I-595 (SR-862)

PROJECT DEVELOPMENT & ENVIRONMENT STUDY

FM No. 409354-1-22-01
FAP No. 5951 539 I
From the I-75 Interchange West of 136 Avenue
To the I-95 Interchange
Broward County, Florida

Prepared for:
FDOT District Four

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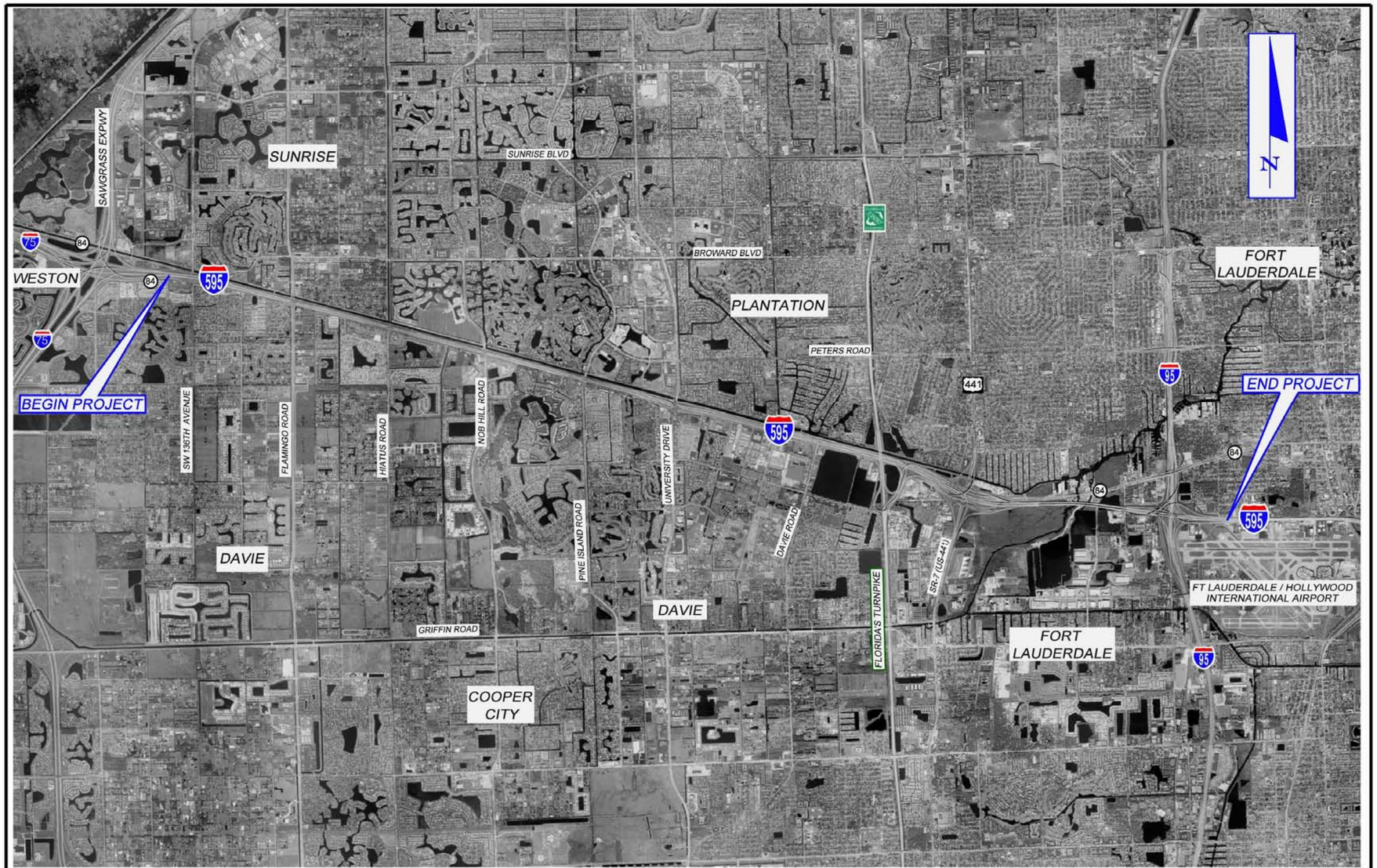
1.0 INTRODUCTION

The objective of this Cultural Resource Assessment Survey (CRAS), conducted during the week of June 13th, 2005, is to identify cultural resources within or adjacent to the project corridor and assess the cultural resources in terms of their eligibility for listing in the *National Register of Historic Places (NRHP)* according to the criteria set forth in 36 CFR Section 60.4.

This assessment was designed and implemented to comply with Section 106 of the *National Historic Preservation Act (NHPA) of 1966* (Public Law 89-655, as amended), as implemented by 36 CFR 800 (*Protection of Historic Properties*, effective January 2001); Chapter 267, *Florida Statutes*; Section 4(f) of the *Department of Transportation Act of 1966*, as amended (49 USC 303); and the minimum field methods, data analysis, and reporting standards embodied in the Florida Division of Historical Resources' (FDHR) *Historic Preservation Compliance Review Program* (November 1990), *Cultural Resource Management Standards and Operational Manual* (February 2003), and Chapter 1A-46 (*Archaeological and Historical Report Standards and Guidelines*), *Florida Administrative Code*. In addition, this report was prepared in conformity with standards set forth in Part 2, Chapter 12 (*Archaeological and Historic Resources*) of the FDOT *Project Development and Environment Manual* (revised, January 1999). All work conforms to professional guidelines set forth in the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716, as amended and annotated).

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

The PD&E Study limits extend from the I-75/Sawgrass Expressway interchange (Mile Post 0.592) west of 136th Avenue to the I-95 interchange (Mile Post 10.407) for a total project length of approximately 10 miles. Figure 1-1 illustrates the location and limits of the project.



RS&H Reynolds, Smith and Hills, Inc. Architecture, Engineering and Planning	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	I-595 PD&E STUDY	LOCATION MAP	FIGURE 1-1

2.0 PROJECT DESCRIPTION

The I-595 PD&E Study is a continuation of the I-595 Master Plan Study completed in March 2003. The Master Plan produced a Locally Preferred Alternative (LPA). Public comment on the LPA was received at a Public Hearing conducted on November 16, 2000, the LPA was adopted by the Broward County Metropolitan Planning Organization (MPO) on January 7, 2003, and subsequently was approved by the Federal Highway Administration (FHWA). The major components of the LPA that emerged from the Master Plan process include the following features.

- Reversible lanes at grade level serving express traffic from I-75 to east of SR 7
- Continuous connection of SR 84 between Davie Road and SR 7
- Collector-Distributor (C-D) system between Davie Road and I-95
- Two-lane off-ramps, as needed
- Braided interchange ramps to eliminate mainline weaving segments
- Combined ramps and cross-street bypasses to reduce congestion
- A westbound to northbound (WB-NB) on-ramp at Florida's Turnpike
- Modifications to the I-595/Florida's Turnpike interchange
- Transit element, such as a commuter rail, integrated into the corridor (with details of the concept to be developed in a separate study)

Fifteen different build alternatives were evaluated during Tiers 1 and 2 of the Master Plan Study. The LPA consists of an integrated set of projects. This integration would be compromised if alternatives analyses for the individual projects resulted in design concepts that would necessitate a revisited corridor planning effort. Therefore, the I-595 Master Plan LPA served as the base build alternative for the I-595 PD&E Study.

The objective of the I-595 PD&E Study is to re-examine the original justifications for the Master Plan LPA to assure that federal, state and local policies enacted since initial development of the project concepts have been incorporated into its recommendations. The same is true of the design standards and technologies considered for application or implementation in the corridor. Complementary projects, either in progress or completed since earlier studies of the I-595 corridor were concluded, have also been considered in the development of recommendations. The detailed examination of these issues through the PD&E process assures that FDOT has identified the most cost-feasible, constructable improvements in the final recommended package. In addition to preserving both local and state interests, the PD&E process satisfies National Environmental Policy Act (NEPA) procedures. These measures are a prerequisite for receiving Location Design Concept Acceptance (LDCA) from FHWA, an essential step in qualifying for the federal funds needed to implement the proposed improvements.

2.1 PROJECT LOCATION

The I-595 corridor is located in central Broward County, Florida. The western study limits are the I-75/Sawgrass Expressway interchange (Mile Post 0.592); the eastern study limits are the I-95 interchange (Mile Post 10.407). The total project length is approximately 10 miles. The I-595 corridor passes through or lies immediately adjacent to six governmental jurisdictions: the Cities of Sunrise, Davie, Plantation, Ft. Lauderdale and Dania, as well as unincorporated areas of Broward County.

Unlike most interstate corridors in Florida, the majority of the I-595 corridor is comprised of two facilities: I-595 and SR 84. The I-595 portion of the corridor is a six-lane, limited access facility. In addition to interchanges with the two freeway systems at each end of the study corridor, there are nine other interchanges along the corridor at the following crossroads: SW 136th Avenue, Flamingo Road (SR 823), Hiatus Road, Nob Hill Road, Pine Island Road, University Drive (SR 817), Davie Road, Florida's Turnpike (SR 91), and SR 7 (US 441).

The SR 84 portion of the corridor lies both north and south of the I-595 mainline. The two lanes north of the mainline operate one-way WB while the two lanes south of the mainline operate one-way EB. In the area west of the I-75 interchange and continuing east to Davie Road, the SR 84 lanes serve as a collector-distributor system to the I-595 mainline. The SR 84 system is suspended through the I-595 interchanges with Florida's Turnpike and SR 7. East of the SR 7 interchange, the SR 84 and I-595 rights of way separate. The SR 84 alignment veers to the northeast and the I-595 alignment continues nearly due east.

2.2 NEED FOR IMPROVEMENT

The various improvements that comprise this project address a number of state, regional and corridor-specific needs. The following sections summarize the need for the proposed improvements. A more detailed discussion of the project justification is provided in Section 3.0 NEED FOR IMPROVEMENTS of the PD&E Study's accompanying *Preliminary Engineering Report* (PER).

2.2.1 Statewide Needs

The improvements proposed for the I-595 corridor are directly related to the FDOT Mission Statement.

> ***Florida will provide and manage a safe transportation system that ensures the mobility of people and goods, while enhancing economic competitiveness and the quality of our environment and communities.***

The proposed improvements to the I-595 corridor are directly related to the four goals that FDOT has adopted as its means of carrying out this Mission Statement.

1. **Safe Transportation** – The proposed improvements will enhance the safe operation of the corridor by increasing the number of persons, vehicles and travel modes that it can accommodate. This is an asset to residents, visitors and commerce.
2. **System Management** – The proposed improvements expand the service life of the corridor, expanding upon the original vision for whom and how the corridor operates to serve the Southeast Florida traveling public.
3. **Economic Competitiveness** – Because of its critical location in the center of Broward County and its proximity to a wide range of other major modes, such as the Port Everglades, Ft. Lauderdale-Hollywood International Airport, Florida East-Coast Rail Line and Tri-County Commuter Rail, as well as its connection to the region's major north-south expressways and principal highways, improvements to the I-595 corridor are a boost to the state and regional economic competitiveness in the global market.
4. **Quality of Life** – The proposed improvements to the I-595 corridor have been developed in a manner that ensures that the qualities of life that are of value to Florida citizens are sustained: preserving parklands, protecting sensitive wetlands and taking appropriate measures to mitigate any environmental impacts that may occur.

2.2.2 Regional (Area-wide) Needs

There are a number of regional issues that serve to justify implementation of the proposed I-595 improvements. These regional issues include system linkages; transportation demand; federal, state and local authorities' support for the project; social demands and economic development; and modal interrelationships.

System Linkages

Within Dade, Broward and Palm Beach Counties, the I-595 corridor is the only east-west freeway providing connections to all of the region's principal north-south corridors, as well as freeways beyond the region's boundaries. West of the I-75/Sawgrass Expressway, I-595 becomes I-75, with direct connections to the population centers along the Gulf Coast. This linkage is important for many reasons.

- I-595 plays an important role in the distribution of products, both within the Southeast (SE) Florida area and between the region and other areas of the state and nation.

- I-595 is a critical link between other components of the Florida Intrastate Highway System (FIHS) network, such as US 27 (located west of the project corridor) Sawgrass Expressway, I-75, Florida's Turnpike and I-95. It is also an important link to Strategic Intermodal System (SIS) network components for other travel modes: freight and passenger rail, port, aviation and intercity bus. These linkages work to ensure an efficient transportation network.

- I-75 is an important facility in the area's emergency evacuation plans. Fox Trail Elementary School (1250 Nob Hill Road, Davie) is a designated emergency shelter and is located within one block of the corridor. I-595 is also a primary route for departure from the SE Florida area, while avoiding the coastal region.

Transportation Demand

Level of Service analyses were performed on Base Year 2002 (existing) travel conditions within the I-595 corridor. They examined each of the system's operating elements: mainline sections, mainline/ramp merge and diverge points, weave sections, ramps, and ramp/crossroad intersections. Table 2-1 identifies those elements of the project found to have volumes that resulted in less than acceptable levels of service, based on the local jurisdictions' adopted minimum standards.

Details of the levels of service assessment are provided in Section 6.0 TRAFFIC of the PER. Analysis of the traffic volumes forecast for the future years of this project (Year 2014 as the Year Open of proposed improvements and Year 2034 as the Design Year) showed that these deficiencies would only worsen in future years. Therefore, any degree of additional capacity that the corridor can contribute to the total system capacity will improve the responsiveness of the entire SE Florida regional transportation network to meet the needs of the motoring public.

Federal, State or Local Governmental Authority

It is important that any publicly-funded transportation project have the support of the public agencies charged with reviewing, approving, constructing and/or financing it. For a project on the interstate system, such as I-595, these agencies exist at the local, state and federal levels.

Local support for the I-595 PD&E Study and its related physical improvements are coordinated through the Broward County MPO. The *Broward County MPO 2030 Long-Range Transportation Plan* shows that the elements of the Master Plan-defined LPA are included.

Project #44 on the list of Cost-Feasible Highway Projects is broken down into two separate projects.

- The first is a 10-mile segment of I-595, from I-75 to SR 7, and includes adding reversible lanes in the median area.
- The second is a 14-mile segment of I-595, extending from I-75 to US 1.

Table 2-1 Corridor Elements Below Adopted Level of Service (LOS) Standards

System Component: Direction of Travel Element Location	AM Peak Hour LOS	PM Peak Hour LOS
Mainline I-595: EB		
• Viaduct between I-95 and SR 7/Florida's Turnpike	F	
I-595 Mainline/Ramp Merges & Diverges: EB		
• SR 7 – Diverge	F	
• Florida's Turnpike – Merge	F	
• SR 7 – Merge [1]	F	
I-595 Mainline/Ramp Merges and Diverges: WB		
• SR 7, from NB mainline – Merge		F
• SR 84/Davie Road, from C-D Rd [2] – Merge	E	F
• SW 136th Avenue – Diverge		E
Mainline Weave Analyses: I-595 EB		
• Between 136th Ave and Flamingo Rd	E	
• Between Flamingo Rd and Hiatus Rd	F	
• Between Hiatus Rd and Nob Hill Rd	F	
• Between Nob Hill Rd and Pine Island Rd	F	E
• Between Pine Island Rd and University Dr	F	F
Mainline Weave Analysis: I-595 WB		
• Between Florida's Turnpike and Davie Rd	E	F
• Between University Dr and Pine Island Rd	E	F
• Between Pine Island Rd and Nob Hill Rd	F	F
• Between Nob Hill Rd and Hiatus Rd	E	F
• Between Hiatus Rd and Flamingo Rd	E	F
• Between Flaming Rd and SW 136th Ave		E
Ramp Levels of Service		
No ramps had substandard levels of service		
SR 84 /Crossroad Intersections: EB		
• Nob Hill Rd	F	
• Pine Island Rd	F	
• University Dr	E	
• Davie Rd	E	
SR 84/Crossroad Intersections: WB		
• SW 136th Ave		E
• Pine Island Rd		F
• Davie Rd		E

1. Highway Capacity Manual Methodology recommends analyzing upstream and downstream basic freeway segments when there is an Add/Drop lane design on the ramp
2. C-D Road – Collector Distributor System developed using segments of parallel SR-84 and braided ramps between I-595 and SR 84

The South Florida Water Management District (SFWMD) has also been a partner in the development of this project. Throughout the development of proposed improvements, the FDOT worked closely with the SFWMD to ensure that their concerns were addressed in the design of project alternatives. From relocation of ramps and roadways to measures taken to mitigate such unavoidable impacts as stormwater retention and noise, SFWMD staff comments and concerns are reflected in designs throughout the corridor.

At the state level, the proposed improvements within the I-595 corridor are addressed in two different plans, one for each of the major corridor designations, FIHS and SIS. The FDOT prepared a comprehensive long-range plan for the FIHS network in 2000 with a planning horizon of 2020, with updates in 5-year cycles. The FDOT published its revised *FIHS 2025 Cost-Feasible Plan Update* in 2003. A number of the elements of the I-595 improvements package were retained in the state's FIHS Cost-Feasible Plan: the mainline reversible lanes, improvements to SR 84 EB and WB, and interchange improvements at SR 7, Florida's Turnpike and I-95.

The I-595 corridor is a Designated SIS Highway Corridor link of the state's Strategic Intermodal Transportation network. All components of the I-595 improvements package are included in the SIS "Unprogrammed Project Needs" list, published in early 2005, divided into eight separate project packages. Seven of these packages reference the Broward County MPO's Long Range Plan as the source of the project listing. The eighth package refers to a recently completed Intelligent Transportation Systems (ITS) study, FDOT District 4's *10-Year ITS Cost Feasible Plan*. The revised listing of SIS projects is anticipated to be published late in 2005. This listing will also include the proposed corridor improvements.

Federal agencies have also been involved in the development of the proposed improvements. In addition to FHWA, which has been involved with the project since its earlier Master Plan phase, several federal agencies have had opportunities to comment on the project. Because the New River, which lies north of SR 84 within the limits of the project, is a navigable waterway through much of the corridor, FDOT has also met with the U.S. Coast Guard to receive their input regarding the design and location of ramps and structures that overpass the river.

Social Demands and Economic Development

The I-595 PD&E Study maximizes the capacity of the corridor within the existing rights of way to the greatest extent feasible. Acquisition of additional rights of way has been restricted to very narrow confines. The directive to minimize acquisition of right of way worked to protect the Section 4(f) lands and the pristine waters and sensitive environmental features adjacent to the corridor. The protection of the natural assets of SE Florida enhances the area's attractiveness to potential business interests, developers and visitors.

Modal Interrelationships

The LPA for the I-595 corridor that emerged from the Master Plan study introduced several multimodal features into the I-595 corridor: light rail transit (LRT), special use lanes, integration with transit lines on crossroads, and non-motorized travel. Utilizing a comprehensive multimodal planning approach in these I-595 corridor studies will enable optimum performance to be derived from all parts of the system, balancing the needs of the various travel modes while minimizing their collective impacts.

2.2.3 Project Corridor Needs

In addition to the statewide and regional benefits of implementing the proposed corridor improvements, there are benefits that are specific to the corridor. These include reductions of incident-related delay and design solutions for the existing interchange design deficiencies and unsafe weaving and merging conditions within the project corridor.

2.3 EXISTING ROADWAY CHARACTERISTICS

I-595 is a limited access facility that runs in an east-west direction with a posted speed of 65 miles per hour (mph). I-595 is an integral part of the FIHS and SIS through its functional classification as a limited access expressway. There are one-way frontage roadways (SR 84) on the north and south sides of the mainline between SW 136th Avenue and Davie Road. SR 84 is functionally classified as a one-way collector with a posted speed of 50 mph. Florida's Turnpike, a major north-south intersecting highway, is a six-lane freeway toll facility, three lanes in each direction, with a posted speed of 65 mph.

2.3.1 Typical Sections

The I-595 corridor has four main typical sections which are described below. The following are their limits.

- Typical Section 1 — SW 136th Avenue to University Drive
- Typical Section 2 — University Drive to Florida's Turnpike
- Typical Section 3 — Florida's Turnpike to west of SR 7
- Typical Section 4 — West of SR 7 to I-95

Typical Section 1 – SW 136th Avenue to University Drive

Typical Section 1 includes a 64-foot median, 10-foot paved inside and outside shoulders (12-foot overall width), and three general purpose (GP) lanes in each direction. There are one or two auxiliary lanes between each pair of successive interchanges. Guardrails are located on the outside of the travel lanes to protect motorists in sections with high fill, while barrier walls are located on areas where mechanically stabilized earth (MSE) retaining walls are used.

Typical Section 1 has a frontage road system, SR 84, on the north and south sides of the I-595. SR 84 is a two-lane, one-way pair that acts as a collector/distributor (C-D) roadway to I-595. When I-595 was planned, the SR 84 right of way served as the original working alignment for the new Interstate connector. Typical Section 1 is depicted in Figure 2-1.

Typical Section 2 - University Drive to Florida's Turnpike

Typical Section 2 is similar to Typical Section 1, except that its median width is 68 feet (see Figure 2-2). The I-595 mainline has a frontage road system (SR 84) on its north and south sides along most of its length, from University Drive to Davie Road.

Typical Section 3 – Florida's Turnpike to West of SR 7

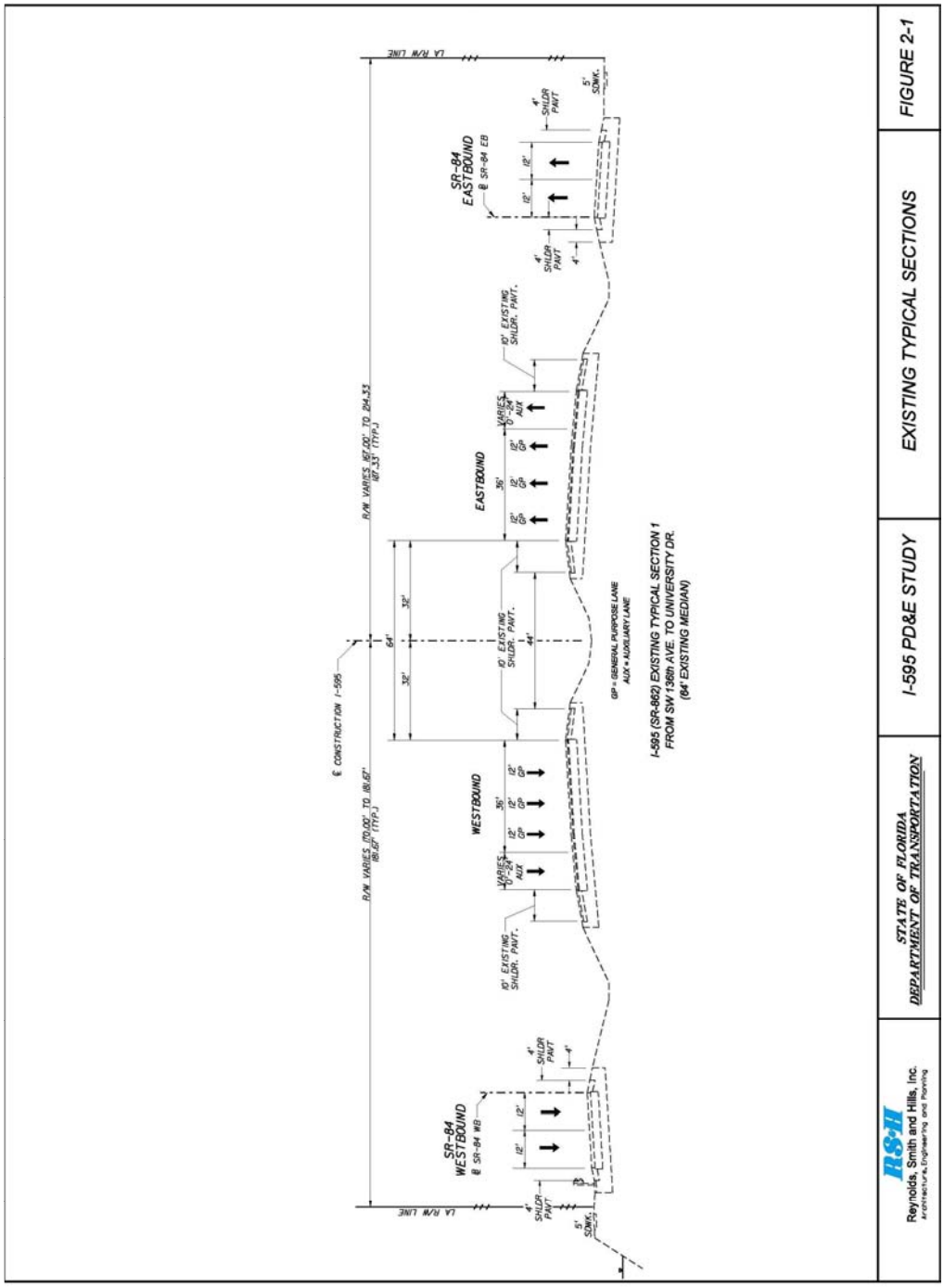
Typical Section 3 has median and inside shoulder widths that vary. This variability is due to a restriping project, completed in 2002, that created an additional WB auxiliary lane on I-595. The mainline alignment is on curve and superelevated through much of this area. No frontage roads are present along this section of I-595. One or two auxiliary lanes are present between interchanges in both directions. Typical Section 3 is shown in Figure 2-3.

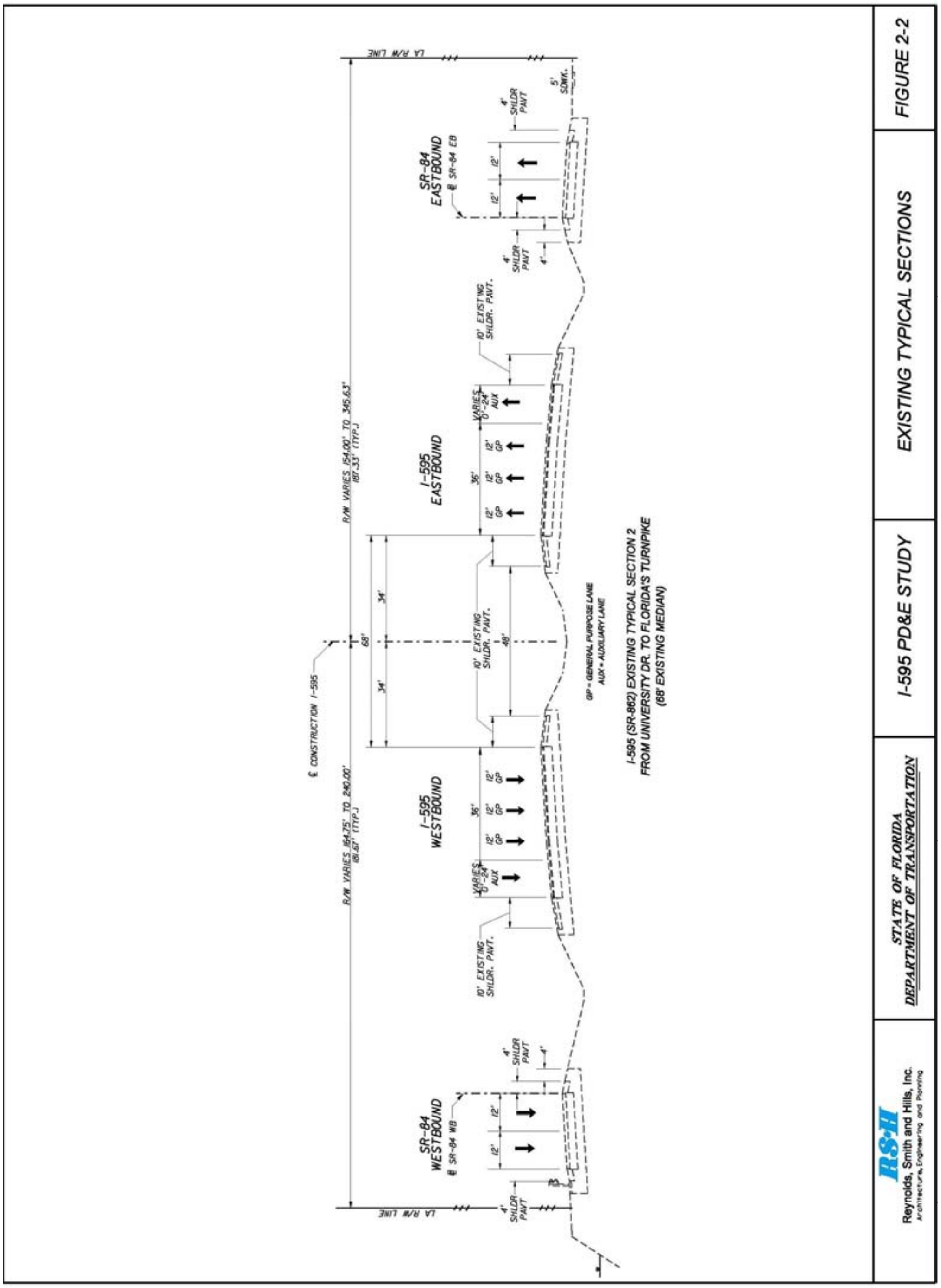
Typical Section 4 – West of SR 7 to I-95

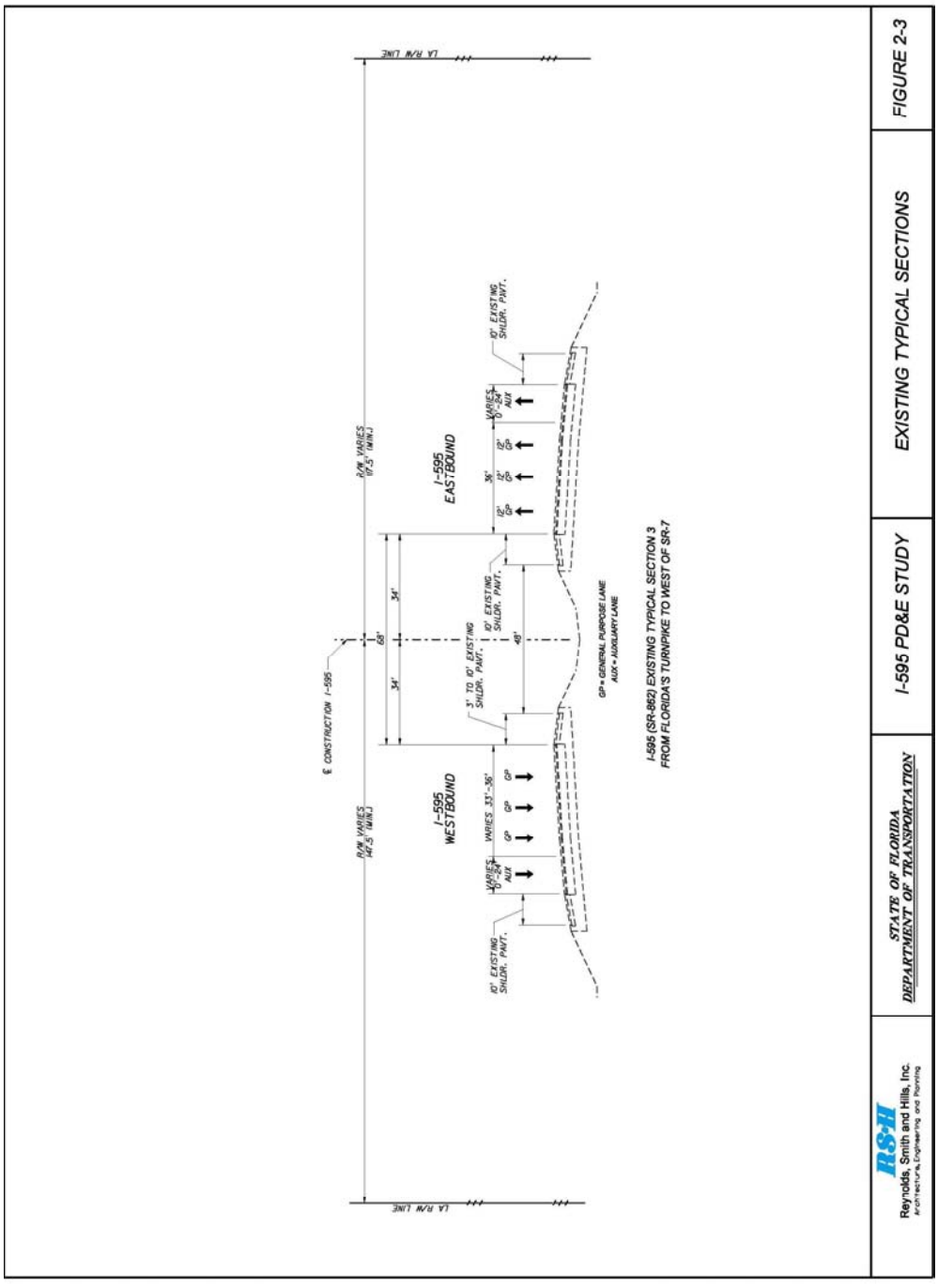
I-595 is on bridge structure through much of this area. Typical Section 4 area has a varying median width and 3-foot inside shoulders that resulted from the 2002 restriping project described above. Three general purpose and two auxiliary lanes are present within this segment of I-595; no frontage roads present (see Figure 2-4). East of SR 7, SR 84 resumes its original alignment north of – and separate from – the I-595 mainline.

