CULTURAL RESOURCE ASSESSMENT SURVEY

FOR THE SEIR FOR WIDENING U.S. 301 FROM FALKENBURG ROAD TO CAUSEWAY BOULEVARD

Hillsborough County, Florida

Prepared for

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FINAL REPORT

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EXECUTIVE SUMMARY

This Cultural Resource Assessment Survey (CRAS) for the State Environmental Impact Report (SEIR) for Widening U.S. 301 from Falkenburg Road to Causeway Boulevard in Hillsborough County, Florida was undertaken at the request of Kimley-Horn and Associates, Inc. The objective of this survey, which was conducted in November, 2006, was to identify cultural resources within or adjacent to the project area and assess 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* (as amended) as implemented by 36 CFR 800 (*Protection of Historic Properties*, effective January 2001); Section 102 of the *National Environmental Policy Act (NEPA) of 1969*, as amended (42 USC 4321 et seq.), as implemented by the regulations of the Council on Environmental Quality (CEQ) (40 CFR Parts 1500–1508); Section 4(f) of the *Department of Transportation Act of 1966*, as amended (49 USC 303); Chapter 267, *Florida Statutes*; and the minimum field methods, data analysis, and reporting standards embodied in the Florida Division of Historical Resources' (FDHR) *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 Secretary of the Interior's Professional Qualification Standards (48 FR 44716). Archaeological investigations were conducted under the direction of John Whitaker, M.A.

The project study area, which is located in central Hillsborough County, extends along U.S. 301 from Falkenburg Road north to Causeway Boulevard. It extends through Section 31 and a portion of Section 30 in Township 29 South, Range 20 East as shown on the Brandon USGS Quadrangle (1956 PR 1981). Widening of U.S. 301 between Falkenburg Road and Causeway Boulevard is required by Hillsborough County, FL as part of proposed development along this section of roadway. The proposed project involves widening US 301 from the existing four-lane section to a six-lane section between Falkenburg Road and Causeway Boulevard by adding an additional lane on both the northbound and southbound directions of the existing roadway.

The CRAS of the U.S. 301 from Falkenburg Road to Causeway Boulevard project study area resulted in the identification of no archaeological sites or historic resources. As no NRHP-eligible or NRHP-listed cultural resources were identified within the project Area of Potential Effect, no further work is recommended.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

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The project study area, which is located in central Hillsborough County, extends along U.S. 301 from Falkenburg Road north to Causeway Boulevard (Figure 1). It extends through Section 31 and a portion of Section 30 in Township 29 South, Range 20 East as shown on the Brandon USGS Quadrangle (1956 PR 1981) (Figure 2). The existing roadway is a four-lane divided highway.

Project Description

Widening of U.S. 301 between Falkenburg Road and Causeway Boulevard is required by Hillsborough County as part of proposed developments along this section of roadway. The proposed project involves widening US 301 from the existing four-lane section to a six-lane section between Falkenburg Road and Causeway Boulevard by adding an additional lane on both the northbound and southbound directions of the existing roadway. The proposed project will help alleviate some conflicts between truck traffic and new residential traffic by this addition of travel lanes.

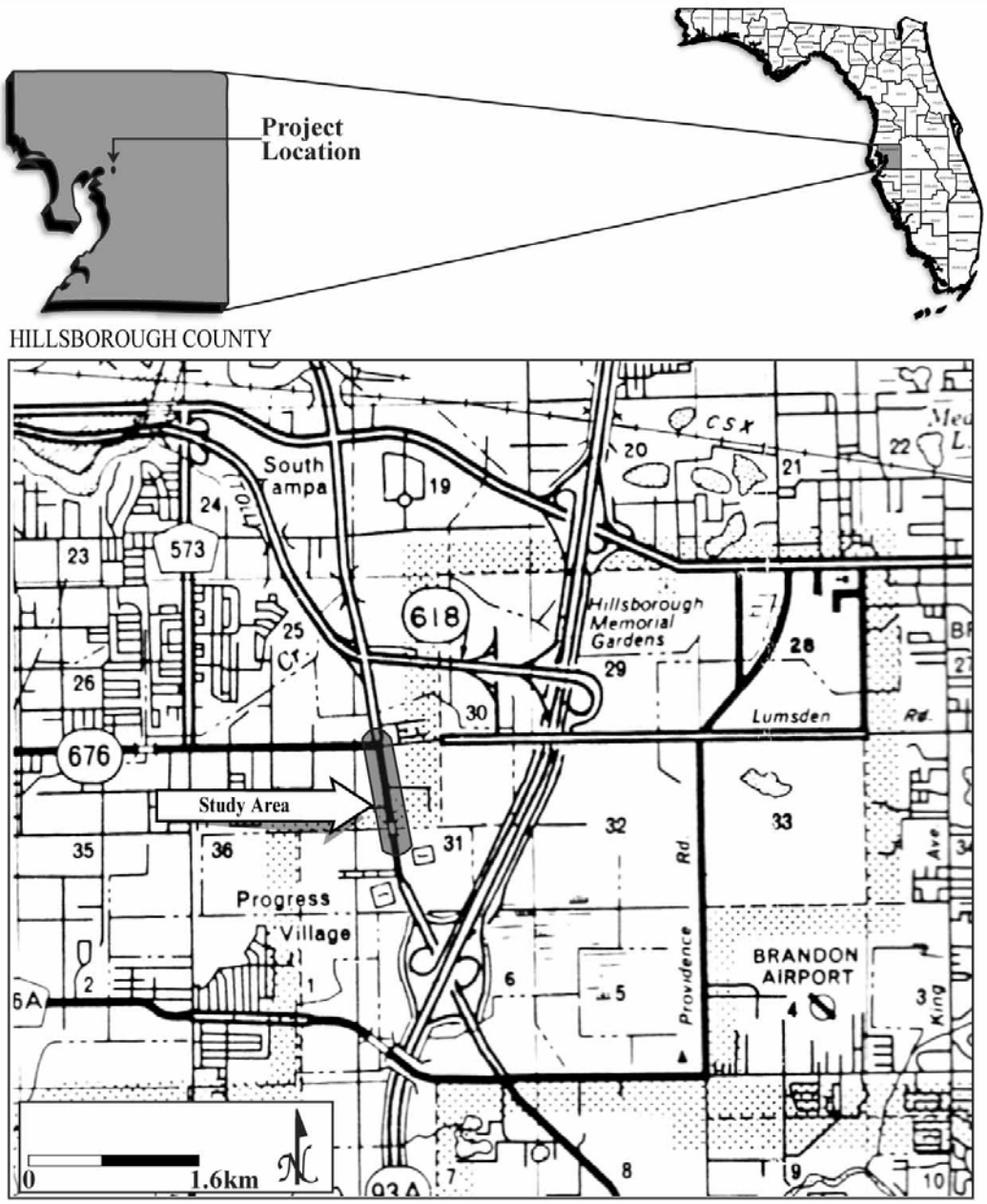

Figure 1: General Location of the Study Area

AREA OF POTENTIAL EFFECT

The Area of Potential Effect (APE) was determined by evaluating the improvements that will be implemented as part of the proposed project. The determination also considered the urban/suburban character of the project corridor. The potential effects include visual, noise, traffic, light, and vibration. Previous cultural resource assessment studies have shown that the potential visual effects are the most far-reaching of these effects. The project APE was defined as the area within which potential visual effects for the improvements could be observed. The APE for the project alignment was 300-ft. to either side of the center line.

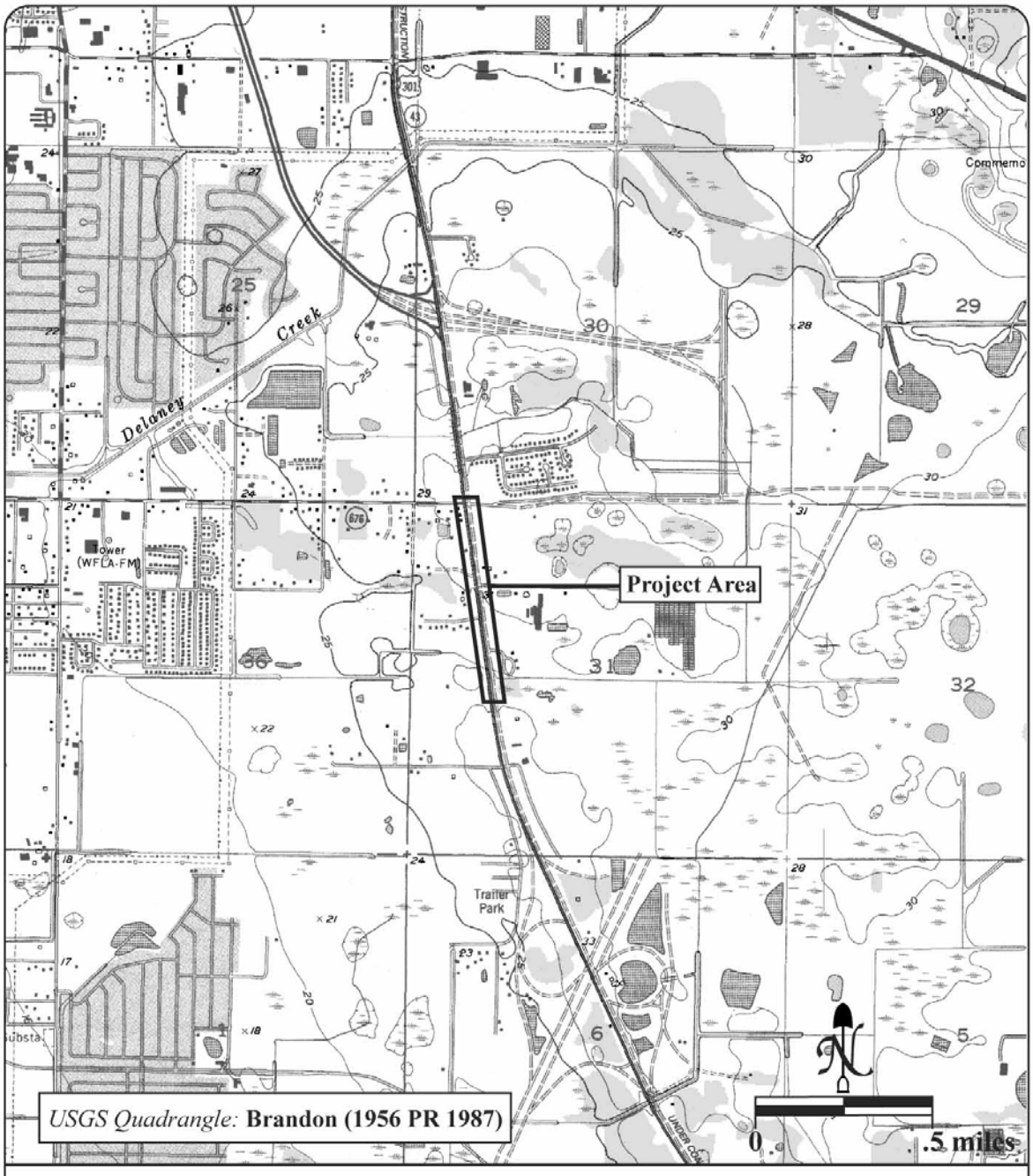

Figure 2: Project APE

ENVIRONMENTAL SETTING

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

Paleoenvironment 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.

Paleobotanical evidence (Watts 1969, 1975, 1980; Watts and Stuiver 1980; Watts and Hansen 1988) has documented that the cypress swamp/mesic hammock environs that presently exist in the river basins of central Florida are recent phenomena (post-1050 BC). Prior to this time, the human groups inhabiting this region had adapted to environments that have no analogues on the Florida peninsula today (Wright 1971, 1981; Long 1974; Carbone 1983). Since the termination of the Wisconsin glaciation, the changes in North American climate and topography have been dramatic; both the environment and human exploitation of the environment have been in continual flux (Edwards and Merrill 1977).

Although Florida was not glaciated, the glacial conditions associated with the Laurentide ice sheet affected the paleoclimates of Florida. Paleobotanical evidence suggests that between 31,050 and 11,550 BC, Florida was dry, windy, and cool (Whitehead 1973). Pollen analyses from lake sediment cores performed by Watts (1969, 1971, 1975, and 1980) suggest that a mosaic landscape of herb prairie and oak savanna covered central Florida at this time. Rosemary (*Ceratiola ericodes*), ragweed (*Ambrosia* sp.), grass species, and other composites covered the dune ridges. Scattered stands of sclerophyllous oak scrub grew in the lower,

riparian areas. Pine species were rare in Florida 35,000 years ago (Watts 1975:345), but increased in abundance toward the end of the Pleistocene (Watts 1980:400). Drier conditions are suggested by hiatuses in lake sediment cores obtained from Mud Lake in north-central Florida (Watts 1969), Lake Louise in southern Georgia, Scott Lake in west-central Florida (Watts 1971), and Sheelar Lake in north-central Florida (Watts and Stuiver 1980).

These breaks in the sedimentary record are the result of lower average rainfall and the depressions of the Floridan Aquifer and surficial aquifer. A lower mean sea level was responsible for the depression of these aquifers. Perched shallow lakes dried, leaving only solution lakes with sufficient depth to tap the depressed Floridan Aquifer containing water. Examples of such solution lakes (cenotes or sinkholes) include Lake Anne in Highlands County (Watts 1975), Warm Mineral Springs (Clausen et al. 1975) and Little Salt Spring (Clausen et al. 1979) in Sarasota County, and Devil's Den in Levy County (Martin and Webb 1974). Evidence of cooler and drier conditions at the maximum of the Wisconsin Glaciation (16,550 BP) is also provided by Gates (1976). Using CLIMAP data, Gates has estimated the mean July temperature to be as much as 7° to 10°C cooler than present mean July temperatures.

