Appendix F
Cultural Resources Assessment Survey

ESA

CULTURAL RESOURCE ASSESSMENT SURVEY OF PROPOSED IMPROVEMENTS TO THE KENDALL-TAMIAMI EXECUTIVE AIRPORT (TMB)

MIAMI-DADE COUNTY

Prepared for:

ESA Airports Group
1715 N. Westshore Boulevard, Suite 780
Tampa, Florida 33607

Prepared by:

Janus Research
1300 N. Westshore Boulevard, Suite 100
Tampa, Florida 33607

FINAL REPORT

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EXECUTIVE SUMMARY

In 2006, Janus Research was engaged by ESA to conduct a cultural resource assessment survey (CRAS) of cultural resources related to improvements proposed for the Kendall-Tamiami Executive Airport. The objective of the survey was to identify cultural resources within or adjacent to the project area of potential effect (APE) and assess the cultural resources in terms of their eligibility for listing in the *National Register of Historic Places (NRHP)* according to the criteria set forth in 36 CFR Section 60.4.

This assessment was designed and implemented to comply with Section 106 of the *National Historic Preservation Act (NHPA) of 1966* (Public Law 89-655, as amended), as implemented by 36 CFR 800 (*Protection of Historic Properties*, effective January 2001); *National Environmental Policy Act (NEPA) of 1969* (Public Law 91-190); Chapter 267, *Florida Statutes*; Section 4(f) of the *Department of Transportation Act of 1966*, as amended (49 USC 303); and the minimum field methods, data analysis, and reporting standards embodied in the Florida Division of Historical Resources' (FDHR) and *Cultural Resource Management Standards and Operational Manual* (February 2003); and Chapter 1A-46 (*Archaeological and Historical Report Standards and Guidelines*), *Florida Administrative Code*. In addition, this report was prepared in conformity with standards set forth in Part 2, Chapter 12 (*Archaeological and Historic Resources*) of the FDOT *Project Development and Environment Manual* (revised, January 1999). All work conforms to professional guidelines set forth in the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716, as amended and annotated).

Principal Investigators meet the minimum qualifications for archaeology, history, architecture, architectural history, or historic architecture contained in 36 CFR 61 (*Procedures for Approved State and Local Historic Preservation Programs*, Appendix A, Professional Qualifications Standards). Archaeological investigations were conducted under the direction of Kate Hoffman, PhD. Historic resource investigations were conducted under the direction of Amy Groover Streelman, M.H.P.

The CRAS resulted in the identification of no historic or archaeological resources.

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INTRODUCTION

In 2006, Janus Research was engaged by ESA to conduct a CRAS for cultural resources related to the improvements proposed for the Kendall-Tamiami Executive Airport. The objective was to identify cultural resources within or adjacent to the project APE and assess the cultural resources in terms of their eligibility for listing in the *NRHP* according to the criteria set forth in 36 CFR Section 60.4.

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Project Description

The project involves improvements to the Kendall-Tamiami Executive Airport located in unincorporated Miami-Dade County within a portion of Township 55 South, Range 39 East, Sections 14-17 (South Miami NW USGS Quadrangle 1988) (Figure 1).

The project consists of a 550 foot eastward extension of the southernmost runway and a westward 1,798 foot extension of the same. An approach lighting system centered on the extended runway centerline would extend 1,400 feet to the west. The area impacted by construction activities is regularly maintained as part of the Airport's airfield maintenance program.

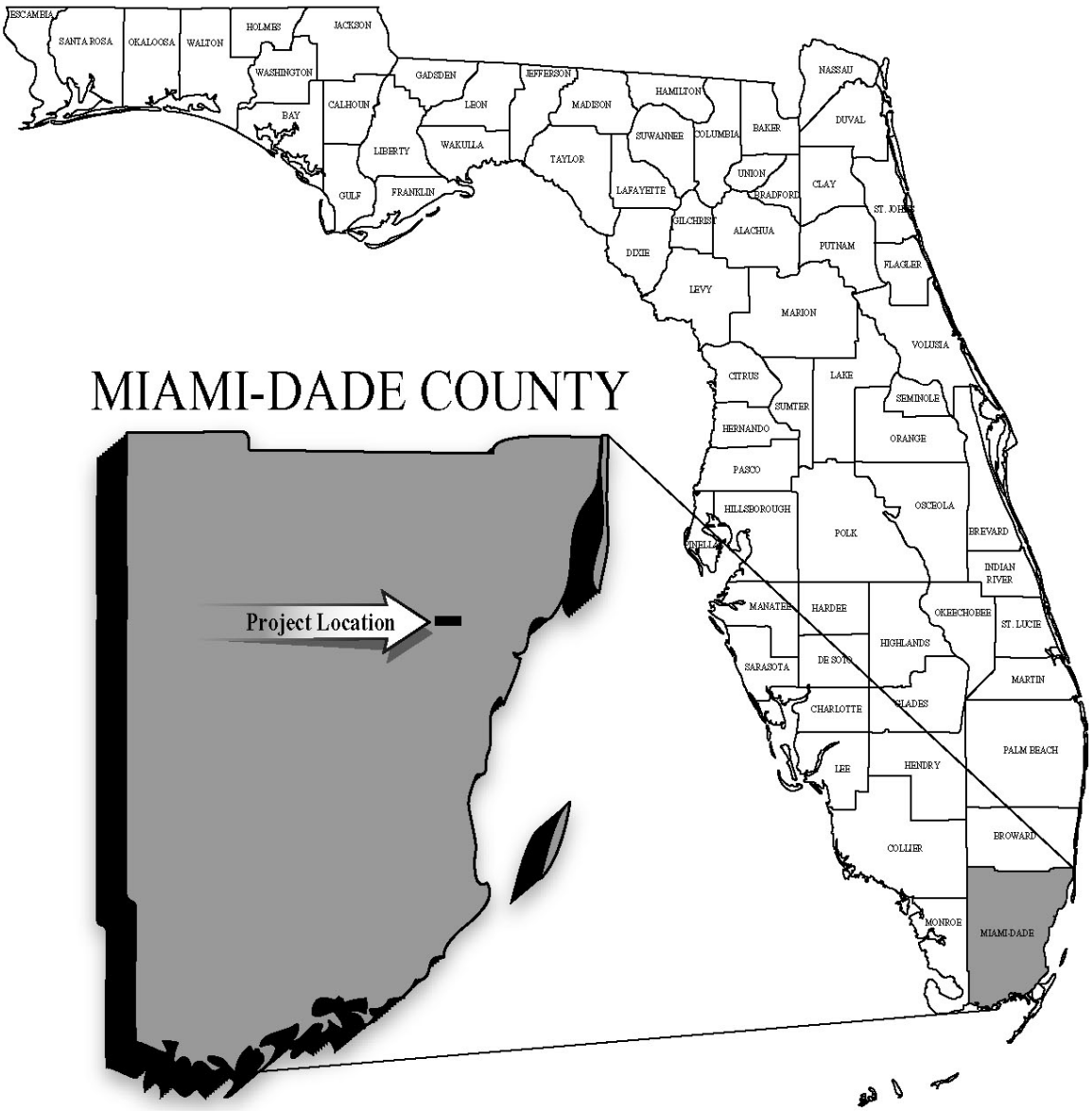

Figure 1: General Location of the Project Area

AREA OF POTENTIAL EFFECT

The area of potential effect (APE) is defined as "the geographic area(s) within which the proposed undertaking may cause changes in the character or use of historic properties listed or eligible for listing in the National Register Historic Places [NRHP]" (36 CFR 800.2[c]). The APE is influenced by the scale and nature of an undertaking, and as such, depends on the proposed action under consideration. The type and extent of construction activities, the horizontal and vertical limits of proposed ground disturbance, and the placement of project related staging, such as borrow pits, waste, and mitigation areas are considered when establishing the APE. Also considered is the introduction of project-associated visual and aesthetic impacts.

The APE for historic resources extends approximately 7,500 feet east, 5,850 feet west, 2,050 feet north, and 1,400 feet south of the current runway scheduled for improvements (Figure 2). An APE of this size allows for the documentation of resources that may be affected visually or audibly by the proposed improvements. The APE for the archaeological survey will be limited to those areas where ground disturbance will take place, specifically the proposed east and west runway extensions.

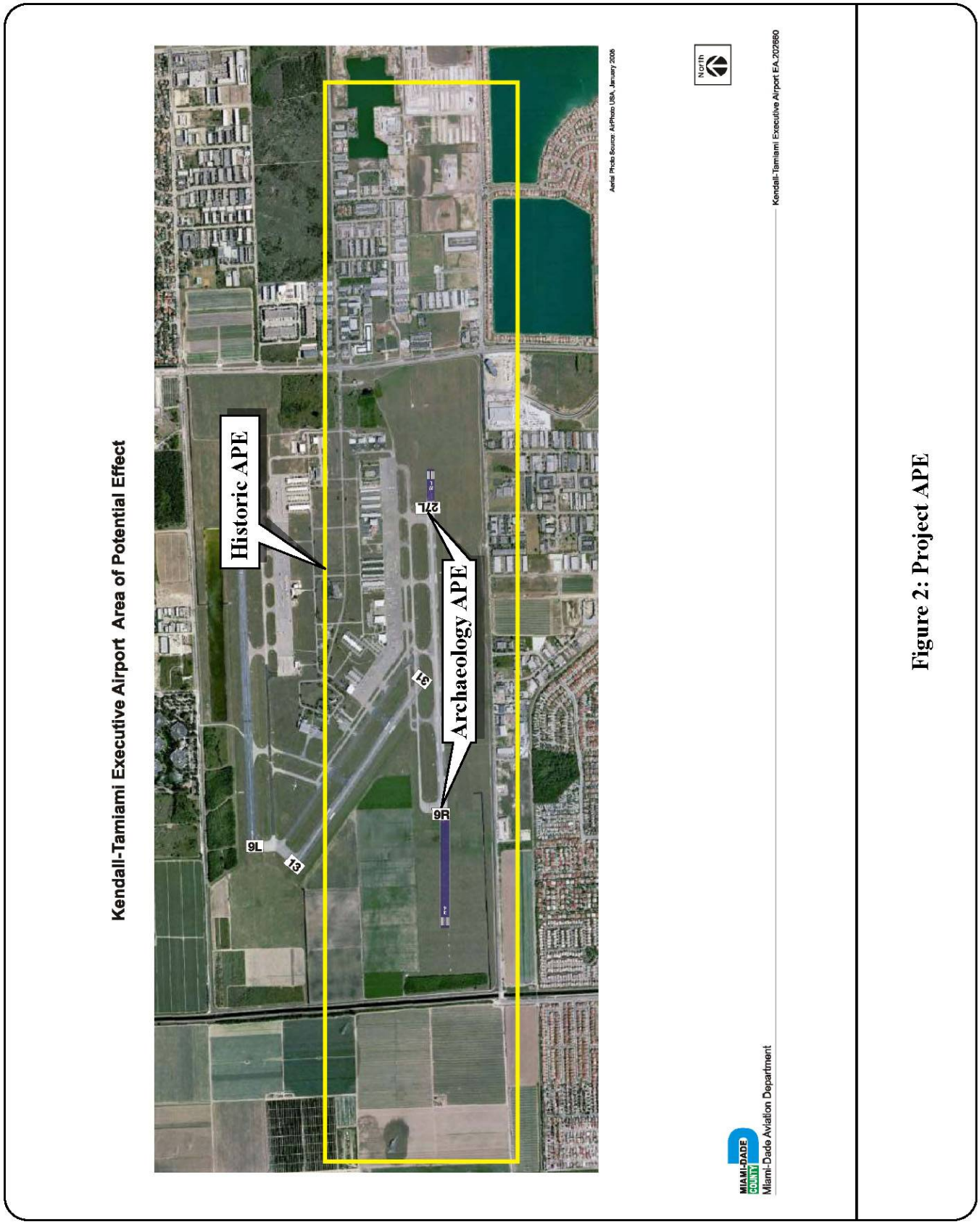

Figure 2: Project APE

ENVIRONMENTAL SETTING

Environmental and ecological factors through time have had a direct influence on the choice of occupation sites by precontact populations and early historic settlers. Therefore, factors such as geologic, hydrologic, and meteorological processes that may have affected the project corridor and its biotic resources are important elements in the formulation of a settlement/subsistence model for precontact and early historic peoples.

Paleo-Environment and Macro-Vegetational Change

Although a comprehensive paleoenvironmental reconstruction is beyond the scope of this report, a brief description of the large-scale climatic and hydrologic conditions that have occurred since 31,050 BC is provided. This description is drawn primarily from the work of W. A. Watts (1969, 1971, 1975, and 1980) and Watts and Hansen (1988). Carbone (1983) has promoted the reconstruction of local paleoenvironments, or small-scale environmental change, with an effort towards developing regional paleoenvironmental mosaic landscapes. Vegetation and animals (including humans) either adapt to local areas (micro-habitats) or move to preferred locations. The descriptions given here provide some indication of the ecological context of pre-Columbian groups at different times, in particular the environmental limitations. However, these descriptions are general and cannot be used to reconstruct the microhabitats of the project area.

Since the termination of the Pleistocene Epoch at the end of the Wisconsin glaciation, roughly 11,550 BC, Florida has undergone significant climatic and environmental change. Notable changes in climate and subsequently in flora and fauna required human groups to adapt to their surroundings. These adaptations resulted in cultural changes in their hunting/foraging strategies and seasonal migration patterns. Within the archaeological record, these changes can be observed by differences in settlement patterns, midden composition, refuse disposal patterns, and the kinds of stone tools or pottery made.

The first 5,000 years or so of the Holocene were marked by rapid rises in southern Florida sea levels. This inhibited the development of estuaries along the Gulf Coast and may have had the same impact on the Atlantic coast (Griffin 1988). However, even though sea levels were rising, they were still considerably lower than present levels. This, combined with low interior water tables, resulted in arid conditions for the interior of southern Florida (Watts 1983; Watts and Hansen 1988). The marshes and swamps for which southern Florida are famous had not yet been formed (Webb 1990).

At about 3050 BC, give or take 1,000 years, sea levels had risen to within a few meters of their current levels (Griffin 1988). Increased rainfall resulted in the formation of Lake Okeechobee, the Everglades, and other modern ecosystems (Watts and Stuiver 1980; Brooks 1984:38; Gleason et al. 1984:311). The relative sea level stability combined with freshwater discharge allowed for the development of coastal estuaries (Widmer 1988). Within the current project area, it is probable that the Loxahatchee came into formation

around this time. However, during its earliest history, the river probably ended in a flood plain or freshwater marsh. Eventually, rising sea levels caused tidal waters to flood this marsh, gradually transforming it into the Loxahatchee Estuary (McPherson et. al. 1982). Around 750 BC, the rising sea level had slowed to the point that some modern beach ridges in southern Florida, like Cape Sable, began to form. Increased precipitation in the interior made cypress common in many areas, including the Big Cypress Swamp, and made droughts in the Everglades less common (Griffin 1988). The southern rim of Lake Okeechobee reached its maximum height about this time (Brooks 1984:38). Vegetation reached its present distributional patterning and estuaries were fully formed and supplied by enough freshwater drainage to become highly productive (Widmer 1988; Griffin 1988).

Regional Environment

The project area is located within the Atlantic Coastal Ridge physiographic province. In Miami-Dade County, the Atlantic Coastal Ridge is known as the Miami Ridge. The Ridge consists of a narrow, gently sloping limestone ridge that extends from Hollywood south to Homestead. A wave-cut cliff, known as the Silver Bluff Scarp, is located along the southeastern edge of the ridge. Features associated with the Miami Ridge include the Atlantic Ocean to the east, the Everglades to the west, and the Southern Slope to the south. A portion of the southern slope extends northeastward along the western shore of Biscayne Bay, terminating across from Key Biscayne. Elevation along the Atlantic Coastal Ridge averages approximately 3 to 4.5 m (10 to 15 ft.) with elevations in the Coconut Grove area of South Miami reaching 6 to 7 m (20 to 24 ft.). Elevations within the project corridor are considerably lower because the ridge merges into the Everglades topography southwest of Homestead.

