



Truck Parking Central Florida Corridor Eastbound Volusia County Site

**Phase I Cultural Resource Assessment Survey of the Preferred Interstate (I) - 4
Truck Parking Site Location: Volusia County Site 1A, Volusia County, Florida**

FDOT Office

District Five

Date of Publication

September 2023

Financial Management No. 446445-2

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022, and executed by the Federal Highway Administration and FDOT.

**Phase I Cultural Resource Assessment Survey of the Preferred
Interstate (I) - 4 Truck Parking Site Location: Volusia County Site
1A, Volusia County, Florida**

Financial Management No. 446445-2

Authored By:

Benjamin Donnan, M.A., RPA and Derek Anderson, M.H.P.

Submitted To:

FDOT District Five
719 S. Woodland Blvd.
DeLand, Florida 32720

Submitted By:

VHB
225 E. Robinson Street, Suite 300
Landmark Center Two
Orlando, Florida 32801
407-839-4006

Signature of the Principal Investigator



Benjamin Donnan, M.A., RPA - 43930265
Principal Investigator

September 2023
Report Version #2

Management Summary

In March 2023, Vanasse Hangen Brustlin Inc. (VHB) conducted a Phase I Cultural Resources Assessment Survey (CRAS) of a preferred Interstate (I-) 4 Truck Parking location along I-4 approximately 4.5 miles west of the I-95 interchange in Volusia County, Florida. The CRAS was performed as part of the Florida Department of Transportation (FDOT) Truck and Freight Alternative Site Analysis Project Development and Environment (PD&E) Study to evaluate potential truck and freight parking sites along or near the I-4 corridor in Osceola, Orange, Seminole, and Volusia counties. Previous studies identified the need for increased truck parking along the I-4 corridor. Without the appropriate freight parking facilities, drivers may be forced to spend unnecessary time searching for available parking, or they may be required to park in unsafe and/or improper locations due to unforeseen circumstances such as weather, congestion, and other traffic incidents. As a result of the PD&E Study, five preferred sites are being advanced for project development, with at least one truck parking facility in each county. The Preferred Alternative to serve freight demand for I-4 Eastbound in Volusia County is designated Volusia County Site 1A.

The project is located within the northwest quadrant of Section 18, Township 16 South, Range 32 East on the Daytona Beach Southwest, Florida 7.5' series United States Geological Survey (USGS) Topographic Quadrangle. As part of the preliminary research design and prior to conducting the general Phase I survey, an Area of Potential Effects (APE) consistent with the proposed undertaking was developed. For the archaeological portion of the survey, the APE was defined as the footprint of the proposed development, which includes all ground disturbing efforts. The footprint is based on the preliminary concept design prepared by the study team as part of this PD&E Study. The archaeology APE covers approximately 73.64 acres (29.8 hectares) southeast of the I-4 Eastbound corridor. The historic resources portion of the survey included the footprint of proposed development and adjacent parcels, which is the typical area in which the proposed development would physically or visually affect a historic resource. Background research was conducted through a review of previously recorded archaeological and historic resource files currently maintained by the Florida Master Site Files (FMSF) at the Florida Division of Historical Resources (FDHR) in Tallahassee. Ancillary archival, documentary, and cartographic resources were also consulted for evaluating and interpreting the cultural landscape of the region. A search of FMSF records in the immediate area of the archaeology APE revealed that no previous cultural resource surveys have been conducted within this area of Volusia County. No archaeological resources have been recorded within one kilometer (km) of the archaeology APE.

The cultural resources field survey resulted in the identification of no new historic or archaeological resources. Based on the current proposed project design, the proposed project would have no effect or impact on any National Register of Historic Places (NRHP) eligible historic resources or archaeological sites.

Table of Contents

List of Figures.....	v
List of Tables	v
I. Introduction.....	1
Area of Potential Effects and Scope of Work	4
II. Environmental Context.....	1
Physiography	1
Soils of the Archaeology APE.....	1
Flora and Fauna	3
Regional Pleistocene and Holocene Environment	3
Modern and Twentieth Century Land Use of the Archaeology APE.....	4
III. Cultural Context.....	7
Paleoindian Period (c. 12,000 – 8,000 B.C.)	7
Archaic Period (8,000 – 500 B.C.)	8
Woodland Period (1000 B.C. – A.D. 800).....	10
Mississippian Period (A.D. 950 – 1550).....	11
Historic Period (A.D. 1733 – Present)	12
IV. Background Research	17
Florida Master Site Files Review General Archival and Historic Aerial Research.....	17
Research Discussion and Survey Expectations	20
V. Methods	21
Background Research Methods	21
Archaeology Survey	21
Historic Architectural Survey	22
National Register of Historic Places Evaluation Criteria.....	22
VI. Results.....	25
Archaeology Survey Results	25
Historic Resource Survey Results.....	25
VII. Conclusions.....	30
Summary and NRHP Recommendations.....	30
References Cited	31
Appendix A: FDHR Survey Log.....	A

List of Figures

Figure 1. USGS Project Location Map..... 2
Figure 2. Aerial Map of Archaeology APE and Historic Resources Survey APE..... 3
Figure 3. Soils Map of the Archaeology APE..... 2
Figure 4. Historic 1950 Aerial Photograph of Archaeology APE..... 5
Figure 5. 1977 Aerial Photograph of Archaeology APE..... 6
Figure 6. Previously Recorded Sites and Surveys Map..... 18
Figure 7. 1835 General Land Office (GLO) Maps Showing the Location of the Archaeology APE and Vicinity..... 19
Figure 8. Shovel Test Results Map.26
Figure 9. View South from Shovel Test G1, Showing Dense Vegetation and Pine.27
Figure 10. View East from Shovel Test H5, Showing Planted Pine with Hardwood.....27
Figure 11. View of Unexcavated Shovel Test D3 due to Inundated Wetland.28
Figure 12. Shovel Test D1 Stratigraphic Profile in Upland Environment.28
Figure 13. Shovel Test C1, Stratigraphic Profile Showing Inundation in Lowland Environment.....29
Figure 14. Shovel Test E10, Stratigraphic Profile Showing Inundation in Lowland Environment.....29

List of Tables

Table 1. Soils of the Archaeology APE (Soil Survey Staff 2023)..... 1

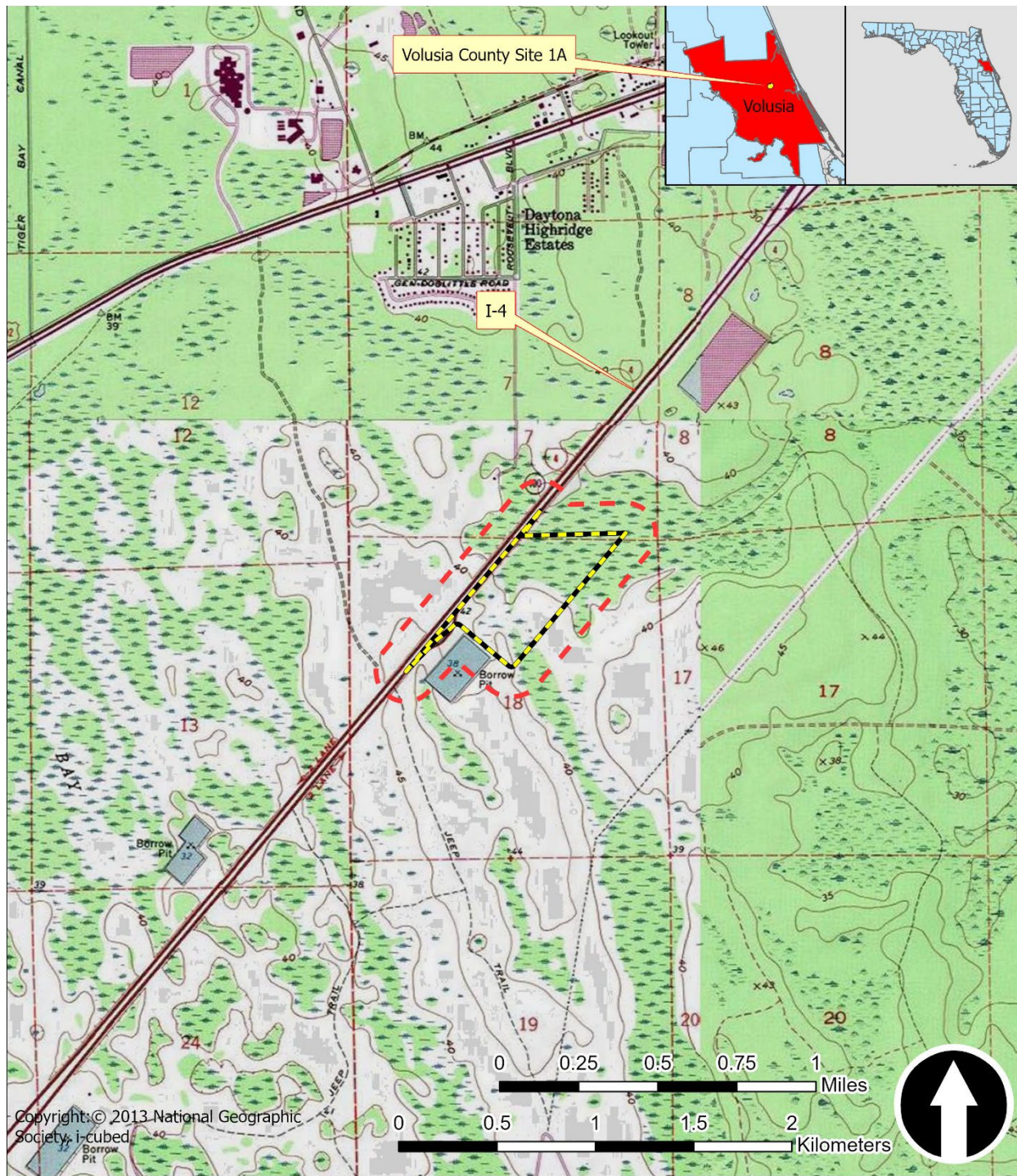
I. Introduction

In March 2023, Vanasse Hangen Brustlin Inc. (VHB) conducted a Phase I Cultural Resources Assessment Survey (CRAS) of the preferred site location, Volusia County Site 1A, in Volusia County, Florida. The CRAS was located within northern half of Section 18, Township 16 South, Range 32 East on the Daytona Beach Southwest, Florida 7.5' series United States Geological Survey (USGS) Topographic Quadrangle (Figure 1). The CRAS was performed as part of the Florida Department of Transportation (FDOT) Truck and Freight Alternative Site Analysis Project Development and Environment (PD&E) Study to evaluate potential truck and freight parking sites along or near the Interstate (I)-4 corridor in Osceola, Orange, Seminole, and Volusia counties. As a result of the engineering and environmental analyses completed during the PD&E Study and the comprehensive public engagement plan, five preferred sites are being advanced for project development and are programmed for the final Design phase. These five preferred sites provide a total of approximately 987 truck parking spaces to accommodate existing and future needs. The Preferred Alternative to serve freight demand for I-4 Eastbound in Volusia County is designated Volusia County Site 1A.

The preferred site, Volusia County Site 1A, is located at a former Volusia County rest area, will supply 275 truck parking spaces and restroom facilities. Eight-foot sidewalks will be provided around the recommended site to allow pedestrians to safely walk from their individual truck parking spot to the restroom facilities.

The preferred site is anticipated to require 73.3 acres of ROW, impacting two parcels both publicly owned by the City of Port Orange. Wildlife fencing and wildlife sensitive lighting will be provided around the preferred site due to the proximity of the existing wildlife crossing. An on-ramp and off-ramp will be provided on I-4 Eastbound for direct access to and from Volusia County Site 1A. No local road access will be provided to the sites.

The preferred Volusia County Site 1A will include one wet detention stormwater pond located along the southeast parcel line and is 7.15 acres. The proposed ROW for the site includes a proposed conservation area outside the limits of construction and surrounding the fenced truck parking area to provide an enhanced natural buffer. The conservation area (31 acres) is east of the truck parking area and will remain as existing (undeveloped) with no site clearing. As part of the PD&E Study, the CRAS was needed to assess potential impacts to cultural resources based on the Area of Potential Effect (APE) established for each site design (Figure 2).