By the early Holocene, roughly 11,550 BC, the climate in west-central Florida had warmed and it is likely that precipitation increased; as a result, the shallow, perched lake levels rose. Watts (1980:400) states that by 6450 BC, oak pollen frequency increased to its highest level, while the pollen from dune cover vegetation (primarily rosemary, ragweed, and grasses) decreased. Pines species became more common, but large areas of open prairie-like vegetation still remained (Watts 1980:400). Temperatures were probably warmer than present (Wright 1971; Watts 1975, 1980) and rainfall was probably greater relative to the preceding period (31,050 to 11,550 BC); however, conditions remained more arid than present.

Kukla (1969) has suggested that a series of minor climatic fluctuations occurred during the Holocene Epoch. He postulates that the Holocene began with a warming trend that lasted until about 2650 BC, reaching a post-glacial climatic optimum at roughly 4050 BC. Cooling trends are suggested for the periods 2650 to 2050 BC, 1500 to 750 BC, 150 BC to 350 AD, and 1200 to 1350 BC (Kukla 1969:315). Associated with these cooler periods are drops in sea level from 2.5 to 4 m below present levels. Warming trends are suggested for the periods 2050 to 1500 BC, 750 to 150 BC, and AD 350 to 1200. The most recent warming trend (AD 350 to 1200) is considered to have been slightly warmer than the others, and has been called the Little Climatic Optimum (Kukla 1969:316). A rise in sea levels to 0.5 m above present levels has been associated with this period.

After 3050 BC, the environment in central Florida began to take on a more modern appearance. Large stands of slash pine (*Pinus elliottii*) became established, probably at the expense of oak in the wetter, low-lying areas. Rainfall increased and sea level rose, creating wetter conditions. At Lake Annie, Watts (1980:400) reports that bald cypress (*Taxodium distichum*) pollen does not occur with any frequency until 680 BC. The development of cypress swamps, bayheads, and mesic hammocks has occurred over the last 3,000 years.

The earliest inhabitants of Florida accessed a permanent water supply from a number of solution lakes and ponds and a seasonal water supply from perched water ponds. Shallow water ponds and rivers fed by the Floridan Aquifer were dry during this period due to insufficient rainfall and the depressed level of the Aquifer. Settlement appears to have been limited to areas around sinkholes that penetrated the Floridan Miocene age limestones (Clausen et al. 1975, 1979) or areas within the Central Gulf Coast Karst Region where both solution lakes and perched water were available (Dunbar and Waller 1983).

By 8050 BC, the previously dry perched water systems began to retain water for longer periods of time as precipitation increased. By 6550 BC, the water levels in the perched water systems approached modern levels; however, the level of the Floridan Aquifer remained depressed due to lowered sea levels. Therefore, potable water was less restricted, but remained only seasonally available at perched water ponds and lakes and permanently available only in some deep sinkholes. During this period, the major rivers in central Florida, such as the Hillsborough, the Peace, and the Caloosahatchee rivers, probably flowed intermittently. For much of the period, these rivers were probably reduced to strings of discrete shallow ponds or pools.

By 4050 BC, the Floridan Aquifer reached modern levels (Dunbar 1982:98). This resulted in fresh water discharge from springs, and spring-fed rivers. Arid conditions caused many of the perched water ponds to dry; thereby, restricting potable water to the deeper springs, rivers, and sinkholes (Dunbar 1982:98). Between 4050 and 3050 BC, surface water was abundant, as the Floridan Aquifer was about 1.5 m above current levels (Dunbar 1982:101). Between 3050 to 550 BC, the level of the Floridan Aquifer fluctuated 3 m, from 1.5 m above current levels at 3050 BC to 1.5 m below present levels at 2250 BC (Dunbar 1982:102). This probably resulted in a decreased surface discharge from the Aquifer, but increased rainfall maintained the levels in the perched water systems.

Beginning about 2050 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 the dissolution of limestone bedrock along the perimeter of these peat marshes. The accretion of fibrous peat continued and raised the water level in the peripheral lakes throughout the area that would later become the Florida Everglades. Lake Okeechobee, in the extreme northeast of the Everglades Trough, was one of these peripheral lakes. The rising dike of fibrous peat allowed Lake Okeechobee's shallow waters to expand over the surrounding lowlands (White 1970:79). Between AD 550 and 1700, the level of the Floridan Aquifer rose. This rise, in combination with higher than present rainfall conditions, probably resulted in seasonal flooding of low-lying regions (Dunbar 1982:102). Potable water was abundant during this period. It is likely that pre-Columbian site location at this time was more dependent on the proximity of plant and animal resources than on the availability of water.

The climatic fluctuations that have occurred over the past 13,000 years have affected the way human groups were able to exploit the resources found within Hillsborough County, Florida.

The Paleoindian and Early Archaic inhabitants would have found the area drier and access to water restricted, possibly only seasonally available at perched water ponds, or in solution lakes (sinkholes). The Florida peninsula was wider as sea level was as much as 49 m (160 ft.) lower than present level (Milanich 1994:38). The continental shelf was exposed in what is now the Gulf of Mexico. Mixed forests of oak and pine probably dominated the lower, riparian areas and the higher, arid locations were covered with rosemary scrub and grass species.

The Holocene Climatic Optimum, a time of warmer and drier environmental conditions, occurred during the Middle Archaic period (5000 to 3000 BC). Pine species replaced oak as the dominant forest element (Watts 1975). This implies that the availability of acorns and the animals that fed on those acorns would have been more restricted. Water was more plentiful, but only in rivers and springs fed by the Floridan Aquifer or at sinkholes.

By Late Archaic times, the environment of the region approached present conditions. With the incipient development of the Everglades, Lake Okeechobee, Lake Kissimmee, swamps, wetlands, and other drainages, water was no longer the limiting factor to site and resource location. The choice of site location was probably more a matter of finding a reasonably dry spot rather than a nearby water supply (Almy 1976, 1978; Grange et al. 1979). Sea levels were still fluctuating, but were within one meter of current levels (Mörner 1969; Widmer 1983). Woodland Period culture groups exploited microhabitats that existed until modern logging, ranching, and land drainage practices were instituted.

Regional Environment

The project area is located in central Hillsborough County, which is a part of the Gulf Coastal Lowlands physiographic region (White 1970). Prominent features of the topography of the Tampa Bay area are five broad marine terraces that were formed during interglacial periods by the advances and retreats of the Pleistocene seas. Subsequent exposure to wind erosion, down-cutting and meandering of streams and rivers, and subsidence of the underlying limestone has helped shape the surface topography of these remnant terraces. As a result of these processes of physical weathering, the terrain of the county is generally flat to gently sloped with the present natural land contours ranging from 0 to 170 ft. (0 to 52 m) above mean sea level.

The surface lithology of Hillsborough County is composed primarily of undifferentiated deposits of sand and clay of Pleistocene and Recent age, which are underlain by Miocene age limestones of the Tampa/St. Marks Formation, and by the Suwannee Limestone of Oligocene age (Knapp 1980). Limestone is present at or near the ground surface around the shore of Tampa Bay and along the central and lower portions of the Hillsborough River (Duerling and MacGill 1981; Knapp 1980). Precontact peoples exploited exposures of silicified limestone, or chert, as raw material for stone tool manufacture (Upchurch et al. 1982). A more thorough discussion of chert resources is presented in a separate section below.

In Hillsborough County, three major rivers drain the uplands and discharge into Tampa Bay: the Hillsborough River, the Alafia River, and the Little Manatee River. Combined, these

three rivers drain more than 1,300 square miles, involving a four county area. The surface drainage is toward Old Tampa Bay, Hillsborough Bay, and Tampa Bay.

Much of Hillsborough County has been cleared and modified by construction activities. Despite these recent modifications, the natural vegetation can be determined using historic documents, maps, and soils information. Most of the County originally consisted of pine/palmetto flatwoods with longleaf pine, slash pine, saw palmetto, and wiregrass as the typical species. The conditions would have occurred within the areas of Immokalee, Adamsville, and Leon soils. In some better-drained locations, stands of gallberry, runner oak, bluejack oak, and turkey oak could have existed. In the area of Pomello fine sand, an oak scrub or scrubby flatwoods environment may have been present. Hardwood hammock vegetation (mesic and hydric) would have existed along the larger drainages. The freshwater wetlands and pond environments contain pond and bald cypress, bay, gum, elm, water oak, and various aquatic plants (Leighty et al. 1958).

Coastal Hillsborough County is located within Davis' (1967) Pine Flatwoods zone. Flatwoods communities have been characterized as having a relatively low ecological diversity offering little in the way of subsistence resources to precontact hunters and gatherers (e.g., Milanich and Fairbanks 1980:17; Larson 1980:56). In reality, there is a relatively high degree of micro-environmental diversity within the region, particularly in the major river basins. This diversity would have provided a variety of plant and animal resources suitable for exploitation by precontact and early historic inhabitants.

Puffer (1981) has compiled a list of native plant species that would have been available to aboriginal populations in the Little Manatee River basin. Her list includes those plants that are considered to be the most common or important for precontact use or consumption. In pine flatwoods communities, huckleberry, saw palmetto berries, coonti, gallberry, staggerbush, and rabbit tobacco would have been available, also slash and longleaf pine. The better-drained, sandy ridges would have supported longleaf pine, saw palmetto, a variety of oaks, gallberry, persimmon, gopher apple, and prickly pear cactus.

Hardwood hammocks along the larger drainages and around the larger ponds and springs would have provided excellent forage for deer, which, in turn, would have attracted aboriginal hunters. A variety of edible plants could have been collected including persimmon, saw palmetto berries, oak and hickory nuts, pigeon plum, beautyberry, wild grapes, dahoon holly, arrowroot, and wild coffee. Ponds and marshes would have contained a number of edible aquatic plants including arrowroot, arrowhead, duck potato, and various rushes.

Black bear, panther, bobcat, wolf, wild turkey, river otter, raccoon, opossum, rabbit, squirrel, gopher tortoise, box turtle, rattlesnake, quail, hawk and bald eagle are all known to inhabit the river drainages along the central Gulf Coast (Puffer 1981; Estabrook and Newman 1984). The numerous marshes and small drainages along the corridor would have been particularly attractive to birds and reptiles. Old Tampa Bay would have provided canoe access to the estuarine environments on Tampa Bay. Here Native American groups could have fished, netted or hunted birds, and collected shellfish such as oyster, clam, whelk and conch.

Lithic Resources

Outcrops of silicified limestone and silicified coral, or "chert," which were often exploited by precontact peoples as raw material sources for the manufacture of stone tools, may occur within the vicinity of the project study area. Geologist Dr. Samuel Upchurch and his colleagues at the University of South Florida developed a system called the "quarry cluster" method to determine lithic raw material provenance (Upchurch et al. 1982). The term "quarry cluster" refers to a geographic region where chert outcrops originate from a specific geological formation and share similar diagnostic features such as fossil content, rock fabric, and the presence or absence of secondary inclusions like quartz sand, phosphate pellets, and calcite crystals. Using these physical properties, the assignment of individual lithic artifacts to a particular quarry cluster can be accomplished with a relatively high degree of accuracy (Austin and Estabrook 2000). The quarry clusters of central Florida include the Hillsborough River, Caladesi, Turtlecrawl Point, Upper Withlacoochee, Peace River, and Brooksville quarry clusters (Upchurch et al. 1982).

The chert quarry cluster area through which the project corridor traverses is the Hillsborough River Quarry Cluster. This quarry cluster extends along the Hillsborough River and its many tributaries west into Hillsborough Bay (Simpson 1941; Upchurch et al. 1982: Figure 20E). Cherts from this cluster vary widely in color and fabric, and contain few diagnostic fossils. Several sub-areas within this cluster have been identified, based primarily on fossil content and rock fabric (Upchurch et al. 1982; Goodyear et al. 1983). Included in this quarry cluster are the reported stone outcrops along, and submerged under, Old Tampa Bay. Dr. Samuel Upchurch (Goodyear et al. 1983) defines six sub-types of chert found within the Hillsborough River Quarry Cluster. Of these, chert types 2 through 5 are known to, or suspected of, outcropping along Old Tampa Bay (Goodyear et al. 1983: Figures 10–13).

Physical Environment of the Project Study Area

The project study area extends through former scrubby and mesic flatwoods as well as a poorly defined slough in the southern half of the corridor (United States Department of Agriculture [USDA] 1958). However, many areas along the corridor have been altered by construction and other earth-moving activities. Mesic flatwoods are open canopy forests of widely spaced pine trees with little or no understory but a dense ground cover of herbs and shrubs (Florida Natural Areas Inventory [FNAI]/ Florida Department of Natural Resources [FDNR] 1990). Typical vegetation in mesic flatwoods includes longleaf pine, wiregrass, runner oak, slash pine, gallberry and saw palmetto. Scrubby flatwoods are similar to mesic flatwoods except they occur in slightly drier, elevated areas. Typical vegetation in scrubby flatwoods consists of longleaf pine, sand live oak, scrub oak, slash pine, Chapman's oak, myrtle oak, saw palmetto, wiregrass, lichens, gopher apple, dwarf blueberry, and staggerbush (FNAI/FDNR 1990).