2.3.2 Right of Way

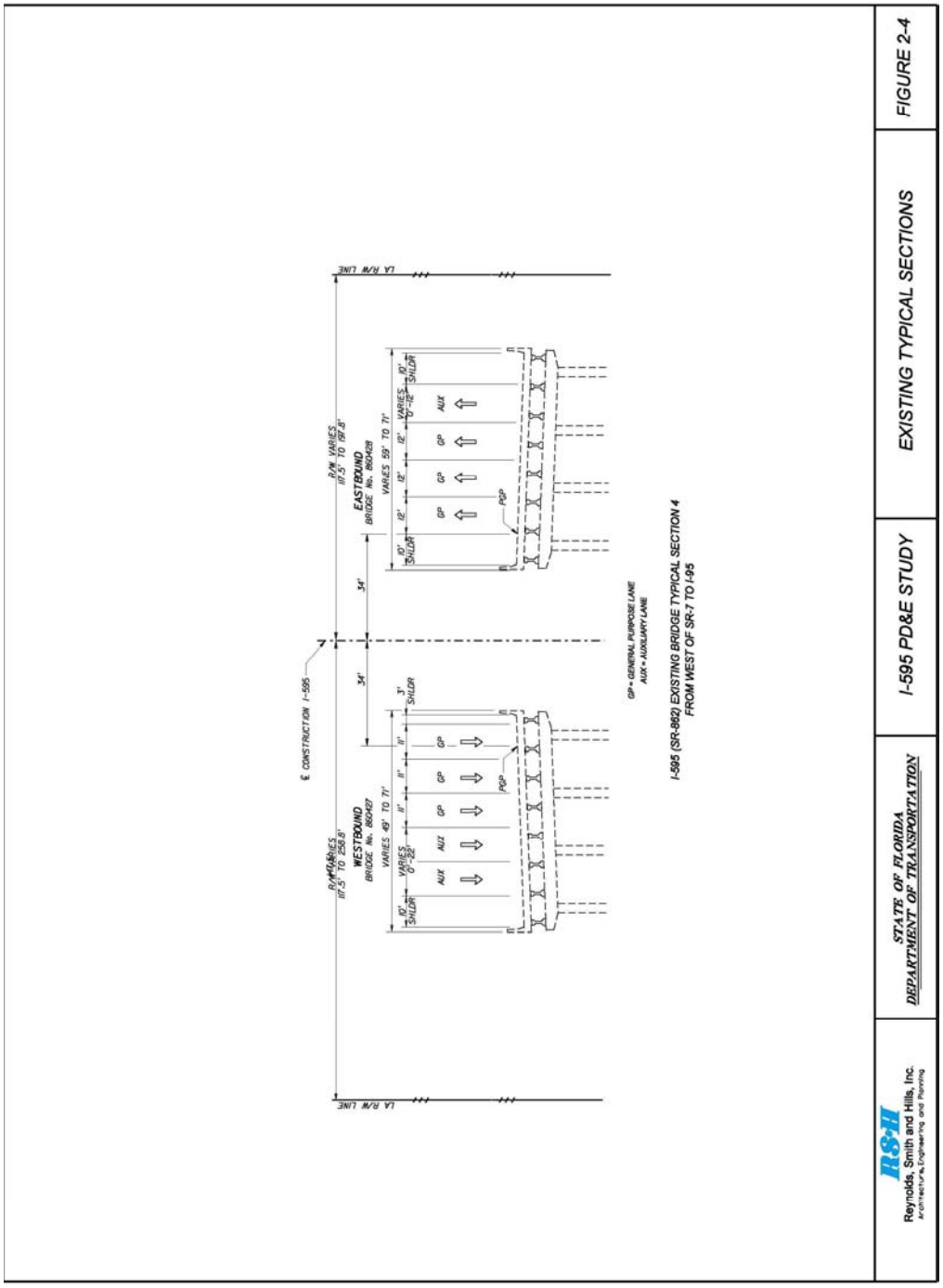
Between SW 136th Avenue and Pine Island Road, I-595 and its adjacent frontage roads lie within a 324-foot right of way. Between Pine Island Road and Davie Road, where the frontage road terminates, the right of way varies in width up to 500 feet. Following the I-595 right of way east from Davie Road, it widens to as much as 1,800 feet in the vicinity of the SR 7 interchange, then narrows to 360 feet west of I-95. East of the I-95 interchange, the I-595 right of way narrows to a minimum of 155 feet.


SR-84
EASTBOUND
@ SR-84 EB
SR-84
WESTBOUND
@ SR-84 WB
EASTBOUND
WESTBOUND
10' EXISTING SHLDR. PAVT.
VARIES 0'-24' AUX
4' SHLDR PAVT
5' SDWK.
L.A. R/W LINE
R/W VARIES (67.00') TO 284.33' (67.33') (TYP.)
R/W VARIES (70.00') TO 186.62' (66.62') (TYP.)
℄ CONSTRUCTION I-595
64'
32'
44'
36'
GP = GENERAL PURPOSE LANE
AUX = AUXILIARY LANE
I-595 (SR-862) EXISTING TYPICAL SECTION 1
FROM SW 136th AVE. TO UNIVERSITY DR.
(64' EXISTING MEDIAN)
RS&H
Reynolds, Smith and Hills, Inc.
Architecture, Engineering and Planning
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
I-595 PD&E STUDY
EXISTING TYPICAL SECTIONS
FIGURE 2-1


SR-84 WESTBOUND
I-595 WESTBOUND
I-595 EASTBOUND
SR-84 EASTBOUND
I-595 (SR-862) EXISTING TYPICAL SECTION 2
FROM UNIVERSITY DR. TO FLORIDA'S TURNPIKE
(68' EXISTING MEDIAN)
Reynolds, Smith and Hills, Inc.
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
I-595 PD&E STUDY
EXISTING TYPICAL SECTIONS
FIGURE 2-2



I-595 (SR-862) EXISTING TYPICAL SECTION 3
FROM FLORIDA'S TURNPIKE TO WEST OF SR-7


EXISTING TYPICAL SECTIONS
I-595 PD&E STUDY
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
RS&H
Reynolds, Smith and Hills, Inc.
FIGURE 2-4
I-595 (SR-862) EXISTING BRIDGE TYPICAL SECTION 4
FROM WEST OF SR-7 TO I-95
GP = GENERAL PURPOSE LANE
AUX = AUXILIARY LANE
EASTBOUND
BRIDGE No. 860428
WESTBOUND
BRIDGE No. 860427
CONSTRUCTION I-595
LA R/W LINE

2.3.3 Intersections and Signalizations

There are 14 signalized intersections within the corridor under the control of the Broward County Traffic Engineering Division. The following intersections were evaluated as part of this study. Each of the signals is actuated. The cycle lengths vary from 80 seconds to 150 seconds.

- SR 84 EB at SW 136th Avenue
- SR 84 EB at Flamingo Road
- SR 84 EB at Hiatus Road
- SR 84 EB at Nob Hill Road
- SR 84 EB at Pine Island Road
- SR 84 EB at University Drive
- SR 84 EB at Davie Road
- SR 84 WB at SW 136th Avenue
- SR 84 WB at Flamingo Road
- SR 84 WB at Hiatus Road
- SR 84 WB at Nob Hill Road
- SR 84 WB at Pine Island Road
- SR 84 WB at University Drive
- SR 84 WB at Davie Road

2.4 ALTERNATIVE ANALYSIS

The Master Plan LPA was developed with a Design Year of 2020. The primary objective of the alternative analysis phase was to refine the LPA as necessary to satisfy future travel demand to a Design Year of 2034. The LPA was updated to include changed conditions within the corridor that have occurred since the Master Plan Study was completed. In addition, the LPA was refined to reflect comments received at public workshops, as well as an extensive Value Engineering/Design Review (VE/DR) process conducted during the PD&E Study. The following are critical elements that were considered during the refinement of the Master Plan LPA.

PD&E Study Design Year 2034

The Master Plan LPA was developed with a Design Year of 2020; the PD&E Study Design Year is 2034. The LPA was refined to accommodate traffic growth for an additional 14 years that required additional auxiliary lanes and ramp widening at select locations.

North New River Greenway

Broward County is developing the North New River Greenway, a shared-use bicycle/pedestrian trail, extending from Markham Park, west of I-75, to SR 7. A portion of the Greenway between Davie Road and SR 7 was relocated to the north side of the corridor as part of the I-595 improvements due to conflicts associated with modifications to the SR 84 alignment in that area.

Sewell Lock Park

The historic Sewell Lock Park, located on the North New River Canal along the north side of I-595 immediately west of Davie Road, presented an obstacle for the

proposed LPA improvements in that area. The Master Plan LPA will impact the park and possibly create Section 4(f) involvement. To avoid impacts to the park, the alignment of the proposed braided ramps and typical sections for SR 84 and the on- and off-ramps between University Drive and Davie Road were modified.

Florida Power and Light (FP&L) Substation

The existing FP&L substation, located on the south side of I-595 west of Davie Road and across from Sewell Lock Park, extends into the SR 84 right of way. The Master Plan LPA most likely will require relocation of the substation. The roadway typical section and alignment in this area were adjusted to avoid impacts to the FP&L substation.

Central Broward East-West Transit Alternatives Analysis

Since the Master Plan Study, FDOT has initiated the Central Broward East-West Transit Alternatives Analysis. As a result of that study, the Broward County MPO endorsed the I-595 corridor in its meeting of April 14, 2005 as the preferred location for the East-West Transit Alignment. At the same time, the MPO identified light rail as the preferred transit mode. The preliminary transit concept provides for elevated light rail within the I-595 corridor between SW 136th Avenue and SR 7. The Master Plan LPA had proposed the transit alignment be elevated within the I-595 corridor as well, but placed it south of both I-595 and SR 84. Extensive coordination with transit officials has continued throughout the PD&E Study process to accommodate the potential transit alignment within the I-595 corridor.

Value Engineering/Design Review Process

As part of the PD&E Study design analysis, a comprehensive VE/DR Team was assembled, composed of senior staff from FDOT District 4, Broward County, Florida's Turnpike Enterprise and specialty consultants. The purpose of the VE/DR Team was to conduct detailed design reviews of the design alternatives at critical stages of the refinement process to assure that the project remained cost effective, constructable and made the most efficient uses of existing rights of way. The refinements to the LPA that emerged from the first four week-long VE/DR workshops were incorporated into a single PD&E design concept, **Alternative 1A**.

As the VE/DR alternative was developed further, it became apparent that extensive right-of-way acquisitions would be needed to construct the transit line along the south side of SR 84. As a result, the project team developed three additional concepts. The alternatives were developed in coordination with the transit study consultants, local municipalities and stakeholders, FHWA and the VE/DR Team. The three alternatives were designated as **Alternatives 1B**, **2A** and **2B**. The three alternatives maintained the

basic design components of the Master Plan LPA (reversible lanes, auxiliary lanes, braided ramp systems, etc.) but made more efficient use of the space available within the existing corridor right of way.

A comparative analysis of the four design alternatives was performed that evaluated each build alternative using such criteria as traffic service; preliminary engineering, environmental and socio-economic impacts; and costs. Based on this analysis, Alternatives 1A and 2B were considered "fatally flawed" and eliminated from further consideration. The Concept Plans for all of the alternatives evaluated, including the No Build Alternative, are presented in Appendix D – Alternative Concept Plans of the PER.

Selection of the alternative for which LDCA will be sought from FHWA will be made after receiving public input during the I-595 PD&E Public Hearing in December 2005.

2.5 PROJECT ALTERNATIVES

The following section describes the primary characteristics of the **No Project Alternative** and the two design concepts, **Alternatives 1B and 2A**.

2.5.1 No Project Alternative

The No Project Alternative entails maintaining the existing I-595 corridor without implementing capacity, operational or safety improvements, except for those already funded and included in the Broward County MPO's *2005/06 – 2009/10 Transportation Improvement Plan*. The following is a summary of the key corridor characteristics.

- Three general purpose lanes with paved inside and outside shoulders per direction, separated by either a 64-foot or 68-foot grass median
- One or two auxiliary lanes between each pair of interchanges
- SR 84, configured as a two-lane one-way pair, with WB lanes north of the mainline and the North New River Canal and EB lanes south of the mainline; extends from SW 136th Avenue to Davie Road; has a design speed of 50 mph (e max = 0.10); has an open drainage; serves as I-595 C-D system
- No frontage road between Davie Road and SR 7; east of SR 7, both EB and WB lanes of SR 84 on the north side of the mainline and the North New River Canal, following its original alignment – separated and apart from the I-595 right of way
- Tight diamond with frontage road interchange configuration at the following crossroads:
  - SW 136th Avenue
  - Flamingo Road
  - Hiatus Road
  - Nob Hill Road
  - Pine Island Road
  - University Drive
  - Davie Road

- Two flyovers at the University Drive interchange carrying SB-EB and NB-WB movements
- 70 mph design speed on mainline; 50 mph design speed on ramps

The consequences of selecting the No Project Alternative include the acceptance of increased traffic congestion that will result from the increased travel demand associated with the continued significant growth of SE Florida that is expected to occur over the next 20 years. By contrast, the advantages of the No Project Alternative include no additional costs, other than maintenance of the existing facility; no need for acquisition of additional rights of way for construction of retention/detention ponds that will be needed for additions to the impervious areas within the corridor limits; and no impacts to traffic or surrounding neighborhoods as a result of construction activities.

The No Project Alternative remains under consideration throughout the study process to provide a baseline for comparison with project design alternatives.

2.5.2 Design Alternatives

The improvement alternatives initially proposed for the I-595 corridor during the 2003 Master Plan and further developed through this PD&E Study process, have a number of design elements.

- Mainline I-595
- Mainline I-595 Interchanges
- Reversible Lanes
- Reversible Lane Interchanges
- SR 84
- Pedestrian and Bicycle Facilities
- I-595/Florida's Turnpike Interchange
- Florida's Turnpike Mainline
- Transit Facilities
- Pond Apple Slough

Common elements of the design alternatives are discussed below and are followed by a discussion of the unique elements of each design alternative. In general terms, Alternative 1B proposes constructing the new reversible lanes at grade level within the median of the I-595 corridor. In Alternative 2A, the reversible lanes would be elevated above the existing I-595 mainline median area.

Shared Design Alternative Design Features

Mainline I-595 – Each of the design alternatives preserves the existing I-595 mainline general purpose lanes in their present location through much of the corridor, 34 feet left and right of the centerline of construction. Where needed, an additional auxiliary lane is proposed so that two auxiliary lanes per direction are provided between each pair of successive interchanges within the corridor. Mainline design speeds of 70 mph are also preserved.

Mainline I-595 Interchanges – Major improvements are proposed for the mainline interchanges to eliminate friction in the outer lanes caused by merge, diverge and weaving segments along the mainline. This will be accomplished by introducing braided ramps, a design feature that eliminates ramps by combining ramp movements and reversing the typical on-ramp/off-ramp sequence usually found between successive interchanges. The proposed improvements will either eliminate mainline weaving segments altogether or relocate them to the frontage roads where any delays would not impact mainline traffic flow.

All ramps will be of parallel type, with auxiliary lanes beginning/ending at the ramp gores. This configuration will improve the operation of merge and diverge segments. In addition, all ramps at interchanges within the study corridor will have 50 mph design speeds.

In addition, the existing flyovers at the University Drive interchange will be reconstructed, moving them to allow widening of the median as needed to accommodate the reversible express lanes.

Reversible Lanes – The reversible lanes will be located within the I-595 median area. Their horizontal and vertical alignments are to follow the existing I-595 alignment. At the present time, it is envisioned that the reversible lane system will flow EB during the AM peak period and WB during the PM peak period, allowing a large percentage of long distance through traffic to be removed from the GP lanes and augmenting the number of lanes flowing in the direction of greatest demand.

Reversible Lane Interchanges – Whether originating within the I-595 corridor only, as proposed under Alternative 1B, or within both the I-595 and Florida's Turnpike corridors, as proposed under Alternative 2A, the median areas are to be widened to accommodate the reversible lane interchanges. Two inside auxiliary lanes will be developed for access to the reversible lane system, separated from the mainline by a 4-foot buffer area. Overhead Dynamic Message Signs (DMSs) are proposed to guide motorists into or away from the auxiliary lanes leading to the reversible lanes (depending on the time of day). Opposing traffic will be prohibited from entering the reversible lanes by a series of gates that will extend from the inside barrier wall in the area of the auxiliary lanes. Drop down safety nets are also proposed to further prohibit motorists from entering the reversible lanes in the wrong direction. Barrier walls will be used along the I-595 mainline to eliminate clear zone violations in the reversible lane interchange area.

SR 84 – A number of factors make it impractical to maintain SR 84 as a rural (open drainage) facility. These factors include limited rights of way, addition of mainline auxiliary lanes, proposed realignments of ramps, proposed addition or expansion of

bicycle and pedestrian facilities, and potential impacts to the North New River Canal. It is proposed that SR 84 be changed to a suburban facility with two 12-foot lanes per direction, installation of a Type F curb-and-gutter system on the outside and an 8-foot stabilized inside shoulder, of which 4 feet are paved. The proposed use of a curb-and-gutter system accomplishes several things: it allows the roadway drainage to be contained within the existing right of way; it allows for a pedestrian/bicycle path to be installed on the outside between Davie Road and SR 7; and it reduces clear zone requirements. A guardrail will be installed in the WB direction along the curb and gutter to protect users from the drop off hazard associated with the canal.

Additional rights of way are required along the north side of WB SR 84 for much of its length. Meetings were held with SFWMD regarding this issue. The SFWMD issued the following guidelines to be followed with respect to potential impacts to the North New River Canal.

- If the roadway footprint is within the SFWMD right of way, a bulkhead constructed with sheet piling will be installed to prevent encroachment on the canal.
- No reduction in the capacity of the canal cross section is permitted.
- No change in the conveyance of the canal is permitted.
- Sound walls may be installed on top of the bulkhead, but not within 100 feet of any bridge crossing the canal.

The reconstructed SR 84 will be located at the same elevation as the existing facility. It also will be located on the outside of I-595 mainline ramps and bypass ramps so that a continuous 4-foot undesignated bicycle lane can be maintained along the outside travel lane. The single exception to this occurs between Pine Island Road and Nob Hill Road.

As part of the SR 84 reconstruction, its intersections with SW 136th Avenue, Flamingo Road, Hiatus Road, Nob Hill Road, Pine Island Road, University Drive, and Davie Road will require reconstruction. Elimination of WB SR 84 access across the canal to and from SW 125th Avenue and Commodore Avenue will also be required, due to limited space between the widened I-595 mainline and the canal.

Improvements are also proposed for the EB lanes of SR 84. The improved EB lanes will be constructed at the elevation of the existing SR 84 Limited Access right-of-way line. The EB lanes will also be located outside of the I-595 mainline ramps and bypass ramps. This will enable access to the many driveways along EB SR 84 to be maintained, as well as allowing a continuous 4-foot undesignated bicycle lane to be constructed along the outside travel lane.

At the present time, SR 84 ends a few hundred feet east of Davie Road, at which point EB traffic is forced onto the I-595 mainline. Both of the design alternatives propose to extend SR 84 farther east, eliminating the need for frontage road traffic to use any portion of the I-595 mainline.

Pedestrian/Bicycle Facilities – Broward County has designated the I-595 corridor as a major component of its Greenway system. A bi-directional shared-use path is currently being designed (by others) that will be located on the north side of the North New River Canal between the western I-595 PD&E project limit and University Drive. The path leaves the project corridor between University Drive and Davie Road, reentering it at Davie Road. Between Davie Road and SR 7, it runs along the south side of the North New River Canal to SR 7. Following discussion with County officials, FDOT has agreed to relocate the portion of Greenway between Davie Road and SR 7 to the north side of the canal as part of this I-595 PD&E project. The relocation will eliminate potential conflicts with proposed ramps within the I-595/Florida's Turnpike interchange.

In addition to the Greenway, FDOT has requested that a 12-foot shared-use, bi-directional path be located along the outside of EB SR 84 (south of the mainline), between SW 136th Avenue and University Drive. It will be constructed adjacent to the proposed curb and gutter. The path will be narrowed to 6 feet between University Drive and Davie Road because of the limited right of way in front of an existing FP&L substation. Four-foot undesignated bicycle lanes will also be incorporated into the design of the outside travel lane of SR 84 in both directions to accommodate advanced riders that currently use SR 84.

Turnpike Interchange – A new WB-NB slip ramp is proposed for the northeast quadrant of the I-595/Florida's Turnpike interchange. Addition of the WB-NB ramp will remove WB-NB traffic volumes from the short weaving section where EB and WB I-595 volumes converge before separating to travel either NB or SB on Florida's Turnpike. Following the opening of the new ramp, a barrier wall will be placed along the existing weave section to prohibit vehicles from making unnecessary weaving movements.

It also is proposed that the bridge carrying both EB-SB and WB-SB traffic between I-595 and Florida's Turnpike be reconstructed as a three-lane structure. The new ramp structure will have a larger radius than the one it is replacing. The Griffin Road SB off-ramp will be relocated farther north to accommodate the wider bridge. It also is proposed that the existing NB-EB and NB-WB two-lane off-ramps be replaced with a single three-lane off-ramp. The NB and SB traffic will separate once away from the mainline. This configuration will eliminate one of the two mainline exits to the Turnpike.

Pond Apple slough – Both design alternatives propose widening the I-595 causeway structures over Pond Apple Slough between SR 7 and I-95. This improvement will allow for the extension of SR 84 as far east as I-95. The proposed design avoids wetland impacts to the fullest extent possible while providing the additional I-595 lanes needed to satisfactorily handle future traffic demand. After careful study, it was determined that the least invasive solution would be to widen the existing structures to the inside as much as physically possible. This approach minimizes widening to the outside and into the environmentally sensitive areas of Pond Apple Slough.

Alternative 1B – At-Grade Reversible Lanes

Mainline I-595 – Mechanically stabilized earthen barrier walls are proposed for use in areas where I-595 passes over cross streets. Barrier walls along the outside shoulders will be required for much of the I-595 mainline because of clear zone violations and grade differentials between I-595 and SR 84.

All entrance ramps along I-595 will be parallel type entrance ramps with a 50 mph design speed.

Reversible Lanes – In Alternative 1B, the reversible lanes will be located at grade level within the I-595 median. In this configuration, the proposed reversible lane facility will have two 12-foot lanes, with 10-foot paved shoulders on each side. The reversible lanes will be physically separated from the I-595 GP lanes by median barrier walls that will drain to the outside through barrier wall inlets.

Access to and egress from the reversible lanes will be limited to two points. The western access point will be located between the SW 136th Avenue and Flamingo Road interchanges; the eastern access point will be located between Florida's Turnpike and SR 7.

Reversible Lane Interchanges – The auxiliary lanes constructed to provide connections between the I-595 mainline and the proposed reversible lanes will be separated from the mainline by a 4-foot buffer area.

Turnpike Mainline – Alternative 1B has no significant impacts to the Florida's Turnpike mainline alignment. The proposed improvements will consist mainly of restriping, reconstructing ramp terminals, and widening to the outside of the NB Florida's Turnpike lanes to accommodate the increased number of lanes on the proposed WB-NB on-ramp.

Transit Facilities – The proposed transit alignment will be elevated on a dedicated structure within the limits of the I-595 right of way. The Alternative 1B transit envelope will be developed in the green space area created between SR 84 and I-595. Locating the transit in this area has several major benefits.

- Avoids the FP&L substation
- Avoids long spans when right-turn lanes are introduced along SR 84
- Minimizes right-of-way impacts and costs
- Allows for more visibility of businesses from SR 84

Alternative 2A – Elevated Reversible Lanes

Mainline I-595 – Alternative 2A recommends that the existing I-595 GP lanes be milled and resurfaced, with widening to the outside for the additional auxiliary lanes where needed. Mechanically stabilized earth walls are proposed where I-595 attains grade to pass over cross streets. Barrier walls along the outside shoulder are required for much of the I-595 mainline because of clear zone violations and grade differentials between I-595 and SR 84. All entrance ramps along I-595 will be of parallel type and will have 50 mph design speeds.

Reversible Lanes – In Alternative 2A, the reversible lanes will be located on elevated structure within the existing I-595 median. The reversible lanes will be located one level higher than the mainline, with the exception of the area near the University Drive flyovers. At these points, the reversible lanes will be raised to a fourth level to avoid the flyovers.

The proposed reversible lane structure will be 59 feet wide, with three 12-foot travel lanes and 10-foot paved shoulders on each side. Four points of access to and egress from the reversible lanes are proposed. The westernmost point will be located between the SW 136th Avenue and Flamingo Road interchanges. In clockwise sequence, the other points are along Florida's Turnpike, between Peters Road and I-595; between Florida's Turnpike and SR 7; and along Florida's Turnpike between I-595 and Griffin Road.

Reversible Lane Interchanges – The auxiliary lanes that carry traffic from the I-595 mainline to the reversible lanes will be elevated to a second level on MSE walls. Upon reaching a vertical clearance of 16.5 feet, the I-595 reversible lanes will be carried on

structure, joining with the third lane. This third lane arises from or carries traffic to Florida's Turnpike and I-75.

Turnpike Mainline – The Florida's Turnpike mainline will require realignment in two areas: from north of Griffin Road to the south abutment of the Turnpike bridges over I-595, and from the north abutment of the Turnpike bridges over I-595 to Peters Road. Its median will also require widening to accommodate the I-595 reversible lane interchange areas, from its current 26 feet to 81.5 feet. In addition, the Turnpike's NB mainline lanes will be widened to the outside to incorporate the additional WB-NB on-ramp lanes.

Transit Facilities – Alternative 2A differs from Alternative 1B in that the transit corridor is located in the median under the elevated reversible lane structure. This requires raising the reversible lane structure from the second level to a third level. Transit traffic will enter and exit the I-595 median at Level 2 at two locations: east of Flamingo Road and west of University Drive. Once the transit line is away from the access/egress areas, it is lowered to the same profile as the I-595 mainline. This will allow the same benefits to be attained by both Alternatives 2A and 1B.

- Avoids the FP&L substation
- Minimizes the need for an additional transit structure
- Minimizes right-of-way impacts and costs
- Allows for more visibility of businesses from SR 84

Design Alternatives' Proposed Typical Sections

The typical sections proposed for Alternatives 1B and 2A will each provide six 12-foot wide general purpose lanes (three per direction) and two 12-foot auxiliary lanes between interchanges. The I-595 mainline will have 10-foot paved shoulders on both the inside and outside.

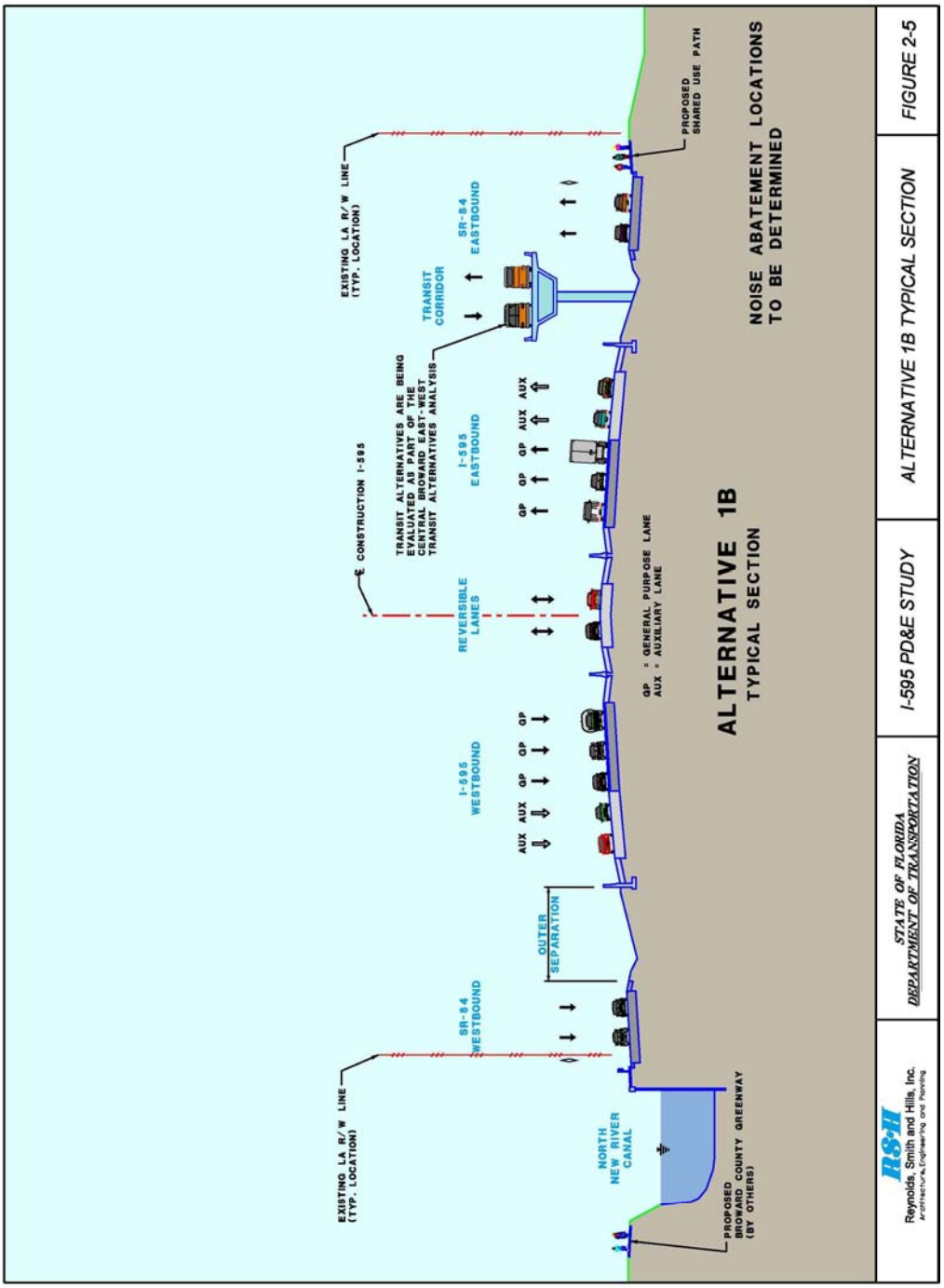
SR 84 will have two 12-foot lanes with 4-foot paved shoulders to the inside and to the outside. Type F curb and gutter and 6 feet to 12 feet of shared-use sidewalk/bicycle path will be included on the outside.