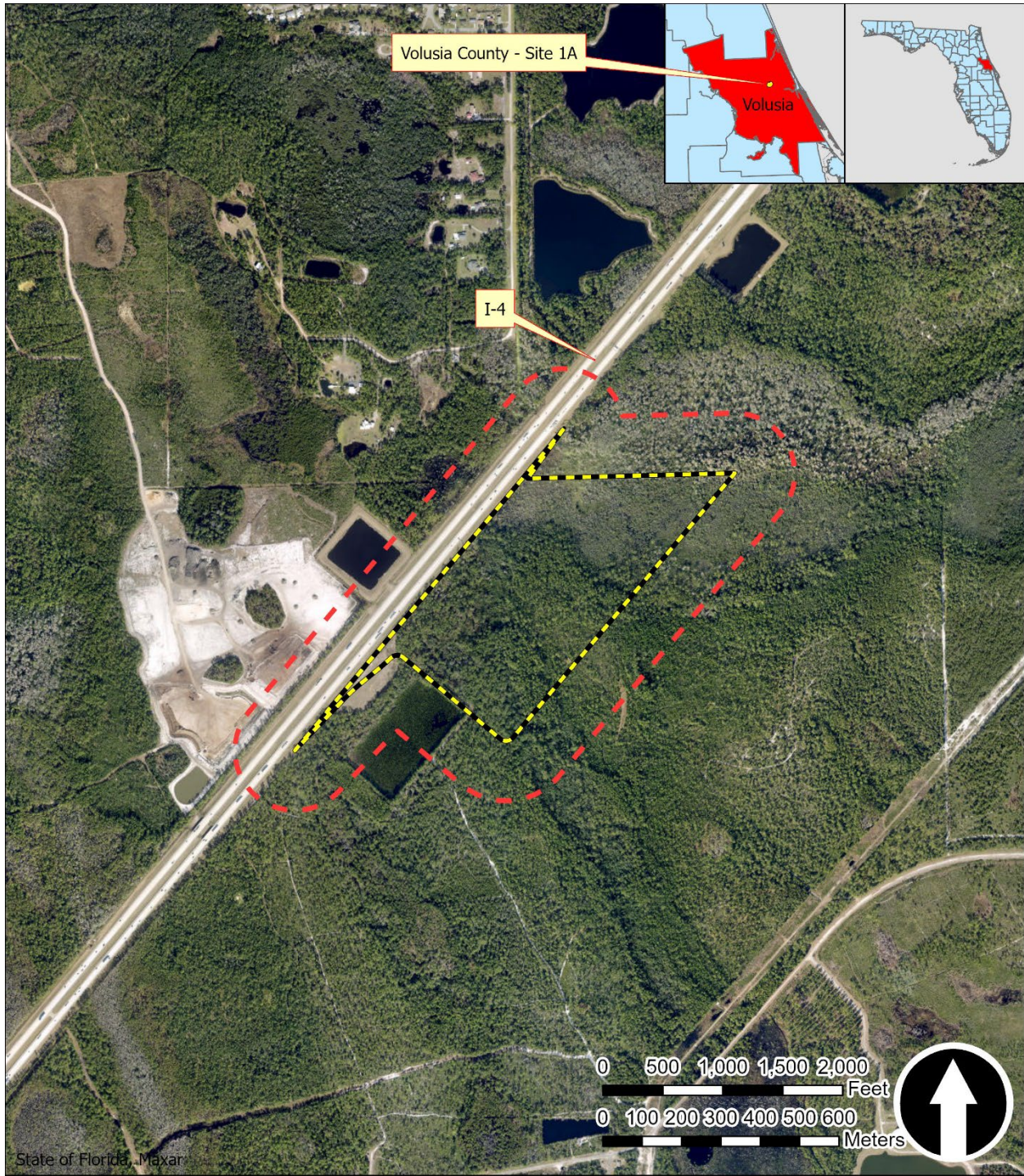


LEGEND




 Historic Resources Survey APE  Archaeology APE

 **USGS Project Location Map**
Volusia County Site 1A
 Interstate 4 Eastbound

Figure 1. USGS Project Location Map.



LEGEND

-  Historic Resources Survey APE
-  Property Lines
-  Archaeology APE

FDOT Aerial Project Location Map
 Volusia County Site 1A
 Interstate 4 Eastbound

Figure 2. Aerial Map of Archaeology APE and Historic Resources Survey APE.

Area of Potential Effects and Scope of Work

The APE as defined in 36 CFR 800.16(d), is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. As part of the preliminary research design and prior to conducting the general Phase I survey, an APE consistent with the proposed undertaking was developed. For the archaeological portion of the survey, the APE was defined as the footprint of the proposed development, which includes all ground disturbing efforts (see Figures 1 and 2). The footprint is based on the preliminary concept design prepared by the study team as part of this PD&E Study. The archaeology APE covers approximately 73.64 acres (29.8 hectares) southeast of I-4. The historic resources portion of the survey included the footprint of proposed development and adjacent parcels, which is the typical area in which the proposed development would physically or visually affect a historic resource (see Figure 2).

The established goals of the project included the location and identification of archaeological and historic resources within the APE (i.e. the project footprint and viewshed) of the proposed project. In addition, the current survey also sought to locate all historic resources within the project area's viewshed, identified as the furthest extent of all adjacent and adjoining parcels. To meet these objectives, work conducted in support of this project included:

- Literature review and record search of the property prior to completion of field investigations;
- A site reconnaissance to ascertain if historic properties (i.e. those listed on or eligible for the NRHP) are located within the APE and if those properties may be adversely affected by the proposed action;
- Archaeological field investigation of the proposed project footprint;
- Phase I cultural resources findings;
- Cultural resource management considerations, as appropriate.

This CRAS was designed and effected to comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended), implementing regulations of the NHPA (as outlined in 36 CFR Part 800), and the provisions within Chapter 267 of the Florida Statutes (F.S.). As a requirement under the NHPA, archaeological and historic resources that may be located within the proposed project's APE must be assessed for cultural significance. This survey was supervised by architectural historian Derek Anderson, M.H.P. and archaeologist Ben Donnan M.A. RPA, who are qualified under the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61 – *Standards and Guidelines*

for Archaeology and Historic Preservation), using standard field and reporting methodologies embodied in the Florida Division of Historic Resources (FDHR) *Cultural Resource Management Standards and Operational Manual* (2002 as amended), and Chapter 1A-46 of the Florida Administrative Code (F.A.C). The primary goal of this survey was to identify any archaeological and historic resources within and near the project area; assess their integrity; and then evaluate those resources for listing on the NRHP through the application of criteria set forth in 36 CFR Section 60.4.

This report is organized into seven chapters, including this introduction (Chapter I). Chapter II presents the environmental context. Chapter III reviews the survey background and research context. Chapter IV presents an overview of the cultural context and historic context for Florida and Volusia County. Chapter V highlights the methods employed during survey. Chapter VI presents the results of the survey efforts, and Chapter VII concludes with a survey evaluation and recommendations for future work.

II. Environmental Context

The following chapter provides a discussion of the effective environment within the archaeology APE. The effective environment is defined as the physical environment (physiography, soils, and climate) as well as biotic components (flora and fauna) that may have influenced precontact and historic peoples' land usage in the general area.

Physiography

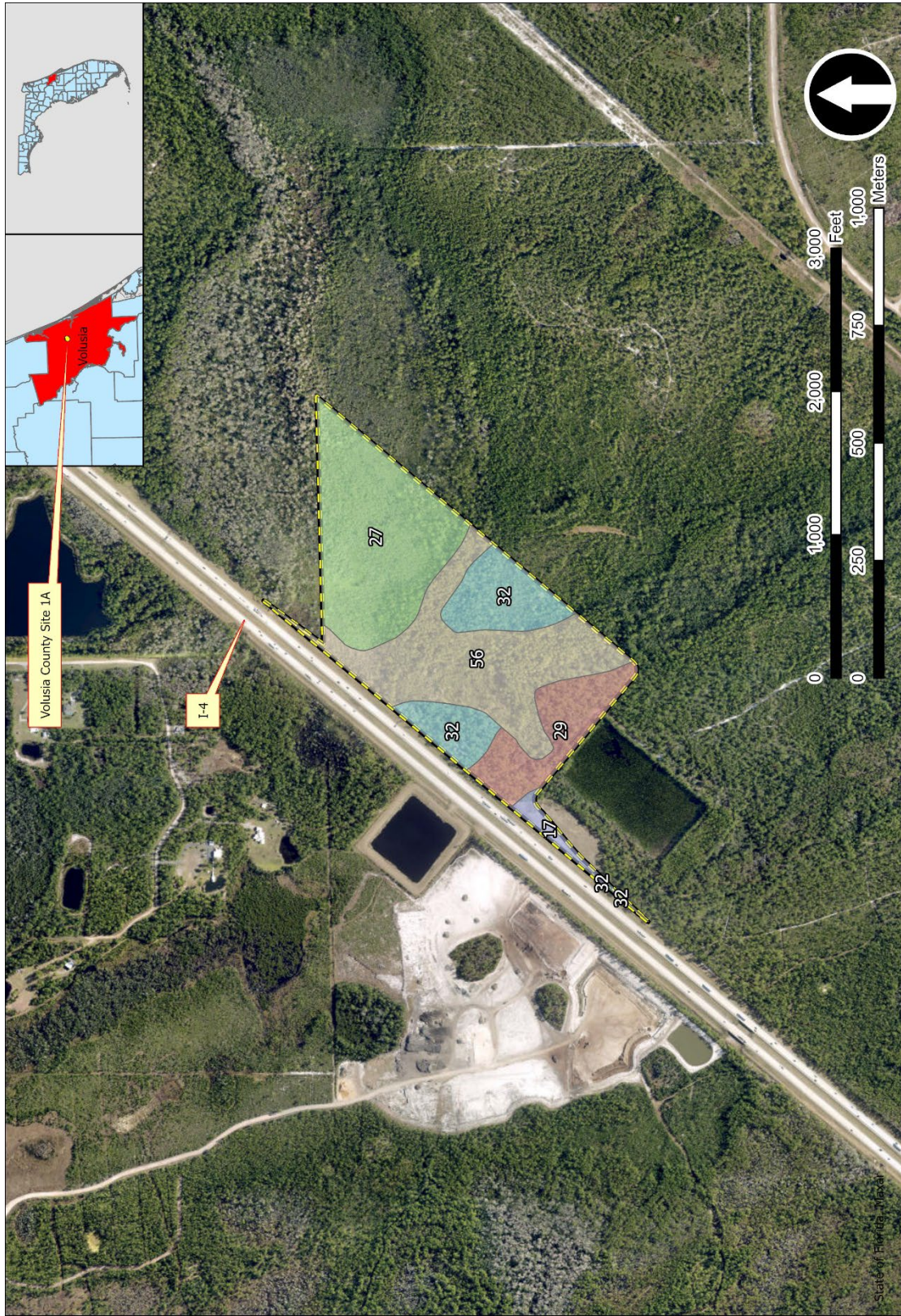
The archaeology APE is located within Volusia County, Florida. Volusia County is located within the Coastal Plain physiographic province. The Coastal Plain is situated between the Gulf of Mexico and the Atlantic Ocean, including the central and northern parts of Florida, southern Alabama, and southern Georgia. The archaeology APE is located within the Eastern Flatwoods District. No major bodies of water intersect with the archaeology APE. The archaeology APE is characterized by a pine forest canopy with dense palmetto undergrowth and wetland with elevations ranging from 25 feet (ft) (7.6 meters [m]) to 40 ft (12.2 m) above mean sea level (amsl).

Soils of the Archaeology APE

There are six soil series found throughout the archaeology APE (Table 1, Figure 3). Soils within the survey area are composed predominately of Hontoon muck and other closely related soils (80%). The Hontoon series consists of deep, very poorly drained, organic soils that formed in more than 130 centimeters (51 inches) of well decomposed, hydrophytic, herbaceous plant remains. Hontoon soils are in depressions, freshwater marshes, swamps and drainageways. Samsula soils series consist of very deep, very poorly drained, and rapidly permeable soils that formed in beds of hydrophytic plant remains. Myakka soil series consist of very deep, very poorly drained, and moderately permeable soils that occur primarily in flatwoods of peninsular Florida (Soil Survey Staff 2023).