The project area is located within the Everglades physiographic region. The Everglades region is characterized by low, poorly drained flatland that represents the shallow, flat bottoms of Pleistocene seas. Elevations range from sea level along Florida Bay to approximately 3 m (10 ft.) in the northern end of the Everglades. Peat and organic-rich soils that have accumulated on a bedrock floor that consists of Miami Oolite cover this region. Miami Oolite, a Pleistocene era deposit, consists of a soft, white to yellow limestone that varies from a sandy limestone to calcium carbonate. This bedrock floor rises to the east and west where it lies very near the surface and where elevations tend to be somewhat higher. The Miami Oolite gradually thickens to the east where it eventually forms the Atlantic Coastal Ridge. It is also important to note that modern human attempts to drain, ditch, or divert water have severely altered much of the Everglades. Certainly, this is true of the current project area.

Slightly higher sea levels before the latest glaciation formed a marine shoreline inland from the current Biscayne Bay, leaving evidence in the Silver Bluff ridge, which is composed of cross-bedded oolitic limestone. The Silver Bluff would probably have been a seaward beach shoal with a protected bay behind it. To the west of the Silver Bluff lies a series of small, circular to semicircular topographic rises that are constructed of oolitic limestone and a matrix of fossil mangrove roots. These features, interpreted to be relict

interbay mangrove islands, are currently small hills, but would have offered a higher, drier location for precontact settlers of the area.

Beginning about 2000 BC, a series of lakes were formed along the interface of the sandy sediments of the central peninsula and the bare limestone bedrock of the distal end of the peninsula. Fibrous peat, deposited from sawgrass and other plant growth, accreted and formed a rising dike that slowed the drainage of water. This widened the area of the Everglades Trough by the erosion of sand deposits, and dissolution of limestone bedrock along the perimeter of these peat marshes. The accretion of fibrous peat continued throughout the area that would become the Everglades, raising the water level in the peripheral lakes. Lake Okeechobee, in the extreme northeast of the Everglades Trough, was one of these peripheral lakes. The rising dike of fibrous peat allowed Okeechobee's shallow waters to expand over the surrounding lowlands.

Limestone and dolostone dominate the sediments of Miami-Dade County. Miami Limestone is at or near the surface in almost all of the current survey area. This formation is a soft, oolitic limestone that is generally less than 40 ft. thick (Puri and Vernon 1964). It characteristically contains large quantities of ooliths, which are small, spherical particles formed when calcite or aragonite was deposited in concentric layers around a nucleus of some type (USDA 1996:3–4). Outcrops of silicified limestone, or chert, which was often sought out by precontact peoples as raw material sources for the manufacture of stone tools do not occur in this area (Lane et al. 1980). The closest known outcrops lie to the west along the Peace River in the central part of the state (Scott 1978; Upchurch et al. 1982). Shell was the material of choice for the manufacture of precontact tools, and large univalve and bivalve shells occur in abundance along nearby Biscayne Bay.

Water resources consist of both ground and surface water. The surficial aquifer, known as the Biscayne Aquifer, consists of sediments from the Anastasia formation, Miami and Key Largo limestone, and the Fort Thompson formation (Scott 1992:53). The surficial aquifer is recharged through local rainfall. Because of low hydraulic gradients, movement of water within this zone is very slow. Water is discharged from the aquifer through lateral seepage into streams or lakes, or through evapotranspiration. Recently, drainage ditches have allowed for more rapid drainage of inland areas. Spillway dams have been installed in these canals to maintain the level of surficial waters and avoid saltwater intrusion in the heavily stressed coastal areas (Lane 1980; Lane et al. 1980).

The ground water aquifer in southern Florida, known as the Floridan Aquifer, underlies the surficial Biscayne Aquifer. The Floridan Aquifer is presently non-potable due to saltwater intrusion caused by excessive pumping. Because the level of the Floridan Aquifer is dependent on sea level, the projected level of the Aquifer at any point in prehistory will depend largely on which Holocene sea level curve is used. Dunbar (1982) uses the sea level curve developed by Stapor and Tanner (1977). This level prediction is similar to those suggested by Fairbridge (1960, 1961, and 1974) and Mörner (1969). However, it should be noted that the pattern of sea level fluctuations, not the absolute values of the measures above or below present sea level, is important for consideration.

Before the latest glaciation, slightly higher sea levels formed a marine shoreline inland from the current Biscayne Bay and created the Silver Bluff ridge, composed of cross-bedded oolitic limestone. The Silver Bluff would probably have been a seaward beach shoal with a protected bay behind it. To the west of the Silver Bluff lies a series of small, circular to semicircular topographic rises that are constructed of oolitic limestone and a matrix of fossil mangrove roots. These features are interpreted to be relict interbay mangrove islands. These relict islands are currently small hills, but they would have offered a higher and drier location for precontact settlers of the area.

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Physical Environment of the Project Area

An examination of the original 1847 government survey of Township 55 South, Range 39 East, in which the project area is located, reveals that this area was originally part of the Everglades, with sawgrass prairies noted by the original surveyors. A few scattered hammocks were noted to the south and east by the original government surveyors.

The pre-drainage natural resources of the project area would have included the freshwater resources of the nearby Everglades and various transverse sloughs and small swamps. Access to water during the Paleoindian and Early Archaic periods (12,000–7500 BC) when the perched water system was more restricted might have been available from sinkholes and aquifer-fed creeks and streams. Upland resources, such as pine for firewood and tools (Griffin et al. 1982; Gilliland 1989) could have been easily collected from the rocky pinelands and scattered hardwood hammocks in the vicinity of the project area, and could have been used by precontact, Seminole, and modern hunters, campers and permanent residents. One obvious reason for the use of hammocks is that they are not prone to flooding, except perhaps during episodes of very high water. Yet, hammocks in pre-drainage times were moist enough to retard the development and spread of fires (Austin 1992). The thick foliage of hammocks provides a great deal of shade and helps moderate temperatures year-round. The thick canopies of hammocks also provide good shelter during periods of heavy weather. Mature hammocks are noted for a lack of ground cover vegetation due to the closed canopy above, which shades out younger trees, herbs, and shrubs. Thus, mature hammocks offer enough open space for habitation and activity areas. Finally, important food sources, such as fruits, nuts, and tubers, can be found in hammocks. Such food sources are valued for their ability to attract game animals.

Numerous researchers have successfully utilized drainage characteristics of soil in the formulation of site location predictive models. The soil types found within the project area and their drainage characteristics are presented in Table 1.

Table 1. Drainage Characteristics of Soil Types within the Project Corridor.

Drainage Characteristic	Soil Type
N/A	Urban land
Moderately well drained	Krome very gravelly loam
Poorly drained	Biscayne marl, drained

Source: USDA 1996

PRECONTACT OVERVIEW

Native peoples have inhabited Florida for at least 14,000 years. The earliest cultural stages are pan-Florida in extent, while later cultures exhibited unique cultural traits. The following discussion of the precontact time period of the general project area is included in order to provide a framework within which the local archaeological record can be understood. This cultural history provides a chronology, or broad sequence, of precontact cultures, defined largely in geographical terms, but also reflecting shared environmental and cultural factors.

The study area is located in the Glades (Milanich 1994:301) or Everglades (Carr and Beriault 1984) cultural region (Figure 3). Carr and Beriault (1984) put the northeastern border for the area at about the Broward-Palm Beach County line. Griffin (1988) follows suit, arguing that the area to the east of Lake Okeechobee is too poorly understood at present to assign cultural affinity. As defined by Milanich (1994:298), the Glades cultural region includes " the Everglades itself, a largely sawgrass marsh in Hendry, Palm Beach, Broward, Dade, and Monroe counties; the Big Cypress Swamp west of the Everglades in Collier County; and extensive saltwater marshes and mangrove forests ounce found along both coasts, now almost totally destroyed in Broward and Dade counties."

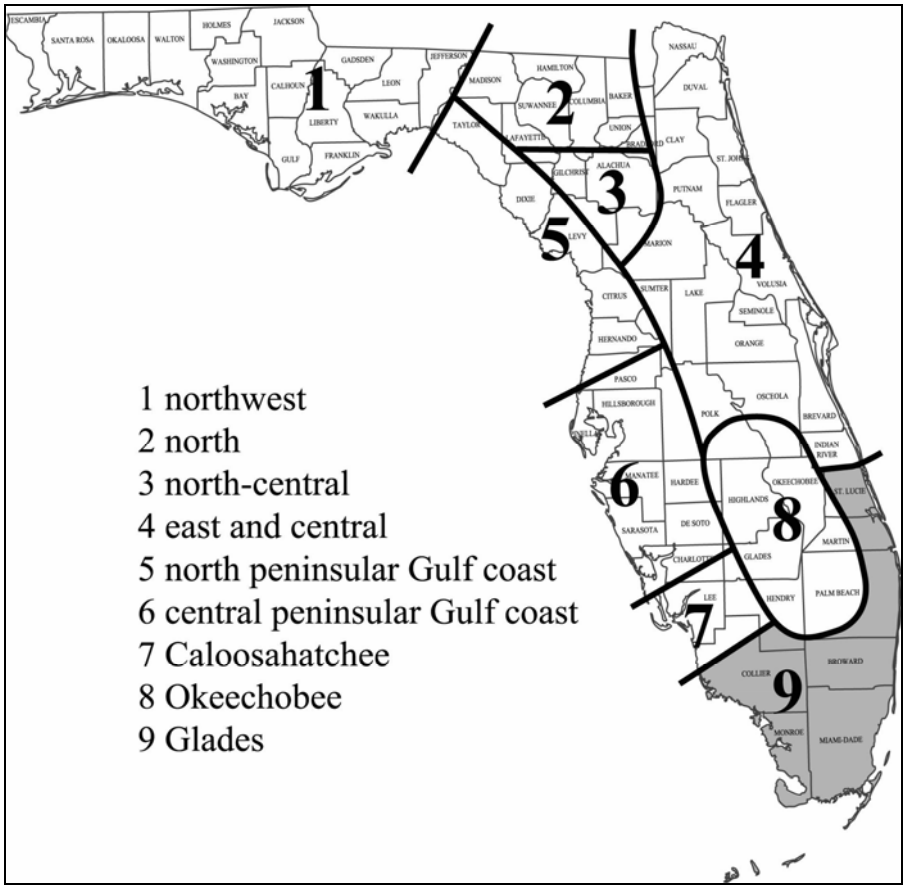

Figure 3: Glades Cultural Region

Paleoindian Period (12,000–7500 BC)

The earliest period of precontact cultural development dates from the time people first arrived in Florida. The greatest density of known Paleoindian sites is associated with the rivers of northern and north-central Florida where distinctive lanceolate projectile points and bone pins have been found in abundance in and along the Santa Fe, Silver, and Oklawaha Rivers (Dunbar and Waller 1983). The majority of these have been found at shallow fords and river crossings where the Native Americans presumably ambushed Pleistocene mammals. The bones of extinct species such as mammoth, mastodon, and sloth are commonly found preserved in the highly mineralized waters of the area's springs and rivers. Despite early claims to the contrary, present evidence strongly supports the contemporaneity of Paleoindians and these extinct mammals.

The climate of Florida during the late Pleistocene was cooler and drier than at present, and the level of the sea was as much as 160 ft lower (Milanich 1994:38–41). Rising sea levels are assumed to have inundated many coastal sites dating to the Paleoindian and Early Archaic periods (e.g., Ruppe 1980; Goodyear and Warren 1972; Goodyear et al. 1980; Dunbar et al. 1988). It is difficult to determine the dependence of Paleoindian groups on estuarine and littoral resources because little is known of these submerged archaeological sites.

The prevailing view of the Paleoindian culture, a view based on the uniformity of the known tool assemblage and the small size of most of the known sites, is that of a nomadic hunting and gathering existence, in which now-extinct Pleistocene megafauna were exploited. Settlement patterns were restricted by availability of fresh water and access to high-quality stone from which the specialized Paleoindian tool assemblages were made. Waller and Dunbar (1977) and Dunbar and Waller (1983), from their studies of the distribution of known Paleoindian sites and artifact occurrences, have shown that most sites of this time period are found near karst sinkholes or spring caverns. This suggests a somewhat more restricted settlement pattern than postulated for other Paleoindian groups in eastern North America. Paleoindian settlement appears to have been "tethered" to sources of fresh water such as rivers and springs (Daniel 1985:264; Daniel and Wisenbaker 1987:169) and to cryptocrystalline lithic sources (Goodyear 1979; Goodyear et al. 1983).

Excavations in Hillsborough County have contributed to the development of increasingly sophisticated models of early hunter-gatherer settlement (e.g., Daniel 1985; Chance 1983), which take into account the adaptive responses of human populations to both short and long-term environmental change. These models suggest that some Paleoindian groups may have practiced a more sedentary lifestyle than previously believed (Daniel and Wisenbaker 1987). For instance, evidence from the Harney Flats site in the Hillsborough River drainage basin indicates that Suwannee points were being manufactured from locally available materials (Daniel and Wisenbaker 1987). Although they noted that this was contrary to Gardner's (1977) argument that the availability and location of fine-grade cryptocrystalline materials dictated Paleoindian settlement, their results suggested that

Paleoindian peoples, much like those of later cultures, moved about within defined, restricted territories.

The majority of Paleoindian sites in Florida consist of surface finds. The most widely recognized Paleoindian tool in Florida is the Suwannee point, typically found along the springs and rivers of northern Florida. Evidence from Harney Flats has provided information on the manufacturing process of Suwannee points: first, a blank was struck from a chert core; then, the blank was bifacially worked into a preform; finally, the preform was knapped into the finished point (Daniel and Wisenbaker 1987:44–53). Other points, including Simpson and Clovis points, are found in lesser numbers. Some of these, and other Paleoindian lanceolate points, were hafted by attaching them to an ivory shaft that was, in turn, attached to a wooden spear shaft (Milanich 1994:48–49).

Other Paleoindian stone tools are known from the Harney Flats site (Daniel and Wisenbaker 1987:41–97), the Silver Springs site in Marion County (Neill 1958), and other northern Florida sites (Purdy 1981:8–32). These Paleoindian tools tend to be unifacial and plano-convex, with steeply flaked, worked edges (Purdy and Beach 1980:114–118, and Purdy 1981). Bifacial and "hump-backed" unifacial scrapers, blade tools, and retouched flakes, including spokeshaves, have been found at these sites (Purdy 1981; Daniel and Wisenbaker 1987:62–81, 86–87). However, some tools are little more than flakes or blades that were struck from cores, used, and discarded (Milanich 1994:51). Other stone tools include an oval, ground stone weight that was found at the Page/Ladson site from a stratum dated to 12,330 years ago (Dunbar et al. 1989:479). It is thought to represent a bola weight, which is a stone weight attached by a leather thong and thrown to bring down water birds and other game (Milanich 1994:51).

Dunbar et al. (1988) review of Paleoindian site/point locations in western Florida and results from excavations at the Harney Flats site revealed that 60 percent of the site clusters were located in and around mature karst river channels. In fact, 90 percent of all Paleoindian sites/points were located around karst depressions within Tertiary limestones. The most recent distribution maps of Paleoindian points in Florida show that 92 percent of Clovis and Suwannee projectile points are found in the region of Tertiary limestone features (Dunbar 1991).