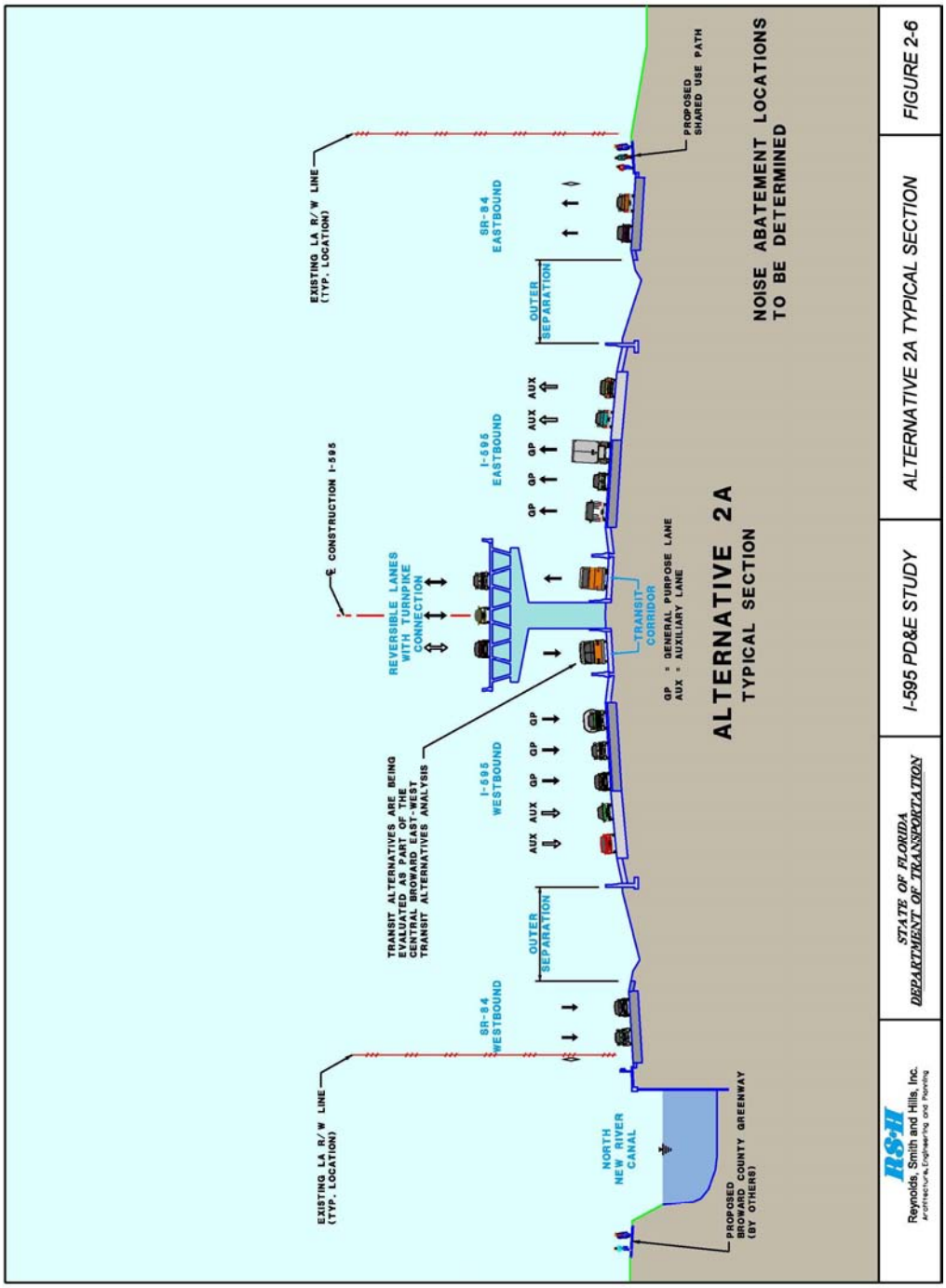
The configuration of the reversible lanes features is the primary way in which the two alternatives differ.

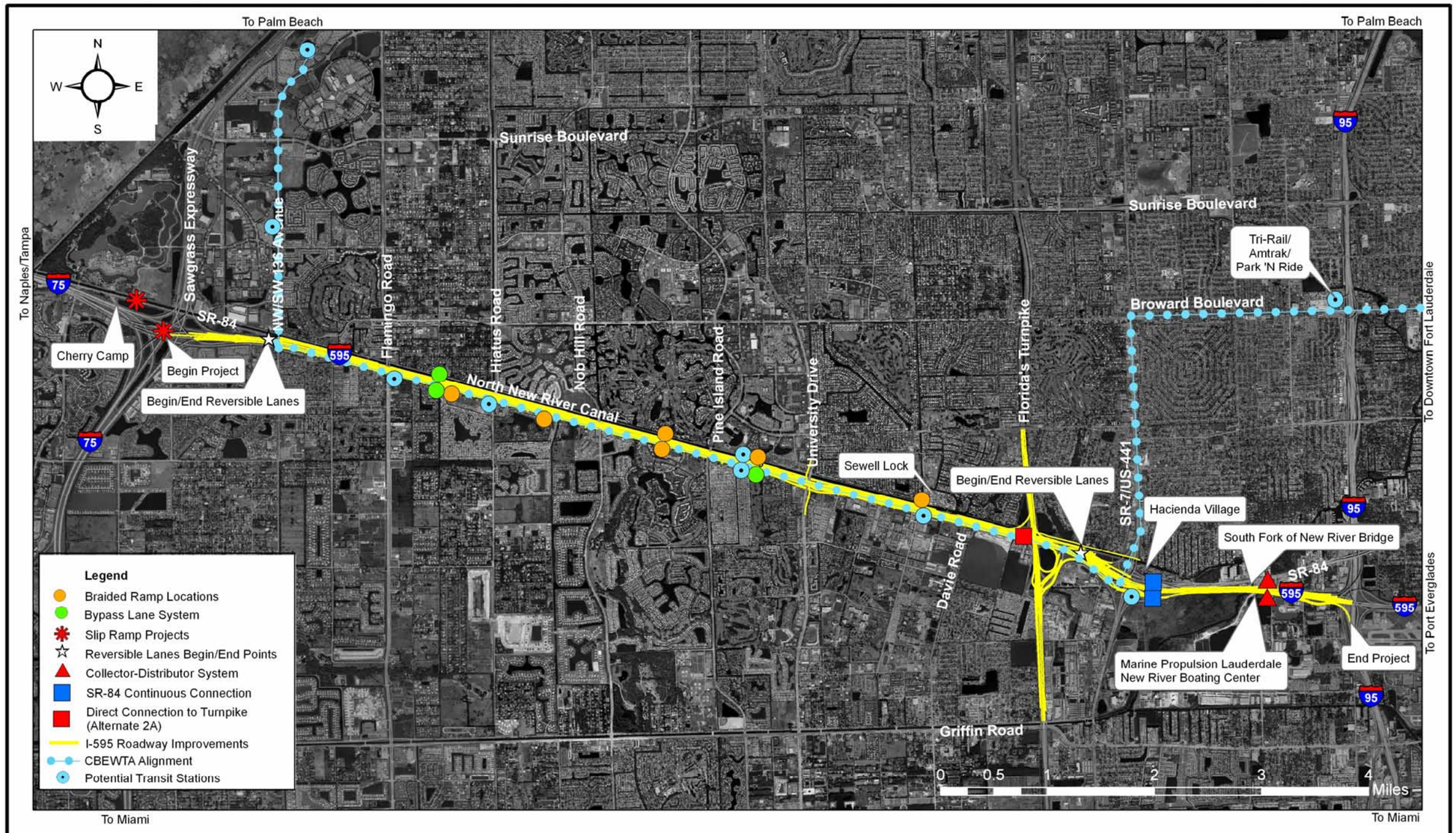
- **Alternative 1B** proposes that the reversible lanes be constructed at grade level within the I-595 median, separated from the mainline by median barrier walls. Under this design concept, there will be two 12-foot reversible lanes with 10-foot shoulders.

- **Alternative 2A** proposes that the reversible lanes be carried on a bridge structure that is 59 feet wide. It, too, will be located within the I-595 median. In Alternative 2A, there will be three 12-foot reversible lanes with 10-foot shoulders.

The proposed typical sections for **Alternatives 1B** and **2A** are shown in Figures 2-5 and 2-6. Figure 2-7 shows the system improvements proposed along the corridor.


ALTERNATIVE 1B
TYPICAL SECTION
NOISE ABATEMENT LOCATIONS
TO BE DETERMINED
GP = GENERAL PURPOSE LANE
AUX = AUXILIARY LANE
EXISTING LA R/W LINE
(TYP. LOCATION)
SR-84
WESTBOUND
OUTER
SEPARATION
I-595
WESTBOUND
AUX AUX GP GP GP
REVERSIBLE
LANES
CONSTRUCTION I-595
TRANSIT ALTERNATIVES ARE BEING
EVALUATED AS PART OF THE
CENTRAL BROWARD EAST-WEST
TRANSIT ALTERNATIVES ANALYSIS
I-595
EASTBOUND
GP GP GP AUX AUX
TRANSIT
CORRIDOR
SR-84
EASTBOUND
EXISTING LA R/W LINE
(TYP. LOCATION)
PROPOSED
SHARED USE PATH
NORTH
NEW RIVER
CANAL
PROPOSED
BROWARD COUNTY GREENWAY
(BY OTHERS)
RS&H
Reynolds, Smith and Hills, Inc.
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
I-595 PD&E STUDY
ALTERNATIVE 1B TYPICAL SECTION
FIGURE 2-5


ALTERNATIVE 2A
TYPICAL SECTION
NOISE ABATEMENT LOCATIONS
TO BE DETERMINED
GP = GENERAL PURPOSE LANE
AUX = AUXILIARY LANE
EXISTING LA R/W LINE
(TYP. LOCATION)
SR-84
WESTBOUND
OUTER
SEPARATION
I-595
WESTBOUND
GP GP GP
AUX AUX
TRANSIT ALTERNATIVES ARE BEING
EVALUATED AS PART OF THE
CENTRAL BROWARD EAST-WEST
TRANSIT ALTERNATIVES ANALYSIS
REVERSIBLE LANES
WITH TURNPIKE
CONNECTION
CONSTRUCTION I-595
I-595
EASTBOUND
GP GP GP AUX AUX
SR-84
EASTBOUND
OUTER
SEPARATION
EXISTING LA R/W LINE
(TYP. LOCATION)
PROPOSED
SHARED USE PATH
TRANSIT
CORRIDOR
NORTH
NEW RIVER
CANAL
PROPOSED
BROWARD COUNTY GREENWAY
(BY OTHERS)
R&H
Reynolds, Smith and Hills, Inc.
architecture/engineering/planning
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
I-595 PD&E STUDY
ALTERNATIVE 2A TYPICAL SECTION
FIGURE 2-6



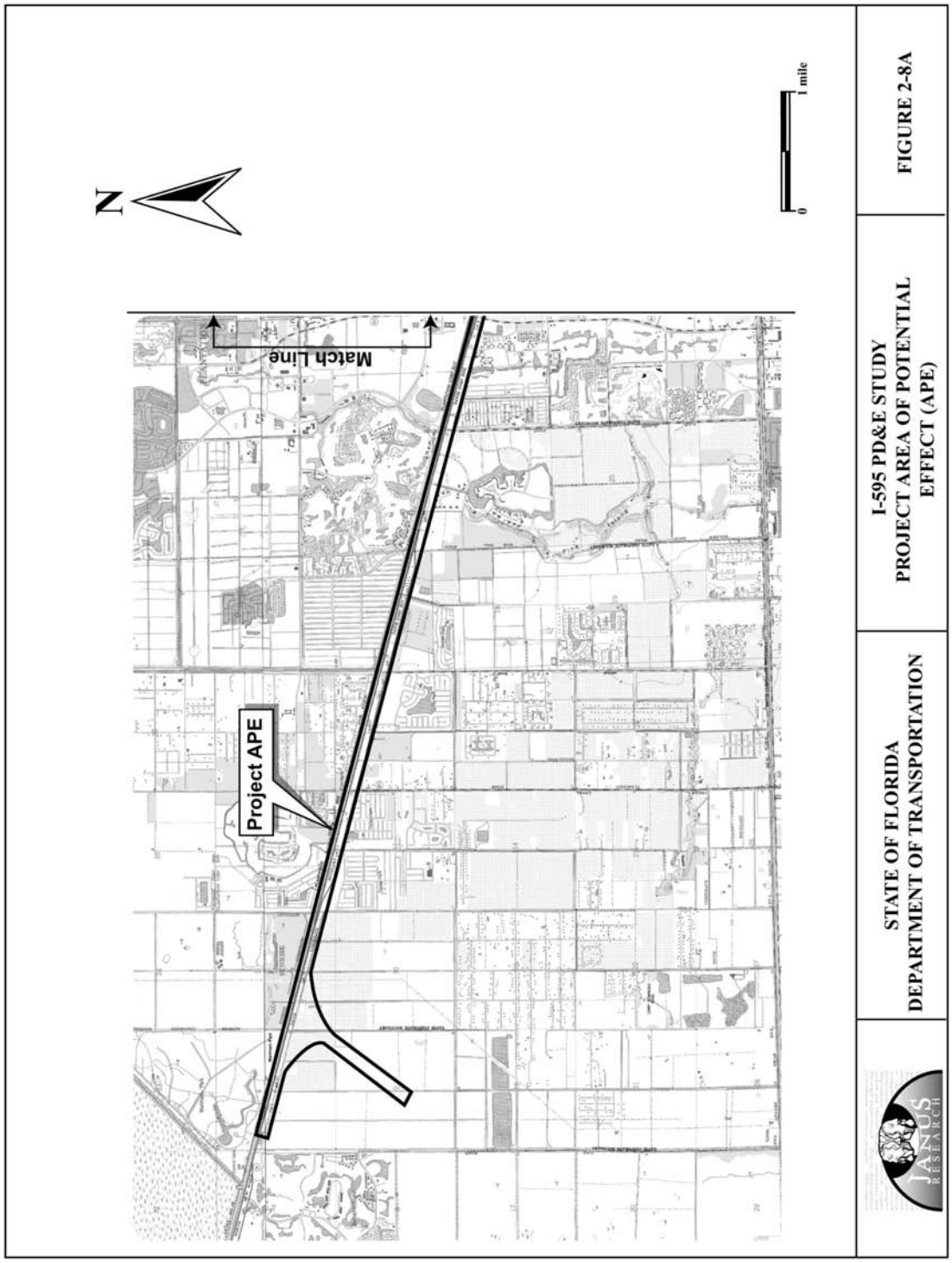
Reynolds, Smith and Hills, Inc. Architecture, Engineering and Planning	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	I-595 PD&E STUDY	SUMMARY OF PROPOSED I-595 CORRIDOR IMPROVEMENTS — FIGURE 2-7

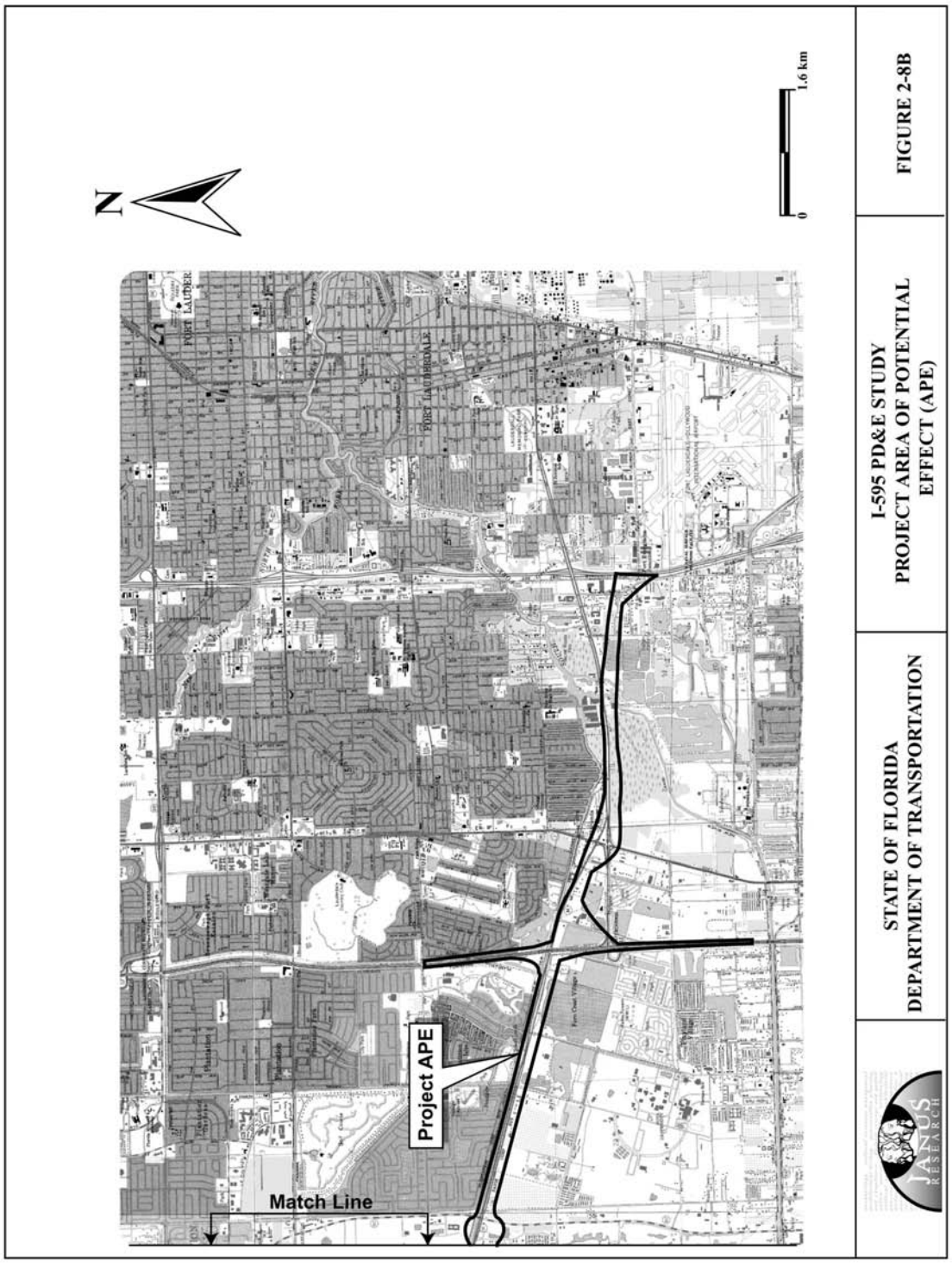
2.6 AREA OF POTENTIAL EFFECT

The Area of Potential Effect (APE) for this project was determined by evaluating the type of improvements under consideration and the possible effects these improvements could have on cultural resources. This determination also considered the urban character of the project area. The potential effects from this proposed project may include visual, noise, traffic, light, and vibration. Previous cultural resource assessment studies have shown that potential visual effects are the most far-reaching of the effects mentioned.

The historic resources APE was defined as the area within which potential visual effects for the improvement could be observed. The APE for historic resources along the project study area was established at approximately 300 feet (91.44 m) from the edge of the proposed expanded right of way (Figures 2-1A and 2-1B). The APE also included all proposed improvements at interchanges along the I-595 corridor, such as at University Drive, the Florida Turnpike, and SR 7/US-441. An APE of this size allowed for the evaluation and documentation of cultural resources within or directly adjacent to the expanded right of way that may be potentially impacted by the proposed improvements.

The APE for the archaeological survey was limited to a corridor extending along the existing right of way of I-595/SR 862. The archaeological field study was conducted within the limits of the project impact area that includes the existing right of way.


N
1 mile
0
Match Line
Project APE
FIGURE 2-8A
I-595 PD&E STUDY
PROJECT AREA OF POTENTIAL EFFECT (APE)
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
JANUS RESEARCH


N
1.6 km
0
Project APE
Match Line
FIGURE 2-8B
I-595 PD&E STUDY
PROJECT AREA OF POTENTIAL EFFECT (APE)
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

3.0 ENVIRONMENTAL SETTING

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

3.1 PALEO-ENVIRONMENT AND MACRO-VEGETATIONAL CHANGE

Although a comprehensive paleoenvironmental reconstruction is beyond the scope of this report, a brief description of the large-scale climatic and hydrologic conditions that have occurred since 33,000 BP (years before present, i.e. radiocarbon dates are quoted in uncalibrated form and the present is taken as 1950 calendar years AD) is provided. This description is drawn primarily from the work of W. A. Watts (1969, 1971, 1975, 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 corridor.

Since the termination of the Pleistocene Epoch at the end of the Wisconsin glaciation, roughly 13,500 BP, Florida has undergone significant climatic and environmental change. Notable changes in climate, and subsequently in flora and fauna, required human groups to adapt to their surroundings. These adaptations resulted in cultural changes in their hunting/foraging strategies and seasonal migration patterns. Within the archaeological record, these changes can be observed by differences in settlement patterns, midden composition, refuse disposal patterns, and the kinds of stone tools or pottery made.

The first 5,000 years or so of the Holocene (10,000 BP–present) were marked by rapid rises in southern Florida sea levels. This inhibited the development of estuaries along the Gulf Coast and may have had the same impact on the Atlantic coast (Griffin 1988). However, even though sea levels were rising, they were still considerably lower than present levels. This, combined with low interior water tables, resulted in arid conditions for the interior of southern Florida (Watts 1983; Watts and Hansen 1988). The marshes and swamps for which southern Florida is famous had not yet been formed (Webb 1990).

At about 5,000 BP, give or take 1,000 years, sea levels had risen to within a few meters of their current levels (Griffin 1988). Increased rainfall resulted in the formation of Lake Okeechobee, the Everglades, and other modern ecosystems (Watts and Stuiver 1980; Brooks 1984:38; Gleason et al. 1984:311). The relative sea level stability combined with freshwater discharge allowed for the development of coastal estuaries (Widmer 1988). Within the current project corridor, it is probable that the Loxahatchee came into formation around this time. However, during its earliest history, the river probably ended in a flood plain or freshwater marsh. Eventually, rising sea levels caused tidal waters to flood this marsh, gradually transforming it into the Loxahatchee Estuary (McPherson, Sabanskas, and Long 1982). Around 2700 BP, the rising sea level had slowed to the point that some modern beach ridges in southern Florida, like Cape Sable, began to form. Increased precipitation in the interior made cypress common in many areas, including the Big Cypress Swamp, and made droughts in the Everglades less common (Griffin 1988). The southern rim of Lake Okeechobee reached its maximum height about this time (Brooks 1984:38). Vegetation reached its present distributional patterning and estuaries were fully formed and supplied by enough freshwater drainage to become highly productive (Widmer 1988; Griffin 1988).

3.2 REGIONAL ENVIRONMENT

The project corridor is located within the Atlantic Coastal Ridge and the Everglades physiographic provinces. The Atlantic Coastal Ridge is characterized by low, poorly drained flatlands that represent the shallow, flat bottoms of ancient seas. Features associated with this province include the Atlantic Ocean to the east, the Everglades to the west, and the Southern Slope to the south. Superimposed on this flat terrain are several linear sand ridges that parallel the coast and are remnants of ancient shorelines, dunes, or offshore bars (White 1970:Plate 1-C). Elevation along the Atlantic Coastal Ridge averages approximately 10–15 feet (3-4.5 m). The Everglades physiographic region is characterized by low, flat, poorly drained marsh and rockland areas overlain with peat deposits. The Everglades basin, a bedrock depression known as the Everglades trough, is positioned between the Atlantic Coastal Ridge, the Immokalee Rise, and Big Cypress Swamp. At one time, the Everglades marsh covered the entire central portion of southern Florida (Kushlan 1990:330). Features associated with this province include the Atlantic Coastal Ridge to the east, Big Cypress Spur to the west, and Reticulate Coastal Swamps to the south (White 1970:Plate 1-C).

Beginning about 2000 BC, a series of lakes were formed along the interface of the sandy sediments of the central peninsula and the bare limestone bedrock of the distal end of the peninsula. Fibrous peat, deposited from sawgrass and other plant growth, accreted and formed a rising dike that slowed the drainage of water. This widened the area of the Everglades Trough by the erosion of sand deposits, and dissolution of limestone bedrock along the perimeter of these peat marshes. The accretion of fibrous

peat continued throughout the area that would become the Everglades, raising the water level in the peripheral lakes. Lake Okeechobee, in the extreme northeast of the Everglades Trough, was one of these peripheral lakes. The rising dike of fibrous peat allowed Okeechobee's shallow waters to expand over the surrounding lowlands.

Unsilicified limestone and dolostone dominate the sediments of Broward County as well as Miami-Dade County. Outcrops of silicified limestone, or chert, which were often sought out by precontact peoples as raw material sources for the manufacture of stone tools, do not occur in this area (Lane et al. 1980). The closest known outcrops lie to the northwest along the Peace River in the central part of the state (Scott 1978; Upchurch et al. 1982). There are no known sources of silicified limestone south of the Peace River in Polk and Hardee counties.

Water resources consist of both ground and surface water. The principal groundwater aquifer for Broward County is the Biscayne, which consists of highly permeable limestone and less-permeable sandstone and sand (Miller 1990). The aquifer is under unconfined conditions, which causes it to respond rapidly to changes in precipitation (Miller 1990). The Biscayne Aquifer formations are thin and generally sandy. It grades northward and westward into sandy deposits that are part of the surficial aquifer system. A sequence of low-permeability, largely clayey deposits about 1,000 feet (304.8 m) thick separates the Biscayne aquifer from the underlying Floridan aquifer system. The Floridan contains saltwater in southeastern Florida, and is not hydraulically connected to the Biscayne aquifer (Miller 1990). Major rivers and streams include the North and South Fork of the New River. The Everglades also would have provided a significant freshwater source. The major water control system is an extensive network of canals that is used for both drainage and irrigation purposes.

3.3 PHYSICAL ENVIRONMENT OF THE PROJECT AREA

An examination of the notes from the original 1845, 1870, 1897, and 1898 government survey of the project corridor, reveals that most of this area consisted originally of sawgrass marsh with interspersed wax myrtle, red and white bay trees, and pine rocklands. The original government surveyor also noted a few scattered tree hammocks.

The project corridor runs through former pine rocklands, rockland hammocks, wet prairie, baygall wetlands, and an alluvial stream natural communities. Pine rocklands are characterized as an open canopy forest of slash pines with a patchy understory of tropical and temperate shrubs and palms in addition to a variable ground cover of grasses and herbs (FNAI/DNR 1990:20). Rockland hammocks are characterized as a hardwood forest on upland sites in regions where limestone is very near the surface and is often exposed (FNAI/DNR 1990:21). Wet prairies are characterized as a treeless

plain with a sparse to dense ground cover of grasses and herbs, including wiregrass, toothache grass, maidencane, spikerush, and beakrush (FNAI/DNR 1990:30). Baygalls are generally characterized as densely forested, peat-filled seepage depressions often at the base of sandy slopes. The canopy is composed of tall, densely packed, generally straight-biled evergreen hardwoods dominated by sweetbay, swamp red bay, and loblolly bay (FNAI/DNR 1991:32). An alluvial stream environment is characterized as perennial or intermittent seasonal watercourses originating in uplands that are primarily composed of sandy clays and clayey-silty sands (FNAI/DNR 1990:52).

The pre-drainage natural characteristics of the project corridor would have included the freshwater resources of the nearby Everglades and various transverse sloughs and small swamps. Access to water during the Paleoindian and Early Archaic periods (12,000–7500 BC), when the perched water system was more restricted, might have been available from sinkholes and aquifer-fed creeks and streams. Upland resources, such as pine for firewood and tools (Griffin et al. 1982; Gilliland 1989) could have been easily collected from the rocky pinelands through which the project corridor passes. The scattered hardwood hammocks in the vicinity of the project corridor could have been used by precontact, Seminole, and early historic residents.

One obvious reason for the use of hammocks is that they are not prone to flooding, except perhaps during episodes of very high water. Yet, hammocks in pre-drainage times were moist enough to hinder the development and spread of fires (Austin 1992). The thick foliage of hammocks provides a great deal of shade and helps moderate temperatures year-round. The thick canopies of hammocks also provide good shelter during periods of heavy weather. Mature hammocks are noted for a lack of ground cover vegetation due to the closed canopy above, which shades out younger trees, herbs, and shrubs. Thus, mature hammocks offer enough open space for habitation and activity areas. Finally, important food sources, such as fruits, nuts, and tubers, can be found in hammocks. Such food sources are valued for their ability to attract game animals.

Numerous researchers have successfully utilized drainage characteristics of soil in the formulation of site location predictive models. The soil types found within the project corridor and their drainage characteristics are presented in Table 3-1.