Numerous researchers have successfully utilized drainage characteristics of soil in the formulation of site location predictive models. The project corridor lies in an area characterized by the Leon-Immokalee soil association (USDA 1958). The specific soil types found within the project area are presented in Table 1 along with their associated landforms.

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

Drainage Characteristic	Soil Type	Environmental Context
Somewhat poorly drained	Ona fine sand, light-colored surface phase	Broad areas of relatively dry flatwoods and low ridges or knolls in the mesic flatwoods
Poorly drained	Leon fine sand	Broad areas of mesic flatwoods
	Plummer fine sand	Depressions and sloughs in the flatwoods
Made land (mines, pits, and dumps)	Not applicable	Not applicable

Source: USDA 1958

PRECONTACT OVERVIEW

Precontact peoples have inhabited Florida for at least 14,000 years. The earliest cultural periods are pan-Florida in extent, while later cultures exhibited unique cultural traits. Jerald Milanich and Charles Fairbanks (1980) synthesized the earlier work of John Goggin (1947, 1949, 1952), Irving Rouse (1951), Ripley Bullen (1972), and others for central Florida. Recently, Milanich (1994) updated and revised much of the work he and Fairbanks presented earlier.

The project area lies in the Central Gulf Coast cultural region as defined by Goggin (1947). This area has been divided into two closely related cultural regions by Milanich and Fairbanks (1980:24–26): the North Peninsular Gulf Coast region, stretching from Apalachee Bay to Pasco County, and the Central Peninsular Gulf Coast region, which extends from Pasco County to Charlotte Harbor (Figure 3). The dividing line in mid–Pasco County is somewhat arbitrary, but present evidence suggests that most post–AD 100 pre-Columbian pottery to the north of this line consists of limestone-tempered Pasco ware while the majority to the south is tempered with varying amounts of sand (Milanich 1994:211).

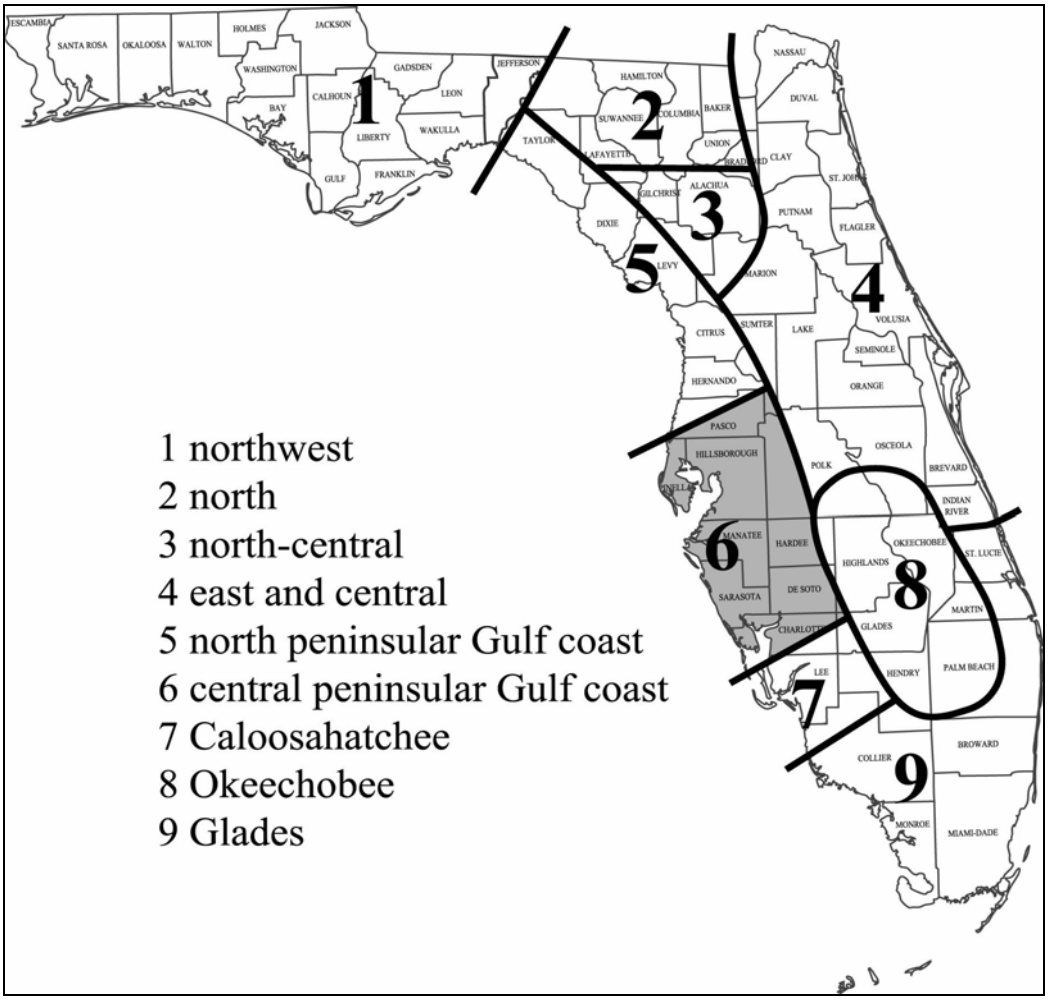

Figure 3: Central Peninsular Gulf Coast Cultural Region

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.

In addition to Little Salt Spring and Warm Mineral Springs, another Paleoindian inland spring site, a Paleoindian component was identified at the Myakkahatchee site, located in the City of North Port. Reported artifacts recovered from the site include a broken Simpson point, a Tallahassee point, a Bolen Point, a Florida Spike, and three Florida Morrow Mountain Knives (Luer et al. 1987:146).

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).

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, 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. The Middle Archaic period is characterized by increasing population and a gradual shift toward shellfish, fish, and other food resources from freshwater and coastal wetlands as a significant part of their subsistence strategy (Watts and Hansen 1988:310; Milanich 1994:75–84). Pollen evidence from Florida and south-central Georgia indicates that after about 4000 BC, a gradual change in forest cover took place, with oaks in some regions giving way to pines or mixed forests. The vegetation communities that resulted from these changes, which culminated by 3000 BC, are essentially the same as those found in historic times before widespread land alteration took place (Watts 1969, 1971; Watts and Hansen 1988).

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).

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 (Wharton, Ballo, and Hope 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 (A. K. 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).

Late Archaic Period (3,000–500 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).

Orange Period

By about 2000 BC or slightly earlier, the firing of clay pottery was either invented in Florida or the technique diffused from coastal Georgia and South Carolina, where early dates for pottery have been obtained (Milanich 1994:86). At one time, it was thought that the earliest pottery-manufacturing culture in Florida was the Orange culture of the St. Johns region in northeast Florida. But additional evidence from southwest Florida indicates fired clay pottery from northeastern and southwestern Florida is comparable to the early dates from sites in Georgia and South Carolina (Division of Archives 1970; Cockrell 1970; Widmer 1974; McMichael 1982; Russo 1991).

The earliest ceramics in Florida were tempered with plant fibers such as palmetto fiber or Spanish moss. The first use of pottery is well dated to the period from circa 2000 BC to 1000 BC, making fiber-tempered pottery a convenient horizon across the state. Although at first undecorated, various techniques were used to apply surface decoration, starting sometime around 1650 BC, providing an important tool for differentiating sites dating to the second half of the Late Archaic, known as the Orange Period (2000–500 BC) (Milanich 1994:86, 94). Table 2 illustrates the long-accepted Orange Period ceramic chronology.

Table 2: Orange Period Ceramic Sequence

Period	Dates
Orange 1	2000[a]–1650 BC
Orange 2	1650–1450 BC
Orange 3	1450–1250 BC
Orange 4	1250–1000 BC
Orange 5	1000–500 BC

Source: Milanich (1994) based on Bullen (1955, 1972).
[a] or slightly earlier.

However, recent data from sites in northeastern Florida suggests a revised Orange period chronology (Sassaman 2003:5-14). Sassaman (2003:9) indicates that "…the four major subperiods of Bullen's sequence (i.e., Orange 1-4) collapse down into one (Orange 1)." This revised chronology suggests that variations in Orange period ceramic paste, form, and decoration do not represent temporal changes.

Riverine middens in the East and Central cultural region have produced artifacts that illustrate aspects of Late Archaic subsistence technology, such as the throwing stick, use of which is indicated by the presence of steatite throwing-stick weights and stemmed projectile points. Russo (1992:198) suggests that, along the coast, fine-mesh nets were also used to catch fish from the estuarine tidal creeks. Also common in these midden sites were picks and hammers made of shell, pins, points, and other tools made of bone (Milanich 1994:92-93).

Late Archaic period sites, such as middens adjacent to the Gulf and smaller sites back from the coast proper have been identified in the Central Peninsular Gulf Coast region. The Interstate 75 archaeological surveys and excavations located several sites with Late Archaic components in the wetlands of the Hillsborough River drainage basin. One of these, the Wetherington Island site, is a re-used quarry first used in Early Archaic-times (Chance 1981, 1982). Other inland sites include the Deerstand, Ranch House, and Marita sites (Daniel 1982; Estabrook and Newman 1984).

Recently, a cluster of unique Late Archaic sites was identified in Pasco County (Estabrook et al. 2001). The sites within this cluster, referred to as the Enclave sites, contain freshwater midden remains and represent a rarely seen inland site type. The evidence recovered indicates a heavy reliance on aquatic resources and suggests that coastal dietary practices were carried into the interior (Estabrook et al. 2001).

Coastal sites appear much more common in this region and include the Culbreath Bayou, Canton Street (Bullen et al. 1978), and Apollo Beach (Warren 1968) sites. Many Late Archaic sites in the Central Peninsular Gulf Coast region are probably either inundated or were destroyed around the turn of the century. The once numerous shell middens of all periods were used to provide road materials for towns like Bradenton and Tampa (Milanich 1994:100-101).

As more research is completed and regional differences among Late Archaic peoples in Florida are recognized, it is apparent that specific regional manifestations must be defined. These manifestations will undoubtedly be recognized as closely linked to the post-500 BC regional cultures of the Formative period discussed below.

Formative and Mississippian Periods (500 BC–AD 1513)

Changes in pottery and technology occurred in Florida during the Late Archaic period, also known as the Florida Transitional period; these changes mark the beginning of the Formative period. Fiber-tempered wares were replaced by sand-tempered, limestone-tempered, and chalky temperless ceramics and three different projectile point styles (basally-notched, corner-notched, and stemmed) occur in relatively contemporaneous contexts. This profusion of ceramic and tool traditions suggests population movement and social interaction between culture areas.

Mississippian cultural development began in the central Mississippi Valley around AD 750 and was adopted by cultures in Florida between AD 800 and AD 1000. It was characterized by elaborate community developments including truncated pyramidal mounds, large plazas, and a chiefdom-level of socio-political organization. Other distinctive traits include small, triangular-shaped projectile points, the use of the bow, religious ceremonialism, increased territoriality and warfare, and, in some areas, development of agriculture (Milanich 1994:355–412).

Manasota Culture

During the Formative period, the Central Peninsular Gulf Coast region was dominated by the Manasota culture, primarily known as a coastal dwelling people. A dominance of sand-tempered plain ceramics as well as shell and bone tools characterizes their material culture (Luer and Almy 1982). The identification of interior Manasota sites has been hindered by the difficulty in distinguishing between the various types of undecorated, sand tempered ceramic wares used by the different precontact cultures of South Florida (Milanich 1994: 224–226). A chronology for the Manasota Culture based on variations in ceramics and burial, is presented in Table 3.

Table 3: Manasota Culture Chronology

Period	Dates
Manasota	500 BC–AD 300
Early Weeden Island	AD 300–700
Late Weeden Island	AD 700–900
Safety Harbor	AD 900–1513

Source: Milanich (1994), modified from Luer and Almy (1980, 1982)

Despite its characterization as a primarily coastal culture, a number of inland Manasota sites have been documented (Deming 1976; Wood 1976; Wharton 1977; Ellis 1977; Wharton and Williams 1980; Piper and Piper 1981; Piper, Hardin, and Piper 1982; Almy 1982; Austin and Ste. Claire 1982; Austin and Russo 1989; Janus Research 1999). These sites share characteristics that distinguish them from the typical Manasota site, which has been defined using characteristics from coastal sites. However, they are similar to what Luer and Almy define as "inland from the shore" sites. These sites are described as existing in the pine flatwoods, often occurring on a small, low hillock or "mound" of sand near a freshwater source, and having similar artifact assemblages as the coastal sites except for a significantly lesser amount of shell and shell tools (Luer and Almy 1982:39–43). Luer and Almy distinguish these sites from "inland" sites, which are sites situated in interior regions of the peninsula (1982:51). Aside from the occasional shell tool, the one characteristic which precludes the above sites from being defined as "inland from the shore" Manasota culture sites is that they are situated beyond 30 km from the shore (Luer and Almy 1982:51).

