

**CULTURAL RESOURCE ASSESSMENT SURVEY
FOR THE MINNEOLA PD&E,
LAKE COUNTY, FLORIDA**

PREPARED FOR

**HNTB, INC.
LAKE MARY, FLORIDA**

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JUNE 2008

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PREPARED BY

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EXECUTIVE SUMMARY

This report presents the findings of a cultural resource assessment survey conducted in support of the Florida Department of Transportation (FDOT), District 5, Minneola Collector Road Project Development and Environment (PD&E) study from Old SR 50 north and west to US 27 in Lake County, FL. The project corridor measures approximately 4.41 miles in length. The Area of Potential Effects (APE) for this project included a 330-foot buffer of the proposed centerline or the back/side property lines of parcels adjacent to the corridor.

Seventy-nine shovel tests were excavated within the Minneola PD&E APE resulting in the update of one previously recorded site (8LA2875). One archaeological occurrence (AO 1) also was defined, and the Orange Belt Railway (8LA4042) was recorded within the APE.

A single flake was recovered from within the previously recorded site 8LA2875. This recovery did not result in a boundary amendment to the site. Additional testing around the shovel test containing the single flake did not yield additional artifacts, supporting the State Historic Preservation Officer (SHPO) determination that 8LA2875 is ineligible for listing on the National Register of Historic Places (NRHP). As an isolated find, AO 1 is inherently ineligible for listing on the NRHP. Recorded site 8LA2281 could not be relocated but was previously found to be ineligible for listing on the NRHP.

The Orange Belt Railway (8LA4042) has unexceptional architecture and engineering, lack of association with historical events, and lack of integrity of setting and feeling; therefore, the Orange Belt Railway Resource Group (8LA4042) is not eligible for listing on the NRHP.

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INTRODUCTION

This report presents the findings of a cultural resource assessment survey conducted in support of the Florida Department of Transportation (FDOT), District 5, Minneola Project Development and Environment (PD&E) study from Old SR 50 north and west to US 27 in Lake County, FL. The project corridor measures approximately 4.41 miles in length. The Area of Potential Effects (APE) for this project included a 330-foot buffer of the proposed centerline or the back/side property lines of parcels adjacent to the corridor (Figure 1).

The purpose of the survey is to locate, identify and bound any historic properties (archaeological sites, historic structures, historic cemeteries, historic bridges, resource groups, and historic districts) within the APE for the preferred alignment and evaluate their potential for listing in the National Register of Historic Places (NRHP). All work was performed in accordance with Part 2, Chapter 12 of the FDOT PD&E Manual, the FDOT Cultural Resource Management Handbook (revised November 2004), as well as the Florida Division of Historical Resources (FDHR) recommendations for such projects as stipulated in the FDHR's *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals* and Rule Chapter 1A-46, Florida Administrative Code. The project complies with Chapter 267 Florida Statutes. The Principal Investigator for this project meets the U.S. Secretary of Interior's standards for professional qualifications as set forth in 36 CFR Part 61.

Within the APE, consideration was given to any visual, audible, and atmospheric effects that the road construction may have to historic properties. Archaeological shovel testing was conducted within the APE and any other historic properties within the entire APE were recorded and evaluated.

The northern end of the proposed road corridor begins at US Highway 27, approximately one and one-half miles north of the City of Minneola. From there, it extends east about three-quarters of mile to the tip of Grassy Lake, at which point it travels south approximately 1500 feet before turning east again for another three-quarters of a mile. The corridor then turns south for two and half miles to its terminus at Old Highway 50. The total length of the corridor is 4.41 miles with a proposed Right of Way of 350 feet. The APE for this project included a 330-foot buffer of the proposed centerline or the back/side property lines of parcels adjacent to the corridor. The APE has a total area of 350.76 acres.

ENVIRONMENTAL OVERVIEW

The proposed corridor is in a rapidly developing area east of Minneola in Lake County, Florida. US Highway 27 is located west of the corridor, and east of the Florida Turnpike (SR 91). Elevation within the APE ranges from approximately 60 to 80 feet above mean sea level (amsl).

Lake County falls within the Central Highlands region of Florida (Schmidt 1997). This area is composed of a series of ridges encompassing broad expanses of lowlands interspersed with lakes. The ridges, which parallel the eastern coastline, are relict coastal beach

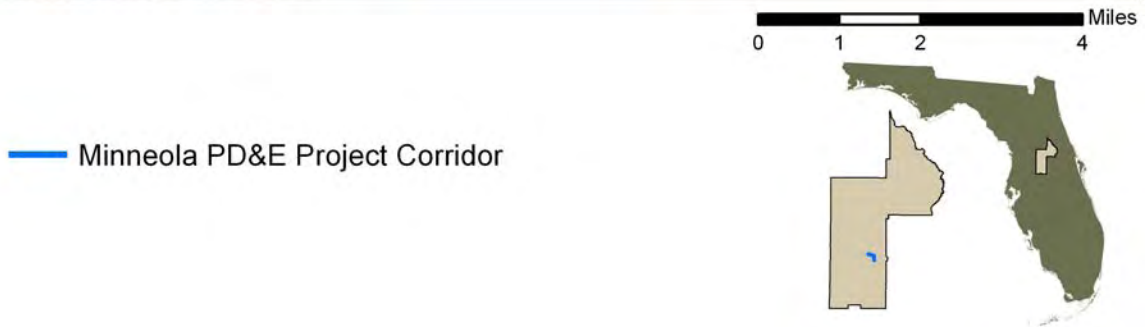


Figure 1. Minneola PD&E location, Lake County, Florida.

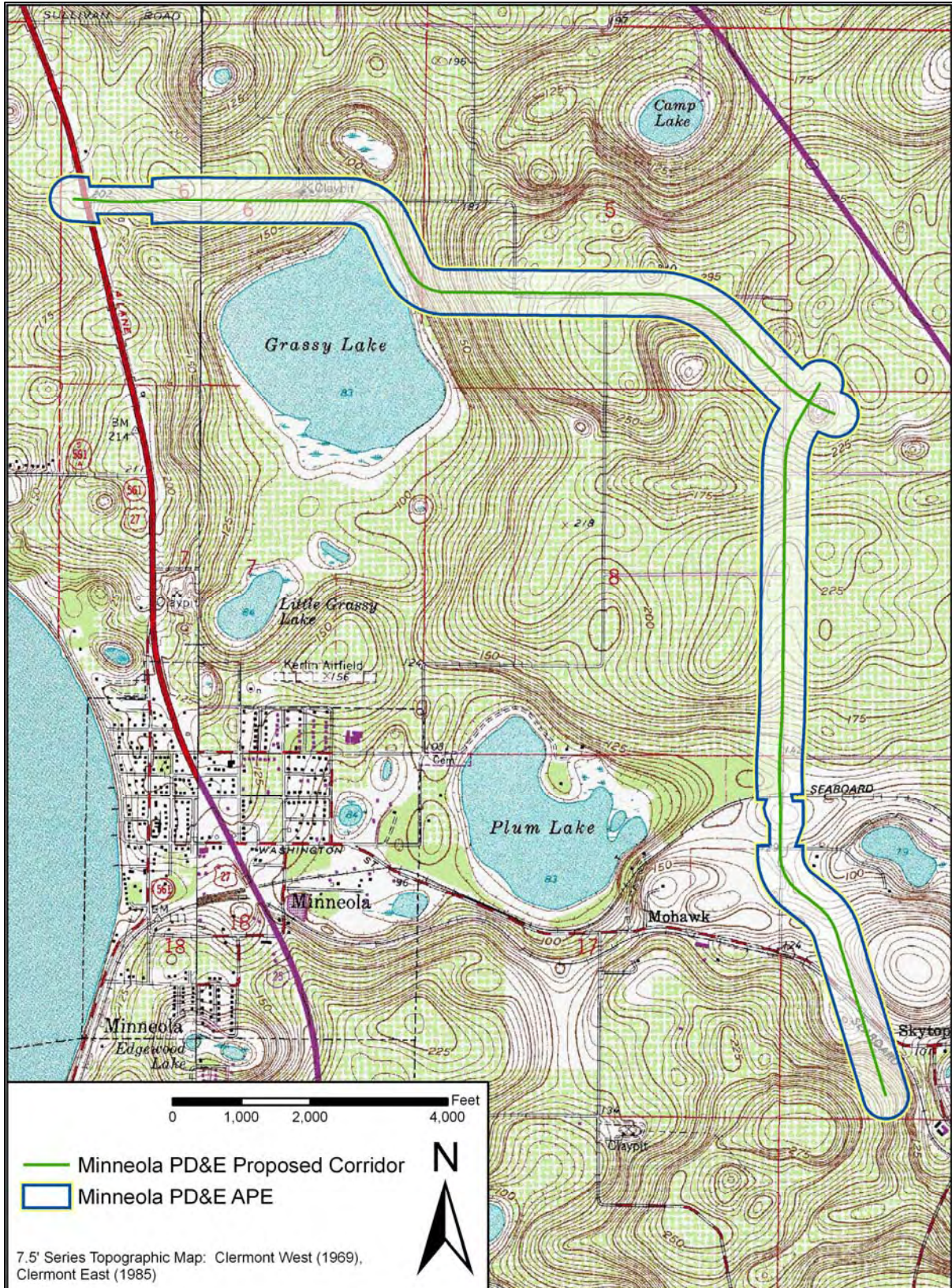


Figure 2. Minneola PD&E Area of Potential Effects (APE), Lake County, Florida.

