Bethabara, which contained a congregation house, the Single Brothers House, and six other buildings. Later, in 1759, a new settlement was established at Bethania that allowed Moravians and members of other religious groups to live in the same community. Active planning for another town,

Salem, began in 1764. By 1772, several structures had been completed in Salem, and former Bethabara residents began to move to Salem. By the end of the year, most of the residents of Bethabara had moved to Salem, which continued to grow as the center of the Moravian culture in the Wachovia area (Fries et al. 1976:20).

About the time that Salem was established in the center of the Wachovia tract, several other towns sprang up near the borders of what was to become Forsyth County. Kernersville, the largest of these, began as 400 acres purchased by an Irishman, Caleb Story, between 1756 and 1760 (Fries et al. 1976:24). It was located at the intersection of two stage roads, one of which was the main route between Salem and the original Moravian settlement in Bethlehem, Pennsylvania. The settlement that arose closest to the study area was the Belews Creek Settlement. In 1753, a survey on Belews Creek recorded two hundred acres of land belonging to Thomas Linville, Senior and his son, Thomas Linville, Junior. A public road between Salem and Belews Creek was approved by the county court in Salisbury, North Carolina, and was opened in 1773.

Both the eighteenth and early nineteenth century economic mainstay in most of the North Carolina Piedmont was subsistence farming; however, the Moravians had established a somewhat different pattern with their prospering self-sufficient, cooperative communities in what later (in 1849) became Forsyth County. The Moravians were among the first to raise cotton, flax, and tobacco in this area, and to produce these products for the outside market, as well for community use. These trends in the central Piedmont continued until the development of transportation systems in the 1830s lessened the isolation of the backcountry and allowed for some development of market oriented farming. This period also witnessed a rapid expansion of the southern tobacco and cotton industries in Forsyth County, and these cash crops had a dramatic effect on the local economy of the project area after the mid-eighteenth century (Fries et al. 1976). The first steam-powered wool carding machine in North Carolina was set up circa 1818, and the first cotton factory was completed in Salem in 1837. These

efforts greatly expanded the scope of textile manufacturing in what would become Forsyth County.

As the nineteenth century progressed, dissatisfaction with dependence on Northern markets and the slavery issue increased. This led to a declaration of independence by the South from the North's hold on technology and industry. This new emphasis on southern industrial independence led to an emphasis on establishing cotton mills in close proximity to southern cotton fields. Investment in cotton mills was considered to be a wise, as well as patriotic, move in the new industrial South (Fries et al. 1976). Forsyth County was only indirectly affected by the Civil War until April of 1865, when General Stoneman and a division of about 6,000 Union cavalry, advanced from East Tennessee across North Carolina. On April 10, 1865 about five thousand men stopped in Bethania for three hours. After eating everything they could procure while the population was in church celebrating Easter Week, a detachment of men under Colonel Palmer moved on toward Salem. His orders stated that he was to "destroy the large factories engaged in making clothing for the rebel army, and send out parties to destroy the railroad south of Greensborough and Danville" (Fries et al. 1976:141). The soldiers met little or no resistance in Salem, and nearly 3,000 troops camped near Salem Bridge, on the south side of Salem Creek. News of the surrender of Lee's Army of Northern Virginia, the fall of the Richmond government, and the departure of Palmer's troops left Salem without an organized guard, and bands of marauding homeward-bound soldiers necessitated the formation of a vigilance committee. One final occupation came in May of 1865, when men of the Tenth Regiment of Ohio Volunteers under Colonel Saunders arrived in Salem. This interaction was peaceable also, and the Memorabilia (Fries et al. 1976:143) reports that

although upon the whole they had conducted themselves tolerably well as a body, still little regret was felt at their departure, in as much as it had appeared very plainly that their presence was anything but necessary or pleasant, and their moral influence was anything but beneficial.

After the war, factories became the new working environment for many North Carolinians. Textile

production became the dominant industry in most of the Piedmont, and by the end of the century North Carolina was the leading industrial state in the South (Fries et al. 1976; Blower 1984).

### Summary

Members of the Moravian Church established the first real settlements in Forsyth County during the mid-eighteenth century, seeking freedom to follow their religious beliefs and enough fertile land to support their self-sufficient, cooperative communities. Many of the cultural elements brought by Moravians into this area persisted and influenced the development of what became Forsyth County in 1849. Many other people from various religious and ethnic groups were also attracted to this central Piedmont environment, and had settled in the area by the late eighteenth century. The Moravians were the first group to grow and market tobacco, cotton, and flax in Forsyth County, and by 1837 a cotton factory was built in Salem to fulfill the needs of local growers. This cash crop economy persisted until the direct and indirect effects of the Civil War ended the slave supported plantation system. Since the Civil War and up until the present, Forsyth County has expanded into a leading industrial area, particularly in tobacco and textile production.

## CHAPTER V. RESULTS

This chapter describes the seven sites and associated artifacts identified during this survey. Lithics are not heat altered unless noted. Metric measurements are used for all prehistoric properties and distances. Elevations are given in feet Above Mean Sea Level (AMSL). The only other exception is a historic site, for which English System measurements are given. Field site numbers and temporary North Carolina county site number designations were assigned during the field work and laboratory phases. All sites are recorded on appropriate North Carolina State Site forms. Continuing erosion and agricultural activities appear to be the only current impacts on the cultural resources of the study area; however, the proposed Kernersville, North Carolina landfill will have a major impact on the area, and will effectively destroy these sites.

### FY86-1 (FIELD SITE 1)

This prehistoric, probable Woodland site is located in a fallow tobacco field on a terrace overlooking a tributary of East Belews Creek approximately 35 m to the south (Figures 1, 2, and 3). The temporal affiliation of the site appear to be Early or Middle Woodland, based on one projectile point (Figure 4D). An incidental occurrence of historic glass is probably refuse from a nearby modular home. The site is approximately 30 m north-south by 40 m east-west, and the elevation is 755 ft AMSL. Four screened shovel tests were excavated to approximately 75 cm below ground surface. No artifacts were recovered from these tests.

The upper 5 cm of soil consisted of dark yellowish brown (10YR4/6) sandy loam with mica flecks and quartz. The second zone (5-38 cm below surface) consisted of dark yellowish brown (10YR4/6)

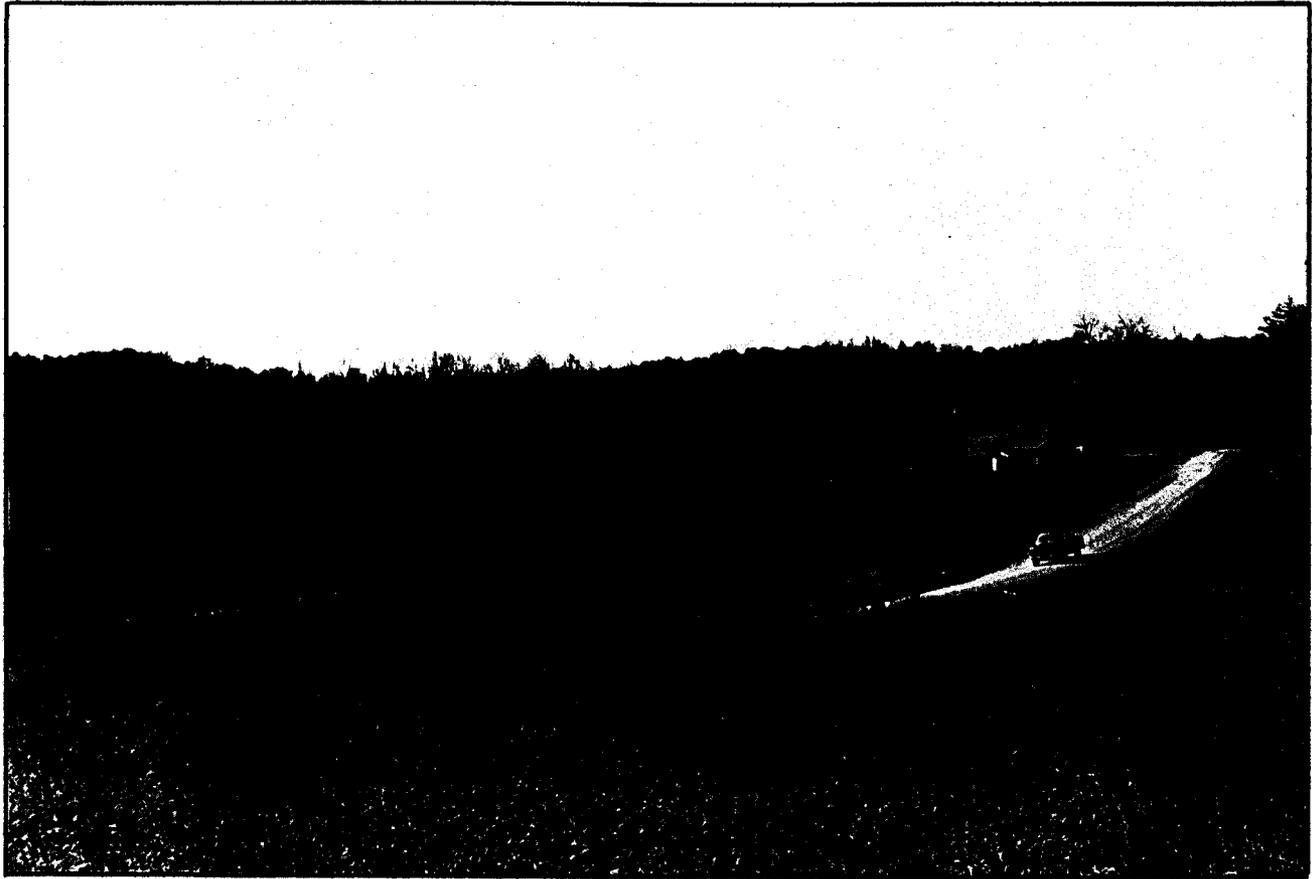


FIGURE 2. Site 1 Looking Southwest - Site is Behind Modular Home.