Weeden Island–Related Manasota Culture

During its later periods, the Manasota culture was influenced by the extensive Weeden Island socio-political complex, which is best known in northern Florida, southern Georgia, and Alabama—the recognized "heartland" of Weeden Island cultures. Present evidence suggests a date of circa AD 200 for the beginning of the Weeden Island period. Mound burial customs, artifact evidence of an extensive trade network, and settlement pattern data suggest a complex socio-religious organization while technologically and stylistically Weeden Island ceramic types are considered outstanding examples of pre-Columbian pottery. Evidence for the adoption of Weeden Island customs by local Manasota groups appears in the archaeological record around AD 300–900. This period of Manasota development is often referred to as "Weeden Island–related" (Milanich 1994:227; Luer and Almy 1982:46–47).

Early Manasota period burials were flexed, primary interments in shell middens or in cemeteries. Burial in intentionally constructed burial mounds apparently was not practiced until

after AD 100. These early mounds, at least until about AD 300, also contained primary, flexed interments and occasional extended or semi-flexed burials. These mounds are generally located adjacent to villages and often contain locally made ceramics (Luer and Almy 1982:42, 46–47; Milanich 1994:227).

Early Weeden Island burial mounds contained secondary interments accompanied by almost the full range of Weeden Island ceramics and, often, complicated-stamped sherds. These secondary interments were usually bundle burials, indicating that they were placed in a charnel house prior to interment. Late Weeden Island peoples continued these traditions, and their wares often include Wakulla Check Stamped, St. Johns Check Stamped, and occasional Safety Harbor sherds in addition to the Weeden Island ceramics. The inclusion of Safety Harbor wares within these Weeden island mounds indicates they were used for many generations (Luer and Almy 1982:42, 46–47; Milanich 1994:227). The re-use or continued use of mounds was apparently a common practice in the Central Peninsular Gulf Coast region during Manasota and later periods. There are several examples, both inland and coastal, of such continually used or re-used mounds (Fewkes 1924; Willey 1949:332–333; Sears 1960; Bullen 1971; Luer and Almy 1980, 1982; Janus Research 1999).

Safety Harbor Culture

The final pre-Columbian cultural manifestation to occur in this region was the Safety Harbor culture, which evolved out of the Manasota and later Weeden Island–related Manasota cultures. Although similar to the Mississippian cultures of northern Florida, Safety Harbor peoples apparently borrowed only certain ideas and practices that helped them adjust to larger populations and to maintain the greater level of political complexity needed to support stronger territorialism. Other ideas and practices associated with a fully Mississippian way of life were not adopted because the agricultural economic system at the base of the Mississippian culture was not possible in coastal Florida. Similar to the preceding Manasota and Weeden Island–related cultures of the region, the Safety Harbor culture had a subsistence economy based on gathering shellfish and other marine resources (Grange et al. 1979; Milanich 1994:412).

A subdivision of the Safety Harbor phase has been recently proposed (Mitchem 1989). Based on the presence of dateable European artifacts, as well as on radiocarbon dates from components with Englewood ceramics, Mitchem suggested dividing the Safety Harbor into two pre-Columbian phases (Englewood [AD 900–1100] and Pinellas [AD 1100–1500]) and two colonial period phases (Tatham [AD 1500–1567] and Bayview [AD 1567–1725]) (Mitchem 1989:557–567).

The Safety Harbor culture, known after Spanish contact to be the culture of the Tocobaga, is typified by ceremonial centers with truncated, pyramidal temple mounds and open village plazas surrounded by middens, as well as burial mounds with associated charnel structures. Most Safety Harbor sites are found along the coast, although inland villages, camps, and mounds are also present (Milanich 1994:395, 403). Although the Safety Harbor culture is centered on the Tampa Bay area and the adjoining river drainages, it extends well to the north into Pasco, Hernando, and Citrus counties, and to the south and west into Sarasota, Polk, Manatee, Hardee, and Desoto counties. Safety Harbor pottery has also been found in

mounds south of Charlotte Harbor in the Caloosahatchee archaeological area (Milanich 1994:391). Safety Harbor sites within Sarasota County include site 8SO403, a burial site along the Myakka River (Hazeltine and Luer 1983); the Englewood Mound (8SO1), which dates to the Englewood and Pinellas phases of the Safety Harbor period (Luer 1999b); and the Blackburn site, which reportedly contained European glass beads as well as Culbreath and Pinellas points/knives (Deming 1989). This latter site is thought to date to the Englewood Phase of the Safety Harbor period and the later Contact periods.

Regional Variants: Northern, Inland, Circum-Tampa-Bay, and South-Central Sub-regions
The ceramic traditions of the previous Weeden Island cultures of this region continued into the Safety Harbor phase. Along with differences in settlement patterns and subsistence strategies related to specific environments, ceramic distributions have allowed Mitchem (1989:567–579) to define four sub-regions within the Safety Harbor culture area. These sub-regions shared patterns of burial mound ceremonialism, ideology, and, perhaps, socio-political organization, but different environmental settings allowed for different economic patterns (Milanich 1994:392).

The Northern Safety Harbor variant encompasses Pasco, Hernando, and Citrus counties. Pasco plain pottery is most common at non-mound villages and campsites, along with sand-tempered plain, St. Johns plain, St. Johns Check Stamped, and cord-marked ceramics. Most settlements, including residential sites and isolated mounds, are dispersed. Inland riverine and coastal shell middens are common (Mitchem and Weisman 1987; Mitchem 1989).

Within this sub-region, subsistence strategies both in coastal and inland settings continued to reflect the marine- and freshwater-based economies of the previous Weeden Island period, although some agriculture was apparently present within the cove of the Withlacoochee River (Mitchem 1989:588). At a village site within the cove, excavations produced an array of terrestrial and riverine species, including mollusks, largemouth bass, deer, and freshwater snails as the most common meat sources (Fitzgerald 1987). Evidence for the use of bow and arrow throughout the Safety Harbor culture area is seen in the presence of Pinellas Points, small triangular-shaped points used to tip arrows (Bullen 1975:8; Milanich 1994:394). Except for these points, the types of stone and shell artifacts recovered from Safety Harbor phase sites are much the same as those recovered from Weeden Island period sites (Milanich 1994:399).

The best known of the sub-regions, and what might be considered the heartland of the Safety Harbor culture, the Circum-Tampa-Bay sub-region includes southern Pasco, Pinellas, Hillsborough, and northern Manatee counties. Large and numerous shell middens identified in this sub-region suggest that subsistence strategies resembled those of the preceding Manasota and Weeden Island–related cultures. Data from analyses of materials from five of these sites support this contention (Kozuch 1986).

Utilitarian pottery within the Circum-Tampa-Bay Safety Harbor sub-region is predominantly Pinellas Plain, usually wide-mouthed bowls with serrated rims (Sears 1967; Luer and Almy 1980). The predominance of Pinellas plain around Tampa Bay is in contrast to the limestone-tempered Pasco ware of the Northern sub-region (Mitchem 1989; Milanich 1994:396).

Archaeologists have identified 15 major habitation sites in the Circum-Tampa-Bay sub-region, each consisting of a large platform mound and shell midden deposits thought to reflect associated village areas (Willey 1949:331–335; Bullen 1955:51; Griffin and Bullen 1950; Bushnell 1966; Sears 1967; Bullen et al. 1970; Luer and Almy 1981; Mitchem 1989). These sites occur on the shoreline in Tampa Bay, especially at the mouths of rivers and streams that drain into the bay, or along those rivers within a short distance of the coast, and along the western coast of Pinellas County. The plan of each is the same: a platform mound, probably the base of a temple or other important building, is placed adjacent to a plaza with surrounding village middens. Burial mounds are also present at the sites (Milanich 1994:396).

Many of the Circum-Tampa-Bay sites along the interior drainages of the Hillsborough, Alafia, Manatee, and Little Manatee rivers that were occupied during the Manasota and Weeden Island–related periods have Safety Harbor period components (Fewkes 1924; Willey 1949:332–333; Sears 1960; Bullen 1971; Luer and Almy 1980, 1982; Janus Research 1999). It is evident that inhabitants of these inland sites would have relied on freshwater resources for a large part of their sustenance. Some of the burial mounds recorded in the inland portion of the Circum-Tampa-Bay sub-region might have been isolated, as may have some of the habitation sites. Smaller sites, probably short-term hunting and foraging camps, are also located in inland locales in the river drainages (Milanich 1994:396).

The Inland Safety Harbor sub-region encompasses Polk and Hardee counties and the eastern portion of DeSoto County (Mitchem 1989:576–577). Although the density of settlements is sparse in comparison to those in coastal locales, numerous surveys in the phosphate district in Hardee County and surrounding areas indicate that some dispersed settlements and isolated burial mounds are present (Browning 1973; Wharton 1977; Wharton and Williams 1980; Piper et al. 1982; Janus Research 1999). Most of these sites have not been completely excavated and their cultural affiliations remain uncertain. One site, however, contained a large number of Spanish artifacts along with Safety Harbor ceramics, suggesting the occupation of the Inland sub-region during the colonial period (Benson 1967).

St. Johns Plain and Belle Glade Plain ceramics are most common, possibly a reflection of the ceramic transition to the assemblages of the Okeechobee Basin region and the lake district of central Florida. However, the decorated ceramics found in inland burial mounds are the same types found throughout the Safety Harbor culture area, indicating a zone of peoples who borrowed traits from neighbors to the west, east, and south (Milanich 1994:401).

The South-Central Safety Harbor sub-region (Mitchem [1989] calls this variant the Manasota Safety Harbor) extends from Charlotte Harbor north to southern Manatee County and east to the Peace River drainage (Milanich 1994:400). Dispersed coastal and inland settlements are present, but these have not yet been studied extensively. Utilitarian pottery is predominantly an undecorated quartz sand-tempered ware (Mitchem 1989:575–576).

Marion Almy (1978:87–88) has found that the primary factors for site location in Sarasota County are the distance to water and soil type. This probably reflects the need for potable water, the preference for camping on well- or better-drained soils, and reliance on wetlands, both coastal and freshwater, for subsistence (Milanich 1994:400).

HISTORICAL OVERVIEW

The intent of this historical overview is to identify the possible locations of any historic sites within the cultural assessment project area and to provide a background for the determination of their historical potential. To this end, books, maps, and manuscripts located at the City of Tampa Public Library, University of South Florida Special Collections Department, Florida Department of Environmental Protection, Division of State Lands, and Janus Research were examined and interviews with local informants were conducted.

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

The earliest contact between the native populations and Europeans consisted of slave hunting expeditions. "Slaving expeditions," the enslavement of Caribbean natives, who then worked in the mines of Hispaniola and Cuba, were not recorded in official documents as the Spanish Crown prohibited them. Evidence of these slave raids comes from the familiarity with the Florida coast stated by navigators of the earliest official coastal reconnaissance surveys (Cabeza DeVaca 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 East 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 sailed 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 in hopes of establishing 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. During the period of 1565–1566, 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, while smaller outposts and missions were established in Ais, Tequesta, Calusa, and Tocobaga territory (Gannon 1965:29).

Jesuit missions were established in 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. One year later, 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 South Florida native population 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), the project area 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 to preserve 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 they 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 it had been earlier. 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 from 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 ranchos, seasonal fishing camps, 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 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.

The Territorial Period (ca. 1821–1860)

Hillsborough County was created on January 25, 1834, reaching north to Dade City, south to Charlotte Harbor and encompassing eight future counties (Mormino and Pizzo 1983:45). The first settlement occurred in 1823 with the establishment of a large military fort, Fort Brooke. The fort was built to suppress Indian unrest as a result of the First Seminole War. Before and upon becoming a U.S. territory in 1821, control of the Native American population became a primary concern for the Monroe Administration.

The first of the conflicts between Native Americans and Americans, the First Seminole War, began in 1818 when General Andrew Jackson invaded Spanish Florida. The brief bouts that took place during this war were localized in northern Florida. When Florida became a United States Territory in 1821, the U.S. Government increased its control over the Seminoles' rights through the Treaty of Moultrie Creek. Signed in 1823, it restricted the Seminoles to 4,032,894 acres of land in the middle of the state, running south from Micanopy to just north of the Peace River (Mahon 1967:50). The northeast corner of Hillsborough County was included within the new reservation boundary (Mahon 1967: Rear foldout map). The treaty was unpopular with the Seminoles, who recognized the agricultural inferiority of the reservation, and were reluctant to move.

As a consequence of this unrest, Colonel George Mercer Brooke was sent by the U.S. Army in 1823 to establish a fortification on Tampa Bay near present-day central Tampa. In 1819, Richard S. Hackley bought an 11-million-acre Spanish land grant and established a city. The land grant included all of Tampa Bay (Tebeau 1971:124). Colonels Brooke and Gadsden selected a site within the land grant and forced Hackley to leave. They sited Fort Brooke by the Hillsborough River (Chamberlin 1968:12–13). The location offered the highest and driest land on the eastern shore of Tampa Bay, a supply of fresh water, and easy access to the interior from the sea. Because the fort offered the nearest and quickest access to forts and communities in the interior of Florida, it became a military depot and staging area for the Second Seminole War (Hillsborough County Planning Commission 1973: I-13).

Colonel Brooke utilized the existing buildings as temporary housing for the officers and ordered additional lands cleared for cultivation. By September 1824, a hospital, officer's quarters, and several small houses were constructed. In 1830, upon Brigadier General Clinch's recommendation, a reserve of 16 miles squared (256 square miles) was set apart for military purposes with Fort Brooke in the center. The presence of the military fort added a measure of security and stability to the area and civilians began to settle nearby.