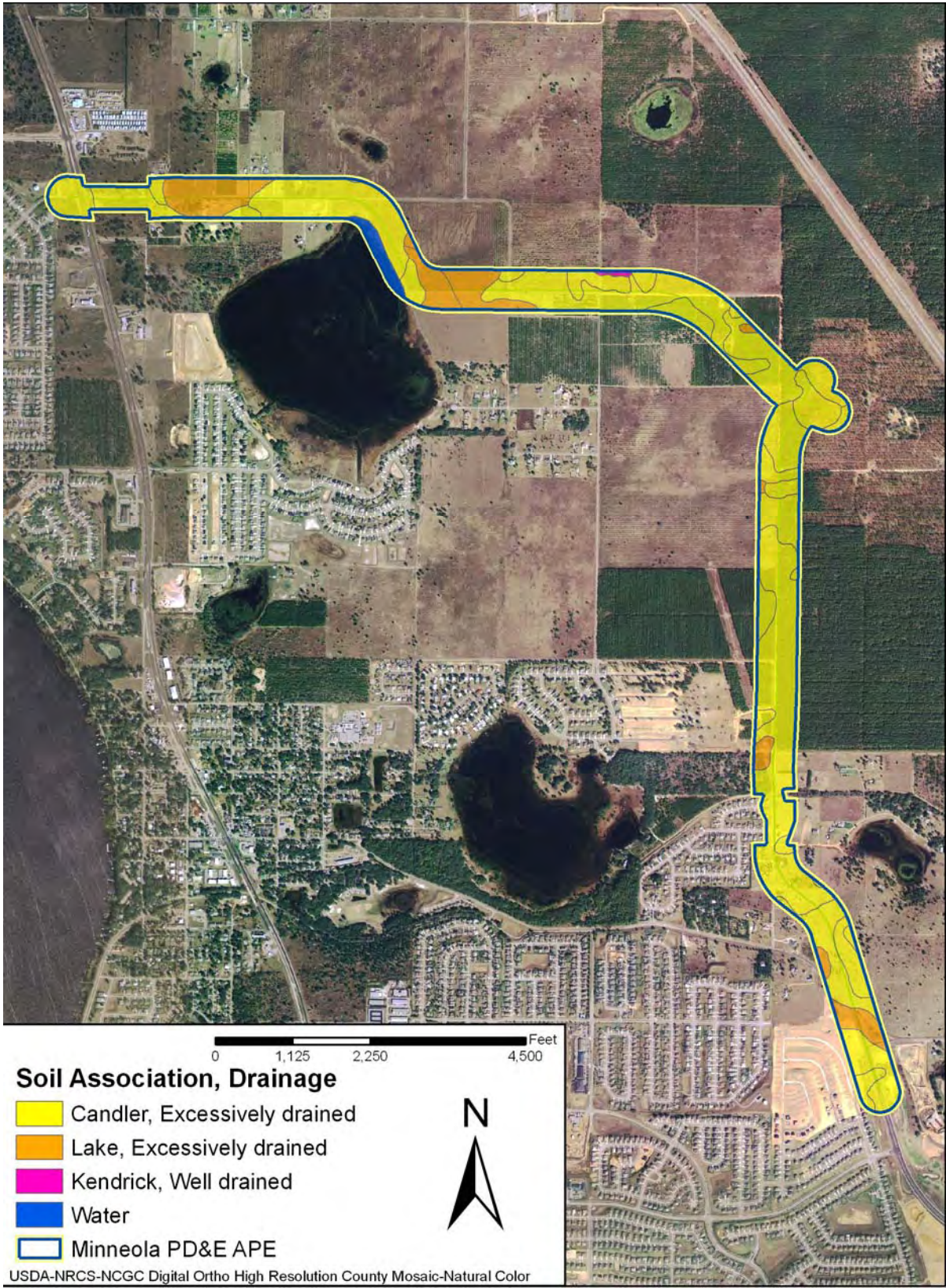


Figure 3. Soil associations and drainage characteristics within the Minneola PD&E APE.

features (White 1970). Soils within the APE are primarily excessively well drained Candler fine sand. There are small pockets of extremely well-drained Lake fine sands and well-drained Kendrick fine sands (Figure 3) (USDA 1975).

Prior to modern land alterations and clearing, the project area and its immediate surroundings would have been composed of a patchwork of different ecosystems. The majority of the area would have been dominated by species found in xeric upland sandhill communities, particularly those of the Longleaf Pine-Turkey Oak Hills ecological community (Florida Soil and Water Conservation Society 1989). The most common tree species in this community are longleaf pine (*Pinus palustris*), turkey oak (*Quercus laevis*), and bluejack oak (*Quercus incana*). A variety of herbaceous plants, vines, and grassy plants also are variably distributed throughout this low to moderately-dense community. In the past, this community was sustained by frequent natural fires which controlled the vegetative profile of the ecosystem (Florida Soil and Water Conservation Society 1989).

The upland sandhill environments were once common to the ridges of central Florida, but this environment has largely been destroyed or degraded by clearing for citrus agriculture and the suppression of natural fires by humans (Department of Natural Resources 1990). Scrubby plants in these communities include dwarf huckleberry (*Gaylussacia dumosa*), gopher apple (*Chrysobalanus oblongifolius*), prickly pear (*Opuntia spp.*), and saw palmetto (*Serenoa repens*). A variety of oak and pine species also are interspersed in these communities, which are usually found in areas of well-drained to excessively drained soils.

Paleoenvironment

Florida was much cooler and drier than today from 16,000 to 12,000 years ago, and then became warmer and wetter rather rapidly during the next three millennia. By no later than 9000 years ago, the warmer climates of the Holocene began to prevail. These changes were more drastic in northern Florida and southern Georgia than in southern Florida, where the “peninsular effect” and a more tropically influenced climate tempered the effects of the continental glaciers that were melting far to the north (Watts 1969, 1971, 1975, 1980).

Melting of the continental ice sheets led to a major global rise in sea level (summarized for long time scales by Rohling et al. 1998) that started from a low stand 400 ft. below current sea level roughly 18,000 years ago. The rise was slow while glacial conditions prevailed at high latitudes but became very rapid in the latest Pleistocene and earliest Holocene. By 8000 to 7000 years ago, sea level had risen to only nine to 15 feet lower than at present. As a generalization, the climate, water levels, and plant communities of Florida and southern Georgia attained essentially modern conditions by about 4000 years ago during the Late Archaic period and have been fairly stable through all phases of habitation by ceramic-using cultures.

PREHISTORIC OVERVIEW

Paleoindian Period

The following prehistoric overview of central Florida consists of a four-part chronology, with each period based on distinct cultural and technological characteristics recognized by archaeologists. From oldest to most recent, the four temporal periods include Paleoindian, Archaic, Woodland, and Mississippian. These periods along with their regional subperiods are presented in Table 1. While each period is briefly discussed below, readers are referred to Milanich (1994) for a more comprehensive treatment of the prehistory of Florida.

Table 1. Prehistory of Central Florida.

Paleoindian Period (10,000+ - 8000 B.C.)
Archaic Period (8000 - 500 B.C.)
Early (8000 - 5000 B.C.)
Middle (5000-3000 B.C.)
Late (3000 - 500 B.C.)
Preceramic (3000 - 2000 B.C.)
Orange (2000 - 500 B.C.)
Woodland Period (500 B.C. - A.D. 750)
St. Johns I (500 B.C. - A.D. 100)
St. Johns Ia (A.D. 100 - 500)
St. Johns Ib (A.D. 500 - 750)
Mississippian Period (A.D. 750 - 1565)
St. Johns IIa (A.D. 750 - 1050)
St. Johns IIb (A.D. 1050 - 1513)
St. Johns IIc (A.D. 1513 - 1565)

Paleoindian Period (10,000 - 8000 B.C.)

The most widely accepted model for the peopling of the New World argues that Asian populations migrated to North America over the Beringia land bridge that formerly linked Siberia and Alaska, some 12,000 years ago. However, data are mounting in support of migrations that date to before 12,000 years ago. Regardless of the precise timing of the first occupations of the New World, it does not appear that Florida was inhabited by humans prior to about 10,000 years ago. Although limited, radiocarbon dates from Paleoindian sites in western Florida date to between 10,000 and 7500 B.C. (Cockrell and Murphy 1978; Clausen et al. 1979; Dunbar et al. 1988). The conventional view of Paleoindian existence in Florida is that they were nomadic hunters and gatherers who wandered into an environment quite different than that of the present.

Excavations at the Harney Flats site in Hillsborough County have altered this view and many archaeologists believe that Paleoindian people lived part of the year in habitation sites that were located near critical resources such as fresh water. The climate during the Paleoindian period was cooler than at present and the land drier, with coastal sea levels and the inland water table much lower than at present (Carbone 1983; Watts and Hansen 1988). The paucity of potable water sources is thought by some archaeologists to have played a crucial role in the distribution of Paleoindian bands across the landscape. They hypothesize that human groups frequented sinkholes and springs to collect water and exploit the flora and fauna that were also attracted to these locations (Webb et al. 1984; Dunbar 1991; Milanich 1994). As an added attraction, many of these freshwater sources were located in areas of exposed Tertiary age limestone that had become silicified, providing the Paleoindians with a raw material source (chert) for tool manufacture. Thus, it is thought that permanent freshwater sources (sinkholes, springs) along with locations of high quality chert were primary factors influencing Paleoindian settlement patterns in Florida.

Archaic Period (8000 - 500 B.C.)

Around 8000 B.C. the environment and physiology of Florida underwent some pronounced changes due to climatic amelioration. These changes were interconnected and include a gradual warming trend, a rise in sea levels, a reduction in the width of peninsular Florida, and the spread of oak-dominated forests and hammocks throughout much of Florida (Milanich 1994; Smith 1986). Concomitant with these environmental changes were alterations in native subsistence strategies, which became more diverse due to the emergence of new plant, animal, and aquatic species. Also occurring at this time was a significant increase in population numbers and density, with native groups developing regional habitat-specific adaptations and material assemblages (Milanich 1994; Smith 1986:10). As conditions became wetter, coastal, riparian, and lacustrine adaptations became increasingly more common. The Archaic period is typically divided into the Early, Middle, and Late subperiods by archaeologists, as shown in Table 1.