Table 1. Soils of the Archaeology APE (Soil Survey Staff 2023)

Soil Unit Name	Acres in APE	Percent of APE
Hontoon muck, frequently ponded, 0 to 1 percent slopes	25.5	34.6%
Samsula muck, frequently ponded, 0 to 1 percent slopes	24.9	33.8%
Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes	12.2	16.6%
Immokalee sand	9.5	12.8%
Daytona sand, 0 to 5 percent slopes	1.6	2.1
Totals	73.7	100.0%



Soils Map
Volusia County Site 1A
 Interstate 4 Eastbound



- LEGEND**
- 17- Daytona sand, 0 to 5 percent slopes
 - 27- Hontoon muck, frequently ponded, 0 to 1 percent slopes
 - 29- Immokalee sand
 - 32- Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes
 - 56- Samsula muck, frequently ponded, 0 to 1 percent slopes
 - Archaeology APE

Figure 3. Soils Map of the Archaeology APE.

Flora and Fauna

The archaeology APE is located within the Eastern Flatwoods ecosystem (Abrahamson and Hartnett 1990). The ecosystem is characterized by “low, flat topography and relatively poorly drained, acidic, sandy soil” (Abrahamson and Hartnett 1990). Natural vegetation within this environment consists of an understory predominantly of saw palmettos and grasses with a slash pine canopy.

Modern fauna of the Coastal Plain in this region are summarized and include diverse species of mammals, birds, fish, reptiles, and amphibians. A wider variety of fauna were available for exploitation during the precontact and early historic habitation of this area. Common faunae include white-tailed deer, opossum, feral pig, raccoon, mouse, pygmy rattlesnake, cottonmouth, gray and fox squirrels, and Great Horned owl. Less common fauna includes the cotton mouse, cottontail rabbit, and bald eagle (USFWS 2018).

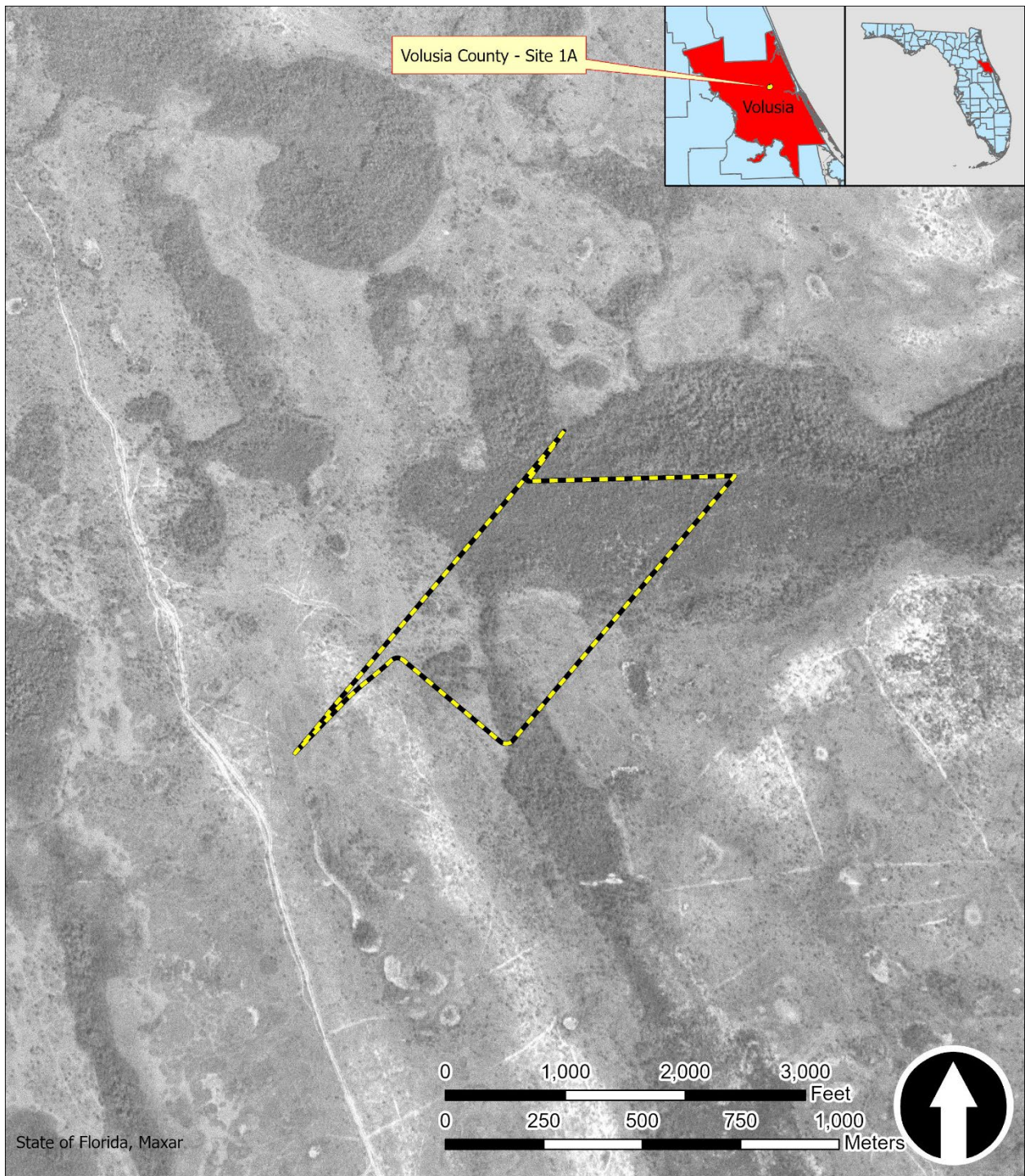
Regional Pleistocene and Holocene Environment

Florida was much cooler and drier than today from 14,000 to 10,000 B.C., and then became warmer and wetter rather rapidly during the next three millennia. By no later than 7,000 B.C., 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 of -120 m at 16,000 B.C. The rise was slow while glacial conditions prevailed at high latitudes but became very rapid in the latest Pleistocene and earliest Holocene. By 4,000 to 3,000 B.C., sea level had risen to only 3-5 m lower than at present. As a generalization, the climate, water levels, and plant communities of Florida, southern Alabama, and southern Georgia attained essentially modern conditions by 2,000 B.C. during the Late Archaic period and have been fairly stable through all phases of habitation by ceramic-using cultures. From 2,000 B.C. to the present, the upland vegetation of the Southeast was characterized by a thinning of the deciduous forests. Hickory and gums were generally less important, with alder and ragweed increasing in representation in the palynological record (Delcourt and Delcourt 1979). This forest thinning suggests an increase in human-related land activities (i.e., timbering, farming). Similarly, the importance and overall increase in pine species in the forest during this time would have depended on several factors, including fire, land clearing, and soil erosion (Delcourt and Delcourt 1979).

As American Indians and Euro Americans began to modify their environment, native species spread into new areas, and immigrant species, introduced by migrating populations spread with the development of agriculture. Floristic diversity probably became more widespread and more uniform as native habitats were changed to cultivated ones. Volusia County is located within the Warm Temperate Subtropical Zone. The area has moderately warm, humid summers with mild, short winters. The average annual temperature is approximately 71° Fahrenheit. Average annual rainfall is around 52 inches with most rainfall occurring between the months of June and September.

Modern and Twentieth Century Land Use of the Archaeology APE

The area within the archaeology APE is an undeveloped parcel of municipal land. Much of the area is covered with seasonal wetland that hosts such recreational activities as camping and hunting (Figure 4). The addition of a drainage pond to the southeast occurred prior to 1977 (Figure 5).

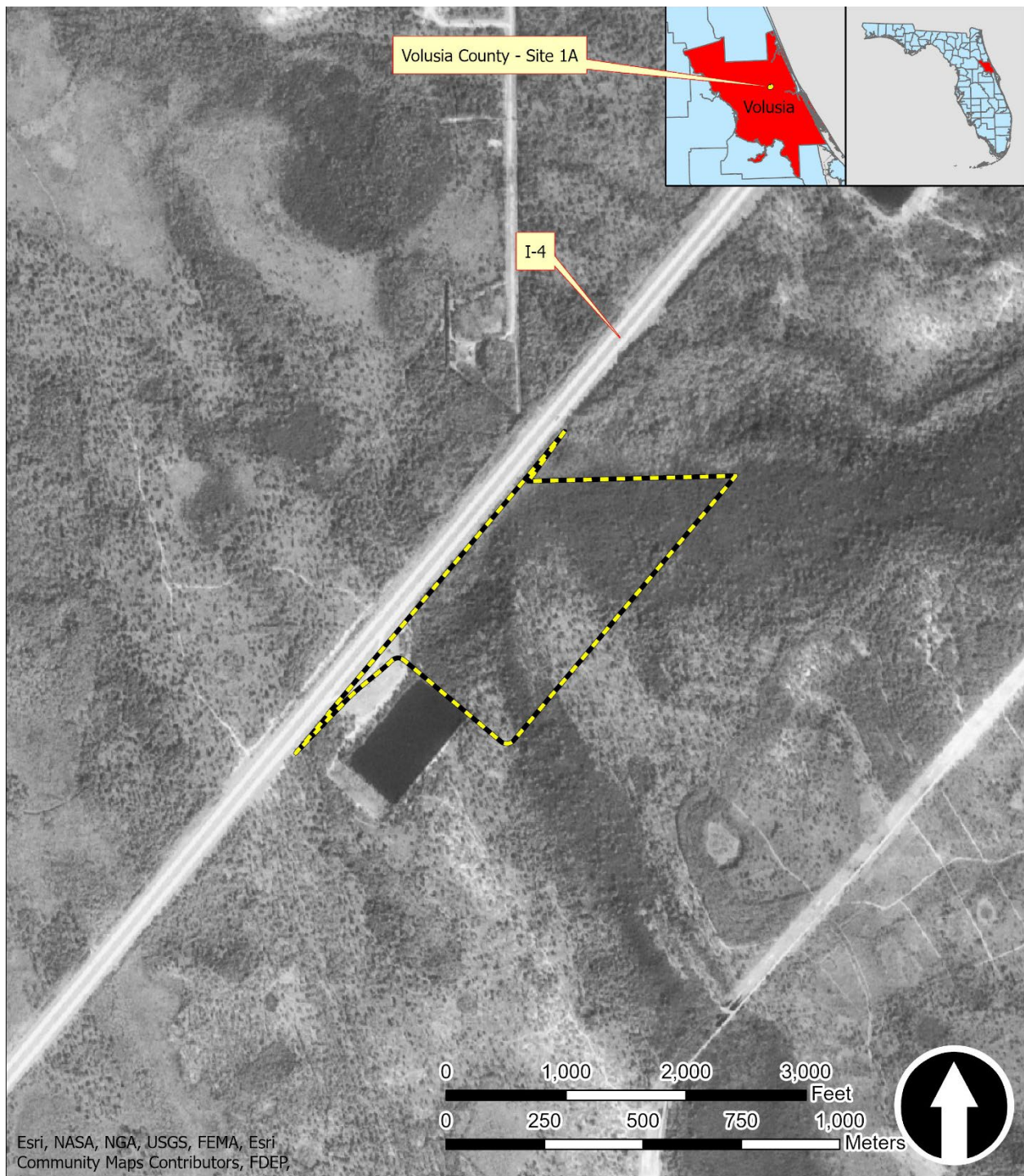


LEGEND

 Archaeology APE

 **1950 Historic Aerial Photograph**
Volusia County Site 1A
 Interstate 4 Eastbound

Figure 4. Historic 1950 Aerial Photograph of Archaeology APE (USGS 1950).



LEGEND

 Archaeology APE



1977 Historic Aerial Photograph
 Volusia County Site 1A
 Interstate 4 Eastbound

Figure 5. Historic 1977 Aerial Photograph of Archaeology APE (USGS 1977).

III. Cultural Context

The history of the North American continent is generally divided into three eras: Pre-Contact, Contact, and Historic. The Pre-Contact era refers primarily to the American Indian groups and cultures that were present for at least 10,000 to 12,000 years prior to the arrival of Europeans. The Contact era refers to the time of exploration and initial European settlement on the continent. The Post-Contact era refers to the time after the establishment of European settlements, when American Indian populations usually were in rapid decline. Within these eras, more specific cultural and temporal subdivisions have been defined in order to permit discussions of particular events and life-ways of the native peoples who inhabited North America at that time.

Paleoindian Period (c. 12,000 – 8,000 B.C.)