As a result of the Treaty of Moultrie Creek, Native Americans continued to be removed from Florida. Additional treaties, including Payne's Landing (1832) and Fort Gibson (1833), were designed to remove the Seminoles from Florida entirely. Resentment quickly escalated, resulting in outbreaks of hostility that culminated in the Second Seminole War in 1835 (Mahon

1967:75–76, 82–83). Fort Brooke was the main garrison for the Second Seminole War and the Army of the South's headquarters. Although the War's headquarters were in Tampa, no battles were fought there. As the war continued, Seminoles retreated to the Withlacoochee Swamp and Green Swamp, located in central Florida (Map1836, 1839; Mahon 1967).

The Second Seminole War ended in 1842 and on February 19, 1845 the Secretary of War authorized reduction of the Fort Brooke military reserve to 4 miles squared (16 square miles). In 1848, Fort Brooke was again reduced to include only that portion of Tampa south of Whiting Street. The fort was used sporadically during the next 35 years, but it never regained the prominence it had during the Second Seminole War.

An 1838 map of Fort Brooke indicates that the southern portion of the military reservation contained various structures. However, the lack of a reliable scale on this map makes it difficult to relate these structures to present-day downtown Tampa in anything other than general terms. The configuration of the fort remained basically the same until 1848 when a hurricane struck the Tampa area and substantially altered its appearance. The structures along the south shore were destroyed and a later map of the fort (1852) shows that new quarters were constructed for the officers in an area northwest of their earlier location, closer to the Hillsborough River. For the remainder of its history, Fort Brooke was only occupied sporadically and new construction was minimal.

Once the Department of War turned the Fort Brooke property over to the Department of the Interior in 1883, homesteaders began to claim property within the old military reserve (Grismer 1950:169). However, for many years court battles ensued over the validity of the homesteader's claims, and the matter was not settled until 1905 when the Supreme Court ruled in favor of the homesteaders. During the 1890s, the firm of Hendry and Knight, founded by Edward M. Hendry and Andrew J. Knight, began purchasing land from the homesteaders, and by the time of the Supreme Court ruling they owned a substantial portion of the former reservation (Grismer 1950:169, 224).

Due to its isolated location, Hillsborough County grew very little after the Seminole Wars. However, a civilian community, Tampa, had developed around Fort Brooke. Early Anglo settlers included Levi Collar, who constructed a log dwelling in 1824; William Saunders, who established a general store in 1828; Maximo Hernandez, a farmer; and a few Cuban immigrants. Along with the garrison, these residents established a village with a "Tampa Bay" post office in 1831 (Stafford 1973). The 1898 Map of Tampa and Suburbs from the land office of Hendry and Knight shows the former military reservation divided into large lots owned by Bell, Hampton, Carew, and Chamberlain.

Some development occurred around the Tampa region as a result of the Armed Occupation Act of 1842. The Act provided 160-acre land grants to men over the age of 18, as long as they lived on the land for five years and cultivated at least five acres. Many of these settlers helped to establish Alafia, one of the oldest communities in Hillsborough County. Raising cattle became the main industry of these land grant settlers. A fort, Alafia Garrison, was built in response to Native American uprisings in the area (HDR Engineering, Inc. 1992: 15). Settlers were establishing settlements in other areas of Hillsborough County, as well. In 1856, John Brandon,

a blacksmith and farmer from Mississippi, settled the Brandon area, calling it East Hills. When the railroad reached the area in 1890, East Hills was renamed Brandon (HDR Engineering, Inc. 1992:15).

Tampa remained the county's most developed area. Fort Brooke continued to dominate Tampa's development until 1846. At this time, the government reduced the size of the fort with the remaining land going to the town. In response, the Hillsborough County Commissioners hired John Jackson to survey and plat the town. The first county courthouse was constructed the following year. Shortly thereafter, churches and a school were built. Unfortunately, the great hurricane of 1848 destroyed many of these buildings. In fact, all but five structures in the town were destroyed by the storm (Mormino and Pizzo 1983:46–47). Reconstruction after the storm was energetic and the community continued to grow through the 1850s. At this time, all known dwellings and businesses were south of Twiggs Street and east of the Hillsborough River, near present-day Downtown Tampa (Mormino and Pizzo 1983:46–47, Stafford 1973).

The Civil War and Post-Civil War Periods (ca. 1860–1898)

Florida did not have much daily contact with Civil War battles, although supplies and soldiers were provided to the Confederate Army. After the Second Seminole War, Florida's pioneer families began developing the cattle trade from Tampa. Four men (Captain James McKay, Howell Lykes, William Hooker, and Jake Summerlin) developed a profitable cattle trade with Cuba (Mormino and Pozetta 1987:44). During the Civil War, the Tampa cattlemen became an important supplier of beef to the Confederate Army after the occupation of Vicksburg on July 4, 1863. Florida's governor, John Milton, organized a commissary service under James McKay, who was to supervise cattle collections from south Florida ranges (Gannon 1996:241).

In addition to the cattle supplies, Tampa's port was a stopping point for blockade-runners who provided supplies northward. The War affected Tampa when the Federal Navy bombarded the city on two occasions. The first bombing occurred on June 30, 1862, without significant damage (Mormino and Pizzo 1983:65). The second bombing occurred on October 17, 1862, while a small force landed to destroy merchant vessels on the Hillsborough River. A minor skirmish near Gadsden's Point followed the bombing. Tampa was not directly engaged again until May 1864, when Union forces occupied Tampa without resistance. During the occupation, the Union Army destroyed all of Tampa's fortifications (Mormino and Pizzo 1983:67).

Although blockade-runners carried supplies to other parts of the South and cattle were supplied to the Confederate Army, the Civil War hampered the County's economy (Hillsborough County Planning Commission 1973: I-13). The Civil War's end brought Reconstruction to the County, where military rule lasted from 1866 to 1869. The economy continued its decline.

Wartime and reconstruction impeded the county's development until the late nineteenth century. The population of Tampa in the 1850s had been 1,000 residents, by 1860 it was 885

and by 1870 it was 796. Population declined through 1880 (Mormino and Pizzo 1983:68). The decades of the 1880s and 1890s introduced an era filled with activity. Two railroads were extended to Tampa, a deepwater port was dredged, the cigar industry was established, phosphate was discovered, and the Spanish-American War made Tampa's name known (Hillsborough County Planning Commission 1973: I-13).

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 $0.25 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.

Tampa's and the county's economy rebounded with the arrival of Henry Plant's railroad from Kissimmee in 1883–1884 (Westfall 1985:5). Plant had established the Jacksonville, Tampa & Key West Railway Line in 1883 (Harner 1973:23). In bringing the railroad to Tampa, Plant bypassed the community of Shiloh in the eastern part of the county. J. T. Evers owned a small store there. Realizing the potential of increased markets the railroad could bring, he purchased a large tract of land adjoining the railroad. He had the land platted in 1883 and named the new town Plant City after the railroad magnate. Other merchants followed Evers and moved to Plant City. In 1890, another railroad, the Florida Railway and Navigation Company, extended its rails to Tampa from Ocala via Plant City. Plant's railroad and others connected the formerly isolated Hillsborough County to Florida's interior, the east coast, and the nation (Hillsborough County Planning Commission 1973: I-14).

Table 4: Land Apportionment in the Project Area as Recorded in the Tract Book Records

Township 29 South, Range 20 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
30	All	The Plant Investment Company	February 19, 1884
31	All	Florida Central & Peninsular Railroad	June 5, 1890

Source: Florida Department of Environmental Protection (FDEP) n.d.

To increase Tampa's economic options and fulfill the Key West portion of the Jacksonville, Tampa, & Key West Railway venture, Plant established the Plant Steamship Line from Tampa to Key West in 1885. The new rail service lifted Tampa's economy, increased its population, made it possible for a war to be launched from her port, and brought the cigar industry to Tampa (Harner 1973:23). Later, in 1890, Plant would increase economic activity by building Port Tampa (Westfall 1985:5).

Vicente Martinez Ybor planned a company town and began an industry that would eventually surpass both Key West and Havana in cigar manufacturing. Both Ybor and fellow cigar manufacturer Ignacio Haya offered plant sites and other incentives to attract other major cigar manufacturers, such as R. Monne and Company; Armo, Garcial and Company;

Trujillo and Benemelis; and Arguilles, Lopez and Brothers. Ybor City also had hundreds of small cigar shops. Known locally as *chinchales* ("bedbugs"), or "Buckeyes" (because of their use of southern Ohio tobacco), these enterprises employed only a handful of workers and produced cigars of lower quality. At its peak, the cigar industry employed 20,000 people who handcrafted cigars in 36 sizes (Charleton 1990:40–41, 43). Ybor City was annexed as part of Tampa in 1887 (Westfall 1985).

The handmade cigar industry would dominate Tampa's economy for 50 years (Ingalls 1985:117). The creation of Ybor City transformed Tampa from an economy centered on each resident's self-sufficiency to an energetic manufacturing base (Mormino and Pozetta 1987:55). The city would be dependent on cigar making as its prominent economic base. The majority of cigar makers were exiled Cubans who had family ties and political interests in Cuba, their homeland. As a result, many guns and ammunition were sent from Ybor City to Cuban revolutionaries fighting for independence from Spain. José Martí, referred to as the "George Washington of Cuba," delivered significant speeches on Cuban independence in the U.S. This natural connection made Tampa important during the Spanish-American War. Tampa sent arms and other supplies for the Cuban revolution between 1895 and 1898. Consequently, the U.S. invasion of Cuba was launched from Tampa.

Spanish-American War Period/Turn-of-the-Century (1898–1916)

The brief war brought an immense and sudden influx of business to Tampa, adding to the momentum of economic and population growth started by the railroad and cigar industries. With the outbreak of the Spanish-American War in 1898, Tampa became the primary staging area for the invasion army. Several infantry and cavalry regiments with 30,000 troops were stationed in Tampa (Federal Writers' Project 1984:287).

Around the same time the Spanish-American War was being launched from Tampa, another important industry for Hillsborough County was developing. Phosphate was discovered in 1899 at Dunnellon in Marion County. The discovery at Dunnellon began the industry that became important to Hillsborough County. The largest phosphate deposits were found in the County's eastern portion. Tampa became the main port for shipping phosphate, which developed into its primary export item (Hillsborough County Planning Commission 1973:I-14–15). Cigars and phosphate remained the backbone of Tampa's industry through the 1920s; however, other industries, such as agriculture and shipbuilding, contributed to Tampa's growth (Ingalls 1985:129–130).

Tampa's port and railroad became increasingly important as the demand for Florida's citrus, vegetables, and phosphate grew. During the previous decade, 11,000 acres were under cultivation, and beef cattle outnumbered the county's population. Citrus production increased and lumber and turpentine were harvested. All these products went through Tampa's port to be distributed around the nation (HDR Engineering, Inc. 1992:15). The Seaboard Air Line Railroad established a major shipping area along Tampa's waterfront where it built warehouses, rail tracks, and loading docks. Phosphate was mined and shipped from Seddon Island, which was created from dredged fill in 1908 (Mormino and Pizzo 1983:130–131, 133, 136).

World War I and Aftermath Period (1917–1920)

While Florida industrialization and agriculture flourished, immigration and housing development slowed during the war. Tourism increased as a result of the war in Europe, which forced Americans to vacation domestically. Tycoons such as Henry Flagler and Henry Plant were building the hotels and railroads for people desiring winter vacations in sunny Florida. These magnates took an interest in the improvements and promotion of Florida in an effort to bring in more tourist dollars. The end of the war marked a slight increase in population, and Flagler and Okeechobee counties were created at this time.

Florida Boom Period (1920–1930)

The Florida Land Boom era of the 1920s ushered in a time of great prosperity for Hillsborough County. As Tampa was developing industries important to Hillsborough County between 1880 and 1920, she became a modern city with electric lights, a sewage system, intra-urban trolley, paved streets and congested sidewalks. Tampa expanded to the northeast with Ybor City and west across the Hillsborough River (Hillsborough County Planning Commission 1973: I-15).

One of the major developments of the early 1920s that contributed to Tampa's economic revitalization was the deepening and expansion of Ybor Channel. The improvements to the channel helped stimulate industrial and commercial growth in Tampa, as more products could be shipped in and out of the city. Additionally, real estate was a booming business with developers buying any available land and promoting it (Trigaux 1999:10h). The influx of tourists as well as the speculative real estate market encouraged subdivision establishment.

A series of events caused the end of the early 1920s prosperity, including a financial collapse in real estate and two hurricanes. The hurricanes killed thousands, destroyed property, and ended the real estate boom across the state. Despite the serious consequences for Tampa's real estate market, the cigar industry kept Tampa economically viable. At this time there were 159 factories with 13,000 employees who produced 500 million cigars (Mormino and Pizzo 1983:167).

Depression and New Deal Period (1930–1940)

The next decade brought the Depression and the decline of development. Banks had heavily invested in the real estate ventures of the 1920s and when the stock market crashed, many of these banks closed (Triguax 1999:10h). Banks across Florida failed and closed their doors even before the stock market crash that began the Depression era for the nation (Mormino and Pizzo 1983:168). In 1929, rumors amongst cigar workers caused a run on the Citizens Bank and Trust Co. in Ybor City, and the doors closed on July 17, 1929 (Trigaux 1999:11h).