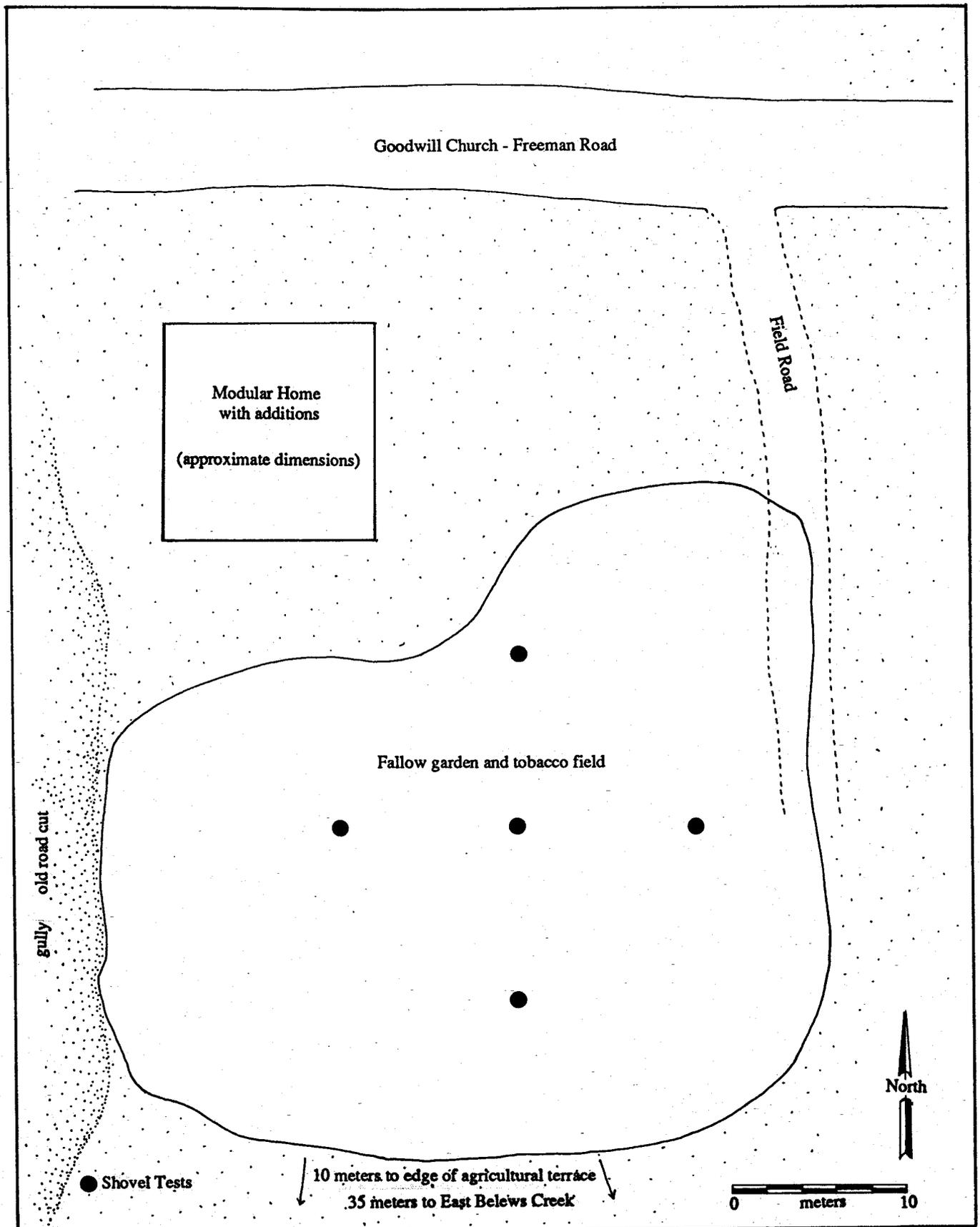


FIGURE 3  
Site 1, Plan Map.



**FIGURE 4. Selected Artifacts from the Kernersville Landfill Survey.**  
 A, B - Kirk Corner-Notched Early Archaic Projectile Points - Site 2. C - Rounded Stemmed Woodland Projectile Point - Site 6. D - Rounded Stemmed Woodland Projectile Point - Site 1.  
 E - Triangular Late Woodland/Mississippian Projectile Point - Site 3. F - Cord-Marked Ceramic Sherd with Interior Fabric Marking - Site 2. G - Cord-Marked Ceramic Sherd - Site 2.  
 H, I - Other Bifaces - Site 1. J - Other Bifaces - Site 6.

coarser sandy loam. The third zone (38-75 cm below surface) was a mixed interface of brownish yellow (10YR6/8) subsoil clay with the upper sandy loam.

Artifacts recovered from the surface collection are:

### PREHISTORIC

#### Debitage

- 1 uniaxially retouched flake (metavolcanic)
- 3 tertiary biface thinning flakes (metavolcanic)
- 4 tertiary other flakes (1 metavolcanic and 3 quartz)
- 2 tertiary flake fragments (metavolcanic)

#### Bifaces

- 1 rounded, stemmed hafted biface (metavolcanic)

Maximum length (mm):	40.0
Maximum width (mm):	18.0
Maximum thickness (mm):	8.0
Shoulder width (mm):	18.0
Blade length (mm):	26.0
Haft length (mm):	14.0
Maximum width at blade midpoint (mm):	14.0
Distal haft element width (mm):	16.5
Proximal haft element width (mm):	5.0
Max. thickness at distal haft location (mm):	7.0
Basal concavity depth (mm):	-
Weight (grams):	5.1
Heat alteration:	no

- 2 other bifaces (1 metavolcanic, 1 chalcedony)

### HISTORIC

#### Glass

- 1 colorless, molded bottle glass fragment

The rounded stemmed point (Figure 4D) is very similar to the Swannanoa type (Keel 1976; Oliver 1985), but also bears some resemblance to Morrow Mountain II (Coe 1964). It is probably a

Woodland type, but given the lack of other diagnostics it is very difficult to place this biface chronologically. The other lithics recovered suggest late stage bifacial reduction/resharpening.

A combination of erosional and cultural factors have influenced artifact distribution on this site. The area has been agriculturally terraced and used for tobacco and other crop production, possibly since the early nineteenth century. The prehistoric and historic components represented on this site are very limited (low artifact density), and no artifacts were recovered in a buried context.

This site does not appear to be eligible for the National Register of Historic Places because of the sparcity and disturbance of the prehistoric and historic components. No further work is recommended.

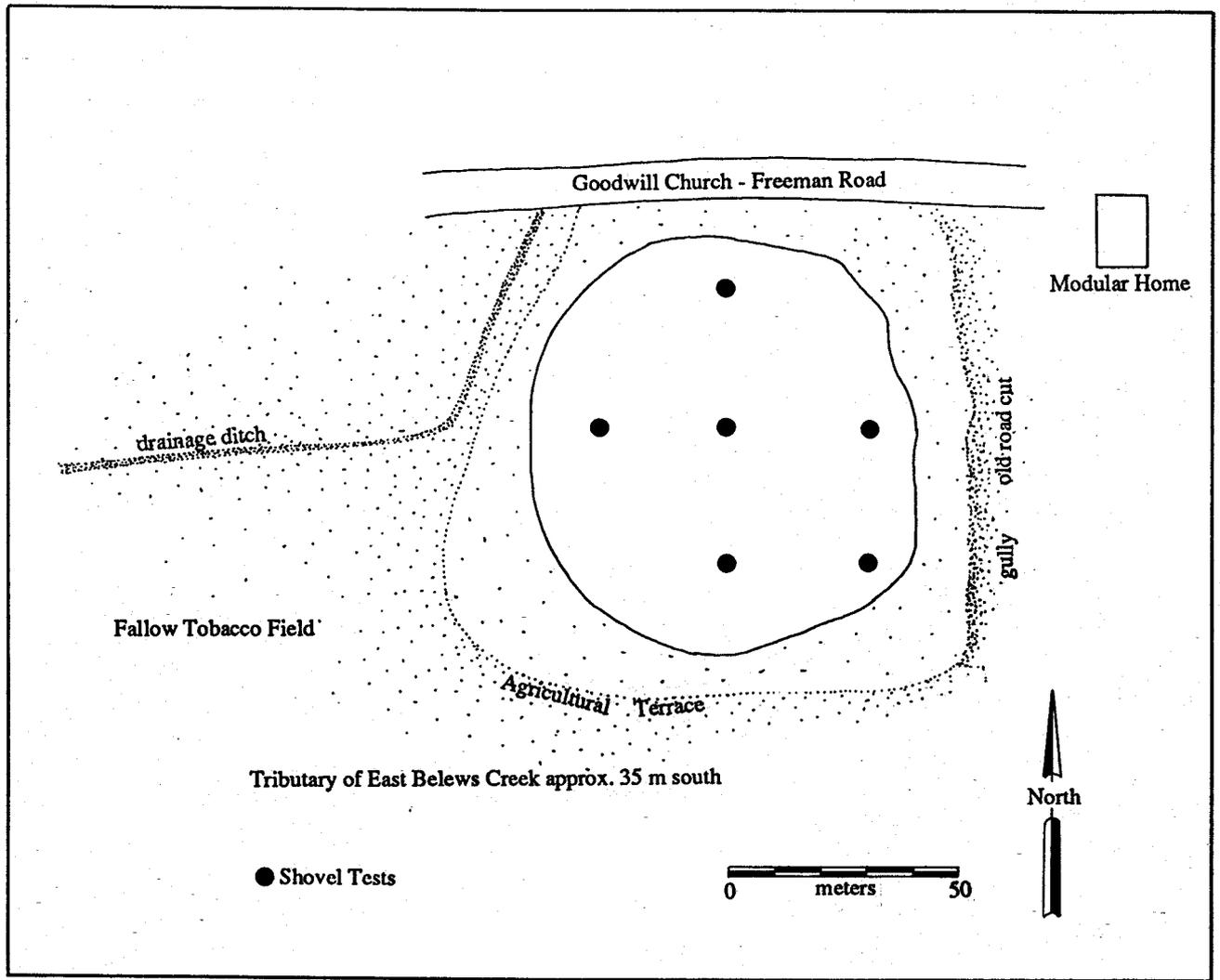
#### **FY86-2 (FIELD SITE 2)**

This multicomponent prehistoric site is located in a fallow tobacco field, west of and across a gully from, Site FY86-1 (Figures 1, 5, and 6). Temporal affiliation of the prehistoric components is Early Archaic, and Early to Middle Woodland. It is approximately 80 m by 80 m, and is located at an elevation of 755 ft AMSL. Six shovel tests were excavated to approximately 40 cm below surface. No artifacts were recovered from shovel tests.

The upper 10-23 cm of soil consisted of strong brown (7.5YR5.8) sandy, silty loam with quartz and mica flecks. A mottled white (10YR8/2) and strong brown (7.5YR5/8) subsoil clay was encountered at approximately 40 cm below surface.



FIGURE 5. Site 2 Looking East.



**FIGURE 6**  
**Site 2, Plan Map.**

Artifacts recovered from the surface collection are:

### PREHISTORIC

#### Debitage

- 1 tertiary blade flake (metavolcanic)
- 2 tertiary biface thinning flakes (metavolcanic)
- 1 primary other flake (metavolcanic)
- 7 tertiary other flakes (6 metavolcanic, 1 quartz)
- 9 flake fragments (8 metavolcanic, 1 quartz)
- 1 shatter (metavolcanic)
- 2 random cores (1 metavolcanic, 1 quartz)

#### Bifaces

	1 Kirk corner-notched (metavolcanic)	1 Archaic stemmed/notched* (metavolcanic)
Maximum length (mm):	44.0	65.0
Maximum width (mm):	31.5	31.0
Maximum thickness (mm):	7.0	7.5
Shoulder width (mm):	31.5	31.0
Blade length (mm):	34.0	56.0
Haft length (mm):	8.5	8.5
Maximum width at blade midpoint (mm):	22.0	27.0
Distal haft element width (mm):	19.0	19.5
Proximal haft element width (mm):	20.0	17.0
Maximum thickness at distal haft location (mm):	6.0	6.0
Basal concavity depth (mm):	1.0	-
Weight (grams):	7.9	14.35
Heat alteration:	no	no

\*One edge of this point is damaged.