Within the Central Lakes District, evidence of the earliest occupations usually consists of lithic scatters containing chert debitage and occasionally projectile points. While Early Archaic Bolen projectile points have been recovered at sites in central Florida, Middle Archaic points, such as Hardee, Sumter, Alachua, Putnam, and Newnan, are typically much more common (Smith and Bond 1984:53-55). As life became more settled during the Archaic period, an array of site types evolved that included residential bases, short-term settlements, specialized procurement camps, and cemeteries (Milanich 1994:75-85). Collectively, these comprised the regional settlement-subsistence system.

The trend toward increased sedentism and more circumscribed territories continued into the Late Archaic period, as environmental and climatic conditions approached those of today. A major technological innovation of the Late Archaic was the development of fired-clay pottery around 2000 B.C. Referred to as Orange pottery by archaeologists, this early ceramic ware was tempered with vegetal fibers, either thin strands of palmetto or Spanish moss (Bullen 1972; Griffin 1945). During a span of approximately 1500 years, plain, incised, and punctated types were produced; decorated variants, however, underwent periods of stylistic popularity. With regard to vessel form, early pots were hand molded and tended to be thick-walled, whereas some of the later vessels were thinner and formed by coiling. This Transitional period is characterized by the emergence of ceramic traditions and the inception of limited horticulture. Horticulture preceded the early fiber-tempered pottery, which appeared simultaneously in three areas of the southeastern United States (Sassaman 1993). People belonging to the Orange culture lived along the Atlantic Coast between southern South Carolina and northern Florida. While fiber-tempered pottery is found sparingly throughout Florida, it is primarily recovered in eastern and central portions of the state.

Orange Fiber-Tempered ceramics were first described by James Griffin (1945:219) and are considered among the earliest pottery types in North America. The next recognized early fiber-tempered ceramic culture, Norwood, extended from the Gulf coast, to the Orange series on the East coast. These early ceramic periods are characterized by fiber-tempered ceramics with sand temper or inclusions. The fiber-tempered Norwood pottery is usually undecorated or stick impressed. A variety of the later Deptford simple-stamped ceramic ware found on

the Gulf coast is also stick impressed and seems to be derived from the earlier Norwood ceramic assemblage (Milanich and Fairbanks 1980).

A third fiber-tempered ceramic variant known as Tick Island Incised was produced at the same time as Orange series ware and occurs in the Upper St. Johns River drainage area. The designs incised onto the exterior of Tick Island ware are curvilinear and incorporate small dashes or punctations. A typical design uses concentric circles and small dashes between the lines of the circle. This type is somewhat localized and is not typically on sites outside of the Upper St. Johns area.

During the late Transitional period, more and more sand was added to the clay used to make pottery as a tempering agent. Eventually, this technique replaced the practice of using plant fibers as temper. Early sand- and grit-tempered pottery in north Florida was produced by the Deptford culture. The other dominant pottery type that followed the fiber-tempered tradition is called St. Johns ware, produced in northeast Florida. St. Johns pottery relies on microscopic sponge spicules, or exoskeletons, as temper. Although some sand was added to this pottery, St. Johns ware lacks the fiber, sand, and grit temper that is typical of prehistoric pottery giving it a chalky texture. Deptford and St. Johns were produced at the same time and are often recovered in association with each other.

Woodland and Mississippian Periods (500 B.C. - A.D. 1565)

St. Johns Culture

The Central Lakes District is not well studied archaeologically, but research to date finds that St. Johns is the dominant ceramic type in the region. Culturally it is currently included within the east and central Florida region, which is dominated by the St. Johns tradition. St. Johns is characterized by chalky pottery produced between 500 B.C. and A.D. 1565, increased population and settlement numbers compared to the Archaic period, construction of sand burial mounds, continued economic dependence on aquatic resources, and greater emphasis on plant cultivation (Goggin 1952:40; Milanich 1994:243-274). While St. Johns ceramics are found across the peninsula, the St. Johns River drainage in central and northeastern Florida was the core area of the St. Johns culture. In eastern and central Florida, the St. Johns culture grew directly out of the Orange culture. This is evidenced by the carryover of late Orange period designs to early St. Johns period pottery. Within the St. Johns period there are two major subdivisions (I and II).

In addition to St. Johns wares, sites in the Central Lakes District typically contain Glades and Belle Glade ceramics, which originate in the Lake Okeechobee region. These are more common in the south central portion of this district, whereas purer St. Johns assemblages are found in the northern portion of the region (Sears 1959). The present project corridor is located in this northern region and may be culturally associated with the St. Johns heartland. Sites in the Central Lakes District are often characterized by freshwater shell and black earth middens located along the banks of inland rivers and lakes (Austin and Hansen 1988; Hardin et al. 1984).

St. Johns I

The St. Johns I period is divided into three subperiods (I, Ia, and Ib) on the basis of observable changes in material culture, most notably ceramics (Goggin 1952:40; Milanich 1994:247). People of the St. Johns I culture (500 B.C. to A.D. 100) were foragers who relied primarily upon hunting, fishing and wild plant collecting. During this time, the resources found near freshwater wetlands, swamps, and the coastal zones were typically the most heavily exploited. St. Johns I sites are typically shell middens in coastal zones that contain St. Johns Plain and St. Johns Incised pottery.

At St. Johns Ia sites (A.D. 100 to 500), St. Johns Plain and Incised pottery continued to be produced and a red-painted St. Johns variant called Dunns Creek Red was also made. Exotic Hopewellian artifacts also occur in burial mounds. Weeden Island pottery (a primarily Gulf coast ware) has been recovered from late St. Johns Ia sites, apparently acquired as a trade ware. The St. Johns Ib period (A.D. 500 to 750) is similar to the Ia period, with the carry over of St. Johns Plain and Incised wares and Dunns Creek Red, but Weeden Island pottery becomes more common. However, the majority of everyday ceramics are plain. As the St. Johns culture progressed, sand mounds continued to be constructed and became larger through time.

St. Johns II

St. Johns II period is further divided into three subperiods (IIa, IIb, and IIc). As populations grew, the number and size of mounds and villages increased. The emergence of check stamping marks the beginning of the St. Johns II period around A.D. 750 and, along with plain pottery, dominates the assemblages throughout the period. During St. Johns IIa (A.D. 750-1050), incised and punctated wares, possibly a reflection of Gulf coast influences, occur with some frequency in mounds and middens. Late Weeden Island pottery continued to be traded into the St. Johns region and is recovered in sand burial mounds.

The St. Johns II culture reached its apex in terms of social, political, and ceremonial complexity during the St. Johns IIb period (A.D. 1050-1513). Classic Mississippian traits such as the construction of large truncated mounds and the presence of Southern Cult burial paraphernalia in association with perceived elite burials are evident (Milanich 1994; Smith 1986), indicating influence from northwest Florida. Some sand burial mounds were quite large and ceremonially complex, including truncated pyramidal mounds with ramps or causeways leading up to their summits (Milanich 1994:269-270). The rise in the number of St. Johns village and mound sites implies greater cultural complexity compared to that of the earlier St. Johns I period (Milanich 1994:267-274; Miller 1991). Shell and bone ornaments, worked copper, and other exotic materials and artifacts occur with some frequency in burial mounds (Goggin 1952; Milanich 1994).

In addition to the exploitation of aquatic resources for subsistence, it has been suggested that there was an increased dependence on horticulture during St. Johns II times (Goggin 1952; Milanich 1994:263-264). In fact, sixteenth-century French and Spanish documents allege that beans, squash, and maize were heavily cultivated by the Timucua of northern Florida

(Bennett 1964, 1968, 1975; Lawson 1992), although direct evidence of prehistoric horticulture is lacking for the St. Johns region.

HISTORICAL OVERVIEW

Contact Period (post 1513)

The St. Johns IIc (A.D. 1513-1565) represents the protohistoric period and is characterized by the introduction of European artifacts. Prior to the founding of St. Augustine by Pedro Menendez in 1565, the Spaniards made several forays into Florida beginning with Ponce de Leon in 1513 (Davis 1935). Except for the native's intermittent exposure to European goods and diseases, the St. Johns IIc seems to represent a continuation of the earlier St. Johns II period. Items such as glass beads, European pottery, hawk's bells, mirrors, and metal hoes, axes, and chisels have been recovered in association with St. Johns IIc burials. Other metals such as copper, silver, and gold were also acquired and reworked by native artisans.

In order to convert the local Indians to Christianity, the Spanish established a series of Franciscan missions between St. Augustine and Tallahassee. Cattle ranches were established as a way of supporting the missions and the colonists in St. Augustine.

The Indian groups living in the project vicinity at the time of Spanish contact were known as the Jororo, named for one of the larger villages in the region. The Jororo subsisted primarily by hunting animals, collecting locally available root, nuts, fruits and tubers, and fishing (Milanich 1995:68). Their settlements were nearly always located either on islands or along the shore of the larger lakes in central Florida. The Jororo spoke Mayaca, a language distinct from Timucua, and appear to have been tied linguistically and politically to the Ais and other peoples of south-central Florida.

Spanish records document four large Jororo villages in the central lakes region: Jororo, Atissimi, Atoyquime, and Piaja. The Spanish established missions in the largest of these villages. Efforts to missionize the Jororo were less than completely successful. In 1696, Frier Luis Sanchez was killed along with a local chief and two boys who had been converted to Christianity at the mission at Atoyquime (Hann 1996:244). The Spanish retaliated, and later captured the Indians involved, but many of the Jororo had already left the area and moved to the St. Augustine area (Hann 1993:130-131).

Little is known about the material culture of the Jororo people. They had some contact with the Spanish Mission system in the late 17th century, but most of the Spanish artifacts have been recovered from burial contexts. None of the village sites identified in the Spanish documents have ever been identified and there are no known Jororo village sites.