Table 3-1
Drainage Characteristics of Soil Types Within the Project Corridor

Drainage Characteristics	Soil Type
Very poorly drained	Sanibel muck
	Plantation Muck
	Lauderhill Muck
Poorly drained	Pompano fine sand
	Basinger fine sand
	Hallandale fine sand
	Hallandale and Margate soils
	Immokalee fine sand
	Margate fine sand
Moderately well drained	Pomello fine sand
Not Applicable	Udorthents-Urban land complex
	Udorthents, shaped
	Urban land

4.0 PRECONTACT OVERVIEW

Native peoples have inhabited Florida for at least

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

The project study area is located in the Glades (Milanich 1994:301) or Everglades (Carr and Beriault 1984) cultural region (Figure 4-1). Carr and Beriault (1984) put the northeastern border for the area at about the Broward-Palm Beach County line. Griffin (1988) follows suit, arguing that the area to the east of Lake Okeechobee is too poorly understood at present to assign cultural affinity. As defined by Milanich, the Glades area begins at Cape Sable, and extends north and east along the coast to the headwaters of the St. Johns River in present-day Brevard County.

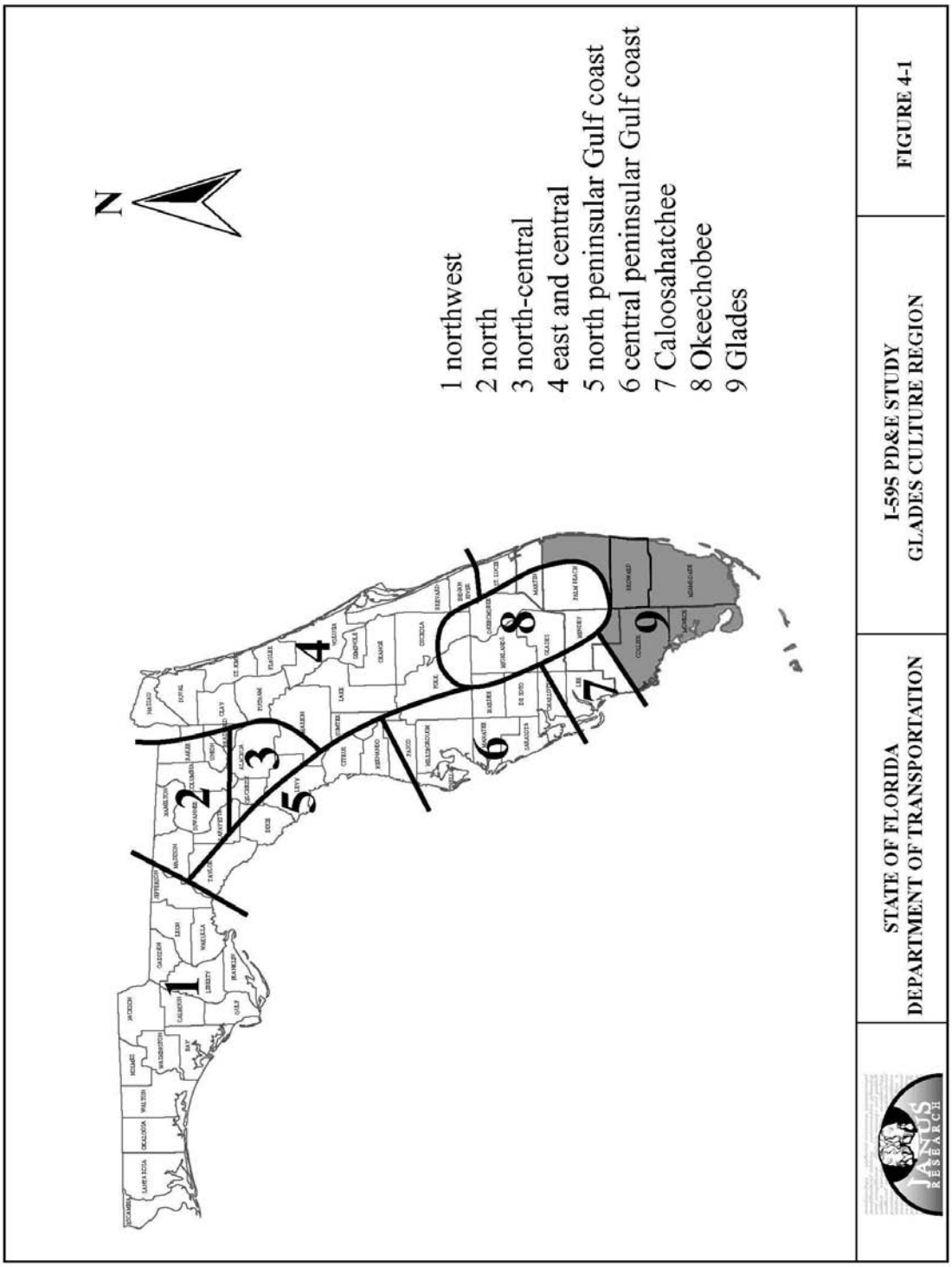
4.1 PALEOINDIAN PERIOD (12,000–7500 BC)

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 feet (48.76 m) 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.


N
1 northwest
2 north
3 north-central
4 east and central
5 north peninsular Gulf coast
6 central peninsular Gulf coast
7 Caloosahatchee
8 Okeechobee
9 Glades
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
I-595 PD&E STUDY
GLADES CULTURE REGION
FIGURE 4-1

Waller and Dunbar (1977) and Dunbar and Waller (1983), from their studies of the distribution of known Paleoindian sites and artifact occurrences, have shown that most sites of this time period are found near karst sinkholes or spring caverns. This suggests a somewhat more restricted settlement pattern than postulated for other Paleoindian groups in eastern North America. Paleoindian settlement appears to have been "tethered" to sources of fresh water such as rivers and springs (Daniel 1985:264; Daniel and Wisenbaker 1987:169) and to cryptocrystalline lithic sources (Goodyear 1979; Goodyear et al. 1983).

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

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

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

1989:479). It is thought to represent a bola weight, which is a stone weight attached by a leather thong and thrown to bring down water birds and other game (Milanich 1994:51).

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

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

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

4.2 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).

4.2.1 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; Janus Research 1999a:58–61). Although this patterning is largely based on evidence from Alachua and Marion Counties, there is no reason to believe that patterning is different elsewhere in interior northern Florida (Milanich 1994:64).

One Early Archaic wetland site that does not have a Paleoindian component is the Windover Pond site near Titusville in Brevard County. This site is a precontact cemetery consisting of over 160 burials in the natural peat deposits of what was, during the Early Archaic, a woody marsh (Stone et al. 1990:177). It is the most thoroughly excavated early precontact site in the East and Central archaeological area of Florida and has produced normally perishable items such as samples of cloth in which the dead were wrapped before burial, wood artifacts, preserved brain and other soft tissue, and samples of proteins and mitochondrial DNA. Radiocarbon dates indicate that the interments were made in discrete episodes of short duration between 6000 and 5000 BC. This indicates that a single social group used the pond to bury their dead in one small area, the location of which was somehow marked or memorized. Later, another group, probably the descendants of the first group, again used the pond for burial. After 5000 BC, increasingly wetter conditions most likely made it too difficult to bury people in the peat of the pond bottom (Doran and Dickel 1988).

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

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

4.2.2 Middle Archaic Period (5000–3000 BC)

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

The Middle Archaic artifact assemblage is characterized by several varieties of stemmed, broad-blade projectile points. The Newnan point is the most distinctive and widespread in distribution (Bullen 1975:31). Other stemmed points of this period include the less common Alachua, Levy, Marion, and Putnam points (Bullen 1968; Milanich 1994). In addition to these stemmed points, the Middle Archaic lithic industry, as recognized in Florida, includes production of cores, true blades, modified and unmodified flakes, ovate blanks, hammerstones, “hump-backed” unifacial scrapers, and sandstone “honing” stones (Purdy 1981; Clausen et al. 1975).

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

1971; Austin and Ste. Claire 1982:104). At the Harney Flats site, Daniel and Wisenbaker (1987:33–34) found a Middle Archaic component with corresponding increases in the amounts of silicified coral and heat-treated lithic material.

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

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

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

Three common types of Middle Archaic sites are known in Florida (Bullen and Dolan 1959; Purdy 1975). The first are small, special-use camps, which appear archaeologically as scatters of lithic waste flakes and tools such as scrapers, points, and knives. These sites are numerous in river basins and along wetlands and probably represent sites of tool repair and food processing during hunting and gathering excursions (Milanich 1994:78). Such sites are numerous in northern Florida where they are frequently identified along river basins and other wetlands. A possible example of a site like this in South Florida is Riverbend Park #7 (8PB7979) in northern Palm Beach County (Pepe and Carr 1996b). Other possible Middle Archaic campsites in South Florida seem to be located on xeric sand hills next to lowlands that may or may not have contained wetlands during the time in which the sites were utilized. Examples include the Medalist site (8MT388) in Martin County (Pepe and Carr 1996a) and Westridge (8BD1119) on Pine Island ridge in Broward County (Carr et al. 1992).

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

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

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

Other less common site types include cave camps in northern Florida and wetland cemeteries. Examples of the latter site type include the slough burials at Little Salt Spring in Sarasota County (Clausen et al. 1979), the pond burials at the Bay West site in Collier County (Beriault et al. 1981), and the Republic Grove site in Hardee County (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 (Bullen 1972:166; Jahn and Bullen 1978).

The other unique Middle Archaic burial site is the Gauthier site, located in Brevard County about six miles from the coast. Interments were made by creating a shallow

depression in the soil and laying bodies in it, at times, one on top of another. Artifacts found with the flexed burials include limestone throwing-stick weights, antler "triggers" from throwing sticks, projectile points, tubular *Busycon* shell beads, ornaments of bone, and worked shark teeth that had probably been hafted and used as knives or scrapers (Carr and Jones 1981).

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

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

Due to rising sea levels since the Middle Archaic, many sites dating to this period are now submerged beneath the waters of the Gulf of Mexico and Atlantic Ocean. One such site in St. Lucie County may be the Douglass Beach Midden (8SL17), from which artifacts predating the Late Archaic have been recovered (Murphy and Cummings 1990).

4.2.3 Late Archaic Period (5000–3000 BC)

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

Extensive Late Archaic middens are found along the northeastern coast inland waterway from Flagler County north, along the coast of southwestern Florida from Charlotte Harbor south into the Ten Thousand Islands, and in the braided river-marsh

system of the central St. Johns River, especially south of Lake George. The importance of the wetlands in these regions to precontact settlements was probably duplicated in other coastal regions, especially the Central Peninsular Gulf Coast and the Northwest (Milanich 1994:85). However, in many of these coastal areas, such as Tampa Bay, many of the Late Archaic sites are inundated (Warren 1964, 1970; Warren and Bullen 1965; Goodyear and Warren 1972; Goodyear et al. 1980).

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

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

Russo and Heide (2000) have recently forwarded a similar model for the ceramic Late Archaic in the coastal region east of Lake Okeechobee, sometimes called the East Okeechobee area or district. In their model, the earliest portions of the ceramic Late Archaic there are marked by fiber-tempered and semi-fiber-tempered plain ceramics. After this, they propose a period marked only by thick, chalky wares. Chalky wares and sand-tempered plain pottery mark the latest phase of their Late Archaic model.

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

4.3 FORMATIVE PERIOD (500 BC–AD 1513)

The Formative Period represents a time when changes in pottery and technology occurred throughout Florida. The specific changes in pottery traditionally used by archaeologists to mark the beginning of this period include the replacement of fiber-tempered pottery with sand-tempered, limestone-tempered, and chalky-paste ceramics. Three different projectile point styles (basally-notched, corner-notched, and stemmed) also occur in some areas in contexts contemporaneous with these new ceramic types. This profusion of ceramic and tool traditions suggests population movement and social interaction between culture areas. The earliest known major occupations of southern Florida date to this period (Bullen et al. 1968; Sears 1982).

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

4.3.1 Glades Culture Tradition

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

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

Table 4-1 is based on Griffin's 1988 work and presents the most thorough chronological framework for southern Florida. Summaries of the ceramic markers associated with each period are provided, as well. It is important to note that the information provided in this table is most applicable to the heartland of the Glades archaeological area: the Big Cypress Swamp, Everglades, and coastal portions of southern Florida to the south of Lake Okeechobee.

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

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

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

Table 4-1
Glades Cultural Sequence (After Griffin 1988: 124–142)

Period	Dates	Distinguishing Characteristics
Glades I early	500 BC[1]–AD[2] 500	First appearance of sand-tempered pottery; no decoration.
Glades I late	AD 500–750	First appearance of decorated pottery: Fort Drum Incised, Fort Drum Punctated, Cane Patch Incised, Gordon's Pass Incised, Opa Locka Incised, Sanibel Incised; sand-tempered plain persists.
Glades IIa	AD 750–900	Appearance of Key Largo Incised and Miami Incised; sand-tempered plain and Opa Locka Incised persist; none of the earlier decorated types are present.
Glades IIb	AD 900–1100	Sand-tempered plain and Key Largo Incised persist; Matecumbe Incised appears; none of the earlier decorated types are present; certain rim modifications (incised lip arcs

Period	Dates	Distinguishing Characteristics
		and lip crimping and grooving) also appear for the first time.
Glades IIc	AD 1100–1200	Almost no decorated ceramics; some grooved lips but no more lip arcs or crimped rims; Plantation Pinched appears.
Glades IIIa	AD 1200–1400	Plantation Pinched is no longer present; Sand-tempered plain and grooved lips persist; appearance of Surfside Incised and St. Johns Check Stamped.
Glades IIIb	AD 1400–1513	Glades Tooled, sand-tempered plain and St. Johns Check Stamped are present, Surfside Incised and grooved lips are not present.
Glades IIIc	AD 1513–c[3]1700	Same as previous period with the addition of historic artifacts.

[1]BC = before Christ
[2]AD = anno Domini.
[3]c = circa

5.0 HISTORICAL OVERVIEW

The intent of this section is to identify the possible locations of any cultural resources within the project APE and to provide a background for the determination of their historical potential. To this end, books, maps, and manuscripts located at the University of South Florida Special Collections Department, Florida Department of Environmental Protection, Division of State Lands, Broward County Historical Commission, Fort Lauderdale Historical Society, Broward County Public Library, and Janus Research were examined.

5.1 EUROPEAN CONTACT AND COLONIAL PERIOD (C. 1513-182)

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

Official credit for the discovery of Florida belongs to Juan Ponce de León, whose voyage of 1513 took him along the eastern coast of the peninsula (Tebeau 1971:21). He is believed to have sailed as far north as the mouth of the St. Johns River before turning south, stopping in the Cape Canaveral area and possibly at Biscayne Bay. The expedition then continued southward, following the Florida Keys, making contact with the local Tequesta people en route before turning to the northwest, where they encountered the Calusa along the southwestern Gulf Coast. Other Spanish explorers followed Juan Ponce de León, and over the next 50 years the Spanish government and private individuals financed expeditions hoping to establish a colony in “La Florida.” In 1565, King Philip II of Spain licensed Pedro Menéndez de Avilés to establish a settlement in St. Augustine, Florida. Between 1565 and 1566, Menéndez sailed along the Florida coast placing crosses at various locations and leaving Spaniards “of marked religious zeal” to introduce Christianity to the Native American people (Gannon 1965:29). Settlements with associated missions were established at St. Augustine, San Mateo (Ft. Caroline) and Santa Elena, and smaller outposts and missions were located in Ais, Tequesta, Calusa, and Tocobaga territory (Gannon 1965:29).

Jesuit missions were established in the Central Peninsular Gulf Coast and Glades cultural regions, including the mission of Carlos at Charlotte Harbor, the mission of Tocobaga at Tampa Bay, and a mission at a Tequesta village at the mouth of the Miami River. In March of 1567, Menéndez sailed into the Bay of Tocobaga (now Old Tampa Bay) with a group of 30 soldiers, Captain Martinez de Coz, and Fray Rogel. The mission was established at the village of the cacique known as Tocobaga and consisted of 24

houses (Velasco 1571:161). It was abandoned in January of 1568 due to the hostility of the Native Americans (Solis de Meras 1964:223–230). This Jesuit mission represented the final Spanish attempt to colonize the region.

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

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

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

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

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

By the end of the eighteenth century, the Seminoles had become the dominant Native American group in the state. Groups of fugitive African-American slaves also had settled among the Seminoles by the early nineteenth century (Brown 1991:5–19). Armed conflict with pioneers, homesteaders, and eventually the United States Army resulted in the removal of most of the Seminoles from Florida. This action forced the withdrawal of the remaining Seminole population to the harsh environment of the Everglades and Big Cypress Swamp by the late nineteenth century.

The first known non-Indian residents of what is now Fort Lauderdale were the Charles Lewis family, who arrived from the Bahamas with the British adventurer William Augustus Bowles in the late eighteenth century. Bowles tried to establish a sovereign nation of the native Creek Indians, and Lewis established a plantation along the New River. In 1810, the Spanish government awarded nobleman Juan Arrambide a huge land grant extending from New River south to Biscayne Bay. Arrambide developed this land as a lumber source and, in the process, introduced black slaves to the region (Historic Property Associates 1995:28–29).

5.2 THE TERRITORIAL AND STATEHOOD PERIOD (1821–1860)

In 1821, after several years of negotiations with Spain, the U.S. acquired Florida as a territory. The population of the territory at that time was still centered in the northern areas around Pensacola, St. Augustine, and Tallahassee. By 1830, the New River Settlement included approximately 60 to 70 inhabitants. The leader of the settlement was William Cooley. Richard Fitzpatrick who established plantation practices on his property (Historic Property Associates 1995:29–30). His assistant was Stephen Russell Mallory, who traveled from Key West to the New River area in 1830 and established a plantation in the Fort Lauderdale vicinity. Only there 12 months, he spent his time fishing, hunting and learning woodcraft from the Seminoles, who fished around the coast (Kemper 1981:4–6). In 1840, a skirmish occurred between the Seminoles and a small command of soldiers near the West Lake tract (Kemper 1981:4). Apparently, the Indians fired on two boats under the command of Lieutenant Rankin. The Indians were pursued inland but were not apprehended.

As more European-American settlers moved into the region, conflicts arose with the Seminole people over available land. Pressure began to bear upon the government to remove the Seminoles from northern Florida and relocate them farther south. The

Treaty of Moultrie Creek (1823) restricted the Seminole people to approximately four million acres of land in the middle of the state, running south from Micanopy to just north of the Peace River (Mahon 1967:Rear foldout map). The Seminoles did not approve of this treaty because they were reluctant to move from their established homes to an area that they felt could not be cultivated. Other treaties soon followed such as Payne's Landing (1832) and Fort Gibson (1833), which called for Seminole emigration to the western territories (Mahon 1967:75–76, 82–83). These treaties fostered Seminole resentment of settlers that would culminate in the Second Seminole War in 1835.

During the Second Seminole War, the area around Lake Tohopekaliga was a Seminole stronghold. They kept their cattle in the woods around the lake and retreated into the cypress swamp west of the lake at the approach of soldiers (Mahon 1967; Sprague 1964; Moore-Willson 1935). Tohopekaliga means "Fort Site" and the lake was so named because the islands within the lake housed the forts and stockades of the Seminoles (Moore-Willson 1935:29).

In January 1837, General Jesup's men encountered the Seminoles near the "Great Cypress Swamp." The soldiers drove the Indians into the swamp, across the "Hatcheelusteell" and into even more dense swamp (Sprague 1964:172). On the 28th of January, the army "moved forward and occupied a strong position on Lake Tohopekaliga, within a few miles of the point at which the Cypress Swamp approaches it, where several hundred head of cattle were taken" (Sprague 1964:172). Hetherington (1980:3), citing Major Edward Keenan, a "noted authority on the Seminole Wars," believes that General Jesup's base camp was located in the vicinity of the present-day Kissimmee Airport. The "Great Cypress Swamp" and "Hatcheelusteell Creek" referred to by Sprague (1964) are now called Reedy Creek Swamp and Reedy Creek (MacKay and Blake 1839; Mahon 1967:Rear fold out map; USGS Lake Tohopekaliga Quadrangle Map 1953; Hetherington 1980:3).

At the beginning of the Second Seminole War, the conflict was centered near the Withlacoochee region. In 1838, U.S. troops moved south to pursue the retreating Seminoles into the Lake Okeechobee and Everglades regions. Colonel Zachary Taylor was sent to the area between the Kissimmee River and Peace Creek. Colonel Persifor Smith and his volunteers were dispatched to the Caloosahatchee River, and U.S. Navy Lt. Levi N. Powell was assigned the task of penetrating the Everglades (Mahon 1967:219–220). Powell's detachment had several skirmishes with Seminole people near Jupiter Inlet. Powell established a depot on the Miami River and erected Fort Dallas in the approximate location of present-day downtown Miami. For three months, Fort Dallas was a base of operations as Powell led his men into the Everglades in search of the Seminoles (Gaby 1993:47).

Following the Second Seminole War, the New River settlement was brought to an end. Seminoles massacred Cooley's family in 1836 and the settlers fled to Cape Florida. In March 1838, Major William Lauderdale of the Tennessee Volunteers and his troops constructed an outpost near New River called Fort Lauderdale, which was later replaced by two other forts. The Third Seminole war in 1855 was fought primarily in other parts of the state, but some troops did visit New River (Historic Property Associates 1995:32–35).

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

5.3 CIVIL WAR AND POST WAR PERIOD (1860–1898)

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

The New River region was sparsely settled during the Civil War. A Miami Unionist who served as a gunboat pilot, Isaiah Hall, and his family lived there after being driven from the Miami area by Confederate sympathizers (Historic Property Associates 1995:35). In 1868, hog farmer and beachcomber John J. "Pig" Brown settled on New River with his family, as well. Brown was elected to the Florida Legislature in 1876 and never returned from Tallahassee. During the same time, the United States Life Saving Service established ten Government Houses of Refuge for shipwrecked sailors along the uninhabited eastern coastline, and the first permanent white settler in present-day Fort Lauderdale came to the area in 1876 to occupy one of the cabins (Nance 1962:334). At

this time, the population center of present-day Broward County was Pine Island, west of present-day Davie. Approximately 30 Seminole families cultivated gardens and roamed the Everglades in search of game (McGoun 1978).

Concern for future settlement created survey activity in Broward County. It had already been surveyed in 1845, but in 1870 many more areas were surveyed. The Florida Surveyor General approved a plat map on November 30, 1870 (Kemper 1981:12). Isolated events such as the surveying would lead to increased development of Broward County. Another such event was the purchase of four million acres of Florida's land with a drainage project in mind. The drainage project would turn swampland into agriculture and development lands.

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

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

The Disston Land Purchase was an agreement between Disston and the State in which Disston agreed to purchase Internal Improvement Fund Lands at $1.25 an acre to satisfy the indebtedness of the fund. A contract was signed on June 1, 1881 for the sale of 4 million 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 3.5 million acres. The remainder was to be selected in tracts of 640 acres (Davis 1938:206–207). Before he could fulfill his obligation, Disston sold half of this contract to a British concern, the Florida Land and Mortgage Company, headed by Sir Edward James Reed (Tischendorf 1954:123).

Disston changed Florida from a wilderness of swamps, heat, and mosquitoes into an area ripe for investment. This enabled Henry B. Plant to move forward with his plans to open the west coast of Florida with a railroad-steamship operation called the Jacksonville, Tampa & Key West Railway. Through the Plant Investment Company, he bought up defunct rail lines such as the Silver Springs, Ocala & Gulf Railroad, Florida

Transit and Peninsular Railroad, South Florida Railroad, and Florida Southern Railroad to establish his operation (Mann 1983:68; Harner 1973:18–23). In 1902, Henry Plant sold all of his Florida holdings to the Atlantic Coast Line, which would become the backbone of the southeast (Mann 1983:68).

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

Private land claims between 1881 and 1883 were probably squatters acquiring the land on which they lived prior to the land transfers under the Disston Land Purchase contract. The flurry of land transfers recorded in the early 1880s was mainly the result of two factors: large influxes of people as a result of the railroads, and the widespread unpopularity of the Disston Land Purchase and Drainage Contracts.

The Disston Land Purchase and Disston Drainage Contract were not very well liked among many of Florida's residents. They resented the $0.25 per acre price Disston paid under the land contract, as they were required to pay $1.25 per acre under the terms of the Homestead Act of 1876. Claims also were made that Disston was receiving title to lands that were not swamplands or wetlands (Tebeau 1971:278). Many residents bought up the higher, better-drained parcels of land for speculation, knowing that the surrounding wetlands and flatwoods would be deeded to Disston under the Land Purchase contract. Many hoped that their more desirable land purchases would increase in value.

In August 1881, at the same time Disston's companies were beginning their work, the legislature granted a state charter to the privately owned Florida Coast Line Canal & Transportation Company to construct a continuous waterway from the St. Johns River to Miami; the intracoastal channel would provide a sheltered, inland passage for shallow-draft vessels. The charter granted the company 3,840 acres of land for every mile of canal built. Construction began in 1883 on a 5-foot-deep, 50-foot-wide, intracoastal channel connecting coastal bays, rivers, and lakes (Buker 1975:117). Although the canal company dredged almost continuously from 1883 until the 268-mile channel was completed in 1912, the firm's waterway operations were never successful. While the channel was still under construction, the company faced a formidable

challenge from competing transportation interests expanding into South Florida (Buker 1975:120).

Development in Broward County was slow, but sure. By the early 1890s, land was purchased and development was being planned (Kemper 1981:12). For example, Hollywood tract book records indicate the majority of the township's land, approximately 27 square miles out of the town's total 36 square miles, was purchased by the Florida Coast Line Canal and Transportation Company on September 24, 1890. By 1910, Fred Zirbs established a five-acre farm where he grew peppers and tomatoes (Kemper 1981:12). New River was the site of a ferry and an overnight camp for stage line passengers. Frank Stranahan, who is regarded as the first permanent white settler of what is now Fort Lauderdale, ran both the ferry and the camp (Historic Property Associates 1995:38).

Development and settlement would increase after the freezes of 1894 and 1895 that killed citrus crops, vegetables, and coconut palms north of Broward County. This event in part caused Henry M. Flagler to extend the Florida East Coast (F.E.C.) Railway 70 miles south to Miami, where no damaging frosts had occurred (Shepard Associates 1981:1–10). The completion of the railroad to Miami in 1896 launched the most significant period in the region's development. The railroad brought farmers from the north, and agriculture was developed. Other businesses also began to emerge (Historic Property Associates 1995:39–42).

5.4 SPANISH-AMERICAN WAR PERIOD/TURN-OF-THE-CENTURY (1898–1916)

At the turn-of-the-century, Florida's history was marked by the outbreak of the Spanish-American War in 1898. As Florida is the closest state to Cuba, American troops were stationed and deployed from the state's coastal cities. Harbors in Tampa, Pensacola, and Key West were improved as more ships were launched with troops and supplies. "The Splendid Little War" was short in duration, but evidence of the conflict remained in the form of improved harbors, expanded railroads, and military installations (Miller 1990).

Fort Lauderdale saw growth at this time despite a yellow fever epidemic, in 1899. In the same year, the area's first schoolhouse was built. The 1900 census reported 52 residents in Fort Lauderdale. The area's first incorporated communities were Dania in 1904, Pompano in 1908, and Fort Lauderdale in 1911; these communities predate the formal incorporation of Broward County (McGoun 1978:19). Fort Lauderdale's downtown began to develop at this time; the commercial area centered on the intersection of the railroad and the New River. Unfortunately, a fire in June of 1912 destroyed most of the business district, but the disaster did little to impair Fort Lauderdale's future growth (Historic Property Associates 1995:42–47).

In 1904, Governor Napoleon Bonaparte Broward initiated significant reforms in Florida's politics. Several of Broward's major issues included the Everglades drainage project, the railroad regulation, and the construction of roads. The draining of the Everglades resulted in the construction of canals, an increase in land available for agriculture, and the fueling of Fort Lauderdale's growth.

In order to reduce the water level of the Everglades, the State of Florida established the Everglades Drainage District in 1905, with the authorization to tax local landowners to pay for the construction of the canals needed to drain the Everglades. The state designed this act because it predicted that through the drainage of the Everglades 3,000,000 acres of land would be created for agricultural and habitable purposes (Werndli and Kirk 1978). One of the first elements of the project was the dredging of the North New River Canal, which runs parallel to the north of the project corridor. Construction of the North New River Canal began in July of 1906, after the completion of the Everglades and Okeechobee dredges. By 1908, under the constant supervision of Governor Broward, the North New River Canal extended 6.25 miles into the Everglades west of Fort Lauderdale (Knetsch 1991:39).

By 1909, the State of Florida had decided that it would allow contracts to private corporations to complete the draining of the canals. In June of 1910, a bid was accepted from the Furst-Clark Construction Company of Baltimore, Maryland to complete the dredging of the North New River Canal, along with the South New River Canal, Miami Canal, and the Gulf Coast Canal. Under the direction of the Furst-Clark Construction Company, it was realized that locks would need to be constructed to control both the water level, and water traffic along the canals. The construction of these locks, including the *NRHP*-listed Sewell Lock, located within the project APE, began in October of 1911 (Werndli and Kirk 1978).

By 1912, the North New River Canal was operational and extended all the way from the New River to Lake Okeechobee, and it became the major transportation artery between Lake Okeechobee and Fort Lauderdale. The shipping of agricultural products along the water route was immediately the preferred method of transportation (Historic Property Associates 1995:44). The locks, including the Sewell Lock, which was also operational by 1912, facilitated this traffic along the canal route, and made the agricultural lands created by the draining of the Everglades easily accessible and profitable. Crops grown around the area of Lake Okeechobee and the newly-drained Everglades were transported down the North New River Canal to Fort Lauderdale where they were shipped via railroad to other destinations. The Sewell Lock was the first of the locks to be constructed on the North New River Canal, as well as in all of South Florida (Werndli and Kirk 1978). Furthermore, it was the first water control structure to be constructed in Broward County (n.a. n.d.A)

During this time, railroads were also being constructed throughout the state, and automobile use became more prevalent. Improved transportation in the state opened the lines to export Florida's agricultural and industrial products (Miller 1990). As various products such as fruits and vegetables were leaving the state, people were arriving in Florida. Some entered as new residents and others as tourists. Table 5-1 shows land purchases within the project corridor during this time.