Data on Paleoindian subsistence is scarce; although, such data is dramatic where encountered. The best evidence consists of the remains of a giant land tortoise recovered from the Little Salt Spring site in Sarasota County (Clausen et al. 1979). Although human skeletal remains were associated with extinct Pleistocene fauna at Devil's Den (Martin and Webb 1974), Milanich (1994) suggests that sloth, mastodon, mammoth, and bison probably formed part of the Paleoindian diet. There is very little information upon which to reconstruct the Paleoindian subsistence base. If, as Daniel and Wisenbaker (1987) suggested, there was seasonal movement along the river valleys, then not only is a seasonal littoral focus likely, but it also becomes likely that the majority of Paleoindian sites exist underwater (Dunbar 1988; Dunbar et al. 1988), rendering subsistence data for half of the Paleoindian year mostly inaccessible.

Presently, the Paleoindian period is poorly represented on the Atlantic coast of Florida. Some sparse Paleoindian remains may be located near the current project area at the Cutler fossil site. Extinct late-Pleistocene mammals and Bolen points, typical of the late Paleoindian/Early Archaic periods, were recovered from this large solution hole (Carr 1986). It is also possible that Paleoindian deposits may exist off the current Atlantic shore (Dunbar 1991). For instance, the offshore Douglass Beach Midden (8SL17) in St. Lucie County may contain a Paleo period component. Human bone and a Bolen Point have been recovered here along with the remains of extinct mammals (Murphy and Cummings 1990).

Archaic Period (7500–500 BC)

The Archaic period of cultural development was characterized by a shift in adaptive strategies stimulated by the onset of the Holocene and the establishment of increasingly modern climate and biota. It is generally believed to have begun in Florida around 7500 BC (Milanich 1994:63). This period is further divided into three sequential periods: the Early Archaic (7500–5000 BC), the Middle Archaic (5000–3000 BC), and the Late Archaic (3000–500 BC). The Late Archaic is subdivided into the Preceramic Late Archaic (3000–2000 BC) and the Orange Period (2000–500 BC).

Early Archaic (7500–5000 BC)

Cultural changes began after about 8000 BC in the late Paleoindian times with the onset of less arid conditions, which correlates with changes in projectile-point types, specifically a transition from lanceolate to stemmed varieties. Beginning about 7500 BC, Paleoindian points and knives were replaced by a variety of stemmed tools, such as the Kirk, Wacissa, Hamilton, and Arredondo types (Milanich 1994:63).

Kirk points and other Early Archaic diagnostic tools are often found at sites with Paleoindian components, suggesting that Early Archaic peoples and Paleoindians shared similar lifeways (Daniel and Wisenbaker 1987:33–34). However, it appears that the distribution of Early Archaic artifacts is wider than that of Paleoindian materials. Sites having both Paleoindian and Early Archaic components have been found to be largely restricted to natural springs and the extensive perched water sources of northern Florida. Early Archaic points are found in smaller numbers at upland sites in northern Florida where there is a lack of Paleoindian materials (Neill 1964). Although this patterning is largely based on evidence from Alachua and Marion Counties, there is no reason to believe that patterning is different elsewhere in interior northern Florida (Milanich 1994:64).

One Early Archaic wetland site that does not have a Paleoindian component is the Windover Pond site near Titusville in Brevard County. This site is a precontact cemetery consisting of over 160 burials in the natural peat deposits of what was, during the Early Archaic, a woody marsh (Stone et al. 1990:177). It is the most thoroughly excavated early precontact site in the East and Central archaeological area of Florida and has produced normally perishable items such as samples of cloth in which the dead were wrapped before burial, wood artifacts, preserved brain and other soft tissue, and samples

of proteins and mitochondrial DNA. Radiocarbon dates indicate that the interments were made in discrete episodes of short duration between 6000 and 5000 BC. This indicates that a single social group used the pond to bury their dead in one small area, the location of which was somehow marked or memorized. Later, another group, probably the descendants of the first group, again used the pond for burial. After 5000 BC, increasingly wetter conditions most likely made it too difficult to bury people in the peat of the pond bottom (Doran and Dickel 1988).

Despite the dramatic Windover site, Early Archaic occupations in southern Florida are sparsely documented or they are unknown (Dickel 1992). An exception is the Cutler Fossil site in Miami-Dade County (Carr 1986). This site contains human remains, early side-notched projectile points and faunal remains, including some extinct Pleistocene species. A radiocarbon date of ca. 7800 BC was obtained from a possible hearth feature, making this one of the earliest sites found thus far in South Florida.

With the wetter conditions that began about 8000 BC and the extinction of some of the Pleistocene animal species that helped to sustain earlier populations, Paleoindian subsistence strategies were no longer efficiently adapted to the Florida environment. As environmental conditions changed, surface water levels throughout the state increased and new locales became suitable for occupation. Early Archaic peoples might be viewed as a population changing from the nomadic Paleoindian subsistence pattern to the more sedentary coastal- and riverine-associated subsistence strategies of the Middle Archaic period.

Middle Archaic Period (5000–3000 BC)

Throughout the Middle Archaic period, environmental and climatic conditions would become progressively more like modern conditions, which would appear by the end of the period, circa 3000 BC. During this period, rainfall increased, surface water became much less restricted and, as a result, vegetation patterns changed. However, although interior moisture increased, sea level was still lower than during modern times (Dickel 1992). As a result, brackish estuaries were restricted or non-existent and Lake Okeechobee was still in the early stages of development (Brooks 1981; Griffin 1988). The continued relative scarcity of sites in southern Florida during this time may be indicative of the persistence of isolated inhospitable xeric conditions (Watts 1975; Watts and Hansen 1988; Widmer 1988). Despite this, the Middle Archaic period is characterized by gradually increasing human populations and a gradual shift in diet towards shellfish, fish, and other food resources from fresh water and coastal wetlands (Watts and Hansen 1988:310; Milanich 1994:75–84).

The Middle Archaic artifact assemblage is characterized by several varieties of stemmed, broad-blade projectile points. The Newnan point is the most distinctive and widespread in distribution (Bullen 1975:31). Other stemmed points of this period include the less common Alachua, Levy, Marion, and Putnam points (Bullen 1968; Milanich 1994). In addition to these stemmed points, the Middle Archaic lithic industry, as recognized in Florida, includes production of cores, true blades, modified and unmodified flakes, ovate

blanks, hammerstones, "hump-backed" unifacial scrapers, and sandstone "honing" stones (Purdy 1981; Clausen et al. 1975).

Additionally, thermal alteration, a technique in stone tool production, reached its peak during the Middle to Late Archaic periods. This technique was usually used in late stage tool production (Purdy 1971, 1981:78). However, Austin and Ste. Claire (1982:101–106) observed that, at the Tampa Palms site in Hillsborough County, very few thinning flakes were thermally altered. They noted that at this and other Archaic sites in the region, thermal alteration and the presence of silicified coral were correlated (Austin and Ste. Claire 1982:104; Daniel and Wisenbaker 1981, 1987). It is apparent that there was a preference for thermally altered coral for technological and aesthetic reasons; not only is it more easily worked, but also it may have been valued for its color and luster (Purdy 1971; Austin and Ste. Claire 1982:104). At the Harney Flats site, Daniel and Wisenbaker (1987:33–34) found a Middle Archaic component with corresponding increases in the amounts of silicified coral and heat-treated lithic material.

Middle Archaic settlement patterns are believed to have followed the Early Archaic patterns until after circa 3000 BC, when settlement patterns shifted toward coastal and riverine resources. Daniel (1985:265) postulated that a seasonal dichotomy existed between upland and lowland Middle Archaic sites in the Central Peninsular Gulf Coast archaeological area. According to his model, aggregate base camps were located along the upland boundaries of the Polk Uplands and were occupied during the fall and winter months. These upland sites are thought to be larger and contain a greater variety of functionally defined tools. These sites should also contain tools related to "maintenance" activities.

Dispersed residential camps were occupied in the Coastal Lowlands physiographic zone during the summer months. Daniel (1985) predicted these lowland sites would be smaller, more numerous, and exhibit a smaller number, and a more limited variety, of tool types. These sites are thought to contain tools related to "subsistence" activities. The lack of tool forms at these sites may also reflect an orientation towards activities that did not require the use of stone tools.

Middle Archaic sites are found in a variety of locations, including, for the first time, freshwater shell middens along the St. Johns River and the Atlantic Lagoon. Middle Archaic sites have been found in the Hillsborough River drainage northeast of Tampa Bay, along the southwestern Florida coast, and in South Florida locales such as Little Salt Spring in Sarasota County. In addition, Middle Archaic sites occurred throughout the forests of the interior of northern Florida (Milanich 1994:76).

Three common types of Middle Archaic sites are known in Florida (Bullen and Dolan 1959; Purdy 1975). The first are small, special-use camps, which appear archaeologically as scatters of lithic waste flakes and tools such as scrapers, points, and knives. These sites are numerous in river basins and along wetlands and probably represent sites of tool repair and food processing during hunting and gathering excursions (Milanich 1994:78). Such sites are numerous in northern Florida where they are frequently identified along

river basins and other wetlands. A possible example of a site like this in South Florida is Riverbend Park #7 (8PB7979) in northern Palm Beach County (Pepe and Carr 1996b). Other possible Middle Archaic campsites in South Florida seem to be located on xeric sand hills next to lowlands that may or may not have contained wetlands during the time in which the sites were utilized. Examples include the Medalist site (8MT388) in Martin County (Pepe and Carr 1996a) and Westridge (8BD1119) on Pine Island ridge in Broward County (Carr et al. 1992).

The second common site type is the large base camp. This type of site may cover several acres or more, and contains several thousand or more lithic waste flakes and tools. A good example of this type of site is the Senator Edwards site in Marion County (Purdy 1975; Purdy and Beach 1980). One implication of this type of site is that a greater variety of tools were being used in this period than in the preceding one. It is possible that a more sedentary way of life led to the development of more specialized tools. Some of the tools indicate woodworking activity, possibly related to constructing more permanent houses (Milanich 1994:78–79).

The third common type of site is the quarry-related site that occurs in localities of chert outcrops. Chert deposits often outcrop along rivers or around lakes and wetlands as erosion cuts through the soil to the underlying limestone bed. The resulting outcrops provided opportunities for native peoples to quarry this raw material for stone tool production. Some of these sites have also produced evidence of late period tool production, including large flake blanks, bifacial thinning flakes, blades, and unifacial and bifacial tools (Milanich 1994:78–79; Purdy 1975).

Recently, a new site type has been identified in Hillsborough County. The West William site (8HI509) was identified as containing deposits of faunal remains, pit features, and structural remains, while lacking in the typical tool pattern commonly associated with upland sites (Austin et al. 2001:10). With these features, Austin et al. (2001:10) hypothesized that the site represents a seasonal congregation camp for the purpose of "social interaction, ceremonial feasting, and/or mate exchange."

Other less common site types include cave camps in northern Florida and wetland cemeteries. Examples of the latter site type include the slough burials at Little Salt Spring in Sarasota County (Clausen et al. 1979), the pond burials at the Bay West site in Collier County (Beriault et al. 1981), and the Republic Grove site in Hardee County et al. 1981). Like the Windover site of the Early Archaic peoples, these sites provide a glimpse of the range of objects used by Middle Archaic peoples such as antler, wood, and bone tools not preserved on land sites (Milanich 1994:82).

Although most of the Early and Middle Archaic cemeteries throughout peninsular Florida appear to have used aquatic environments, at least two exceptions are noted: the Tick Island and Gauthier sites. Interments at the Tick Island site, located in the St. Johns River basin, were made in an existing freshwater shell midden subsequently covered with a mound of sand (Bullen 1962). Over time, this process was repeated as other groups were

interred. Later, post–Middle Archaic people re-used the site, depositing shell refuse on top of the burial area (Bullen 1972:166; Jahn and Bullen 1978).

The other unique Middle Archaic burial site is the Gauthier site, located in Brevard County about six miles from the coast. Interments were made by creating a shallow depression in the soil and laying bodies in it, at times, one on top of another. Artifacts found with the flexed burials include limestone throwing-stick weights, antler "triggers" from throwing sticks, projectile points, tubular *Busycon* shell beads, ornaments of bone, and worked shark teeth that had probably been hafted and used as knives or scrapers (Carr and Jones 1981).

Both of the sites described above contained artifacts securely dating the sites to the Middle Archaic period. It is possible that these two sites represent the development of new burial patterns which correlated with the end of the Middle Archaic period, at which time pond burials fell into disuse and were replaced with the new burial patterns (Milanich 1994:84).

Similarly, the Cheetum site in Miami-Dade County (Newman 1986) has provided evidence of mostly secondary burials in a compact concretion zone at the base of the site. The Cheetum site burials have been radiocarbon dated to the Middle or Late Archaic time periods.

Late Archaic Period (3000–500 BC)

After 3000 BC, there was a general shift in settlement and subsistence patterns emphasizing a greater use of wetland and marine food resources than in previous periods. This shift was related to the natural development of food-rich wetland habitats in river valleys and along the Atlantic and Gulf coasts (Bense 1994). By the Late Archaic period, a regionalization of precontact cultures began to occur as human populations became adapted to specific environmental zones. Based on current evidence, it appears that relatively large numbers of Late Archaic peoples lived in some regions of the state but not in others. For example, large sites of this period are uncommon in the interior highland forests of northwestern Florida and northern peninsular Florida, regions where Middle Archaic sites are common. The few Late Archaic sites found in these areas are either small artifact scatters or components in sites containing artifacts from several other periods. This dearth of sites in the interior forests suggests that non-wetland locales either were not inhabited year-round or were only inhabited by small populations (Milanich 1994:87).

Extensive Late Archaic middens are found along the northeastern coast inland waterway from Flagler County north, along the coast of southwestern Florida from Charlotte Harbor south into the Ten Thousand Islands, and in the braided river-marsh system of the central St. Johns River, especially south of Lake George. The importance of the wetlands in these regions to precontact settlements was probably duplicated in other coastal regions, especially the Central Peninsular Gulf Coast and the Northwest (Milanich 1994:85). However, in many of these coastal areas, such as Tampa Bay, many of the Late

Archaic sites are inundated (Warren 1964, 1970; Warren and Bullen 1965; Goodyear and Warren 1972; Goodyear et al. 1980).

The most distinctive aspect of the Late Archaic Period in Florida is probably the appearance of ceramic artifacts, the earliest use of this artifact type in the continental United States. The ceramic portion of the Late Archaic has commonly been called the Orange Phase or Orange Period. Using sites in the St. Johns drainage, Bullen and others (Bullen 1959, 1971, 1972; Milanich and Fairbanks 1980) established a sequence for the Orange Phase that began with plain fiber-tempered pottery (Orange Plain). Eventually, the type Orange Incised was also used, along with steatite sherds. By the end of the Orange phase, semi-fiber-tempered ceramics, tempered with both temper and sand, were in use.

Widmer (1988) offers a different ceramic chronology for the Late Archaic in southwestern Florida. According to his model, the earliest portions of the ceramic Late Archaic there are characterized by Orange ceramics along with untempered chalky ceramics and limestone-tempered ceramics.

Russo and Heide (2002) have recently forwarded a similar model for the ceramic Late Archaic in the coastal region east of Lake Okeechobee, sometimes called the East Okeechobee area or district. In their model, the earliest portions of the ceramic Late Archaic there are marked by fiber-tempered and semi-fiber-tempered plain ceramics. After this, they propose a period marked only by thick, chalky wares. Chalky wares and sand-tempered plain pottery mark the latest phase of their Late Archaic model.