3 other bifaces (metavolcanic)

#### Ceramics

- 2 quartz-tempered plain (Yadkin?)
- 3 quartz-tempered eroded (Yadkin?)
- 3 quartz-tempered eroded decoration, one with interior (fabric-marked?) decoration (Yadkin?)
- 1 sand-tempered cord-marked (Baden?)
- 1 grit-tempered eroded

Figure 4 illustrates the diagnostic artifacts from this site. One definite and one possible Kirk Corner-notched point (Figure 4A and B), and cord marked ceramics comprise the diagnostics.

Eight of the eroded sherds (including one with a cord marked exterior and fabric marked interior) had a sand and crushed quartz temper, and probably represent Yadkin ceramics (Blanton et al. 1986; Scheitlin et al. 1979; Claggett and Cable 1982; Coe 1964). One cord marked sherd appears to be sand tempered, possible Baden, and one other extremely eroded sherd is grit tempered. Some secondary stage reduction of metavolcanic and quartz material is suggested by the lithic artifacts, while a small Woodland period occupation is indicated by the presence of ceramics.

This site is not considered eligible for the National Register of Historic Places due to the erosion, agricultural terracing, and plowing that has severely disturbed the area. The sparsity of surface artifacts, and lack of subsurface artifacts in shovel tests also supports a recommendation of no further work on this site.

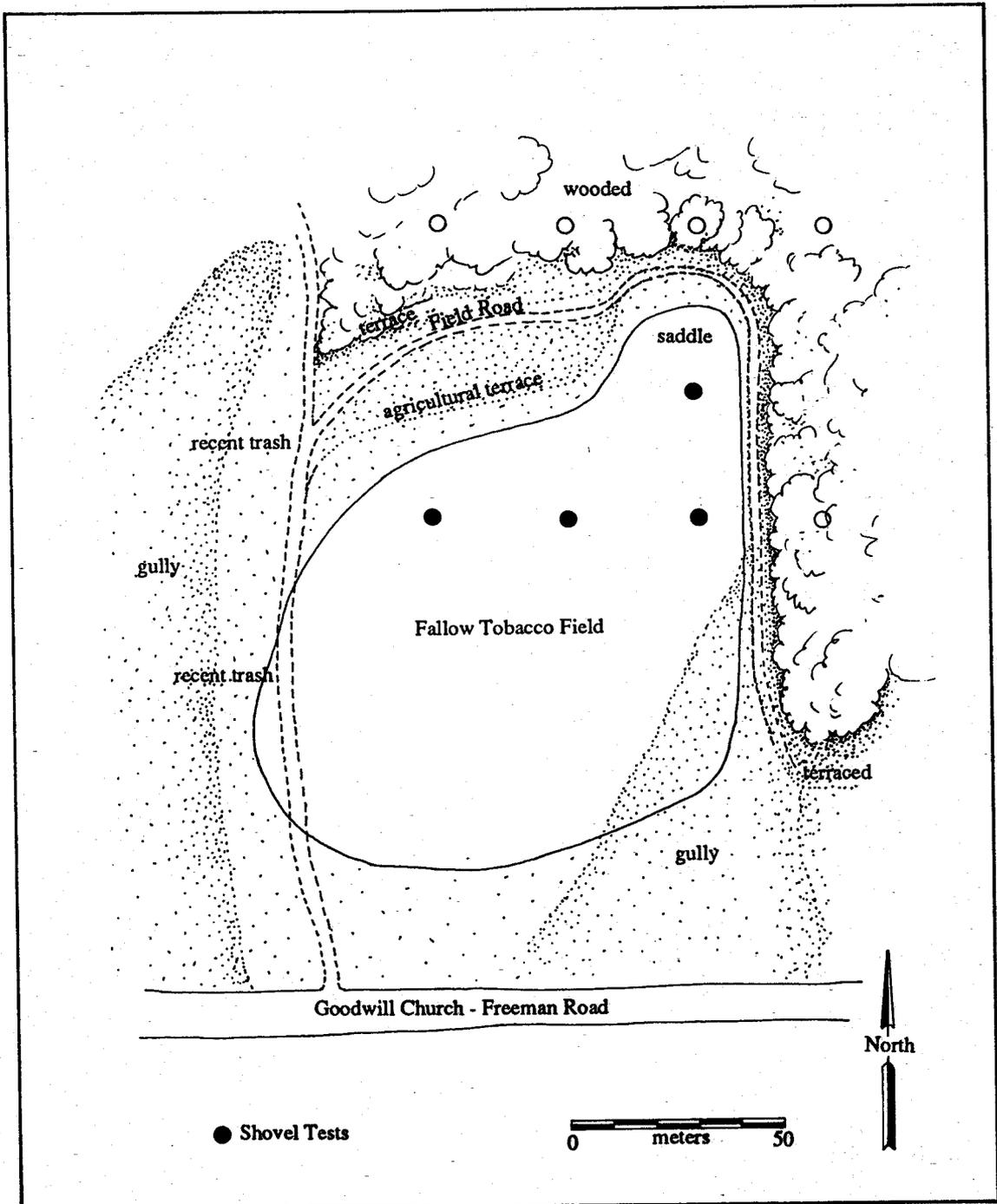
### **FY86-3 (FIELD SITE 3)**

This Late Woodland/Mississippian and historic site is situated in a saddle and gullied area that is shown as an intermittent tributary on Soil Conservation Maps of Forsyth County (Zimmerman 1976; Figures 1, 7, and 8). The site is presently in a fallow tobacco field, and may be slope wash from the higher saddle area. It is approximately 100 m north-south by 75 m east-west, based on a very sparse surface collection. The elevation is 775 ft AMSL. All but three artifacts were found in a 10 m north-south by 20 m east-west area of the saddle. Three shovel tests were excavated in this area to a depth of 30 cm below surface. No artifacts were recovered from these tests.

The 30 cm deep plowzone consisted of brown (7.5YR4/4) sandy loam with quartz. The subsoil was a strong brown (7.5YR5/6-5/8) clay with saprolitic quartz.



FIGURE 7. Site 3, Looking North.



**FIGURE 8**  
**Site 3, Plan Map.**

Artifacts from the surface collection are:

## PREHISTORIC

### Debitage

- 2 tertiary flake fragments (metavolcanic)
- 1 tertiary flake fragment with area of unifacial retouch (possibly recent) (metavolcanic)
- 1 shatter (metavolcanic)

### Bifaces

- 1 Late Woodland/Mississippian triangular point fragment (metavolcanic)

Maximum length (mm):	-
Maximum width (mm):	16.0
Maximum thickness (mm):	3.0
Shoulder width (mm):	-
Blade length (mm):	-
Haft length (mm):	-
Maximum width at blade midpoint (mm):	9.5
Distal haft element width (mm):	-
Proximal haft element width (mm):	-
Maximum thickness at distal haft location (mm):	-
Basal concavity depth (mm):	-
Weight (grams):	0.8
Heat alteration:	no

## HISTORIC

### Ceramics

- 1 cream-colored ware

Small triangular arrow points, while indicative of a late prehistoric occupation (i.e., probably post-dating A. D. 1000), occur locally both on sites with Mississippian pottery, and on late sites with Woodland tradition ceramics, and hence are not reliable Mississippian diagnostics. The other lithics suggest late stage lithic reduction activities. The absence of prehistoric ceramics precludes clarification of the chronological placement of this artifact (Figure 4F and G). The historic

component on this site appears to be incidental, because of a lack of associated structural and/or artifactual remains.

The extent of erosion and plow disturbance in this gullied area, as well as the sparcity of artifacts on the surface, does not support eligibility for the National Register of Historic Places. No further work is recommended.

#### **FY86-4 (FIELD SITE 4)**

This isolated prehistoric artifact, a metavolcanic flake fragment, was found on a flat ridgeslope area that has been agriculturally terraced (Figures 1, 9, and 10). The area is currently in a fallow tobacco field, and is located at 785 ft AMSL. Two shovel tests were excavated to 35 cm below surface in the area of the artifact, but no further artifacts were recovered.

The soil consisted of 35 cm of brown (7.5YR4/4) sandy loam with quartz. The subsoil was a strong brown (7.5YR5/6) clay with saprolitic quartz.

This isolated artifact occurrence is not considered eligible for the National Register of Historic Places due to a lack of spatial and cultural integrity. No further work is recommended.



FIGURE 9. Site 4, Looking Northeast.