The first well-documented inhabitants of eastern North America are presumed to have been relatively mobile, with a subsistence strategy based on migratory (and now-extinct) large animals, such as mastodons, as well as a reliance on other plant and animal food resources (McNett et al. 1977). Settlements are thought to have included small temporary camps and less common base camps, that were occupied by loosely organized bands (Anderson 1996). Many Paleoindian sites in the Southeast appear to be associated with riverine rather than upland locations, suggesting an aquatic orientation (Gagliano 1977). The climate was essentially similar to modern day in the lower south after about 11,000 B.C., arguing for an early adjustment to Holocene forest rather than Pleistocene steppes (Delcourt and Delcourt 1979). Climate and vegetation were changing rapidly as the continental ice sheets retreated to the north. Initial Paleoindian groups probably encountered a mixed coniferous forest/prairie vegetational mosaic, which was gradually replaced by northern hardwoods (summarized in Claggett and Cable 1982).

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 entered into an environment quite different than that of the present. As mentioned in the previous chapter, climate during the Early Holocene (i.e. Paleoindian period) was cooler than at present and the land drier, with coastal sea levels and the inland water table much lower than 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 (Dunbar 1991;

Milanich 1994; Webb et al. 1984). Additionally, 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 (Gardner 1979). 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 (8,000 – 500 B.C.)

The Archaic period exhibits an increase in the density and horizontal dispersal of archaeological remains. It is characterized by a reliance on both animals and wild plant resources, which became increasingly stabilized and broad based over time. Group organization was presumed to be still fairly mobile, making use of seasonally available resources in different areas of the Southeast. Caldwell (1958) has termed the maximizing adaptation (scheduled hunter-forager) to the environment in the Eastern woodlands during the Archaic period. Group size gradually increased during this period, culminating in a fairly complex society in the Late Archaic. By the end of the Archaic, the base cultural framework for the following cultural periods has been established.

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

In its most common expression, the Archaic period is viewed as one in which the predominantly big-game hunting of the Paleoindian period was replaced by a more generalized or diffuse hunting and gathering way of life (Griffin 1967; Cleland 1976). The Archaic period formally begins with the onset of Holocene post-glacial, climatic conditions in the east, and has been subdivided into three sub-periods: Early, Middle, and Late Archaic. The Archaic Period saw relatively long and successful foraging adaptation, with subsistence based on hunting, fishing, and the collection of wild plant resources.

Early Archaic Period (8,000 – 5,000 B.C.) - During the Early Archaic, the vegetation matrix of mixed coniferous forest was replaced by mixed hardwood communities dominated by

pine, oak, and hemlock (Claggett and Cable 1982). A modern faunal assemblage was in place, following the extinction of the Pleistocene megafauna. The Early Archaic in Florida is differentiated from the Paleoindian period by the disappearance of large fluted lanceolate points, and the emergence and widespread occurrence of smaller projectile point types and more refined specialized lithic tools. Also, unlike the preceding Paleoindian Period, evidence of less nomadic lifeways is present at Early Archaic period sites.

Early Archaic peoples occupied small, seasonal short-term, and densely populated base camps. In some cases, the camps were likely special activity sites, aggregation sites, and/or year-round habitation sites from which specialized forays would be staged (Milanich 1994). Within northeastern Florida, evidence of Early Archaic occupation usually consists of small coastal plain chert (CPC) lithic scatters, occasionally with Early Archaic diagnostic points (Milanich 1994).

Middle Archaic Period (5,000 – 3,000 B.C.) - During the Middle Archaic, the cool, moist conditions of the Early Holocene gave way to the warmer, drier climate of the mid-Holocene Hypsithermal interval. Archaeologically, the transition from the Early Archaic to the Middle Archaic in the Coastal Plain is characterized by the appearance of stemmed, broad-blade projectile points, such as the Newnan, Putnam, Levy, and Alachua (Bullen 1975). In addition, an increased incidence of groundstone tools, including atlatl weights, axes, and grinding implements is evident in the Middle Archaic; flake tools become more expedient in nature rather than the previously utilized formal flake tools (Blanton and Sassaman 1989; Sassaman 1993).

Subsistence during the Middle Archaic likely was a continuation of Early Archaic practices utilizing a variety of terrestrial flora and faunal resources and marine/aquatic resources when available. Likewise, settlement patterns during the Middle Archaic probably still followed the small, specialized camp-large base camp dichotomy seen in the Early Archaic. Individual group sizes of 25 to 50 individuals likely moved frequently about the landscape, keeping few social obligations to other groups in order to minimize restrictions on movement and fusing and/or fissioning of groups (Sassaman 1993).

Late Archaic/Gulf Formational Periods (3,000 – 500 B.C.) - The Late Archaic/Gulf Formational periods are a time of considerable population growth, regional adaptation, and an inter-regional exchange of raw materials (Griffin 1967). New technologies and cultural developments were introduced during this period including soapstone containers used for storing and preparing food, ground and polished stone tools, and the development of ceramics (Stanyard 2003). The period also saw an increase in inter-regional trade. A greater reliance on riverine resources is seen during this period, with

shellfish exploitation and the varied hunting of large and small game possibly pushing Late Archaic populations toward seasonal settlements within specific environmental zones (Griffin 1967; Dragoo 1975).

In the Coastal Plain, sites along the interior of the region likely served more short term, specialized functions such as hunting camps with a focus on floodplain locations, particularly swamps with seasonally flooded backwater sloughs. Freshwater shellfish exploitation during the Late Archaic was likely associated with seasonal riverine aggregation points for local populations during the late spring/summer months (Elliott and Sassaman 1995). In the littoral zone, permanent or semi-permanent residences are recognized as shell rings, with shell mounds representing base camps (DePratter 1979).

The Late Archaic period also saw the development of fiber-tempered pottery. Early ceramic examples from this period are fiber-tempered wares that exhibit plain surfaces with fibrous plant material mixed into the paste. These types of ceramic assemblages have been assigned the Orange series classification in Northeast Florida. This series of ceramics also employed decorative surface treatments including Simple Stamping and impressed stick type designs (DePratter 1979). Culbreth, Clary, Lafayette, and Levy stemmed and corner-notched projectile points were produced during the Late Archaic (Bullen 1975).

Woodland Period (1000 B.C. – A.D. 800)

Across the eastern United States, the Woodland period is marked by the adoption of widespread pottery use, a greatly increased role for horticulture in subsistence economies, and an elaboration of mortuary ceremonialism, including the appearance of burial mounds (Griffin 1967). In the greater Southeast, the Woodland period began with a transition from the Late Archaic that was marked by increasing sedentism and changes in food storage and preparation technologies. Subsistence strategies were a continuation of earlier hunter-forager ways, with an increased reliance on the cultivation of native plants (Yarnell and Black 1985). Religious life, as evidenced by increased ceremonialism and the development of burial mounds, became more sophisticated during the Woodland period. Similarly, the intensification of long-distance trade networks, centered on the exchange of non-local exotic materials (e.g., copper, obsidian, marine shell), is evident in the Woodland period. Triangular projectile points are diagnostic of much of the Woodland period, indicating the adoption and expansion in the use of the bow and arrow as opposed to earlier spear and atlatl. Ceramics became more refined and regional differentiation of wares, particularly with respect to temper, paste, and surface decoration, became manifest during the period.

Within northeastern Florida, the Woodland period is noted for the rise of the St. Johns tradition, evidenced by St. Johns chalky wares with designs similar to those on Orange incised pottery (Bullen 1975; Milanich 1994). The archaeology APE is located within the St. Johns Region. Settlement patterns during the St. Johns phase are characterized by increased population and settlement numbers compared to the Late Archaic. The St. Johns I period saw groups continue to rely upon estuarine fish and shellfish along the coast and freshwater aquatic species along the inland waterways and lakes (Milanich 1994: 265-268; Russo 1992). Both foraged and domesticated plants were an important resource during the Woodland period; however, evidence of domestication is lacking at St. Johns I sites.

The period is further divided into three sub-periods (St Johns I, Ia, and Ib) due to notable and consistent changes in ceramic style (Milanich 1994). St. Johns pottery is light-weight and chalky to the touch, due to the presence of naturally occurring sponge spicules in the clay (Borremans and Shaak 1985). Plain and incised St. Johns types were most prevalent during the St. Johns I subperiod (500 B.C. – A.D. 100), although Deptford Checked and Simple Stamped also occurred. St. Johns Plain was also the predominant ware during the succeeding St. Johns Ia subperiod (A.D. 100 -500), but assemblages from this subperiod also contained decorated wares that fall within the Dunn’s Creek Red, Deptford Check Stamped, and Swift Creek Complicated Stamped typologies. The St. Johns Ib period (A.D. 500 – 750) was characterized by the prominence of St. Johns Plain wares within middens, and the presence of Dunn’s Creek Red and Weeden Island pottery types within burial mounds (Milanich 1994).

Mississippian Period (A.D. 950 – 1550)

The Mississippian period is marked by a rise in ceremonialism expressed architecturally in large public constructions, the intensification of maize agriculture, and more rigid social organizations associated with chiefdom-level societies (i.e., ranked societies). In some regions, settlement became securely permanent, notable archaeologically as villages (some surrounded by a palisade) in which houses were rebuilt many times. Toward the centers of these societies, villages were frequently associated with large public constructions, including truncated pyramidal mounds fronting plazas. The main difference between the Mississippian mounds and earlier Woodland mounds is in the form of construction—Woodland mounds were often accretional mounds built over long periods of time whereas Mississippian mounds were intentionally constructed from the beginning.

In general, the Mississippian period is seen as a time of permanent settlements, increased religious and social complexity, and greater dependence on agricultural practices. The most dramatic characteristics of this period are observed in the construction of large fortified villages and flat- topped earthen mounds utilized in political and religious

functions. An elaborate and complex iconography became widespread throughout the Midwest and Southeast during this time (Dragoo 1975; Griffin 1967; Smith 1975; Stoltman 1978).

Mississippian settlements were located primarily along major streams or rivers on large alluvial floodplains. These areas provided easily accessible and fertile soils suitable for agricultural activities. Griffin (1967) suggests that "it was the gradual shift to a substantial dependence on agriculture that tied the societies to specific localities and emphasized territoriality and ownership of land."

Overall, artifact assemblages during this time become more complex. Pottery is more diversified than in previous cultural periods; there are clear functional differences of form and quality. Plain cooking bowls and storage containers are the most common forms, but polished and decorated vessels are also present. Trade goods often include Coastal Plain shell, used in the manufacture of beads, drinking vessels, and elaborately decorated gorgets; flint; copper; wood; and salt (Griffin 1967; Stoltman 1978). The Mississippian period in Northeastern Florida is known as the St. Johns II period, which is further divided into three subperiods (IIa, IIb, and IIc). The emergence of check stamping on St. Johns chalky wares marks the beginning of the St. Johns IIa, period around A.D. 750. Along with plain pottery, check stamped wares dominated pottery assemblages throughout the St. Johns II period. During the St Johns IIb period, sand burial mounds were included in large ceremonially complexes, including truncated pyramidal mounds with ramps or causeways leading up to their summits.

The St. Johns IIc period (A.D. 1513-1565) represents the protohistoric period in Northeastern Florida. 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 1913). The effects of the early sixteenth-century Spanish incursions in Florida are unknown, but it is likely that diseases were introduced to the coast at this time. While European exploration led to the exposure of European goods and diseases, the St. Johns IIc sub-period otherwise represents a continuation of the earlier St. Johns II sub-periods in terms of material culture and lifeways (Milanich 1994).

Historic Period (A.D. 1733 – Present)

Europeans first established a foothold in the American South around 1513 through Florida when Spanish conquistadors and monks sailed north from Cuba after the conquest of Mexico (Davis 1913). Full attempts at interior exploration of North America came later in the sixteenth century with the arrival of Spanish conquistador Hernando de Soto. De Soto along with the roughly 600 people (Coulter 1960) in his expedition, found decline and

disarray among the American Indians of the interior Southeast when they arrived from Cuba on their 1539–1543 exploration of the region. They explored most of the southern United States looking for gold and food. They brought with them Christianity, European-style warfare, and also diseases to which the Native inhabitants had no resistance (Coulter 1960). Attempts at permanent settlement of Florida followed soon after De Soto's excursion into the Southeastern United States (U.S.) interior. In 1559, Tristan de Luna attempted to settle a Spanish colony near Pensacola Bay. Although this settlement failed, the Spanish soon began a wholesale attempt to convert the American Indian inhabitants of Florida to Christianity. Starting in the mid-sixteenth century, the Spanish began to establish a series of Franciscan missions between St. Augustine and Tallahassee as well as in south Florida along both coasts and the St. Johns River. By the eighteenth century, the Spanish had an established network of missions throughout Florida including San Mattheo, San Pedro, and Mission San Luis de Apalachee, though very few west of the Apalachicola River. The Spanish also controlled a number of permanent fortification settlements which included St. Augustine along the Atlantic coast, and St. Marks located at the confluence of the Apalachee and Apalachicola Rivers in north-central Florida.