After the destruction of the mission system by the British in 1702, central and north Florida was essentially abandoned, as the few remaining Indians fled to St. Augustine for safety (Milanich 1995). Warfare and disease decimated the native Florida populations. Groups of Creek Indians began to move south into an unpopulated central Florida from Georgia and Alabama after being pushed off their ancestral lands by European pressure and inter-Creek

warfare. These people settled in Spanish Florida and utilized some of the feral cattle abandoned by the Spanish 50 years before. They later became known as the Seminoles.

Seminoles

Seminole folklore links Seminoles to earlier Florida Native American groups and their hunting grounds (Wickman 1999:197). Wickman (1999:218-219) contends that the group that became known as the Seminoles were in fact “survivors of the earlier tribes” of Florida who were later joined by groups of Creek Indians, their “cultural relatives.” According to Mahon (1985), the Oconee Creeks of central Georgia, led by Cowkeeper (so named because of his large cattle herd), migrated into the Alachua savanna region south of Gainesville between 1739 and 1750, eventually becoming the nucleus of the Seminole tribe. Two other regions of early Seminole settlement are the Brooksville Ridge in Hernando County and the area around Dunnellon in Marion County (Weisman 1989).

The Seminoles’ friendly manner toward escaped slaves angered the slave-holding border states of Georgia, Alabama, South Carolina, and Mississippi; a factor that would eventually culminate in the Seminole wars. Conflicts between American settlers and Seminoles led to the First Seminole War in 1817. General Andrew Jackson, known to the Seminoles as “Sharp Knife”, invaded Seminole territory on Spanish controlled land and destroyed Seminole towns. This military effort led to Florida becoming a United States Territory in 1819. President James Monroe appointed Jackson Governor who organized the Territory of Florida into two counties, Escambia and St. Johns. The legislative council for Florida met in Pensacola in 1822, and again in St. Augustine in 1823 (Carter 1956:8-11; Tebeau 1971). The First Seminole War ended with the *Treaty of Moultrie Creek* in 1823, which stipulated that all Indians in Florida move onto a reservation in the middle of the state.

The project area is within the limits of the Seminole Indian reservation as demarcated by the *Treaty of Moultrie Creek*. The reservation spanned from present-day Marion County in the north to northern portions of Hardee, Highland, and Okeechobee counties in the south (Mahon 1985:46-50, 390-391 [rear map]). Seminoles moved into the area and established villages and camps (Sime 1995). White settlement of the interior of central and south Florida began after the United States obtained Florida from Spain in 1821. This brought about increased pressure for the U.S. government to remove the Seminoles entirely from Florida to open the Seminole reservation for White settlement. Eventually tensions between White settlers and the Indians culminated in the Second Seminole War (1835-1842), which severely affected the Seminole population. Despite population losses and the shipment of many Seminoles to reservations west of the Mississippi River, the Seminoles persevered.

The third and final Seminole War (1855-1858) consisted of a series of skirmishes fought by Seminoles under Chief Billy Bowlegs (Milanich 1995:234). Because of these events, the series of conflicts is also referred to as Billy Bowleg’s war. During this period, forts were reactivated and war was again declared. By 1858, after a series of sporadic skirmishes, the Third Seminole War ended with the shipment of 123 Seminoles to Oklahoma. However, 100-300 Seminoles evaded capture and remained in the Everglades (Fernald and Purdum 1992; Milanich 1995). In 1879, approximately 20 Seminoles were estimated to be living near present day Miami (Covington 1993:156). The present day Seminole and Miccosukee Tribes of Florida and the

Independent Seminoles of Florida are direct descendants of those who could not be forcibly removed during the Seminole Wars. As a result of forced removal, Seminole Indians also now live in Texas and Oklahoma.

Early Settlement and Modern Era

Lake County, like Indian River and Volusia Counties, was originally part of Mosquito County, which encompassed most of East Florida in the early 19th century. Fort Butler, located near the town of Astor, was established in 1838. Although this area was popular with prehistoric peoples due to the numerous lakes and navigable rivers, the 1840 census bureau records “0” as the number of residents living in the area. This, of course, considered only non-native peoples. The Second Seminole War (1838 – 1842), however, opened up much of the interior and southern portions of Florida to White settlement. The military erected forts and established roads throughout much of Florida’s interior. Some of the earliest roads in Lake County were established to connect a chain of forts across Central Florida.

By 1887, population had increased enough to warrant the creation of Lake County out of Orange and Sumter counties (Morris 1995:138). Many of these newcomers cleared a plot out of the pine forest, built a small house, and planted orange trees. The first American settlement in the vicinity began when James Anderson established a farm south of present-day Clermont in circa 1862. A little over a decade later, Herring Hooks obtained land adjacent to Lake Minnehaha. Though Herring lived in Okahumpka, several of his children settled and farmed his land near the Clermont area (Kennedy et al. 1929).

In 1884, T.J. Hooks, son of Herring, arranged the sale of several hundred acres of land to the Clermont Improvement Company, a business owned by a group of New Jersey businessmen. The company developed and marketed the town of Clermont, eventually bringing the railroad through the town to bring farm products, particularly tomatoes and citrus, from the area to the larger market. The town of Minneola was incorporated in 1884. George W. Hull, an engineer from Minnesota, mapped and surveyed the new town and was responsible for getting the town its first post office. By the end of 1884, Minneola boasted a store and sawmill, and in 1885 a brickyard was established on the west side of Grassy Lake that obtained local clay for making bricks (Kennedy et al. 1929). As with Clermont and much of Lake County, citrus was the backbone of the developing economy of Minneola. However, the freeze of 1894-1895 devastated the citrus industry and with it Lake County’s primary source of income (Dietrich 1978:146; Peter 1994). After this event, the economy of the area was based upon apiculture and turpentine while waiting for the citrus trees to recover.

In the early 20th century, south Lake County found another natural resource to help stimulate the local economy. Charles Lindley-Wood, who was an agent for British Admiralty, discovered diatomite in Lake County in 1917. His son discovered a second deposit near Clermont in 1919, which is possibly the largest deposit known in the world (Fuller 1936). Diatomite is a chalk-like, very fine-grained, sedimentary rock that is used primarily as cat litter. Pure Kaolin clay, used to produce porcelain ceramics, is another commodity of Lake County and was especially prevalent near the town of Villa City, located north of Groveland and west of Lake Minneola.

Throughout the twentieth century Lake County's population grew, as northern residents began to move in and around the already bustling towns of Clermont and Minneola. As roads and the automobile improved, people began to move from the town centers to take up residence around the many lakes throughout the county. Employment options began to shift from agricultural work to retail and commercial employment. However, even with the expansion of the job sector, agriculture remained the most profitable industry for the county. In 1987, this industry took a great blow when an intense freeze decimated almost all of the orange groves in the county. Citrus agriculture in the state moved south into Highlands, Polk, and Hardee counties. The barren fields, however, proved profitable for land developers who bought up the abandoned groves to provide housing for the ever increasing population in the Orlando area, which is rapidly expanding into eastern Lake County.

RESEARCH DESIGN

A research design is a plan to coordinate the investigation from the inception to the completion of the project. This plan should minimally account for three things. It should make explicit the goals and intentions of the research, it should define the sequence of events to be undertaken in pursuit of the research goals, and it should provide a basis for evaluating the findings and conclusions drawn from the investigation.

The goal of this cultural resource survey is to locate and document the existence of any evidence of potentially important historic or prehistoric occupation or use within the area of potential effect. The field survey is the traditional and most cost-effective means of locating this evidence. These activities typically manifest as archaeological or historic sites, historic structures, or archaeological occurrences (isolated artifact finds). Assessment surveys attempt to locate evidence of any past human activities that are archaeologically discernable with current investigative techniques. The techniques employed must be able to identify the kinds of sites expected in the region.

The research strategy is composed of background investigation, a historical document search, and the field survey. The background investigation involves several inquiries. A perusal of relevant archaeological literature produced a summary of previous archaeological work in the region and a discussion of previous survey work undertaken near the project area. The Florida Master Site File was checked for any previously recorded sites within the project corridor, and provided an indication of prehistoric settlement and land-use patterns for the region. Current soil surveys, vegetation maps, and relevant literature were consulted to provide a description of the physiographic and geological region of which the project area is a part.

The historical document search involved a review of both primary and secondary historic sources. The original township plat maps and relevant secondary historical sources were checked for information pertaining to the existence of historic structures, sites of historic events, and historically occupied or noted aboriginal settlements within the project limits.

Previous Surveys

There have been seven surveys within a mile of the APE, and portions of four of these surveys (5840, 5847, 11033, and 14139) are within the APE (Table 2). For those surveys where archaeological and/or architectural resources were identified, specific information (i.e. site type, cultural affiliation, etc.) for those historic resources within the vicinity of the current project area is discussed in the Florida Master Site File Review section of this report.

Table 2. Surveys conducted in the vicinity of the proposed Minneola PD&E APE.

SURVEY NUMBER	TITLE	DATE	AUTHOR
2273	A Cultural Resource Assessment: The Summitt Development of Regional Impact [Lake County, Florida]	1990	Dickinson, Martin F.
3300	Cultural Resource Assessment of the Proposed Montverde Country Club, Lake County, Florida	1993	Clagett, Heather et al.
5840	Cultural Resource Assessment Survey of the Proposed Buccaneer Gas Pipeline, Florida	2000	Estabrook, Richard W.
5847	Cultural Resource Assessment Survey for the State Road 25 (US Highway 27) Project Development and Environmental (PD&E) Study from US 192 to SR 91 (Florida's Turnpike) in Lake County, Florida	1998	Janus Research
9243	A Cultural Resource Assessment Survey of the Verde Ridge Property, Lake County, Florida	2003	Stokes, Anne V.
11033	Cultural Resource Assessment, Founders Ridge, Lake County, Florida	2004	Dickinson, Martin F. et al.
11123	An Archaeological and Historical Survey of the Proposed Blackstill Lake Tower Location in Lake County, Florida	2005	Hughes, Skye W.
14139	A Phase I Cultural Resource Survey for the Hills of Minneola Project, Lake County, Florida	2007	Nodine, Bruce K.