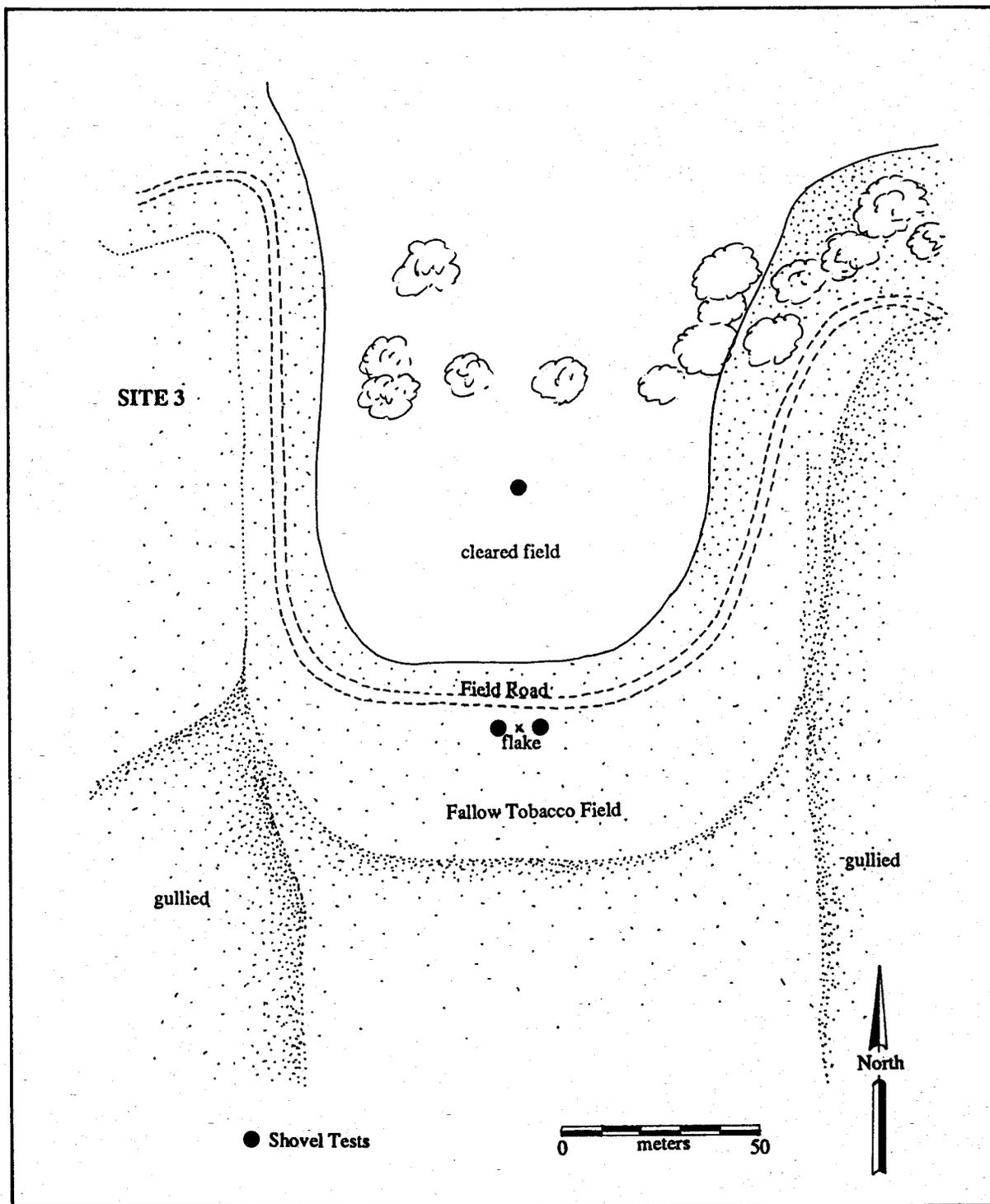


FIGURE 10  
Site 4, Plan Map.

#### **FY86-5 (FIELD SITE 5)**

This unidentified prehistoric site consisted of one metavolcanic flake and one metavolcanic flake fragment found in a cleared ridgetop field (Figures 1, 11, and 12). Both artifacts were found in a five meter area, and no others were found in two 45 cm deep shovel tests or during surface collection of the field. Site elevation is 825 ft AMSL.

The upper zone (0-27 cm below surface) was a pale brown (10YR8/4) sandy loam. The second zone (27-45 cm below surface) was strong brown (7.5YR5/8) sandy clay with mica flecks. The subsoil was strong brown (7.5YR5/8) clay.

The sparcity of artifact and plow and agricultural terracing disturbance of this site renders it ineligible for the Nationa Register of Historic Places. No further work is recommended.

#### **FY86-6 (FIELD SITE 6)**

This prehistoric, probable Woodland, site is situated on a flat ridgetop (Figures 1, 13, and 14). The site area has been agriculturally terraced, and is currently a fallow tobacco field. It is approximately 100 m north-south by 200 m east-west as defined by surface artifacts, and its elevation is 825 ft AMSL. Six shovel tests were excavated in the field and an adjacent wooded area.



FIGURE 11. Site 5, Looking East.

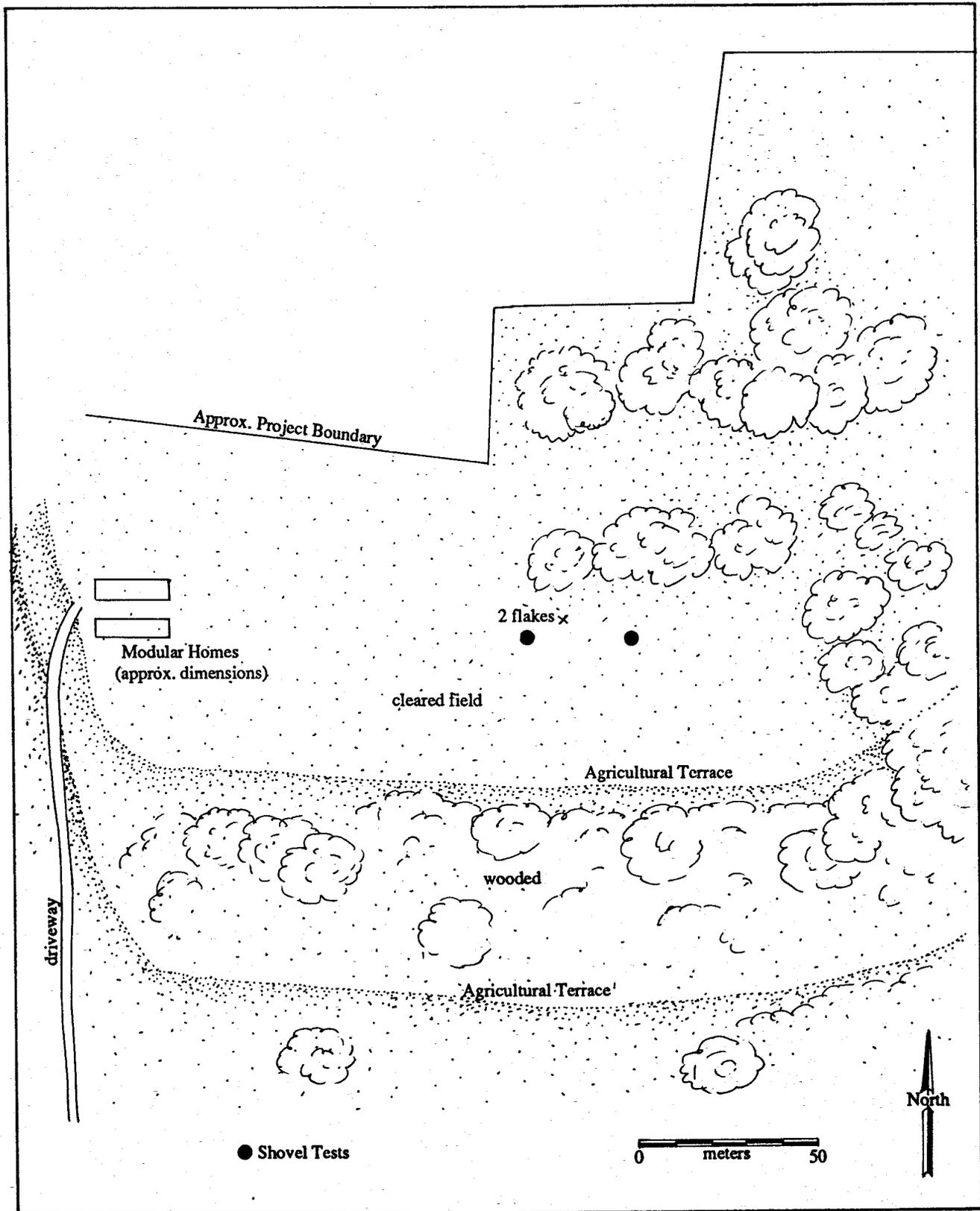
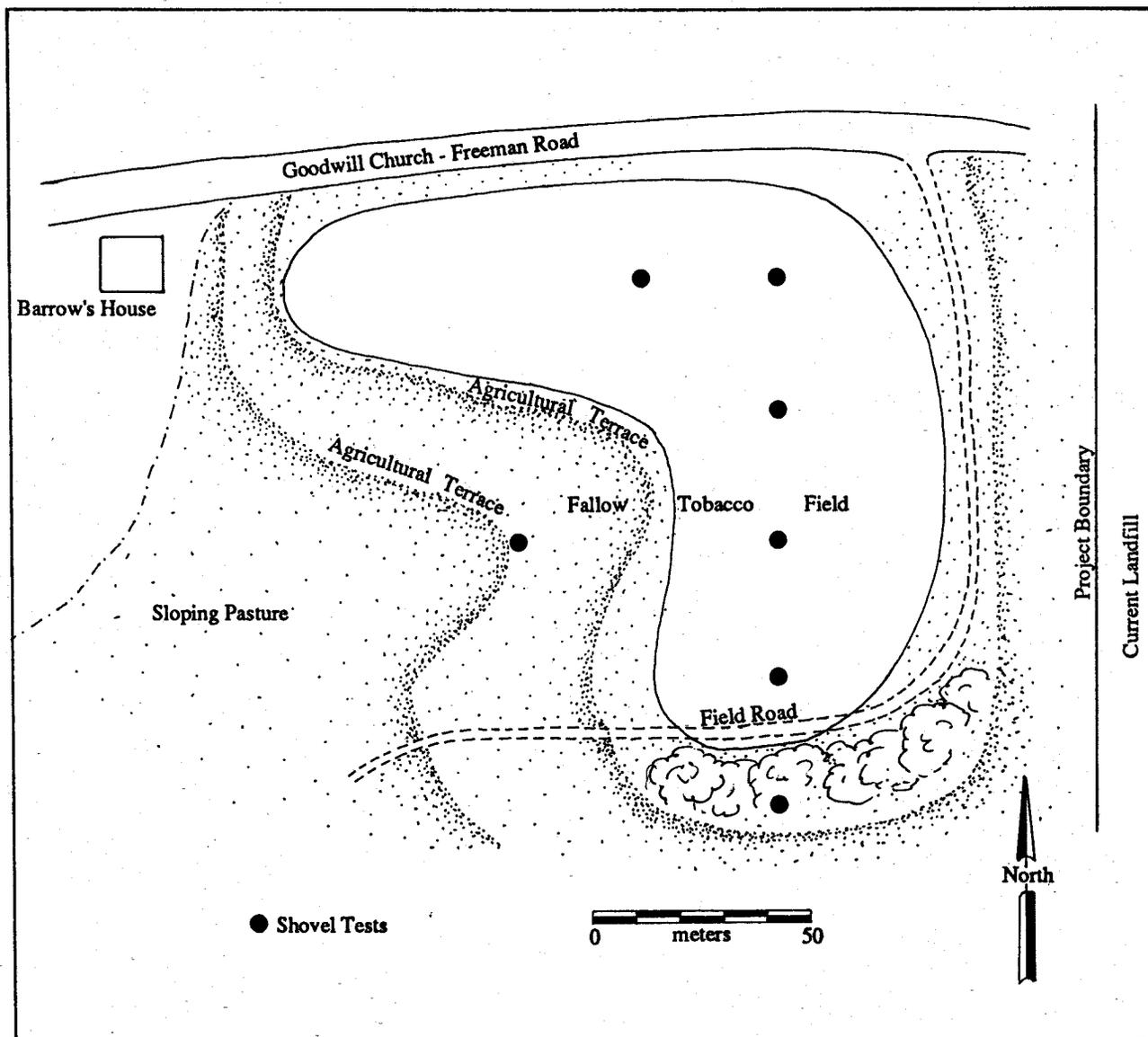


FIGURE 12  
Site 5, Plan Map.



FIGURE 13. Site 6, Looking South-Southeast.



**FIGURE 14**  
**Site 6, Plan Map.**

Soils consisted of yellowish red (5YR5/8) sandy clay loam with quartz. The subsoil was yellowish red (5YR5/8) clay.

