

Phase I Archaeological Survey,
**Oak Ridge Enhanced
Technology Training Center,**
Y-12 National Security Complex

Roane County, Tennessee

Subcontract #4300163998
Solicitation #6300022834

New South Associates, Inc.

Phase I Archaeological Survey, Oak Ridge Enhanced Technology and Training Center, Y-12 National Security Complex

Roane County, Tennessee

Subcontract No. 4300163998
Solicitation No. 6300022834

Report submitted to:

Consolidated Nuclear Security, LLC • 310 Bear Creek Road • Oak Ridge, Tennessee, 37380

Report prepared by:

New South Associates • 6150 East Ponce de Leon Avenue • Stone Mountain, Georgia 30083



Danny Gregory, RPA – Principal Investigator

Matt Lyons – Archaeologist and Co-Author

Robbie D. Jones – Historian and Co-Author

October 21, 2020 • **Final Report**
New South Associates Technical Report 4049

ABSTRACT

Between June 29th and July 1, 2020, New South Associates, Inc. (New South) performed a Phase I archaeological survey for the proposed Oak Ridge Enhanced Technology & Training Center of the Y-12 National Security Complex in Roane County, Tennessee. The survey was designed to identify all archaeological resources that may be impacted by development in the area. The project area covered approximately 81 acres of undeveloped forested land adjacent to the Oak Ridge Turnpike approximately 3.5 miles northeast of East Tennessee Technology Park (ETTP), formerly known as the K-25 Gaseous Diffusion Plant located on the Oak Ridge Reservation.

The survey consisted of systematic shovel testing at 30- or 60-meter intervals determined by terrain slope. A total of 369 pre-plotted shovel test locations were investigated throughout the project area. As a result of the survey, 203 shovel tests were negative and 166 were not excavated, mostly due to steep slopes. No archaeological sites were identified during the course of this survey. No further archaeological work is recommended for this project.

Intentionally Left Blank

TABLE OF CONTENTS

ABSTRACT.....	i
LIST OF FIGURES AND TABLE.....	v
I. INTRODUCTION.....	1
II. ENVIRONMENTAL CONTEXT.....	5
III. CULTURAL CONTEXT.....	9
PRE-CONTACT CONTEXT	9
Paleoindian Period (15,000–10,000 B.P.).....	9
Archaic Period (10,000–3000 B.P.)	11
Woodland Period (3000–1100 B.P.)	15
Mississippian Period (1100–400 B.P.).....	16
PROTOHISTORIC.....	18
HISTORIC CONTEXT	20
Settlement Era through Civil War.....	20
Industrial Development.....	21
New South Progress	23
Great Depression and the New Deal	24
World War II and the Manhattan Project.....	25
Post-World War II History.....	27
IV. METHODS.....	33
V. RESULTS AND RECOMMENDATIONS.....	35
BACKGROUND RESEARCH RESULTS.....	35
ARCHAEOLOGY FIELDWORK RESULTS.....	38
VI. SUMMARY AND RECOMMENDATIONS	43
REFERENCES CITED.....	45

Intentionally Left Blank

LIST OF FIGURES AND TABLE

Figure 1.	Project Location Map.....	2
Figure 2.	Map of the Area of Potential Effects	3
Figure 3.	Current Conditions within the Area of Potential Effects	6
Figure 4.	Photographs, Industrial Landmarks, Roane County	22
Figure 5.	Maps, Oak Ridge Reservation	26
Figure 6.	Photographs, Oak Ridge Reservation near Project Site.....	28
Figure 7.	Photographs, Oak Ridge Reservation, circa 1945	29
Figure 8.	Previously Recorded Archaeological Sites and Previous Surveys near the Area of Potential Effects.....	36
Figure 9.	Map of the Area of Potential Effects Showing Shovel Tests, Northern Section	39
Figure 10.	Map of the Area of Potential Effects Showing Shovel Tests, Southern Section	40
Figure 11.	Typical Shovel Test Profile (Shovel Test 115).....	41
Table 1.	Previous Sites and Surveys within 1 Mile of the Project Area	35

Intentionally Left Blank

I. INTRODUCTION

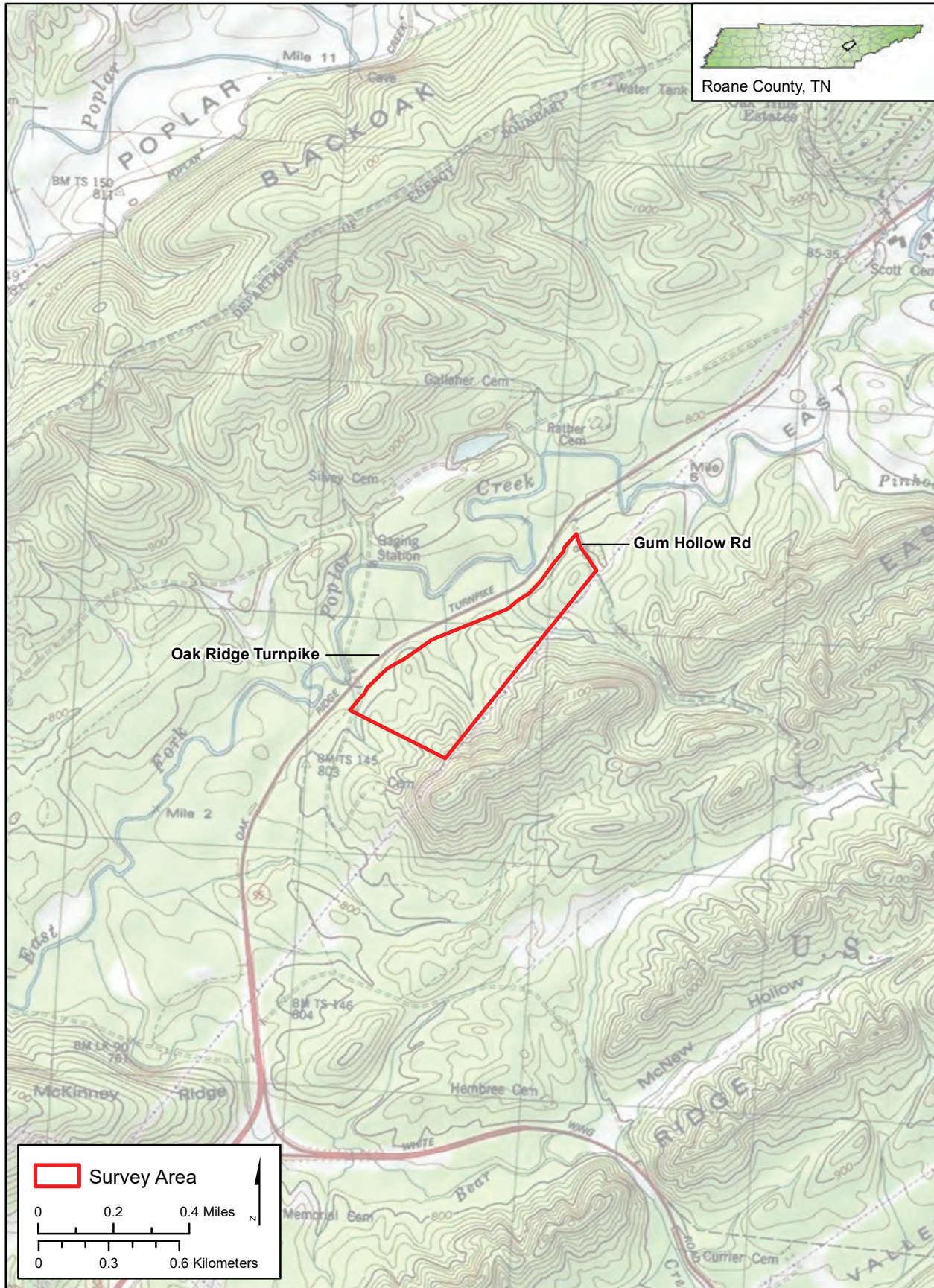
New South Associates, Inc. (New South) conducted a Phase I Archaeological Survey of 81 acres for the proposed Oak Ridge Enhanced Technology and Training Center located in the Self Sufficiency Parcel 2 (SSP-2) in Roane County, Tennessee (Figure 1). The parcel is currently a part of the U.S. Department of Energy's (DOE) Oak Ridge Reservation. The project was carried out under subcontract to Consolidated Nuclear Security, LLC (CNS) and for the DOE NNSA. The work followed the Tennessee State Historic Preservation Office's (TN-SHPO) Standards and Guidelines for Archaeological Resource Management Studies and the Tennessee Division of Archaeology (TDOA) Standards and Guidelines for Archaeological Permit Applications.

The Area of Potential Effects (APE) consists of 81 acres of undeveloped land bordering the Oak Ridge Turnpike approximate 3.5 miles (5.6 km) northeast of the East Tennessee Technology Park (ETTP), formerly known as the K-25 Gaseous Diffusion Plant (K-25). The parcel is bounded by the Oak Ridge Turnpike to the west, DOE North Patrol Road to the north, and a power transmission corridor to the east (Figure 2). Most of the APE consists of secondary growth (planted pine forest) vegetation interspersed with small copses of old-growth hardwoods.

The goal of the survey was to identify all archaeological resources within the APE and, if located, provide a recommendation for their eligibility for listing on the National Register of Historic Places (NRHP). The information generated from this project will be used to assist the DOE with planning and compliance in regard to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. Background and archival research were conducted prior to fieldwork and included consultation with the TDOA, TN-SHPO, and a review of the NRHP for previously recorded archaeological resources both within and in the proximity of the APE. Archaeological fieldwork consisted of systematic subsurface testing along transects throughout the project area.

Archaeological fieldwork was completed between June 29 through July 1, 2020, led by Field Director Matt Lyons and assisted by Brian Cavanaugh and Ashley Cavanaugh. Danny Gregory served as Principle Investigator. This report contains six chapters, including the introduction. Chapter II discusses the environmental context. Chapter III presents an overview of the cultural context. Chapter IV discusses the methods. Chapter V presents the archaeological survey results. Chapter VI summarizes the results and recommendations.

Figure 1.
Project Location Map



Source: USGS Topographic Quadrangle Map, Bethel Valley, TN (1976)

Figure 2.
Map of the Area of Potential Effects



Source: ESRI World Imagery (2020)

Intentionally Left Blank

II. ENVIRONMENTAL CONTEXT

The project area is located in Roane County in eastern Tennessee, north of the Clinch River. This area falls within the Ridge and Valley physiographic province, which is comprised of long, narrow, even-topped ridges overlooking narrow valley floors (Fenneman 1928). Elevations for the project area range between 780 and 1060 feet above mean sea level (amsl). Slopes within the project area average 9.3 percent with a maximum slope of 33.6 percent. Typical survey environments in the project area are shown in Figure 3.

Differential erosion is the most important factor in the shaping of the landscape of this area. Tough, resistant rocks, such as sandstone and siltstone, form the ridges. More easily eroded rocks, such as shales and limestones, form the valleys. Many of the towns in the Ridge and Valley province are located on alluvial fans and stream terraces made up of cobbly and sandy material that washed down from the Appalachian Mountains and the Cumberland Plateau and were deposited during the Holocene epoch (Fenneman 1928).

A review of the Web Soil Survey indicated that no soil surveys have been conducted on the Oak Ridge Reservation. The last soil survey of Roane County in 1942 lists general soil types within the county although it does not characterize specific soils in or near the project area (Swann 1942). The soils in the county are described as silt loams, cherty silt loams, or clay loams and most of the soils examined are considered severely eroded. The soils encountered during this project are consistent with these descriptions.

The varying elevations in the Ridge and Valley province result in a variety of environmental conditions. The lower valley areas can have hot, humid summers, while the ridges experience cooler summer temperatures. The relatively mild environmental conditions make this province home to a wide variety of species.

The Ridge and Valley province falls within the Carolinian Biotic Province, which is covered by temperate deciduous forests (Dice 1943:166–18). The original forests in the area were oaks and chestnuts (Braun 1950); however, the majority of the chestnuts have been removed from the area through lumbering and by the chestnut blight that occurred in the early twentieth century (Shelford 1963:3839). Oak is the predominate hardwood today (Braun 1950).

Figure 3.
Current Conditions within the Area of Potential Effects

A.
High Probability Area with Pines at
Transect Shovel Test 272, Facing
Northeast



B.
Inundated Stream Area at Transect
Shovel Test 160, Facing Southeast



C.
Slope and Hardwood Vegetation at
Transect Shovel Test 210, Facing
Northeast



A great variety of fauna is also present in the Ridge and Valley region. Mammals found roaming the area in both prehistoric and historic times include white-tailed deer, black bear, gray fox, bobcat, raccoon, and a variety of other small woodland animals (Kellogg 1939:257–297). Wetland areas covered by rivers and streams are host to abundant wildlife including fish, turtles, and mollusks. The most common turtles include snapping turtle, mud turtle, and spiny, soft-shelled turtles. Birds include wild turkey, pigeons, hawks, bald eagles, and owls.

Intentionally Left Blank

III. CULTURAL CONTEXT

A brief overview of the major cultural developments throughout the pre-contact and historic periods are presented below and provide the framework for assessing the significance of archaeological resources in the region. This overview has been drawn from a variety of sources including management documents, published historic contexts, and relevant regional research.

PRE-CONTACT CONTEXT

The pre-contact periods of the Southeast are generally described as being composed of four archeological contexts or “cultural traditions” (Willey and Phillips 1958). These include the Paleoindian (15,000–10,000 years before present [B.P.]), Archaic (10,000–3000 B.P.), Woodland (3000–1100 B.P.), and Mississippian (1100–400 B.P.) periods.