Pepe and Jester (1995:17-18) have suggested that there may be several contemporary Archaic traditions within southeastern Florida, including one associated with fiber-tempered ceramics and another being an aceramic Archaic tradition. They suggest that the fiber-tempered pottery tradition is largely a coastal phenomenon, associated with shell mound building, while the aceramic Archaic, or Glades Archaic, appears to be a more widespread phenomenon, perhaps giving rise to the distinctive regional culture of the Everglades. Pepe (2000:32) further argues that this Glades Archaic may have originated with pre-pottery Mount Taylor culture groups that gradually moved into southern Florida from the St. Johns River region (Wheeler et al. 2002:143). It is quite possible that many of the faunal bone middens known for the Everglades and Big Cypress Swamp (Pepe et al. 1997, 1998) may be related to this postulated Glades Archaic culture.

Formative Period (500 BC–AD 1513)

The Formative Period represents a time when changes in pottery and technology occurred throughout Florida. The specific changes in pottery traditionally used by archaeologists to mark the beginning of this period include the replacement of fiber-tempered pottery with sand-tempered, limestone-tempered, and chalky-paste ceramics. Three different projectile point styles (basally-notched, corner-notched, and stemmed) also occur in some areas in contexts contemporaneous with these new ceramic types. This profusion of ceramic and tool traditions suggests population movement and social interaction between culture

areas. The earliest known major occupations of southern Florida date to this period (Bullen et al. 1968; Sears 1982).

The regional diversity that marked this period has been primarily attributed to local adaptation to varied ecological conditions within the state. Traditionally, it has been described archaeologically in terms of cultural periods based on variations in ceramic types. The ceramic tradition for southern Florida, characterized by sand-tempered bowls with incurvate rims, is known as the Glades or Everglades cultural tradition.

Glades Culture

Environmentally, the interior portions of the Everglades area are dominated by inundated or formerly inundated humic or peat soils which are drained by massive sheet-flow instead of river channeling. The Atlantic coast, which has developed from beach dune deposition, has a few rivers cutting through the Atlantic Coastal Ridge and a coast-parallel lagoon system.

John Goggin established a ceramic sequence for the Glades region on the basis of work he conducted from the 1930s to early 1950s (n.d.). Subsequent research has only served to refine his basic chronological framework. The most recent revision was presented by John Griffin (1988), who based his research on a series of radiocarbon dates from the Granada site in Miami-Dade County (Griffin et al. 1982) and research he conducted on the Bear Lake site in Everglades National Park. In presenting his revisions, Griffin makes a point to emphasize that the Glades sequence represents a chronology of stylistic and technological changes in ceramics to which other cultural traits have been added.

Table 2 is based on Griffin's 1988 work and presents the most thorough chronological framework for southern Florida. Summaries of the ceramic markers associated with each period are provided, as well. It is important to note that the information provided in this table is most applicable to the heartland of the Glades archaeological area: the Big Cypress Swamp, Everglades, and coastal portions of southern Florida to the south of Lake Okeechobee.

A number of archaeological sites dating to the Glades period are located along the southwestern coast of Florida, with some of the smaller islands in the Keys composed almost entirely of shellworks and shell middens with enclosed plazas. The most famous of these is the Key Marco site, where a large number of perishable artifacts were found preserved in the muck of a mangrove swamp (Durnford 1895; Cushing 1896; Gilliland 1989). Carved wooden masks and vessels, cordage, netting, bone and shell tools, and the remains of wooden structures were recovered, providing a wealth of information about aspects of prehistoric life that are rarely represented at typical archaeological sites in Florida. The ceramic assemblage indicates a late fifteenth century occupation (i.e., Glades IIIb).

Table 2. Glades Cultural Sequence (after Griffin 1988: 124–142)

Period	Dates	Distinguishing Characteristics
Glades I early	500 BC–AD 500	First appearance of sand-tempered pottery; no decoration
Glades I late	AD 500–750	First appearance of decorated pottery: Fort Drum Incised, Fort Drum Punctated, Cane Patch Incised, Gordon's Pass Incised, Opa Locka Incised, Sanibel Incised; sand-tempered plain persists
Glades IIa	AD 750–900	Appearance of Key Largo Incised and Miami Incised; sand-tempered plain and Opa Locka Incised persist; none of the earlier decorated types are present
Glades IIb	AD 900–1100	Sand-tempered plain and Key Largo Incised persist; Matecumbe Incised appears; none of the earlier decorated types are present; certain rim modifications (incised lip arcs and lip crimping and grooving) also appear for the first time
Glades IIc	AD 1100–1200	Almost no decorated ceramics; some grooved lips but no more lip arcs or crimped rims; Plantation Pinched appears
Glades IIIa	AD 1200–1400	Plantation Pinched is no longer present; Sand-tempered plain and grooved lips persist; appearance of Surfside Incised and St. Johns Check Stamped
Glades IIIb	AD 1400–1513	Glades Tooled, sand-tempered plain and St. Johns Check Stamped are present, Surfside Incised and grooved lips are not present
Glades IIIc	AD 1513–ca.1700	Same as previous period with the addition of historic artifacts

Other Glades period sites include those at Gordon's Pass (Goggin 1939), Goodland Point (Goggin 1950), Marco Island (Van Beck and Van Beck 1965), Useppa Island (Milanich et al. 1984), Horr's Island (McMichael 1982), Sanibel Island (Fradkin 1976), and the Turner River site (Sears 1956). An interesting feature of these large coastal sites is the progressive movement of habitation areas toward the water (e.g., Cushing 1896; Goggin 1950; Sears 1956), and indications are that dwellings may have been built to extend out over the water. Inland sites consist of shell and dirt middens along major watercourses (e.g., Laxson 1966) and small dirt middens containing animal bone and ceramic sherds in oak/palm hammocks or palm islands associated with freshwater marshes. The coastal Glades subsistence pattern is typified by the exploitation of fish and shellfish, wild plant food, and inland game, while Glades sites in the Big Cypress Swamp show a greater, if not exclusive, reliance on interior resources.

Interior Glades-period sites are also well documented (Goggin n.d.; Griffin 1988). These sites are typically located on naturally occurring hammock tree islands within the Everglades. However, recent research suggests that human activity may have contributed to the formation of at least some of these tree islands (Beiter 2003).

HISTORICAL OVERVIEW

The following overview traces the historical development of the general study area from the European settlement through the twentieth century. The intent of this historical documentary review is to serve as a guide to field investigations by identifying the possible locations of any historic sites within the project area and to provide expectations regarding the potential historic significance of any such sites. It also provides a context with which to interpret any historic resources encountered during the CRAS. To this end, books, maps, and manuscripts located at the University of South Florida Special Collections Department, Florida Department of Environmental Protection, Division of State Lands, the Miami-Dade Public Library, the Historical Museum of Southern Florida, and the library at Janus Research were examined.

European Contact and Colonial Period (ca. 1513–1821)

Little is known about the terminus of the Glades culture and the early period of contact between the Native Americans and the European immigrants. The later precontact Glades groups appear to have been actively trading with other cultures to the north, as evidenced by the occurrence of exotic raw materials and ceramic designs similar to those seen farther north. Few ethnohistoric accounts exist for South Florida, and only one is widely publicized: Fontaneda's seventeenth century account of the Native Americans who lived near Lake Okeechobee (Fontaneda 1945). Many historic Glades sites contain European artifacts and European-derived raw materials such as silver, iron, and gold. These materials were probably salvaged from Spanish ships that sank or ran aground off the Straits of Florida.

The earliest contact between the native populations and the Europeans occurred through slave hunting expeditions. "Slaving expeditions," which provided workers for the mines of Hispaniola and Cuba, were not recorded in official documents as the Spanish Crown prohibited the enslavement of Caribbean natives. Evidence of these slave raids comes from the familiarity with the Florida coast stated by navigators of the earliest official coastal reconnaissance surveys (Cabeza de Vaca 1542: Chapter 4). The hostile response of the native population to expeditions during the 1520s may confirm this hypothesis.

Official credit for the discovery of Florida belongs to Juan Ponce de León, whose voyage of 1513 took him along the eastern coast of the peninsula (Tebeau 1971:21). He is believed to have sailed as far north as the mouth of the St. Johns River before turning south, stopping in the Cape Canaveral area and possibly at Biscayne Bay. The expedition then continued southward, following the Florida Keys, making contact with the local Tequesta people en route before turning to the northwest, where they encountered the Calusa along the southwestern Gulf Coast.

Other Spanish explorers followed Juan Ponce de León, and over the next 50 years the Spanish government and private individuals financed expeditions hoping to establish a colony in "La Florida." In 1565, King Philip II of Spain licensed Pedro Menéndez de Avilés to establish a settlement in St. Augustine, Florida. Between 1565 and 1566,

Menéndez sailed along the Florida coast placing crosses at various locations and leaving Spaniards "of marked religious zeal" to introduce Christianity to the Native American people (Gannon 1965:29). Settlements with associated missions were established at St. Augustine, San Mateo (Ft. Caroline) and Santa Elena, and smaller outposts and missions were located in Ais, Tequesta, Calusa, and Tocobaga territory (Gannon 1965:29).

Jesuit missions were established in what are now referred to as the Central Peninsular Gulf Coast and Glades archaeological regions, including the mission of Carlos at Charlotte Harbor, the mission of Tocobaga at Tampa Bay, and a mission at a Tequesta village at the mouth of the Miami River. In March of 1567, Menéndez sailed into the Bay of Tocobaga (now Old Tampa Bay) with a group of 30 soldiers, Captain Martinez de Coz, and Fray Rogel. The mission was established at the village of the cacique known as Tocobaga and consisted of 24 houses (Velasco 1571:161). It was abandoned in January of 1568 due to the hostility of the Native Americans (Solis de Meras 1964:223–230). This Jesuit mission represented the final Spanish attempt to colonize the region.

In 1567, Brother Francisco Villareal was sent to one of the large Tequesta villages located on Biscayne Bay. In 1568, a skirmish between the Spanish soldiers and the Tequesta Indians temporarily closed the mission. By the end of 1568, the Tequesta were willing to reopen the mission, largely due to the work of Don Diego, a Tequesta who had visited Spain. Despite zealous attempts, the native groups in Florida continued to resist conversion, and in 1572 Jesuit authorities decided to abandon their missionary efforts in Florida.

Undaunted, Menéndez turned his attention to another order, the Franciscans, and entreated them to send priests. The Franciscan mission effort was most successful in the northern areas of Florida. One possible reason may have been differences in Native American settlement patterns and economies. According to Milanich (1978:68), the failure of the Spanish missions among the southern Florida native populations was due partially to the groups' subsistence pattern, which required seasonal movement for maximum resource exploitation. Consequently, for the remainder of the First Spanish period (1565–1763), southern Florida was virtually ignored as the Spanish concentrated their efforts in the northern half of the peninsula.

Another attempt to build a mission in southeastern Florida took place nearly 150 years after the establishment of St. Augustine. Because it was in Spain's best interest to maintain control along the Florida coastline and alliances with the native groups inhabiting the coast, a missionary effort was supported in the Biscayne Bay area (Parks 1982:55–65). Father Joseph María Monaco and Joseph Xavier Alaña were sent from Cuba in 1743, and arrived at a Native American village located at the mouth of the Miami River. The village did not appear any more receptive towards accepting Christianity than before. After Joseph Xavier Alaña conveyed this to the Governor of Cuba, the mission was closed, and the fort they had erected was destroyed to prevent its fall into hostile hands (Parks 1982:55–65). Although the Spanish were resigned to the fact that missionization and settlement of South Florida came at too high a price, they did strive to maintain good relations with the various native people who lived in the area.

By the beginning of the eighteenth century, the Native American population of South Florida had declined considerably as a result of disease, slave raids, intertribal warfare, and attacks from a new group of Native Americans, the Seminoles. The Seminoles, descendants of Creek Indians, moved into Florida during the early eighteenth century to escape the political and population pressures of the expanding American colonies to the north (Wright 1986:218).

During the eighteenth century, Cuban fishermen had established seasonal fishing camps or ranchos along the Gulf coast. These fishermen were engaged in catching mullet and drying them for sale in the Havana markets. By the early nineteenth century, Native Americans were often employed as workers in these "ranchos pescados," which is probably why they were called "Spanish Indians" in Anglo-American documents (Wright 1986:219).

By the end of the eighteenth century, the Seminoles had become the dominant Native American group in the state. Groups of fugitive African American slaves also had settled among the Seminoles by the early nineteenth century (Brown 1991:5–19). Armed conflict with pioneers, homesteaders, and eventually the United States Army resulted in the removal of most of the Seminoles from Florida. This action forced the withdrawal of the remaining Seminole population to the harsh environment of the Everglades and Big Cypress Swamp by the late nineteenth century. Seminole artifacts were recovered from South Indian Fields (8BR23) in Brevard County (Rouse 1951:94) and two Seminole villages are reported to have been in the general vicinity of West Palm Beach, but their exact locations remain unknown (Fairbanks 1978:185).

The first recorded ownership of land in the vicinity of the project area dates back to 1763, the year in which England took over possession of Florida from Spain due to the results of the Seven Years War. William Legge, the Second Earl of Dartmouth, was awarded 40,000 acres of land in the area of present day Kendall from the British crown shortly after the end of the war. Lord Dartmouth had planned to establish a community on the land called the Cape Florida Society, however the plan did not come to fruition before Florida was returned to Spanish possession as the results of the treaties in 1783 that marked the end of the American Revolutionary War (Matkov 2001).

Territorial and Statehood Period (1821–1860)

Miami's earliest permanent land records date from the Second Spanish Period. John Egan's grant from the King of Spain was included as part of his son James's claim after Florida became a territory of the United States in 1821. A commission was set up to validate claims from the Spanish Period. James Egan's claim for the north bank of the Miami River (640 acres) and his mother Rebecca Egan's claim for the south bank (640 acres) were validated in 1825. These two grants included most of the original limits of the City of Miami. Key West resident Richard Fitzpatrick, formerly of South Carolina, purchased the James Egan grant in 1830 for $400. By 1833, he had also purchased the Rebecca Egan grant for $640 and two other grants (Polly and Jonathan Lewis), each 640 acres. These latter two grants were located along the bay, south of Rebecca Egan's grant.

Fitzpatrick cleared the land and was in the process of building a large plantation when the Second Seminole War erupted in late 1835. Early in 1836 Fitzpatrick left the area, and the Seminole Indians burned his plantation to the ground. Just weeks before, as President of the Territorial Council, he had successfully pushed for the creation of Miami-Dade County from the larger Monroe County. The United States established Fort Dallas on Fitzpatrick's property in 1838 and occupied it intermittently until the war ended in 1842.

In 1821, after several years of negotiations with Spain, the U.S. acquired Florida as a territory. The population of the territory at that time was still centered in the northern areas around Pensacola, St. Augustine, and Tallahassee. As more European-American settlers moved into the region, conflicts arose with the Seminole people over available land. Pressure began to bear upon the government to remove the Seminoles from northern Florida and relocate them farther south. The Treaty of Moultrie Creek (1823) restricted the Seminole people to approximately four million acres of land in the middle of the state, running south from Micanopy to just north of the Peace River (Mahon 1967: Rear foldout map). The Seminoles did not approve of this treaty because they were reluctant to move from their established homes to an area that they felt could not be cultivated. Other treaties soon followed such as Payne's Landing (1832) and Fort Gibson (1833), which called for Seminole emigration to the western territories (Mahon 1967:75–76, 82–83). These treaties fostered Seminole resentment of settlers that would culminate in the Second Seminole War.