Artifacts from the surface collection are:

## PREHISTORIC

### Debitage

2 tertiary biface thinning flakes, 1 utilized (metavolcanic)  
7 tertiary other flakes (metavolcanic)  
10 tertiary flake fragments (metavolcanic)  
1 retouched shatter (metavolcanic)

### Bifaces

1 rounded, stemmed biface (metavolcanic)

Maximum length (mm):	36.0
Maximum width (mm):	20.5
Maximum thickness (mm):	7.0
Shoulder width (mm):	20.5
Blade length (mm):	23.0
Haft length (mm):	9.0
Maximum width at blade midpoint (mm):	13.0
Distal haft element width (mm):	17.0
Proximal haft element width (mm):	6.5
Maximum thickness at distal haft location (mm):	9.0
Basal concavity depth (mm):	-
Weight (grams):	4.3
Heat alteration:	no

1 other biface (metavolcanic)

## HISTORIC

### Architectural

1 asphalt tile fragment

The rounded stemmed point resembles the Swannanoa type (Keel 1976; Oliver 1985), and, to a lesser extent, the Morrow Mountain II type (Coe 1964) (Figure 4C). Given the lack of other

diagnostics from this site, it is difficult to place this point chronologically. Other lithic artifacts suggest late stage bifacial reduction. The historic component is represented by what appears to be a fragment of siding for some type of structure. However, no structural remains were located nearby. This artifact is considered to be incidental, based on a lack of associated remains.

This site is not recommended to be eligible to the National Register of Historic Places due to the extent of terracing, erosion, and plow disturbance, as well as the sparcity of surface artifacts and lack of subsurface artifacts. No further work is recommended.

#### **FY86-7 (FIELD SITE 7)**

This historic farmstead is situated over a two acre (200 ft east-west by 400 ft north-south) ridgetlope area between one year-round and two intermittent tributaries of East Belews Creek (Figures 1, 15, 16, 17, 18, 19, 20, 21). A small spring is located approximately 13 meters behind a log house that is believed to be the main domestic structure of this eighteenth- through twentieth-century farmstead. Ten structures are located in this area, of which eight are at least 50 years old. The two more recent structures are late twentieth century, and include the occupied home of Mrs. Beulah C. Barrow (ca. 1960), and a wood frame garage/storage shed (Figures 16 and 20). The older structures consist of a heavily remodeled, but integral, occupied log house, two log tobacco barns, three other wood frame/partial log outbuildings, and two small solid cinderblock structures. One of these outbuildings may have originally been a domestic structure, and is of partial log construction with a basement area under half of the structure (Figure 19). These outbuildings are currently used for storage of old furnishings (furniture, sewing machine, stoves, etc.), crops, and farm equipment and tools.



FIGURE 15. Site 7 - Potentially Significant Structure, Looking North.



FIGURE 16. Site 7 - Potentially Significant Structure, Looking East, Showing Mid-Twentieth Century Additions and Back of Log Cabin and Cinderblock Outbuilding.



FIGURE 17. Site 7. Barns Across Road from Main Structure, Looking Southeast.

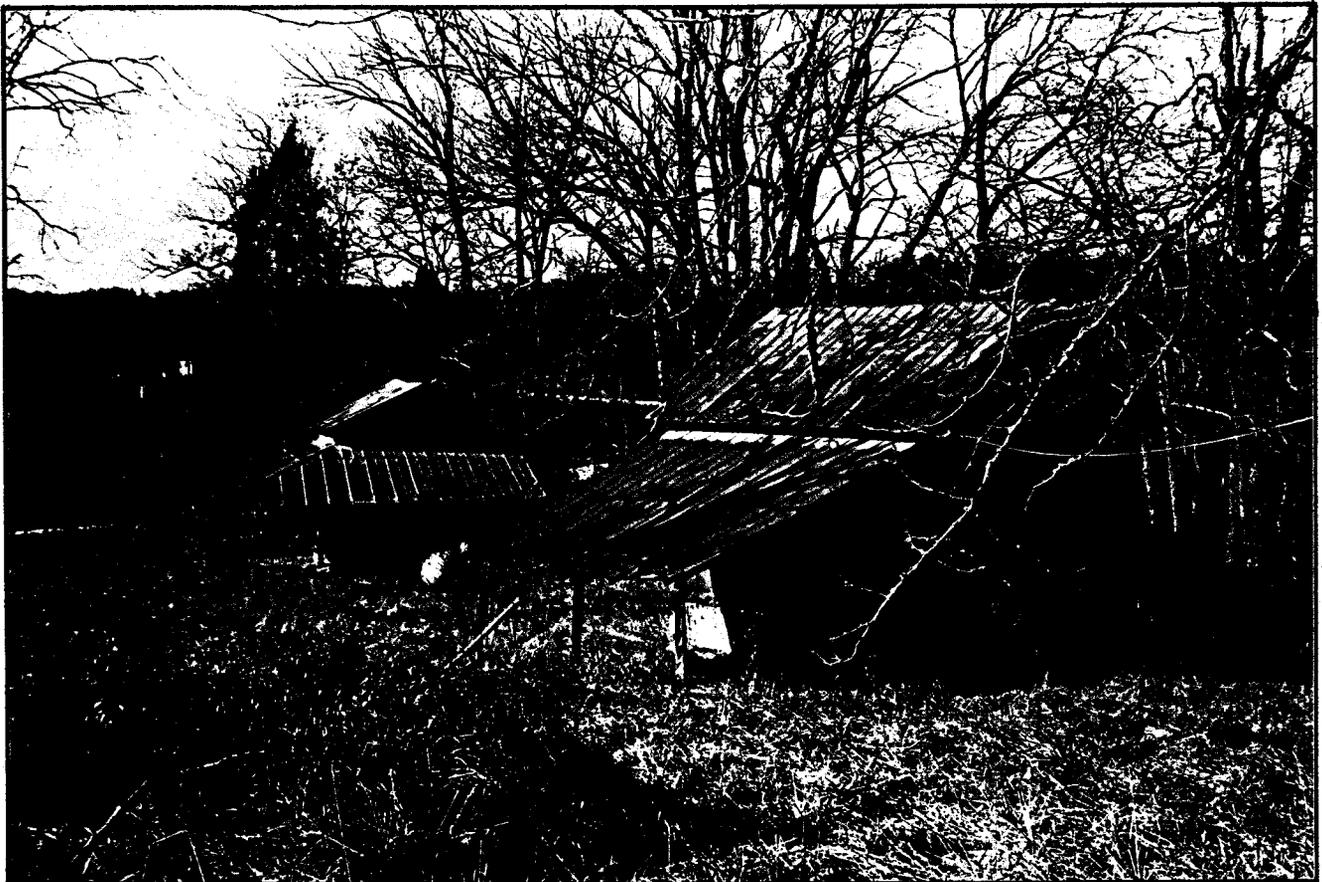


FIGURE 18. Site 7 - Log Tobacco Barns, View to Northwest.

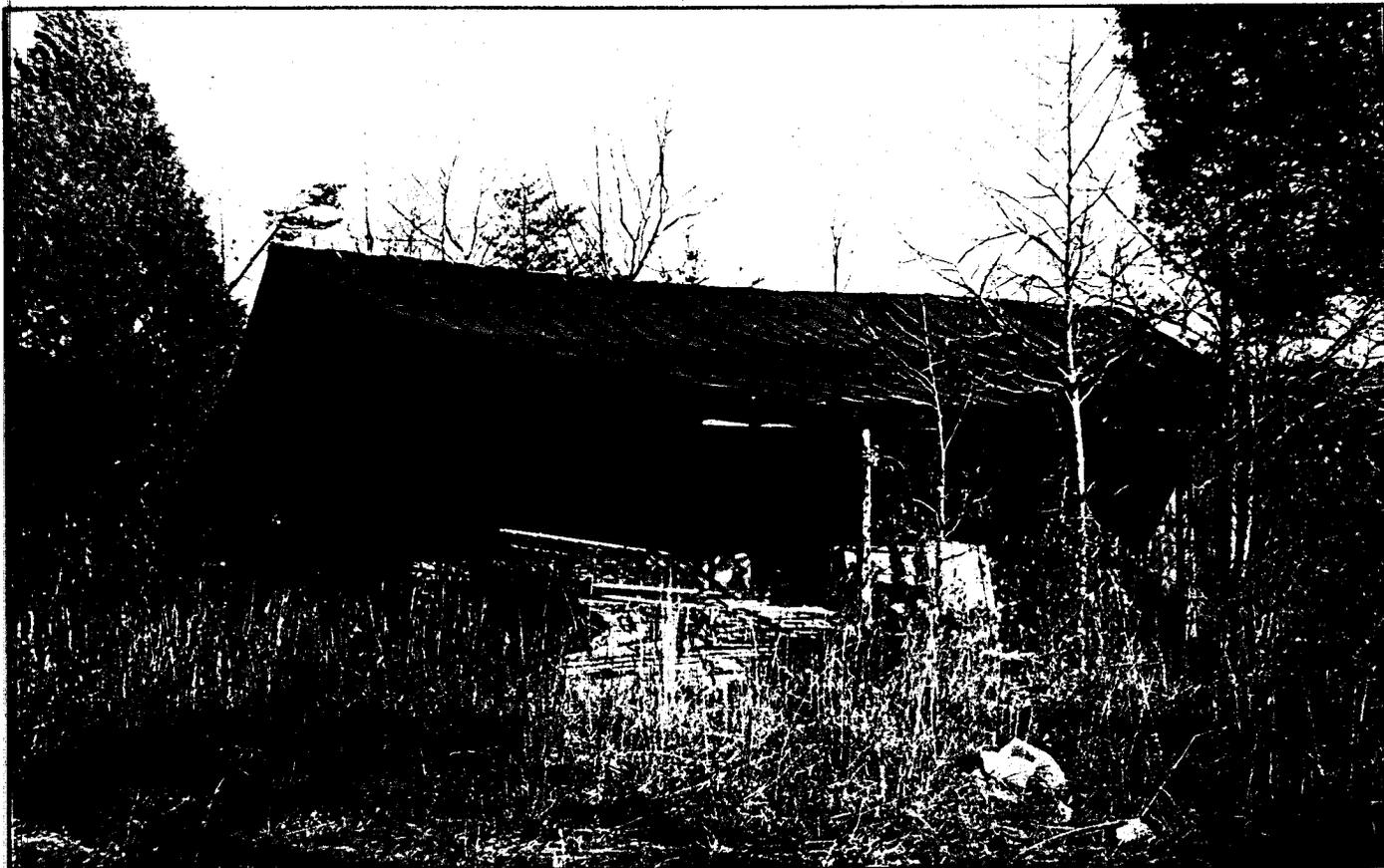


FIGURE 19. Site 7, Potentially Significant Partial Log-and-Frame Structure, East of Main House, Looking East.