PALEOINDIAN PERIOD (15,000–10,000 B.P.)

Human occupation of eastern North America is generally thought to have occurred at the end of the Pleistocene between 15,000 and 12,000 B.P. (Anderson 1996a). Earlier dates are suggested by recent work at Cactus Hill (Virginia), Topper (South Carolina), Big Eddy (Missouri), and Meadowcroft Rockshelter (Pennsylvania) (Goodyear 1979; Lopinot et al. 1998; McAvoy and McAvoy 1999). Most Paleoindian contexts in the eastern United States fall between 11,500 and 10,000 B.P., although suspected “pre-Clovis” sites may eventually expand this range (Anderson 1995).

The Paleoindian period is commonly divided into the Early Paleoindian subperiod or “Clovis” (circa 11,500–10,800 B.P.), the Middle Paleoindian subperiod or “Cumberland” (circa 11,000–10,500 B.P.), and the Late Paleoindian subperiod or “Dalton” (circa 10,500–10,000 B.P.). Typically, these components are delineated by differences in the morphology of projectile points or other lithic tools. Because of the age of these components, the stone tools are frequently the only remaining cultural material. Fluted, lanceolate projectile points are typical for Clovis and Cumberland sites. Unfluted types such as Quad, Beaver Lake, and Dalton are typically associated with the Late Paleoindian. All Paleoindian points typically exhibit parallel oblique flaking patterns and basal grinding. Other Paleoindian lithic tools include bifacial knives, a variety of relatively formalized flake tools including endscrapers and graters (frequently executed on blades), and splintered wedges (*pieces esquillees*).

The traditional model for subsistence, settlement patterns, and social organization was that the Early Paleoindian was characterized by the hunting of Pleistocene megafauna (mammoth and mastodons) by small, highly mobile bands of hunter-gatherers with specialized toolkits (Kelly and Todd 1988; Meltzer 1988). By the Late Paleoindian, these groups, though still highly mobile, had adapted to climatic changes and the extinction of the megafauna and were largely focused hunting bison and a variety of smaller animals. Cultural processes have been viewed in terms of cultural ecology and the direct interplay between the adaptive-oriented decision-making of Paleoindians and the late Pleistocene/emerging Holocene environment (Binford 1980; Griffin 1967; Mason 1962; Meltzer 1988).

However, this simple, linear view of Paleoindian adaptations is being challenged by recent research in Tennessee that has identified intact features and dense cultural deposits that suggest recurrent and highly structured use of the same localities, possibly by aggregate band and macro-band populations (Broster and Norton 1996). Archaeological interpretations of this period have been modified to incorporate what are now perceived of as the dynamic effects of increasing population, increased regionalization, and societal interaction rather than, simply, environmental “stimuli,” nomadic wandering, and social isolation (Anderson 1995; 1996a; Wycoff and Bartlett 1995).

Paleoindian settlement and patterns of exploitation are believed to have been at least partially structured to promote and mediate social interaction between groups such as bands and macro-bands (Anderson 1995:14). Recent re-evaluations of Paleoindian data suggest that changes occurred during this period that involved increasingly limited territorial ranges for individual band and macro-band groups. Anderson (1995:5) proposed that following an initial interval of pioneer incursions into Eastern North America, early populations adjusted rapidly to “bounded habitual-use areas or settlement ranges.” This trend was in part the product of “cultural perceptions of appropriate group size, range, spacing, and frequency of interaction, as well as [a desire] to meet biological needs” of reproduction and to avoid overexploitation of key resource areas (Anderson 1995:5). Subregional traditions emerged within the Paleoindian cultural tradition and social interactions between regions became increasingly structured in order to offset the spatial incongruencies of the availability of viable mates and, in order to generate a network of external social ties. Anderson (1995) identified the Cumberland and Tennessee River drainages as containing a distinct, regional concentration of Paleoindian material that may be indicative of the bounded settlement range for a Middle-to-Late Paleoindian macro-band.

Paleoindian sites are more common along the Cumberland and Tennessee rivers than in the surrounding region. This is likely due to the abundance of sources of high quality, Mississippian cherts such as Knox, Dover, and Fort Payne. The riverine environment in this region would have supported a diverse array of animal and plant life that would have also been very attractive to Paleoindian inhabitants.

ARCHAIC PERIOD (10,000–3000 B.P.)

The Archaic period in the Eastern United States dates between 10,000 and 3000 B.P. During this broad time span, prehistoric cultures changed due to variations in the climate and availability of resources, the introduction of new technologies, diversification of subsistence strategies, decreased mobility, and a general increase in population. Regionally distinct morphological diversity in similar artifact types (primarily projectile points) increases during the Archaic period (Walthall 1980). This was also likely due to increased territoriality and the establishment of ethnic boundaries, or those defined by differences in language and cultural practices (Griffin 1964; Jennings 1974; Williams and Stoltman 1965). The apparent escalation of inter-societal interaction during the Archaic period was probably associated with greater sedentism, denser populations, and the emergence of more complex forms of societal organization (Jefferies 1995).

The Archaic period is generally divided into three subperiods: Early (10,000–8000 B.P.), Middle (8000- 5500 B.P.), and Late or Terminal (5500- 3000 B.P.) (Bense 1994; Brown 1994; Smith 1986; Steponaitis 1986). Each of these subperiods is defined and identified primarily on the basis of changes in a limited range of diagnostic artifacts (projectile points) but also on other facets of material culture and patterning in the archaeological record.

Early Archaic (10,000–8000 B.P.)

Early Archaic subperiod assemblages share technological and stylistic affinities with the preceding Late Paleoindian subperiod assemblages (thin, basally-ground types). Notable changes include a wider variety of projectile point types and informal tools. A decreased reliance on megafauna and the introduction of the atlatl led to diversification in toolkits and subsistence strategies during the Early Archaic subperiod.

The Early Archaic tool kit consisted of hafted bifaces including Lost Lake, Kirk Corner Notched Cluster points (i.e. Kirk, Palmer, Decatur, and Pine Tree), Large Side Notched Cluster Projectile Points/Knives (i.e. Big Sandy, Graham Cave, and Raddatz), and Bifurcate Base Cluster forms (i.e. St. Albans, Lecroy, and Kanawah) types among others are attributed to the Early Archaic sites from within the region (Justice 1987). Other common tools included knives, drills, perforators, graters, scrapers, and a variety of bone, antler, and wood tools.

Compared to the succeeding Middle and Late Archaic subperiods, these Early Archaic assemblages appear very uniform over broad geographical areas. This broad based similarity in styles and technology has been attributed to a high degree of mobility on the part of Early Archaic groups (Goodyear 1979; Kelly and Todd 1988). High mobility has generally been equated with a specific order of subsistence adaptation that was oriented towards foraging and the exploitation of migratory animals (Kelly and Todd 1988). The potential social dimensions of highly mobile behavior have been attributed in part to the absence of constraints to movement in areas of low population. Conversely, high mobility has also been viewed as a response to incentives to promote social interaction over long distances between groups in areas where populations are typically low and between-group contacts are normally rare (Sassaman 1995). The regularization of interactions between groups that Anderson (1995; 1996a) postulated for the Late Paleoindian subperiod, appears to continue as a component aspect of Early Archaic social adaptations. Large node-like sites, such as Puckett (40SW228) and Johnson (40DV400), that had repeated occupations (Broster and Barker 1992; Norton and Broster 1992) may represent the locations of regularized interactions between Early Archaic bands and macro-bands that were otherwise widely spaced within large but increasingly well-defined territories.

Early Archaic sites are common in Tennessee; however, little systematic excavation work has been done in the last 20 years beyond cursory, survey level investigations. In east Tennessee Early Archaic components have been recorded at Calloway Island, Icehouse Bottom, Thirty Acre Island, Bacon Farm, and, immediately southwest of the project area, Bussell Island (40LD18).

Middle Archaic (8000–5500 B.P.)

The Middle Archaic subperiod record is considerably different from the preceding Paleoindian and Early Archaic records. Larger sites, repeated occupations, and decreased mobility are noted in many of the Southeastern river valleys (Anderson 1996b; Claassen 1996a; 1996b). Middle Archaic assemblages become diverse and reflect increased regionalization. Evidence for exchange and interaction is limited but does appear at some locations, generally corresponding to large sites evincing intensive and long-term occupation (Jefferies 1995; 1996). Although population increase is assumed for the entire Archaic period, records for Tennessee document a significant decline in the number of sites from the Early to Middle Archaic subperiods. However, this could be explained by population aggregation rather than decline.

Overall, Archaic period lithic assemblages reflect the general effects of population increases and the increased boundedness of territories. A Late Paleoindian and Early Archaic reliance upon formal tool manufacture and curated technologies noted in the Duck River Valley gradually shifts

to more expedient tool production during the Middle Archaic subperiod (Amick 1984; Amick and Carr 1996:44). Local cherts were heavily exploited regardless of traceable attributes. Limited and select non-local resources were exploited by logistical strategies.

Middle Archaic projectile point types differ considerably from the preceding Archaic types. Hafted bifaces with large basal notches (Eva Cluster) are generally associated with the Middle Archaic in the western and central portions of Tennessee. Though based on types from the North Carolina Piedmont, small sized, contracting stemmed Morrow Mountain Cluster types are more commonly found in the eastern highland rims and to lesser extent in the central basin. Large stemmed points from the White Springs and Benton Clusters begin to appear near the end of the Middle Archaic (Justice 1987). The change in projectile point morphology by the Late Archaic is believed to be the result of restricted access to some resources precipitating a return to curative strategies and an increase in exchange to offset the effects of limited mobility (Amick and Carr 1996:46). During the Late Archaic, finished tools were often manufactured on non-local cherts that Amick (1984) interpreted as the result of territorial circumscription and an increase in lithic resource exchange. Late Archaic patterns of exchange are demonstrated by the distribution and occurrence of Benton-like projectile points manufactured from Fort Payne chert. These items appear over much of the Mid-South and are believed to represent the ritualized but non-ceremonial (utilitarian) components of broad-based systems of exchange (Childress 1999; Johnson and Brookes 1989; Meeks 1999).

Probably the most well-known Middle Archaic and Late Archaic site excavated in Tennessee is the Eva site. The site located in Benton County along the Tennessee River. Lewis and Kneberg (1961) conducted extensive excavations in the 1930s and 1940s before it was inundated by Kentucky Lake. Early work at this site produced considerable information on the Middle and Late Archaic “Shell Mound Archaic” cultures along the Tennessee River. It contained well-preserved remains including human burials.

Major Middle Archaic occupations have been identified at the Anderson, Hicks Bend (40WM32), and Mizzell (40WM225) sites in Williamson County; the Ryan site (40RD77) in Rutherford County; and at French Lick (40DV5), Ensworth (40DV184), Gowen Farmstead (40DV401), and the Hart and Owl Creek sites (40WM14 /40DV434) in Davidson County (Childress 1999; Deter-Wolf 2004; Dowd 1989; Lindstrom and Stevenson 1987; Walling et al. 2000).

Late Archaic (5500–3000 B.P.)

The Late Archaic subperiod was very dynamic in terms of settlement patterns, subsistence strategies, and site types. Three types of sites from this subperiod have been recognized in the Mid-South including large scale villages with midden deposits (shell), smaller, less densely occupied sites with storage facilities, and lithic scatters. These three settlement patterns may represent three different environmental exploitation patterns (Walling et al. 2000).

The early part of the Late Archaic (5500–4500 B.P.) in Eastern Tennessee is generally defined by the presence of Savannah River projectile points (Cambron and Hulse 1975; Coe 1964). Generally dated between 5000 and 3000 B.P., Savannah River points have been associated with radiocarbon dates of 4,400 and 4,100 B.P. at the Bacon Bend Site. A smaller, derived variant of this type was found at the Iddins site. The Iddins type (3700–3200 B.P.) appears to postdate the Savannah River points in the Little Tennessee River drainage (Chapman 1981).

The later portion of the Late Archaic in eastern Tennessee is characterized as the Ledbetter phase, which was originally defined along the Tennessee River in the western part of the state (Lewis and Kneberg 1959:172–173). This phase is identified by the presence of Ledbetter cluster projectile point types including Cotaco Creek, Ledbetter, Little Bear Creek, and Pickwick. Adena type projectile points were also common in Ledbetter phase components. Ledbetter phase components contained assemblages similar to those of the Late Archaic Big Sandy components, and in fact, were believed to be roughly the same age. Both contained Ledbetter, Big Sandy, and Adena-type tools. Oblong, two-hole shell gorgets were noted by Lewis and Kneberg (1959:172) as being indicative of the latter part of the Ledbetter occupation.

The Ledbetter phase contained both seasonal hunting/gathering encampments occupied by a single-family group and larger, seasonal sites occupied by several family groups. The small encampments typically contained clusters of features including storage pits, shallow basins, hearths, and the occasional burial or posthole. The multi-family occupations contained larger feature clusters including storage pits, shallow basins, hearths, earth ovens, midden, postholes for open and enclosed structures, and burials (Bentz 1995:140).

In south-central and eastern Tennessee, Late Archaic populations practiced horticulture and cultivated several species including goosefoot (*Chenopodium* sp.), marsh elder (*Iva funtescens*), sumpweed (*Iva annua* v. *macrocopa*), sunflower (*Helianthus annuus*), and squash (*Cucurbita* sp.) (Chapman and Shea 1981). Other subsistence practices during the Late Archaic included the gathering and storage of local seed crops (mostly hickory and walnut) and the hunting/collection of various fauna including deer, bear, opossum, raccoon, beaver, rabbit, squirrel, muskrat, mink,

fox, wildcat, otter, groundhog, turkey, turtle, and several species of fish (Bentz 1995:140). Mortuary practices during the Late Archaic included shallow pit cremations (usually articulated) and primary interments in either shallow pits or midden deposits.