Contemporaneously with Spanish colonization and religious conversion efforts in Florida, the British began to establish colonies southward from Virginia into the Carolinas and south into Georgia. Also at this time, the French expanded their colonial interests eastward from the Mississippi River. All three of these nations met in what would eventually become Alabama and Georgia. Throughout the seventeenth and eighteenth centuries, this large-scale European colonization characterized the Southeast.

Britain eventually took possession of Florida in July 1763, dividing it into East and West Florida, and held control until 1783 (Wright 1975). Eager to further colonize the new British province, "more effort to induce settlement in Florida was made than in the whole period of previous Spanish rule" (Boyd et al. 1951). The British made Pensacola the capital of the West Florida province and trade increased significantly through the newly designated port city.

In 1783, Spain regained possession of Florida from British rule. Over the next 35 years, East Florida was the focus of continued Spanish management while West Florida was effectively marginalized. By the end of the eighteenth century, Creek Indians from Georgia, having been displaced by Euro-American encroachment, settled large areas of northern and western Florida (Tebeau 1971). Further encroachment from Euro-Americans into these newly settled lands led to a series of conflicts and skirmishes in what today is referred to as the Creek Wars of 1813 and 1814.

Increased divergence from traditional tribal Creeks and other various displaced American Indian tribes led to the ethnogenesis of the Seminoles. Clashes between whites and Seminoles started anew with anger over runaway slaves seeking refuge with the tribe. The U.S. appointed General Andrew Jackson to bring the Seminoles under control. The result was the First Seminole War. In March of 1818, Jackson led a force of 3500 men across Florida and captured the area from St. Marks to Pensacola. In August of 1818, the U.S. returned the captured lands to stabilize diplomatic relations with Spain (Tebeau 1971).

In 1819, a treaty of cessation was arranged between the U.S. and Spain. The Adams-Onis Treaty, ratified February 22, 1821, made Florida a U.S. territory (Tebeau 1971). This period between 1821 and when Florida would become a state in 1845 was marked by protracted military efforts to subdue the Seminole Tribe. Shortly after becoming a U.S. territory, Jackson was appointed Governor and organized Florida into two counties, Escambia and St. Johns. The legislative council met in Pensacola in 1822, and again in St. Augustine in 1823 (Tebeau 1971). The First Seminole War ended with the Treaty of Moultrie Creek in 1823, which stipulated that all Florida Indians move onto a reservation in the middle of the state. Most of Florida's population resided in the northern half of Florida.

With the signing of the Payne's Landing Treaty of 1832, the Treaty of Moultrie Creek first signed between the U.S. and Seminole leaders, was effectively reversed. The Payne's Landing Treaty now required the Seminoles to move to reservations in the western U.S. (Sprague 1964 [1848]). The Seminole leaders were divided over whether or not to accept the treaty. A group of Seminole warriors attacked a column of 108 U.S. Army soldiers led by Major Francis Dade. The attack took place on December 28, 1835 near present day Bushnell and left only three soldiers alive at the battlefield (Sprague 1964 [1848]). The Seminoles sustained minimal casualties. The battle demonstrated to the U.S. Army that the Seminoles represented a considerable military force. The Second Seminole War lasted from 1835 to 1842. The Seminole guerilla warfare tactics and Florida's swampy terrain confused Federal forces. The Second Seminole War spread into south Florida as far as Lake Okeechobee and the Everglades. At the close of the war, the U.S. government shipped several hundred Seminoles to the western territories (Tebeau 1971). In total, the war cost the U.S. \$40,000,000 and the lives of 1,500 American troops. Casualties to the Seminoles are unknown. The Seminole never signed a formal peace treaty with the U.S. government and after the war, the remaining Seminole (about 300) went into hiding deep into the swamps of South Florida. Today, the descendants of those who managed to elude capture number more than 2000.

Volusia County, where the archaeology and historic resources survey APE is located, was originally part of St. Johns County when the U.S. took over control of Florida in 1821 (Maps ETC 2023). In 1824, St. John's County's southern portion was split off as Mosquito County.

A large county which consisted of the middle peninsular region of Florida, it covered the territory of several modern counties such as Osceola, Lake, Seminole, and Volusia. The county was renamed to Orange County when Florida became a state in 1845. In 1854, Volusia County was created from the eastern portion of Orange County, centered around the steamboat landing town known as Volusia (Scofield 2023).

During the Civil War, much of the Florida coast was controlled by Federal soldiers while the interior of the state was left to the Confederates. Communities were raided and occupied along the Atlantic coast. No major military objectives drew Union forces inland, but the city of Jacksonville was invaded and abandoned four separate times throughout the war (Tebeau 1971). The Civil War dealt much of Florida and the South in general a major blow in the form of social and economic upheaval. Intermittent raids and guerrilla activities caused disruption of former lifeways; food, seed, and livestock were taken or destroyed, and the institution of slavery was abolished. The loss of the slave labor force throughout the South, combined with severe financial setbacks suffered by the Southern states as the war's defeated party, necessitated changes in the overall economic system. The reorganization that occurred was primarily based on changes in the relationship between management and labor and resulted in the broad dispersion of smaller individual farmsteads (tenant farmers and sharecroppers) within the former boundaries of plantations or larger operating farmsteads. Former slaves and non-landholding whites ultimately became a part of this new system wherein farmland rented for cash or a share of the seasonal growth.

While the first railroads in Florida were constructed between 1834 and 1855, the expansion of these lines into cross state railroads did not occur into 1856 to 1859 (Zerfas 2006). The development of railroads intensified after the Civil War. In particular, Henry Flagler, who is known for the Florida East Coast Railroad, and Henry Plant, known for the Plant System (Savannah, Florida, and Western Railway), pushed the expansion in South Georgia and throughout Florida. The South Florida Railroad was incorporated in 1878, which primarily functioned between Orlando and Sanford. The long-term goal of the rail was to expand to Tampa and the Gulf Coast. In 1883, Henry Plant and the Plant System purchased a majority share in the South Florida Railroad. A race to connect Orlando and Sanford to Tampa began between the South Florida Railroad and Florida Transit and Peninsular railroad. In 1884, the South Florida Railroad was the first line completed connecting Orlando to the Gulf. After Henry Plant's death in 1899, the Atlantic Coast Line Railroad acquired most of the railroads along the Florida East Coast including the South Florida. The Atlantic Coast Railroad eventually merged with the Seaboard Airline Railroad in 1967, which became CSX during the 1980s.

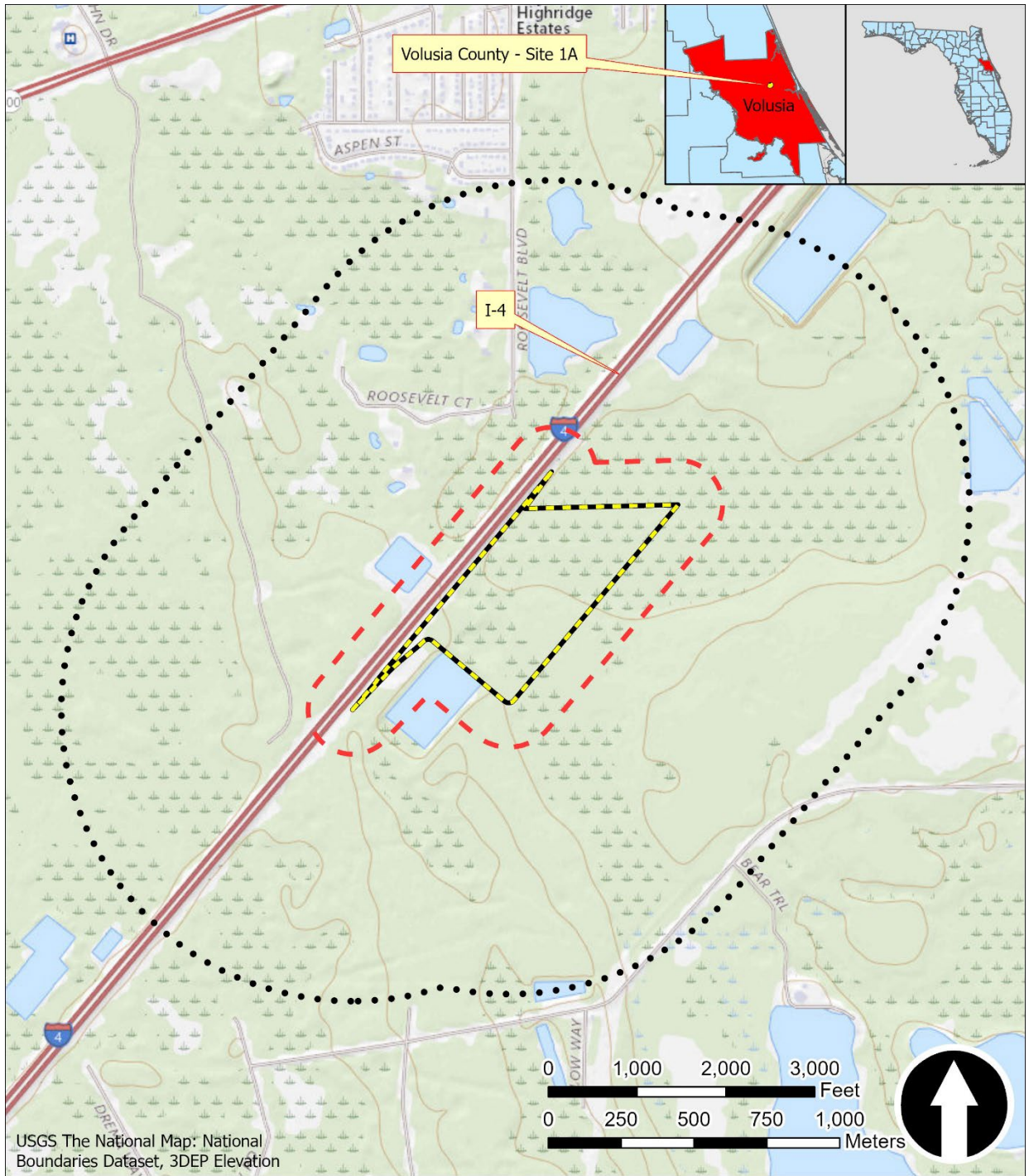
By the end of the nineteenth century, Florida's population had increased to approximately 400,000 owing much to homestead acts and the successes of the citrus, naval stores, lumber, cattle, phosphate, and tourism industries (Marth and Marth 1988). Today, Volusia County has a population of 553,543 people (U.S. Census Bureau 2021). The county seat is DeLand (Volusia County 2023).

IV. Background Research

Background research was conducted in order to reconstruct the general survey history of the archaeology and historic resources survey APE and whether any previously recorded resources were located within or near the archaeology APE. To meet this objective, initial efforts were made through the Florida Master Site File (FMSF) in Tallahassee. The purpose of this initial effort was to identify all previously recorded cultural resources which may have been located within the archaeology APE as defined in Chapter 1 of this report and the immediate surrounding area. In addition, background research included an examination of all archaeological site forms and many previous undertakings conducted within a one kilometer (km) radius of the archaeology APE. Bibliographies of all relevant previous surveys were compiled, and references procured for historical context information.

Florida Master Site Files Review General Archival and Historic Aerial Research

A search of the FMSF, completed on March 9, 2023, revealed that there were no previously recorded archaeological sites and no previously recorded historic properties located within 1 km of the archaeology APE (Figure 6). General Land Office Survey (GLO) maps, and Volusia County property appraiser records were reviewed for information on historic structures and land use in the project area. Historic aerial photographs in the Publication of Archival, Library & Museum Materials (PALMM) Collection at the University of Florida were also reviewed. The 1835 GLO map of the area shows the relevant township and range section in which the archaeology APE is located as having little to no development. The archaeology APE is depicted as straddling a low wetland in between two pine uplands (GLO 1836) (Figure 7). A 1950 USGS aerial photograph shows that the area surrounding the archaeology APE was mostly used for agricultural purposes in the mid-twentieth century (see Figure 4). Some structures were constructed by 1977 seen within and towards the northeast of the archaeology APE (see Figure 5).