During the economic decline of the Great Depression, the cigar industry was damaged when smokers gave up the luxury of cigars for less expensive cigarettes. Tampa's cornerstone industry was in decline; factories closed or moved to the north and 4,000 workers were laid off during the decade (Ingalls 1985:129–130). In addition, many mines, mills, and citrus

packing plants were closed. In 1931, Tampa decided to legalize gambling at horse and dog tracks to recover economically. To aid Tampa's economic recovery, the government established a Tampa headquarters for the Works Progress Administration (WPA). The WPA employed 8,000 people and funded large-scale projects such as the Davis Island airport (Mormino and Pizzo 1983:168). In other areas of the county, modern citrus canning plants and cooperatives were established in citrus grove areas (HDR Engineering, Inc. 1992:21).

During the Depression, most rural development occurred northeast and north of Tampa. Plant City's rural population had increased due to the quality of agricultural land. The county experienced an absence of development in the vicinity of the Hillsborough River northeast of Tampa (Hillsborough County Planning Commission 1973: I-15).

World War II and the Post-War Period (1940–1950)

The outbreak of World War II returned prosperity to Hillsborough County. Three air bases were located in the County: MacDill Field, Drew Field, and Henderson Field (Hillsborough County Planning Commission 1973:I-15). During the war, 25,000 soldiers were stationed at MacDill and Drew fields. In addition to air base activity, the port was expanded for the numerous shipbuilding enterprises (Hillsborough County Planning Commission 1973:I-15). Shipbuilding was again producing at full capacity with the industry employing 16,000 people (Mormino and Pizzo 1983:174). Many military personnel were introduced to the area during the war and many returned as permanent residents (Hillsborough County Planning Commission 1973: I-16).

World War II also produced a demand for food for the war efforts. This need caused a rapid expansion in citrus canning in the grove belt region that included Brandon and Valrico (HDR Engineering, Inc. 1992:21). Building activity during the post-war years was equivalent to the market during the 1920s, but "without the speculative aspects" (Grismer 1950:286). Interstate 75 (I-75) connected the Midwest to the Tampa Bay area and people have continued to migrate here. The retirees have fueled real estate development of affordable housing and retirement centers (Trigaux 1999:11h). Between 1950 and 1960, a 59 percent population increase occurred in Hillsborough County, with concentrations in Tampa (Hillsborough County Planning Commission 1973:I-16).

Modern Era (1950–Present)

Hillsborough County and the Tampa area have continued to expand. Phosphate remains the number one product exported from Tampa. However, the port is diversifying its cargo to include frozen chicken, cars, and melons. In addition, cruise ships now depart from the new Cruise Terminals off of Ybor Channel.

During World War II and the post-War era, as the Tampa cigar industry recovered from the Depression and labor union problems, the environment of Ybor City declined. Prosperity enabled some residents to move to other areas. By the late 1950s and early 1960s, Ybor City had become an urban slum. The 1962 embargo on all Cuban goods following the Cuban Missile Crisis crippled the remaining Tampa cigar industry. Cuban tobacco was essential to

first-rate cigars (Yglesias 1996:74). In addition, the area suffered from the construction of Interstate 4 through Ybor City, which bisected the community and resulted in the demolition of approximately 600 houses. In 1965, an Urban Renewal project also resulted in the demolition of portions of the neighborhood.

In response, an interest in preserving the Latin community began during this period. Historic preservation measures included the designation of the Barrio Latino local district that monitors demolition, rehabilitation, and rebuilding of Ybor City's historic structures. The Ybor City National Historic Landmark District is presently experiencing an incredible period of revitalization and growth, as is the Channelside district, located between Downtown Tampa and the Ybor Channel.

LITERATURE AND SITE FILE REVIEW

Evaluations of archaeological or historical site significance cannot be made without proper attention to the site's placement within the context of other sites in the area. Therefore, a consideration of these sites within the larger, regional settlement system is essential. A first approximation of settlement variability through time can be obtained by reviewing information regarding the known sites in the area.

The work of previous investigators was reviewed in order to gather information about the types of cultural resources sites that could be expected to occur within the project area (Table 5). The FMSF search served as a guide to the field investigations by identifying the possible locations of any cultural resources within the project area and providing expectations regarding the potential historic significance of any such sites.

Table 5: Surveys Conducted in the Vicinity of the Project Area

Survey Name	Author	Date	Survey #
An Archaeological Survey of the Tampa South Crosstown Expressway Eastern Extension, Hillsborough County	Baker, H.A.	1978	276
An Archaeological and Historical Resource Assessment of the 22nd Street/22nd Street Causeway Boulevard (SR676) PD&E Project Corridor (From U.S. 301 to S.R. 60), City of Tampa and Hillsborough County	HDR Engineering, Inc.	1992	3515
Cultural Resource Assessment Survey of the Proposed Tampa Bay Water Pipeline from the Tampa Bypass Canal at Six Mile Creek To Bell Shoals Road, Hillsborough County	Austin, R.J.	2000a	5867
Cultural Resource Assessment Survey for the Florida Gas Transmission Company Proposed Bayside Lateral Reroute, Hillsborough County	Austin, R.J.	2000b	6122
Cultural Resource Assessment Survey for the Florida Gas Transmission Company Proposed Bayside Lateral, Hillsborough County	Austin, R.J.	2000c	6130
Cultural Resource Assessment Survey of the Hillsborough County Water Department's Falkenburg to South County Water Main, Hillsborough County	Austin, R.J.	2000d	6116
Cultural Resource Survey of Modifications to the Proposed Bayside Lateral And Compressor Station 31, Hillsborough And Osceola Counties, Florida Gas Transmission Company Phase V Expansion	Pochurek, J.	2000	6319
Cultural Resources Survey of Two Bayside Lateral Access Roads and One Road Crossing, Florida Gas Transmission Company (FGT) Phase V Expansion	Stokes, A.V.	2002a	7085
Addendum Report for the Florida Gas Transmission Company Bayside Lateral Modifications Hillsborough County	Stokes, A.V.	2002b	7037
Cultural Resource Assessment Survey of the Recommended Pond and Floodplain Compensation (FPC) Alternative Sites, SR 676 (Causeway Blvd) From US41 to US301, Hillsborough County, Florida.	Archaeological Consultants, Inc.	2004	11590

The State of Florida Division of Historical Resources (FDHR) was contacted about the location of known archaeological sites and historic structures within or near the project area. A search of the Florida Master Site File (FMSF) records revealed one previously recorded historic resource (8HI6879) and four previously recorded archaeological sites (8HI521, 8HI6813, 8HI6888, and 8HI6898) within one mile of the project study area. However, no historic resources or archaeological sites have been previously recorded within or adjacent to the project area. The historic resource (8HI6879) is a circa-1945 dairy barn located approximately 3000 ft. northwest of the project corridor (Figure 4). This historic resource was determined eligible for listing in the NRHP (FMSF form, 8HI6879, 2000). Table 6 describes the previously recorded archaeological sites (see Figure 4 for site location).

Table 6: Previously Recorded Archaeological Sites within One Mile of the Project Area

Site #	Site Name	Site Location	TRS	Description	NRHP Status
8HI521	Titus Church	4500 ft. south of project corridor	T30S/R20E/S6	Archaic lithic scatter	Not evaluated
8HI6813	Causeway	3850 ft. west of project corridor	T29S/R19E/S25	Redeposited lithic scatter	Ineligible
8HI6888	Bayside #3	5200 ft. northwest of project corridor	T29S/R19E/S24	Pre-Columbian Lithic scatter	Ineligible
8HI6898	Bayside #12	2000 ft. south of project corridor	T29S/R19E/S31	Pre-Columbian artifact scatter	Ineligible

* TRS=Township/Range/Section

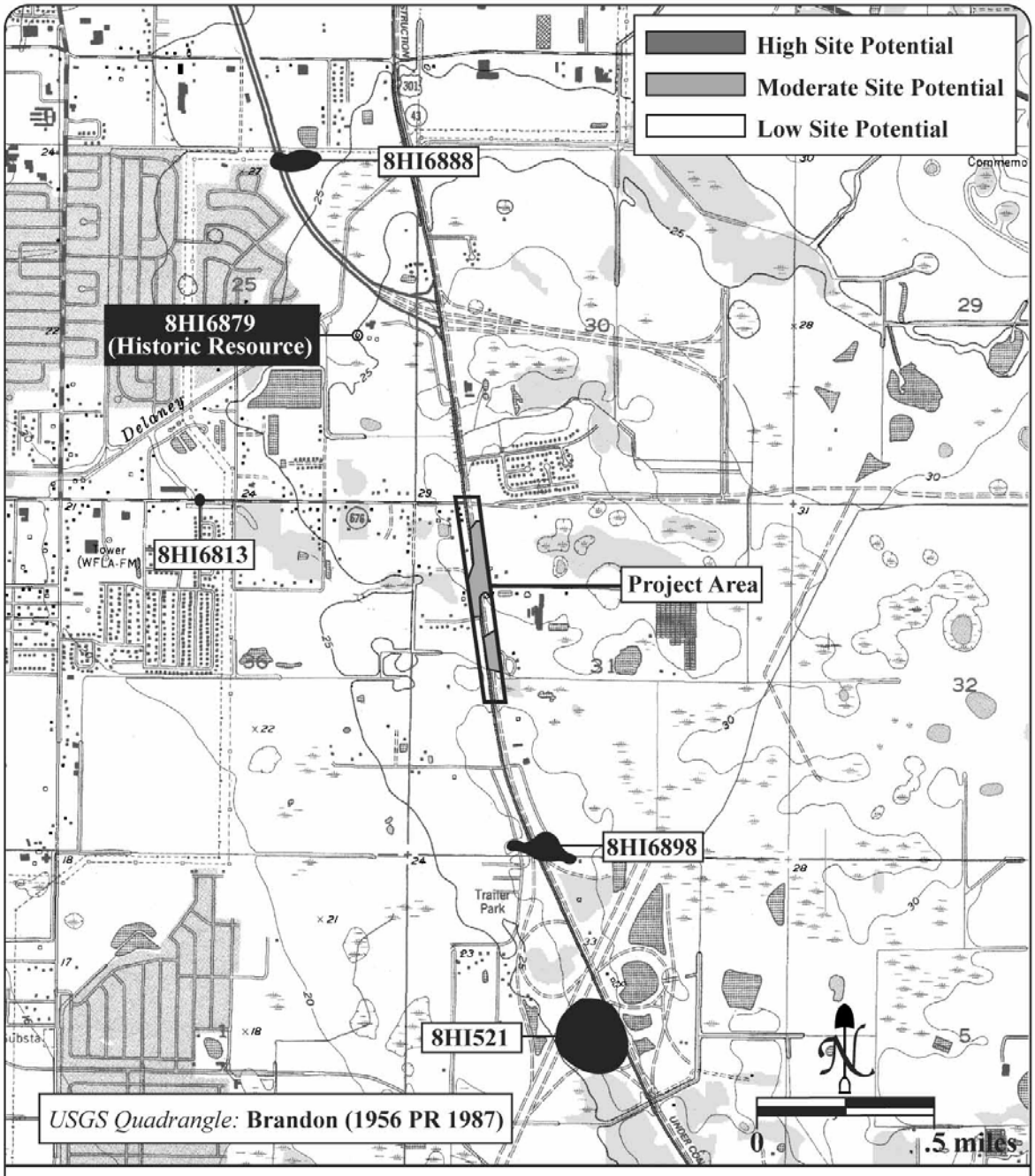

Figure 4: Previously Recorded Cultural Resources and Archaeological Site Potential Zones

PROJECT RESEARCH DESIGN AND SITE LOCATION MODEL

The objective of a research design is to provide a project-specific guide for the location, identification, and evaluation of cultural resources. Several authors have proposed models for the subsistence-settlement patterns for the earliest periods of Florida's prehistory: the Paleoindian and the Archaic stages. These models are based on the aggregate assemblages of lithic chipping debris and discarded stone tools (Waller and Dunbar 1977; Goodyear 1979; Dunbar and Waller 1983; Chance 1983; Daniel 1985). The settlement models postulated for the earliest periods, the Paleoindian and Early Archaic are pan-Florida and suggest a settlement pattern restricted by water availability and the availability of the high-quality stone from which the specialized Paleoindian and Early Archaic stone tools were made.

From their studies of the distribution of known Paleoindian sites and artifact occurrences, Waller and Dunbar (1977) and Dunbar and Waller (1983) have shown that most known sites of these time periods 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 and Early Archaic settlement appears to have been restricted, or "tethered," to sources of fresh water (Daniel 1985:264; Daniel and Wisenbaker 1987:169) and cryptocrystalline lithic sources (Goodyear 1979; Goodyear et al. 1983).

Based on some of the first large-scale cultural resource management surveys done in the 1970s, Padgett (1976) proposed a set of ideas that came to be called the "hinterland hypothesis." This model organized the extent of the southern Central Gulf Coast archaeological area into three environmental zones: coastal, riverine, and hinterland (inland). Different socio-economic activities were proposed for each zone. Padgett proposed that the hinterland was exploited primarily as a hunting area only during the Late Archaic stage and the Safety Harbor phase of the Mississippian stage. Use of this area during the intervening cultural periods was thought to be lacking. The projected site type for the hinterland zone was the small, limited use extractive site. At the time, this equated with small, sparsely evidenced sites, usually lithic scatters, which produced few tools or pottery. More permanent village sites were thought to have been located in better-drained riverine and coastal zones.