Late Archaic sites are abundant along the Tennessee River. Generally, archaeological work on these sites was not the primary focus of excavations but was dealt with as a component of a larger, stratified, multi-component site. Few Late Archaic sites excavated in Tennessee have seen extensive work. The best known examples of Late Archaic “Shell Mound Archaic” sites are the Eva and Ledbetter sites located on the Tennessee River. Both had significant Late Archaic shell midden deposits, good faunal preservation, and human burials. Late Archaic excavations in east Tennessee include the University of Tennessee’s work at Harrison Branch, Bacon Bend, and Iddins on the Little Tennessee River (Chapman 1981; Schroedl 1975). Also, Late Archaic near Loudon includes work at the Higgs and Kimberly-Clark sites (Chapman 1990; McCollough and Faulkner 1973).

The division between Archaic and Woodland cultures has traditionally been modeled as the distinction between food collectors at one end of the cultural spectrum and food producers at the other. This distinction appears to no longer be valid (Claassen 1996a; 1996b). As Sassaman and Anderson (1996:xv) noted, “the divide between hunter-gatherer societies and food producers carries with it a tremendous amount of conceptual baggage.” In light of new evidence, many of the traditional stage-level distinctions between the Archaic and Woodland appear to be increasingly irrelevant as the obvious cultural diversity and complexity of Archaic period cultures is realized. Though it is no longer used to craft new theoretical frameworks, this collector/producer continuum is mentioned because it remains an important part of the context used in previous studies.

WOODLAND PERIOD (3000–1100 B.P.)

The Woodland period in eastern Tennessee is generally divided four subdivisions: Woodland I (3000–2200 B.P.), Woodland II (2200–1650 B.P.), Woodland III (1650–1400 B.P.), and Woodland IV (1400–1100 B.P.). The Woodland period is marked by decreased mobility, cultural complexity, trade and exchange, horticulture, the widespread use of ceramic technology, and the development of an elaborate mortuary complex, including the construction of burial mounds and ceremonial earthworks (Brose 1979; Faulkner 2002). Traditionally, these subdivisions are demarcated by three trends: the first widespread use of pottery across the Southeast, the rise and then decline of pan-regional, ceremonially-based interaction networks; and finally, a period of political fragmentation, increasing agricultural intensification, and population growth (Anderson and Mainfort 2002).

Projectile points from the Woodland period vary considerably in quality, size, and form. Generally, they are smaller than Archaic forms. In the Ridge and Valley region of Tennessee, common point types include medium-sized triangular points, pentagonals, small to medium side notched and stemmed forms, and Bradley Spikes (Kneberg 1956). These points are not clearly delineated into periods as their associated ceramics. Using the Tellico Reservoir chronology (Kimball 1985) and work in the other regions of the Tennessee River drainage (e.g. McNutt and Weaver 1985), barbed or shouldered, stemmed projectile forms such as Wade and Cotaco Creek (DeJarnette et al. 1962) date to the Late Archaic/Early Woodland transition, followed by Adena-like points and straight to contracting stem forms with reduced shoulders such as Flint Creek in the Early Woodland (McNutt and Weaver 1985:20). In the Early and Middle Woodland, Pidgeon Side Notched like points have been found in the area (Keel 1976:127–129). At the Tellico Reservoir (Kimball 1985) and other Middle Woodland sites in the region (Walthall 1985), the primary projectile points are Greeneville and Camp Creek (Keel 1976:132). In the Late Woodland to Early Mississippian, projectile point forms include Bradley Spikes, pentagonal points, and triangular Madison and Hamilton (Kneberg 1961) forms (Kneberg 1956).

MISSISSIPPIAN PERIOD (1100–400 B.P.)

The Mississippian period is generally dated between circa 1100 to 400 B.P., although considerable regional variation is documented for its emergence and culmination (Griffin 1967; Jennings 1974; Peebles 1978; Phillips 1970). The Mississippian period is generally characterized by large, complex villages with associated hamlets and resource extraction/gathering sites (Peebles 1978). Subsistence activities were dominated by more intensive agricultural pursuits including the cultivation of maize (*Zea mays*), beans (*Phaseolus vulgaris*), and squash (*Cucurbitis* sp.).

Ranked status differentiation is another aspect of Mississippian period culture that distinguishes it from previous periods where social and political positions were primarily determined by individual achievement rather than by ascription. Centralized authority in the form of chiefdom-level polities is a highly visible aspect of the archaeological record for this period in the Southeastern United States. Large civic-ceremonial centers appeared early in the Mississippian period and are distinguished by the presence of platform mounds and strategic spatial arrangements of community features (Anderson 1994; Emerson 1997; King 2003; Milanich 1998; Pauketat 1994; Smith 1992; Sullivan 2001).

The local regional chronology for the Mississippian period has been defined as a series of sites along the Tennessee River. The archaeological expressions of Mississippian culture fall under three basic themes: the presence of platform mounds, large organized villages, and large-scale agriculture (corn). The regional chronology of Mississippian culture in East Tennessee has been

delineated into four phases, commonly termed Mississippian I-IV (Pritchard and Ahlman 2009; Schroedl 2009). Mississippian I is a Woodland transitional subperiod defined as the Martin Farm phase (1100–900 B.P.) (Schroedl et al. 1985; 1990). The Mississippian II subperiod was defined as the Hiwassee Island phase (900–700 B.P.) (Lewis and Kneberg 1946). Dallas phase and Mouse Creek phase sites are placed within the Mississippian III subperiod (700–400 B.P.) (Schroedl et al. 1990). Finally, the protohistoric Overhill Cherokee sites comprise the Mississippian IV subperiod ranging from the 17th to 19th centuries (Pritchard and Ahlman 2009; Schroedl 2009).

Early Mississippian culture (Mississippian I) in East Tennessee includes the Martin Farm phase, which was first defined at the Martin Farm site (40MR20) on the Tellico Reservoir (Schroedl et al. 1985; 1990; Schroedl 2009). It is a transitional interval (1100–900 B.P.) combining elements of both the Woodland and Mississippian periods. Many of the distinctly Mississippian cultural traits, such as villages with domestic structures and a platform mound, have their earliest expressions at Martin Farm. During this subperiod, East Tennessee populations began to organize into consolidated settlements with increased social complexity and a focus on agriculture.

Early Mississippian sites in East Tennessee typically contain small platform mounds and organized habitation areas with domestic structures, palisades, refuse trenches, storage pits, above-ground granaries, conical mortuary mounds, and shell-tempered ceramics. Early Mississippian components were also defined at Hiwassee Island (40MG31), Lea Farm (40AN17), Bat Creek (40LD24), and Hixon (40HA3) (Lewis and Kneberg 1946; Schroedl 1975; Webb 1938).

The Middle Mississippian (Mississippian II) subperiod (1000–700 B.P.) in East Tennessee was first defined at the Hiwassee Island site (Lewis and Kneberg 1946). In general, this period is characterized by a continuation of the trends that first appeared in the Martin Farm phase. Slight changes in settlement patterns, house form, and material culture are noted along with an increased reliance on agriculture and a more complex social organization. Houses during the Middle Mississippian transitioned from the wall trench construction to single set post (bent pole) forms later in the period. Mound construction continues and increases in scale. Shell-tempered ceramics continue to be the dominant type during this period. Settlement patterns during the Middle Mississippian shift from a focus on first alluvial terraces to the older second terraces. Differentiation between site types becomes more pronounced. In addition to large mound complexes like Hiwassee Island (40MG31) and Toqua (40MR6), site types also include farmsteads/hamlets like Kimberly-Clark (40LD208) and resource-extraction sites like Davis-Noe (40RE137) (Lewis and Kneberg 1946; Pritchard and Ahlman 2009; Schroedl 1975; Webb 1938).

The Late Mississippian (Mississippian III) subperiod (700–400 B.P.) in East Tennessee is generally referred to as the Dallas phase throughout most of the Tennessee River Valley. The intensification of agriculture continues in this period, as does an increase in social organization. Political centers emerge in the form of large mound complexes. Several large Dallas phase mound complexes have been investigated including Dallas (40HA1), Hixon (40HA3), Hiwassee Island (40MG31), Fains Island (40JE1), DeArmond (40RE12), Sale Creek (40HA10), Citico, and Toqua (40MR60) (Schroedl 1998). More focus is paid to these ceremonial and cultural centers and less organization is noted among outlying farmsteads. An additional regional expression is noted in the Chickamauga Basin. Egalitarian farmsteads with no mounds were identified throughout the basin. These were collectively referred to as the Mouse Creek phase, a local sequential occupation of the Dallas phase. It has been suggested that Mouse Creek might be a reflection of social reorganization related to warfare and the dissolution of trade networks (Schroedl 1986; Sullivan 1987).

Dallas phase structures were square or rectangular with single-set post construction. Other common features include pits, palisades, surface fired areas, and collared hearths. Shell-tempered ceramics remain common, as do exotic trade goods. The large villages and cooperative trade networks of the Dallas phase form the basis for the later protohistoric cultures in East Tennessee.

PROTOHISTORIC

As suggested by the palisades and other defensive structures noted at Dallas phase sites, the latter part of the Mississippian period is thought to be a time of increased conflict. A decrease in the construction of ceremonial structures suggests a decline in ritual behavior. Falling maize production, possibly due to the colder temperatures associated with the Little Ice Age, created an increasingly stressed resource base (Pauketat 1994).

Contact with European groups occurred in the midst of this time of upheaval and the collapse of the powerful Mississippian chiefdoms. The first contact between the Mississippian groups and the Europeans occurred during the expeditions of Hernando de Soto (A.D. 1539–1543). Though sporadic contact between the Spanish and the Mississippian groups occurred during the latter half of the sixteenth century, the Historic period is generally considered to begin at the turn of the seventeenth century, when European colonization of the New World began in earnest. The collapse and fragmentation of the Mississippian resulted in the appearance of the tribes present within the district during European expansion into the region.

The seventeenth- and eighteenth-century inhabitants of Eastern Tennessee are collectively referred to as the Overhill Cherokee. Their towns were located primarily along the Tennessee and Hiwassee rivers and were visited by Europeans. Known Overhill Cherokee towns include Chota, Toqua, Tanasi, Tomotley, Tuskegee, Mialoquo, Hiwassee Old Town, Chilhowee, Tallhassee, Citico, and Chatuga.

Overhill Cherokee towns in eastern Tennessee have seen a great deal of archaeological work. Following the historic ethnographic accounts of these towns, the first archaeological studies of the area were conducted in the late nineteenth century by the Smithsonian's Bureau of (American) Ethnology (BAE). Cyrus Thomas of the Smithsonian surveyed 25 mound sites, mostly along the Little Tennessee and Tellico rivers, including Tallassee (40BT8), Tanasi/Chota (40MR2), Citico (40MR7), Toqua (40MR6), Tomotley (40MR5), and Tuskegee (40MR4). Thomas attempted to correlate these sites with the Overhill Cherokee towns shown on the 1762 map by Henry Timberlake. Between 1885 and 1889, another BAE archeologist, John W. Emmert, conducted excavations at 53 mound sites along the Little Tennessee River. Several of these were known Cherokee towns including Toqua (40MR6) and Tomotley (40MR5) (Chapman 1985).

Clarence B. Moore conducted excavations along the Tennessee River, though they were more focused on artifact collection than research (Moore 1915). In 1914 and 1915, M.R. Harrington excavated Bussell Island at the confluence of the Little Tennessee and Tennessee rivers (Harrington 1922). In 1933, the Federal Emergency Relief Administration allocated money to hire 1,500 workers for archeological excavations in the Tennessee River Valley. That same year, the TVA was created. TVA's efforts to control the Tennessee River and its major tributaries through a series of dams and reservoirs produced the need for surveys and salvage excavations of hundreds of archeological sites (Pritchard and Ahlman 2009). Following the creation of the Department of Anthropology at the University of Tennessee, Knoxville in 1934 and the Works Progress Administration (WPA) in 1936, the Tennessee River Valley became a hotbed for archeological work until 1942 when the economic impacts of World War II caused the work to cease (Chapman 1985; Pritchard and Ahlman 2009).

Between 1936 and 1942, WPA laborers under the supervision of the TVA conducted massive salvage excavations. Several of these salvage excavations were conducted at Overhill Cherokee towns including Fort Loudoun (40MR1) and Tanasi/Chota (40MR2) (Chapman 1985). Smaller archaeological projects continued through the 1950s and early 1960s. Following the Reservoir Salvage Act of 1960 and the National Historic Preservation Act of 1966, two large reservoir projects were conducted by the TVA, including archeological work on a scale similar to that seen in the 1930s (Chapman 1985). The Tellico Archeological Project was conducted in Monroe County, Tennessee from 1967–1979. Excavations began at Tanasi/Chota (40MR2) in 1969 and

even included a small crew of Cherokee laborers (Schroedl 2009). Excavations were also conducted at Mialoquo (40MR3), Tuskegee (40MR4), Tomotley (40MR5), Toqua (40MR6), and Citico (40MR7) (Baden 1983; Chapman and Newman 1979; Kutruuff and Bastian 1977; Polhemus 1987; Russ and Chapman 1983).