Florida Master Site File Review

Florida Master Site File (FMSF) GIS data dating to May 2008 was reviewed to determine if any cultural resources were recorded within the study area. Currently, there are two previously recorded archaeological sites (8LA2875 and 8LA2281) located within the proposed Minneola PD&E APE. Seven archaeological sites and four historic structures have been recorded within one mile of the APE (Figure 4; Tables 3 and 4).

Six of the seven of the recorded archaeological sites within one mile of the APE have been determined ineligible for listing in the NRHP by both the surveyor and the State Historic Preservation Officer (SHPO). The remaining one is a prehistoric canoe that has not been evaluated. Two of the sites (8LA2223 and 8LA3518) have historic components. The remaining sites, including the two (8LA2281 and 8LA2875) recorded within the APE, are prehistoric artifact scatters or isolated finds. No structures are recorded within the APE.

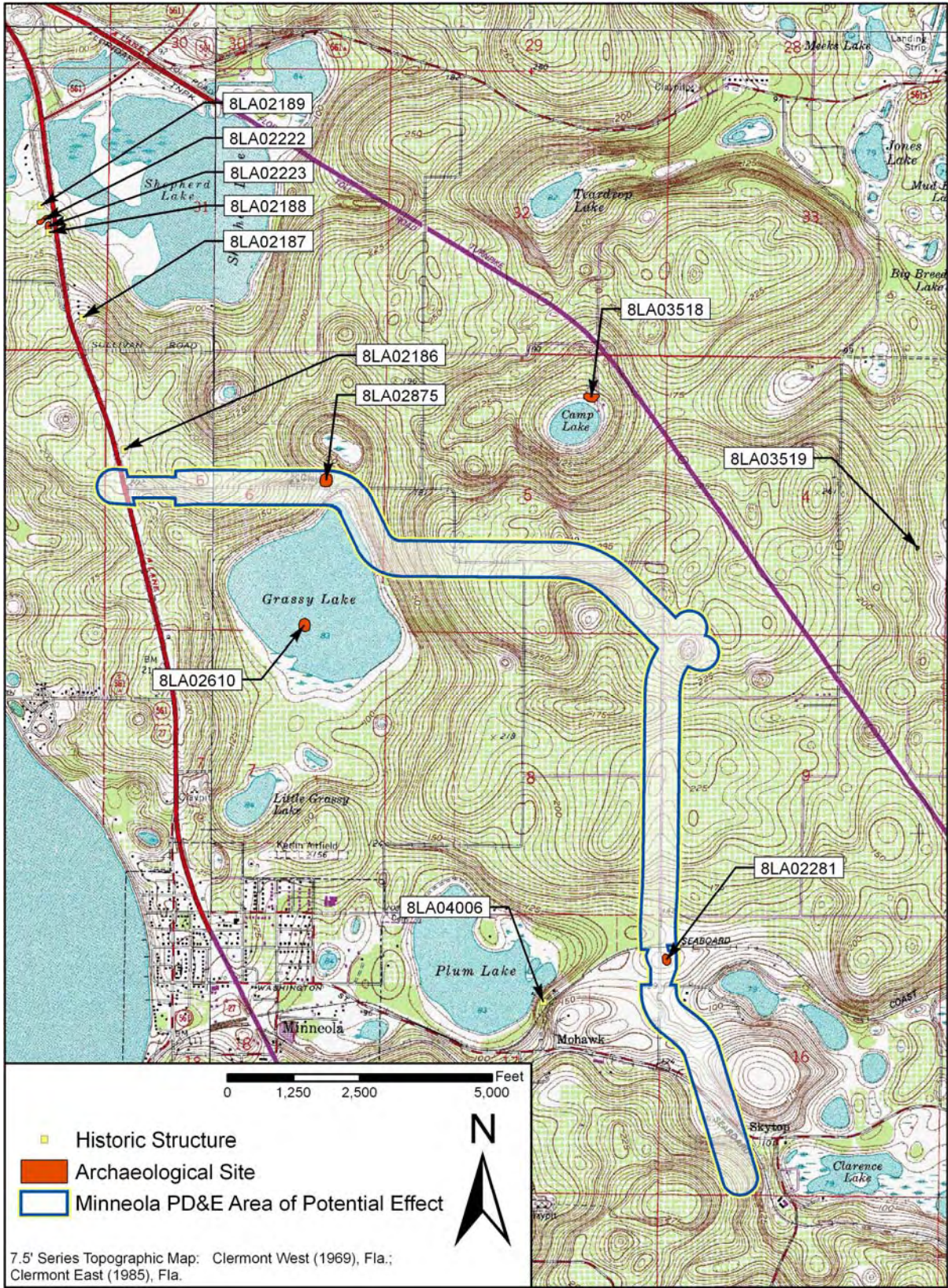


Figure 4. Previously recorded cultural resources within one mile of the proposed Minneola PD&E APE.

Table 3. Archaeological sites recorded within one mile of the Minneola PD&E APE.

FMSF Number	Name	Type	Culture	Surveyor Evaluation	SHPO Evaluation
LA02281	Turkey Hill	Land-terrestrial	Prehistoric lacking pottery	Ineligible	Ineligible
LA02222	Barnes-Smith	Lithic scatter/quarry (prehistoric: no ceramics)	Prehistoric lacking pottery	Ineligible	Ineligible
LA02223	Lake Shepherd	Land-terrestrial	Nineteenth century American, 1821-1899	Ineligible	Ineligible
LA02610	Grassy Lake Canoe	Log Boat - Historic or Prehistoric	Prehistoric	Not Evaluated	Not Evaluated
LA02875	Willet-in-the-Rain	Artifact Scatter	Archaic, 8500 B.C.-1000 B.C.	Ineligible	Ineligible
LA03518	Camp Lake	Historic refuse / Dump; Artifact scatter-low density (< 2 per sq meter)	Twentieth century American, 1900-present; Prehistoric	Ineligible	Ineligible
LA03519	Minneola 1	Lithic scatter/quarry (prehistoric: no ceramics)	Prehistoric lacking pottery	Ineligible	Ineligible

Table 4. Historic structures recorded within one mile of the Minneola PD&E APE.

FMSF Number	Address	Build Date	Style/Function	Surveyor Evaluation	SHPO Evaluation
LA02186	17628 North US 27	C1948	Masonry vernacular	Ineligible	Insufficient Information
LA02187	18110 US 27	C1940	Frame Vernacular	Ineligible	Ineligible
LA02188	18413 US 27	C1945	Frame Vernacular	Ineligible	Ineligible
LA02189	18537 US 27	C1930	Frame Vernacular	Ineligible	Ineligible

Historic Map and Aerial Photograph Review

A road is shown going east of the project area on military maps dating to 1837, 1839, and 1865, though unfortunately inaccuracies and changes in scale on these maps make impossible exact georeferencing on the modern landscape (Figures 5 and 6). In the 1839 map, the road is displayed as the 1837 Route of General Jesup. It runs from Fort Maitland and other Second Seminole War forts south to Fort Armstrong, near the present day town of Bushnell (Sime 1995). The 1865 map, slightly more accurate than the 1839 map, shows a route similar to that shown on the 1850 General Land Office Survey (GLOS) map of Township 21 South, Range 26 East (Figure 7). The APE is located in Township 22 South, Range 26 East, but the road is not shown on the 1855 GLOS map for that Township and Range. No other GLOS maps for the APE are available. The road most likely follows a similar course to that of SR 455 as it runs north from Castle Hill through Roan east of the project area. No other human activity is indicated on the GLOS maps within the Minneola PD&E APE.

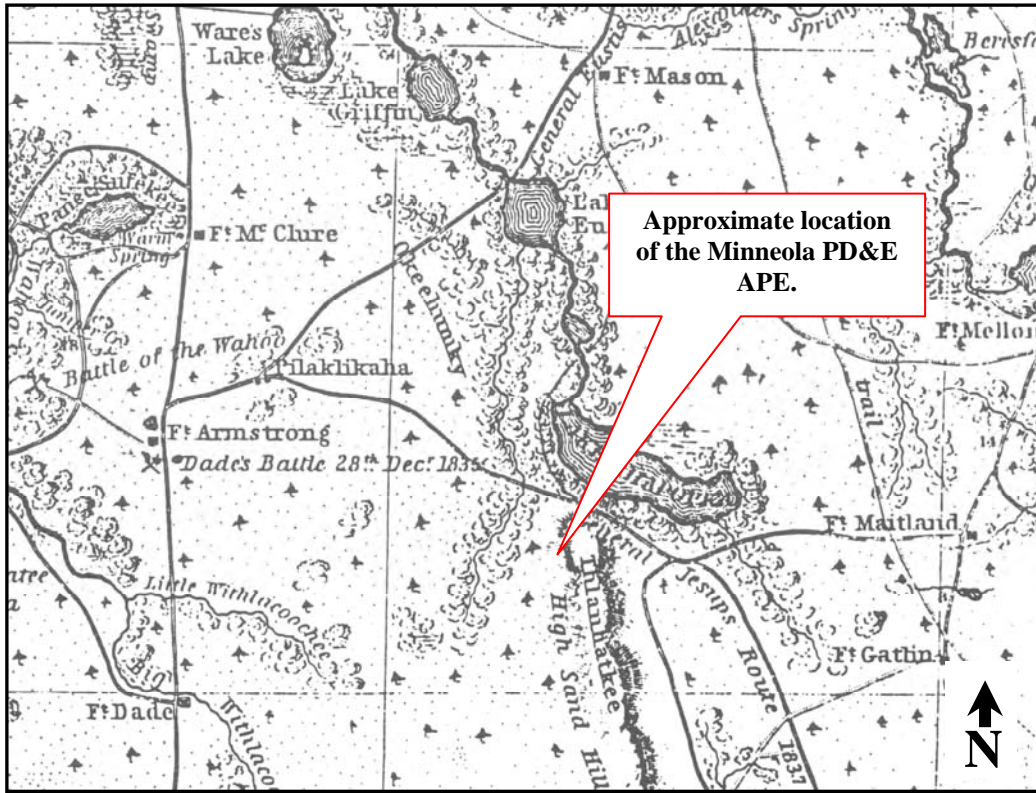


Figure 5. 1839 US War Department Map showing the area of the APE (Sime 1995) .