LEGEND

-  Historic Resources Survey APE
-  Archaeology APE
-  1 km Buffer



Previous Sites and Surveys Map
Volusia County Site 1A
Interstate 4 Eastbound

Figure 6. Previously Recorded Sites and Surveys within 1-km of Archaeology APE.

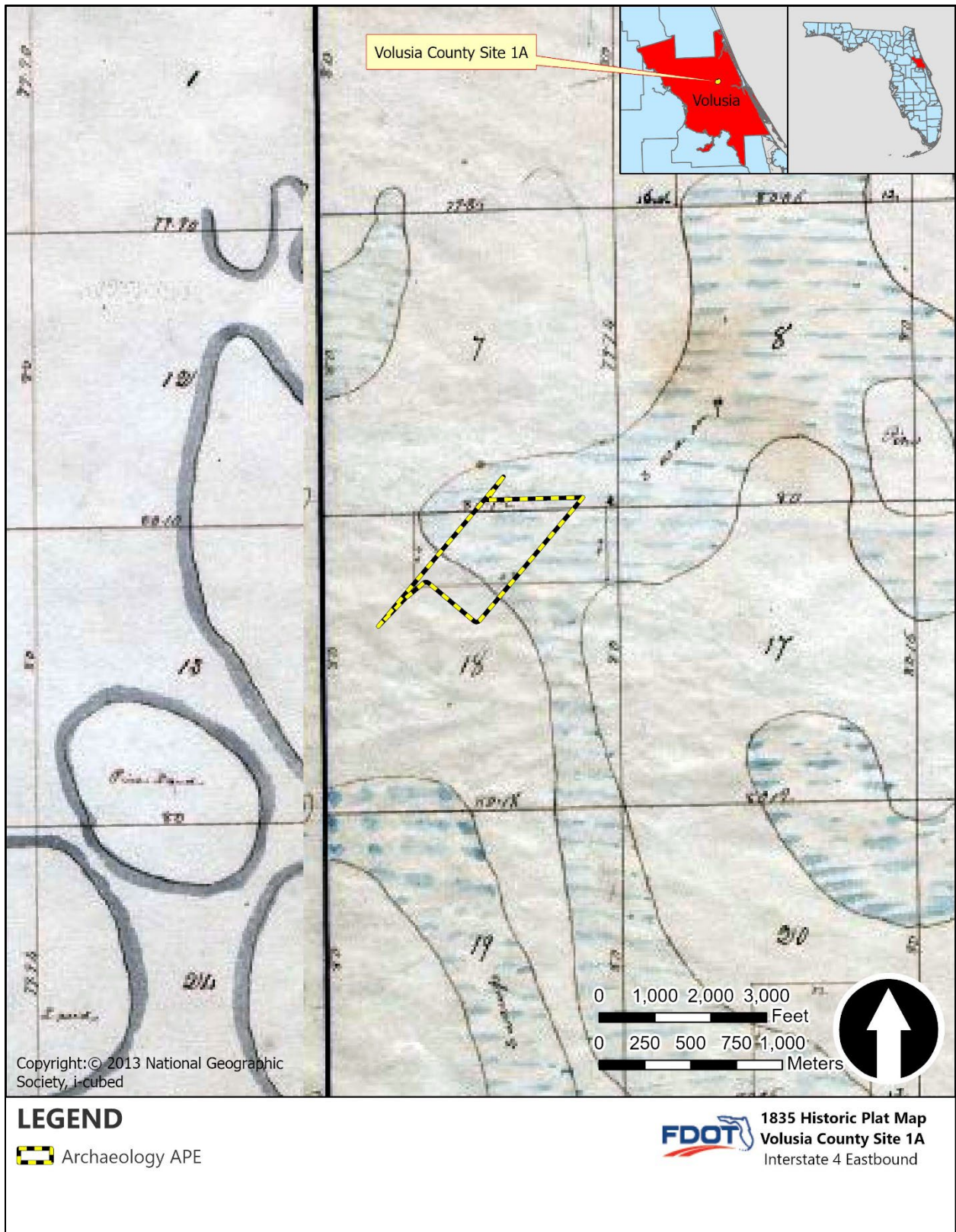


Figure 7. 1835 General Land Office (GLO) Maps Showing the Location of the Archaeology APE and Vicinity.

Research Discussion and Survey Expectations

Prior to the start of fieldwork, VHB evaluated the archaeology APE and the immediate surrounding area for potential to contain or yield important and significant cultural data. The survey began with an initial desktop reconnaissance (i.e. aerial photography, topographic and soil map review) of the entire project area. The results of our background research indicated that the area around the archaeology APE consisted of undisturbed wetland prior to the construction of I-4 between 1958 and 1962. After 1962, a borrow pit is marked on topographic maps in the same location as the current retention pond. However, outside of the borrow pit and the I-4 corridor, there has been little change to the archaeology APE and the area has continued to be undisturbed wetland. Due to this wetland, the potential for intact archaeological resources would be low. The lack of development in the area indicated a low likelihood of identifying historic structures within and in the vicinity of the archaeology APE.

V. Methods

Some of the objectives during the survey were to identify any previously unrecorded cultural and historic resources within the archaeology APE and historic resources survey APE; assess their integrity; and then evaluate those resources through the application of criteria set forth by the NRHP. Ancillary objectives included the reidentification of any previously recorded cultural and historic resources located within the archaeology APE and historic resources survey APE, and the compilation of all relevant cultural and historical information pertaining to the archaeology APE and surroundings. Tasks performed to accomplish these objectives included background investigations, field survey, and the application of the NRHP eligibility criteria. If artifacts were recovered, they would have been subjected to laboratory analysis. Methods employed for each of these tasks are described below.

Background Research Methods

Background research was conducted in order to reconstruct the history of occupation and land use within the archaeology APE and vicinity. To meet this objective, initial efforts were made through the FMSF in Tallahassee. The purpose of this initial effort was to identify all previously recorded archaeological and historic resources which may have been located within the archaeology APE and immediate viewshed. In addition, background research included an examination of all archaeological site forms and previous undertakings conducted within a 1 km radius of the survey area. All relevant cultural studies and historic studies pertaining to the archaeology APE and the immediate area were consulted. Compiled bibliographies of all relevant previous surveys were consulted, and references procured for historical context information. Secondary and primary research was conducted using material curated by the University of Florida's PALMM Collection and the Historical Map and Image Library.

Archaeology Survey

Fieldwork was realized through two primary methods: 1) surface inspection and 2) shovel testing of the archaeology APE where possible. Due to the overall low to moderate probability of encountering archaeological sites, VHB employed a systematic approach to shovel test excavations using an environmentally and historically informed probability model. Shovel tests were completed at 50 m intervals at 50 m spacing within the archaeology APE. Shovel tests measured 50 centimeters (cm) in diameter and were excavated to at least 100 cm below the surface (cmbs) or until the water table was encountered, whichever came first. Due to the systematic approach of shovel testing, the location of each shovel test was preplanned across the footprint.

Shovel test locations were then verified in the field using a hand-held Trimble Global Positioning Satellite (GPS) system capable of sub-meter accuracy, and then excavated and recorded.

In general, if archaeological material is encountered during the survey, the interval between shovel tests is reduced to better delimit the boundaries of the site. Two consecutive negative shovel tests at 10 m intervals in one cardinal direction provide an edge determination to a site boundary. In areas where archaeological material had been previously identified, testing would be initially performed at 50 m intervals.

Shovel tests were excavated by natural soil horizons. All excavated soils were sifted using ¼-inch mesh hardware weave for uniform artifact recovery. Standardized data for each shovel test were collected in notebooks; information recorded consisted of depth, Munsell soil color for each soil stratum, and the number and type of each artifact encountered if applicable. Once excavated, the walls of each shovel test were inspected for artifacts, features, and other indications of an archaeological site. All excavated shovel tests were backfilled upon completion.

Historic Architectural Survey

Pedestrian and vehicular survey were undertaken to locate historic resources 50 years old or older within the project's APE. Each identified resource was photographed, mapped, and described in notes to assist in describing material, style, and construction details. Based on the information collected on each resource, VHB evaluated the structures using the NRHP significance criteria in 36 CFR 60.4. These criteria define eligible cultural resources as buildings, structures, objects, sites, and districts that have integrity of location, design, setting, materials, workmanship, feeling, and association and that meet one or more criteria pertaining to historic events, historic persons, architectural distinction, or ability to yield important information about the past (most often considered for archaeological resources). More on the NRHP criteria and aspects of integrity can be found below.

National Register of Historic Places Evaluation Criteria

The data obtained from survey was evaluated based on the NRHP criteria for eligibility. These criteria are specified in the Department of the Interior Regulations 36 CFR Part 60.4, Criteria for Evaluation. According to Regulation 36 CFR Part 60.4, cultural resources can be determined eligible if they:

- A. *Are associated with events that have made a significant contribution to the broad patterns of history;*
- B. *Are associated with the lives of persons significant in the past;*
- C. *Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, possesses high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction, or;*
- D. *Have yielded, or are likely to yield, information important to prehistory or history.*

Any one particular cultural resource may be eligible under one or more of the above criteria. Criteria A, B, and C, however, are most commonly applied to buildings, structures, districts, or non-archaeological sites (e.g., historic landscapes). Though many cultural resources or properties nominated under Criteria A, B, and C may have archaeological deposits, individual archaeological sites are most frequently evaluated and considered eligible specifically under Criterion D. The NRHP evaluation criteria are employed for any historic properties (including archaeological sites) that are 50 years of age or older. Therefore, any resource that has a demonstrated age of at least 50 years may be evaluated. More temporally recent historic properties however may be eligible if they demonstrate exceptional significance (Sherfy and Luce 1996).

In addition to the above criteria, the NRHP also stipulates that in order to be considered eligible, a property, or archaeological site, must possess integrity of location, design, setting, materials, workmanship, feeling, and/or association. According to the National Register Bulletin *How to Apply the National Register Criteria for Evaluation*, integrity is defined as the resource's ability to convey its significance (Andrus and Shrimpton 1990). For a resource to retain sufficient historic integrity, it will always possess several, and usually most, of the following seven aspects:

1. *Location – The place where the historic property was constructed or the place where the historic event occurred.*
2. *Design – The combination of elements that create the form, plan, space, structure, and style of a property.*
3. *Setting – The physical environment of a historic property. Setting includes elements such as topographic features, open space, viewshed, landscape, vegetation, and artificial features.*
4. *Materials – The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.*

5. *Workmanship – The physical evidence of the labor and skill of a particular culture or people during any given period in history.*
6. *Feeling – A property's expression of the aesthetic or historic sense of a particular period of time.*
7. *Association – The direct link between an important historic event or person and a historic property. Under Criterion D, it is measured in the strength of association between data and important research questions.*

Integrity is considered relative to whatever significance the cultural resource can still adequately convey. While it is possible to correlate the above aspects of integrity with historic properties (i.e. archaeological and historical resources), there is no universally applied standard. Historic properties must be evaluated within their respective historic contexts.