Historic accounts and archaeological data show that Overhill towns housed 100–400 people. Each contained an octagonal townhouse and a rectangular summer council house on either end of a large plaza. The plaza is surrounded associated households, each of which contained a circular winter house and rectangular summer house. Other features included agricultural fields, small gardens, storage pits, and refuse dumps. All Overhill Cherokee towns were eventually abandoned following the resettlement of the Cherokee to Oklahoma by 1838 (Schroedl 2012).

HISTORIC CONTEXT

The project area is located in Oak Ridge, Tennessee, which spans both Anderson and Roane counties. Oak Ridge was established during World War II as the Clinton Engineer Works (CEW), which became the Oak Ridge Reservation, the administrative and military headquarters of the Manhattan Project. The Oak Ridge Reservation included three parallel industrial processes for uranium enrichment and experimental plutonium production: X-10 Graphite Reactor, a National Historic Landmark, and K-25 Gaseous Diffusion Process Facility, both located in Roane County, and the Y-12 Complex located in Anderson County. The project site is located between these three facilities in the East Fork Valley along Black Oak Ridge and the south side of the Oak Ridge Turnpike (SR-95) in Roane County.

SETTLEMENT ERA THROUGH CIVIL WAR

In the 1790s, white settlers, German immigrants, and enslaved people initially settled the Cherokee Indian lands that would become Anderson and Roane counties. The Tennessee General Assembly created both counties in 1801. Anderson County was carved from portions of Knox and Grainger counties and named for Joseph Anderson (1757–1837), a prominent US Senator and former territorial judge in nearby Knoxville. The first county seat was located at Burrville, named after Vice President Aaron Burr (1756–1836), near the Clinch River. After Burr killed Alexander Hamilton, the former Secretary of the Treasury, in their famous 1804 duel and became implicated in a treasonous land speculation scheme, the Tennessee General Assembly changed the name of Burrville to Clinton, in honor of Vice President George Clinton (1739–1812) (Mielnik 2018).

Roane County was carved from Knox County and named for Archibald Roane (1759–1819), the second governor of Tennessee, serving from 1801 to 1803. The town of Kingston, near Fort Southwest Point, was designated the county seat and named for Major Robert King. In 1807,

Kingston became the state capitol for one day as a condition of the Tellico Treaty of 1805 that stated Kingston would become the state capitol in return for thousands of acres of Indian land. It did, for a few hours when the Tennessee General Assembly met there on September 21, 1807, before being returned to Knoxville. From 1797 to 1811, Fort Southwest Point (NRHP, 1972) served as a federal military post on the edge of lands under control of the Cherokee Indians (Hall and Parker 2018; Smith 2018; West 2018a).

In the early nineteenth century, the economy of both counties was based primarily on agriculture with small numbers of enslaved people, particularly along the rich bottomlands along the rivers. After the 1830s, coal mining in the Cumberland Mountains also became an important industry. Once the area was linked to the region's railroads in the mid-nineteenth century, coal mining became Anderson County's leading industry. No major Civil War battles were fought in either county, both of which experienced divided loyalties between Union and Confederate sympathizers. During the war, violence and bushwhacking was common in the region. In October 1861, Union sympathizer William B. Carter organized the East Tennessee bridge-burning conspiracy from a command post in Kingston. When Confederates established a conscription center near Clinton, Union sympathizers used a local cabin as a safe house to escape to Kentucky and join the Union Army (Hall and Parker 2018; Mielnik 2018).

INDUSTRIAL DEVELOPMENT

During the Civil War, northern military leaders traversing the area discovered pig iron and potential industrial development sites along the base of Walden's Ridge in the Cumberland Mountains of Roane County. In 1868, Union General John T. Wilder (1830–1917) of New York with other northern industrialists formed the Roane Iron Company and established iron and coal mines as well as the industrial town of Rockwood, which became known as a “Company Town of the New South.” At Rockwood, Wilder built the first two blast furnaces in the South for making pig iron from iron ore and coal (Figure 4A). Wilder also built ironworks and rail-manufacturing facilities at Chattanooga and developed the Carnegie industrial suburb at Johnson City. Pig iron was first shipped from Rockwood by steamboat on the Tennessee River and later by rail to Knoxville and Chattanooga (Hall and Parker 2018; Jones 2002).

In 1889, northern industrialists and leading Prohibitionists created the planned industrial town of Harriman along the Emory River at the base of the Cumberland Mountains in Roane County. The eponymous town site had been discovered by Union General Walter Harriman (1817–1884) during the Civil War. In 1890, the New York City-based East Tennessee Land Company (ETLC) sold hundreds of lots to settlers to the New South from throughout the US with restrictions on every

Figure 4.
Photographs, Industrial Landmarks, Roane County



A. Roane Iron Company Blast Furnace, Rockwood, 2010

Source: Brian Stansberry



B. Temperance Hall, Harriman, 2017

Source: Robbie D. Jones

deed forbidding the use, making, storage, or selling of intoxicating beverages. Within two years, the segregated and “dry” town grew to 4,000 residents. With a diversified industrial economy based primarily on manufacturing and construction, Harriman gained the reputation of the “Utopia of Temperance.” Completed in 1891, the imposing three-story Richardsonian Romanesque ETLC headquarters (NRHP, 1971) served as the primary academic building for American Temperance University from 1893 until 1908 and as the city hall from 1914 until the mid-1950s (Figure 4B). A third industrial town, called Cardiff, was planned in the 1890s near Rockwood; however, this company town was short-lived and little remains (Jones 2017).

In the 1890s, the coal mining industry experienced violent strikes, including the 1891–1892 Coal Creek War at Briceville in Anderson County. Prompted by the increasing use of convict labor leases to replace more expensive free labor, armed miners attacked the prisoners’ stockade (NRHP, 2011), released convicts and shipped them and the stockade guards to Knoxville via railcars, and demanded an end to the state’s convict-leasing system. Governor John Buchanan sent in the state militia to restore order and return the released convicts to Briceville. Built in 1888, the Briceville Community Church (NRHP, 2003) was used as a temporary jail. Months of negotiations between the miners and state leaders failed, and the half-dozen private mining companies continued to use convict labor until the leases expired in 1895. At the same time, the Tennessee General Assembly enacted prison reforms and established the Brushy Mountain Penitentiary in nearby Morgan County, where prisoners mined coal until 1937. The area experienced several mining disasters such as the Fraterville coal mine explosion in 1902 that killed 216 miners (NRHP, 2005) (Garrison and Jones 2018; Jones 2018; Mielnik 2018).

NEW SOUTH PROGRESS

Beginning in the late nineteenth century, both counties experienced a boom in tourism with mineral springs and resort hotels established in the mountainous areas along Walden’s Ridge such as Oliver Springs at the corner of Anderson, Morgan, and Roane counties. Featuring a four-story hotel, Oliver Springs became a nationally renowned mineral resort town; the luxurious hotel burned in 1905 and was not rebuilt. The industrial towns of Rockwood, Harriman, and Briceville survived the boom and bust cycle spurred by the financial Panic of 1893. In the early twentieth century, the counties prospered due to the construction of intrastate highways as U.S. 27 and the Dixie Highway, which passed through Rockwood along Kingston Avenue (NRHP, 1997) and connected the area to Knoxville and Chattanooga and larger cities beyond. Improved highway transportation brought development of textile mills and roadside businesses such as motels and service stations as well as the Tennessee Highway Patrol Building (NRHP, 2001) in Rockwood (Carver 2017; Hall and Parker 2018; Stager and Carver 2006).

Education played an important role in Anderson County's development with private academies for both male and female students opening at Clinton in the early to mid-nineteenth century. During the progressive New South era, the county established an extensive public educational system. By 1892, the county operated 58 public schools, including five for Black children. Roane County also established a segregated public school system and built a Classical Revival-style Carnegie Public Library (NRHP, 1989) for white residents at Harriman in 1909 (Jones 2002; Mielnik 2018).

GREAT DEPRESSION AND THE NEW DEAL

The Great Depression had a significant impact to the economy of Roane and Anderson counties, with shuttered businesses, manufacturing plants, coal mines, and iron furnaces. From 1933 to 1934, several strikes by textile workers, mostly women, occurred at the Harriman Hosiery Mills. Textile mills also operated at Rockwood and Clinton. The federal government implemented many New Deal make-work projects in both counties, with an alphabet soup of acronyms such as the Works Progress Administration (WPA), Public Works Administration (PWA), Civilian Conservation Corps (CCC), and Tennessee Valley Authority (TVA). The WPA built a municipal hospital at Harriman, US Post Offices at Clinton and Rockwood (NRHP, 1999), and a new road up Walden's Ridge at Rockwood. The PWA built a two-story addition to the Roane County Courthouse (NRHP, 1971) at Kingston (Reagan 2018; *The Living New Deal* n.d.; West 2001).

However, the New Deal agency that had the most significant impact on Roane and Anderson counties was the TVA, which constructed two large hydroelectric dam projects that inundated sections of both counties. Designed by TVA architect Roland Wank, the Norris Hydroelectric Dam (NRHP, 2016) was constructed from 1933–1936 along the Clinch River at Coal Creek in Anderson County as TVA's first major hydroelectric dam project. Displacing some 3,000 people from 152,000 acres, the Norris Dam and Reservoir project included the planned Norris housing community (NRHP, 1975), Norris Freeway, and Norris State Park (NRHP, 2014), which the CCC improved with construction of numerous Rustic-style recreational facilities. Norris Dam served as a prototype for numerous TVA dam projects to follow, such as the Watts Bar Dam, which TVA constructed along the Tennessee River in Meigs and Rhea counties from 1939–1942. The Watts Bar Reservoir displaced 832 families in 54,600 acres located in several counties, including Roane County. The Watts Bar Lake created waterfront recreational facilities at Rockwood and Harriman, and an earthen dike was built to protect Kingston from inundation. These hydroelectric dams provided jobs, flood control, and electricity to Anderson and Roane counties (Carver 2018; Hall and Parker 2018; Mathieson 2014; Mielnik 2018; Stager 2019; Tennessee Valley Authority n.d.; Tennessee Valley Authority 1933; Tennessee Valley Authority 1934; Tennessee Valley Authority 2014).

WORLD WAR II AND THE MANHATTAN PROJECT

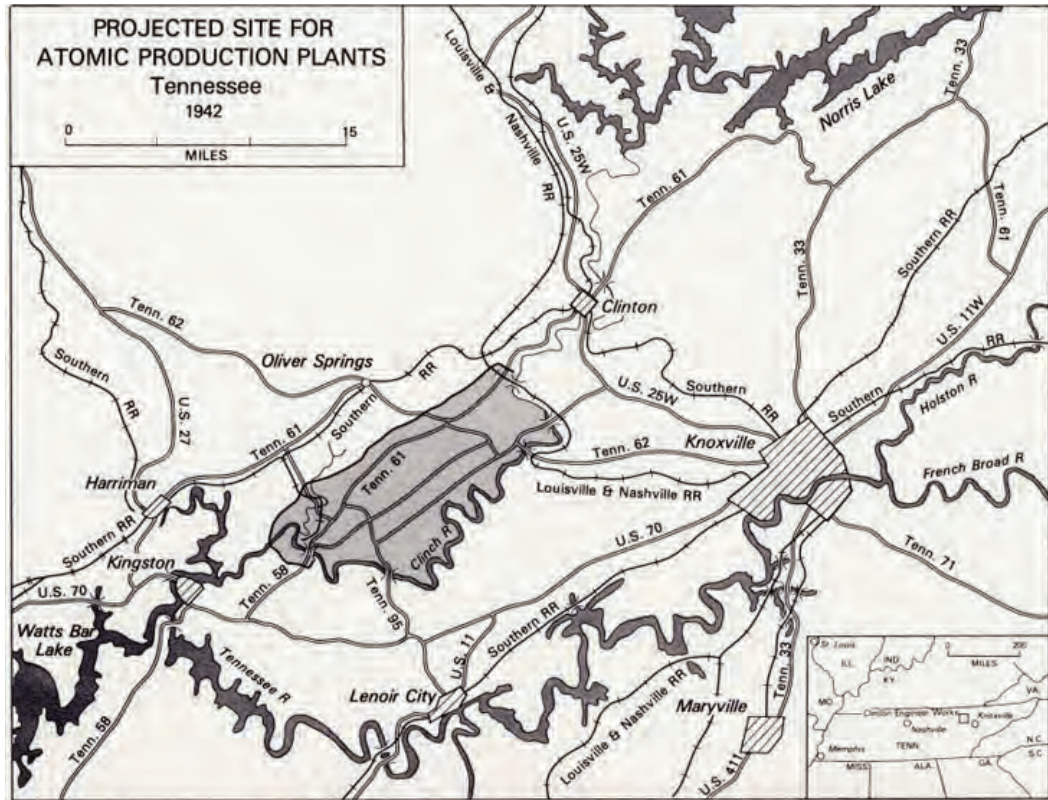
During World War II, TVA's Norris Dam and Watts Bar Dam provided electricity for emergency wartime industries such as aluminum production for warplanes at Alcoa. However, the most extraordinary impact these dams had to Roane and Anderson counties was construction of the top-secret Clinton Engineer Works (CEW), originally called the Kingston Demolition Range and later renamed the Oak Ridge Reservation, from 1943 to 1945 as part of the Manhattan Project developed by the US Army Corps of Engineers (USACE). Located roughly halfway between Kingston and Clinton along the valley at the base of Walden's Ridge spanning Roane and Anderson counties, the CEW was utilized for development of uranium and plutonium production in development of the world's first nuclear weapons. The CEW served as the administrative and military headquarters for the Manhattan Project, which also operated laboratory facilities at Los Alamos, New Mexico, and Hanford, Washington. Construction of the CEW required displacement of over 3,000 people, mostly farmers, and construction of a "Secret City" to house some 75,000 workers. The U.S. Army relocated farmers, both white and Black, from rural communities such as Wheat, Elza, Scarboro, and Robertsville, located in both counties (Figure 5A) (Johnson 2018; Stager 2017).