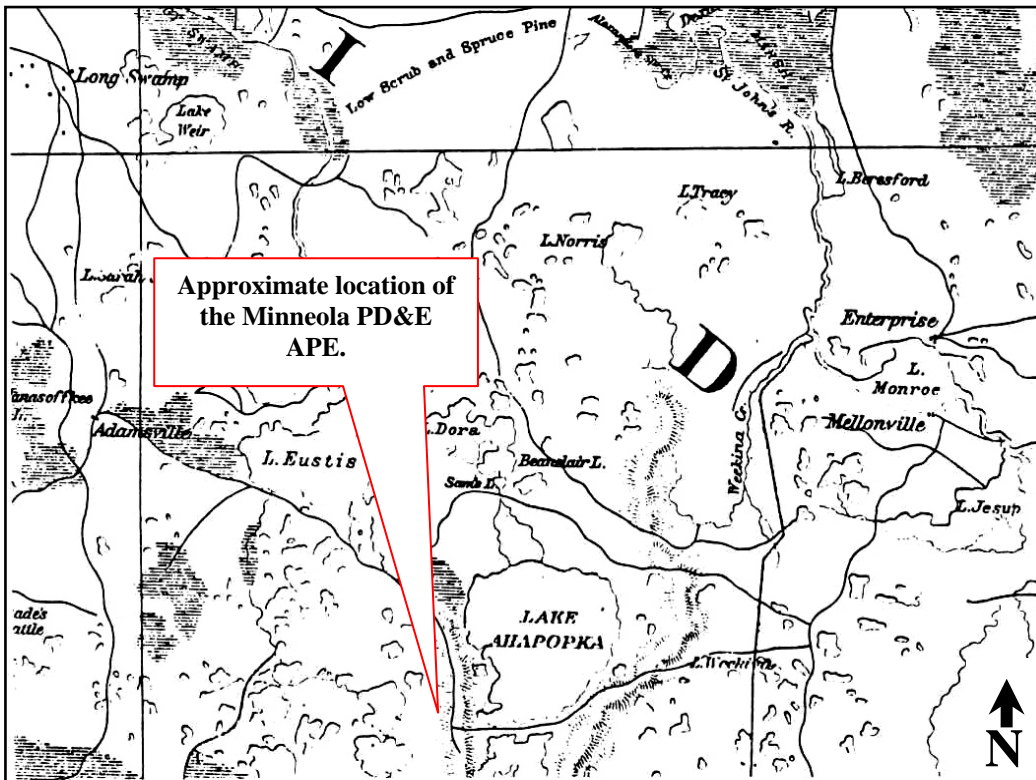


Figure 6. "Official Atlas of War of Rebellion," 1861 – 1865 showing the area of the APE (Sime 1995).

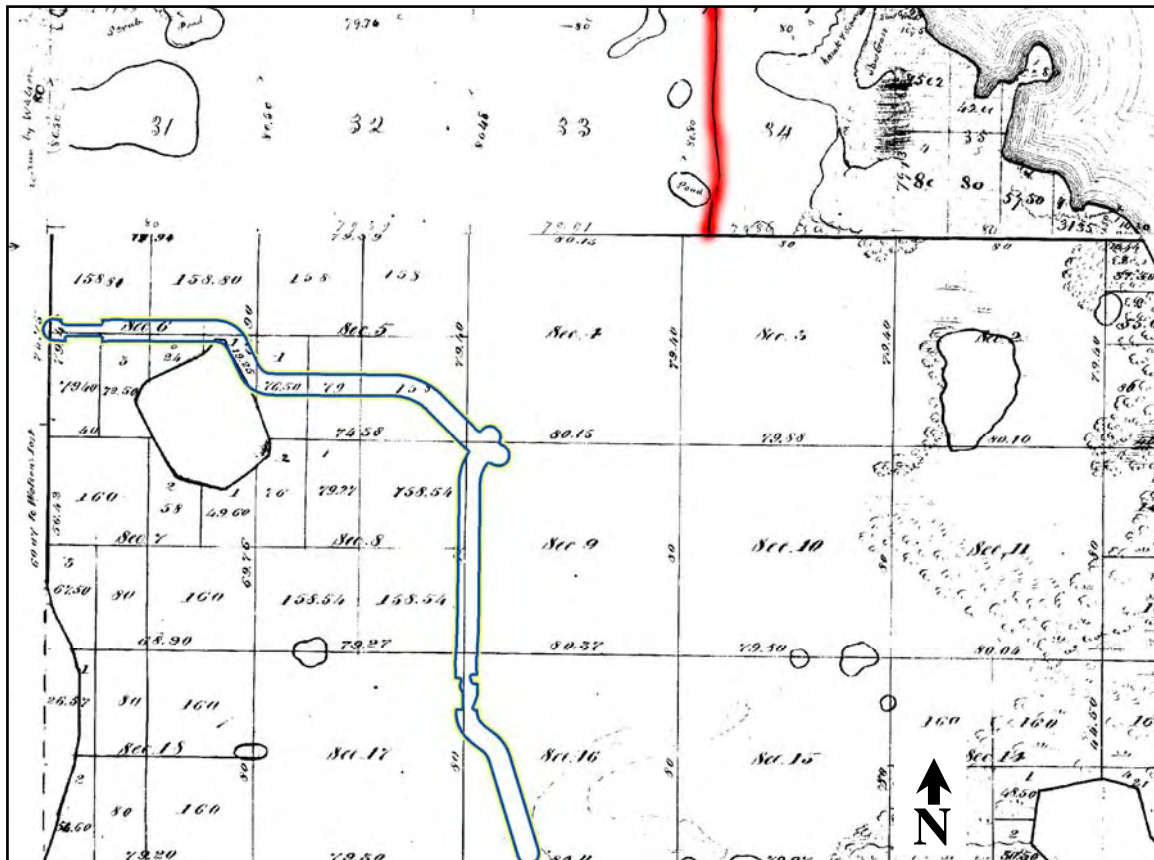


Figure 7. 1850 GLOS map of Township 21 South, Range 26 East and 1855 GLOS map of Township 22 South, Range 26 East showing the Minneola PD&E APE. Portion of road shown on military maps highlighted in red.

The 1941, 1947, and 1958 United States Department of Agriculture (USDA) aerial photographs of the project area also were examined. The area changed little over the 17 years shown in the historic aerials, with agriculture dominating the landscape. The 1941 historic aerial shows Old Highway 50 and the Seaboard Railroad in the southern end of the APE (Figure 8).

Procedures to Deal with Unexpected Discoveries

Every reasonable effort has been made during this investigation to identify and evaluate possible locations of prehistoric and historic archaeological sites; however, the possibility exists that evidence of cultural resources may yet be encountered within the project limits. Should any evidence of cultural resources be discovered during construction activities, all work in that portion of the project area shall stop. Evidence of cultural resources includes aboriginal or historic pottery, prehistoric stone tools, bone or shell tools, historic trash pits, and historic building foundations. Should questionable materials be uncovered during the excavation of the project area, representatives of Florida Department of Transportation, District Five, will assist in the identification and preliminary assessment of the materials. If such evidence is found, the Florida Division of Historical Resources will be notified within two working days.