FIGURE 20. Site 7. Twentieth-Century Cinderblock Outbuilding and Wooden Barn, Looking Northeast.

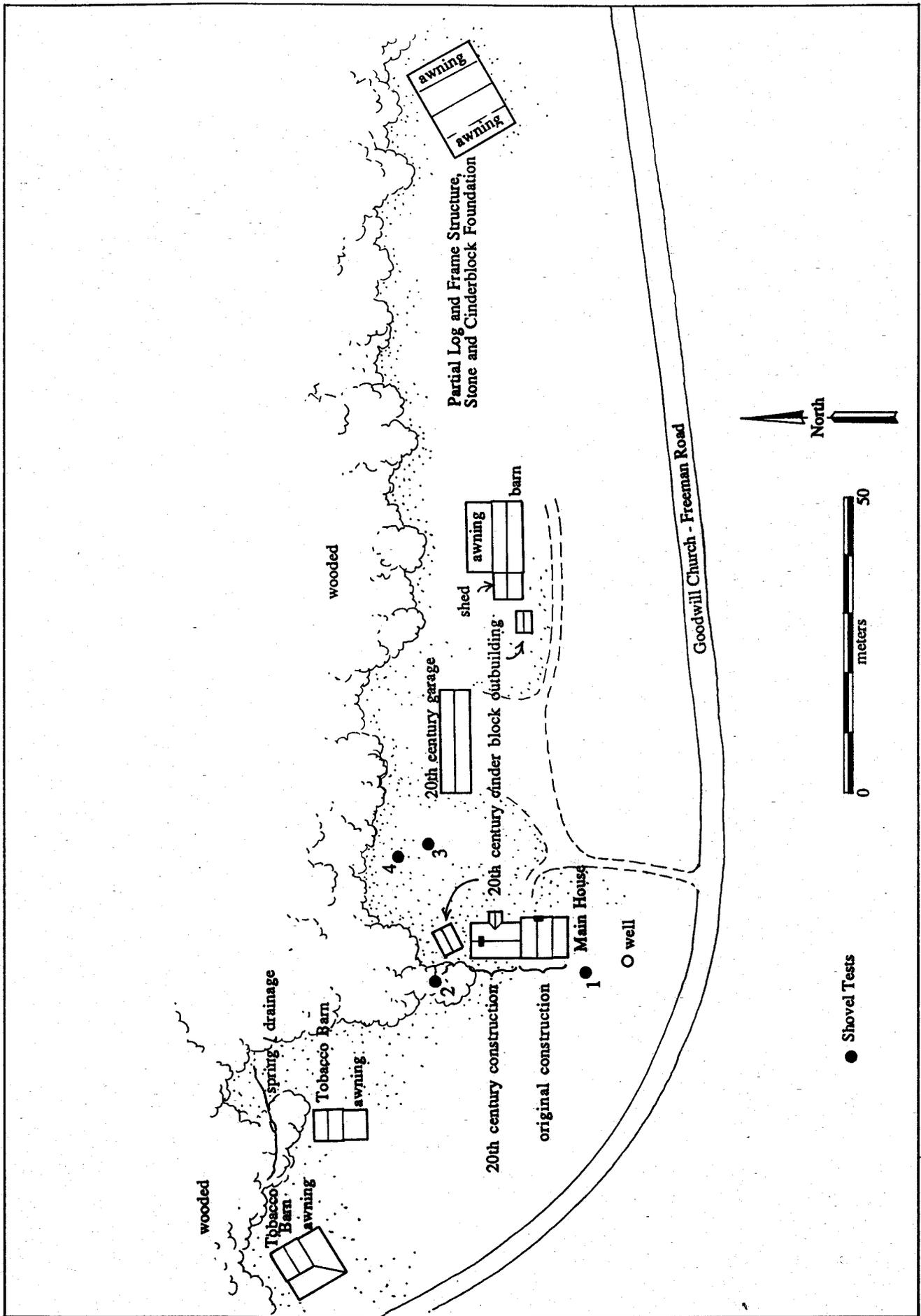


FIGURE 21  
Site 7, Plan Map.

Mrs. Barrow, who currently owns and resides on the property, lived in the log house until 1977. She stated that this house was the "homestead" of her husband's great grandparents, and is approximately 150 to 200 years old. Sometime prior to 1940, a second room was added to the back (north side) of the one room cabin. A porch, that Mrs. Barrow believes is original, is located on the front (south side) of the cabin. A loft or attic room is present above part of the original cabin, and the log construction is visible inside a small closet in the south wall of this room. This upstairs area is reached by an enclosed stairway on the east side of the front room. The structure was renovated in the mid-1940s, when a kitchen, bathroom, and bedroom were added to the back (north side) of the house. The wooden shingles were removed, replaced with tin, and eventually replaced with the asphalt shingles that are currently in place (Beulah C. Barrow personal communication, 1986). The log walls of the house are covered over with wooden boards on the interior and exterior, making a determination of architectural details difficult. The foundation of the house is cemented/mortared fieldstone, except under the rear (northernmost) room, where cinderblocks were used. The original fireplace construction is impossible to determine, as it has been replaced or covered over inside and out. There is only one fireplace in the original log part of the house, and it is located on the eastern end of the room. The well in use today is located in front of the house (Figures 15 and 21), and no evidence of another well was located during the survey.

A small, solid cinderblock structure is located just behind the 1940s additions to the house (Figures 16 and 21). The structure contains a large iron cauldron set into a brick stove, into which wood for heating/cooking liquids could be placed. While the exact age of this structure is difficult to ascertain, the Sears and Roebuck Catalog of 1906 illustrates cinderblock making machines for home use (Thomas Hanchet personal communication, 1986), suggesting that this and the other cinderblock structure could be greater than 50 years old. The blocks produced by these machines often exhibit irregularities, such as bumps and cracks, and weather irregularly because of differences in the cement mixing process.

The two log buildings northwest of the house are currently used as tobacco barns. Both structures have rounded, arched brick vents near the base, one on each side of the door. In one structure, these vents have been sealed. Inside are round logs that are used for hanging the tobacco. The aforementioned spring is located directly behind one of these structures (Figures 18 and 21).

The original function(s) of the outbuildings northeast and east of the log house are less clear, although one appears to have originally been a domestic structure. One is solid cinderblocks with an asphalt tile roof (Figures 20 and 21), one is a wooden barn (Figures 20 and 21), and one is a partial log and wood frame structure with a partial basement (Figures 19 and 21).

Four shovel tests were excavated around the main domestic structure (Figure 21). Three pieces of plain cream-colored ware were recovered from a test down an embankment behind the main house. No artifacts were recovered from the other three tests. Three artifacts were recovered from a bank/road cut in front of the log house. These consist of one piece of hand-painted cream colored ware, one piece of exterior Bristol-glazed and interior Albany-glazed, industrial buff-colored stoneware, and one fragment of light blue pharmaceutical bottle glass. Unfortunately, none of these artifacts provide more than a general nineteenth- to twentieth-century temporal affiliation.

The upper five to seven centimeters of soil consisted of dark brown (10YR3/3) sandy, silty loam. Below this, two types of soils were encountered. Behind and northwest of the house, dark brown (10YR3/3) sandier loam continued to a depth of 20 cm below surface. Southwest of the house the second zone consisted of a light brown (7.5YR6/4) sandy loam to a depth of 20 cm below surface. The subsoil was a yellowish red (5YR5/6-5/8) mottled clay.

This historic farmstead is potentially significant, based on the integrity of the main vernacular

(Deathhouse)

structure and associated outbuildings. In addition, the property may remain in the possession of the original family, the Barrows. The Barrow Family cemetery is located approximately one mile southwest of the site, and contains three graves that date to 1877, 1862, and 1846 (Stanley, Sheek, and Hartman 1976:59). The parents of Eliza Barrow, an infant buried in the Barrow Family plot in 1862, are buried at Pine Grove Methodist Cemetery, 3.5 miles south toward Kernersville from the Barrow Family plot. The Barrow family graves at Pine Grove date between 1917 and 1972 (Stanley, Sheek, and Hartman 1976:319). The Jim Barrow house, located approximately 1.5 miles south of FY86-7, is recorded in File 391 of the standing structures file (Survey Branch, Division of Archives and History). This house is very similar in size and architectural style to the structure in the study area, and dates to ca. 1850. The Barrow family has been in Forsyth County since the early nineteenth century, based on cemetery records and a county history (Fries et al. 1976; Stanley, Sheek, and Hartman 1976). A Phillip Barrow was elected to the Court of Pleas and Quarter Sessions in Winston in 1849. William Barrow was one of the first store owners in Winston, and was elected as Winston's first mayor in 1859 (Fries et al. 1976:127, 130). In 1875, a Henry Barrow lived on Main Street in Winston (Fries et al. 1976:191).

Further work in the form of archaeological testing, architectural documentation and recordation, and historical documentation, is necessary for this potentially significant site. Significance would be local/regional, depending on the historical and architectural documentation that can be recovered.

## SUMMARY

A total of seven archaeological suites were identified during the Kernersville Landfill Survey. Four of these sites contain prehistoric Woodland Period components, one contains an Early Archaic component, two contain unidentified prehistoric lithic components, and one is a potentially

significant historic farmstead, consisting of a log house and several associated outbuildings. The prehistoric sites provide some data that will be useful for settlement studies in the North Carolina Piedmont. The lithics recovered from these indicate limited secondary and final stage lithic reduction activities, while the ceramics from FY86-2 suggest a small occupation during the Early to Middle Woodland Period.

With the exception of the historic site, FY86-7, the other sites are not considered to be eligible to the National Register of Historic Places because of erosional, plow, and terracing disturbances that have severely disturbed the cultural deposits. No prehistoric artifacts were recovered from a buried context, and the density of artifacts on the ground surface was also low. Because of these conditions, no further work is recommended for the prehistoric sites identified in the study area. Further work, involving archaeological testing, and thorough historical documentation and architectural study of the potentially significant historic site, is recommended.

## CHAPTER VI. SUMMARY

A Phase II Records Check and Survey of a Waste Management of North America, Inc. proposed landfill site near Kernersville, North Carolina was carried out between November 17 and 20, 1986 by Garrow & Associates, Inc. of Atlanta, Georgia. A background literature and records search at the Archaeology Branch, Division of Archives and History in Raleigh, North Carolina indicated that no previously recorded archaeological sites were identified in the survey area. The survey area comprises 100 acres along a 0.4 mile stretch of a tributary of East Belews Creek in eastern Forsyth County, North Carolina. The 100 percent field survey coverage of this area involved screened shovel testing at 30 m intervals along alluvial features and in wooded areas, and surface collection of fallow fields, tree falls, bank cuts, eroded areas, and road cuts that had surface exposures. Screened shovel testing at 30 m intervals was implemented on all discovered sites to determine site integrity and soil composition.