Table 5-1
Land Apportionment in the Project Corridor as Recorded in the Tract Book Records

Township 50 South, Range 40 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
2	All	Modern Land Co.	Jan. 6 1921
3	All	Richard J. Bolles	Dec. 24 1908
4	All	L.S. Remsberg	July 24 1945
11	All	Richard J. Bolles	Dec. 24 1908
12	All	The Tatum Land Co.	Sept. 24 1917
Township 50 South, Range 41 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
7	All north of canal	A. B. Sanders & A.A. Boggs	April 20 1910
	All south of canal	Richard J. Bolles	Dec. 24 1908
8	All north of canal	A. B. Sanders & A.A. Boggs	April 20 1910
	All south of canal	Richard J. Bolles	Dec. 24 1908
Township 50 South, Range 41 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
13	Fraction lot 1 tier 20	Michael Rode	Dec. 19 1924
	Fraction lot 2 tier 20	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947
	Lot 3 tier 20	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947
	Lot 4 tier 20	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947
	Lot 5 tier 20	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947
	Lot 6 tier 20	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947

Township 50 South, Range 41 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
13	Lot 7 tier 20	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947
	Fraction lots 3 & 2 tier 22	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947
	Fraction lot 4 tier 22	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947
	Fraction lot 5 tier 22	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947
	Lot 6 tier 22	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947
	Lot 7 tier 22	Edmund Rode, Albert Rode and Paul N. Rode	Feb. 26 1947
	Fraction lot 5 tier 24	Unknown	Unknown
	Fraction lot 6 tier 24	Unknown	Unknown
14	Lot 1, tier 34	State Board of Education	July 23 1919
	Fraction lot 1 tier 19	John Dunn	Dec. 18 1909
	Fraction lot 1 tier 20	Michael Rode	Dec. 24 1924
	Fraction lot 2-7 tier 20	Michael Rode	Dec. 24 1924
	Fraction lot 1 tier 21	Victor Lewis	Apr. 28 1908
	Lot 1 tier 22	Unknown	Unknown
	Fraction lot 22 tier 22	Unknown	Unknown
	Fraction lot 3 tier 22	Unknown	Unknown
	Fraction lot 4, tier 22	Unknown	Unknown
	Fraction lot 5, 6, 7 tier 22	Unknown	Unknown
	Fraction lot 1, tier 23	Richard J. Bolles	Dec. 18 1909
	Lot 1 tier 24	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 2, tier 24	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 3 tier 24	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 4 tier 24	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Fraction lot 5, tier 24	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Fraction lot 6 tier 24	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Fraction lot 1 tier 25	Richard J. Bolles	Dec. 18 1909
	Lot 1 tier 26	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 2 tier 26	Miami Beach First National Bank, as trustee	Mar. 18 1943

Township 50 South, Range 41 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
14	Lot 3 tier 26	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 4 tier 26	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 5 tier 26	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 6 tier 26	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Fraction lot 1 tier 27	Richard J. Bolles	Dec. 18 1909
	Lot 1 tier 28	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 2 tier 28	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 3 tier 28	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 4 tier 28	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 5 tier 28	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Lot 6 tier 28	Miami Beach First National Bank, as trustee	Mar. 18 1943
	Fraction lot 2 tier 29	Richard J. Bolles	Dec. 18 1909
	Fraction lot 1 tier 29	Richard J. Bolles	Dec. 18 1909
15	Lot 1 and 2 tier 41	A. B. Sanders & A.A. Boggs	Jan. 06 1911
	Fraction lot 3 tier 41	A. B. Sanders & A.A. Boggs	Jan. 06 1911
	Lots 1 and 2 tier 43	A. B. Sanders & A.A. Boggs	Jan. 06 1911
	Fraction lot 3 tier 43	A. B. Sanders & A.A. Boggs	Jan. 06 1911
	Lots 1 and 2 tier 45	A. B. Sanders & A.A. Boggs	Jan. 06 1911
	Fraction lot 3 tier 45	A. B. Sanders & A.A. Boggs	Jan. 06 1911
	Lots 1, 2 and 3 tier 47	Richard J. Bolles	Dec. 24 1908
	Fraction lot 4 tier 47	Richard J. Bolles	Dec. 24 1908
	Lots 1, 2 and 3 tier 49	Richard J. Bolles	Dec. 24 1908
	Fraction lot 4 tier 49	Richard J. Bolles	Dec. 24 1908
	Lots 1, 2 and 3 tier 51	Richard J. Bolles	Dec. 24 1908
	Fraction lot 4 tier 51	Richard J. Bolles	Dec. 24 1908
	Lots 1 and 2 tier 53	Richard J. Bolles	Dec. 24 1908
	Fraction lot 3 tier 53	Richard J. Bolles	Dec. 24 1908
	Fraction lots 1& 2 tier 55	Richard J. Bolles	Dec. 24 1908

Township 50 South, Range 41 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
16	All tier 58	O.L. Daniel and Hennriette Daniel	Mar. 18 1943
	All tier 60	O.L. Daniel and Hennriette Daniel	Mar. 18 1943
	All tier 62	O.L. Daniel and Hennriette Daniel	Mar. 18 1943
	All N of canal, less tiers 58, 60, 62	M.S. Babst	June 17 1917
	All south of canal	Trustee, JJ Fund	July 11 1919
	All south of canal	John M. Bryan	Sept. 22 1919
17	All less lot 1 tier 81	John M. Bryan	Sept. 22 1919
	Lot 1 Tier 81	Pearl B Tracy	Jan. 28 1915
23	Fraction lot 4 tier 15	Mrs. Martha C. Hirsty	Feb. 16 1920
	Fraction lot 5 tier 15	A.J. Bacon	June. 14 1923
	Fraction lot 6 tier 15	A.J. Bacon	Nov. 5 1919
	Fraction lot 7 tier 15	Miss Josephine C. Bacon	Oct 8 1923
	Fraction N ½ of Lots 1 & 2 tier 17	J.A. Kindall	Dec. 18 1907
	Fraction S ½ tier 17	H.M. Forman	Aug. 23 1923
	Fraction lots 3 & 4 tier 17	Greenlawn Realty Co.	Nov. 20 1925
	Lots 5, 6, & 7 tier 17	Scorge E. Henry	Jan. 30, 1918
	Fraction N ½ of lot 1 tier 19	John Drumm	Dec. 18 1907
	Fraction S ½ lot 14 & N ½ lot 2 tier 19	K. B. Chilton	Dec. 18 1907
	S ½ lot 2 tier 19	A.E. Rees	May 23 1923
	Lot 3 tier 19	H.M. Forman	Aug. 23 1923
	Lot 4 tier 19	H.M. Forman	Aug. 4 1916
	Lots 5, 6, 7 tier 19	George E. Henry	Jan. 30 1918
	Fraction lot 1 tier 21	Victor Lewis	Apr. 28 1908
	Fraction lot 2 tier 21	H.M. Forman	Aug. 21 1913
	Fraction lot 3 tier 21	Blanch Colline Forman	Aug. 26 1913
	Fraction lot 4 tier 21	Vacant	Unknown
	Lots 5,6, & 7 tier 21	George E. Henry	Jan. 30 1918
24	Lot 1 tier 1	John Lewis	Dec. 18 1907
	Fraction lot 2 tier 4	Andrew H. & Eva C. Yount	May 25 1918
	Lot 1 tier 4	Andrew H & Eva C Yount	Sept. 19 1916
	Fraction lot 2 tier 6	D.W. Berryhill, Trustee	Oct. 25 1928
	Lot 1 tier 6	Andrew H. & Eva C. Yount	Feb. 11 1916
	Lot 1 tier 8	Geo M. Ceram	Nov. 28 1908
	Fraction lot 2 tier 8	W.D. Berryhill, Trustee	Dec. 3 1925

Township 50 South, Range 41 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
24	Fraction lot 1 tier 10 & fraction lot 1 tier 17	E.N. Worley	Dec. 18 1907
	Fraction lot 1 tier 14	Janger Investments Co.	July 7 1914
	Fraction lot 1 tier 16	Richard Taylor	Dec. 31 1952
	Lot 1 tier 1	Reed A. Bryan	Dec. 18 1907
	Lot 2 tier 1	Edward L. Jones	Mar. 23 1916
	Lots 3 & 4 tier 1	John Bordon	Jan. 6 1919
	Lot 5 tier 1	John Anderson & Kristy Brown	May 28 1919
	Lot 1 tier 3	K.R. Oliver	Dec. 18 1907
	Lot 2 tier 3	A.A. & Marie C. Bivins	Aug. 15 1916
	Lot 3 tier 3	Katherine E. Ausherman	Aug. 25 1920
	Lot 4 tier 3	C.C. & Annie M. Perfect	Jan. 20 1940
	Lot 5 tier 3	Adolf Frederick Baum	Jan. 2 1920
	Lot 6 tier 3	C.C. & Annie M. Perfect	Jan. 20 1940
	Lot 1 tier 5	S.W. Carter	Dec. 18 1907
	Lot 2 tier 5	Mrs. Eva K. Bradon	July 15 1915
	Lot 3 tier 5	Medory Gorsuch	July 27 1916
	Lot 4 tier 5	J.L. Haire	June 9 1919
	Lot 5 tier 5	A. Junge	Oct. 14 1916
	Lot 6 tier 5	Frank Elmstedt	Sept. 22 1919
	E ½ Lot 1 tier 7	Henry Jumer	Apr. 10 1914
	W ½ Lot 1 tier 7	S.W. Clark, agent	Apr. 3 1908
	Lot 2 and N ½ 3 tier 7	Gottleib Radzat	June 9 1951
	S ½ Lot 3 tier 7	Frank Lindley	June 9 1916
	Lot 4 tier 7	Joseph & Gustava Tully	Dec. 6 1920
	Lot 5 tier 7	Thomas Farghen	Oct. 20 1919
	Lot 6 tier 7	J.L. Hughes	June 24 1918
	Lot 1 tier 9	S.W. Clark, agent	Apr. 3 1908
	Lot 2 tier 9	Levi Brendla	May 1 1915
	Lot 3 tier 9	Vacant	Unknown
	Lots 4, 5, & 6 tier 9	Henry C. Bagley	Jan. 30 1918
	Lot 1 tier 11	H.B. Gaskin, J.G. Henty, & C.D. Clark	Apr. 28 1908
	Lot 2 tier 11	Levi Brendla	Sept. 1 1914
	Lot 3 tier 11	J.W. Bigelow	Apr. 28 1916
	Lot 4 tier 11	Edward Heimburger	Apr 25 1919
	Lot 5 tier 11	C.R. Yaeger	Nov. 30 1920

Township 50 South, Range 41 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
24	Lot 6 tier 11	C.R. Yaeger	May 11 1923
	Lot 1 tier 13	H.B. Gaskin, J.G. Henty, & C.D. Clark	Apr. 28 1908
	E ½ Lot 2 tier 13	Levi Brendla	Sept. 1 1914
	W ½ Lot 2 tier 13	Abbie E. Dunlap	Jan. 7 1908
	Lot 3 tier 13	A.L. Field	Mar. 4 1916
	Lot 4 tier 13	Edward Heimburger	Oct. 26 1917
	Lot 5 tier 13	C.R. Yaeger	Nov. 30 1920
	Lots 6 & 7 tier 13	Henry C. Bugby	Jan. 30 1918
	N ½ Lot 1 tier 15	Edward Ames	Jan. 7 1908
	S ½ Lot 1 & Lot 2 tier 15	J.A. Tindall	Dec. 18 1907
	Lot 3 tier 15	Joseph Franklin Davis	June 9 1919
	Fraction lot 4 tier 15	Mrs. Martha C. Finty	Feb. 16 1920
	Fraction lot 5 tier 15	A.J. Bacon	June 14 1923
	Fraction lot 6 tier 15	A.J. Bacon	Nov. 5 1919
	Fraction lot 7 tier 15	Miss Josephine C. Bacon	Oct. 8 1923
	Lot1 & fraction N ½ lot 2 tier 17	J.A. Tindall	Dec. 18 1907
	Fraction S ½ lot 2 tier 17	H.M. Forman	Aug. 23 1923
	Fraction lots 3 & 4 tier 17	Greenlawn Realty Co.	Nov. 20 1925
	Fraction lot 1 tier 19	John Dumm	Dec. 18 1907
	Fraction lot 2 tier 19	T.B. Chilton	Dec. 18 1907

Township 50 South, Range 42 East			
Section	**Portion Owned**	**Owner**	**Date of Deed or Sale**
19	All	Florida Coastline Canal and Trans. Co.	Sept. 24 1890
20	All	Florida Coastline Canal and Trans. Co.	Sept. 24 1890
21	All	Sir Edwards James Reed	Mar. 22 1883

Between 1900 and 1910, the state population increased from 528,542 residents to 752,619. At this time, St. Lucie and Palm Beach counties were established, indicative of the increasing numbers of people moving to the east coast of the state. Fort Lauderdale incorporated in 1906.

Broward County incorporated in 1915 with a population of 8,000 (Wells and Little 1982:8–12), and Fort Lauderdale was named county seat (Historic Property Associates 1995:50). The county was named after the former Governor Broward. As recently as 1910, the County had been a wilderness of pine trees and swampland and had few homesteaders. Agriculture was still the main economy (Wells and Little 1982:8–12).

Before 1915, Broward County had at times been part of St. Johns, Monroe, Mosquito, Dade, St. Lucie, Brevard, and Palm Beach counties. By the time of the county's incorporation, most citizens were living in the eastern areas along the coast such as Dania, Pompano, Fort Lauderdale, Deerfield, Hallandale, Davie, Colohatchee, and Progresso (Shepard Associates 1981:I-10).

The area's tourist trade began to emerge around the time of incorporation. Development of the Fort Lauderdale beach area began in 1914 when D. C. Alexander purchased 32 acres of beachfront property. In July of 1915, the Dixie Highway, the first major highway linking Fort Lauderdale with the rest of the nation, was completed. This highway and other new Broward County roads would play a significant role in Florida's growing tourist trade (Historic Property Associates 1995:50–51).

Rapid and widespread growth was the theme of this period in Florida history. Thousands of miles of railroad tracks were laid, including the (F.E.C.), Atlantic Coast Line, and Seaboard Air Line railroads. While agriculture, especially the citrus industry, had become the backbone of Florida's economy, manufacturing and industry began growing during the beginning of the century. Fertilizer production, boat building, and lumber and timber products were strong secondary industries (Weaver et al. 1996:3).

5.5 WORLD WAR I AND AFTERMATH PERIOD (1917–1920)

The World War I and Aftermath period of Florida's history begins with the United States' entry into World War I in 1917. Wartime activity required the development of several training facilities in the state, and protecting the coastlines was a priority at this time. Although the conflict only lasted until November 1918, the economy was boosted greatly by the war. For example, the war brought industrialization to port cities such as Tampa and Jacksonville, where shipbuilding accelerated. These cities also functioned as supply depots and embarkation points. An indirect economic benefit of the war was an increase in agricultural production, as beef, vegetables, and cotton were in great demand (Miller 1990).

Area development was halted temporarily during World War I, although the construction of bridges from the mainland over to the beaches at Pompano, Hallandale, and Fort Lauderdale were completed in 1917 (Historic Property Associates 1995:51). Truck farming still dominated Broward County's economy before the 1920s boom time development began in earnest. Higher areas in the county were preferred for planting crops like beans, squash, cabbage, tomatoes, pineapples, and turpentine mangoes (Shepard Associates 1981:I-11–13, 34).

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.

5.6 FLORIDA BOOM PERIOD (1920–1930)

After World War I, Florida experienced unprecedented growth. Many people relocated to Florida during the war to work in wartime industries or were stationed in the state as soldiers. Bank deposits increased, real estate companies opened in many cities, and state and county road systems expanded quickly. Road building became a statewide concern as it shifted from a local to a state function. These roads made even remote areas of the state accessible and allowed the boom to spread. On a daily basis up to 20,000 people were arriving in the state. Besides the inexpensive property, Florida's legislative prohibition on income and inheritance taxes also encouraged more people to move into the state.

Earlier land reclamation projects created thousands of new acres of land to be developed. Real estate activity increased steadily after the war's end and drove up property values. Prices on lots were inflated to appear more enticing to out-of-state buyers. Every city and town in Florida had new subdivisions platted and lots were selling and reselling for quick profits. Southeastern Florida, including cities such as Miami and Palm Beach, experienced the most activity, although the boom affected most communities in central and South Florida (Weaver et al. 1996:3).

In the late 1910s and early 1920s Fort Lauderdale was used as a setting for movies. Real estate sales increased as swamps were dredged and "finger islands," narrow strips of fill alternating with channels of water, were developed. Building included exclusive and moderately priced homes, as well as downtown hotels and commercial structures. These activities in Florida's southeastern "Gold Coast" represented the highest intensity of Florida's land boom. By 1925, Fort Lauderdale's population reached 16,000 people (Historic Property Associates 1995:51–54). Other cities in Broward County were incorporated during the Land Boom period including Hollywood, Deerfield, Davie, and Floranada (McGoun 1978:20).

In 1918, George Henry came to Fort Lauderdale to build the Broward Hotel. The city financed the development in part in hopes of bringing an economic boom similar to those that occurred in Palm Beach and St. Augustine. After the hotel's opening in 1919, tourists flocked to the area. In 1921, Joseph Young bought land that would transform the area of Hollywood from truck farming agricultural fields into a city. Development began full-scale in the summer of 1921; the town was based on the design for Indianapolis, Indiana where Young had lived. By 1925, the town would have

neighborhoods, a country club and golf course, and the famous Hollywood Beach Hotel (Shepard Associates 1981:I-11–13, 34).

An important development in Fort Lauderdale during the late 1920s was the division of the city into quadrants, which not only assisted tourists in finding their destinations, but also solidified racial segregation. Blacks arrived as laborers on the railroad and remained as farmers, settling in the northwestern section of the town. Following the adoption of the grid system, the city officially restricted black homes to the northwest quadrant (Historic Property Associates 1995:56–58).

The boom began to decline in August 1925, when the F.E.C. Railway placed an embargo on freight shipments to South Florida. Ports and rail terminals were overflowing with unused building materials. In addition, northern newspapers published reports of fraudulent land deals in Florida. In 1926 and 1928, two hurricanes hit southeastern Florida, killing hundreds of people and destroying thousands of buildings. The 1926 hurricane hit Broward County, killing 37 people in Hollywood and 15 in Fort Lauderdale. The collapse of the real estate market and the subsequent hurricane damage effectively ended the boom. The 1929 Mediterranean fruit fly infestation that devastated citrus groves throughout the state only worsened the recession (Weaver et al. 1996:4).

For Broward County, 1926 saw a dramatic reversal of fortune, as real estate activity declined as a result of a stock market slump the previous November. People began defaulting on payments, and business came to a near standstill (Kemper 1981:47). Over-speculation in real estate, the F.E.C. Railway freight embargo, and the 1926 hurricane created economic havoc, further devastating the area's land boom (Historic Property Associates 1995:55–56). In order to promote morale and development, right of way was granted to the Seaboard Air Line Railway (Shepard Associates 1981:I-43).

By the time the stock market collapsed in 1929, Florida was suffering from an economic depression. Construction activity had halted and industry dramatically declined. Subdivisions platted several years earlier remained empty and buildings stood on lots partially-finished and vacant (Weaver et al. 1996).

Despite the economic hardships of the Depression era, local financiers began a project to create a port in the Fort Lauderdale area. One of the greatest supporters of the port was the developer of the City of Hollywood, J. W. Young. Throughout the early 1920s, Young worked towards the creation of a deepwater harbor from a body of water originally know as Lake Mabel, but various circumstances including the bust of the real estate market, initially prevented its construction. A special act of the Florida Legislature established the Broward County Port Authority in 1927, and construction of the port was soon underway (Broward County 2001). After several years of financial difficulties, the

port was opened in 1929 for use by cargo ships and military vessels. The name "Port Everglades" was chosen, as it represented the port as the "gateway to the rich agricultural area" of Florida (Broward County 2001). In July 1929, the construction of a railroad to the port was underway, and several months later it was decided that storage warehouses were needed on the port property (Eller 1971:17).

Another big event that took place during 1929 was the opening of the Merle Fogg Airport in Fort Lauderdale (known today as the Fort Lauderdale-Hollywood International Airport). Named after the city's renowned aviator, the Merle Fogg Airport opened in May 1929 with a ceremony attended by over 5,000 people (Nelson 1963:22).

5.7 DEPRESSION AND NEW DEAL PERIOD (1930–1940)

This era of Florida's history begins with the stock market crash of 1929. As previously discussed, there were several causes for the economic depression in Florida, including the grossly inflated real estate market, hurricanes, and fruit fly infestation. During the Great Depression, Florida suffered significantly. Between 1929 and 1933, 148 state and national banks collapsed, more than half of the state's teachers were owed back pay, and a quarter of the residents were receiving public relief (Miller 1990).

Employment in Hollywood was difficult, if not impossible, to find. Many property owners requested of the City of Hollywood that their labor be accepted in lieu of their property taxes, and in August of 1932, the City Manager had compiled a list of 73 unemployed men in the city, and arranged for two days of work for each every week (TenEick 1989:327).

As a result of hard economic times, President Franklin D. Roosevelt initiated several national relief programs. Important New Deal–era programs in Florida were the Works Progress Administration (WPA) and the Civilian Conservation Corps (CCC). The WPA provided jobs for professional workers and laborers, who constructed or improved many roads, public buildings, parks, and airports in Florida. The CCC improved and preserved forests, parks, and agricultural lands (Miller 1990).

The Depression affected most areas of the state's economy. Beef and citrus production declined, manufacturing slowed, and development projects were stopped. Even the railroad industry felt the pressures of the 1930s, and had to reduce service and had to downsize. In addition, the increasing use of the automobile lessened the demand for travel by rail. Despite the Depression, tourism remained an integral part of the Florida economy during this period. New highways made automobile travel to Florida easy and affordable and more middle-class families were able to vacation in the "Sunshine State" (Miller 1990).

A slow recovery began as the thirties progressed in Broward County (Historic Property Associates 1995:58). In the mid-1930s, Federal loans were secured for several projects in Broward County, including the construction of U.S. 1, from south Dania to the Dade/Broward County line, and the construction of a water softening system at the municipal water plant in 1935 (Kemper 1981:49). Tourism and the hotel business were making a comeback. Additionally, Port Everglades was evolving into one of Florida's premier ports; it was ranked seventh in the state in imports and exports. At the end of 1934, the port's export commerce increased from 1,850 tons to 10,859 tons in one year (Burghard 1982:74).

In 1935, the first annual Collegiate Aquatic Forum was held at the Fort Lauderdale municipal pool, making Fort Lauderdale a popular college vacation destination (Historic Property Associates 1995:58–59). Agriculture and residential building began in the western suburbs of Hollywood, and several new businesses were started along Hollywood Boulevard (TenEick 1989:335–337,342).

5.8 WORLD WAR II AND THE POST WAR PERIOD (1940–1950)

From the end of the Great Depression until after the close of the post-war era, Florida's history was inextricably bound with World War II and its aftermath. It became one of the nation's major training grounds for the various military branches including the Army, Navy, and Air Force. Prior to this time, tourism had been the state's major industry and it was brought to a halt as tourist and civilian facilities, such as hotels and private homes, were placed into wartime service. The influx of thousands of servicemen and their families increased industrial and agricultural production in Florida, and also introduced these new residents to the warm weather and tropical beauty of Florida.

Wartime activities brought an economic boom to Broward County (Shepard Associates 1981:I-51). Fort Lauderdale felt the conflict in December 1939 when the British cruiser *Orion* drove the German freighter *Arauca* into Port Everglades. The *Arauca* remained there for over a year. The 1942 attack of Allied shipping by German U-boats was visible from the shoreline. The area lent itself to military training, and the influx of military personnel brought business to Broward County (Historic Property Associates 1995:58–60). Two military training centers were opened in Hollywood, the United States Naval Air Gunners School and the United States Naval Indoctrination and Training School. Soldiers trained in the schools and on Hollywood's beaches. The Navy also maintained a station in Fort Lauderdale where naval aviators were trained, and the site of the current Broward County Community College was used for military training during the war. Some of the servicemen stationed here returned at the war's end to live permanently (Shepard Associates 1981:I-51).

Port Everglades was used extensively for military operations. The port possessed numerous tanks for petroleum storage and modern equipment used for loading and

unloading. Fuel reserved for the defense of the Caribbean Islands and molasses, which would be used later in the production of explosives for the Navy, also were stored at the port. The seaport accommodated an undersea warfare experimental station and a Navy boat service used in the recovery of torpedoes dropped by planes at the Fort Lauderdale Naval Air Station during training (George 1991:6).

The wartime activities of Port Everglades were inextricably connected to those at the Fort Lauderdale Naval Air Station, the area's largest military installation. Fort Lauderdale was considered an ideal location for an air station due to its moderate climate, which allowed for year-round training, and its proximity to the Atlantic Ocean and the Everglades, that provided open areas for training, bombing targets, and ranges. Construction of the more than 1,000-acre naval air station began in 1942; the facility absorbed the Merle Fogg Airport. The facility, which could accommodate 3,000 people, included more than 4,000 feet (1,219.2 m) of runways and 217 buildings. By late 1942, the base was complete. During the war, the Fort Lauderdale Naval Air Station was one of two facilities from Illinois to Florida equipped to combat train Navy pilots and crewmen in torpedo bomber planes (George 1991:7, 9). At the conclusion of the war, the facility was abandoned by the military and remained unused for several years.

During this time, railroads profited, since servicemen, military goods and materials needed to be transported. However, airplanes were now becoming the new form of transportation, and Florida became a major airline destination. The highway system was also being expanded at this time. The State Road Department constructed 1,560 miles of highway during the war era (Miller 1990).

Growth in Broward County continued to increase after the end of World War II, as a result of the leftover benefits of a wartime economy and the renewed availability of construction materials and durable goods (Kemper 1981:50, TenEick 1989:407). Servicemen stationed in the area returned to live, often convincing family and friends to return as well. Between 1940 and 1950, Fort Lauderdale's population more than doubled to 36,328. Hacienda Village was founded in 1949, Lauderdale-by-the-Sea was established in 1951; Plantation and Lazy Lake in 1953; Margate and Miramar in 1955; Lighthouse Point in 1956; Sunrise, Davie, and Lauderdale Lakes in 1961; and Coconut Creek in 1967 (Broward County 2001).

Hollywood's population, which had stagnated after the 1926 bust, now exploded. In 1930, Hollywood had a population of 2,689; in 1940, the population was at 6,239. In 1950 Hollywood's population was up to 14,351, and it was up by more than 10,000 people over that figure in 1955. By 1955, the yearly influx of tourists added more than 10,000 more temporary residents to the base population (Kemper 1981:50, TenEick 1989:407).

The population expansion fueled an increase in construction. Broward County's greatest area of growth in the 1940s, 1950s and 1960s took place in the newly incorporated communities outside Fort Lauderdale and other Broward cities (Historic Property Associates 1995:61–62).

The town of Hacienda Village, which maintained its own police and fire departments, was disincorporated in 1984, and annexed into the town of Davie (n.a. n.d.B). This area falls within the APE, however, during the construction of I-595 between the years of 1984 and 1989, the majority of the defunct town was destroyed.

6.0 FLORIDA MASTER SITE FILE SEARCH AND LITERATURE REVIEW

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

Cultural resource management surveys conducted within the general area include *Historic Properties Survey of Fort Lauderdale, Florida* (Historic Properties Associates 1989), *Tri-County Commuter Rail Authority Double Track Corridor Improvement Program for Segment 5 Cultural Resource Assessment Survey* (Janus Research 1999b), *Cultural Resource Assessment Survey for the Gulfstream Natural Gas System* (Janus Research 1999c), and *Cultural Resource Assessment Survey Technical Memorandum Rail Bridge Over the South Fork of the New River* (PBS&J 2001).

A search of the FMSF records revealed nine previously recorded archaeological resources (8BD49, 8BD82, 8BD95, 8BD96, 8BD182, 8BD183, 8BD202, 8BD206, and 8BD3208) (Figures 6-1A & 6-1B) (Table 6-1) and five previously recorded historic resources (8BD58, 8BD166, 8BD3222, 8BD3279, and 8BD3340) within the vicinity of the project APE (Figures 6-2A & 6-2B). Of these 14 resources only four (8BD58, 8BD82, 8BD3208, and 8BD3279) are located within the project APE. The Sewell Lock (8BD58) is an *NRHP*-listed resource and the Cherry Camp (8BD82) has not been evaluated for listing in the *NRHP*. Additionally, the Hacienda Village (8BD3208) has not been evaluated for listing in the *NRHP*, however it appears that this site has been destroyed. The North New River Canal (8BD3279) has been determined by the SHPO to be potentially eligible for listing in the *NRHP.* Of the remaining resources, two (8BD166 and 8BD3340) have been determined by the SHPO to be potentially eligible for listing in the *NRHP*. However, since these resources are outside of the current project APE, 8BD166 is located approximately 5,400 feet (1,645.92 m) north of the project APE, and 8BD3340 is located approximately 4,500 feet (1,371.6 m) north of the project APE, they will not be discussed in this report.

Table 6-1
Previously Recorded Archaeological Resources within One Mile of the APE

SITE #	SITE NAME	SITE LOCATION	TRS	DESCRIPTION	NATIONAL REGISTER STATUS
8BD49	Cottonmouth	3,000 ft. (914.4 m) NW of project APE	[1]T49S/R40E/ S32	Glades II & III midden	Not Evaluated
8BD82	Cherry Camp	within project APE	T50S/R40E/S4	Occupied by Glades II & III, Seminole, and 19th Century settlers	Not Evaluated
8BD95	Pine Island 2	1,500 ft. (457.2 m) S of project APE	T50S/R41E/S17	Glades IIb and Seminole midden and artifact scatter	Not Evaluated
8BD96	Pine Island 3	1,700 ft. (518.16 m) S of project APE	T50S/R41E/S17	Glades II and Seminole midden and artifact scatter	Not Evaluated
8BD182	Markham Park1	4,500 ft. (1371.6 m) N of project APE	T49S/R40E/S33	Glades burial mound and midden	Not Evaluated
8BD183	Markham Park2	4,300 ft. (1,310.64 m) N of project APE	T49S/R40E/S33	Archaic, Glades, Transitional, and Seminole occupations	Not Evaluated
8BD202	Secret Woods Camp	1,400 ft. (426.72 m) N of project APE	T49S/R40E/S33	Seminole Indian campsite	Not Evaluated
8BD206	Riverland Midden	2,300 ft. (701.04 m) N of project APE	T50S/R42E/S20	Pre Columbian and Glades midden	Not Evaluated
8BD3208	Hacienda Village	within project APE	T50S/R42E/S24	Archaic and Glades burial, habitation, and midden, and 19th and 20th Century homestead	Not Evaluated

[1] TRS=Township/Range/Section

Site 8BD49 is located approximately 3,000 feet (914.4 m) northwest of the project corridor in Section 32 of Township 49 South, Range 40 East on the Cooper City NE USGS Quadrangle (1963, PR1983). It is a Glades II (AD 750-1200) and Glades III (AD 1000-1700) culture period site evidenced by a midden. This site has not been evaluated for listing in the *NRHP* (FMSF form 8BD49, 1974).

Site 8BD82 (Cherry Camp) is located within the project APE in Section 4 of Township 50 South, Range 40 East on the Cooper City USGS Quadrangle (1963, PR1983). This site has been intermittently occupied by people from the Glades II (AD 750-1200) and Glades III (AD 1000-1700) cultural periods, the Seminole Indians and early nineteenth century settlers. It is evidenced by a midden, a pre-Columbian burial site, and habitation. This site has not been evaluated for listing in the *NRHP* (FMSF form 8BD82, 1991).