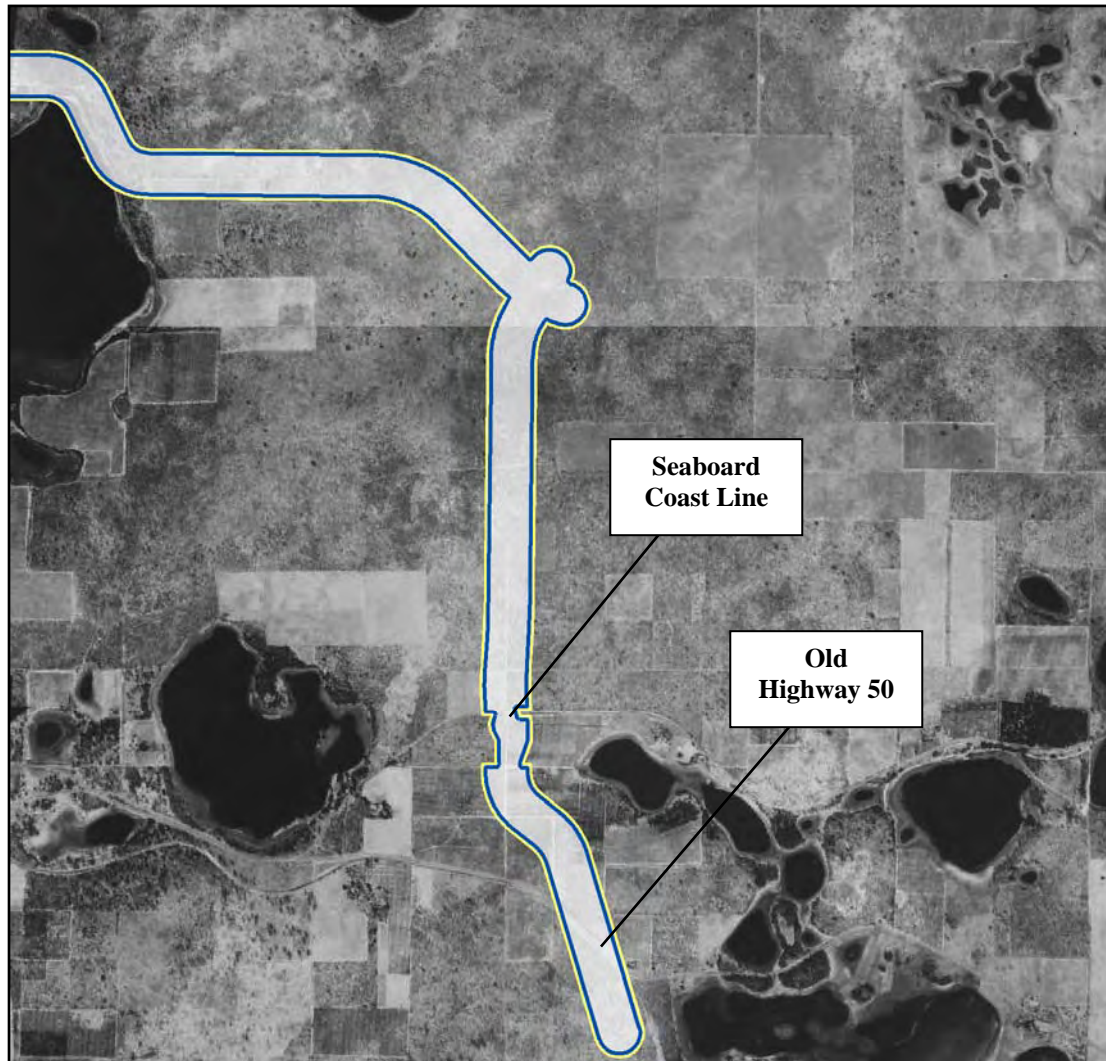


Figure 8. 1941 USDA Aerial Photograph showing the Minneola PD&E APE.

In the unlikely event that human skeletal remains or associated burial artifacts are uncovered within the project area, all work in that area must stop. The Florida Department of Transportation District Environmental Administrator or Cultural Resource Coordinator must be contacted. The discovery must be reported to local law enforcement, who will in turn contact the medical examiner. The medical examiner will determine whether or not the State Archaeologist should be contacted per the requirements of Chapter 872.05, Florida Statutes.

SURVEY METHODOLOGY

Archaeological Field Methods

The Phase 1 archaeological survey consisted of visual inspection and a systematic subsurface testing program of the APE. Round shovel tests measuring approximately 50 centimeters (cm) in diameter were excavated to a minimum depth of 100 centimeters below surface (cmbs). Shovel tests were placed at intervals between 50 m and 100 m, except in the high

probability area along the shore of Grassy Lake, where shovel tests were placed at 25-m intervals. Shovel tests were excavated in a cruciform pattern at 10-m intervals around shovel tests that contained artifacts. No shovel tests were placed in areas previously tested (Dickenson et al. 2004; Nodine 2007), or in areas in the southern end of the APE that were heavily disturbed by modern residential and roadway development (Appendix B). All excavated soil was screened through ¼ inch mesh hardware cloth. The location of each shovel test was marked on an aerial photograph (see Appendix B). The cultural content, stratigraphy, and environmental setting of each shovel test were recorded in field notebooks. Global Position System (GPS) coordinates were recorded for each shovel test location with a Wide Area Augmentation System (WAAS)-enabled handheld unit. No historic structures are located within the APEs; therefore, no historic structure survey was necessary.

Laboratory Methods and Curation

No artifacts were recovered as a result of this survey, and therefore, no laboratory analysis was required. The original maps and field notes are presently housed at the Jonesville office of Southeastern Archaeological Research, Inc. (SEARCH). The original maps and field notes will be turned over to FDOT, District 5 upon project completion; copies will be retained by SEARCH.

SURVEY RESULTS

The Minneola PD&E APE is interspersed with planted pine and open fields of recently harvested pine. There is sparse development at the north end of the APE, near its intersection with U.S. Highway 27, and dense residential development is located at the southern of the APE, near its intersection with Old Highway 50.

Archaeological Resources

Seventy-nine shovel tests were excavated, two of which contained artifacts resulting in an update to one previously recorded site (8LA2875) and one archaeological occurrence (Figure 9). Soil stratigraphy was consistent throughout the Minneola PD&E APE. Typical shovel tests displayed light grayish-brown to grayish-brown sand from 0 to 40 cmbs, followed by pale brown or brown sand to 100 cmbs. Approximately 10 percent of the shovel tests contained orange-red compact clay from 0 to 40 cmbs, followed by pale brown, brown, or grayish-brown sand to 100 cmbs. There was no discernable spatial pattern to the shovel tests containing clay.

An attempt was made to locate the two previously recorded sites (8LA2875 and 8LA2281) within the APE. Shovel tests placed in close proximity to the location of 8LA2281 did not contain artifacts, and the site was not relocated. Additional recovery from 8LA2875 is discussed below.

8LA2875

8LA2875 is located in Section 6 of Township 21 South, Range 26 East in an overgrown pasture dotted with oak and pine (Figure 10). Soils within the site are excessively drained

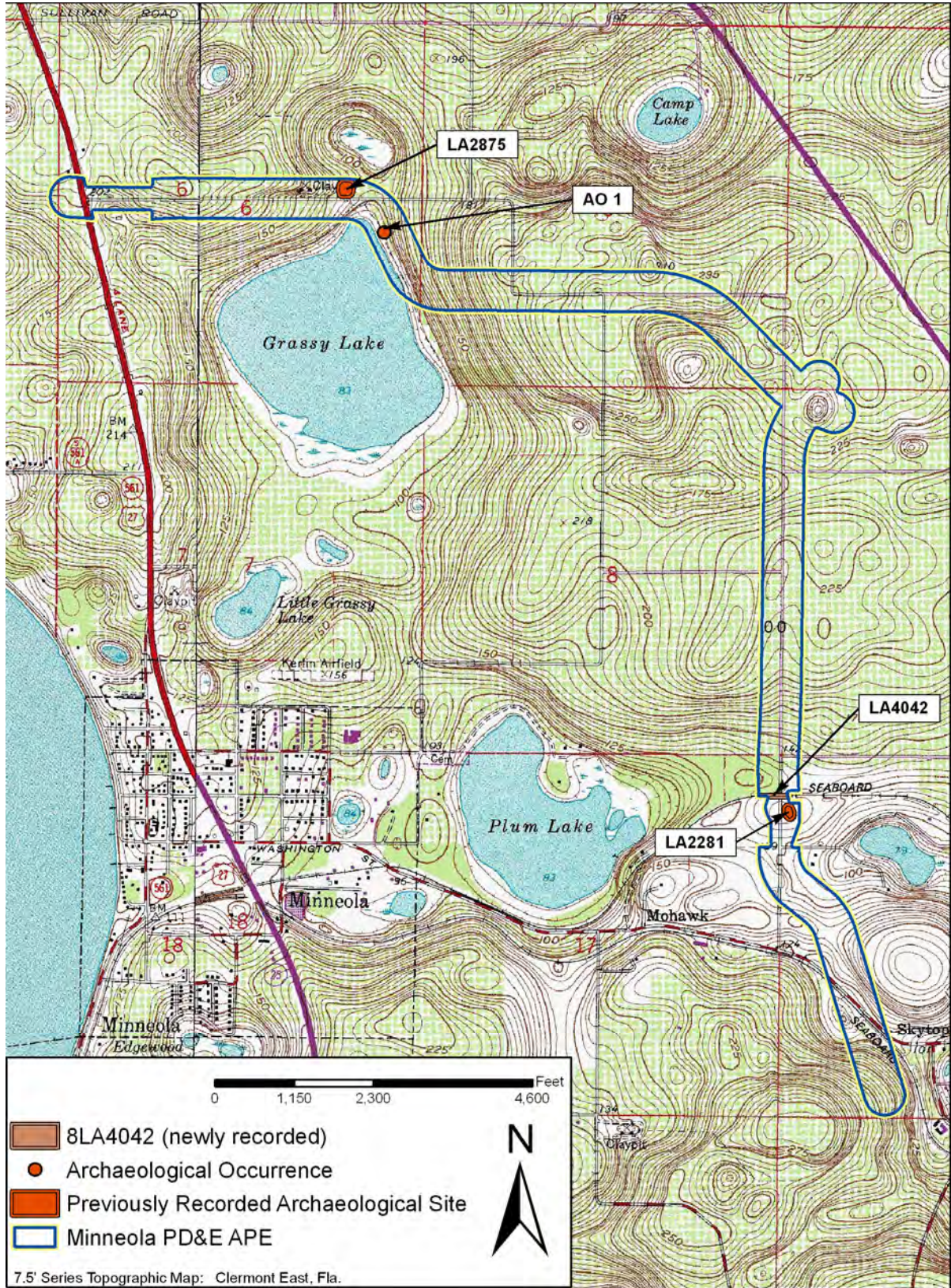


Figure 9. Cultural resources recorded within the Minneola PD&E corridor APE.

Candler fine sands. Elevation with the site steeply slopes from 110 feet above mean sea level (amsl) on its eastern end to 125 feet amsl on its western side.

The site was originally recorded in 2004 as an Archaic period artifact scatter made up of six lithic flakes from stone tool manufacture and repair and one sherd of fiber-tempered pottery (Dickenson et al. 2004). During this recent survey, a single flake was recovered from within the recorded area of 8LA2875. The flake is a proximal thinning flake of chert, not thermally altered, weighing 0.19 g and measuring 1.5 sq. cm. Close interval testing around the shovel test containing the single flake did not produce additional artifacts.