Wharton and Williams (1980) offered the antithesis of the hinterland model. They proposed that the advent of agriculture in the Peace River drainage resulted in the eclipse of the Gulf coastal religious and political centers by new ones in the interior. At present, the available site distribution data appears to support this conclusion. However, no evidence for domestic plants has been recovered from any site within the Central Peninsular Gulf Coast archaeological area. Recent surveys and excavations have documented the presence of habitation sites, burial mounds, and at least one temple mound in this interior zone (e.g., Deming 1976, Wood 1976, Wharton 1977, Ellis, 1977, Wharton and Williams 1980, Piper and Piper 1981, Piper et al. 1982, Janus Research 1999), suggesting that this region functioned as more than just a procurement area for coastal dwelling groups.

Luer and Almy (1981:149) have proposed a culture trait/settlement model for the middle Woodland period. They take the hinterland hypothesis one step further by stating that the Gulf Coast and Peace River basin represent two "similar but distinct" cultural areas. They have

identified the precontact culture group occupying the Gulf coast as the Manasota culture. As they define it (Luer and Almy 1979, 1982), the Manasota culture was principally a coastal adaptation which first appeared about 500 BC and continued until roughly AD 800 (Luer and Almy 1982:37).

According to Luer and Almy (1982:39–44), the Manasota/Weeden Island–related settlement pattern was one of permanent residence on the coast for most of the year with occasional, probably seasonal, forays into the interior to obtain game, plants, or other resources. The catchment or procurement area of these groups is thought to be 30 km (18 mi.). They use the term "inland from the shore" to differentiate this area from interior regions such as the Peace River drainage basin (Luer and Almy 1982:51). This latter culture area is believed to have been a separate polity, participating in similar but distinct cultural and political developments as the Manasota culture area of the Central Peninsular Gulf Coast region. Under this scheme, the inhabitants of each area maintained their own cultural and political centers (Luer and Almy 1981:149).

Hardin and Piper (1984) have questioned the validity of the criteria used to define these boundaries, and, in the process, have raised questions about the entire Manasota settlement model. Citing data from several interior sites located within the Peace River drainage, they suggest that aboriginal groups possessing a Manasota material culture may have inhabited these interior areas on at least a temporary basis. As they observe, one of the problems with the Manasota concept is that the culture has been defined on the basis of patterned traits observed primarily at coastal sites. Little is known about how non-coastal sites articulated with the primary population centers on the Gulf. Because of their typically small size, it has been assumed that these sites represent short term, special-use campsites (e.g., Milanich and Fairbanks 1980:207; Luer and Almy 1982:43). However, as noted above, other researchers (e.g., Wharton and Williams 1980; Hardin and Piper 1984) have suggested that some of the larger, non-coastal sites may represent permanent or semi-permanent (seasonal) habitation sites.

Hardin and Piper (1984) also make a distinction between cultures and polities and suggest that two different political entities, one occupying the coast and the other the interior drainage of the Peace River, could share a similar material culture. The debate remains unresolved in part because of the lack of detailed studies of interior sites, particularly with regard to season of occupation, as well as the difficulty in identifying cultural differences in the plain ceramic wares that dominate the archaeological assemblages of southwest Florida sites.

Grange et al. (1977) forwarded the concept of the "micro-hinterland" in an effort to understand the aboriginal use of marginal environments; pine flatwoods, for example. The "micro-hinterland" is an environmental zone characterized by flat relief and poor drainage that is located peripheral to environmental locations more conducive to permanent settlements (i.e., coastal areas or upland ridges). When sites are found in such environments, it has been assumed that the availability of food or other resources was the determining factor that influenced site location (Grange et al. 1977; Deming 1980; Piper et al. 1981). This implies that these areas were used primarily for extracting locally available (i.e., seasonal) resources.

There is also one kind of Florida archaeological site occasionally found in wetland/swamp environments: human burial interments of the Archaic stage (8500 to 4000 years BP). The Bay West site in Collier County (Beriault et al. 1981), the Hazeltine site in Sarasota County (Clausen et al. 1979), the Republic Groves site in Hardee County (Wharton et al. 1981), and the Windover site in Brevard County (Doran and Dickel 1988), are noted examples of Archaic wetland burials. Beriault et al. (1981) suggested that Archaic wetland burials are more likely to occur adjacent to large, upland Archaic village sites. However, a recent evaluation of the geography of wetland burials suggests that their occurrence may be more a function of the local depositional environment, rather than the interments' proximity to other precontact sites (Purdy 1991).

Purdy (1991) has shown that certain environmental conditions must be present before wet sites will preserve. The sites appear to be associated with inundated anaerobic peat and mucks. Anaerobic peat deposits that are underlain by limestone tend to be alkaline, and are likely to preserve wood, bone, and faunal remains. Peat deposits underlain by sand or clay tend to be acidic, which will preserve wood, but will destroy bone (Purdy 1991:11). Alternating drying and wetting of the deposit will result in the decomposition (oxidation) of the peat into muck, and will also result in the destruction of any organic cultural artifacts deposited within it.

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

Considerable discussion about the validity of precontact site predictive models and the various environmental variables that can be used abound in the archaeological literature (Almy 1978; Grange et al. 1979; Grange and Williams 1979; Deming 1980; Piper et al. 1982;

de Montmollin 1983). A brief synthesis of these works will be presented here; the reader is directed to any or all of these works for an extended background discussion on the variables employed in this study.

Four environmental factors are typically employed in predicting site locations: soil type (soil drainage), distance to fresh (potable) water, distance to hardwood hammocks, and topography. Within this project study area, the presence of the slough adjacent to former scrubby flatwoods would have made this area fairly attractive for habitation.

Obviously, fresh water was an important resource for precontact populations. Freshwater would have been available from Delaney Creek and the various sloughs and depressional wetlands located in the general project vicinity. During the Paleoindian and Early Archaic stages (12,000–5000 BC), access to fresh water would have been more restricted.

Hardwood hammocks (hydric, mesic, or xeric) provide a variety of resources that would have been exploited by the aboriginal inhabitants of this region. Hydric hardwood hammocks can contain abundant animal and plant life, particularly a variety of tubers. Mesic hardwood hammocks contain cabbage palms and other plants that produce edible portions. Other mesic hardwoods, such as ash and elm, are woods that are known to have been used for specific purposes, i.e., bows, canoes, mortars, and dart shafts (Newsom and Purdy 1983). Often, areas of higher relative elevation correspond with better-drained soils or the presence of hardwood hammocks (xeric and mesic).

Relative elevation is the most difficult variable to quantify for central Florida because of the topographic diversity of the area. This variable has greater potential to locate sites in poorly to somewhat poorly drained areas of flatwoods than it does in typically undulating sandhill scrub environments. A slight topographic rise within a flatwood area adjacent to a wetland slough has a much greater potential for containing a precontact archaeological site than does the summit of a large, well-drained sand hill; even when both are the highest elevations within their respective environments.

Historic Archaeological Site Location Model

In Florida, historic period sites frequently co-occur with precontact archaeological sites. This is often the result of environmental conditions found desirable by both groups: better-drained upland knolls near transportation routes (i.e., historic trails and major rivers). Use of the land around the project area during the earliest historic periods (First Spanish, English, and Second Spanish) was probably limited; occupations from these periods would have been of such short duration that evidence of parties crossing the project vicinity is almost impossible to detect archaeologically. Furthermore, no such groups are known or suspected of having settled or camped within the project vicinity.

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.

A review of a historic plat map for Township 29 South, Range 20 East (Florida Department of Environmental Protection [FDEP] 1852) indicates that there are no military forts, roads, encampments, battlefields, homesteads, or historical Native American villages or trails were located within a mile of the project area (Figure 5).

Archaeological Site Potential Zones

Zones of archaeological site location were designated based on previous research conducted within the Central Peninsular Gulf Coast cultural region and they conform to the guidelines set forth in the FDOT *Cultural Resource Management Handbook* (2004). The site potential zones for the project area are shown in Figure 4 along with previously recorded cultural resources near the project area.

Moderate site potential zones are defined as those somewhat poorly to very poorly drained locales within 200 m (660 ft) of a wetland or body of water, or areas of poorly drained to excessively drained soils that are within 200 m (656 ft.) to 300 m (984 ft.) of a wetland or body of water. Areas of moderate site potential are tested at roughly 50-m (164-ft.) intervals. Low site potential zones are defined as those areas of very poorly drained to excessively drained upland locales not otherwise designated as high or moderate 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.

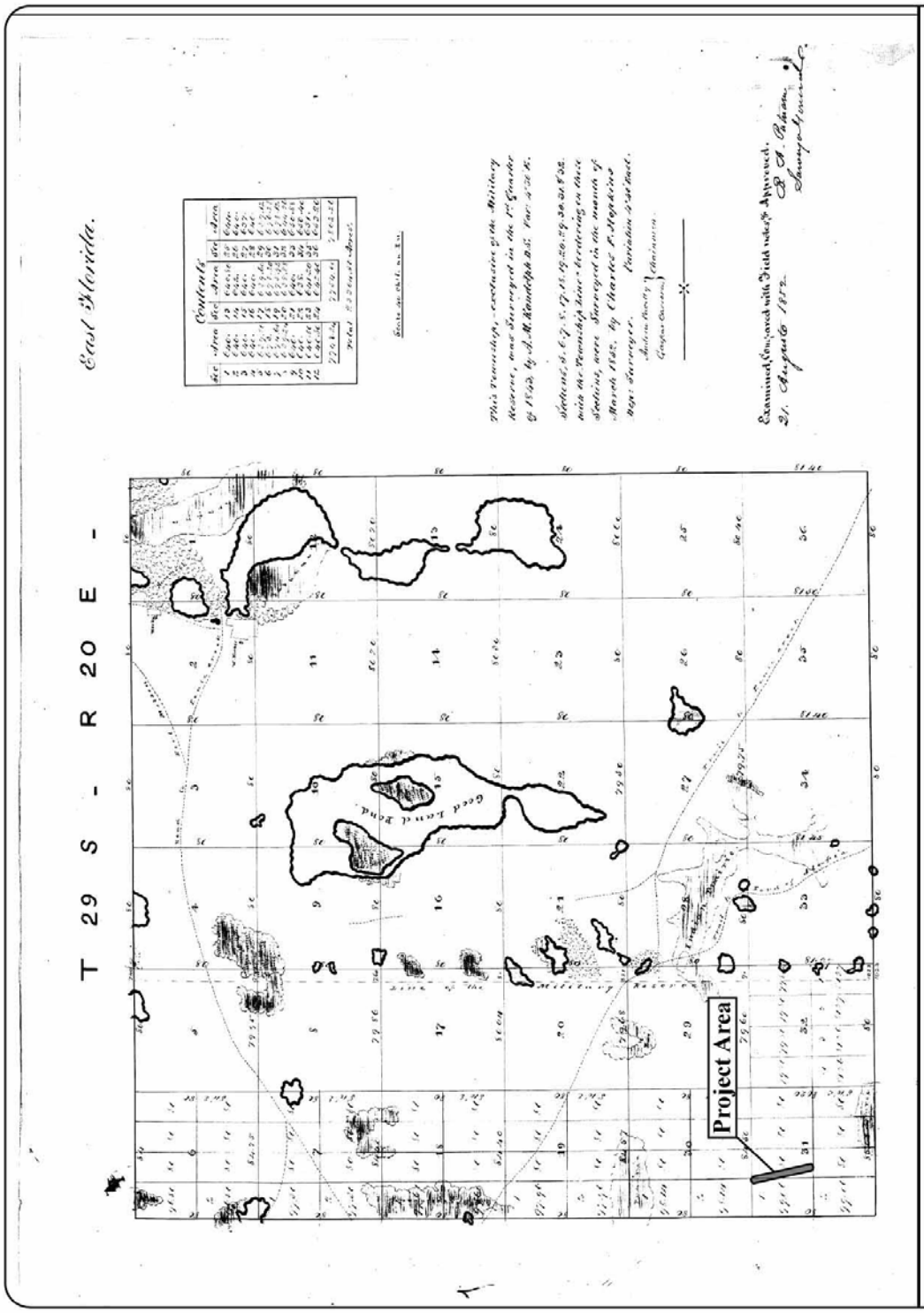

Figure 5: Project Area on the 1852 Plat Map

METHODS

Field procedures consisted of archaeological surface inspections and subsurface testing. The methods were employed to locate and evaluate archaeological sites and historic cultural resources in terms of their eligibility for listing in the *NRHP*. As no pre-1958 or potentially historic resources were observed during the field survey, a historic resource survey was not necessary. Had any such resources been identified, an architectural historian and one assistant would have conducted a historic resources survey.

The 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. Thirteen round shovel tests were excavated during this investigation. Shovel tests were circular and roughly 50 cm (20 in) in diameter. They were dug to a minimum depth of 1 m (39 in), unless excavation was inhibited by pit slumping due to the influx of water or by subsurface obstructions such as concreted clay. All excavated soil was screened through ¼-in hardware cloth suspended from portable wooden frames.

Shovel tests were placed systematically at 50-m (164-ft) intervals within moderate site potential zones. Shovel tests were placed judgmentally in low site potential zones. Testing was performed at the specified interval unless standing water, burial utilities, or surface obstructions such as asphalt or concrete prevented subsurface investigations. The field crews were instructed to place additional shovel tests in areas they deemed likely for sites, regardless of the potential zone designation or testing interval.