The field phase identified one historic (FY86-7) and six prehistoric archaeological sites (FY86-1, 2, 3, 5, and 6), one of which was an isolated find (FY86-4) (Table 1 ). Historic site FY86-7 is an approximately two acre farmstead dating from the late eighteenth- to twentieth-centuries (Beulah C. Barrow personal communication, 1986). Prehistoric sites FY86-1, 2, 3, and 6 contained Woodland components, and FY86-2 also contained an Early Archaic component. Sites FY86-4 and 5 contained very sparse unidentified prehistoric lithic components. These temporary North Carolina county site numbers were assigned during the field work phase of the project.

Table 1. Identified Sites, Identified Components, and Recommendations from the Kernersville Landfill Survey.

Site	Components	Recommendations	Level of Significance
FY86-1	Woodland	No further work	Not significant
FY86-2	Early Archaic Woodland	No further work	Not significant
FY86-3	Late Woodland/ Mississippian	No further work	Not significant
FY86-4	Unidentified Prehistoric	No further work	Not significant
FY86-5	Unidentified Prehistoric	No further work	Not significant
FY86-6	Woodland	No further work	Not significant
FY86-7	Historic	Testing, Architectural and Historical Documentation	Potentially Significant

The horizontal extent and vertical character of each site was assessed in the field (when possible). Because of erosion, borrowing activities, agricultural terracing, and pond construction, preservation of sites in the study area was poor, and none of the discovered prehistoric sites contain potentially significant archaeological resources.

Thirteen standing structures are also located in the study area, consisting of eight barns/outbuildings, three modular homes, and two other houses. Eight of these structures, a log house, two log barns, and five other associated outbuildings, are potentially significant as an intact farmstead. Additional architectural and historical documentation and recordation, and archaeological testing, is recommended for the log house, two log barns, and five other outbuildings. The remaining seven structures appear to be less than 50 years old, and are not

recommended to be significant. All standing structures in the study area were documented photographically. All of the discovered sites will be potentially impacted by the construction of the proposed landfill area.

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## APPENDIX I

**Lisa Diane O'Steen**  
**Garrow & Associates, Inc.**

**Education**

M. A., Anthropology, University of Georgia, Athens, Georgia, 1983.

B. A., Psychology and Anthropology, Emory University, Atlanta, Georgia, 1976.

**Professional Memberships**

Society for Georgia Archaeology  
Archaeological Society of South Carolina  
Center for the Study of Early Man  
Southeastern Archaeological Conference  
Society for Historical Archaeology  
Georgia Historical Society

**Teaching Experience**

1981-1983      Instructor, Department of Anthropology, University of Georgia, Athens, Georgia.

1981            Teaching Assistant, University of Georgia Archaeological Field School, Flowerdeew Hundred Plantation, Prince George County, Virginia.

**Professional Experience**

**Field Experience**

1985 to present      Archaeologist, Garrow & Associates, Inc., Atlanta, Georgia.

1984-1985            Archaeologist, Southeastern Archeological Services, Inc., Athens, Georgia.

Archaeological Field Technician, U. S. Forest Service, Daniel Boone National Forest, Stanton Ranger District, Stanton, Kentucky.

1983                  Archaeological Field Technician, Southeastern Archeological Services, Inc., Athens, Georgia.

Archaeological Field Technician (volunteer), U. S. Forest Service, Sumter National Forest, Greenwood Ranger District, Greenwood, South Carolina.

- 1982 Field Assistant, Cultural Resource Consultants, Inc., Nashville, Tennessee.
- 1980-1981 Field Assistant, University of Georgia, Department of Anthropology, Athens, Georgia.
- Archaeological Field Technician, Memphis State University, Memphis, Tennessee.
- 1979 Archaeological Field Technician, University of Florida, Gainesville, Florida.
- Archaeological Field Technician, Memphis State University, Memphis, Tennessee.
- 1977-1978 Field Assistant, University of Georgia, Athens, Georgia. Attended archaeological field school, University of Georgia, Department of Anthropology, Athens, Georgia.

### Faunal Analysis

- 1986 GP-JO-05--Analysis of nineteenth-century historic fauna from Jones County, Georgia. Garrow & Associates, Inc., Atlanta, Georgia.
- 38Su83--Analysis of prehistoric fauna from a Yadkin Phase site in South Carolina, Garrow & Associates, Inc.
- 1985 Oxon Hill Manor--Analysis of historic eighteenth-century fauna from Prince Georges County, Maryland, Garrow & Associates, Inc., Atlanta, Georgia.
- 1984 46Su67, 72, and 182--Analysis of prehistoric and historic fauna in West Virginia, University of Kentucky Cultural Resources Center, Lexington, Kentucky.
- 9Le44, 50, 55, 9, and 70--Analysis of prehistoric fauna from Lee County, Kentucky, U. S. Forest Service, Daniel Boone National Forest, Stanton Ranger District, Stanton, Kentucky.
- 1983 38Ed9--Analysis of prehistoric Late Archaic fauna from Edgefield County, South Carolina, U. S. Forest Service, Sumter National Forest, Greenwood Ranger District, Greenwood, South Carolina.
- Nashville Convention Center Project--Analysis of historic nineteenth-century fauna, Cultural Resource Consultants, Inc., Nashville, Tennessee.
- 40Dv39--Analysis of prehistoric Mississippian fauna from Davidson County, Tennessee, Cultural Resource Consultants, Inc., Nashville, Tennessee.
- Forest Service sites BK121-124--Analysis of fauna from a French Huguenot plantation house (18th to early 19th century). U. S. Forest Service, Sumter National Forest, Greenwood Ranger District, Greenwood, South Carolina.

- 1982                    40Sw71--Analysis of prehistoric fauna from Stewart County, Tennessee. Memphis State University, Memphis, Tennessee.
- Santa Elena (38Bu162C)--Analysis of sixteenth-century Spanish fauna from Beaufort Count, South Carolina. National Geographic Santa Elena Project, Laboratory of Zooarchaeology, University of Georgia, Athens, Georgia.
- Bourbon Field and North of the Shell Ring Drain--Analysis of fauna from two Mississippian shell middens on Sapelo Island, Georgia. Laboratory of Zooarchaeology, University of Georgia, Athens, Georgia.
- 1981                    40Wg17--Analysis of fauna from a prehistoric Mississippian site in Washington County, Tennessee. Laboratory of Zooarchaeology, University of Georgia, Athens, Georgia.

### Research Reports

- O'Steen, Lisa D., Mary Beth Reed, Elizabeth Jorgensen, and J. W. Joseph  
1986                    CRM: Vogtle-Scherer Transmission Line, Wallace Dam to Plant Scherer Section, Cultural Property GP-JO-05 Data Recovery. Garrow & Associates, Inc., Atlanta.
- O'Steen, Lisa D.  
1986                    CRM: Vogtle-Effingham-Thalman 500 KV Electric Transmission Line. GP-SN-03 Data Recovery. Garrow & Associates, Inc., Atlanta.
- O'Steen, Lisa D.  
1986                    Faunal Analysis, In An Archaeological Study of 38Su83: A Yadkin Phase Site in the Upper Coastal Plain of South Carolina. Garrow & Associates, Inc. Authored by Dennis Blanton, Christopher Espenshade, and Paul Brockington.
- O'Steen, Lisa D. and Mary Beth Reed  
1986                    CRM: Resource Inventory I and II - Barnett Shoals Project. Garrow & Associates, Inc., Atlanta.
- O'Steen, Lisa D.  
1986                    Chapter VIII. Faunal Analysis, In I-95/MD 210/I-2905 Oxon Hill Manor Archaeological Site Mitigation Project - Volume 2. Final report prepared for the Maryland Department of Transportation, State Highway Administration by Garrow & Associates, Inc. Patrick Garrow and Thomas Wheaton, editors.
- Kathy Manning and Lisa D. O'Steen  
1985                    CRM: Vogtle-Scherer 500 KV Electric Transmission Line - Wallace Dam to Plant Scherer Section Resource Evaluation and Data Recovery Planning--Cultural Properties GP-BL-01 and GP-JO-05. Garrow & Associates, Inc., Atlanta.
- O'Steen, Lisa D. and Paul E. Brockington  
1985                    CRM: Vogtle-Effingham-Thalman 500 KV Electric Transmission Line,

GP-SN-12: Resource Testing and Data Recovery Planning. Garrow & Associates, Inc., Atlanta.

- R. Jerald Ledbetter and Lisa D. O'Steen  
1985 Cultural Resources Survey of the Proposed Lumpkin-Louvale Transmission Line, Stewart County, Georgia. Southeastern Archeological Services, Inc., Athens, Georgia.
- Braley, Chad O., Lisa D. O'Steen, and Irvy Quitmyer  
1985 Archaeological Investigations at 9Mc41, Harris Neck National Wildlife Refuge, McIntosh County, Georgia. Southeastern Archeological Services, Inc., Athens, Georgia.
- O'Steen, Lisa D.  
1985 Faunal Remains, In Archaeological Investigations at Green Sulphur Springs. University of Kentucky Cultural Resources Center, Lexington, Kentucky. Authored by Cecil R. Ison, Jimmy Railey, Gwynn Henderson, and Bet Ison. Report prepared for the West Virginia Department of Transportation.
- O'Steen, Lisa D.  
1984 A Cultural Resources Survey of a Proposed Sanitary Landfill Site, Irwin County, Georgia. Southeastern Archeological Services, Inc., Athens, Georgia.
- O'Steen, Lisa D.  
1984 Faunal Remains, In Archaeological Investigations at the Nashville Convention Center. Authored by Robert L. Jolley. Cultural Resource Consultants, Inc., Nashville, Tennessee.
- O'Steen, Lisa D.  
1983 Faunal Remains, In Preliminary Investigations at Mims Point, Edgefield County, South Carolina. Authored by Daniel T. Elliott. U. S. Forest Service, Edgefield Ranger District, South Carolina.
- O'Steen, Lisa D.  
1983 Faunal Remains, In Archaeological Testing at 40Dv39, The Brick Church Pike Mound Site. Authored by Robert L. Jolley. Cultural Resource Consultants, Inc., Nashville, Tennessee.
- Ledbetter, R. Jerald and Lisa D. O'Steen  
1979 An Archaeological Survey of Structure 9M, Cedar Creek Watershed, Coweta County, Georgia. Report on File, Department of Anthropology, University of Georgia, Athens, Georgia.