Site 8BD95 (Pine Island 2) is located approximately 1,500 feet (457.2 m) south of the project corridor in Section 17 of Township 50 South, Range 41 East on the Cooper City USGS Quadrangle (1963, PR1983). This habitation site was occupied during the Glades IIb (AD 900-1100) cultural period and by Seminole Indians during the First and Second Seminole Wars (AD 1817-1834). It is evidenced by a midden and an associated dense artifact scatter. This site has not been evaluated for listing in the *NRHP* (FMSF form 8BD95, 1991).

Site 8BD96 (Pine Island 3) is located approximately 1,700 feet (518.16 m) south of the project corridor in Section 17 of Township 50 South, Range 41 East on the Cooper City USGS Quadrangle (1963, PR1983). This site was occupied during the Glades II (AD 750-1200) cultural period and by Seminole Indians during the First and Second Seminole Wars (AD 1817-1834). It is evidenced by a midden and associated artifact scatter. This site has not been evaluated for listing in the *NRHP* (FMSF form 8BD96, 1988).

Site 8BD182 (Markham Park 1) is located approximately 4,500 feet (1,371.6 m) north of the project corridor in Section 33 of Township 49 South, Range 40 East on the Cooper City NE USGS Quadrangle (1963, PR1983). This site was occupied during the Glades (1,000 BC- AD 1,700) cultural period and is evidenced by a burial mound, midden, and a variable density artifact scatter. This site has not been evaluated for listing in the *NRHP* (FMSF form 8BD182, n.d.).

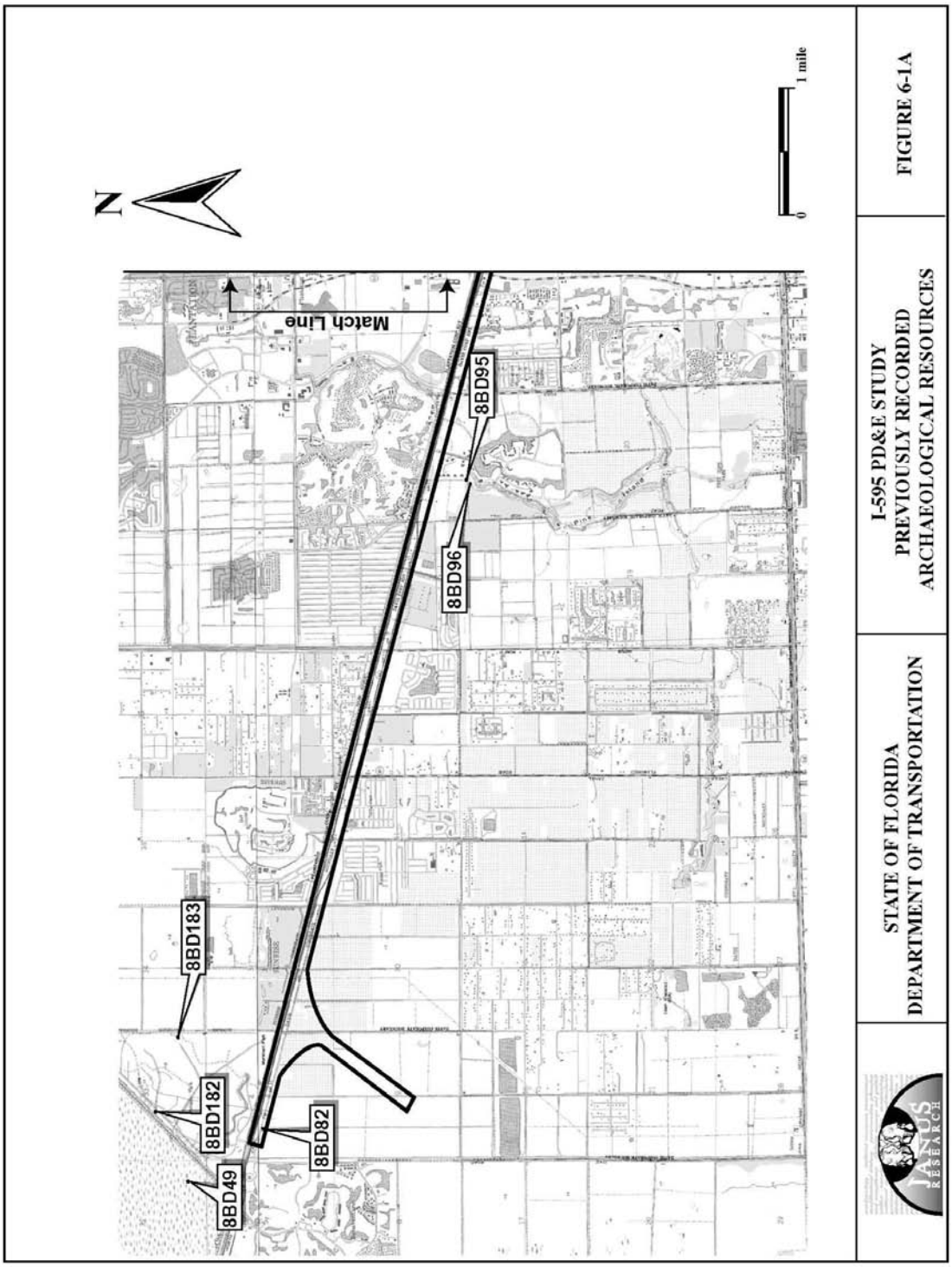
Site 8BD183 (Markham Park 2) is located approximately 4,300 feet (1,310.64 m) north of the project corridor in Section 33 of Township 49 South, Range 40 East on the Cooper City NE USGS Quadrangle (1963, PR1983). This site has been intermittently occupied by people from the Archaic (8,500 BC-1,000 BC), Glades (1,000 BC- AD

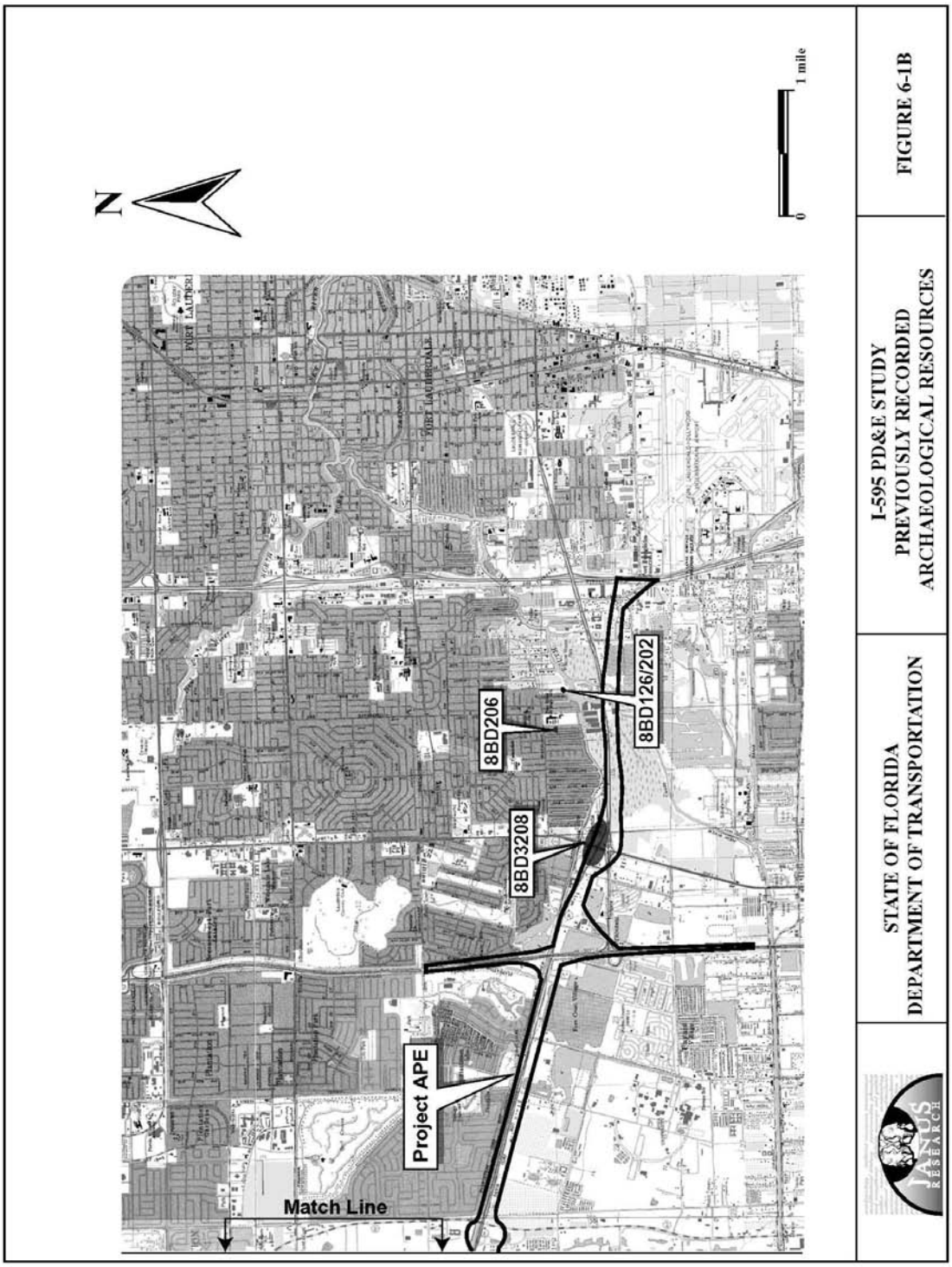
1,700), and Transitional (1,000 BC- 700 BC) cultural periods and by Seminole Indians during the First and Second Seminole Wars (AD 1817-1834). This site has not been evaluated for listing in the *NRHP* (FMSF form 8BD183, n.d.).

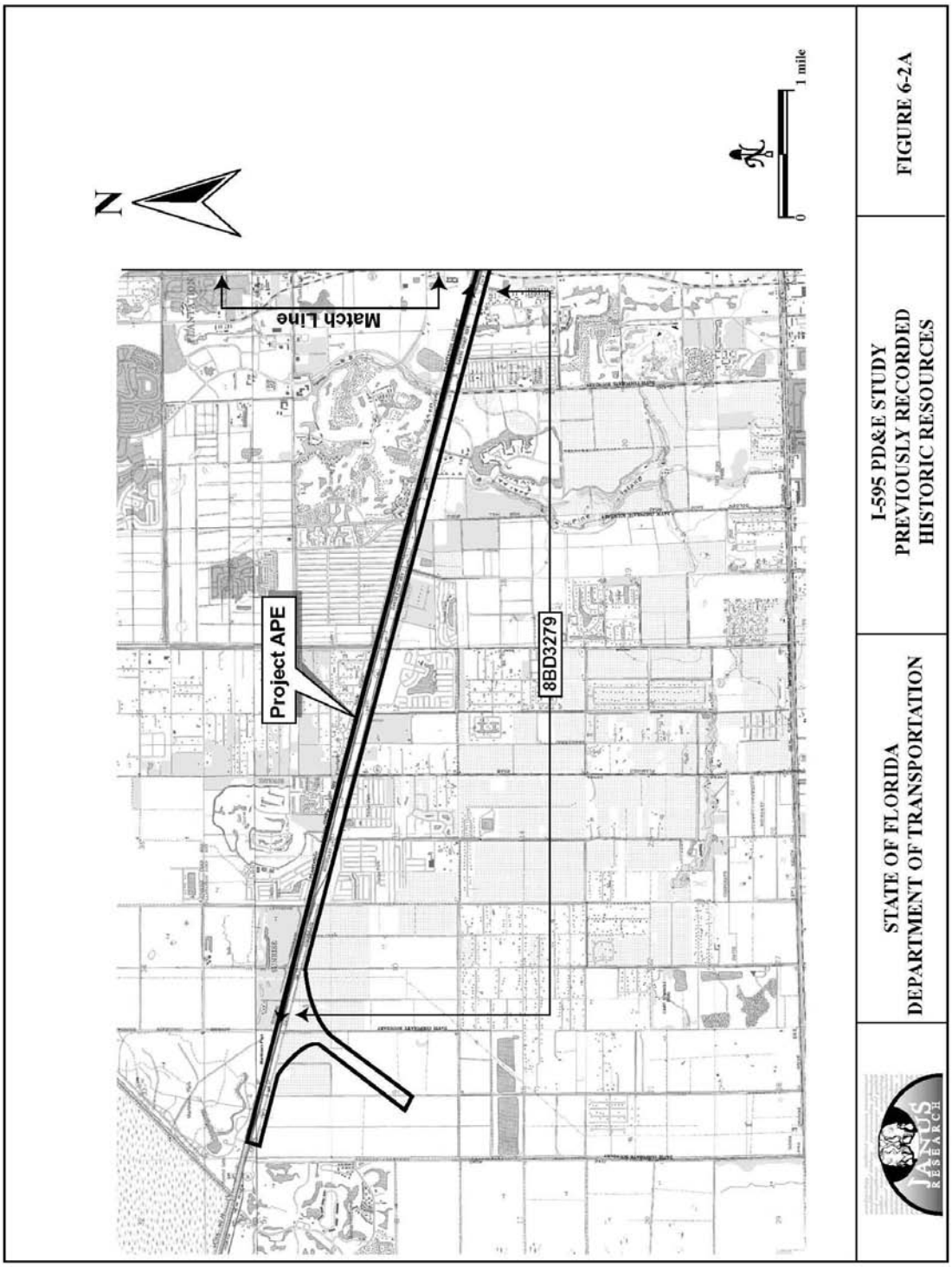
Site 8BD202 (Secret Woods Camp) is located approximately 1,400 feet (426.72 m) north of the project corridor in Section 20 of Township 50 South, Range 42 East on the Ft. Lauderdale South USGS Quadrangle (1962, PR1983). This site was used intermittently as a camp by Seminole Indians during the First and Second Seminole Wars (AD 1817-1834) and during the Spanish-American War (AD 1898-1916) and generally during the early nineteenth century. The site is evidenced by historic refuse and an associated dense artifact scatter. This site has not been evaluated for listing in the *NRHP* (FMSF form 8BD202, 1995).

Site 8BD206 (Riverland Midden) is located approximately 2,300 feet (701.04 m) north of the project corridor in Section 20 of Township 50 South, Range 42 East on the Ft. Lauderdale South USGS Quadrangle (1962, PR1983). This site was occupied during the pre-Columbian and Glades (1,000 BC- AD 1,700) cultural periods. It is evidenced by a midden and associated artifact scatter. This site has not been evaluated for listing in the *NRHP* (FMSF form 8BD206, 1996).

Site 8BD3208 (Hacienda Village) is located within the project corridor in Sections 19 and 24 of Township 50 South, Range 42 east on the Ft. Lauderdale South USGS Quadrangle (1962, PR1983). This site was occupied intermittently during the Late Archaic, Glades IIc (AD 1,100-1200), Glades IIIa (AD 1,200-1,400), Glades IIIb (AD 1,400-1513) cultural periods and during the nineteenth and twentieth centuries. It is evidenced by a pre-Columbian burial, habitation, and midden and a historic homestead. This site has not been evaluated for listing in the NRHP (FMSF form 8BD3208, 1998). Based on field observations, it appears to have been destroyed (see Figure 9-2).


N
1 mile
0
Match Line
8BD95
8BD96
8BD183
8BD182
8BD82
8BD49
FIGURE 6-1A
I-595 PD&E STUDY
PREVIOUSLY RECORDED
ARCHAEOLOGICAL RESOURCES
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
JANUS RESEARCH


N
1 mile
0
8BD206
8BD126/202
8BD3208
Project APE
Match Line
FIGURE 6-1B
I-595 PD&E STUDY
PREVIOUSLY RECORDED
ARCHAEOLOGICAL RESOURCES
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION


N
1 mile
0
Match Line
Project APE
8BD3279
FIGURE 6-2A
I-595 PD&E STUDY
PREVIOUSLY RECORDED
HISTORIC RESOURCES
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
JANUS RESEARCH

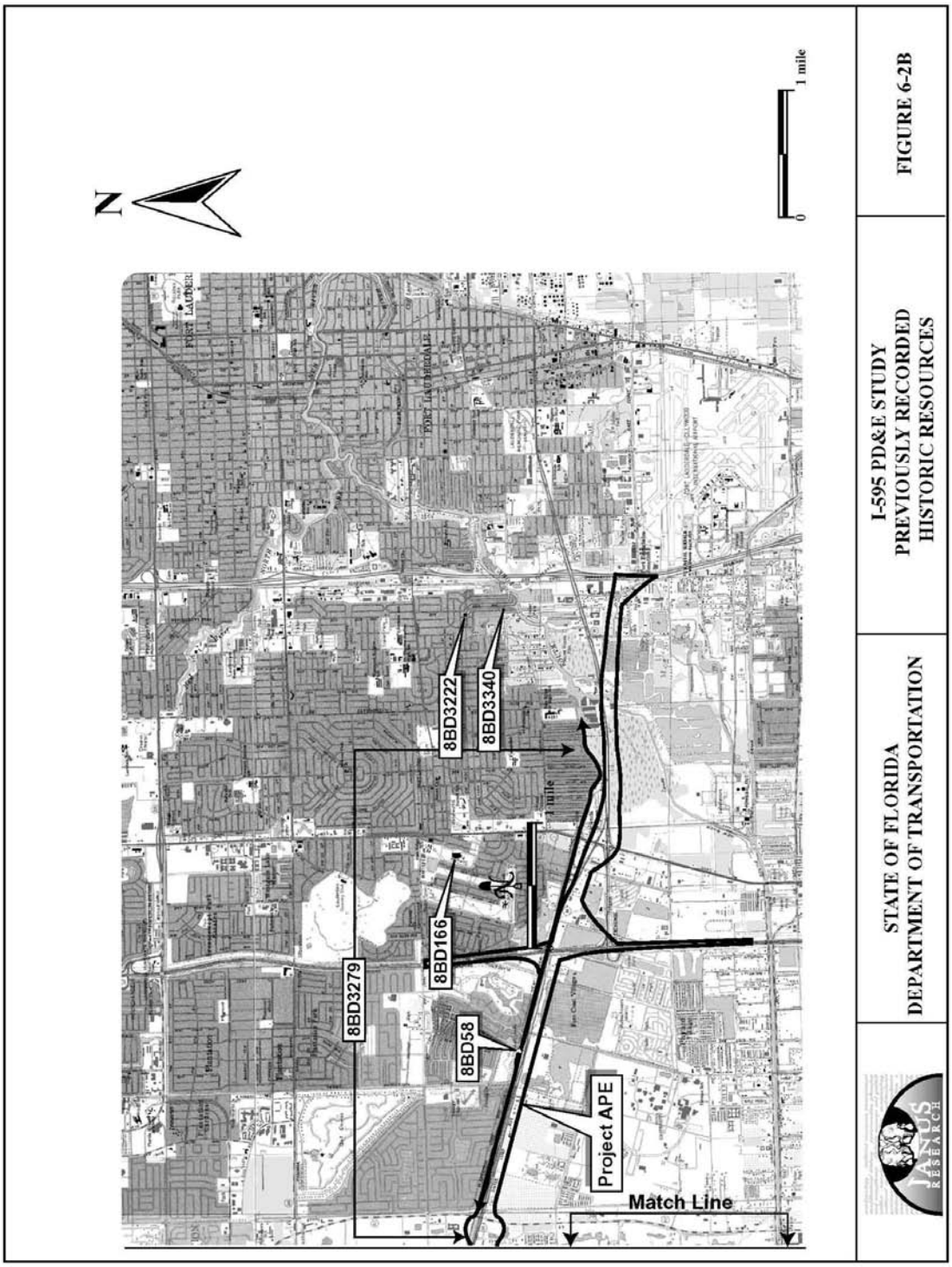


FIGURE 6-2B

I-595 PD&E STUDY
PREVIOUSLY RECORDED
HISTORIC RESOURCES

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

7.0 PROJECT RESEARCH DESIGN AND SITE LOCATION MODEL

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

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

In southeastern Florida and the Keys, a major research emphasis focuses on the patterns of settlement and land use for environmentally distinct areas around the Glades region. For example, the precontact and early historic use of coastal areas on the mainland is fairly well defined from such projects as the Granada excavations in the early 1980s (Griffin et al. 1982). The patterns of use, the resources gathered, and the chronology of sites in the Keys is less well known. The extraordinarily rich resources of the southern Florida coast encouraged precontact inhabitants to choose a relatively sedentary existence. This, in turn, stimulated a rapid rate of population growth that necessitated a centralization of power and organization to resolve disputes and redistribute food and other resources effectively (Widmer 1983:439–448). How the rich and ranked coastal populations related to those living farther south is unclear. The discovery of other significant sites in southern Florida, which could be used as a comparison with the known coastal middens would help resolve this question.

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

Historical archaeology addresses many of the same types of research questions noted above. However, because of the existence of historic records, such as maps,

documents, letters, probate inventories, and photographs, these questions are framed and interpreted within a different context. The historic record is used not only to assist in the location of sites and the identification and interpretation of specific features and artifacts, but to also provide a context from which to formulate questions about the past.

Settlement pattern, social organization, health, economic development, and adaptation are all important questions that need to be explored. This is particularly true for the post-contact period in Florida because most historical archaeological research focuses on the Colonial period (ca. 1513–1821). The majority of these studies address the effects of Spanish expansion and settlement on the Native American people of Florida (Hann 1988; McEwan 1994; Milanich 1995). However, attention also has been directed to the development of a distinctive Spanish-American cultural tradition (Deagan 1983, 1985; Hoffman 1994).

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

7.1 PRECONTACT ARCHAEOLOGICAL SITE LOCATION MODEL

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

Fresh water is obviously an important resource, as the need for water is universal. This variable would have been of greater importance during the Paleoindian and Early Archaic periods (14,000–7500 BC) when the perched water system was more restricted. During the precontact and early historic periods, closest water source would have been from the Everglades, within which the project corridor would have been located.

Relative elevation and the characteristics of soils have been used successfully by several researchers in the formulation of predictive models for precontact site location. In general, soils with an organic pan, with underlying marl or clays, and with slow to

moderate internal drainage tend to retain water or be inundated. Areas with a low elevation relative to perched water systems tend to be wet or inundated. Although wet areas can contain abundant wildlife and plant resources, they make poorer habitation areas when better-drained locations are available. Soil information is useful in urban areas because subsurface features may have been buried, but not necessarily destroyed, by modern activities. Subsurface features, such as filled drainages or sloughs that would not be identifiable during the field inspection can sometimes be identified on soil maps. However, most of the soils within the current project corridor are poorly drained and the project corridor crosses through what would have been a sawgrass marsh.

Soil characteristics alone are not necessarily the best predictors of site location in this region. Other variables, such as vegetation and the presence of hammocks and natural wells serve as more reliable indicators of site location. Hammocks provide a variety of resources, which would have been exploited by the native people who lived in the region. Their use by precontact, Seminole and modern hunters, campers and permanent residents is well documented. One obvious reason for their use is that they are not prone to flooding, except perhaps during episodes of very high water. Yet, hammocks are moist enough to retard the development and spread of fires (Austin 1992). The thick foliage of hammocks also provides a great deal of shade as well as serving to moderate temperatures year-round. The thick canopies of hammocks also provide good shelter during periods of heavy weather. Mature hammocks are noted for a lack of ground cover vegetation due to the closed canopy above shading out younger trees, herbs and shrubs. Thus, mature hammocks offer enough open space for habitation and activity areas. Finally, many fruits, nuts and tubers are available in hammocks that are important as human food sources as well as for their ability to attract game animals (Pepe and Carr 1999).

Another determination in the creation of archaeological probability zones for the current project corridor is the proximity of previously recorded archaeological resources. As mentioned previously, several archaeological sites are known for the local vicinity of the project corridor. A final determination in the creation of archaeological probability zones is the degree of disturbance to the project corridor. The project corridor has been impacted by road construction and canal dredging.

7.2 HISTORIC ARCHAEOLOGICAL SITE LOCATION MODEL

In southern Florida, historic period sites frequently 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). Because so little of the pre-urban environment remains, government survey plat maps, surveyors notes, and tract book records were used to identify

preurbanization environmental features that could possibly contain or be associated with precontact sites or historic period sites.

Use of the land around the project corridor during the earliest historic periods 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. No such settlements are known for the current project corridor. However, a review of the 1870 and 1899 plat maps (Florida Department of Environmental Protection [FDEP] 1870 and 1899) for Township 50 South, Range 41 East and Township 50 South, Range 42 East indicate that Native American settlements were present near the current project corridor. There are two Native American villages located on Pine Island south of the project corridor. One is located approximately 5,500 feet (1,676.4 m) south of the project corridor in Section 17 of Township 50 South, Range 41 East. The second village is located approximately 7,000 feet (2,133.6 m) south of the project corridor in Section 20 of Township 50 South, Range 41 East. Located just east of Pine Island is “Charlie Willie’s Island,” which is situated 6,000 feet (1,828.8 m) south of the project corridor in Section 20 of Township 50 South of Range 41 East. An “Indian Camp” is located along the South Fork River approximately 2,500 feet (762 m) north of the project corridor in Section 15 of Township 50 South, Range 42 East. No additional historic features such as military forts, roads, encampments, battlefields, homesteads, or trails were located within three miles of the project corridor.

7.3 ARCHAEOLOGICAL SITE POTENTIAL ZONES

Zones of archaeological site location were designated based on previous research conducted within the Glades cultural region and Broward County. The project corridor is located in what was once the Everglades. Archaeological sites in the Everglades are located on tree islands or remnant tree islands. However, the project corridor has been entirely urbanized, with much of the ground surface covered with pavement. The remaining unpaved areas consisted of landscaped and sculpted fill soils (as seen in areas of exposed soil) containing numerous buried utilities, including fiber-optic lines. Therefore, most of the project corridor was considered to have low potential for unrecorded archaeological sites. Areas of high site potential were located in the immediate vicinity of the previously recorded Cherry Camp site (8BD82) and the Hacienda Village site (8BR3208).

8.0 METHODS

Field procedures consisted of archaeological surface inspections, subsurface testing, and historical resource evaluation. The methods were employed to locate and evaluate archaeological sites and historic cultural resources in terms of their eligibility for listing in the *NRHP*.

8.1 ARCHAEOLOGICAL SURVEY

Archaeological field survey included a surface inspection, which consisted of a visual inspection of exposed ground to look for evidence of mounds, middens, or other structural evidence of human occupation. Additionally, a careful surface inspection was undertaken in areas of minimal vegetation and/or upturned soil such as drainage ditches, recent clearings, and animal burrows. Subsurface testing employed conventional shovel testing throughout the investigation. In total, 10 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.

Surface inspection of the project corridor revealed that the area has been entirely urbanized, with much of the ground surface covered with pavement. The remaining areas consisted of landscaped and sculpted soils (as seen in areas of exposed soil) containing numerous buried utilities, including fiber-optic lines. For these reasons the majority of the project corridor was considered to have low site potential.

Subsurface testing was conducted in areas of high site potential. Shovel tests were placed at 10-m and 25-m intervals within and immediately adjacent to the Cherry Camp site (8BD82). Although the area around the Hacienda Village site (8BD3208) was considered to have high site potential, the field survey indicated that this area is now a gated apartment complex called Stone Arch Apartments. The entire development is covered with grass and asphalt on top of shallow fill dirt that has been graded. The streets that were originally in this area have been wholly reconfigured and are different from those shown on the Ft. Lauderdale South USGS Quadrangle (1962). Several sections of the New River Canal bank retain large Cuban Laurels with roots that extend into the bedrock of the canal banks. The highest elevation of the site is located in this area, which exhibits exposed limestone bedrock and lack of soil. No testing was possible within the site or along the banks of the New River Canal because of exposed limestone bedrock. The western portion of the site along US 441 consists of very flat rock rubble fields. All available evidence indicates the site has been destroyed by modern land-clearing and development (see Figure 9-2).

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" aerial photographs (Appendix D). All artifacts discovered during surface inspection were collected, bagged by provenience and their location marked on the project aerial maps. Whenever possible, artifacts were recovered in place, with both the vertical and horizontal position of the artifacts recorded.

8.2 HISTORICAL RESOURCES SURVEY

An architectural historian and at least one technical assistant conducted a historic resources survey in order to ensure that each resource built through 1956 within or directly adjacent to the project corridor was identified, properly mapped, and photographed. The historic resources survey used standard field methods to identify and record historic resources. Resources within the APE received a preliminary visual reconnaissance. Any resource with features indicative of 1950s or earlier construction materials, building methods, or architectural styles was noted on aerial photographs and a USGS Quadrangle map.

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

Each resource's individual significance was then evaluated for its potential eligibility for inclusion in the *NRHP*. Historic physical integrity was determined from site observations, field data, and photographic documentation. Concentrations of historic resources within or adjacent to the project APE were noted in terms of their potential for inclusion in a *NRHP* historic district. Research was conducted at the Broward County Historical Commission, Fort Lauderdale Historical Society, and Broward County Public Library.

8.3 LABORATORY METHODS

8.3.1 Ceramic Artifacts

All ceramics recovered during site testing were returned and processed in the laboratory facilities at Janus Research. All proveniences were visually scanned to determine if they ensure that they would be available for analysis. All ceramics were carefully brushed clean of sand and dirt, and allowed to air-dry.

All ceramic sherds were subjected to detailed ceramic analysis. Each sherd was examined both macroscopically and under an American Optical 7x to 42x binocular microscope to determine the kind of temper used, to identify any major aplastic inclusions, and to observe any interior and/or exterior surface treatments. All observations were made from freshly broken edges. The counts, proveniences, weights, traditional ceramic types, and methods of surface decoration were recorded, as well as information regarding the section of each vessel represented, in order to facilitate classification and comparative analysis. Ceramic specimens that could not be positively identified were classified as unidentified.

Sand-tempered plain: Sand-tempered pottery is one of the most common types of precontact ceramics identified in Florida. Tempered with sand ranging from fine quartz sand to coarse quartz grit, these sherds are often undecorated, but decorative variants (e.g., incised, punctate) are sometimes recovered. While this category is not a formal type, its use has become widely accepted. This category now subsumes Glades plain and Glades Gritty ware. It is found at sites dating from the Florida Transitional phase through the Historic era (Luer and Almy 1982), and is not, in itself, a good chronological indicator.

8.3.2 Faunal Material

Most of the faunal remains from the site were rinsed under tap water and allowed to air dry. However, some of the bone was too fragile to be washed and were gently brushed clean of sand instead. All faunal specimens were classified to the lowest taxonomic class possible using skeletal specimens in the Janus Research type collection for comparison. As most of the bone was very fragmentary, analysis consisted only of weight by taxon.

9.0 RESULTS

9.1 ARCHAEOLOGICAL RESOURCES

The CRAS of the I-595 (SR 862) PD&E study resulted in the reevaluation of two previously recorded archaeological sites (8BD82 and 8BD3208) (see Figures 6-1A and 6-1B). These archaeological sites are described in detail below. Completed FMSF form for each site is included in Appendix A.