During the Second Seminole War, the area around Lake Tohopekaliga was a Seminole stronghold. They kept their cattle in the woods around the lake and retreated into the cypress swamp west of the lake at the approach of soldiers (Mahon 1967; Sprague 1964; Moore-Willson 1935). Tohopekaliga means "Fort Site" and the lake was so named because the islands within the lake housed the forts and stockades of the Seminoles (Moore-Willson 1935:29). In January 1837, General Jesup's men encountered the Seminoles near the "Great Cypress Swamp." The soldiers drove the Indians into the swamp, across the "Hatcheelustee" and into even more dense swamp (Sprague 1964:172). On the 28th of January, the army "moved forward and occupied a strong position on Lake Tohopekaliga, within a few miles of the point at which the Cypress Swamp approaches it, where several hundred head of cattle were taken" (Sprague 1964:172). Hetherington (1980:3), citing Major Edward Keenan, a "noted authority on the Seminole Wars," believes that General Jesup's base camp was located in the vicinity of the present-day Kissimmee Airport. The "Great Cypress Swamp" and "Hatcheelustee Creek" referred to by Sprague (1964) are now called Reedy Creek Swamp and Reedy Creek (MacKay and Blake 1839; Mahon 1967:Rear fold out map; USGS Lake Tohopekaliga Quadrangle Map 1953; Hetherington 1980:3).

At the beginning of the Second Seminole War, the conflict was centered near the Withlacoochee region. In 1838, U.S. troops moved south to pursue the retreating Seminoles into the Lake Okeechobee and Everglades regions. Colonel Zachary Taylor was sent to the area between the Kissimmee River and Peace Creek. Colonel Persifor Smith and his volunteers were dispatched to the Caloosahatchee River, and U.S. Navy Lt. Levi N. Powell was assigned the task of penetrating the Everglades (Mahon 1967:219–

220). Powell's detachment had several skirmishes with Seminole people near Jupiter Inlet. Powell established a depot on the Miami River and erected Fort Dallas in the approximate location of present-day downtown Miami. For three months, Fort Dallas was a base of operations as Powell led his men into the Everglades in search of the Seminoles (Gaby 1993:47).

The Second Seminole War had a deleterious effect on new settlement in Florida. To encourage settlement in the middle portion of the territory after the war, the Armed Occupation Act of 1842 offered settlers 160 acres of land at no cost, provided they built a house, cleared five acres, planted crops, and resided on the land for five years. Any head of a family, or single man over 18 years of age and able to bear arms, was eligible to receive a homestead. This act, plus the end of the Second Seminole War, created a small wave of immigration by Anglo-American pioneers to central Florida. Most of these immigrants were Anglo-American farmers and cattle ranchers, or "crackers," from the southeastern United States (Gaby 1993). During the latter years of the Territorial Period, south Florida represented a frontier with few European-American settlers who were primarily involved in the milling of lumber and arrowroot.

By the time the war was over, Richard Fitzpatrick had lost interest in the area and sold his entire holdings to his nephew, William F. English, for $16,000. English platted the "Village of Miami" on the south bank of the Miami River in 1843 and began building a large plantation house and slave quarters of native oolitic limestone on the north bank. When another Indian outbreak brought the troops back to the Miami River in 1849, English went to California to seek his fortune during the gold rush as a means to finance his new city. He was accidentally killed in California. The Army occupied the English plantation (renamed "Fort Dallas") improved the two stone buildings he had constructed, and added several others.

The troops left a year later, only to return and reactivate Fort Dallas in 1855, at the beginning of the Third Seminole War. During this occupation, the Army again occupied English's stone buildings. Military engineers also constructed the region's first road, connecting Fort Dallas with the military outpost at Fort Lauderdale. William Wagner, a settler who followed the troops to the wilderness, decided to stay after the war. Sometime between 1855 and 1858 he built a simple frame house on a creek that branched off the Miami River. This house and English's slave quarters (Fort Dallas) are now located in Lummus Park, and are the only known buildings of the pioneer era that remain in downtown Miami. The Miami Post Office opened in December 1856, receiving mail once a month by boat from Key West. When the Third Seminole War ended, many soldiers settled in the area and Fort Dallas became the nucleus of a permanent community (Patricios 1994:12, 19).

During the latter years of the Territorial Period, South Florida was a frontier with few European-American settlers. In 1842, William F. English established a plantation and platted the "Town of Miami" on land he had purchased south of the Miami River. Few settlers were attracted to the area and English abandoned his property when the Third Seminole War began in 1855. The Army reactivated Fort Dallas during the war,

completing its stone buildings and adding new wooden structures. Military engineers also constructed the region's first road, connecting Fort Dallas with the military outpost at Fort Lauderdale. The Miami Post Office opened in December 1856, receiving mail once a month by boat from Key West. When the Third Seminole War ended, many soldiers settled in the area and Fort Dallas became the nucleus of a permanent community (Patricios 1994:12, 19).

Civil War and Post-War Period (1860–1898)

With the beginning of the Civil War, cattle were needed to help feed the Confederate Army. Herds from as far south as central Florida were driven to railheads near the Georgia border. However, cattle ranchers discovered they could sell their herds in Cuba for a greater profit and began dealing with blockade-runners. The Union attempted to stop all shipping from Florida ports, but blockade-runners were too abundant. Cattle ranchers from all over Florida drove their cattle to Punta Rassa to be shipped to Cuba for payment in Spanish gold. Jacob Summerlin, a successful cattle rancher from the Fort Meade area, gave up his contract with the Confederate government to supply cattle and in 1863 teamed up with James McKay from the Tampa area. McKay, a successful and daring blockade-runner, supplied the schooners and Summerlin the cattle. It is not known how many cattle were shipped from the port during the Civil War. However, after the war as cattle continued to be shipped, it is reported that in the decade between 1870 and 1879 over 165,000 head were shipped (Grismer 1949).

The post-war economic conditions of much of the rest of the south contributed to changes in the economy of the Tampa Bay area and communities to the south along the Gulf Coast. An influx of poor farmers coinciding with the southward movement of cattle ranches made the economic stability of the area dependent upon reliable sources of overland freight transport. Beginning about 1870, many settlers began to buy the land on which they had homesteaded for so many years in anticipation of the coming railroad (Hetherington 1980:86).

In the 1880s, interest in the resources of South Florida increased due in large part to people like Hamilton Disston and Henry B. Plant. By 1881, the State of Florida faced a financial crisis involving a title to public lands. On the eve of the Civil War, land had been pledged by the Internal Improvement Fund to underwrite railroad bonds. After the War, when the railroads failed, the land reverted to the state. Almost $1 million was needed by the state to pay off the principal and accumulated interest on the debt, thereby giving clear title.

Hamilton Disston, son of a wealthy Philadelphia industrialist, contracted with the State of Florida in two large land deals: the Disston Drainage Contract and the Disston Land Purchase. The Drainage Contract was an agreement between Disston and the state in which Disston and his associates agreed to drain and reclaim all overflow lands south of present-day Orlando and east of the Peace River in exchange for one-half the acreage that could be reclaimed and made fit for cultivation.

The Disston Land Purchase was an agreement between Disston and the state in which Disston agreed to purchase Internal Improvement Fund Lands at $1.25 an acre to satisfy

the indebtedness of the fund. A contract was signed on June 1, 1881 for the sale of 4,000,000 acres for the sum of $1 million, the estimated debt owed by the Improvement Fund. Disston was allowed to select tracts of land in lots of 10,000 acres, up to 3,500,000 acres. The remainder was to be selected in tracts of 640 acres (Davis 1938:206–207). Before he could fulfill his obligation, Disston sold half of this contract to a British concern, the Florida Land and Mortgage Company, headed by Sir Edward James Reed (Tischendorf 1954:123).

Disston changed Florida from a wilderness of swamps, heat, and mosquitoes into an area ripe for investment. This enabled Henry B. Plant to move forward with his plans to open the west coast of Florida with a railroad-steamship operation called the Jacksonville, Tampa & Key West Railway. Through the Plant Investment Company, he bought up defunct rail lines such as the Silver Springs, Ocala & Gulf Railroad, Florida Transit and Peninsular Railroad, South Florida Railroad, and Florida Southern Railroad to establish his operation (Mann 1983:68; Harner 1973:18–23). In 1902, Henry Plant sold all of his Florida holdings to the Atlantic Coast Line, which would become the backbone of the southeast (Mann 1983:68).

During 1881 and 1882, channels were dug between the lake systems to the north and the Kissimmee River (Tebeau 1971:288). The Atlantic and Gulf Coast Canal and Okeechobee Land Company was responsible for opening up Lake Okeechobee to the Gulf of Mexico by dredging a channel to the Caloosahatchee River. Disston and his associates received 1,652,711 acres of land under the Drainage Contract, although they probably never permanently drained more than 50,000 acres (Tebeau 1971:280). Drainage operations began and the Florida Land and Improvement Company and Kissimmee Land Company were formed to help fulfill the drainage contract (Hetherington 1980:6).

Private land claims between 1881 and 1883 were probably squatters acquiring the land on which they lived prior to the land transfers under the Disston Land Purchase contract. The flurry of land transfers recorded in the early 1880s was mainly the result of two factors: large influxes of people as a result of the railroads, and the widespread unpopularity of the Disston Land Purchase and Drainage Contracts. The Disston Land Purchase and Disston Drainage Contract were not very well liked among many of Florida's residents. They resented the $0.25 per acre price Disston paid under the land contract, as they were required to pay $1.25 per acre under the terms of the Homestead Act of 1876. Claims also were made that Disston was receiving title to lands that were not swamplands or wetlands (Tebeau 1971:278). Many residents bought up the higher, better-drained parcels of land for speculation, knowing that the surrounding wetlands and flatwoods would be deeded to Disston under the Land Purchase contract. Many hoped that their more desirable land purchases would increase in value.

In 1874, George M. Thew established the Biscayne Bay Company to purchase several of the original land claims and market the property. Julia Sturtevant Tuttle, a resident of Cleveland, Ohio, moved to Florida in 1891, and was so taken with the old Fort Dallas property that she purchased it from the Biscayne Bay Company for $2,000.00. She also

recognized the importance of transportation if the region was ever to progress. Consequently, she negotiated with railroad magnate Henry Flagler to transfer to him half of her acreage along the Miami River in exchange for bringing the Florida East Coast (F.E.C.) Railway to Miami. Flagler agreed, and by 1896 the railroad arrived. Flagler used some of the land he received from Julia Tuttle to build the Royal Palm Hotel on the north bank of the river across from Brickell's Point. Flagler extended his railway to Homestead, completing the line by 1903 (Mann 1983).

Miami became a "company town" as Flagler influenced virtually every aspect in the germinal city. *The Miami Metropolis*, first published in May 1896, became Flagler's mouthpiece, and advocated the incorporation of the town. The City of Miami was incorporated three months after the construction of the railroad, with a population of 502 voters. When the City of Miami was incorporated on July 28, 1896, the mayor and aldermen were all considered "Flagler men." A.L. Knowlton platted Miami for Flagler with the northern boundary of Julia Tuttle's property at First Street (now North 11th Street). The numbers ran south so that 12th Street is what is now Flagler Street. Avenues ran alphabetically starting with Avenue "A" at the bayfront. Flagler laid out a makeshift bridge over the Miami River at Avenue "G" (NW 2nd Avenue) near the F.E.C. railroad docks. He then dredged the channel across the bay into the Miami River.

The historic plat map for the project area was also examined and no evidence was found of military forts, historic homesteads or roads (Table 3).

Table 3. Land Apportionment in the Project Area as Recorded in the Tract Book Records

Township 55 South, Range 39 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
14	E ½ of NE ¼ and S ½ of Sec.	Jacksonville, Tampa, and Key West Railway Company	July 10, 1886
14	W ½ of NE ¼ & E ½ of NW ¼	Frederick G. Ross	June 23, 1919
15	All	Plant Investment Company	December 26, 1892
16	All	Plant Investment Company	December 26, 1892
17	All	Plant Investment Company	December 26, 1892

The Twentieth Century (ca. 1900-Present)

Small-scale settlement in south Miami-Dade County began in the late-1800s, when various pioneers moved to the area to take advantage of the land available through the various Homestead Acts passed by the U.S. government during the mid- to late-nineteenth century. At this time, few settlers inhabited the area around Snapper Creek, which is now the northern edge of Kendall. Two Seminole settlements were also located in the Kendall area during the early part of the twentieth century. Roots from the cycad plant (coontie) were plentiful in the area, and the Seminoles desired these (Matkov 2001:119).

The railroad survey for the Miami-Homestead extension of the F.E.C. Railway through south Miami-Dade County was completed in 1903; the tracks were completed in 1904, the same year the F.E.C. platted the town site for Homestead. The extension completion provided the impetus for further development (George 1995:34). In order to promote his railroad, Flagler began marketing land in the area as farmland, and platted town lots from the large amounts of land the F.E.C. acquired from the State. Before selling the land, he made several "improvements" to the area to attract future buyers, such as the dredging and installation of drainage canals in the low lying and swampy areas (George 1995:36). As a result, railroad towns gradually emerged as farmers purchased land and settled the area. Several important railroad towns were located in south Miami-Dade County such as Goulds, Black Point, Princeton, Naranja, Modello, and Homestead. These railroad towns reflect the evolution of commerce and transportation in the southernmost portion of Florida.

The F.E.C. established the Kendall railroad station at the intersection of today's US 1 and SW 98th Street in 1904. A small farming community quickly developed around the depot, and a general store and post office was soon to follow. One of the most notable areas of the early Kendall community was the Flagler Groves, which consisted of 70 acres of citrus farms on land given to Flagler by the State of Florida (Matkov 2001:119).

The land around the area known as Goulds was homesteaded in 1900 by African-American settlers. One of the first to file a homestead in the area was William Johnson, who took up the quarter section from what is now S.W. 216th Street to S.W. 224th Street. This parcel later became the center of downtown Goulds (Taylor 1980:89). However, the town of Goulds did not begin to grow or prosper until the F.E.C. built a siding there in 1903 near the present day intersection of S.W. 216th Street and U.S. 1. Gould's Siding, as it was originally called, was named after Lyman B. Gould who was in charge of cutting railroad ties for Flagler's Key West Extension (George 1995:44). Many blacks settled in Goulds to work for the railroad, the Drake Mill, and for the homesteaders in the surrounding areas who operated large farms and groves (Taylor 1980:90). Goulds Siding came to be called Goulds and became the first fruit and vegetable packing center for the Redland District. The Redland District was an agricultural region noted for its production of grapefruit, oranges, and avocados (Bureau of Historic Preservation 1996:3). As early as 1912, there were five packing houses, a ketchup factory, boarding houses, two stores, a post office, restaurant, school, and a railroad depot located in Goulds (Taylor 1980:89).

Homestead was the most important railroad-related town in south Miami-Dade County. This community began just prior to the arrival of the railroad. It was initially settled in 1903 by William Alfred King, section foreman for the F.E.C., and approximately a dozen black workers. In June of 1904, just one month before the railroad arrived, the town was formally platted by John S. Fredericks, and officially named "Homestead." The town was sited on the east side of the railroad right-of-way and parallel to the tracks (Research Atlantica 1994:11). It quickly developed into the center of business for the surrounding small settlements, known as the Redland District.

By 1905, Homestead served as the base of operation for Flagler's planned construction of the Key West Extension of the F.E.C. Railway. As many as four thousand men were a part of the railroad extension's labor force, and a number of the workers and their families settled in Homestead during this period. As the population continued to expand during the first decade of the twentieth century, new social institutions such as a local school and the First Baptist and Methodist churches were established (Research Atlantica 1994:17). Homestead was incorporated in 1913, with a population of 121 people and 28 registered voters.