## Publications

- Anderson, David G., Lisa D. O'Steen, and Jerald Ledbetter  
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- Lisa D. O'Steen, R. Jerald Ledbetter, Daniel T. Elliott, and William W. Barker  
1986 Paleo-Indian Sites of the Inner Piedmont of Georgia: Observations of Settlement in the Oconee Watershed. In press *Early Georgia*, Georgia Society of Archaeology.
- Lisa D. O'Steen  
1983 Early Archaic Settlement Patterns in the Wallace Reservoir: An Inner Piedmont Perspective. *Wallace Reservoir Project Contribution No. 25*, Department of Anthropology, University of Georgia, Athens, Georgia.
- Ledbetter, R. Jerald, Stephen Kowalewski, and Lisa D. O'Steen  
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## Papers Presented

- Anderson, David G., R. Jerald Ledbetter, Lisa D. O'Steen, Daniel T. Elliott, Dennis B. Blanton, Glen Hanson, and Frankie Snow  
1986 PaleoIndian and Early Archaic in the Lower Southeast: A View from Georgia. Paper presented at the Ocmulgee National Monument 50th Anniversary Conference, Macon, Georgia.
- Anderson, David G., Lisa D. O'Steen, and R. Jerald Ledbetter  
1986 The Georgia PaleoIndian Fluted and Lanceolate Point Recordation Project: Response to Date. Paper presented at the Fall Meeting, Society for Georgia Archaeology.
- O'Steen, Lisa D., Jerald Ledbetter, and Daniel T. Elliott  
1983 Paleo-Indian Sites of the Inner Piedmont of Georgia and South Carolina. 40th Southeastern Archaeological Conference, Columbia, South Carolina.
- Reitz, Elizabeth J. and Lisa O'Steen  
1981 Fauna from four coastal Mississippian Sites. 38th Southeastern Archaeological Conference, Ashville, North Carolina.

**APPENDIX II**

Site 1: \_\_\_\_\_ County \_\_\_\_\_ DMA 1 \_\_\_\_\_ Unit 1 \_\_\_\_\_ coordinates \_\_\_\_\_ Place Plot: 1 \_\_\_\_\_  
 Analyst \_\_\_\_\_ Block 1 \_\_\_\_\_ Level 1 \_\_\_\_\_ Feature \_\_\_\_\_ coordinates \_\_\_\_\_  
 Bag 1 \_\_\_\_\_ Accession 1 \_\_\_\_\_ elevation \_\_\_\_\_

COASTAL PLAIN CHERT

Heat Altered

Not Heated

Indeterminate

OTHER MATERIAL

	Heat Altered			Not Heated			Indeterminate		
	Primary	Secondary	Interior	Primary	Secondary	Interior	Primary	Secondary	Interior
Biface Thinning									
Unspecialized Flakes									
Bipolar									
Blade									
Flake Fragments									
Shatter									
<b>TOTALS</b>									

COASTAL PLAIN CHERT

Heat Altered

Not Altered

Indeterminate

OTHER MATERIAL

	Heat Altered			Not Altered			Indeterminate		
	Unifacial	Bifacial	Both	Unifacial	Bifacial	Both	Unifacial	Bifacial	Both
Uniform									
Concave									
Denticulate									
Point/Tip									
Multiple									
Other									

COASTAL PLAIN CHERT

OTHER

	Heat Altered		Not Altered		Indeterminate		OTHER	
Hafted Endscraper	_____	_____	_____	_____	_____	_____	_____	_____
H. Endscraper w/ graver	_____	_____	_____	_____	_____	_____	_____	_____
Unifacial Knife (Waller)	_____	_____	_____	_____	_____	_____	_____	_____
Edgefield Scraper	_____	_____	_____	_____	_____	_____	_____	_____
Hafted Spokeshave	_____	_____	_____	_____	_____	_____	_____	_____
H. Spokeshave w/ graver	_____	_____	_____	_____	_____	_____	_____	_____
Hafted Graver	_____	_____	_____	_____	_____	_____	_____	_____
St. Retouched Blade, Bifacial	_____	_____	_____	_____	_____	_____	_____	_____
Drill/Perforator	_____	_____	_____	_____	_____	_____	_____	_____
Other ( )	_____	_____	_____	_____	_____	_____	_____	_____

OTHER BIFACES

COASTAL PLAIN CHERT

OTHER MATERIAL

	Heat Altered		Unaltered		Indeterminate		OTHER MATERIAL	
	Whole	Fragment	Whole	Fragment	Whole	Fragment	Whole	Fragment
Stage 1	_____	_____	_____	_____	_____	_____	_____	_____
Stage 2	_____	_____	_____	_____	_____	_____	_____	_____
Stage 3	_____	_____	_____	_____	_____	_____	_____	_____
Stage 4	_____	_____	_____	_____	_____	_____	_____	_____
Indeterminate	_____	_____	_____	_____	_____	_____	_____	_____

CORES

COASTAL PLAIN CHERT

OTHER

	Heat Altered		Unaltered		Indeterminate		OTHER	
Unspecialized (Random)	_____	_____	_____	_____	_____	_____	_____	_____
Specialized (Lamellar)	_____	_____	_____	_____	_____	_____	_____	_____
Bipolar	_____	_____	_____	_____	_____	_____	_____	_____
Piece Esquillee	_____	_____	_____	_____	_____	_____	_____	_____
Other ( )	_____	_____	_____	_____	_____	_____	_____	_____

HAFTED BIFACES

Number of hafted bifaces present = \_\_\_\_\_ (including frags)

Note: See attribute forms for detailed information.

Garrod Basic \_\_\_\_\_  
 Associates, \_\_\_\_\_  
 log/Analysis \_\_\_\_\_  
 site # \_\_\_\_\_  
 Analyze \_\_\_\_\_  
 A / \_\_\_\_\_  
 ock \_\_\_\_\_  
 it # \_\_\_\_\_ coordinates \_\_\_\_\_  
 level # \_\_\_\_\_ Feature \_\_\_\_\_  
 g # \_\_\_\_\_ Accession # \_\_\_\_\_  
 Piece # \_\_\_\_\_

Unidentified groundstone \_\_\_\_\_  
 Gorget \_\_\_\_\_  
 Bannerstone (atlatl wt.) \_\_\_\_\_  
 Manuports (Unmodified) \_\_\_\_\_  
 Other ( ) \_\_\_\_\_  
 Fire Cracked Rock #: \_\_\_\_\_ Weight \_\_\_\_\_

PREHISTORIC CERAMICS

	BODY		RIM	
	Fiber ↓	Other ↓	Fiber ↓	Other ↓
Plain	_____	_____	_____	_____
Punctate	_____	_____	_____	_____
Simple Stamp	_____	_____	_____	_____
Complicated Stamp	_____	_____	_____	_____
Brushed	_____	_____	_____	_____
Daub	_____	_____	_____	_____
Bone	_____	_____	_____	_____
Shell	_____	_____	_____	_____
Charcoal	_____	_____	_____	_____
Other Historic	_____	_____	_____	_____

GENERAL REMARKS

\_\_\_\_\_

\_\_\_\_\_

**APPENDIX II**

Site 1: \_\_\_\_\_ County \_\_\_\_\_ DWA 1 \_\_\_\_\_ Unit 1 \_\_\_\_\_ coordinates \_\_\_\_\_  
 Analyst \_\_\_\_\_ Block 1 \_\_\_\_\_ Level 1 \_\_\_\_\_ Feature \_\_\_\_\_  
 Day 1 \_\_\_\_\_ Accession 1 \_\_\_\_\_  
 Piece Plot: 1  
 coordinates \_\_\_\_\_  
 elevation \_\_\_\_\_

COASTAL PLAIN CHERT

Heat Altered

Not Heated

Indeterminate

OTHER MATERIAL

Primary Secondary Interior Primary Secondary Interior Primary Secondary Interior Primary Secondary Interior

Biface Thinning

Unspecialized Flakes

Bipolar

Blade

Flake Fragments

Shatter

TOTALS

COASTAL PLAIN CHERT

INTERNAL FLAKE TOOLS

Heat Altered

Not Altered

Indeterminate

OTHER MATERIAL

Unifacial Bifacial Both Unifacial Bifacial Both Unifacial Bifacial Both Unifacial Bifacial Both

Uniform

Concave

Denticulate

Point/Tip

Multiple

Other

	COASTAL PLAIN CHERT						OTHER	
	Heat Altered		Not Altered		Indeterminate			
Hafted Endscraper	_____	_____	_____	_____	_____	_____	_____	_____
H. Endscraper w/ graver	_____	_____	_____	_____	_____	_____	_____	_____
Bifacial Knife (Waller)	_____	_____	_____	_____	_____	_____	_____	_____
Edgefield Scraper	_____	_____	_____	_____	_____	_____	_____	_____
Hafted Spokeshave	_____	_____	_____	_____	_____	_____	_____	_____
H. Spokeshave w/ graver	_____	_____	_____	_____	_____	_____	_____	_____
Hafted Graver	_____	_____	_____	_____	_____	_____	_____	_____
Sm. Retouched Blade, Bifacial	_____	_____	_____	_____	_____	_____	_____	_____
Drill/Perforator	_____	_____	_____	_____	_____	_____	_____	_____
Other ( )	_____	_____	_____	_____	_____	_____	_____	_____

	COASTAL PLAIN CHERT						OTHER BIFACES		OTHER MATERIAL	
	Heat Altered		Unaltered		Indeterminate					
	Whole	Fragment	Whole	Fragment	Whole	Fragment	Whole	Fragment	Whole	Fragment
Stage 1	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Stage 2	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Stage 3	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Stage 4	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Indeterminate	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

	COASTAL PLAIN CHERT			OTHER	
	Heat Altered	Unaltered	Indeterminate		
Unspecialized (Random)	_____	_____	_____	_____	_____
Specialized (Lamellar)	_____	_____	_____	_____	_____
Bipolar	_____	_____	_____	_____	_____
Piece Esquillee	_____	_____	_____	_____	_____
Other ( )	_____	_____	_____	_____	_____

HAFTE BIFACES

Number of hafted bifaces present = \_\_\_\_\_ (including frags)

Note: See attribute forms for detailed information.

Garrod Associates, Inc.   
 Basic Log/Analysis   
 Site # \_\_\_\_\_   
 Analyze \_\_\_\_\_   
 Block \_\_\_\_\_   
 Piece # \_\_\_\_\_   
 coordinates \_\_\_\_\_   
 Feature \_\_\_\_\_   
 Accession # \_\_\_\_\_

Unidentified groundstone \_\_\_\_\_   
 Gorget \_\_\_\_\_   
 Bannerstone (atlatl wt.) \_\_\_\_\_   
 Manuports (Unmodified) \_\_\_\_\_   
 Other ( ) \_\_\_\_\_   
 Fire Cracked Rock #: \_\_\_\_\_ Weight \_\_\_\_\_

PREHISTORIC CERAMICS

	BODY		RIM	
	Fiber ↓	Other ↓	Fiber ↓	Other ↓
Plain	_____	_____	_____	_____
Punctate	_____	_____	_____	_____
Simple Stamp	_____	_____	_____	_____
Complicated Stamp	_____	_____	_____	_____
Brushed	_____	_____	_____	_____
Daub	_____	_____	_____	_____
Bone	_____	_____	_____	_____
Shell	_____	_____	_____	_____
Charcoal	_____	_____	_____	_____
Other Historic	_____	_____	_____	_____

GENERAL REMARKS

\_\_\_\_\_

\_\_\_\_\_