The 59,000-acre Oak Ridge Reservation was approximately seventeen miles long and seven miles wide. The reservation included three parallel industrial processes for uranium enrichment and experimental plutonium production: X-10 Graphite Reactor, designated a National Historic Landmark in 1966, and K-25 Gaseous Diffusion Process Facility, both located in Roane County, and the Y-12 Electromagnetic Separation Processing Complex located in Anderson County. The three processing plants were separated from each other geographically in case of an unforeseen disaster and connected by the Oak Ridge Turnpike (SR-95). The military town site was located at the eastern edge of the reservation, away from the processing plants, including the gigantic K-25 facility that included 54 four-story buildings containing nearly two million square feet. Roane County gave up around one-eighth of its land area for the project and Anderson County gave up around one-seventh of its land area (Figures 5B) (Johnson 2018; Valk et al. 2011:17–31).

Stone and Webster Corporation was the primary contractor for the X-10, K-25, and Y-12 facilities. Oak Ridge served as the headquarters for the entire national project, housed a graphite reactor, and provided facilities for separating the fissionable isotope uranium 235 from the much more plentiful U-238. The Y-12 facility was operated by the Tennessee Eastman Corporation, K-25 was operated by Union Carbide Corporation, and X-10 was operated by a combination of contractors including Du Pont, the Metallurgical Laboratory of the University of Chicago, and Monsanto Chemical Corporation. A third process, S-50 located in Roane County, using thermal diffusion was begun too late to have any impact on events and was not carried to completion (Johnson 2018).

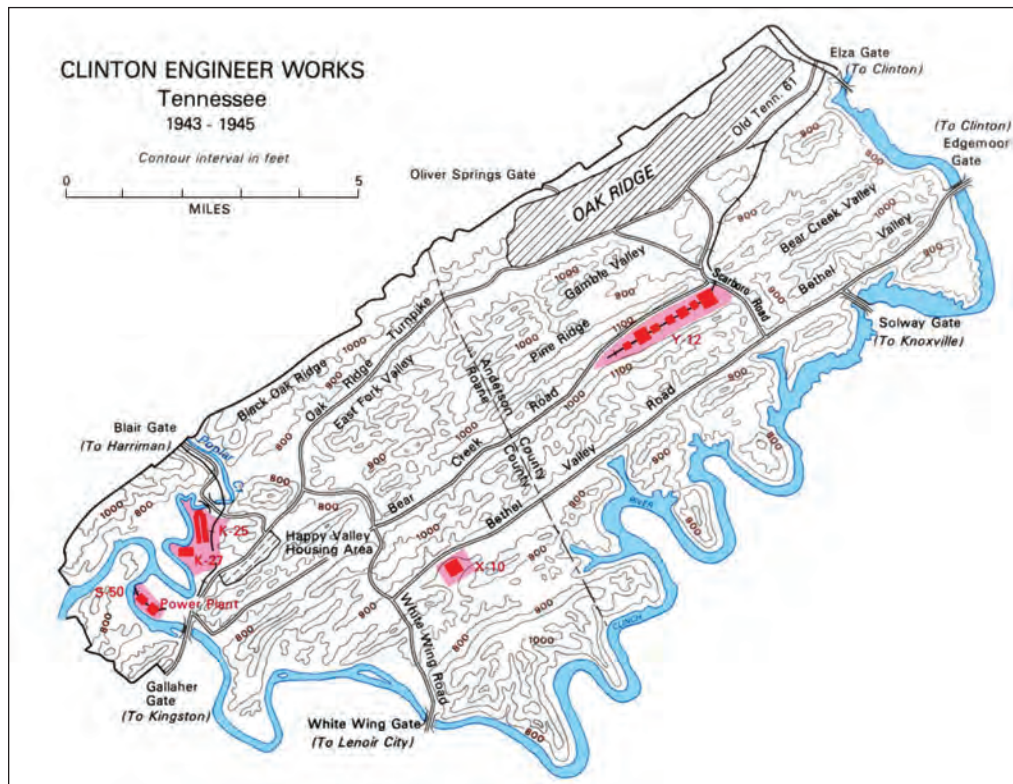
Figure 5.
Maps, Oak Ridge Reservation

A.
Projected Site
of the Atomic
Production
Plant, 1942



Source: Jones 1985:48

B.
Clinton Engineer
Works (CEW),
circa 1985



Source: Jones 1985:131

Laid out along the south side of Black Oak Ridge, the town site featured a commercial shopping center called Jackson Square, a multi-denominational church, a school, a segregated village for Black workers, recreational facilities, and a large Guest House (NRHP, 1993) for housing visiting scientists, engineers, military leaders, and dignitaries. The entire city was fenced and gated, patrolled by armed guards, and only approved visitors and workers, many of which were bussed in from neighboring towns such as Rockwood and Harriman, were allowed to enter. Skidmore, Owings and Merrill (SOM) of Chicago and Stone and Webster of Boston were the primary designers and builders of the Tennessee project. Nathaniel Owings of SOM recounted that in December 1942 the company was asked by the USACE to begin plans for a temporary city without knowing the purpose or location. The original plan was for 13,000 residents, but by the summer of 1943, 40,000 to 45,000 people were in Oak Ridge, making it the fifth largest city in Tennessee at that time. By 1945, there were 75,000 people in 10,000 single-family houses, 13,000 dormitory spaces, 5,000 trailers, and 16,000 prefabricated barracks or hutments. Located in places such as Happy Valley, single-family houses were known as Flat Tops or Victory Cottages. While some buildings exhibited International-style architectural design and were made of masonry, most were designed for rapid construction and few had architectural refinements (Figures 6 and 7) (Johnson 2018; Stager 2017; Valk et al. 2011:17–31).

Through the around-the-clock scientific research and military work at Oak Ridge Reservation, the US military detonated two atomic bombs on Hiroshima and Nagasaki, Japan, on August 6 and August 9, 1945, respectively. The two bombings killed between 129,000 and 226,000 people, most of whom were civilians, and remain the only uses of nuclear weapons in armed conflict. As a result, Japan surrendered on August 15, 1945, and signed the instrument of surrender on September 2, 1945, effectively ending World War II.

POST-WORLD WAR II HISTORY

On January 1, 1946, the Oak Ridge Reservation was transferred from military to civilian control and SOM was hired to prepare a master plan for the then-permanent city. In 1947, the Atomic Energy Commission took over control of the Manhattan Project. That year, the reservation was officially renamed “Oak Ridge” and the town’s population fell to 40,000. By 1950, Oak Ridge was a local municipality without federal government control, and the population had shrunk to around 30,000, where it would remain until current day. Many of the temporary buildings, such as housing at the Happy Valley construction camp near K-25, were disassembled and sold. After the war ended, the X-10 site was named the Oak Ridge National Laboratory (ORNL), which served as a laboratory for nuclear research, leading the nation in research in nuclear power and nuclear medicine. In 1948, supervision of ORNL was transferred to Union Carbide’s Nuclear Division.

Figure 6.
Photographs, Oak Ridge Reservation near the Project Site



A. Original Farmhouse with K-25 under Construction, 1942

Source: Public Domain



B. K-25 Gaseous Diffusion Plant and Happy Valley Housing

Source: Public Domain

Figure 7.
Photographs, Oak Ridge Reservation, circa 1945



A. International-Style Worker Housing

Source: Skidmore, Owings & Merrill 2020



B. Prefabricated Flat Top Working Housing

Source: Skidmore, Owings & Merrill 2020

From 1951 to 1955, the TVA constructed the Kingston Fossil Plant, the world's largest coal-fired power plant, along the Watts Bar Lake at Kingston to provide electricity for ORNL (Johnson 2018; Stager 2017).

During the 1950s, Anderson County played a significant role in the American Civil Rights Movement, when Oak Ridge integrated its schools in 1955 and the Clinton High School was integrated in 1956. Four Black students sued to enroll at Clinton High School in 1950 but were rejected. A lawsuit to integrate the school in 1952 failed in US federal court at Knoxville. Two years later, however, the US Supreme Court overturned the ruling with *Brown vs Board of Education*. In 1956, when the Clinton High School accepted twelve Black students, a riot ensued and Governor Frank Clement sent in the National Guard to restore order in Clinton. Nevertheless, Clinton High School became the first state-supported school in Tennessee and the South to integrate. White students boycotted school and in 1958 the high school was bombed. Clinton High School students were transferred to Oak Ridge, which had integrated its federally supported public schools in 1955, until the high school could be rebuilt. The Civil Rights Movement events associated with integration of public schools in Clinton received extensive national media coverage (Johnson 2018; Mielnik 2018; West 2018b).

Since the 1960s, Oak Ridge and other towns in Anderson and Roane counties have evolved into suburban communities for Knoxville, the largest city in East Tennessee, due to their location along freeways such as Interstate-40. Many of the towns evolved into lakefront resort areas focused on abundant recreational facilities. In 1947, the Union Carbide Corporation took over operation of Oak Ridge Reservation and in 1984 Martin Marietta took over operations from Union Carbide. Through partnerships with the DOE, TVA, and the University of Tennessee at Knoxville, Oak Ridge evolved from a Cold War military town into a hub for professional and scientific jobs in the technology industry. In 2015, several facilities on the Oak Ridge Reservation became part of the Manhattan Project National Historic Park, administered by the National Park Service (NPS) and DOE in New Mexico, Washington, and Tennessee. These facilities include the Graphite Reactor located at ORNL, the oldest nuclear reactor in the world, which has been preserved as a National Historic Landmark, and two historic buildings at Y-12, Buildings 9731 and 9204-3, as well as the K-25 building site. The enormous and abandoned K-25 facility was demolished in 2017 for redevelopment as an expansion of the East Tennessee Technology Park. Many of the Cold War-associated facilities at Oak Ridge were listed in 1992 on the National Register of Historic Places (NRHP), such as three turnpike checking stations, the original town site, and the Woodland-Scarboro residential neighborhood, as well as vernacular landmarks that predate the Oak Ridge Reservation such two rural churches in Roane County and three dwellings in Anderson County (Johnson 2018).

In 2019, the population of Oak Ridge was estimated at 29,156 people. That year, Anderson County contained approximately 77,000 people and Roane County contained approximately 53,000 people. Both counties are predominantly white with less than four percent Black population. Anderson and Roane counties are included in the 12-county Knoxville-Morristown-Sevierville combined statistical area, which counted over 1.1 million people in 2016 (Johnson 2018; U.S. Census Bureau 2020).

Intentionally Left Blank

IV. METHODS

Archaeological fieldwork was designed to locate and identify archaeological sites. The study was conducted following standards and guidelines of the TN-SHPO and TDOA. Archaeological survey utilized systematic shovel testing as the prime site discovery method. The project area consists of both high and low probability areas. Areas with slopes greater than 15 percent were considered low probability. All other areas were classified as high probability. High probability landforms were calculated at 40.3 acres while low probability lands were estimated at 40.7 acres. High probability locations were systematically shovel tested at 30-meter intervals. Low probability areas were subjected to pedestrian survey and systematic shovel tests at 60-meter intervals, supplemented with judgmental tests placed on level landforms and in potential rock shelters. All shovel tests measured 30 centimeters in diameter and were excavated to at least 80 centimeters below ground surface (cmbgs) or until impenetrable substrate (bedrock or clay), known sterile subsoil, or the water table was encountered. All shovel tests received unique field designations. Excavated soils were screened through 1/4-inch mesh hardware cloth. Soils encountered in shovel tests were described using standard terminology for color and texture and shovel test locations were plotted on project maps that indicated the topography, locations of roads, water sources, and other pertinent information.

New South uses a digital recording system for field data using cellular phones. The electronic documentation process is driven by spatial data and can not only increase fieldwork efficiency but also generate a range of digital data. A custom shovel test database is used for in-field data collection. During the field visit, shovel tests are recorded and their corresponding attributes such as soil texture and color, depth, and artifacts recovered. At the end of each field day the records are then synced to New South's server automatically once the user is connected to a WiFi network and has completed review of the data. The Field Director or Principal Investigator can then perform additional QA/QC as necessary. Digital recording has several added benefits. First, photographs of shovel tests, artifacts, and other features can be taken using the phone and linked to individual records along with spatial information. This allows for automated generation of photo logs. Second, the shovel test data are automatically populated in a spreadsheet that can then be used to create summary logs and other tables based on any combination of attributes.

GPS locations for all shovel tests were recorded with a mobile phone. Additional GPS recording with a Trimble Geo7 receiver was also conducted. The Trimble receiver has a sub-meter positional accuracy when augmented with real-time differential correction.

Intentionally Left Blank

V. RESULTS AND RECOMMENDATIONS

BACKGROUND RESEARCH RESULTS

A review of site records at the TDOA indicated that 14 archaeological sites had been previously recorded within 1 mi (1.6 km) of the project area (Figure 8; Table 1). In addition, three previous surveys have been conducted within this same search radius.