VI. Results

Archaeology Survey Results

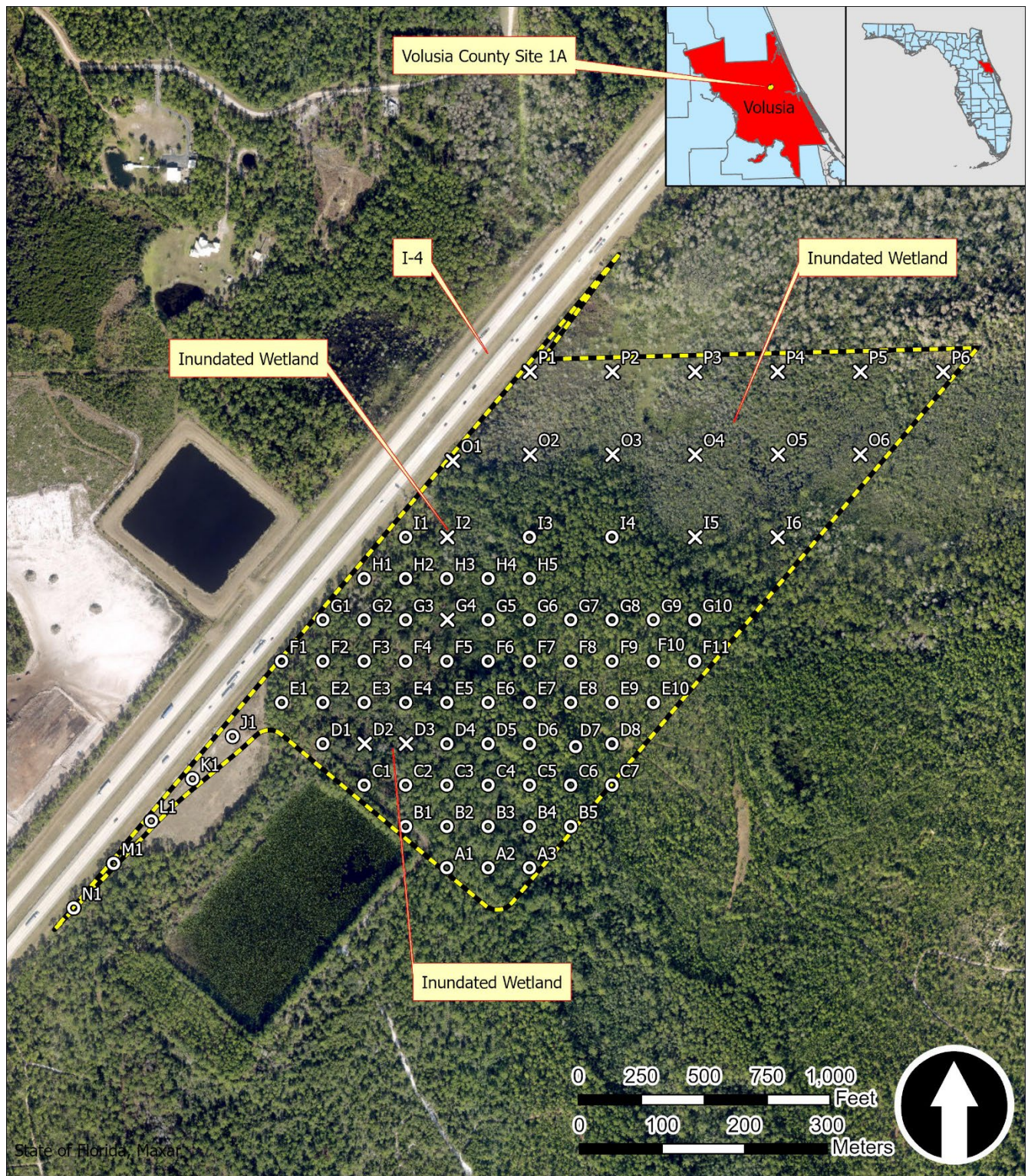
Archaeological field survey of the archaeology APE was completed in March of 2023. A total of 64 shovel tests were excavated within the project's archaeology APE (Figure 8). Eighteen shovel tests were not excavated and recorded as "No digs" due to inundated wetland. The land within northern section of the survey area from transect I to P consists entirely of inundated wetland. No shovel tests were positive for cultural material. As a result, no archaeological sites or features were identified during the survey.

Environmental conditions within the archaeology APE consisted primarily of overgrown grasses, dense palmetto, cypress swamp, and planted pine. General photos of the archaeology APE can be seen in Figures 9, 10, and 11. Examples of shovel test profiles can be seen in Figure 12, 13, and 14.

In general, soil conditions encountered during shovel testing varied in characteristic between wetland and upland within the archaeology APE. A typical wetland shovel test profile consists of Stratum I from 0 to 25 cmbs of dark gray (2.5Y 4/1) loamy sand, underlain by Stratum II from 20-60 cmbs light gray (2.5Y 7/1) sand and became inundated below 60 cmbs. A typical upland shovel test profiles consist of Stratum I from 0 – 50 cmbs dark gray (2.5Y 4/1) sand underlain by Stratum II that consists of light gray (2.5Y 7/1) sand from 50 to 100 cmbs. In some upland shovel tests a Stratum III was identified at 70 to 100 cmbs consisting of very dark grayish brown (2.5Y 3/2) sand.

Historic Resource Survey Results

Historic background research showed that no historic resources had previously been recorded within the project APE, and field visits to the APE recorded no new historic resources.



LEGEND

- ⊙ Negative
- ⊗ No Dig
- ▨ Archaeology APE



Shovel Test Result Map
 Volusia County Site 1A
 Interstate 4 Eastbound

Figure 8. Shovel Test Results Map.



Figure 9. View South from Shovel Test G1, Showing Dense Vegetation and Pine.



Figure 10. View East from Shovel Test H5, Showing Planted Pine with Hardwood.



Figure 11. View of Unexcavated Shovel Test D3 due to Inundated Wetland.



Figure 12. Shovel Test D1 Stratigraphic Profile in Upland Environment.



Figure 13. Shovel Test C1, Stratigraphic Profile Showing Inundation in Lowland Environment.



Figure 14. Shovel Test E10, Stratigraphic Profile Showing Inundation in Lowland Environment.

VII. Conclusions

Summary and NRHP Recommendations

In March 2023, VHB conducted a Phase I CRAS of a preferred I-4 Truck Parking location along the I-4 Eastbound lanes in Volusia County, Florida. Archaeological field survey of the archaeology APE excavated 64 shovel tests, which were all negative for cultural materials or features. Eighteen shovel tests were not excavated and recorded as "No digs" due to inundated wetland. No archaeological sites or features were identified during the archaeological survey. Historic background research showed that no historic resources had previously been recorded within the historic resources survey APE, and the historic resource survey recorded no new historic resources. Based on the current proposed project design, the undertaking would have No Historic Properties Affected and therefore no further work is necessary under Section 106.

References Cited

Andrus, Patrick W., and Rebecca H. Shrimpton

1990 *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*. US Department of the Interior, National Park Service, Interagency Resources Division, Washington, D.C.

Anderson, David

1996 Models of Paleoindian and Early Archaic Settlement in the Southeastern United States. In *The Paleoindian and Early Archaic Southeast*, edited by David G. Anderson and Kenneth E. Sassaman, pp. 29–57. University of Alabama Press, Tuscaloosa.

Anderson, David and Robert S. Mainfort, Jr.

2002 An Introduction to the Woodland Archaeology in the Southeast. In the *Woodland Southeast*. Edited by David G. Anderson and Robert S. Mainfort Jr., pp. 1-19. University of Alabama Press, Tuscaloosa.

Ashley, Keith

2002 On the Periphery of the Early Mississippian World: Looking Within and Beyond Northeastern Florida. In *Southeastern Archaeology*. Vol 21, No 2, Winter 2002. Southeastern Archaeological Conference.

Blanton, Dennis B., and Kenneth E. Sassaman

1989 Pattern and Process in the Middle Archaic of South Carolina. In *Studies in South Carolina Archaeology in Honor of Robert L. Stephenson*, edited by Albert C. Goodyear. South Carolina Institute of Archaeology and Anthropology, Columbia.

Blanton, Dennis B., and F. Snow

1986 Paleoindian and Early Archaic Lithic Assemblage Composition in South Georgia: Evidence from the Feronia Locality. Paper presented at the annual Southeastern Archaeological Conference, Nashville.

Borremans, Nina Thanz and Graig D. Shaak

1985 *A Preliminary Report on Investigations of Sponge Spicules in Florida "Chalky" Paste Pottery*. In *Ceramic Notes*, 3, edited by Prudence M. Rice, pp. 125-132. Occasionally Publications of the Ceramic Technology Laboratory, Florida State Museum, Gainesville.

Bullen, Ripley

1975 *A Guide to the Identification of Florida Projectile Points*. Kendall Books, Gainesville, Florida.

- Caldwell, Joseph R.
1958 *Trend and Tradition in the Prehistory of the United States*. Memoir 88. American Anthropological Association, Arlington, Virginia.
- Carbone, V. A.
1983 Late Quaternary Environments in Florida and the Southeast. *The Florida Anthropologist* 36(1-2):3-17.
- Claggett, Stephen R., and John S. Cable
1982 *The Haw River Sites: Archaeological Investigations at Two Stratified Sites in the North Carolina Piedmont*. Commonwealth Associates, Inc., Jackson, Michigan. Copies available from US Army Corps of Engineers, Wilmington District.
- Clausen, C.J., A.D. Cohen, C. Emilliani, J.A. Holman, and J.J. Stipp
1979 Little Salt Spring, Florida: A Unique Underwater Site. *Science* 203:609-614.
- Cleland, Charles E.
1967 The Focal-Diffuse Model: An Evolutionary Perspective on the Prehistoric Cultural Adaptations of the Eastern United States. *Mid-Continental Journal of Archaeology* 1:59-76.
- Cockrell, W.A., and L. Murphy
1978 Pleistocene Man in Florida. *Archaeology of Eastern North America* 6:1-12.
- Coulter, E. Merton
1960 *Georgia: A Short History*. University of North Carolina Press, Chapel Hill.
- Davis, T. Frederick
1913 History of Juan Ponce de Leon's Voyages to Florida: Source Records. *Florida Historical Quarterly* 14(1):5-70.
- Delcourt, Paul A., and Hazel R. Delcourt
1979 *Late Pleistocene and Holocene Distributional History of the Deciduous Forest in the Southeastern United States*. Veroff. Geobot. Inst. ETH, Suftung Rubel, Zurich 68:79-107.
- DePratter, Chester B.
1979 *Ceramics*. In *The Anthropology of St. Catherines Island, The Refuge-Deptford Mortuary Complex*, edited by D. H. Thomas and C. S. Larsen, pp. 109-132. Anthropological Papers of the American Museum of Natural History 56(1).

Dragoo, Don W.

1975 Some Aspects of Eastern North American Prehistory: A Review. *American Antiquity* 41(1):3-27.

Dunbar, James S.

1991 Resource Orientation of Clovis and Suwannee Age Paleo-Indian Sites in Florida. In *Clovis: Origins and Adaptations*, edited by R. Bonnicksen and K. Turnmeir, pp. 185-213. Center for the First Americans, Oregon State University, Corvallis.

Dunbar, J.S., Webb, S.D. and Faught, M.K.

1988 An Underwater Paleo-Indian Site in Northwestern Florida. *Florida Anthropologist*, 41(4), 442-452.

Ford, Richard I.

1974 Northeastern Archaeology: Past and Future Directions. *Annual Review of Anthropology* 1:385- 413.

Gagliano, S. W.

1977 *Cultural Resources Evaluation of the Northern Gulf of Mexico Continental Shelf, Volume 1*. Interagency Archeological Services, National Park Service, Washington, D.C.

Gardner, William M.

1979 Paleo-Indian Settlement Patterns and Site Distribution in the Middle Atlantic. Ms. on file, Department of Anthropology, Catholic University, Washington, D.C.

Griffin, James B.

1945 The Significance of the Fiber-tempered Pottery of the St. Johns Area in Florida. *Journal of the Washington Academy of Sciences* 35(7):218-223.

1967 Eastern North America Archaeology: A Summary. *Science* 156:175-191.

Griffin, James B., and William H. Sears

1950 Certain Sand-Tempered Pottery Types of the Southeast. *Prehistoric Pottery Types of the Eastern United States*, Museum of Anthropology, University of Michigan.

Goggin, John M.

1952 Space and Time Perspective in Northern St. Johns Archeology, Florida. *Publications in Anthropology* 47. Department of Anthropology, Yale University, New Haven.

Jennings, Jesse D.

1975 *Prehistory of North America*. McGraw Hill, New York.

Marth, Del and Martha J. Marth

1988 *Florida Almanac*. Pelican Publishing Company, Inc. St. Gretna, Louisiana.

McNett, Charles W., Barbara A. McMillan, and Sydney B. Marshall

1977 The Shawnee Minisink Site. In *Northeastern North America*, edited by Walter S. Newman and Bert Salwen, pp. 282-296. Academic Press, New York.

Milanich, Jerald T.

1994 *Archaeology of Precolumbian Florida*. University Presses of Florida. Gainesville, Florida.

Rohling, E. J., M. Fenton, F. J. Jorissen, P. Bertrant, G. Ganssen and J. P. Caulet.

1998 Magnitudes of Sea-Level Lowstands of the past 500, 000 years. *Nature* 394:162-165.

Russo, Michael

1992 Chronologies and Cultures of the St. Marys Region of Northeast Florida and Southeast Georgia. *The Florida Anthropologist* 45:107-126.

Sassaman, Kenneth E.

1993 *Early Pottery in the Southeast: Tradition and Innovation in Cooking Technology*. University of Alabama Press, Tuscaloosa.

Sherfy, Marcella, and W. Ray Luce

1996 *National Register Bulletin 22: Guidelines for Evaluating and Nominating Properties that Have Achieved Significance in the Last Fifty Years*. US Department of the Interior, National Park Service, Interagency Resources Division, Washington, D.C.