Land reform efforts began in earnest at the turn-of-the-century under the agenda of 1900 governor-elect, William Sherman Jenning, who promised to drain the Everglades. The Everglades Drainage District was established in 1905 and by 1909 drainage began with the construction of the Miami Canal. As a result, flooding was controlled in the western part of the county and the land became available for agriculture and development. By 1912, small farming communities of the Redland District materialized on land west of NW 27th Avenue that was formerly under water (Janus Research 1999:26-27). By 1917, four canals were draining the Everglades from the southeast end of Lake Okeechobee towards Miami, Ft. Lauderdale, and Boca Raton (Clement 2002). The three canals that currently run off the southeast end of Lake Okeechobee are the Miami, West Palm Beach and St. Lucie Canals. The North New River Canal extended between Lake Okeechobee to the New River and was dredged between 1906 and 1911. A canal extending from the Caloosahatchee River in southwestern Florida was also dredged starting in 1906. Yet another canal was the Florida East Coast Canal (later the Intracoastal Waterway) which was completed in 1911, it stretched from Jacksonville to Biscayne Bay (Clement 2002). In the late 1920s, after two hurricanes had devastated the area, Congress passed the River and Harbor Act of 1930, and the construction of levees on the north and south sides of Lake Okeechobee began.

The idea of constructing the Tamiami Trail, a highway across the Everglades, which would link the Gulf and Atlantic coasts in southern Florida, was first promoted by James Franklin Jaudon in 1915. Jaudon, a former Miami-Dade County tax assessor, wanted to develop property he owned in the western Everglades and around Chevalier Bay in northern Monroe County, and believed that construction of the Tamiami Trail would make this feasible (Burnett 1988). Apparently with this scheme in mind, Jaudon, L. T. Highleyman, eventual Supervisor of the Southern Drainage District, and R. E. McDonald purchased 20,000 acres of land in the Everglades from the Trustees of the Internal Improvement Board in 1917 (Jaudon 1924). Jaudon and a promotion group then convinced Lee, Miami-Dade, and Monroe county officials of the value and feasibility of a road and canal through his landholdings. At the time, there was even serious talk of the construction of a railroad alongside the Trail and Canal (Jaudon Papers 1917–1934). Consequently, Miami-Dade County raised $125,000 and graded a rough road from the eastern part of the county to the edge of the Everglades, while Lee County worked on the western end of the highway. Work on the project temporarily stopped during World War I, when the war and problems connecting the Miami-Dade and Lee County portions delayed the road's completion.

After World War I, Florida experienced unprecedented growth. Many people relocated to Florida during the war to work in wartime industries or were stationed in the state as soldiers. Bank deposits increased, real estate companies opened in many cities, and state and county road systems expanded quickly. Earlier land reclamation projects created thousands of new acres of land to be developed. Real estate activity increased steadily after the war's end and drove up property values. Prices on lots were inflated to appear more enticing to out-of-state buyers. Every city and town in Florida had new subdivisions platted and lots were selling and reselling for quick profits. Southeastern Florida, including cities such as Miami and Palm Beach, experienced the most activity, although the boom affected most communities in central and South Florida (Weaver et al. 1996:3).

Between 1919 and 1920, agricultural production in the area reached record levels. In the early 1920s, the real estate "boom" hit Miami-Dade County. Between 1920 and 1923, the population of Miami-Dade County doubled. Consequently, the population of Homestead reached 1,307 people in 1920 (Bureau of Historic Preservation 1996:5). Development in the Kendall area, which was slow in the first decades of the twentieth century, grew in pace during the land boom.

The real estate boom was created in part by the desirable sub-tropical climate of the area, the abundance of available land created by the draining of the Everglades, and the visions and schemes of promoters and developers. Real estate was rapidly changing hands and several new residential subdivisions were platted. Beginning in 1916, promoters and developers placed advertisements about Miami in northern magazines and newspapers in hopes of attracting more buyers to the area. This advertising expanded yearly (Sessa 1950: 47), and the demand for land gradually increased. During the boom years, Kendall had some large building projects that were primarily institutional in nature. The Dade County Home and Hospital and a prison work farm were constructed at this time (Matkov 2001:120). Similarly, the area's accessibility looked increasingly promising as the construction of the Tamiami Trail continued; 43-miles extending west from Miami-Dade were complete as of 1918.

During the Florida Boom, the F.E.C. added a second track and the Seaboard Air Line Railroad (Seaboard) arrived in Miami in 1927 adding competition to railroad services in South Florida. The Seaboard first entered Florida in 1899 when it merged with the Florida Central & Peninsular System. Under the leadership of new President, S. Davies Warfield, the Seaboard was able to challenge the F.E.C. and capitalize on the steady increase of rail traffic into Florida during the 1920s. In 1925, the Seaboard began its extension from West Palm Beach to Homestead (Mann 1983:127-129).

During the 1920s, like the rest of Florida, Homestead was experiencing a land boom. Real estate was rapidly changing hands and several new residential subdivisions were platted. The Homestead Bond and Mortgage Company financed the construction of over 30 residences at this time. In the 1920s, Krome Avenue evolved into the City's downtown business center. Homes along the south end of Krome Avenue were even relocated to accommodate the burgeoning commercial area (Research Atlantica 1994:21).

Road building also became a statewide concern during the 1920s, as responsibility shifted from a local to a state level. Roads made remote areas of the state accessible and allowed the boom to spread. On a daily basis up to 20,000 people were arriving in the state. Besides the inexpensive property, Florida's legislative prohibition on income and inheritance taxes also encouraged more people to move into the state. Work on the Tamiami Trail resumed after World War I ended. Undaunted by depleting funds, Jaudon surveyed and staked out the most feasible route. In the spring of 1923, a group of Lee County promoters organized a motorcade to attract public interest and demonstrate that automobile travel across the Everglades was possible. On April 4, 1923, these motorists, called the "Trail Blazers," left Fort Myers to drive across the flooded and rock-bottomed prairies of the Everglades. The expedition, which consisted of 10 cars, 23 men, and 2 Seminole-Miccosukee guides, took 23 days to reach Miami and captured the attention of the nation as daily reports were wired to the press (Federal Writers' Project 1984:406; Covington 1993:202; Gaby 1993:163).

This trip stimulated interest in building the highway and also demonstrated the viability of overland automobile traffic across the Everglades. Following this journey Barron G. Collier, a millionaire tycoon, guaranteed completion of the highway contingent on the establishment of a new county named after him in what was then southern Lee County. It also required the re-routing of the road across Collier's holdings in this new county, thereby bypassing Monroe County and Jaudon's original tract. Although Collier's financing depleted by 1926, the State Road Department took over the final 12 miles of the Everglades section of the road which would link the Miami-Dade County and Lee County portion. When the 143-mile-long Tamiami Trail officially opened on April 25, 1928, it had taken 13 years to build at a cost of $13 million (Tebeau 1966:220–232; Burnett 1988:41–44).

By the end of 1925, over-speculation and over-development threatened South Florida's vigorous and unprecedented growth. Unfortunately, throughout Florida, the prosperity associated with the real estate market was short-lived. Additionally, in August of 1925, the F.E.C. Railway announced an embargo on all carload freight except fuel, petroleum, livestock, and perishable goods (Sessa 1950:264-265). This embargo delayed the arrival of supplies for building contractors and forced them to dismiss workers. Compounding the problems posed by the embargo was an active anti-Florida campaign in the northern states. Major magazines did articles on the unscrupulous practices of Florida developers and warned of the dangers of purchasing Florida real estate.

Another blow to the boom came with two major hurricanes in 1926 and 1928. Because there had not been a major storm in Miami-Dade County for 16 years, the 1926 hurricane took everyone completely by surprise (Tebeau 1971:387). Following the hurricane, most of South Florida lay in ruins. Kendall's Flagler Groves lost its 7,000 citrus trees during the hurricane (Matkov 2001:120). Damage to the area was staggering, and the "boom" period ended. The collapse of the Florida Land Boom and the onslaught of the Great Depression were worsened by the impact of these storms. Similarly, both the F.E.C. and the Seaboard entered receivership (Florida Department of Transporation n.d: 3).

During the Depression years of the 1930s, the number of people residing in south Miami-Dade County dramatically decreased. While much of the State would suffer with the Land Bust and the Depression soon afterwards, Goulds remained stable due to its agricultural heritage. In addition to the depressed real estate market, the agricultural industry was suffering due to overproduction, high tariffs, drought, and Mediterranean fruit fly infestation (Bureau of Historic Preservation 1996:6). However, government sponsored projects, such as the Civilian Conservation Corps (CCC) projects, were taking place in the area. CCC workers were housed in barracks in Kendall's Dadeland area, and they conducted numerous improvement projects, such as the construction of Matheson Hammock's marina and beach area (Matkov 2001:120). Similarly, tourists continued to flock to Greater Miami, especially Miami Beach. Many tourists made day trips to South Miami-Dade County to see the farm and grove country or the Everglades. Tourist attractions began to spring up all over Florida. The Monkey Jungle opened three miles to the west of Goulds in 1932. This attraction was founded by a New York commercial artist, Joseph DuMond, on a ten-acre hammock. First it began as a monkey research facility, but eventually DuMond began charging a ten cent admission to view the monkeys in a "rain forest" habitat. By the end of the 1930s, the Monkey Jungle had become one of Miami-Dade County's premier tourist attractions (George 1995:127, 129).

In 1934, the Everglades National Park Project was authorized by Congress to instate a national park. To establish the Everglades National Park over two million acres of land had to be acquired through public and private donations (Clement 2002); that would take 14 years. Another hurricane hit Florida in 1935, this time destroying Flagler's Key West Extension in the Florida Keys (Bureau of Historic Preservation 1996:6). Fortunately, several years later, in 1938, the portions of the Overseas Highway to Key West were created on the old railroad right-of-way; therefore, Homestead was not cut off from travelers heading south to the Keys. Kendall was also hit by this hurricane, which completely destroyed the Flagler Groves (Matkov 2001:120).

Farm production in South Miami-Dade County was slowly gaining momentum in the late 1930s and by the U.S.'s entrance into World War II in 1941 agricultural output significantly increased. Many farms were dedicated to winter production and had developed highly successful irrigation and fertilization methods after years of research and work (George 1995:139). A devastating hurricane struck south Miami-Dade in 1945, which razed the F.E.C. Railway station in Goulds to the ground (George 1995:137).

With the United States involvement in World War II and the influx of military personnel and their families into south Miami-Dade County in the 1940s, growth in the area was revitalized. Military activity associated with World War II and the post-World War II boom revitalized the entire Redland District from Kendall to Homestead. Kendall had a Civil Air Patrol unit during the war that served as enemy aircraft spotters and operated out of Brown's field. Additionally, the former CCC barracks were converted for use as a German prisoner of war facility. Two hundred thirty-one captured men were held at the camp and labored as plumbers, mechanics, and farm hands (Matkov 2001:121). During these years, the establishment of the Homestead Air Force Base greatly influenced Homestead's economic expansion. The base was primarily utilized as a transportation

depot and training station for the Air Transport Command. At the end of the war in 1945, the base was temporarily closed, but soon after reactivated as the first Strategic Air Command Base (Bureau of Historic Preservation 1996:7). The close of the war and the expansion of the base brought new people to the area as current and former soldiers decided to settle in Homestead.

In 1947, Everglades National Park was established on 1.3 million acres of land versus the nearly two million set in 1934. In 1949, the Congress created the Central and Southern Florida Flood Control Project (C&SF) to deal with flood, drought and hurricane issues in Florida. One year later, the Florida legislature created the Central and Southern Florida Flood Control District (renamed South Florida Water Management District [SFWMD] in 1976) to manage the Army Corps of Engineers large water delivery system (SFWMD n.d.; Clement 2002). One outcome of this project was the construction of a system of levees in Miami-Dade County and the construction of roadways, such as the Krome Avenue Extension along the levees.

The Miccosukee Tribe of Indians maintains a strong presence in South Florida and has three reservations in the area along, Tamiami Trail, Alligator Alley, and Krome Avenue. In January 1962, the Miccosukee Tribe of Indians of Florida was incorporated. Up until this point, the federal and state governments had generally considered the Miccosukees to be part of the larger Seminole Tribe. The Miccosukees were granted reservation land adjoining the Tamiami Trail approximately 40 miles west of Miami. In 1965, the Florida legislature divided the former State Indian reservation, awarding three-quarters of the acreage to the Miccosukees because they had no federal reservation (Kersey 1992:119). This land is now the location of the Alligator Alley Reservation, located west of Ft. Lauderdale and north and south of State Highway 84 (Alligator Alley). Miccosukee land near Miami also was accepted into federal trust under the Indian Gaming Regulatory Act of 1988. This land is now known as the Krome Avenue Reservation and is located at the intersection of Krome Avenue and the Tamiami Trail. The Miccosukee Indian Bingo Center was opened on this land in 1990. Six years later the Miccosukee Resort and Gaming Center located at 500 S.W. 177th Avenue opened on June 14, 1996 (Miccosukee Resort and Gaming 2002).

In 1967, the Kendall-Tamiami Executive Airport opened. This airport replaced the original Tamiami Airport which was located to the north on the south side of the Tamiami Trail, at the location of the present-day campus of the Florida International University. By the 1970s this 1,360 acre airport boasted more than 500 based aircraft and serviced over 500,000 annual flight operations (Handrahan 1999).

In the latter half of the twentieth century, the one event to have the greatest impact on Homestead was Hurricane Andrew. On August 24, 1992, the ferocious storm struck South Florida, and Homestead was one of the areas hit the hardest by the hurricane. With winds over 150 m.p.h., approximately 80 percent of Homestead's homes were destroyed (Bureau of Historic Preservation 1996:8). The category five storm damaged 75 percent of Homestead Air Force Base, prompting Defense officials to close the active duty base and move military units and families. Since then, the base has been divided, with about 75

percent turned over to the base closure agency and the remainder serving as an Air Force reserve station (Mobile 1999). Today, the hurricane's effects are still evident throughout the city, as the residential areas feature numerous vacant lots and the commercial buildings downtown exhibit recent repairs and modern renovations.

At the Tamiami-Kendall Executive Airport, the hurricane destroyed 375 based aircraft, the airfield lighting system, and 200,000 square feet of buildings on the airport (Handrahan 1999). The rebuilding effort was slow in completion, but the airport eventually rebuilt the lighting system, and 132,000 square feet of buildings. The airport also constructed a new taxiway and two 2,500-foot runways, and added 4,000 feet of taxiway, a parallel runway crossing and new runway turnoffs (Handrahan 1999). In 1999, the airport operations had recovered from the hurricane and air traffic operations had increased to 193,000 annual flight operations and 400 based aircraft (Handrahan 1999.)

FLORIDA MASTER SITE FILE SEARCH AND LITERATURE REVIEW

Evaluations of cultural resources' significance cannot be made without proper attention to the resources' placement within the context of other resources in the area. Therefore, a consideration of these resources within the larger context is essential.

Cultural resource surveys conducted within the general area include the *Dade County Historic Survey, Phase II, Final Report*, prepared by Metropolitan Dade County in 1989; *A Reconnaissance Archaeological Survey of the Krome Groves Parcel, Miami-Dade County, Florida* prepared by Robert Carr and Victor Longo in 2005, *Cultural Resource Assessment Survey of the Proposed Improvements to the Homestead Extension of the Florida Turnpike (HEFT) from SW 211th Street to the HEFT/SR 874 Interchange, Miami-Dade County* prepared by Janus Research in 2003, and a *Cultural Resource Survey of Krome Avenue (SW 177th Avenue/SR 997) from SW 136th Street (Howard Drive) to US 27 /SR 25/Okeechobee Road* prepared by Janus Research in 2004.

A background search of archaeological and historic resources recorded in the FMSF revealed no previously recorded resources within a mile of the project APE.

PROJECT RESEARCH DESIGN AND SITE LOCATION MODEL

The background research and literature review, in conjunction with pertinent environmental variables, contributed to the formulation of project-specific field methods designed to locate and evaluate previously unrecorded archaeological sites and historic structures within the project area.

Among the fundamental concerns of students of prehistory and history is the relationship between human social groups and the environment. Interpretations of observed settlement patterns have often been dependent largely on the relationship between site location and the natural environment. This assumed environmental-settlement relationship appears to be valid when considering precontact hunter-gatherer and early historic societies with subsistence rather than market-oriented economies.