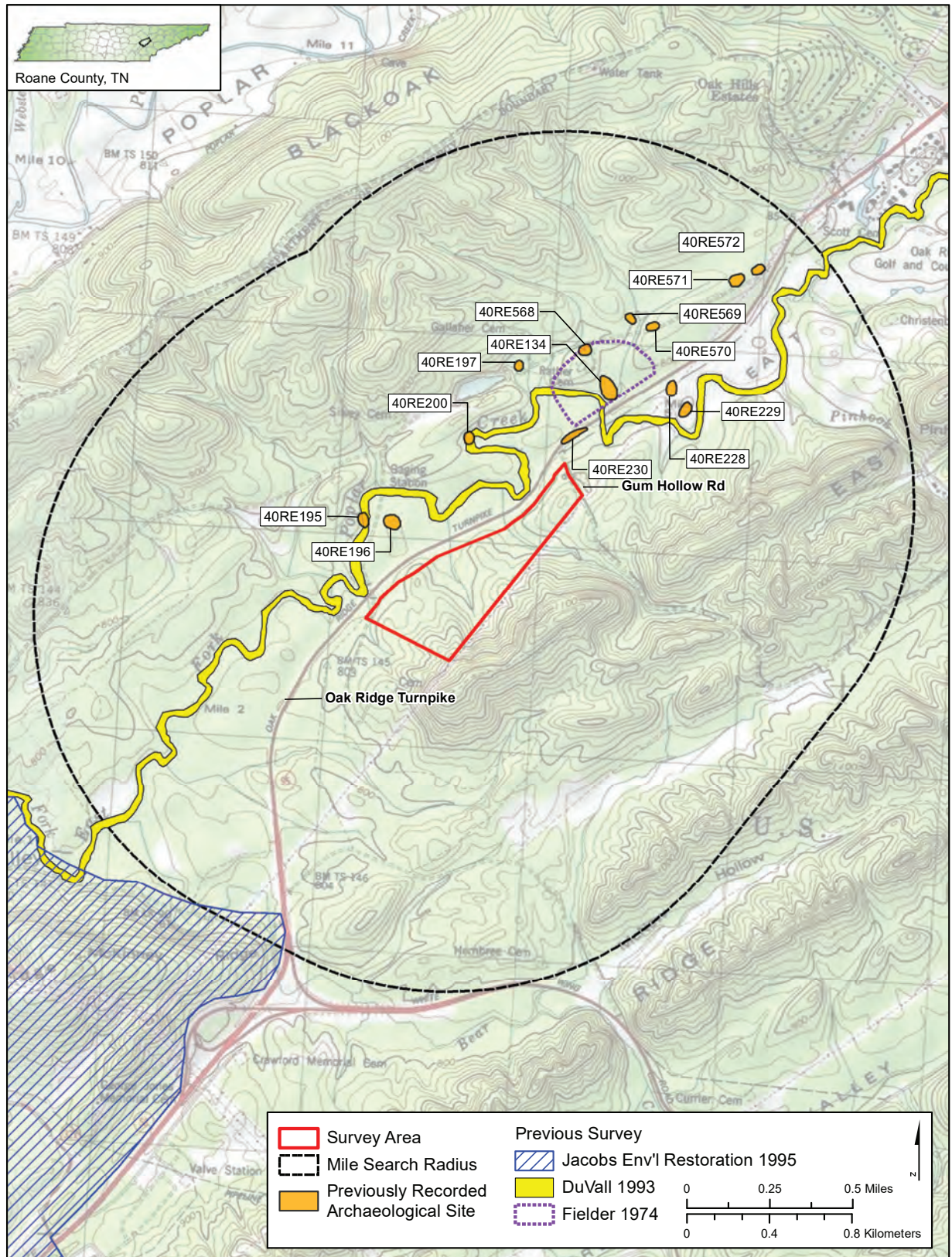
Table 1. Previous Sites and Surveys within 1 Mile of the Project Area

Site Number	Site Type	Site dimensions (meters)	NRHP Recommendation	Source
40RE134	Precontact habitation	30 x 20	Unknown	Fielder 1974
40RE195	Historic grist mill	30 x 25	Eligible	Duvall and Associates 1993
40RE196	Historic domestic farmstead	70 x 70	Not Eligible	Duvall and Associates 1994
40RE197	Historic domestic farmstead	50 x 50	Eligible	Duvall and Associates 1995
40RE200	Historic mill dam	15 x 10	Not Eligible	TDOA
40RE228	Precontact habitation	40 x 20	Unknown	TDOA
40RE229	Precontact habitation	50 x 50	Unknown	TDOA
40RE230	Precontact habitation	100 x 15	Unknown	TDOA
40RE568	Historic domestic farmstead	60 x 45	Unknown	TDOA
40RE569	Historic domestic farmstead	50 x 45	Unknown	TDOA
40RE570	Historic domestic farmstead	60 x 50	Unknown	TDOA
40RE571	Historic domestic house	60 x 40	Unknown	TDOA
40RE572	Historic domestic house	60 x 50	Unknown	TDOA

In 1992, the Jacobs Environmental Restoration team performed a cultural resources survey of approximately 3,366 acres of property surrounding the K-25 Gaseous Diffusion Plant at the ORNL (Jacobs ER Team 1995). The survey visited previously recorded archaeological sites, most located along the Clinch River, to make recommendations for further work. None of the sites visited and assessed are located within 1 mi of the project area.

In 1974 George Fielder, then working with the University of Tennessee Knoxville, conducted a survey of selected properties at the request of the ORNL in advance of expansion of construction of facilities (Fielder 1974). His project centered on the identification of Precontact sites, although historic Euroamerican farmsteads and cemeteries were identified as well. Fielder’s work identified

Figure 8.
Previously Recorded Archaeological Sites and Previous Surveys near the Area of
Potential Effects



Source: USGS Topographic Quadrangle Map, Bethel Valley, TN (1976)

a single site, 40RE134, approximately 0.3 miles northeast of the project area. Site 40RE134 is a Woodland Period lithic scatter situated on a small knoll above the East Fork Poplar Creek. The site measures approximately 120 x 75 m. The NRHP eligibility for Site 40RE134 is unknown.

Duvall and Associates conducted a survey of the East Fork Poplar Creek in 1992 in response to environmental concerns of pollutant spillage within the waterway (DuVall 1993). Their survey identified four historic sites within 0.4 miles to the north and west of the project area: 40RE195, 40RE196, 40RE197, and 40RE200. Sites 40RE195 was identified as a grist mill early to middle nineteenth century and was recommended as eligible for the NRHP listing. 40RE200 was identified as the remains of a mill dam from the early twentieth century and was not recommended eligible for listing on the NRHP. Sites 40RE196 and 40RE197 were reported as domestic farmsteads. Site 40RE196 dated to the early twentieth century; while foundation remains were encountered, the remnants of the structure were assumed to have been razed during land-clearing related to silviculture. Site 40RE196 was not recommended eligible for listing on the NRHP. 40RE197 dated to the early nineteenth century and consisted of a partially intact fieldstone and timber domestic structure. Given the preservation state and potential association with the Gallaher family, Site 40RE197 was recommended as eligible for listing on the NRHP.

Two additional surveys that detail the remaining nine previously recorded archaeological resources are not currently filed with the TDOA; except for 40RE572, state site forms for these sites are not digitally curated with the TDOA. These sites are located to the north and west of the project area. Sites 40RE228, 40RE229, and 40RE230 were identified in 1995 and consist of Precontact habitation sites. 40RE228 and 40RE230 were reported as indeterminate Precontact sites that were likely lithic scatters; 40RE229 contained Archaic and Woodland components. The NRHP status of these sites is currently unknown. Sites 40RE568, 40RE569, and 40RE570 identified in 2004 and are listed as rural domestic farmsteads dating to the middle nineteenth century. The NRHP recommendation status of these sites is unknown. Sites 40RE571 and 40RE572, also recorded in 2004, are listed as rural domestic house sites dating to the middle nineteenth century. Site 40RE572 was identified by limestone and concrete structural elements, assorted domestic ceramics, cast iron, nails, and glass. The NRHP recommendation status for Sites 40RE571 and 40RE572 is unknown.

Prior to fieldwork, New South was notified of a possible historic structure adjacent to the southwestern APE boundary. Maps provided by the ORNL indicated a structure titled “J-946 Tenant House” between the Oak Ridge Turnpike and the APE. No further information about this structure was provided. A review of TDOA site files indicated no previously reported structure in the vicinity of this point. A review of historic topographic quadrangles indicated a structure in the

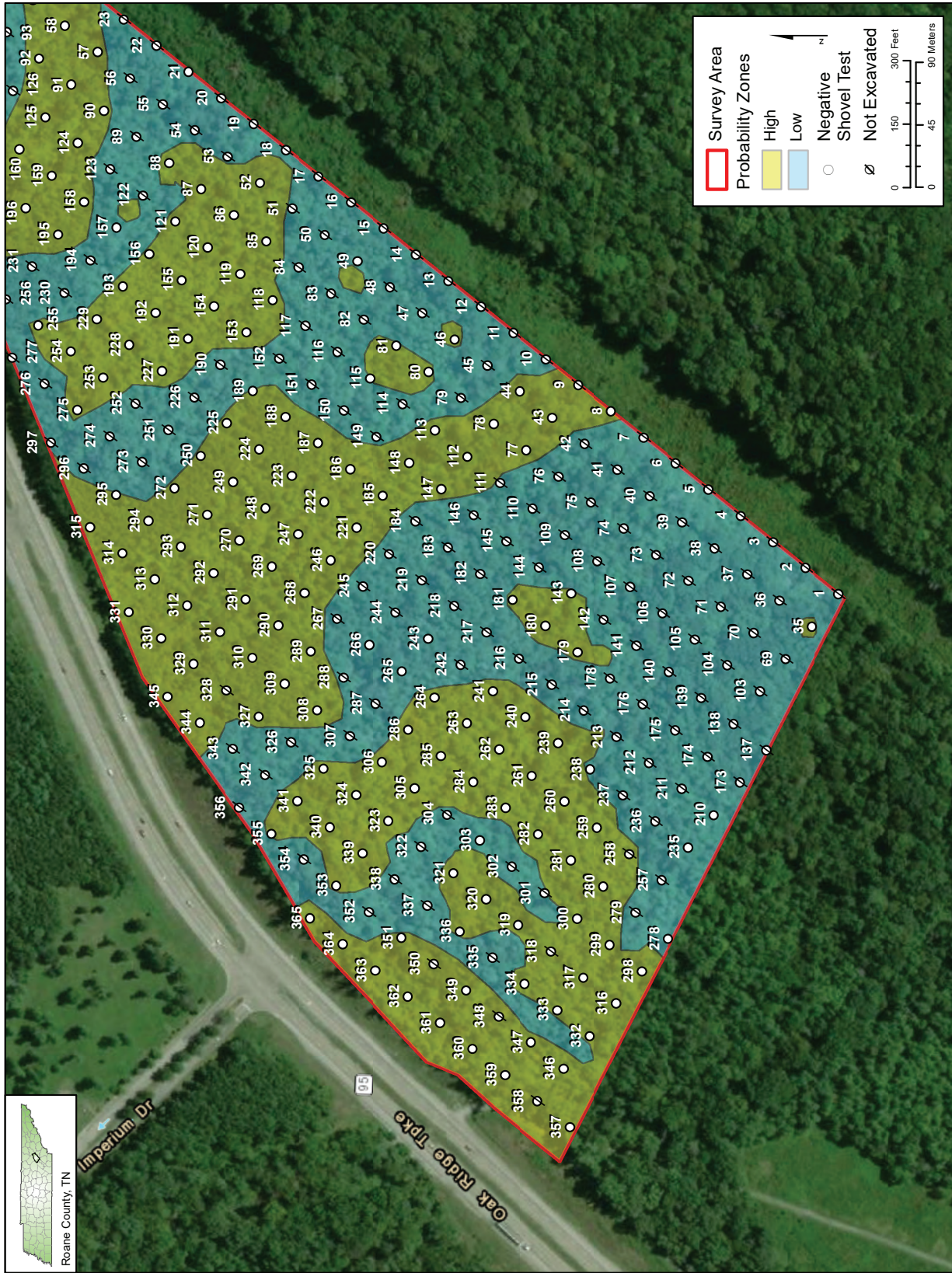
area on the 1946 Bethel Valley, TN 7.5' USGS topographic quadrangle; later editions of this quadrangle do not depict this structure. Given the sensitive nature of the Oak Ridge Reservation, historic aerial imagery of this area is not available for review.

ARCHAEOLOGY FIELDWORK RESULTS

New South investigated 369 shovel test locations within the project area. Of this total, 203 shovel tests yielded negative results while 166 tests were excluded due to slopes or disturbance (Figures 9 and 10). Unexcavated tests were predominantly situated along slopes of greater than 15 percent, although some were situated within streambeds or in areas of exposed bedrock that made shovel testing impossible. No shovel tests yielded cultural materials and no archaeological loci, such as rock shelters or structural remains, were encountered within the project area. Tests situated at 60-m intervals in low-probability areas were covered by pedestrian survey and excavated if terrain appeared suitable.

Soils were mostly uniform throughout the project area and consisted of two distinct strata (Figure 11). Stratum I was a modern A horizon, often with disturbance from logging activities, extended between 0 and 25 cmbs; deeper contexts were situated in flat stream drainage areas. Stratum I consisted of a grayish brown (10YR 5/2) or dark yellowish brown (10YR 4/4) silty clam loam with little to no groundstone inclusions. Stratum II, a strong brown (7.5YR 5/6) or light yellowish brown (10YR 6/4) B horizon of silty clay, was excavated at depths up to 40 cmbs. Stratum II occasionally had cherty groundstone inclusions and in some cases was present at surface.