Smith, Bruce D.

1975 *Middle Mississippian Exploitation of Animal Populations*. University of Michigan Museum of Anthropology Anthropological Papers 57. Ann Arbor, Michigan.

Stanyard, William F.

2003 *Archaic Period Archaeology of North Georgia*. Report No. 38, Laboratory of Archaeology Series, University of Georgia, Athens, Georgia.

Stoltman, James B.

1978 Temporal Models in Prehistory: An Example from Eastern North America. *Current Anthropology* 19(4):703-746.

Tebeau, Charlton W.

1971 *A History of Florida*. University of Miami Press, Coral Gables. United States Fish & Wildlife Service (USFWS).

United States Census Bureau

2023 Population of Volusia County. Electronic document, <https://data.census.gov/table?q=population+of+volusia+county,+florida&tid=DECENNIALPL2020.P1>, accessed March 14, 2023.

United States Fish & Wildlife Service (USFWS)

2023 Environmental Conservation Online System. Electronic document, <http://ecos.fws.gov/ecp/>, accessed February 5, 2023.

Wallis, Neill

2014 Ritualized Practices of the Suwannee Valley Culture in North Florida. In *New Histories of Precolumbian Florida*, edited by Neill Wallis and Asa Randall. University of Florida Press, Gainesville, Florida.

Watts, W. A.

1969 A Pollen Diagram from Mud Lake, Marion County, North-Central Florida. *Geological Society of America Bulletin* 80:631-642.

1971 Postglacial and Interglacial Vegetation History of Southern Georgia and Central Florida. *Ecology* 52:676-690.

1975 A Late Quaternary Record of Vegetation from Lake Annie, South Central Florida. *Geology* 3:344-346.

1980 The Late Quaternary Vegetation History of the Southeastern United States. *Annual Reviews of Ecology and Systematics* 11:387-409.

Watts, W. A. and B. Hansen

1988 Environments of Florida in the Late Wisconsin and Holocene. In *Wet Site Archaeology*, edited by Barbara Purdy, pp. 307-323. Telford Press, Caldwell.

Weatherspark

2023 Climate and Average Weather Year Round in Orlando, Florida. Electronic database, <https://weatherspark.com/y/17721/Average-Weather-in-Orlando-Florida-United-States-Year-Round>, accessed February 3, 2023.

- Webb, S. David, Jerald T. Milanich, Roger Alexon, and James S. Dunbar
1984 A Bison *Antiquus* Kill Site, Wacissa River, Jefferson County, Florida. *American Antiquity* 49:384-392.
- Willey, Gordon R.
1998 A Summary of Ethnohistory: History of European Exploration. In *Archaeology of The Florida Coast*. University Press of Florida, Gainesville, FL.
- Wright, J. Leitch, Jr.
1975 *Florida in the American Revolution*. University of Florida Press, Gainesville.
- Yarnell, Richard A., and M. Jean Black
1985 Temporal Trends Indicated by a Survey of Archaic and Woodland Plant Food Remains from Southeastern North America. *Southeastern Archaeology* 4:93-102.

Appendix A: FDHR Survey Log

Ent D (FMSF only) _____



Survey Log Sheet

Florida Master Site File
Version 5.0 3/19

Survey # (FMSF only) _____

Consult *Guide to the Survey Log Sheet* for detailed instructions.

Manuscript Information

Survey Project (name and project phase)

Truck and Freight Alternative Site Analysis Project Development and Environment (PD&E) Study, I-4 Corridor in Osceola, Orange, and Volusia Co. FL

Report Title (exactly as on title page)

Phase I Cultural Resource Assessment Survey of the Preferred Interstate (I) - 4 Truck Parking Site
Location: Volusia County Site 1

Report Authors (as on title page)

1. Benjamin Donnan 3. _____
2. Joshua Davis 4. _____

Publication Year 2023

Number of Pages in Report (do not include site forms) 50

Publication Information (Give series, number in series, publisher and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*.)

Supervisors of Fieldwork (even if same as author) Names Charles K. Brummeler

Affiliation of Fieldworkers: Organization Other City Atlanta, GA

Key Words/Phrases (Don't use county name, or common words like *archaeology, structure, survey, architecture, etc.*)

1. I-4 3. VHB 5. Truck and Freight 7. _____
2. FDOT 4. PD&E 6. _____ 8. _____

Survey Sponsors (corporation, government unit, organization, or person funding fieldwork)

Name Florida Department of Transportation Organization _____

Address/Phone/E-mail 719 S. Woodland Blvd. DeLand FL, 32720

Recorder of Log Sheet Joshua Davis Date Log Sheet Completed 4-12-2023

Is this survey or project a continuation of a previous project? No Yes: Previous survey #s (FMSF only) _____

Project Area Mapping

Counties (select every county in which field survey was done; attach additional sheet if necessary)

1. Volusia 3. _____ 5. _____
2. _____ 4. _____ 6. _____

USGS 1:24,000 Map Names/Year of Latest Revision (attach additional sheet if necessary)

1. Name DAYTONA BEACH SW Year 2021 4. Name _____ Year _____
2. Name _____ Year _____ 5. Name _____ Year _____
3. Name _____ Year _____ 6. Name _____ Year _____

Field Dates and Project Area Description

Fieldwork Dates: Start 3-14-2023 End 3-22-2023 Total Area Surveyed (fill in one) _____ hectares 73.64 acres

Number of Distinct Tracts or Areas Surveyed 1

If Corridor (fill in one for each) Width: _____ meters _____ feet Length: _____ kilometers _____ miles

Research and Field Methods

Types of Survey (select all that apply): archaeological architectural historical/archival underwater
damage assessment monitoring report other(describe): _____

Scope/Intensity/Procedures

[Empty box for Scope/Intensity/Procedures]

Preliminary Methods (select as many as apply to the project as a whole)

Florida Archives (Gray Building) library research- local public local property or tax records other historic maps LIDAR
Florida Photo Archives (Gray Building) library-special collection newspaper files soils maps or data other remote sensing
Site File property search Public Lands Survey (maps at DEP) literature search windshield survey
Site File survey search local informant(s) Sanborn Insurance maps aerial photography
other (describe): _____

Archaeological Methods (select as many as apply to the project as a whole)

Check here if NO archaeological methods were used.
surface collection, controlled shovel test-other screen size block excavation (at least 2x2 m) metal detector
surface collection, uncontrolled water screen soil resistivity other remote sensing
shovel test-1/4"screen posthole tests magnetometer pedestrian survey
shovel test-1/8" screen auger tests side scan sonar unknown
shovel test 1/16"screen coring ground penetrating radar (GPR)
shovel test-unscreened test excavation (at least 1x2 m) LIDAR
other (describe): _____

Historical/Architectural Methods (select as many as apply to the project as a whole)

Check here if NO historical/architectural methods were used.
building permits demolition permits neighbor interview subdivision maps
commercial permits windshield survey occupant interview tax records
interior documentation local property records occupation permits unknown
other (describe): _____

Survey Results

Resource Significance Evaluated? Yes No

Count of Previously Recorded Resources 0 Count of Newly Recorded Resources 0

List Previously Recorded Site ID#s with Site File Forms Completed (attach additional pages if necessary)

[Empty box for List Previously Recorded Site ID#s]

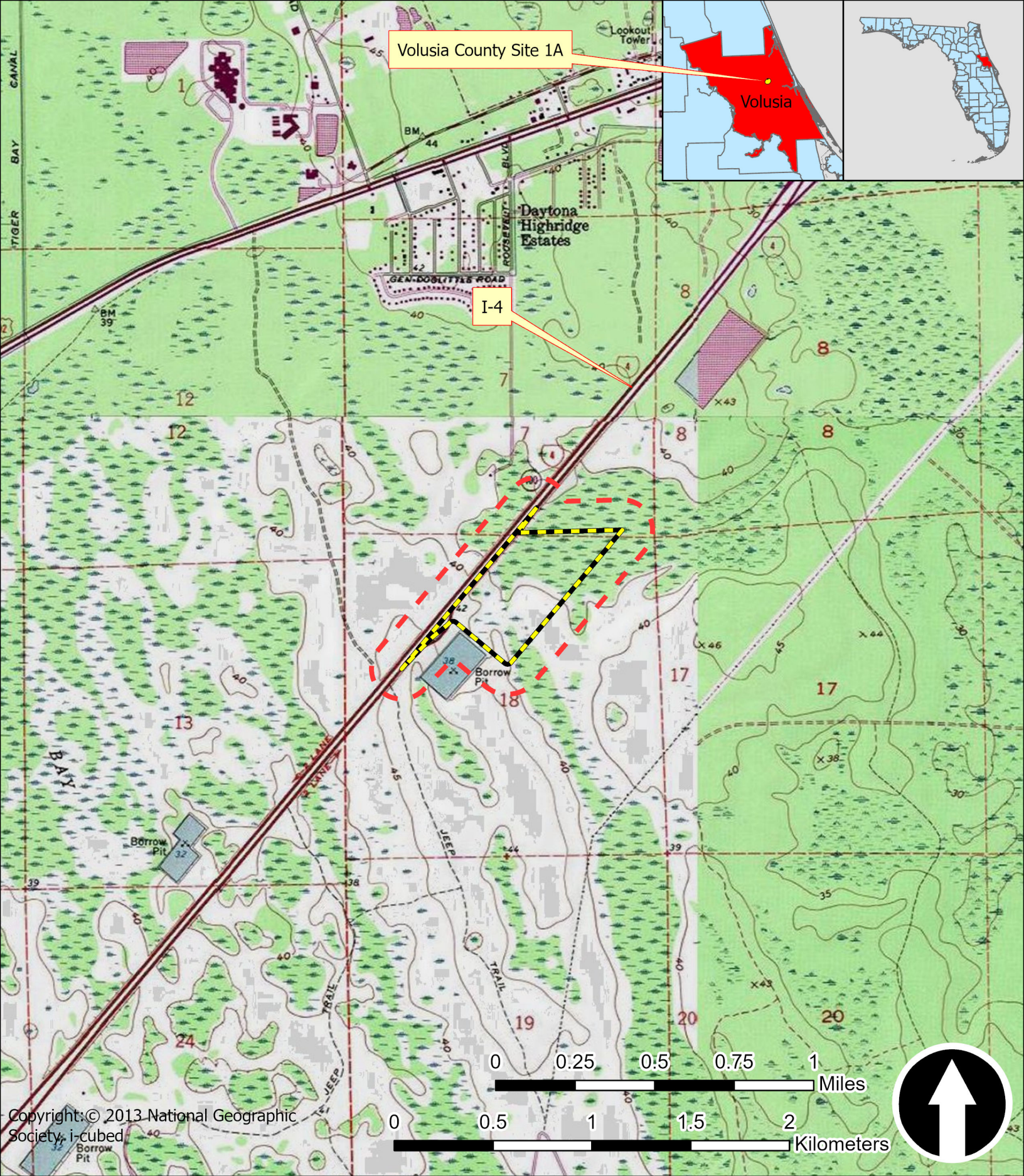
List Newly Recorded Site ID#s (attach additional pages if necessary)

[Empty box for List Newly Recorded Site ID#s]

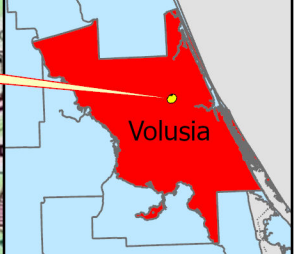
Site Forms Used: Site File Paper Forms Site File PDF Forms

REQUIRED: Attach Map of Survey or Project Area Boundary

SHPO USE ONLY SHPO USE ONLY SHPO USE ONLY
Origin of Report: 872 Public Lands UW 1A32 # _____ Academic Contract Avocational
Grant Project # _____ Compliance Review: CRAT # _____
Type of Document: Archaeological Survey Historical/Architectural Survey Marine Survey Cell Tower CRAS Monitoring Report
Overview Excavation Report Multi-Site Excavation Report Structure Detailed Report Library, Hist. or Archival Doc
Desktop Analysis MPS MRA TG Other: _____
Document Destination: Plottable Projects Plotability: _____



Volusia County Site 1A



I-4

0 0.25 0.5 0.75 1 Miles

0 0.5 1 1.5 2 Kilometers



Copyright: © 2013 National Geographic Society, i-cubed

LEGEND

Historic Resources Survey APE Archaeology APE



USGS Project Location Map
Volusia County Site 1A
 Interstate 4 Eastbound