In southeastern Florida and the Keys, a major research emphasis focuses on the patterns of settlement and land use for environmentally distinct areas around the Glades region. For example, the precontact and early historic use of coastal areas on the mainland is fairly well defined from such projects as the Granada excavations in the early 1980s (Griffin et al. 1982). The patterns of use, the resources gathered, and the chronology of sites in the Keys is less well known. The extraordinarily rich resources of the South Florida coast encouraged precontact inhabitants to choose a relatively sedentary existence. This, in turn, stimulated a rapid rate of population growth that necessitated a centralization of power and organization to resolve disputes and redistribute food and other resources effectively (Widmer 1988:439-448). How the rich and ranked coastal populations related to those living farther south is unclear. The discovery of significant sites in the Keys, which could be used as a comparison with the known coastal middens would help resolve this question.

A second research question deals with the differences in health between inland and coastal groups, and between the elite (or higher ranked) and lower status groups. The comparison of burial sites of people from the interior and coastal burials could potentially reveal similarities and differences in the ways of life between inland and coastal dwellers. The study and comparison of skeletal remains also has the potential to identify differences in nutrition, pathology and disease occurrence, occupations or physiological stress, and many other indications of daily life among the Native Americans who lived in South Florida prior to the arrival of the Europeans.

Historical archaeology addresses many of the same types of research questions noted above. However, because of the existence of historic records, such as maps, documents, letters, probate inventories, and photographs, these questions are framed and interpreted within a different context. The historic record is used not only to assist in the location of sites and the identification and interpretation of specific features and artifacts, but to also provide a context from which to formulate questions about the past.

Settlement pattern, social organization, health, economic development, and adaptation are all important questions that need to be explored. This is particularly true for the post-

contact period in Florida because most historical archaeological research focuses on the Colonial period (ca. 1513–1821). The majority of these studies address the effects of Spanish expansion and settlement on the Native American people of Florida (Hann 1988; McEwan 1994; Milanich 1995). However, attention also has been directed to the development of a distinctive Spanish-American cultural tradition (Deagan 1983, 1985; Hoffman 1994).

In comparison, relatively little research has focused on the later periods of Florida history. Consequently, little is known archaeologically about the nineteenth or early twentieth centuries. Some examples of questions that could be addressed through archaeological research include the locations and settlement patterns of early pioneer homesteads; the ways in which early settlers adapted to the Florida frontier; consumer behavior; the nature of early industries; and patterns of land development.

Precontact Archaeological Site Location Model

The literature search and site file review contributed to the determination of zones of archaeological site potential for the proposed corridor. Based on the archaeological literature concerning the validity of such site predictive models and the various environmental variables used to formulate such predictions, four environmental variables were employed in predicting precontact site potential: distance to fresh water, soil type (soil drainage), distance to hardwood hammocks, and relative elevation. Soil type and relative elevation relate to the water drainage pattern found in a particular area.

Fresh water is obviously an important resource, as the need for water is universal. This variable would have been of greater importance during the Paleoindian and Early Archaic periods (14,000–7500 BC) when the perched water system was more restricted. Access to water during the precontact and early historic periods would have been from transverse sloughs and small swamps of the Everglades.

The characteristics of soils have been used successfully by several researchers in the formulation of predictive models for precontact site location. In general, soils with an organic pan, with underlying marl or clays, and with slow to moderate internal drainage tend to retain water or be inundated. Areas with a low elevation relative to perched water systems tend to be wet or inundated. Although wet areas can contain abundant wildlife and plant resources, they make poorer habitation areas when better-drained locations are available. Soil information is useful in urban areas because subsurface features may have been buried, but not necessarily destroyed, by modern activities. Subsurface features such as filled drainages or sloughs that would not be identifiable during the field inspection can sometimes be identified on soil maps.

Soils within the project area consist primarily of made land. However, soil characteristics alone are not necessarily the best predictors of site location in this region. Other variables, such as vegetation and the presence of hammocks and natural wells serve as more reliable indicators of site location. Tropical hammocks provide a variety of resources, which would have been exploited by the native people who lived in the region.

Their use by precontact, Seminole and modern hunters, campers and permanent residents is well documented. One obvious reason for their use is that they are not prone to flooding, except perhaps during episodes of very high water. Yet, hammocks are moist enough to retard the development and spread of fires (Austin 1992). The thick foliage of hammocks also provides a great deal of shade as well as serving to moderate temperatures year-round. The thick canopies of hammocks also provide good shelter during periods of heavy weather. Mature hammocks are noted for a lack of ground cover vegetation due to the closed canopy above shading out younger trees, herbs and shrubs. Thus, mature hammocks offer enough open space for habitation and activity areas. Finally, many fruits, nuts and tubers are available in hammocks that are important as human food sources as well as for their ability to attract game animals (Pepe and Carr 1999).

Historic Archaeological Site Location Model

Historic period sites frequently co-occur with precontact archaeological sites. This is often the result of environmental conditions found desirable by both groups: well-drained or better-drained upland knolls near transportation routes (i.e., historic trails, military roads, major rivers, and coastal zones). Use of the study area during the earliest historic periods (ca. 1513–1821) was sporadic, at best. Groups of individuals may have passed through the region surrounding the proposed project area, but none are known or suspected of having settled or camped within the boundary of the proposed project corridor.

During the nineteenth century (post-1821), historic settlement tended to follow the isolated homestead or farmstead pattern. Individual families or groups of related families often built homesteads on the better-drained, hardwood hammocks. There were usually several miles between these settlements to allow room for farm fields. However, none are known to have settled in the area.

A review of the 1870 historic plat map for Township 52 South, Range 41 East (Florida Department of Environmental Protection [FDEP] 1870) indicates that there are no military forts, roads, encampments, battlefields, homesteads, or historical Native American villages or trails were located within at least three miles of the project area.

Archaeological Site Potential Zones

Zones of archaeological site location were designated based on previous research conducted within the Glades cultural region and Miami-Dade County. The project study area is located in what was once the Everglades. Archaeological sites in the Everglades are located on tree islands or remnant tree islands. High site potential zones are defined as those areas that would have historically contained tree islands and areas indicated by previous documentary research to be associated with historic buildings or activities. Areas of high site potential are tested at roughly 25-m (82-ft.) intervals.

Low site potential zones are defined as those areas of very poorly drained locales not otherwise designated as high or medium site potential. Areas of low site potential are tested judgmentally at roughly 100-m (328-ft.) intervals within at least 10% of the total project area designated as having low site potential. The review of the 1847 historic plat map revealed that the project APE is located in what was historically the Everglades consisting of sawgrass prairies, the presence of tree hammocks were noted outside of the project area to the south and east. Therefore, the project APE is located in a low site potential zone.

METHODS

Archaeological Survey Methods

Archaeological field survey included a surface inspection which, consisted of a visual inspection of exposed ground to look for evidence of mounds, middens, or other structural evidence of human occupation. Additionally, a careful surface inspection was undertaken in areas of minimal vegetation and/or upturned soil such as drainage ditches, recent clearings, and animal burrows. Subsurface testing employed conventional shovel testing throughout the investigation. In total, one round shovel test was excavated during this investigation. All excavated soil was screened through ¼-in hardware cloth suspended from a portable wooden frame.

The shovel test was placed judgmentally in the low site potential zone. The field crew was instructed to place additional shovel tests in areas they deemed likely for sites, regardless of the potential zone designation or testing interval. The shovel test was placed in the area of the proposed improvements to the west side of the runway. Milled asphalt extended throughout the area of proposed improvements on the eastern side of the runway. Therefore, no subsurface testing was conducted in this area.

Standard archaeological methods for recording field data were followed throughout the project. The identification number, location, stratigraphic profile, and soil descriptions were recorded for every shovel test performed. Field notes also included artifact counts, provenience information, and description of any cultural feature encountered during testing. The location of all shovel tests was recorded on 1"= 100 meter aerial photographs (Appendix A). Any artifacts discovered during surface inspection were collected, bagged by provenience and their location marked on the project aerial maps. Whenever possible, artifacts were recovered in place, with both the vertical and horizontal position of the artifacts recorded.

In addition to surface inspection and subsurface testing, every attempt was made to contact and interview local informants. In many cases, local informants possess invaluable knowledge regarding nearby cultural resources that may be unavailable to the academic or professional Cultural Resource Management (CRM) communities; however, no local informants were available for interview in the vicinity of the study area.

Historic Resources Survey Methods

An architectural historian and at least one technical assistant conducted a historic resources survey in order to ensure that historic resources built prior to 1959 within the project APE were identified, properly mapped, and photographed. The historic resources survey used standard field methods to identify and record historic resources. All resources within the APE received a preliminary visual reconnaissance. Any resource with features indicative of 1950s or earlier construction materials, building methods, or architectural styles was noted on aerial photographs and a USGS Quadrangle map.

For any resource identified in the preliminary assessment, FMSF forms were filled out with field data, including notes from site observations (Appendix A). The estimated date of construction, distinctive features, and architectural style were noted. The information contained on any FMSF Historical Structure form completed for this project was recorded in a database at Janus Research. Photographs were taken with a high resolution digital camera. A log was kept to record the resource's physical location and compass direction of each photograph.

In addition to a search of the FMSF, GIS Data Sets were utilized in conjunction with Miami-Dade County Property Appraiser information to approximate building construction dates within the project APE. Together, the GIS Data Sets and property appraiser information usually yield the majority of the historic resources located within the project area. Historic aerial photography are also resources used to confirm dates of construction and building development. The project architectural historian identified any resource not accounted for by this information in the field based on aforementioned methods.

Each resource's individual significance was then evaluated for its potential eligibility for inclusion in the *NRHP*. Historic physical integrity was determined from site observations, field data, and photographic documentation. Local information was consulted to assist in the research for known significant historical associations. The background research also included a search of historic sites and districts designated by Miami-Dade County. Concentrations of historic resources within the project APE were assessed in terms of the potential for historic district designation.

RESULTS

Archaeological Resources Results

The present CRAS resulted in the identification of no newly recorded archaeological sites. The project area was historically located in the Everglades, and consists of former sawgrass prairie, which is now used as an airport. The majority of the project area consists of graded areas with milled asphalt at both the east and west ends of the existing runway where improvements are proposed. Subsurface testing was not possible on the eastern end of the proposed improvements due to the presence of milled asphalt (see photograph in Appendix B). However, one shovel test was excavated to the west of the existing runway where improvements are proposed (Appendix A). This shovel test was placed to the west of the raised mill asphalt area. However, the area appeared to be disturbed due to the installation of a lighting system. The shovel test was circular and roughly 50 cm (20 in) in diameter. Limestone bedrock was encountered at a depth of 10 cm, a solution hole in the eastern section of the shovel test was excavated to a depth of 55 cm. The area was determined to have low potential for unrecorded archaeological sites. No further work is recommended for this project area.

Historic Resources Results

The historic resources survey resulted in the identification of no historic resources within or adjacent to the project APE.

The resources located within the APE do not meet the age requirements for documentation in the FMSF or listing in the *NRHP*, and they do not feature any outstanding architectural features that merit special consideration. The project APE features a mixed industrial and commercial area of unincorporated Miami-Dade County. The Kendall-Tamiami Executive Airport was constructed in 1967, and the majority of the buildings in the airport were constructed after the date. The majority of buildings to the south and east of the airport, within the project APE, were constructed in the 1980s and represent light industrial use buildings constructed in the Masonry Vernacular style and feature design characteristics common in South Florida. In addition, these resources are sited within an area lacking a contiguous concentration of historic resources and limited research revealed no historical associations with significant local persons or events. For these reasons, the resources are considered ineligible for listing in the *NRHP* on an individual basis or as part of a historic district. The area to the west of the airport, within the project APE, consists of open fields.

CONCLUSIONS

The CRAS of the Proposed Improvements to the Kendall-Tamiami Executive Airport in an unincorporated part of Miami-Dade County, Florida was conducted to identify cultural resources within or adjacent to the project APE and assess these resources in terms of their eligibility for listing in the *NRHP* according to the criteria set forth in 36 CFR Section 60.4.

The CRAS resulted in the identification of no archaeological resources and no historic resources within the project APE. No historic resources were identified within the project APE because it is located in a non-historic mixed industrial and commercial area of unincorporated Miami-Dade County.

The resources located within the APE do not meet the age requirements for documentation in the FMSF or listing in the *NRHP*, and they do not feature any outstanding architectural features that merit special consideration. The project APE features a mixed industrial and commercial area of unincorporated Miami-Dade County. The Kendall-Tamiami Executive Airport was constructed in 1967, and the majority of the buildings in the airport were constructed after the date. The majority of buildings to the south and east of the airport, within the project APE, were constructed in the 1980s and represent light industrial use buildings constructed in the Masonry Vernacular style and feature design characteristics common in South Florida. In addition, these resources are sited within an area lacking a contiguous concentration of historic resources and limited research revealed no historical associations with significant local persons or events. For these reasons, the resources are considered ineligible for listing in the *NRHP* on an individual basis or as part of a historic district. The area to the west of the airport, within the project APE, consists of open fields.

Unanticipated Finds

Should construction activities uncover any archaeological remains, it is recommended that activity in the immediate area of the remains be stopped while a professional archaeologist evaluates the remains. In the event that human remains are found during construction or maintenance activities, the provisions of Chapter 872.05 of the *Florida Statutes* will apply. Chapter 872.05 of the *Florida Statutes* states that, when human remains are encountered, all activity that might disturb the remains shall cease and may not resume until authorized by the District Medical Examiner (if the remains are less than 75 years old) or the State Archaeologist (if the remains are more than 75 years old). If human remains that are less than 75 years old are encountered, or if they are involved in a criminal investigation, the District Medical Examiner has jurisdiction. If the remains are determined to be more than 75 years in age, then the State Archaeologist overtakes jurisdiction in determining appropriate treatment and options for the remains.

Curation

Original forms and photographs are curated at the Florida Master Site File, along with a copy of this report. Recovered materials are temporarily stored at Janus Research during the investigation, and returned to the property owner or client upon completion of the project, as appropriate. Field notes and other pertinent project records are temporarily stored at Janus Research until their transfer to the FDOT storage facilities.