An attempt to locate Tenant House J-946, situated on the southwestern periphery of the project area, was performed to determine whether cultural materials, roads, or outbuildings might have extended into the project area. No structural remains of the house or associated cultural materials were found. Given the rerouting of the Oak Ridge Turnpike between 1946 and 1953 and its expansion into a four-lane roadway within the past decade, it is possible that this structure was destroyed during road construction activities. Field reconnaissance indicated that a sloped roadcut area is present between the Oak Ridge Turnpike and the APE; if Tenant House J-946 was accurately plotted, its current location is situated within this berm.



Source: ESRI World Imagery (2020)

Figure 10. Map of the Area of Potential Effects Showing Shovel Tests, Southern Section

Figure 11.
Typical Shovel Test Profile (Shovel Test 115)



Intentionally Left Blank

VI. SUMMARY AND RECOMMENDATIONS

New South conducted a Phase I archaeological survey for the proposed Oak Ridge Enhanced Technology & Training Center of Y-12 National Security Complex in Oak Ridge, Tennessee. The work included systematic shovel testing of the APE to identify all archaeological resources subject to impacts related to the proposed development.

Background research identified 14 previously identified archaeological sites and 3 previous surveys within 1 mi (1.6 km) of the APE. These sites include pre-contact lithic scatters, historic house sites, and historic mills and their associated architectural features. New South investigated 369 shovel test locations throughout the APE. Of these, 203 were negative and 166 were excluded, mostly due to terrain with a slope of greater than 15 percent. Large portions of the project area have been logged in the recent past, leading to deflated or disturbed top soils. The archaeological survey identified no archaeological resources within the bounds of the project area .

With the exception of Site 40RE229, archaeological resources situated near (within one mile) of the project area were predominately located along the flat floodplain of the East Fork Poplar Creek. While tributaries of the East Fork Poplar Creek bisect the survey area for this project, large floodplains suitable for farming or milling activities are not available. Site 40RE229, a Precontact assemblage of pottery and lithics, was situated on a small rise above the floodplain; however, the slope of this rise is less severe than terrain encountered within the survey area. While it is possible that archaeological loci may have at one time been present within the APE, a history of logging and subsequent erosion processes may have obliterated archaeological contexts. New South recommends no additional work with regards to this project.

Intentionally Left Blank

REFERENCES CITED

Amick, Daniel S.

- 1984 Designing and Testing a Model of Raw Material Variability for the Central Duck River Basin, Tennessee. In *Prehistoric Chert Exploitation: Studies from the Midcontinent*, edited by Brian M. Butler and Ernest E. May, pp. 167–184. Occasional Papers No. 2. Southern Illinois University, Center for Archaeological Investigations, Carbondale, Illinois.

Amick, Daniel S. and Phillip J. Carr

- 1996 Changing Strategies of Lithic Technological Organization. In *Archaeology of the Mid-Holocene Southeast*, edited by Kenneth E. Sassaman and David G. Anderson, pp. 41–56. University of Florida, Pensacola, Florida.

Anderson, David G.

- 1994 *The Savannah River Chiefdoms: Political Change in the Late Prehistoric Southeast*. University of Alabama Press, Tuscaloosa, Alabama.
- 1995 Paleoindian Interaction Networks in the Eastern Woodlands. In *Native American Interaction: Multiscalar Analyses and Interpretations in the Eastern Woodlands*, edited by Michael S. Nassaney and Kenneth E. Sassaman, pp. 1–26. University of Tennessee Press, Knoxville, Tennessee.
- 1996a Models of Paleoindian and Early Archaic Settlement in the Southeast. In *The Paleoindian and Early Archaic Southeast*, edited by David G. Anderson and Kenneth E. Sassaman, pp. 29–57. University of Alabama Press, Tuscaloosa, Alabama.
- 1996b Approaches to Modeling Regional Settlement in the Archaic Period. In *Archaeology of the Mid-Holocene Southeast*, edited by Kenneth E. Sassaman and David G. Anderson, pp. 157–177. University of Florida, Pensacola, Florida.

Anderson, David G. and Robert C. Mainfort

- 2002 *The Woodland Southeast*. University of Alabama Press, Tuscaloosa, Alabama.

Baden, William W.

- 1983 *Tomotley: An Eighteenth Century Cherokee Village*. Report of Investigations. University of Tennessee, Knoxville, Knoxville, Tennessee.

Bense, Judith A.

- 1994 *Archaeology of the Southeastern United States: Paleoindian to World War I*. Academic Press, San Diego, California.

Bentz, Charles

- 1995 Prehistoric Human Adaptation in Selected Areas of the Interior Low Plateau Physiographic Province. In *The Aenon Creek Site (40MU493): Late Archaic, Middle Woodland, and Historic Settlement and Subsistence in the Middle Duck River Drainage of Tennessee*, edited by Charles Bentz, pp. 139–150. Submitted to the Tennessee Department of Transportation by The Transportation Center, University of Tennessee, Knoxville, Knoxville, Tennessee.

Binford, Lewis R.

- 1980 Willow Smoke and Dogs' Tails: Hunter-Gatherer Settlement Systems and Archaeological Site Formation. *American Antiquity* 45(1):4–20.

Braun, E. Lucy

- 1950 *Deciduous Forests of Eastern North America*. Blakiston, New York, New York.

Brose, David S.

- 1979 A Speculative Model on the Role of Exchange in the Prehistory of the Eastern Woodlands. In *Hopewell Archaeology*, edited by David S. Brose and N. Greber, pp. 3–8. Kent State University Press, Kent, Ohio.

Broster, John B. and Gary Barker

- 1992 Second Report of Investigations at the Johnson Site (40Dv400): The 1991 Field Season. *Tennessee Anthropologist* 17(2):120–130.

Broster, John B. and Mark R. Norton

- 1996 Recent Paleoindian Research in Tennessee. In *The Paleoindian and Early Archaic Southeast*, edited by David G. Anderson and Kenneth E. Sassaman, pp. 288–297. University of Alabama Press, Tuscaloosa, Alabama.

Brown, Ian W.

- 1994 Recent Trends in the Archaeology of the Southeastern United States. *Journal of Archaeological Research* 2:45–111.

Cambron, James W. and David C. Hulse

- 1975 *Handbook of Alabama Archaeology: Part I: Point Types*. Edited by David L. DeJarnette. Archaeological Research Association of Alabama, Tuscaloosa, Alabama.

Carver, Martha

- 2017 Historic Highways. Educational. *Tennessee Encyclopedia*. Electronic document, <https://tennesseeencyclopedia.net/entries/historic-highways/>, accessed December 12, 2019.
- 2018 Norris Freeway. *The Tennessee Encyclopedia of History and Culture*. Electronic document, <https://tennesseeencyclopedia.net/entry.php?rec=1004>, accessed April 8, 2016.

Chapman, Jefferson

- 1981 *The Bacon Bend and Iddins Sites*. University of Tennessee, Knoxville, Knoxville, Tennessee.
- 1985 *Tellico Archaeology: 12,000 Years of Native American History*. University of Tennessee Press, Knoxville, Tennessee.

Chapman, Jefferson and Robert D. Newman

- 1979 Archaeological Investigations at the Citico Site. In *The 1978 Archaeological Investigations at the Citico Site (40MR7)*, edited by Jefferson Chapman, pp. 1–4. Tennessee Valley Authority, Knoxville, Tennessee.

Chapman, Jefferson and Andrea B. Shea

- 1981 The Archaeobotanical Record: Early Archaic Period to Contact in the Lower Little Tennessee River Valley. *Tennessee Anthropologist* 6:64–84.

Childress, Mitchell R.

- 1999 The Evidence for Terminal Archaic–Early Woodland Exchange from the Upper Cumberland Drainage of Tennessee. In *Raw Material and Exchange in the Mid-South*, edited by Evan Peacock and Samuel Brooks, pp. 75–85. Archaeological Report No. 29. Mississippi Department of Archives and History, Jackson, Mississippi.

Claassen, Cheryl P.

1996a A Consideration of the Social Organization of the Shell Mound Archaic. In *Archaeology of the Mid-Holocene Southeast*, edited by Kenneth E. Sassaman and David G. Anderson, pp. 235–258. University of Florida, Pensacola, Florida.

1996b Research Problems with Shells from Green River Shell Matrix Sites. In *Of Caves and Shell Mounds*, edited by K.C. Carstens and Patty Jo Watson, pp. 132–139. University of Alabama Press, Tuscaloosa, Alabama.

Coe, Joffre L.

1964 The Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society*. New Series 54(5):1–130.

DeJarnette, David J., Edward Kurjack, and James W. Cambron

1962 Stanfield-Worley Bluff Shelter Excavations. *Journal of Alabama Archaeology* 8(1, 2):1–124.

Deter-Wolf, Aaron

2004 The Ensworth School Site (40DV184): A Middle Archaic Benton Occupation Along the Harpeth River Drainage in Middle Tennessee. *Tennessee Archaeology* 1(1):18–35.

Dice, L.R.

1943 *The Biotic Provinces of North America*. University of Michigan Press, Ann Arbor, Michigan.

Dowd, John T.

1989 *The Anderson Site: Middle Archaic Adaptation in Tennessee's Central Basin*. Miscellaneous Paper. Tennessee Anthropological Association, Knoxville, Tennessee.

DuVall, Glyn D.

1993 *An Archaeological Reconnaissance of a 14 Mile Section of the East Fork Poplar Creek for the Environmental Restoration Project, Anderson and Roane Counties, Tennessee*. DuVall and Associates.

Emerson, Thomas E.

1997 *Cahokia and the Archaeology of Power*. University of Alabama Press, Tuscaloosa, Alabama.

Faulkner, Charles H.

- 2002 Woodland Cultures of the Elk and Duck River Valleys, Tennessee. In *The Woodland Southeast*, edited by David G. Anderson and Robert C. Mainfort, pp. 185–203. University of Alabama Press, Tuscaloosa, Alabama.

Fenneman, Nevin M.

- 1928 Physiographic Divisions of the United States. *Annals of the Association of American Geographers* 18(4):261–353.

Fielder, George F.

- 1974 *Archaeological Survey with Emphasis on Prehistoric Sites of the Oak Ridge Reservation, Oak Ridge, Tennessee*. Department of Anthropology, University of Tennessee Knoxville, Knoxville, Tennessee.

Garrison, Joseph Y. and James B. Jones

- 2018 Labor. *Tennessee Encyclopedia*. Tennessee Historical Society, Nashville, Tennessee.

Goodyear, Albert C.

- 1979 *A Hypothesis for the Use of Cryptocrystalline Raw Materials among Paleo-Indian Groups of North America*. South Carolina Institute of Archaeology and Anthropology Research Manuscript Series 156. University of South Carolina, Columbia, South Carolina.

Griffin, James B.

- 1964 The Northeast Woodland Area. In *Prehistoric Man in the New World*, ed. Jesse D. Jennings and Edward Norbeck, pp. 223–258. University of Chicago Press, Chicago, Illinois.
- 1967 Eastern North American Archaeology: A Summary. *Science* 156:175–191.

Hall, Jere and Rachel Parker

- 2018 Roane County. *Tennessee Encyclopedia*. Tennessee Historical Society, Nashville, Tennessee.

Harrington, Mark R.

- 1922 *Cherokee and Earlier Remains on the Upper Tennessee River*. Indian Notes and Monographs. Museum of the American Indian, Heye Foundation, New York, New York.

Jacobs ER Team

- n.d. *K-25 Site, Oak Ridge Reservation, Oak Ridge, Tennessee*. Jacobs Environmental Restoration Team, Oak Ridge, Tennessee.

Jefferies, Richard W.

- 1995 Late Middle Archaic Exchange and Interaction in the North American Midcontinent. In *Native American Interaction: Multiscalar Analyses and Interpretations in the Eastern Woodlands*, edited by Michael Nassaney and Kenneth E. Sassaman, pp. 73–95. University of Tennessee Press, Knoxville, Tennessee.
- 1996 The Emergence of Long-Distance Exchange Networks in the Southeastern United States. In *Archaeology of the Mid-Holocene Southeast*, edited by Kenneth E. Sassaman and David G. Anderson, pp. 222–236. University Press of Florida, Pensacola, Florida.

Jennings, Jesse D., ed.

- 1974 *Ancient North Americans*. Walt Freeman, San Francisco, California.

Johnson, Charles W.

- 2018 Oak Ridge. *Tennessee Encyclopedia*. Tennessee Historical Society, Nashville, Tennessee.

Johnson, Jay and Samuel O. Brookes

- 1989 Benton Points, Turkey Tails, and Cache Blades: Middle Archaic Exchange in the Midsouth. *Southeastern Archaeology* 8(2):134–145.

Jones, James B.

- 2018 Convict Lease Wars. *Tennessee Encyclopedia*. Tennessee Historical Society, Nashville, Tennessee.

Jones, Robbie D.

- 2002 What's in a Name? Tennessee's Carnegie Libraries and Civic Reform, 1889–1919. M.A. Thesis, Middle Tennessee State University, Murfreesboro, Tennessee.
- 2017 Temperance Hall. Edited by Gabrielle Esperdy and Karen Kingsley. *SAH Archipedia*. University of Virginia Press, Charlottesville, Virginia.

Jones, Vincent C.

- 1985 *Manhattan: The Army and the Atomic Bomb*. United States Army in World War II, Special Studies. Government Printing Office, Washington, D.C.

Justice, Noel D.