9.1.1 8BD82 – Cherry Camp

The Cherry Camp site (8BD82) is a previously recorded site situated in the northwest quarter of Section 4, Township 50 South, Range 40 East, on the Cooper City USGS Quadrangle (1963, PR1983) in Broward County, Florida (see Figure 6-1A). Documentation strongly suggests that this site was also known as the Buzzard Roost Campsite when it was first discovered in mid-1960 by the Broward County Archaeological Society (Robert Carr, Personal Communication 6-13-2005). During the 1970's Calvin Jones conducted a field visit for the State but did not formally record the site (FMSF form 8BD82, 1991). The Society conducted two excavations between 1965 and 1968. Subsequent survey was conducted by Robert Carr in 1974. The site was officially named Cherry Camp after the 1974 survey. This name was given to the site in-part so that it would not be confused with a site further south called Buzzards Roost (8BD92), also identified in 1974 (Robert Carr, Personal Communication 6-13-2005).

The site is located at an elevation of 0-5 feet (0-1.5 m) above mean sea level. It lies in the median between SR 84 and I-595 (Figure 9-1). This site is located in an area characterized by Hallandale fine sand, which is a nearly level, poorly drained soil underlain by limestone located in broad flats east of the Everglades and west of the Atlantic Coastal Ridge (USDA 1976:25).

During testing, this site was identified by four positive shovel tests (Site Sketch, see Appendix E). These positive tests define an area that is 180 feet (55 m) east-west and 131 feet (40 m) north-south, a total area of 23,680 ft^2 (2,200 m^2). The site boundaries were re-established by negative shovel tests at 10-m intervals. Seven shovel tests were excavated within the site area. The stratigraphic sequence as observed in the positive shovel tests consists of disturbed, black organic sand from 0-35 cm, black organic sand with midden from 35-50 cm, brown-grey sand with midden from 50-70 cm, light orange sandy clay from 70-75 cm, and bedrock at 75 cm below surface.

The artifacts recovered during the testing consist of 10 prehistoric ceramic sherds, 88.74 g of faunal material, 6.45 g of shell, and 2 modern glass shards, and 2 unidentified (UID) iron fragments. The 10 prehistoric ceramic sherds were recovered from 0-70 cm below surface and are all sand tempered plain. The 10 sand tempered plain include two rim sherds. One rim sherd has a maximum of 0.98 mm and has a

squared lip. The second rim sherd has a maximum thickness of 0.5 mm and has a narrow rounded lip. The remaining body sherds range in maximum thickness from 4.6-7.5 mm. The total weight for all sherds is 18.45 g. As previously described, this ceramic type is not temporally diagnostic.

Figure 9-1
Photograph of the Cherry Camp Site (8BD82)

Faunal material was recovered from 0-70 cm below surface and the identified taxa are listed in Table 9-1. The taxa represented include fish, reptiles, and an unidentified small to medium mammal. The total weight for the material recovered is 88.74 g. Animal bone was recovered from all four positive shovel tests within the site. Shell recovered from the site was represented in one shovel test from 0-30 cm below surface. The shell is represented by unidentified (UID) gastropods and Purplish Tagelus. The total weight of shell is 6.45g.

Table 9-1
List of Taxa Identified

Taxa	Common Name
Osteicthyes	UID[1] bony fishes
Apolone ferox	Florida soft shell turtle
Testudines	UID turtles
Colubridae	Non-venomous snakes
Crotalidae	Venomous snakes
Nerodia spp.	UID snakes
Mammalian	UID mammals
Vertebrata	UID vertebrates
Tagelus divisus	Purplish Tagelus
Gastropoda	UID Gastropodas

[1] UID= Unidentified

Two historic glass shards were also recovered from 0-50 cm below surface. One of the fragments is an amber bottle neck. The second fragment is white glass of an unidentifiable container form. Neither of the fragments are diagnostic, however they probably date to the mid to early twentieth century.

Based on the artifact assemblage recovered, the previously recorded Cherry Camp site (8BD82) remains relatively intact. A Glades component and a probable nineteenth century American component were identified. The ceramic sherds further indicate that this site was used as a habitation. Additionally, it has been well documented that this site is located on a relic tree island and represents a habitation and burial that has been used continuously or intermittently for about 1,600 years by people from the Glades II (AD 750-1200) and Glades III (AD 1000-1700) cultural periods as well as groups during historic periods including Seminole (Panamerican Consultants, Inc. 2003, Robert Carr et al. 1991, and Robert Carr 1974).

The current survey indicates that a portion of the site remains intact. The black dirt midden layer is still present and intact below the disturbed upper levels with modern debris. For these reasons, the Cherry Camp site (8BD82) continues to retain its integrity as a significant site eligible for listing in the *NRHP*.

The Cherry Camp site was subject to a re-assessed incident to the CRAS of the 595 Slip Ramp study (Janus Research 2005/ Financial Project ID #: 413282-1-52-01). It was determined that the site continues to be eligible for listing in the *NRHP*. Therefore, a proposed conservation plan was presented to avoid future impacts to the site (See Appendix E in Janus Research 2005/ Financial Project ID #: 413282-1-52-01). On November 3, 2005, the SHPO concurred with the findings conditional upon adherence to the proposed conservation plan.

9.1.2 8BD3208 – Hacienda Village

The Hacienda Village site (8BE3208) is a previously recorded site situated in the northwest quarter of Section 19 and the southeast quarter of Section 24 of Township 50 South, Range 40 East, on the Ft. Lauderdale South USGS Quadrangle (1962, PR1983) in Broward County, Florida (see Figure 6-1B). The site is located at an elevation of 0-5 feet (0-1.5 m) above mean sea level. It lies northeast of the I-595/SR 84 interchange (Figure 9-2). This site is located in an area characterized by Hallandale fine sand and Margate fine sand, which are both nearly level, poorly drained soils underlain by limestone located in broad flats east of the Everglades and west of the Atlantic Coastal Ridge (USDA 1976:25).

Although the area around the Hacienda Village site (8BD3208) was considered to have high site potential, the field survey indicated that this area is now a gated apartment complex called Stone Arch Apartments. The entire development is covered with grass and asphalt on top of shallow fill dirt that has been graded. The streets that were originally in this area have been wholly reconfigured and are different from those shown on the Ft. Lauderdale South USGS Quadrangle (1962). Several sections of the New River Canal bank retain large ficus trees with roots that extend into the bedrock of the canal banks. The highest elevation of site is located in this area, which exhibits exposed limestone bedrock and lack of soil. No testing was possible within the site or along the banks of the New River Canal because of exposed limestone bedrock. The western portion of the site along US 441 consists of very flat rock rubble fields. All available evidence indicates the site has been destroyed by modern land-clearing and development.

Figure 9-2
Photograph of the Hacienda Village Site (8BD3208)

9.2 HISTORIC RESOURCES SURVEY RESULTS

The historic resources survey resulted in the identification of two previously recorded resources (8BD58 and 8BD3279), and three newly recorded historic resources (8BD4072, 8BD4073, 8BD4074). The previously recorded resources are the *NRHP*-listed Sewell Lock (8BD58), and the *NRHP*-eligible North New River Canal (8BD3279). The Sewell Lock is located within the North New River Canal. FMSF forms for all identified resources are located in Appendix A.

The Sewell Lock, also known as Lock No. 1 North New River Canal, was listed in the *NRHP* in 1978. Since its listing, the majority of the mechanisms and associated structures have been removed. For informational purposes, the original *NRHP* nomination form for the Sewell Lock is located in Appendix B.

The North New River Canal served as a major transportation artery between Fort Lauderdale and Lake Okeechobee during the early years of the Everglades drainage program. It was identified as part of the CRAS for the Gulfstream Natural Gas System (Janus Research 1999c) and was determined to be potentially eligible for listing in the *NRHP*. In a letter dated December 20, 1999 from Division of Historical Resources/State Historic Preservation Officer to Janus Research the Division concurred with the finding.

The three newly recorded historic resources are not considered eligible for listing in the *NRHP*. These resources exhibit common design types and/or non-historic exterior alterations which compromise their historic physical integrity. According to *National Register Bulletin 15*, historic integrity is evidenced by the survival of physical characteristics that existed during the resource's historic period. For these reasons, and the lack of historical associations with significant local events or persons, these resources are considered ineligible for listing in the *NRHP* on an individual basis or as part of a historic district.

This results section includes a map with the locations of historic resources identified within the project APE (Figure 9-3); a table listing historic resources identified within the project APE (Table 9-2); and a brief description of the architectural style represented in the project corridor. The physical description and evaluation of *NRHP* eligibility are included in a narrative for each surveyed resource.

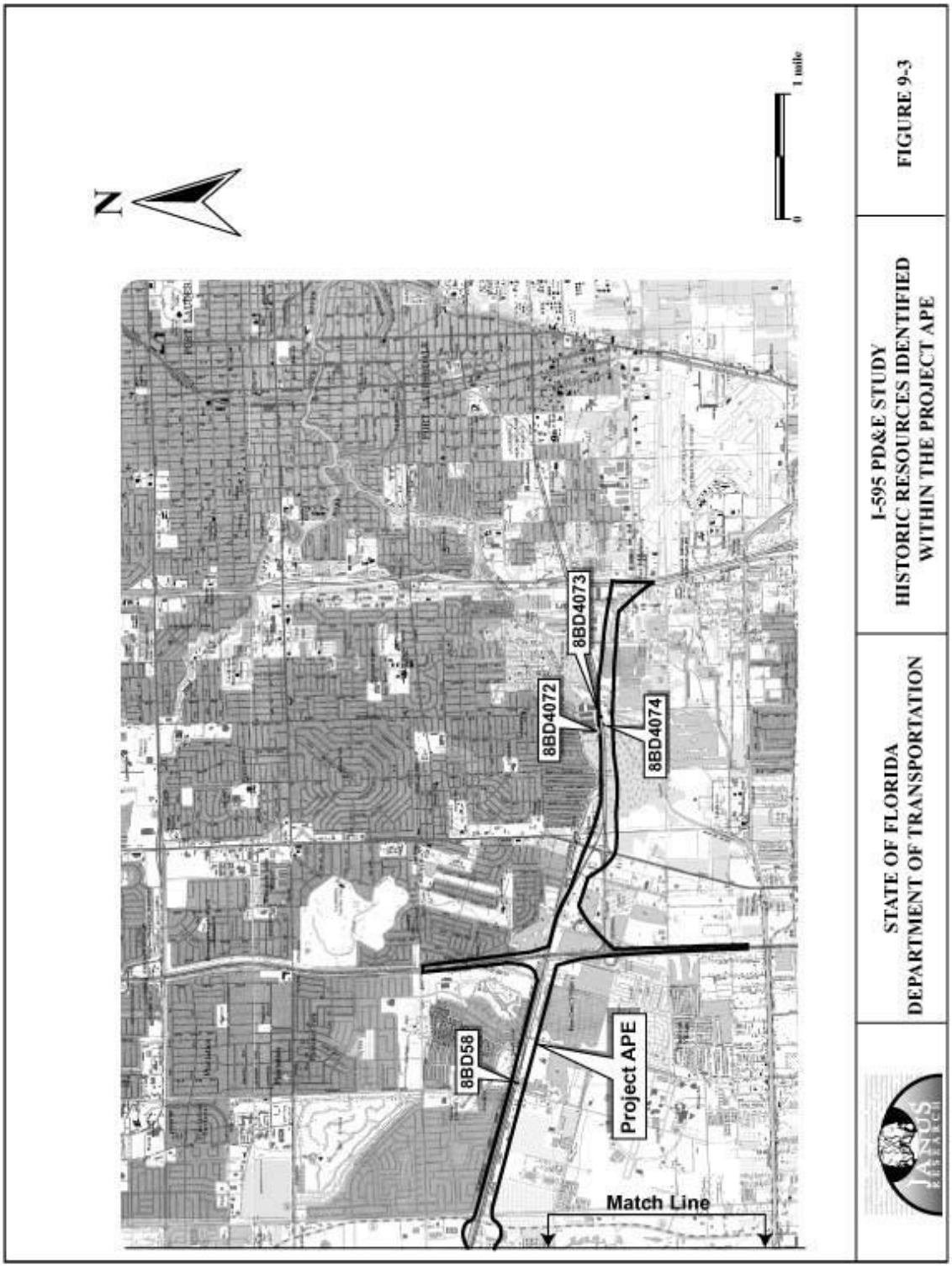

N
1 mile
0
8BD4073
8BD4072
8BD4074
8BD58
Project APE
Match Line
FIGURE 9-3
I-595 PD&E STUDY
HISTORIC RESOURCES IDENTIFIED
WITHIN THE PROJECT APE
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

Table 9-2
Historic Resources Identified Within the Project Ape

FMSF[1]	Site Name/Address	Style	Const. Date	*NRHP* Status
8BD58	Sewell Lock	N/A	c[2].1911	*NRHP*[3]-Listed
8BD3279	North New River Canal	N/A	1906-1912	*NRHP*-eligible
8BD4072	South Fork of New River Bridge	N/A	1956	Ineligible
8BD4073	Marine Propulsion Lauderdale Propeller/2990 SR[4] 84	Masonry Vernacular	c.1955	Ineligible
8BD4074	New River Boating Center/3000 SR 84	Masonry Vernacular	c.1955	Ineligible

[1]FMSF = Florida Master Site File
[2]c = circa
[3]NRHP = National Register of Historic Places
[4]SR = State Road

9.2.1 Representative Architectural Styles

Construction dates for the historic resources identified within the project APE range from circa 1906 to 1956. The North New River Canal and the Sewell Lock were built during the Spanish-American War era, the remaining resources were built during the Modern era of the 1950s. Buildings in the project APE exhibit the Masonry Vernacular style. Due to their resource types, the North New River Canal, Sewell Lock, and South Fork of the New River Bridge do not exhibit a style.

Masonry Vernacular

There are two historic resources exhibiting the Masonry Vernacular architectural style in the project corridor. Masonry Vernacular buildings were mostly designed and built by anonymous individuals (Vogel 1985:105). The use of ready-mixed concrete revolutionized building techniques after 1920 (Rifkind 1980:293). Buildings constructed after this time used concrete blocks which provided the same amount of strength as other traditional masonry units but were lighter and cheaper (McAlester 1993:38). The Masonry Vernacular buildings in the project corridor exhibit stucco exteriors, and consist of a one and two-story building.

RESOURCE LISTED IN THE *NRHP*

Figure 9-4
Sewell Lock, Facing East

9.2.2 8BD58 – Sewell Lock

The Sewell Lock, also known as Lock No. 1 North New River Canal, is located on the south bank of the North New River Canal in Township 50 South, Range 41 East, Section 14 (Fort Lauderdale South USGS Quadrangle 1962 PR 1983) in the vicinity of Plantation, Broward County, Florida (Figure 9-4). The lock currently consists of parallel poured concrete walls 145 feet (44.19 m) long and 25 feet (7.62 m) apart running east/west. The walls are 14 feet (4.26 m) high, and taper from six feet (1.82 m) wide at the foundation to three feet (.91 m) wide at the top. Metal moorings are arranged along the top of each of the lock walls. Paired wooden gates, constructed of heavy timbers secured by iron straps, were originally located at either end of the lock. However, only the western gate is now extant. These gates, when operational, would close to form an angle pointing upstream. The lock gates were originally controlled by geared rack and pinion mechanisms, only the geared mechanisms remain. An engineer's benchmark, dated 1939, has been placed in the eastern corner of the southernmost lock wall.

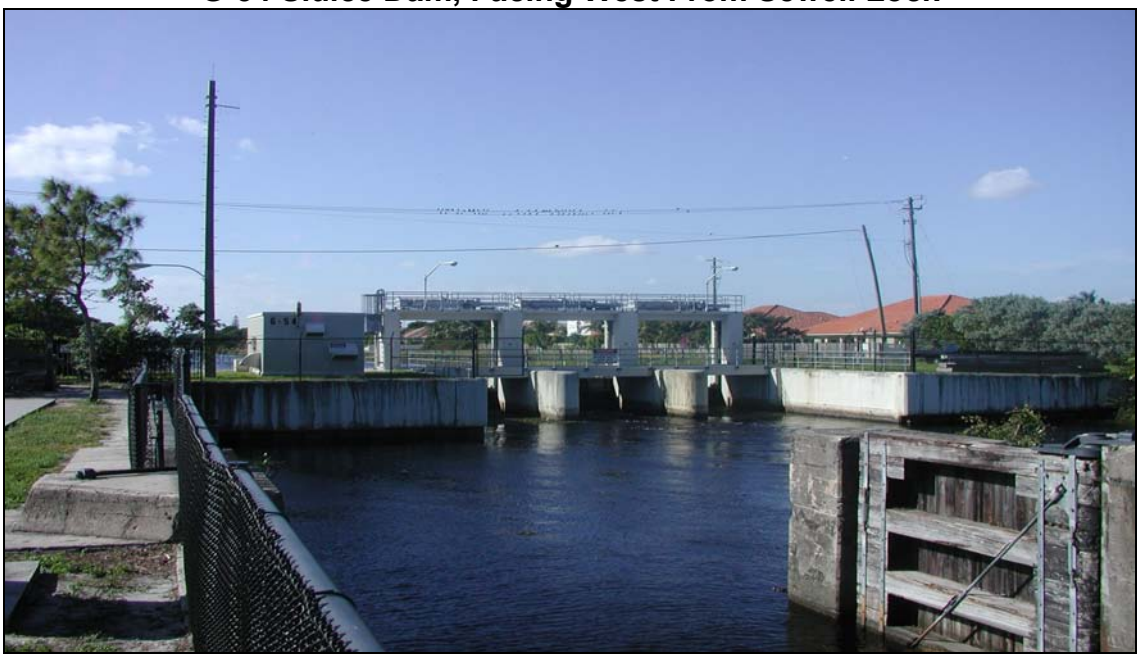
Construction of the lock began in October of 1911 by the Furst-Clark Construction Company, and was in operation by March of 1912. The Furst-Clark Construction Company had taken over the dredging of the North New River Canal from the State of Florida in 1909, and had quickly realized the need for establishing locks in order to maintain both water level and traffic on the canal (Knetsch 1991). The first of the locks to be built on the North New River Canal, as well as in South Florida, the Sewell Lock is a significant historic resource in the areas of engineering and transportation, as the opening of the lock facilitated the agricultural exploitation and development of the land west of Fort Lauderdale drained by the North New River Canal.

Crops grown in the area of the Everglades drained by the North New River Canal would travel down the canal, through the locks to Fort Lauderdale where they would be shipped by railroad to other destinations. The Sewell Lock, in conjunction with other locks, established the North New River Canal as the major transportation artery between Lake Okeechobee and Fort Lauderdale, and made the agricultural lands created by the draining of the Everglades easily accessible and profitable.

The Sewell Lock was listed in the *NRHP* on February 17, 1978. Although there were no explicit boundaries delineated at the time of the *NRHP* nomination, it apparently encompassed an original wing dam extending north from the west side of the lock, which connected to a moveable sluice dam extending to the north bank of the canal (Figure 9-5). A non-historic earthen dam had also been constructed along the western, upstream side of the lock to protect it from the stream water pressure. In addition, a historic USGS recording station and lock tender's house associated with the lock were located to the south of the structure on the canal bank. All of these elements have since been demolished. Presently, the only extant sections are the lock walls, the western wooden gate, and the geared mechanisms and metal moorings. Furthermore, a non-historic sluice dam (G-54) and control house have recently been constructed immediately upstream (west) from the Sewell Lock (Figure 9-6). Due to the demolition of the original wing and sluice dams, as part of this survey the current boundaries of the Sewell Lock were established to encompass only the extant concrete walls and gate of the lock (Figure 9-7).

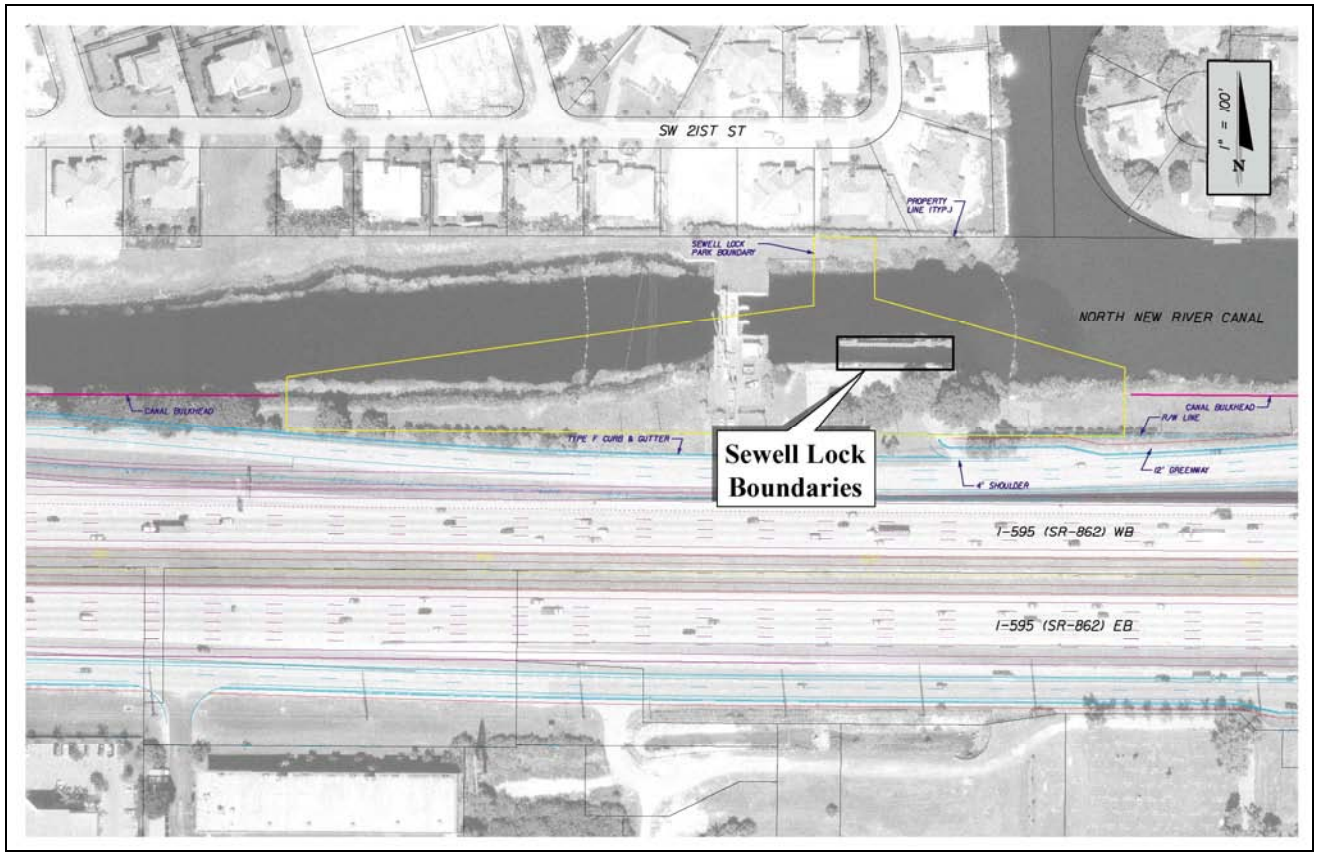
Figure 9-5
c. 1980 Aerial Showing Sewell Lock

Figure 9-6
G-54 Sluice Dam, Facing West From Sewell Lock



Since the Sewell Lock's listing in the *NRHP* in 1978, the majority of the mechanisms and associated structures essential to its function have been removed. Although the Sewell Lock is currently in an altered state, no project improvements will require ROW from this resource and will therefore not impact it.

Figure 9-7
Current Sewell Lock Boundaries



RESOURCE CONSIDERED ELIGIBLE FOR LISTING IN THE NRHP

Figure 9-8
North New River Canal, Facing Northwest
From Just Northwest of the Sewell Locks

9.2.3 8BD3279 – North New River Canal

For purposes of this survey only the portion of the North New River Canal located within the Project APE, beginning in Township 50S, Range 40E, Section 4 (Cooper City NE USGS Quadrangle 1963 PR 1983), and flowing southeast and ending in Township 50 South, Range 42 East, Section 19 (Fort Lauderdale South USGS Quadrangle 1962 PR 1983) in Broward County, Florida, was surveyed (Figure 9-8). Within the project APE, the North New River Canal traverses through Township 50 South, Range 40 East, Sections 2, 3, 4, 11, and 12, Township 50 South, Range 41 East, Sections 7, 8, 13, 14, 15, 16, 17, and 24, Township 50 South, Range 42 East, Section 19 (Cooper City NE, Cooper City, and Fort Lauderdale South USGS Quadrangles), for a total length of approximately 10.71 miles (17.23 km). The width of the canal throughout the project APE is approximately 100 feet (30 m), except in the area of the Sewell Lock (8BD58)

where the width of the canal is expanded to approximately 150 feet (45 m). In its entirety, the North New River Canal extends from Lake Okeechobee in Palm Beach County to the South Fork of the New River in Broward County, for a total length of 66.3 miles (106.69 m). Presently, the North New River Canal, within the project APE, is bordered by SR 84 and I-595 to the south, and non-historic residential construction to the north.

Construction of the North New River Canal began in 1906. In order to reduce the water level of the Everglades, the State of Florida established the Everglades Drainage District in 1905, with the authorization to tax local landowners to pay for the construction of the canals needed to drain the Everglades. The state designed this act because it predicted that through the drainage of the Everglades three million acres of land would be created for agricultural and habitable purposes (Werndli and Kirk 1978). One of the first elements of the project was the dredging of the North New River Canal, which runs parallel to the north of the I-595 project corridor. By 1908, under the constant supervision of Governor Broward, the North New River Canal extended 6.25 miles into the Everglades west of Fort Lauderdale (Knetsch 1991:39).

By 1909, the State of Florida had decided that it would allow contracts to private corporations to complete the construction of the canals. In June of 1910, a bid was accepted from the Furst-Clark Construction Company of Baltimore, Maryland to complete the dredging of the North New River Canal, along with the South New River Canal, Miami Canal, and the Gulf Coast Canal. Under the direction of the Furst-Clark Construction Company, it was realized that locks would need to be constructed to control both the water level and water traffic along the canals. The construction of these locks, including the *NRHP*-listed Sewell Lock, located within the project APE on the North New River Canal, was begun in October of 1911 (Werndli and Kirk 1978).

By 1912, the North New River Canal, one of six primary canals of the Everglades Drainage Project, was operational and extended all the way from the South Fork of the New River to Lake Okeechobee (Figure 9-9). It became the major transportation artery between Lake Okeechobee and Fort Lauderdale, and it also served as part of the first unobstructed waterway across peninsular Florida (Janus Research 1999c:236). The shipping of agricultural products along the water route was immediately the preferred method of transportation (Historic Property Associates 1995:44). The locks, including the Sewell Lock, which was also operational by 1912, facilitated this traffic along the canal route, and made the agricultural lands created by the draining of the Everglades easily accessible and profitable. Crops grown around the area of Lake Okeechobee and the newly-drained Everglades were transported down the North New River Canal to Fort Lauderdale where they were shipped via railroad to other destinations.

Originally engineered to provide agricultural lands and transportation in South Florida, the North New River Canal was eventually used to control flooding around proposed and existing residential lands. Control of the canals was given to the Army Corps of Engineers in the 1940s (Janus Research 1999c:236).

As an example of an early water management system and as one of the primary canals of the Everglades Drainage District, the North New River Canal maintains its important engineering significance. It is historically significant due to its role in the development of South Florida. This resource was initially documented as part of the *Cultural Resource Assessment Survey for the Gulfstream Natural Gas System* (Janus Research 1999c), and determined potentially eligible for listing in the *NRHP*. In a letter dated December 20, 1999 from DHR/SHPO to Janus Research the SHPO concurred with the finding. This historic resource is still considered potentially eligible for listing in the *NRHP*. Stabilization activities that will take place to this resource as part of this project will be appropriately addressed in a Section 106 Determination of Effects Case Study.

Figure 9-9
1914 Photograph of North New River Canal, Unknown Location, Facing West, Florida Photographic Collection

RESOURCES CONSIDERED INELIGIBLE FOR LISTING IN THE NRHP

Figure 9-10
South Fork of New River Bridge, Facing Northwest

9.2.4 8BD4072 - South Fork of New River Bridge

The South Fork of New River Bridge (FDOT#860008) is located in Township 50 South, Range 42 East, Section 20 (Fort Lauderdale South USGS Quadrangle 1962 PR 1983) in Fort Lauderdale, Broward County, Florida. This bridge carries SR 84 traffic across the South Fork of the New River (Figure 9-10). Constructed in 1956, the bridge exhibits a single-leaf bascule design with a four-lane vehicular and pedestrian deck constructed of steel and concrete. The total structure length is 234.9 feet (71.59 m), and the total deck width is 61.6 feet (18.77 m) (FDOT 1997). The main bridge span, which is the single-leaf moveable span, is 53.1 feet (16.18 m) in length. The superstructure includes all elements on the surface of the bridge, such as the main span, approach spans, decking material, and any additional elements, such as sidewalks, decking, or railings. The main span of the bridge is a steel structure with steel grating. The approach spans are covered with asphalt. Concrete walkways on either side of the traffic lanes span the bridge. The bridge features aluminum railings, composed of vertical posts supporting two horizontal rails which rest on a low concrete wall. The handrails on the movable span are made of steel and consist of horizontal rails with thin vertical posts between. The substructure of the bridge includes the supporting elements under the superstructure. The substructure of each approach span is comprised of either concrete or steel piers.

Figure 9-11
Tender Station of the South Fork of New River Bridge, Facing West

The tender station, also constructed in 1956, is located on the southwest side of the bridge (Figure 9-11). It is constructed of poured concrete with a stucco veneer. The shallow hipped roof caps a bi-level room-over-room design. Fenestration consists of metal single-hung sash windows with a one-over-one configuration.

The South Fork of the New River Bridge is a bascule bridge, which is a type of moveable balanced structure that can be tilted at the abutment to move up and out of the way of boats and barges. The term bascule derives from the French term for a weighing device or seesaw. Though bascule bridges have been built since ancient times, the technology of today's bascule bridges developed into its modern form between the 1880s and 1940s. The single-leaf bascule is designed so that the entire span lifts above one end of the bridge (FDOT 2004: 90).

The South Fork of the New River Bridge is located in a commercial setting and remains in good condition. The tender station has undergone some alterations, such as the addition of replacement windows and new lighting. The bridge has undergone some modifications, including new metal railings, re-surfacing, and retrofitted mechanical guards. The bridge also exhibits a simple design with a standard railing and is a late

representation of a particularly common bridge type found throughout Florida. Therefore, non-historic alterations and a common engineering design and lack of distinctive architectural elements limit the significance of this bridge. It is considered ineligible for listing in the *NRHP* on an individual basis or as part of a historic district.