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 m aerial photographs (Appendix B). All artifacts discovered during surface inspection were collected, bagged by provenience and their location marked on the project aerial maps. Whenever possible, artifacts were recorded 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. As Hillsborough County is a Certified Local Government (CLG), the Updated Archaeological Site Predictive Model for the Unincorporated Areas of Hillsborough County, prepared by Janus Research (2004) for the Hillsborough County Board of Commissioners, was consulted regarding any cultural resource issues prior to field investigations for the present study. According to this model, although there are no locally known archaeological sites or historic resources in the

immediate vicinity of the project area other than those already recorded in the FMSF database, there is potential for unrecorded cultural resources.

RESULTS

No cultural resources were identified as a result of this cultural resource assessment survey. A windshield survey revealed no historic resources within the project APE; most of the project study area includes modern infill. During subsurface testing, most of the southern portion of the study area consisted of modern fill and disturbed soils with modern materials such as plastic tarps, modern glass shards, and concrete fragments. Figure 6 shows a stratigraphic profile with sand fill down to approximately 50 cm in Shovel Test 10. However, several areas of undisturbed soils were identified. A concrete pad was also identified below the surface (Figure 7).

Figure 6: Shovel Test Profile Showing Common Depth of Disturbance.

In the southern portion of study area, several areas of wetlands had been filled with sand and concrete fragments, below which was a layer of muck. Additionally, there were several portions of the study area that were artificially elevated and landscaped with berms and roadside swales (Figures 8-10). Based on the significant amounts of disturbance, berming, and landscaping, several portions of the project study area were downgraded to having low site potential. Additionally, many areas could not be tested due to the presence of numerous buried utilities, such as fiber optic cables, telephone cables, cable television cables, and electric power cables.

Figure 7: Concrete Layer at 20 cm Below Surface in Shovel Test 6

Figure 8: Area Elevated by Fill Adjacent to Existing Right-of-Way, Facing Northeast

Figure 9: Parallel Berms and Ditch in the Existing U.S. 301 Right-of-way, Facing North

Figure 10: Parallel Berm and Ditch in the Existing U.S. 301 Right-of-way, Facing North

CONCLUSIONS

The present survey resulted in the identification of no archaeological sites or historic resources within or adjacent to the project APE. As no pre-1959 or potentially historic resources were observed, a historic resource survey was not necessary. Had any such resources been identified, an architectural historian and one assistant would have conducted a historic resources survey. As no NRHP-eligible or NRHP-listed cultural resources were identified within the project APE, no further work is recommended.

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 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 or the State Archaeologist. The District Medical Examiner has jurisdiction if the remains are less than 75 years old or if the remains are involved in a criminal investigation. The State Archaeologist has jurisdiction if the remains are more than 75 years of age.

Curation

Original Survey Log Sheets, site file forms, and photographs are curated at the Florida Master Site File in Tallahassee, along with a copy of this report. Field notes and other pertinent project records are temporarily stored at Janus Research until determination of their final disposition.

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APPENDIX A:

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)
U.S. 301 SEIR, Falkenburg Road to Causeway Boulevard, Phase I

Report Title (exactly as on title page)
Cultural Resource Assessment Survey for the SEIR for Widening U.S. 301 from Falkenburg Road to Causeway Boulevard, Hillsborough County

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

Publication Date (year) 2006 **T**otal Number of Pages in Report (Count text, figures, tables, not site forms) 66

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) Whitaker, John

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.)
U.S. 301, Falkenburg Road, Causeway Boulevard

Survey Sponsors (corporation, government unit, or person who is directly paying for fieldwork)
Name Kimley-Horn and Associates, Inc.
Address/Phone Tampa

Recorder of *Log Sheet* John Whitaker Date *Log Sheet* Completed _____

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)
Hillsborough

USGS 1:24,000 Map(s) : Map Name/Date of Latest Revision (use supplement sheet if necessary):
Brandon/1987

Description of Survey Area

Dates for Fieldwork: Start 11/14/06 End 11/15/06 **T**otal Area Surveyed (fill in one) _____ hectares _____ acres
Number of Distinct Tracts or Areas Surveyed 1
If Corridor (fill in one for each): **W**idth _____ meters 300 feet **L**ength _____ kilometers 0.57 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 Site Predictive Model for Unincorporated Areas of Hillsborough County (2004)

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, **un**controlled	___ water screen (finest size: ____)	___ soil resistivity
M 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	___ exposed ground inspected	___ occupant interview	___ tax records
___ interior documentation	A local property records	___ occupation permits	___ unknown

A other (describe): Visual inspection of adjacent properties

Scope/Intensity/Procedures

Visual inspection of entire project APE. 13 round shovel tests, approx. 50cm diameter, excavated to 1m when possible, soils screened through ¼ inch wire mesh, no positive tests.

Survey Results (cultural resources recorded)

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

Site Counts: Previously Recorded Sites 0 Newly Recorded Sites 0

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

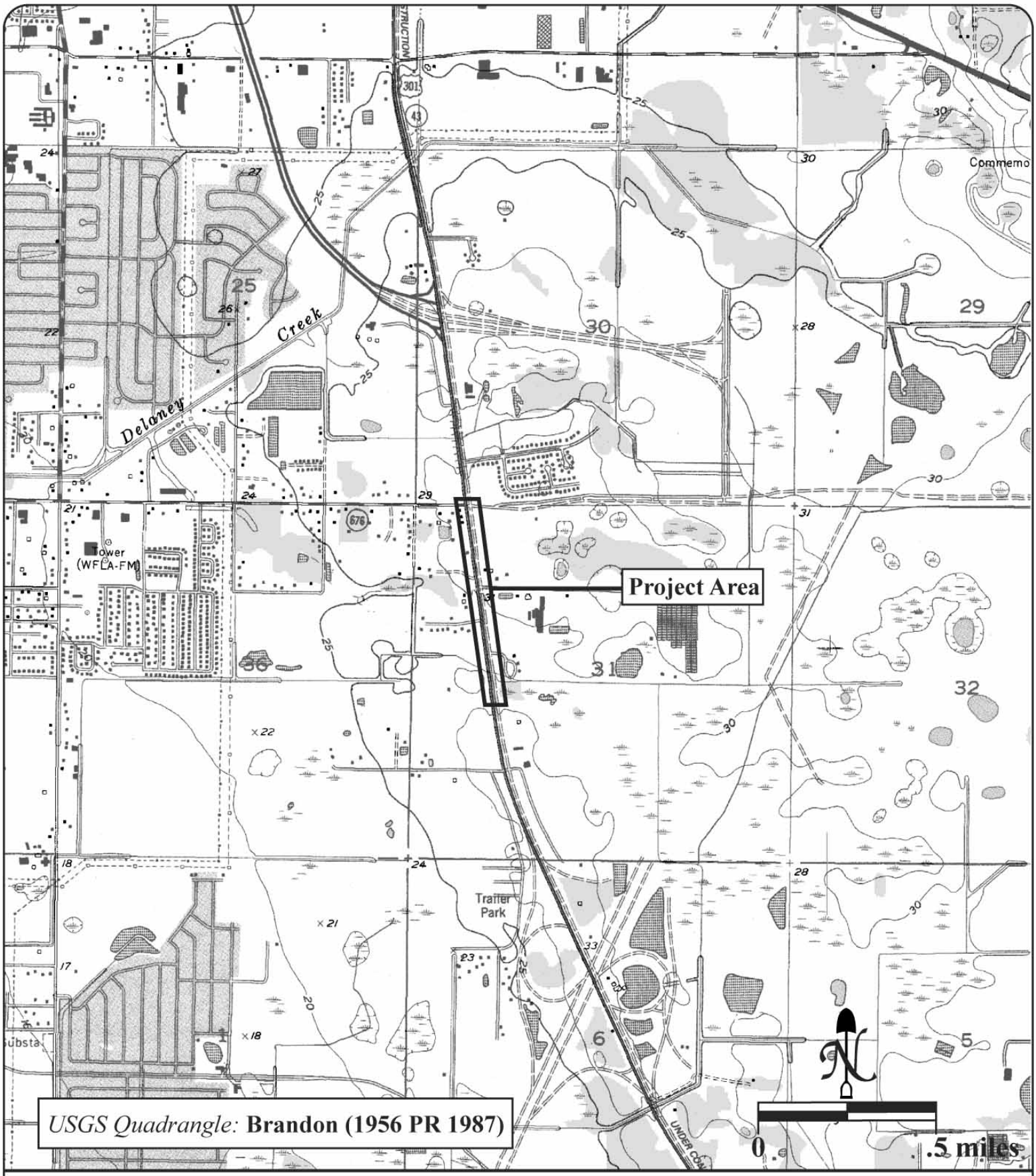
Newly Recorded Site #'s (Are you sure all are originals and not updates? Identify methods used to check for updates, ie, researched the FMSF records. List site #'s without "8." Attach supplementary pages if necessary.)

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 #_____

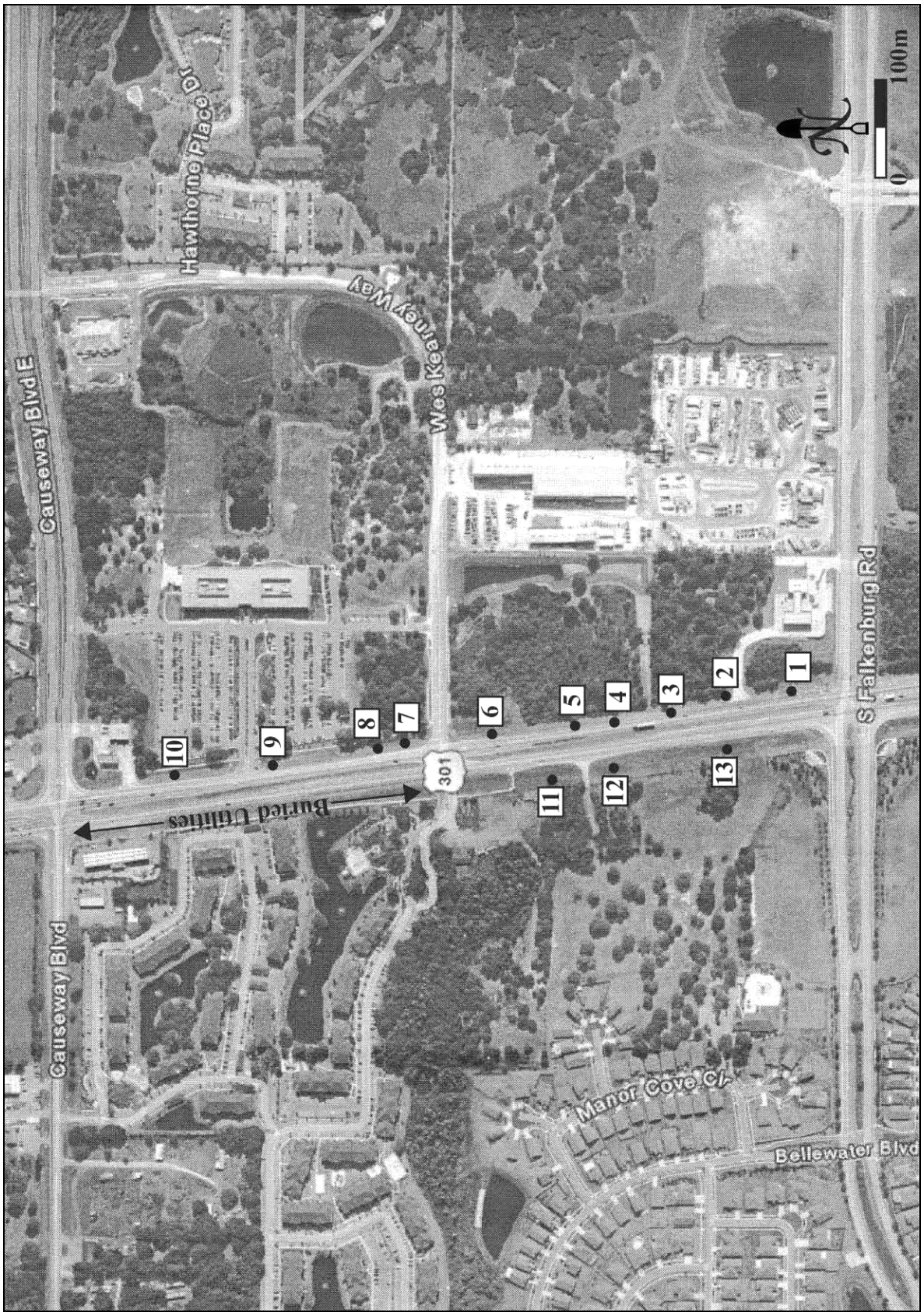
ATTACH PLOT OF SURVEY AREA ON PHOTOCOPIES OF USGS 1:24,000 MAP(S)


Project Area
Delaney Creek
Trailer Park
Commemo
Tower (WFLA-FM)
USGS Quadrangle: Brandon (1956 PR 1987)
0
.5 miles
N

Project APE

APPENDIX B:

MAP OF SHOVEL TEST LOCATIONS


100m
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Hawthorne Place Dr
Wesmere Way
Causeway Blvd E
S Falkenburg Rd
Causeway Blvd
Manor Cove Ct
Bellewater Blvd
301
Buried Utilities
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