- 1987 *Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States*. Indiana University Press, Bloomington, Indiana.

Keel, Bennie C.

- 1976 *Cherokee Archaeology: A Study of Appalachian Summit*. University of Tennessee Press, Knoxville, Tennessee.

Kellogg, Remington

- 1939 Annotated List of Tennessee Mammals. *Proceedings of the United States National Museum* 86(3051):245–303.

Kelly, Robert L. and Lawrence C. Todd

- 1988 Coming into the Country: Early Paleoindian Hunting and Mobility. *American Antiquity* 53(2):231–244.

Kimball, Larry R.

- 1985 *The 1977 Archaeological Survey: An Overall Assessment of the Archaeological Resources of the Tellico Reservoir*. Publications in Anthropology no. 39. Tennessee Valley Authority and University of Tennessee, Knoxville, Tennessee.

King, Adam

- 2003 *Etowah: The Political History of a Chiefdom Capital*. University of Alabama Press, Tuscaloosa, Alabama.

Kneberg, Madeline D.

- 1956 Some Important Projectile Point Types Found in the Tennessee Area. *Tennessee Archaeologist* 12(1):17–28.
- 1961 Four Southeastern Limestone Tempered Pottery Complexes. *Southeastern Archaeological Conference Newsletter* 7(2):3–15.

Kutruff, Karl and Beverly Bastian

- 1977 Fort Loudoun Excavations: The 1975 Season. *Conference on Historic Sites Archaeology Papers* 10:11–23.

Lewis, Thomas M.N. and Madeline D. Kneberg

1946 *Hiwassee Island: An Archaeological Account of Four Tennessee Indian Peoples*. University of Tennessee Press, Knoxville, Tennessee.

1959 The Archaic Culture in the Middle South. *American Antiquity* 25:161–183.

1961 *Eva: An Archaic Site*. University of Tennessee Press, Knoxville, Tennessee.

Lindstrom, B. and K.W. Stevenson

1987 Lithic Artifacts from the Anderson Site, (40WM9). *Tennessee Anthropologist* 12(1):1.

Lopinot, Neal H., Jack H. Ray, and Michael D. Conner

1998 *The 1997 Excavations at the Big Eddy Site (23CE426) in Southwest Missouri*. Special Publication. Missouri State University, Center for Archaeological Research, Springfield, Missouri.

Mason, Ronald J.

1962 The Paleo-Indian Tradition in Eastern North America. *Current Anthropology* 3(3):227–283.

Mathieson, Christine

2014 Norris Dam State Park Rustic Cabins Historic District. *The Courier* LXII(3):4–5.

McAvoy, Joseph M. and Lynn D. McAvoy

1999 *Archaeological Investigations of Site 44SX202, Cactus Hill, Sussex County, Virginia*. Research Report Series No. 8. Virginia Department of Historic Resources, Richmond, Virginia.

McNutt, Charles H., Jr. and Guy G. Weaver

1985 An Above-Pool Survey of Cultural Resources within the Little Bear Creek Reservoir, Franklin County, Alabama. *Memphis State University Anthropological Research Center Occasional Papers 13 and Tennessee Valley Authority Publications in Anthropology* 45.

Meeks, Scott C.

1999 The ‘Function’ of Stone Tools in Prehistoric Exchange Systems: A Look at Benton Interaction in the Mid-South. In *Raw Material and Exchange in the Mid-South*, edited by Evan Peacock and Samuel O. Brookes, pp. 29–43. Mississippi Department of Archives and History, Jackson, Mississippi.

Meltzer, David J.

- 1988 Late Pleistocene Human Adaptations in Eastern North America. *Journal of World Prehistory* 2:1–53.

Mielnik, Tara Mitchell

- 2018 Anderson County. *Tennessee Encyclopedia*. Tennessee Historical Society, Nashville, Tennessee.

Milanich, Jerald T.

- 1998 Native Chiefdoms and the Exercise of Complexity in Sixteenth Century Florida. In *Chiefdoms and Chieftaincy in the Americas*, edited by Elsa M. Redmond, pp. 245–264. University Press of Florida, Gainesville, Florida.

Moore, Clarence B.

- 1915 Aboriginal Sites on the Tennessee River. *Journal of the Academy of Natural Sciences of Philadelphia* 16(2):171–422.

Norton, Mark R. and John B. Broster

- 1992 40HS200: The Nuckolls Extension Site. *Tennessee Anthropologist* 17:13–32.

Pauketat, Timothy R.

- 1994 *The Ascent of Chiefs: Cahokia and Mississippian Politics in Native North America*. University of Alabama Press, Tuscaloosa, Alabama.

Peebles, Christopher S.

- 1978 Determinants of Settlement Size and Location in the Moundville Phase. In *Mississippian Settlement Patterns*, edited by Bruce D. Smith, pp. 369–416. Academic Press, New York, New York.

Phillips, Phillip

- 1970 *Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1949–1955, Volume 60*. 1st–2nd ed. Harvard University, Cambridge, Massachusetts.

Polhemus, Richard

- 1987 *The Toqua Site – 40MR6: A Late Mississippian, Dallas Phase Town*. CRM. Tennessee Valley Authority Publications in Anthropology. Tennessee Valley Authority, Knoxville, Tennessee.

Pritchard, Erin and Todd M. Ahlman

- 2009 *TVA Archaeology: Seventy-Five Years of Prehistoric Site Research*. The University of Tennessee Press, Knoxville, Tennessee.

Reagan, Patrick D.

- 2018 Harriman Hosiery Mills Strike of 1933–34. *Tennessee Encyclopedia*. Tennessee Historical Society, Nashville, Tennessee.

Russ, Kurt C. and Jefferson Chapman

- 1983 *Archaeological Investigations at the 18th Century Overhill Cherokee Town of Mialoquo*. Report of Investigations. Department of Anthropology, University of Tennessee, Knoxville, Knoxville, Tennessee.

Sassaman, Kenneth E.

- 1995 The Cultural Diversity of Interactions among Mid-Holocene Societies of the American Southeast. In *Native American Interaction: Multiscalar Analyses and Interpretations in the Eastern Woodlands*, edited by Michael S. Nassaney and Kenneth E. Sassaman, pp. 174–204. University of Tennessee Press, Knoxville, Tennessee.

Sassaman, Kenneth E. and David G. Anderson

- 1996 *Archaeology of the Mid-Holocene Southeast*. University Press of Florida, Pensacola, Florida.

Schroedl, Gerald F.

- 1975 *Archaeological Investigations at the Harrison Branch and Bat Creek Sites in the Tellico Reservoir*. University of Tennessee, Knoxville, Knoxville, Tennessee.
- 1986 Toward an Explanation of Cherokee Origins in East Tennessee. In *The Conference on Cherokee Prehistory*, edited by David G. Moore: pp. 122–138. Warren Wilson College, Swannanoa, North Carolina.
- 1998 Mississippian Towns in the Eastern Tennessee Valley. In *Mississippian Towns and Sacred Spaces: Searching for an Architectural Grammar*, edited by R. Barry Lewis and Charles Stout, pp. 138–143. University of Alabama Press, Tuscaloosa, Alabama.

- 2009 The Tellico Archaeological Project. In *TVA Archaeology: Seventy-Five Years of Prehistoric Site Research*, edited by Erin Pritchard, pp. 63–110. University of Tennessee Press, Knoxville, Tennessee.
- 2012 Overhill Cherokees. *Tennessee Encyclopedia*. Electronic document, <http://tennesseencyclopedia.net/entry.php?rec=1026>, accessed December 5, 2019.
- Schroedl, Gerald F., C. Clifford Boyd, and R.P. Stephen Davis
- 1985 *Archaeological Contexts and Assemblages at Martin Farm*. Tennessee Valley Authority Publications in Anthropology. Tennessee Valley Authority, Knoxville, Tennessee.
- 1990 Explaining Mississippian Origins in East Tennessee. In *In the Mississippian Emergence*, edited by Bruce D. Smith, pp. 175–196. Smithsonian Institution Press, Washington, D.C.
- Shelford, Victor Ernest
- 1963 *The Ecology of North America*. University of Illinois Press, Champaign, Illinois.
- Skidmore, Owings and Merrill
- 2020 SOM: Oak Ridge New Town Master Plan. Electronic document, https://www.som.com/projects/oak_ridge_new_town_master_plan, accessed August 6, 2020.
- Smith, Bruce D.
- 1986 The Archaeology of the Southeastern United States: From Dalton to DeSoto (10,500 B.P.–500 B.P.). In *Advances in World Archaeology*, edited by Fred Wendorf and Angela E. Close, 5: pp. 1–92. Academic Press, Orlando, Florida.
- Smith, Kevin E.
- 1992 The Middle Cumberland Region: Mississippian Archaeology in North Central Tennessee. Ph.D. Dissertation, Department of Anthropology, Vanderbilt University, Nashville, Tennessee.
- Smith, Samuel D.
- 2018 Fort Southwest Point. *Tennessee Encyclopedia*. Tennessee Historical Society, Nashville, Tennessee.
- Stager, Claudette
- 2017 Alexander Guest House. *SAH Archipedia*. University of Virginia Press, Charlottesville, Virginia.

2019 Norris Dam, Andersonville, Tennessee. *SAH Archipedia*. University of Virginia Press, Charlottesville, Virginia.

Stager, Claudette and Martha Carver, eds.

2006 *Looking beyond the Highway: Dixie Roads and Culture*. The University of Tennessee Press, Knoxville, Tennessee.

Steponaitis, Vincas P.

1986 Prehistoric Archaeology in the Southeastern United States, 1970–1985. *Annual Review of Anthropology* 15:363–404.

Sullivan, Lynne P.

1987 The Mouse Creek Phase Household. *Southeastern Archaeology* 6:16–29.

2001 Those Men in Mounds: Gender, Politics, and Mortuary Practices in Late Prehistoric Eastern Tennessee. In *Gender in the Archaeology of the Mid-South*, edited by Jane M. Eastman and Christopher B. Rodning, pp. 101–126. University Press of Florida, Gainesville, Florida.

Swann, M.E.

1942 *Soil Survey, Roane County, Tennessee*. United States Department of Agriculture, Washington, D.C.

Tennessee Valley Authority

1933 The New TVA Town of Norris, Tennessee. Tennessee Valley Authority, Knoxville, Tennessee.

1934 TVA Facts Book: Norris, Wheeler, and Wilson Projects. Tennessee Valley Authority, Knoxville, Tennessee.

2014 TVA: Watts Bar Reservoir. Electronic document, <http://www.tva.com/sites/wattsbarres.htm>, accessed July 21, 2014.

n.d. Watts Bar. Commercial. *TVA.com*. Electronic document, <https://www.tva.com/energy/our-power-system/hydroelectric/watts-bar>, accessed August 6, 2020.

The Living New Deal

n.d. The Living New Deal: Projects in Tennessee. Education. *The Living New Deal*. Electronic document, https://livingnewdeal.org/us/tn/?post_type=projects, accessed August 6, 2020.

U.S. Census Bureau

- 2020 City and Town Population Totals: 2010–2019. *Population and Housing Unit Estimates Tables*. Electronic document, <https://www.census.gov/data/tables/time-series/demo/popest/2010s-total-cities-and-towns.html#tables>, accessed June 27, 2020.

Valk, Diana, David Price, and J.W. Joseph

- 2011 Archaeological Survey and Testing of the Happy Valley Worker Camp, Roane County, Tennessee. New South Associates, Inc., Stone Mountain, Georgia

Walling, Richard, Lawrence Alexander, and Evan Peacock

- 2000 *The Jefferson Street Bridge Project: Archaeological Investigations at the East Nashville Mounds Site (40DV4) and French Lick/Sulfur Dell Site (40DV5) in Nashville, Davidson County, Tennessee*. Publications in Archaeology. Tennessee Department of Transportation, Office of Environmental Planning and Permits, Nashville, Tennessee.

Walthall, John A.

- 1980 *Prehistoric Indians of the Southeast: Archaeology of Alabama and the Middle South*. University of Alabama Press, Tuscaloosa, Alabama.

Webb, William S.

- 1938 *An Archaeological Survey of the Norris Basin in Eastern Tennessee*. Smithsonian Institution, U.S. Bureau of American Ethnology, Washington, D.C.

West, Carroll Van

- 2001 *Tennessee's New Deal Landscapes: A Guidebook*. 1st ed. The University of Tennessee Press, Knoxville, Tennessee.
- 2018a Capital Cities. *Tennessee Encyclopedia*. Tennessee Historical Society, Nashville, Tennessee.
- 2018b Clinton Desegregation Crisis. *Tennessee Encyclopedia*. Tennessee Historical Society, Nashville, Tennessee.

Willey, Gordon R. and P. Phillips

- 1958 *Method and Theory in American Archaeology*. The University of Chicago Press, Chicago, Illinois.

Williams, Stephen and James B. Stoltman

- 1965 An Outline of Southeastern United States Prehistory with an Emphasis on the Paleo-Indian Era. In *The Quaternary of the United States*, edited by H.W. Wright, Jr. and D.C. Frey, pp. 669–683. Princeton University Press, Princeton, New Jersey.

Wycoff, Don G. and Robert Bartlett

- 1995 Living on the Edge: Late Pleistocene–Early Holocene Cultural Interaction along the Southeastern Woodlands-Plains Border. In *Native American Interaction: Multiscalar Analyses and Interpretations in the Eastern Woodlands*, edited by Michael S. Nassaney and Kenneth E. Sassaman, pp. 27–72. University of Tennessee Press, Knoxville, Tennessee.