Figure 10. Current environment of 8LA2587, facing north.

Based on data recovered during the 2004 survey, the SHPO determined that the site was ineligible for listing. The results of this survey support the SHPO determination.

Archaeological Occurrence (AO) 1

One archaeological occurrence, AO 1, was defined from a single shovel test on the east side of Grassy Lake. AO 1 consists of two flakes. One is a proximal thinning flake of chert from the Ocala Limestone formation, not thermally altered, weighing 0.47 g and measuring 1.5 cm sq. The second flake is a complete thinning flake of chert from the Ocala Limestone formation, not thermally altered, weighing 0.09 g and measuring 1.5 cm sq. Close interval testing around the positive shovel test was negative for cultural material. The lack of additional artifacts indicates that this is an archaeological occurrence that is not NRHP eligible.

Historic Resources

8LA4042 Orange Belt Railway

The railroad corridor within the Minneola PD&E APE aligns with the Orange Belt Railway, completed in the late 1880s. Peter A. Demens, a Russian exile, came to Florida in the late-nineteenth century to invest in sawmills and railroads and spearheaded the development of this line. His goal was to encourage further settlement of the rich agricultural lands in what is now southern Lake County, Sumter County, Pasco County, and Pinellas County. The name of Demens' company, the Orange Belt Investment Company, gave credence to the golden fruit that he envisioned would flourish along the lines of his railroad (Kennedy 1929:101-102; Hensley 1999).

With assistance from local and out-of-state investors, construction of the Orange Belt Railway began in Longwood (Seminole County), where Demens had earlier established a

profitable sawmill. The location already had a railhead for the South Florida Railroad which continued south to Kissimmee. The Orange Belt railroad was to be constructed westward to Oakland (Orange County). When the Oakland area was reached in late 1886, Demens received additional financing from northern investors and was able to extend the railroad further westward, reaching the Minneola area in 1887. Ultimately, the line was constructed to St. Petersburg (Pinellas County) (Kennedy 1929:101-102; Hensley 1999).

Gulf Coast towns that were situated along the new railroad, such as Tarpon Springs and Clearwater (both in Pinellas County), prospered while interior towns in Pasco, Sumter, and Lake Counties developed slowly. In fact, the railway east of Tarpon Springs was not profitable as of 1893, and Demens' company fell into receivership. Reorganized as the Sanford and St. Petersburg Railroad, the company suffered as a result of the freezes of the mid-1890s that ruined the citrus crop of Lake County and the surrounding area. In 1895, the company was sold to railroad magnate Henry B. Plant, and Demens retreated to North Carolina. In 1902, the Atlantic Coast Line acquired the line. By this date, the original Orange Belt Railway was one of many railroads in the region that fueled agriculture, and particularly the citrus industry, in the region. In recent decades, the line was known as the Seaboard Coast Line (Hensley 1999; Pettengill 1998[1952]:87).

Within the Minneola PD&E APE, the former railroad bed (8LA4042) currently is bisected by Turkey Farm Road. On the east side of Turkey Farm Road, the railroad corridor is shown as a grass-covered area with the former rail bed appearing as a slight depression that is used as an electric utility corridor (Figure 11). On the west side of Turkey Farm Road, the corridor is used as a private drive and is covered with a mixture of shell and dirt (Figure 12). Within the APE, the railroad bed measures approximately 150 meters long and between 6 and 8 feet wide. The area is surrounded by twenty-first century residential developments in various stages of completion (Figures 13 and 14).

Though the railroad corridor through the APE aligns with the Orange Beltway railroad, the integrity of setting and feeling of the railroad corridor has been compromised as a result of modern



Figure 11. 8LA4042, facing east.



Figure 12. 8LA4042, facing west.

intrusions such as a paved roadway, electric lines, and structures. Additionally, the integrity of materials has been compromised due to the loss of physical aspects of the railroad grade. 8LA4042 is not associated with important local historical events, as the towns along the route were already in existence when the railroad was constructed, and the railroad did not lead to growth in any of the existing towns. With no historic fabric currently in existence, 8LA4042 is not an exceptional example of architecture or engineering. No historic resources were identified along the railroad corridor during the pedestrian survey of the project area. Due to its unexceptional architecture and engineering, lack of integrity of setting and feeling, and lack of association with historical events, the Orange Belt Railway Resource Group (8LA4042) is not eligible for listing on the NRHP.

CONCLUSION

In June 2008, Southeastern Archaeological Research, Inc. completed a cultural resource assessment survey of the Minneola Project Development and Environment (PD&E) area of potential effects (APE) in Lake County. Seventy-nine shovel tests were excavated within the APE, resulting in the update of one previously recorded site (8LA2875). One archaeological occurrence (AO 1) also was defined. The Orange Belt Railway (8LA4042) also was recorded within the APE. Due to its unexceptional architecture and engineering, lack of association with historical events, and lack of integrity of setting and feeling, the Orange Belt Railway Resource Group (8LA4042) is not eligible for listing on the National Register of Historic Places (NRHP).

A single flake was recovered from within the previously recorded site 8LA2875. This recovery did not result in a boundary amendment to the site. Additional testing around the shovel test containing the single flake did not yield additional artifacts, supporting the SHPO determination that 8LA2875 is ineligible for listing on the NRHP. As an isolated find, AO 1 is inherently ineligible for listing on the NRHP. Recorded site 8LA2281 could not be relocated but was previously found to be ineligible for listing on the NRHP.

Based on the results of this survey, it is the opinion of the Principal Investigator that proposed construction within the Minneola PD&E area will have no effect on historic properties eligible or potentially eligible for listing on the NRHP. No further work is recommended.



Figure 13. 8LA4042, facing northeast.



Figure 14. 8LA4042, facing northwest.

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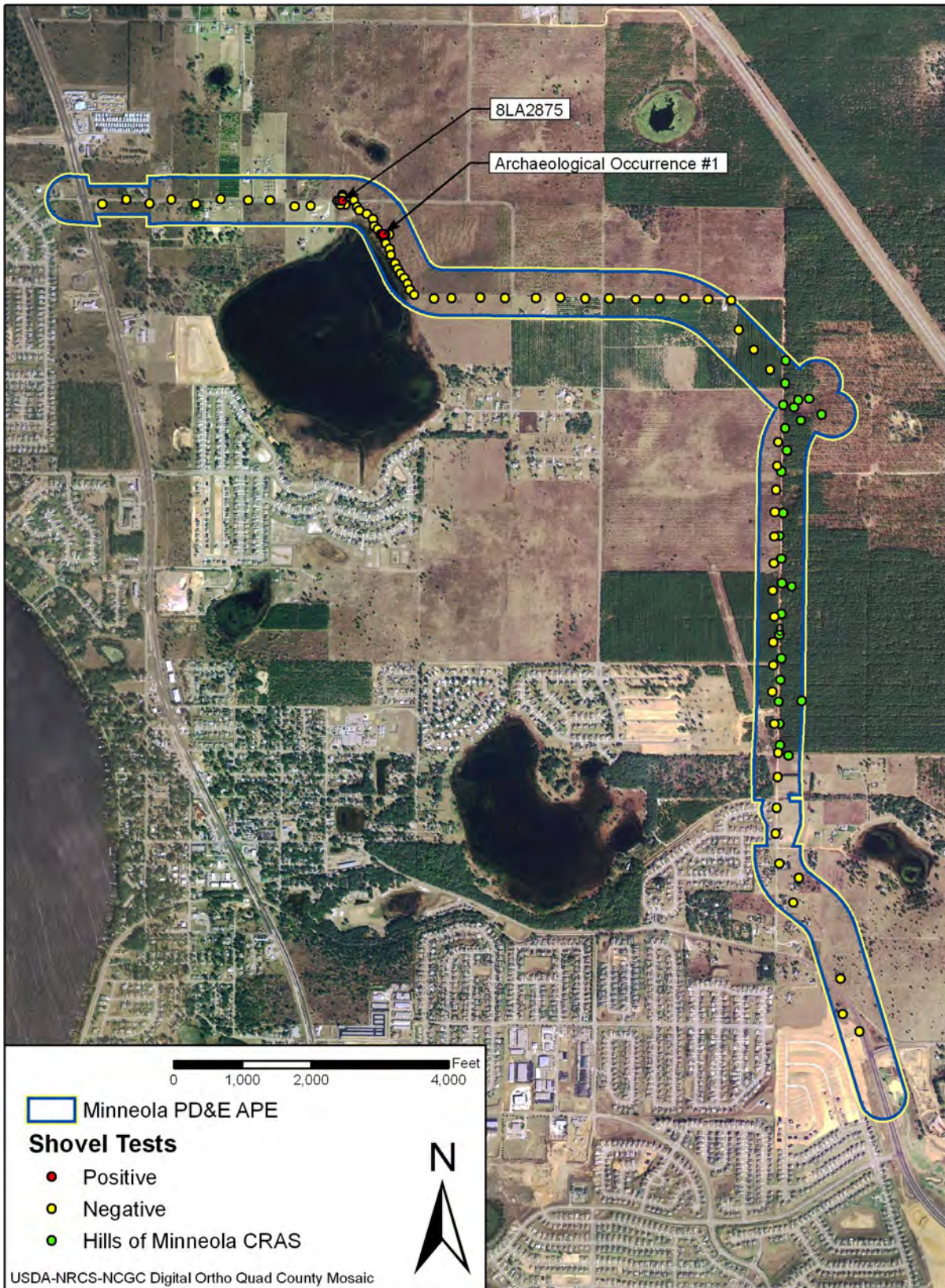
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Appendix A.
Shovel Test Map



Survey results, Minneola PD&E APE, Lake County, Florida.

Appendix B.

Florida Master Site File Forms

Appendix C.

Florida Master Site File Survey Log Sheet