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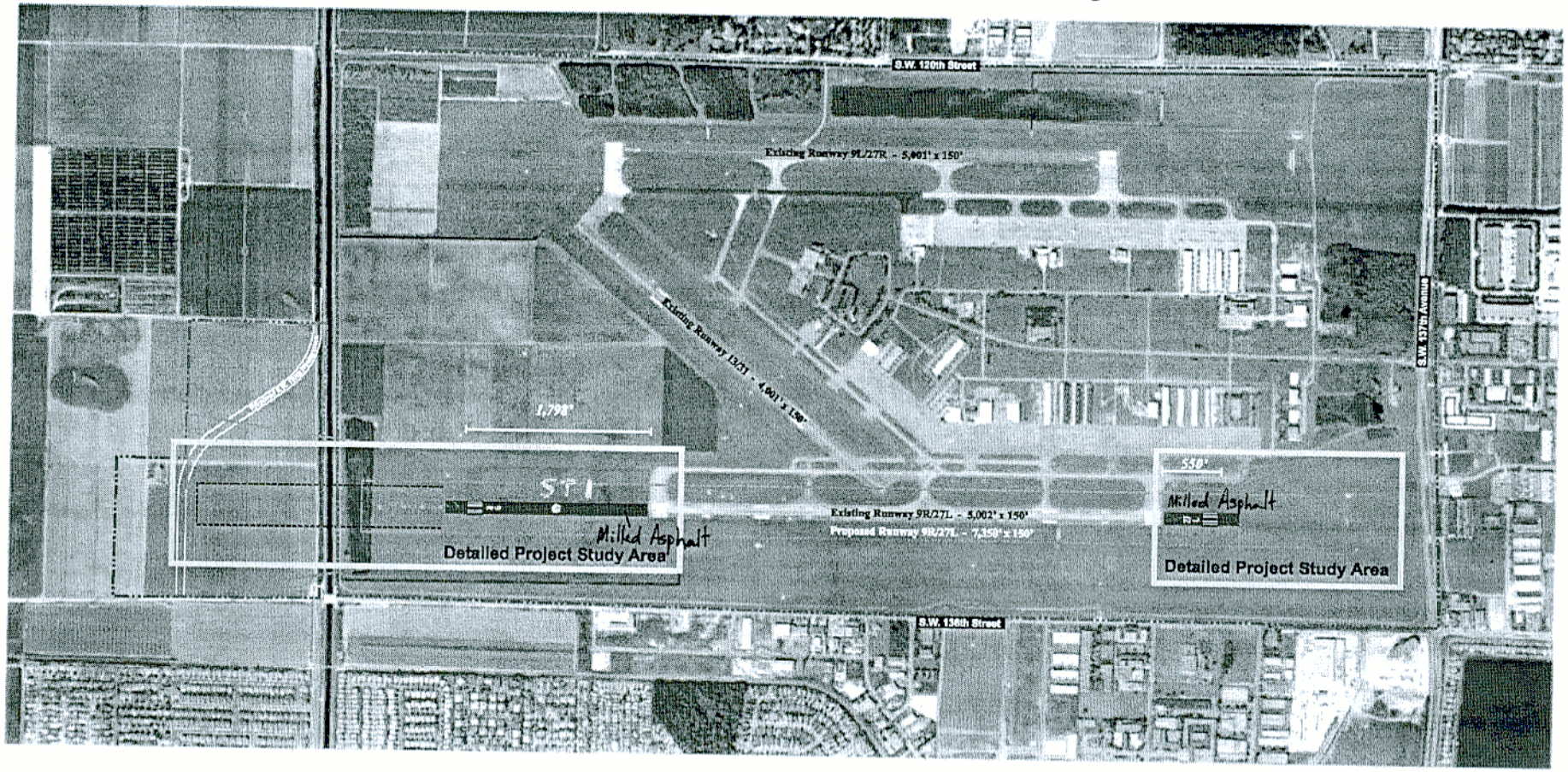
APPENDIX A:

FIELD AERIAL SHOWING SHOVEL TEST LOCATION

Kendall-Tamiami Executive Airport Area of Potential Effect - Archeological



Aerial Photo Source: AirPhoto USA, January 2005

Legend

- Proposed Runway Extension
- Proposed Taxiway Extension
- Existing Airport Property Boundary
- Future Runway Protection Zone (RPZ)
- Future Runway Safety Area (RSA)
- Future Obstacle Free Zone (OFZ)

0 250 500 1000
Feet

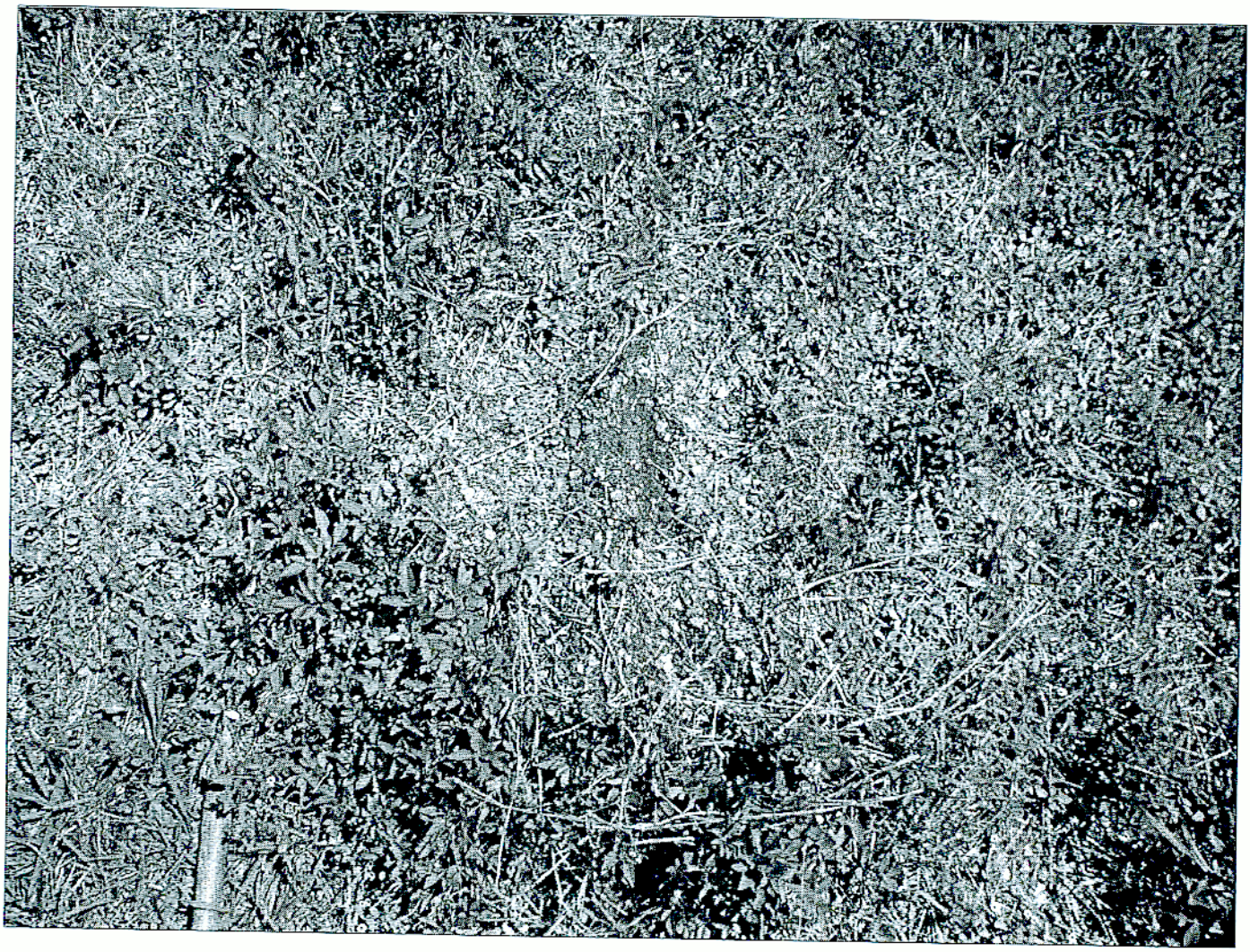
North

MIAMI-DADE COUNTY
Miami-Dade Aviation Department

Kendall-Tamiami Executive Airport EA 202680
Attachment A
Proposed Action

APPENDIX B:

PHOTOGRAPH SHOWING SURFACE CONDITIONS IN PROPOSED EASTERN EXTENSION



Photograph showing milled asphalt in proposed eastern extension

APPENDIX C:

SURVEY LOG SHEET

Ent D (FMSF only)__/__/__

Survey Log Sheet

Florida Master Site File
Version 2.0 9/97

Survey # (FMSF only)_____

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

Identification and Bibliographic Information

Survey Project (Name and project phase)
Kendall-Tamiami Executive Airport

Report Title (exactly as on title page)
Cultural Resource Assessment Survey of Proposed Improvements to the Kendall-Tamiami Executive Airport (TMB) Miami-Dade County

Report Author(s) (as on title page— individual or corporate; last names first)
Janus Research

Publication Date (year) 2006 Total Number of Pages in Report (Count text, figures, tables, not site forms) 62

Publication Information (If relevant, series and no. in series, publisher, and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*: see *Guide to the Survey Log Sheet*.)
Janus Research, 1300 N. Westshore Blvd, Suite 100, Tampa FL 33607

Supervisor(s) of Fieldwork (whether or not the same as author[s]; last name first) Mike Kenneally

Affiliation of Fieldworkers (organization, city) Janus Research, Tampa

Key Words/Phrases (Don't use the county, or common words like *archaeology*, *structure*, *survey*, *architecture*. Put the most important first. Limit each word or phrase to 25 characters.)
Kendall-Tamiami Executive Airport

Survey Sponsors (corporation, government unit, or person who is directly paying for fieldwork)
Name
Address/Phone

Recorder of *Log Sheet* Mike Kenneally Date *Log Sheet* Completed 6/29/06

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

Mapping

Counties (List each one in which field survey was done - do not abbreviate; use supplement sheet if necessary)
Miami-Dade

USGS 1:24,000 Map(s) : Map Name/Date of Latest Revision (use supplement sheet if necessary):
South Miami NW/1988

Description of Survey Area

Dates for Fieldwork: Start 6/14/06 End 6/14/06 Total Area Surveyed (fill in one) _____ hectares _____ acres

Number of Distinct Tracts or Areas Surveyed _____

If Corridor (fill in one for each): **W**idth 30.5 meters 100 feet Length .5 kilometers .3 miles

Survey Log Sheet of the Florida Master Site File

Research and Field Methods

Types of Survey (check all that apply): ☑ archaeological ☑ architectural ☐ historical/archival ☐ underwater ☐ other:_____

Preliminary Methods (✔Check as many as apply to the project as a whole. If needed write others at bottom).

☐ Florida Archives (Gray Building)	☐ library research- *local public*	☑ local property or tax records	☐ windshield
☐ Florida Photo Archives (Gray Building)	☐ library-special collection - *nonlocal*	☐ newspaper files	☑ aerial photography
☑ FMSF site property search	☑ Public Lands Survey (maps at DEP)	☑ literature search	
☑ FMSF survey search	☐ local informant(s)	☐ Sanborn Insurance maps	

☑ other (describe) Janus Research Library

Archaeological Methods (Describe the proportion of properties at which method was used by **writing in** the corresponding letter. Blanks are interpreted as "None.")

F(-ew: 0-20%), **S**(-ome: 20-50%); **M**(-ost: 50-90%); or **A**(-ll, Nearly all: 90-100%). If needed write others at bottom.

☑ Check here if **NO** archaeological methods were used.

___ surface collection, controlled	___ other screen shovel test (size: ____)	___ block excavation (at least 2x2 M)
A surface collection, uncontrolled	___ water screen (finest size: ____)	___ soil resistivity
A shovel test-1/4"screen	___ posthole tests	___ magnetometer
___ shovel test-1/8" screen	___ auger (size:____)	___ side scan sonar
___ shovel test 1/16"screen	___ coring	___ unknown
___ shovel test-unscreened	___ test excavation (at least 1x2 M)	

___ other (describe): _____

Historical/Architectural Methods (Describe the proportion of properties at which method was used by **writing in** the corresponding letter. Blanks are interpreted as "None.")

F(-ew: 0-20%), **S**(-ome: 20-50%); **M**(-ost: 50-90%); or **A**(-ll, Nearly all: 90-100%). If needed write others at bottom.

☐ Check here if **NO** historical/architectural methods were used.

___ building permits	___ demolition permits	___ neighbor interview	___ subdivision maps
___ commercial permits	A exposed ground inspected	___ occupant interview	A tax records
___ interior documentation	A local property records	___ occupation permits	___ unknown

___ other (describe): Windshield; Pedestrian Survey

Scope/Intensity/Procedures

Cultural Resource Assessment; One shovel test excavated, 50 cm. diameter.

Survey Results (cultural resources recorded)

Site Significance Evaluated? ☐Yes ☐No If *Yes*, circle NR-eligible/significant site numbers below.

Site Counts: Previously Recorded Sites N/A Newly Recorded Sites N/A

Previously Recorded Site #'s with Site File Update Forms (List site #'s without "8." Attach supplementary pages if necessary)

N/A

Newly Recorded Site #'s (Are you sure all are originals and not updates? Identify methods used to check for updates, ie, researched the FMSF records. List site #'s without "8." Attach supplementary pages if necessary.)

N/A

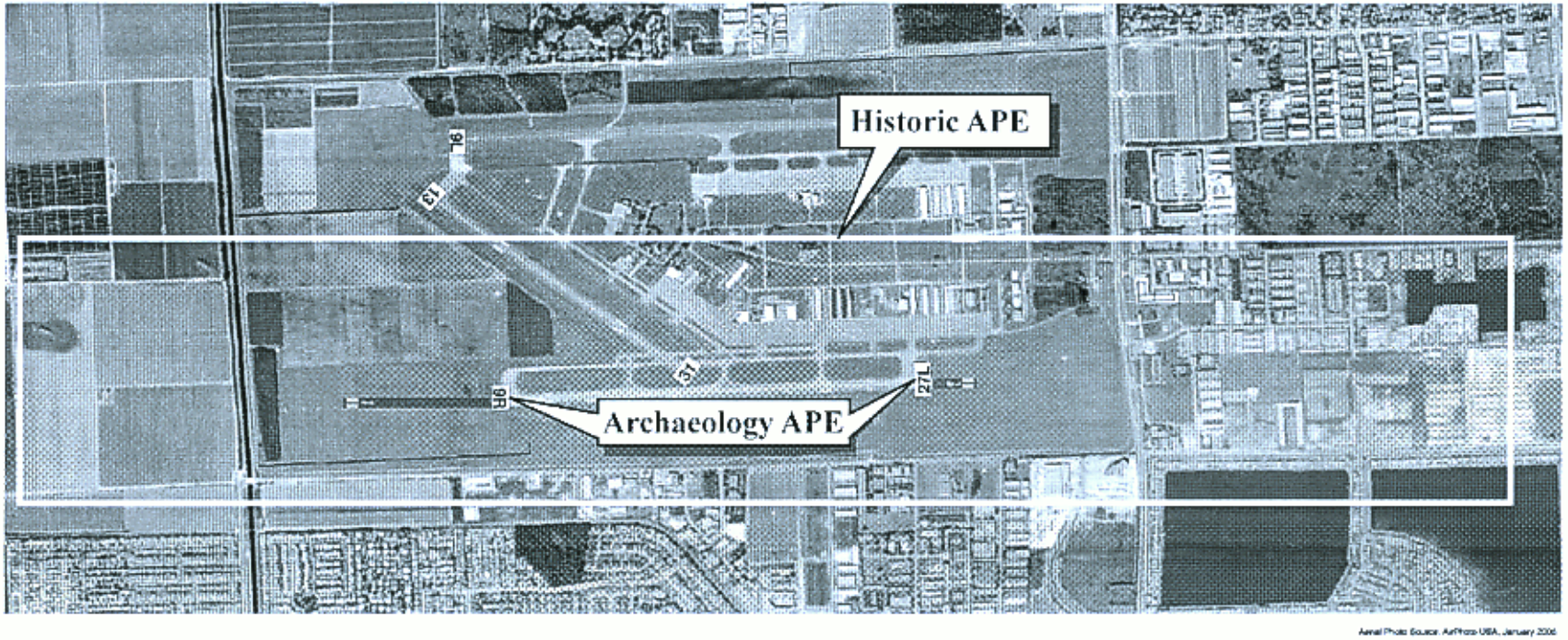
Site Form Used: ☐ SmartForm ☑ FMSF Paper Form ☑ Approved Custom Form: Attach copies of written approval from FMSF Supervisor.

DO NOT USE SITE FILE USE ONLY DO NOT USE

BAR Related		BHP Related
☐ 872	☐ 1A32	☐ State Historic Preservation Grant
☐ CARL	☐ UW	☐ Compliance Review: CRAT #_____

ATTACH PLOT OF SURVEY AREA ON PHOTOCOPIES OF USGS 1:24,000 MAP(S)

Kendall-Tamiami Executive Airport Area of Potential Effect



MIAMI-DADE COUNTY
Miami-Dade Aviation Department

Kendall-Tamiami Executive Airport FA 702660

Project APE