Figure 9-12
Marine Propulsion Lauderdale Propeller/2990 SR 84, Facing South

9.2.5 8BD4073-Marine Propulsion Lauderdale Propeller/2990 SR 84

Constructed circa 1955, this one-story Masonry Vernacular building is located south of SR 84 between SW 29th Avenue and the South Fork of the New River, in Township 50 South, Range 42 East, Section 20 (Fort Lauderdale South USGS Quadrangle 1962 PR 1983) in Fort Lauderdale, Broward County, Florida (Figure 9-12). This rectangular building has a concrete block structural system and rests on a concrete slab foundation. The flat roof is surfaced with built-up materials and the exterior is clad in stucco. Fenestration includes metal awning windows with a four pane configuration. Exterior ornamentation consists of wide overhanging eaves. The building is in a commercial setting and remains in good condition.

Three connected non-historic, one-story, gable roof outbuildings are located to the southwest of the main building. These buildings are constructed of steel-girder frames with corrugated sheet metal exteriors. They are all connected together and serve as warehouses.

The historic building represents a common building type and style found throughout South Florida, which limits its architectural significance. In addition, limited research revealed no significant historical associations with important persons or events. Therefore, this building is considered ineligible for listing in the *NRHP*, on an individual basis or as part of a historic district.

Figure 9-13
New River Boating Center/3000 SR 84, Facing South

9.2.6 8BD4070-New River Boating Center/3000 SR 84

Constructed circa 1955, this two-story Masonry Vernacular building is located south of SR 84 between SW 29th Avenue and the South Fork of the New River, in Township 50 South, Range 42 East, Section 20 (Fort Lauderdale South USGS Quadrangle 1962 PR 1983) in Fort Lauderdale, Broward County, Florida (Figure 9-13). This irregularly-shaped building has a concrete block structural system and rests on a continuous concrete foundation. The flat roof is surfaced with built-up materials and the exterior is clad in stucco. Fenestration includes metal single-hung sash windows with a one-over-one configuration, metal awning windows with a three pane configuration, and metal fixed windows with one pane configurations. A non-historic, one-story addition in the northwest corner connects two previously independent buildings. The building is in a commercial setting and remains in good condition. It is located on the east bank of the New River.

A non-historic, one-story flat roof hut clad in T1-11 siding with a flagstone veneer is present to the east of the main building. In addition, a non-historic, steel-frame boat

lifting structure is present to the north of the main building. Numerous boats, on lifting structures also surround the building.

This building represents a common building type and style found throughout South Florida. Non-historic modifications and additions, such as the one-story gable roofed addition and the parapet awning, limit its architectural significance and compromise its historic physical integrity. In addition, limited research revealed no significant historical associations with important persons or events. Therefore, this building is considered ineligible for listing in the *NRHP*, on an individual basis or as part of a historic district.

10.0 CONCLUSIONS

Two archaeological sites (8BD82 and 8BD3208) were reevaluated during the CRAS of the I-595 (SR 862) PD&E study. The survey of the Cherry Camp site (8BD82) indicates that a portion of the site remains intact. The black dirt midden layer is still present and intact below the disturbed upper levels with modern debris. For these reasons, the Cherry Camp site (8BD82) continues to retain its integrity as a significant site eligible for listing in the *NRHP*.

Although the area around the Hacienda Village site (8BD3208) was considered to have high site potential, the field survey indicated that this area is now a gated apartment complex called Stone Arch Apartments. The entire development is covered with grass and asphalt on top of shallow fill dirt that has been graded. The streets that were originally in this area have been wholly reconfigured and are different from those shown on the Ft. Lauderdale South USGS Quadrangle (1962). Several sections of the New River Canal bank retain large ficus trees with roots that extend into the bedrock of the canal banks. The highest elevation of site is located in this area, which exhibits exposed limestone bedrock and lack of soil. No testing was possible within the site or along the banks of the New River Canal because of exposed limestone bedrock. The western portion of the site along US 441 consists of very flat rock rubble fields. All available evidence indicates the site has been destroyed by modern land-clearing and development.

Five historic resources were identified within the project APE. These resources include the previously recorded and *NRHP*-listed Sewell Lock (8BD58) and the *NRHP*-eligible North New River Canal (8BD3279). Since the Sewell Lock's listing in the *NRHP* in 1978, the majority of the mechanisms and associated structures essential to its function have been removed. The North New River Canal was identified as part of the CRAS for the Gulfstream Natural Gas System (Janus Research 1999c) and was determined to be potentially eligible for listing in the *NRHP*. In a letter dated December 20, 1999 from Division of Historical Resources/State Historic Preservation Officer to Janus Research the Division concurred with the finding. Stabilization activities that will take place to this resource as part of this project will be appropriately addressed in a Section 106 Determination of Effects Case Study. The remaining newly recorded resources (8BD4072, 8BD4073, 8BD4074) exhibit common design types and/or non-historic exterior alterations, which compromise their historic physical integrity. These resources are considered ineligible for listing in the *NRHP* on an individual basis or as part of a historic district. The FMSF forms for the five historic resources are located in Appendix A.

10.1 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.

10.2 CURATION

Original Survey Log Sheets, site file forms, and photographs are curated at the Florida Master Site File Office in Tallahassee, along with a copy of this report. Recovered materials, field notes and other pertinent project records are temporarily stored at Janus Research until their transfer to the FDOT storage facilities.

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APPENDIX A
FLORIDA MASTER SITE FILE FORMS

Page 1

Original ☐
Update ☑

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8BD58
Recorder # 4
Recorder Date 9/2004

Site Name Sewell Lock **Other Names** Lock No. 1; Davie-Sewell Lock; Lock No. 4
Project Name CRAS of the SR-862 (I-595) PD&E Study, Broward County
Historic Contexts Spanish-American War **National Register Category** Structure

LOCATION and IDENTIFICATION

Address 6521 SR 84
Vicinity of North of SR 84 between the Florida Turnpike and SR 817
City Vicinity of Plantation **County** Broward
Ownership Public **Subdivision** John W. Newmans 1 & 2 **Block #** _____ **Lot #** _____

MAPPING

USGS Map FORT LAUDERDALE SOUTH **Township** 50S **Range** 41E **Section** 14
Quarter SW **Qtr Qtr** SE **Irregular Section** ☐ **UTM Zone** 17
Easting 577070 **Northing** 2885200 **Land Grant** Unknown
Latitude _____ **Longitude** _____ **Plat or Other Map** Aerial Photographs

HISTORY

Architect/Builder Furst-Clark Construction Company **Construction Date** 1911 **Circa** ☑
Alterations ☑ **Date** c. 1980 **Type/Location** N/historic dam removed; W/earthen dam removed; S/lock keepers house & USGS recording station demolished; E/lock gate removed
Additions ☐ **Date** _____ **Type/Location** _____
Moved ☐ **Original Location** _____
Original Use Transportation **Use Present** Park

DESCRIPTION

Style N/A **Exterior Plan** N/A **Interior Plan** Unknown **Stories** 1
Structural System Poured Concrete **Exterior Fabric** Poured concrete
Foundation Slab **Foundation Materials** Poured concrete **Foundation Infill** N/A
No. of Porches 0 **Locations/Features** N/A
Dormers ☐ **Number/Location** N/A
Outbldgs. ☐ **Number** _____ **Nature/Location (Describe below)**
N/A
Roof Type Not applicable **Roofing Materials** Unspecified
Secondary Structures ☐ **Comments** Not applicable **Location** N/A
Chimneys ☐ **Number** 0 **Orientation** N/A **Location** N/A **Material** Not applicable
Wood Windows ☐ **Type** N/A **Light #** _____
Metal Windows ☐ **Type** N/A **Light #** _____
Exterior Ornament N/A
Condition Fair **Surroundings** Urban
Narrative (general, interior, landscape, context; 3 lines only)
Please see continuation sheet.

Archaeological Remains Present ☐ _____ **FMSF Archaeological Site Form Completed (if yes, attach)** ☐

HISTORICAL STRUCTURE FORM

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8BD58

RECORDER'S EVALUATION OF SITE

ible for National Register?	Yes ☐	No ☑	Likely, Need Information ☐	Insufficient Information ☐
Significant as Part of District?	Yes ☐	No ☑	Likely, Need Information ☐	Insufficient Information ☐
Significant at Local Level?	Yes ☐	No ☑	Likely, Need Information ☐	Insufficient Information ☐

Areas of Significance

Engineering; Transportation

Summary of Significance

Please see continuation sheet.

DHR USE ONLY	OFFICIAL EVALUATIONS	DHR USE ONLY
NR DATE __/__/__	*KEEPER-NR ELIGIBILITY* ☐ yes ☐ no	*Date* __/__/__
	SHPO-NR ELIGIBILITY: ☐ yes ☐ no ☐ potentially elig. ☐ insufficient info	*Date* __/__/__
DELIST DATE __/__/__	*LOCAL DESIGNATION:* _____	*Date* __/__/__
	Local office _____	
	National Register Criteria for Evaluation ☐ a ☐ b ☐ c ☐ d (See National Register Bulletin 15, p. 2)	

DOCUMENTATION

Research Methods Florida Site File for past architectural surveys; Florida Site File search; Local library; Pedestrian; Windshield

Bibliographic Reference Please see continuation sheet.

Location of Negatives Janus Research **Negative Numbers** Roll 2, #35, Facing E

RECORDER INFORMATION

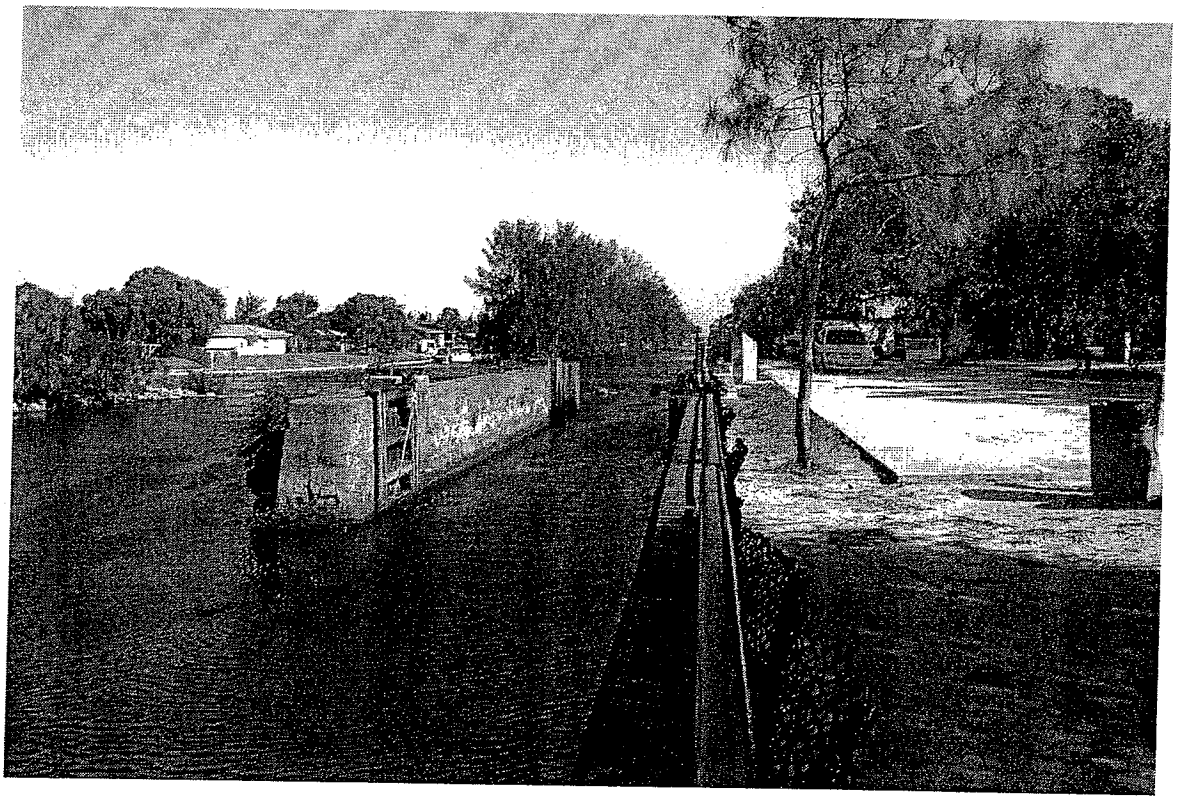
Recorder Name M. Kenneally

Recorder Affiliation JANUS RESEARCH, 1300 N Westshore Boulevard, Suite 100, Tampa, Florida 33607 Telephone 813-636-8200

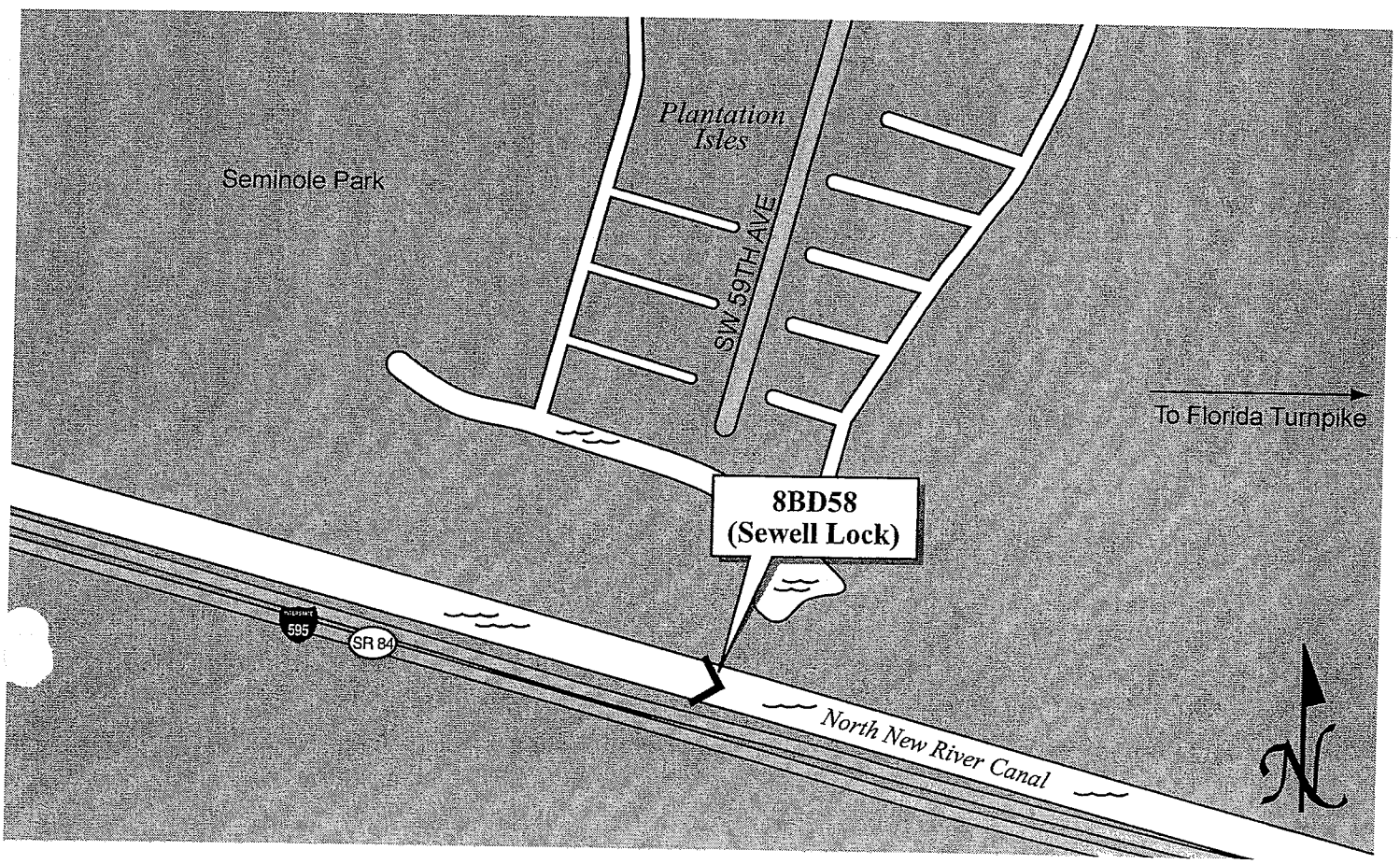
REQUIRED:

1. **USGS 7.5' MAP WITH STRUCTURES PINPOINTED IN RED**
2. **LARGE SCALE STREET OR PLAT MAP**
3. **PHOTO OF MAIN FACADE, PREFERABLY B&W, AT LEAST 3x5**

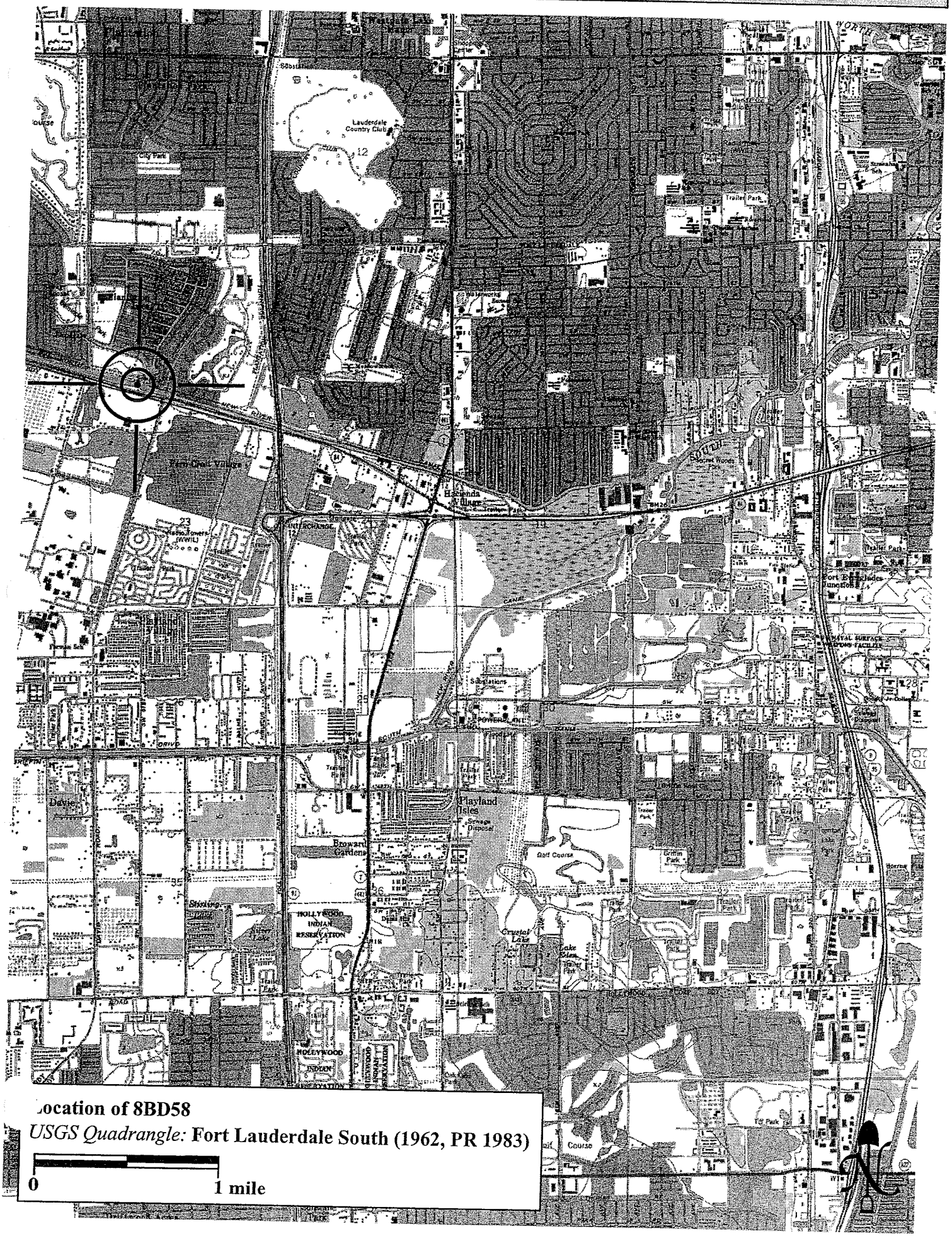
PHOTOGRAPH



SKETCH MAP



USGS QUADRANGLE MAP



Location of 8BD58

USGS Quadrangle: **Fort Lauderdale South (1962, PR 1983)**

0 **1 mile**

A. NARRAVTIVE DESCRIPTION OF SITE

The Sewell Lock, also known as Lock No. 1 North New River Canal, is located on the south bank of the North New River Canal in Township 50 South, Range 41 East, Section 14 (Fort Lauderdale South USGS Quadrangle 1962 PR 1983) in the vicinity of Plantation, Broward County, Florida. The lock currently consists of parallel poured concrete walls 145 feet long and 25 feet apart running east/west. The walls are fourteen feet high, and taper from six feet wide at the foundation to three feet wide at the top. Metal moorings are arranged along the top of each of the lock walls. Paired wooden gates, constructed of heavy timbers secured by iron straps, were originally located at either end of the lock. However, only the western gate is now extant. These gates, when operational, would close to form an angle pointing upstream. The lock gates were originally controlled by geared rack and pinion mechanisms, only the geared mechanisms remain. An engineer's benchmark, dated 1939, has been placed in the eastern corner of the southernmost lock wall.

The Sewell Lock was listed in the *NRHP* on February 17, 1978. Although there were no explicit boundaries delineated at the time of the *NRHP* nomination, it apparently encompassed an original wing dam extending north from the west side of the lock, which connected to a moveable sluice dam extending to the north bank of the canal. A non-historic earthen dam had also been constructed along the western, upstream side of the lock to protect it from the stream water pressure. In addition, a historic USGS recording station and lock tender's house associated with the lock were located to the south of the structure on the canal bank. All of these elements have since been demolished. Presently, the only extant sections are the lock walls, the western wooden gate, and the geared mechanisms and metal moorings. Furthermore, a non-historic sluice dam (G-54) and control house have recently been constructed immediately upstream (west) from the Sewell Lock. Due to the demolition of the original wing and sluice dams, as part of this survey the current boundaries of the Sewell Lock were established to encompass only the extant concrete walls and gate of the lock.

B. DISCUSSION OF SIGNIFICANCE

Construction of the lock began in October of 1911 by the Furst-Clark Construction Company, and was in operation by March of 1912. The Furst-Clark Construction Company had taken over the dredging of the North New River Canal from the State of Florida in 1909, and had quickly realized the need for establishing locks in order to maintain both water level and traffic on the canal (Knetsch 1991). The first of the locks to be built on the North New River Canal, as well as in South Florida, the Sewell Lock is a significant historic resource in the areas of engineering and transportation, as the opening of the lock facilitated the agricultural exploitation and development of the land west of Fort Lauderdale drained by the North New River Canal.

Crops grown in the area of the Everglades drained by the North New River Canal would travel down the canal, through the locks to Fort Lauderdale where they would be shipped by railroad to other destinations. The Sewell Lock, in conjunction with other locks,

established the North New River Canal as the major transportation artery between Lake Okeechobee and Fort Lauderdale, and made the agricultural lands created by the draining of the Everglades easily accessible and profitable.

Since the Sewell Lock's listing in the *NRHP* in 1978, the majority of the mechanisms and associated structures essential to its function have been removed. Due to these losses, the integrity of the resource has been compromised to the extent that it can no longer convey its significance, and therefore, it is not presently considered eligible for inclusion in the *NRHP*. In an email correspondence dated November 29, 2004, this evaluation was further confirmed by Ms. Barbara Mattick, Acting Bureau Chief of the Florida Department of Cultural and Historical Programs and Supervisor of the *NRHP* Survey and Registration Section.

C. HISTORY AND REFERENCES CITED OF PAST WORK AT SITE

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Mattick, Barbara
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ARCHAEOLOGICAL SITE FORM
FLORIDA MASTER SITE FILE

Version prepared by Janus Research, Inc.

Consult the Guide to Archaeological Site Forms for detailed instructions.

☐ Original
☑ Update (give site#)

Site #: 8BD82
Recorder Site #: 1
Field Date: 9-18-2004
Form Date: 1-21-2005

Site Name(s): Cherry Camp — Multiple Listing [DHR only]
Project Name: CRAS of the SR-862 (I-595) PD&E Study, Broward County — FMSF Survey #:
Ownership: ☐ private-profit ☐ private-nonprofit ☐ private-indiv ☐ private-unspecifd ☐ city ☐ county ☑ state ☐ federal ☐ foreign ☐ Native Amer ☐ unknwn
USGS 7.5 Map Name / Date: Cooper City — County: Broward
Township: 50S Range: 40E Section: 4 ☐ Irregular Section ? Qtr. Section (check all that apply) ☐ NE ☑ NW ☐ SE ☐ SW
Landgrant: — Tax Parcel #(s):
City/Town (if within 3 mi): — In Current City Limits? ☐ Y ☑ N ☐ unknown
UTM Zone: 17 Easting: 0564186 Northing: 2889709
Address/Vicinity/Route to:

Name of Public Tract (e.g., park):

TYPE OF SITE (Check all choices that apply: if needed, write others in at bottom)

SETTING *

- ☑ Land - terrestrial
- ☐ Cave/Sink - subterranean
  - ☐ terrestrial
  - ☐ aquatic
  - ☐ intermittently flooded
- ☐ Wetland - palustrine
  - ☐ usually flooded
  - ☐ sometimes flooded
  - ☐ usually dry
- ☐ Lake/Pond - lacustrine
- ☐ River/Stream/Creek - riverine
- ☐ Tidal - estuarine
- ☐ Saltwater - marine
  - ☐ marine unspecified
  - ☐ high energy marine
  - ☐ low energy marine

STRUCTURES - OR - FEATURES *

- ☐ aboriginal boat
- ☐ agric/farm building
- ☐ burial mound
- ☐ building remains
- ☐ cemetery/grave
- ☑ dump/refuse
- ☐ earthworks
- ☐ fort
- ☑ midden
- ☐ mill unspecified
- ☐ mission
- ☐ mound unspec.
- ☐ plantation
- ☐ platform mound
- ☐ road segment
- ☐ shell midden
- ☐ shell mound
- ☐ shipwreck
- ☐ subsurface features
- ☐ surface scatter
- ☐ well

FUNCTION *

- ☐ none specified
- ☐ campsite
- ☐ extractive site
- ☑ habitation (prehist)
- ☑ homestead (historic)
- ☐ farmstead
- ☐ village (prehistoric)
- ☐ town (historic)
- ☐ quarry

Other Site Type: SEE CONTINUATION SHEET

HISTORIC CONTEXTS (Check all that apply; use most specific subphase: e.g., if Glades Ia, don't use Glades I)

Aboriginal *

- ☐ Alachua
- ☐ Archaic, Early
- ☐ Archaic, Middle
- ☐ Archaic, Late
- ☐ Archaic Unspecified
- ☐ Belle Glade I
- ☐ Belle Glade II
- ☐ Belle Glade III
- ☐ Belle Glade IV
- ☐ Belle Glade Unspec.
- ☐ Cades Pond
- ☐ Deptford
- ☐ Englewood
- ☐ Fort Walton
- ☐ Glades Ia
- ☐ Glades Ib
- ☐ Glades I unsp
- ☐ Glades IIa
- ☐ Glades IIb
- ☐ Glades IIc
- ☑ Glades II unsp
- ☐ Glades IIIa
- ☐ Glades IIIb
- ☐ Glades IIIc
- ☑ Glades III unsp
- ☐ Glades unspec
- ☐ Hickory Pond
- ☐ Leon-Jefferson
- ☐ Malabar I
- ☐ Malabar II
- ☐ Manasota
- ☐ Mount Taylor
- ☐ Norwood
- ☐ Orange
- ☐ Paleoindian
- ☐ Pensacola
- ☐ Perico Island
- ☐ Safety Harbor
- ☐ St Augustine
- ☐ St Johns Ia
- ☐ St Johns Ib
- ☐ St Johns I unspecified
- ☐ St Johns IIa
- ☐ St Johns IIb
- ☐ St Johns IIc
- ☐ St Johns II unspecified
- ☐ St Johns unspecified
- ☐ Santa Rosa
- ☐ Santa Rosa-Swift Creek
- ☐ Seminole: Colonization
- ☐ Seminole: 1st War to 2nd
- ☐ Seminole: 2nd War to 3rd
- ☐ Seminole: 3rd War On
- ☑ Seminole unspecified
- ☐ Swift Creek, Early
- ☐ Swift Creek, Late
- ☐ Swift Creek, unspec.
- ☐ Transitional
- ☐ Weeden Island I
- ☐ Weeden Island II
- ☐ Weeden Island unspec.
- ☐ Prehistoric Nonceramic
- ☐ Prehistoric Ceramic
- ☑ Prehistoric unspecified

Nonaboriginal *

- ☐ First Spanish 1513-99
- ☐ First Spanish 1600-99
- ☐ First Spanish 1700-1763
- ☐ First Spanish unspecified
- ☐ British 1763-1783
- ☐ Second Spanish 1783-1821
- ☐ American Territorial 1821-45
- ☐ American Civil War 1861-65
- ☐ American 19th Century
- ☑ American 20th Century
- ☐ American unspecified
- ☐ African-American

Other Context:

* Consult the Guide to Archaeological Site Forms for preferred descriptions not listed above (data are "coded fields" at the Site File).

SURVEYOR'S EVALUATION OF SITE

Potentially eligible for local register?	☑ yes	☐ no	☐ insufficient info	Name of local register if eligible:
Individually eligible National Register?	☑ yes	☐ no	☐ insufficient info	
Potential contributor to NR district?	☐ yes	☑ no	☐ insufficient info	

Explanation of Evaluation: (Required if evaluated; limit to 3 lines; attach full justification)
The Cherry Camps site (8BD82) remains intact. The black dirt midden layer is still present and intact. For these reasons the site continues to retain its integrity as a significant site eligible for listing in the NRHP.

Recommendations Owner/SHPO: Aviod impacts to the site.

DHR USE ONLY ******** OFFICIAL EVALUATIONS ********** DHR USE ONLY**

NR DATE
DELIST DATE

KEEPER-NR ELIGIBILITY ☐ yes ☐ no — Date
SHPO-NR ELIGIBILITY ☐ yes ☐ no ☐ potentially elig ☐ insufficient info — Date
LOCAL DESIGNATION — Date
Local office

National Register Criteria for Evaluation ☐ a ☐ b ☐ c ☐ d (See National Register Bulletin 15, p 2)

ARCHAEOLOGICAL SITE FORM

Consult the Guide to Archaeological Site Forms for detailed instructions.

Site #: 8BD82
Recorder Site #: 1

FIELD METHODS (Check one or more methods for detection and for boundaries)

SITE DETECTION *

- [ ] no field check
- [x] literature search
- [ ] informant report
- [ ] remote sensing
- [x] exposed ground
- [ ] posthole digger
- [ ] auger
- [ ] unscreened shovel
- [x] screened shovel

SITE BOUNDARIES *

- [ ] bounds unknown
- [ ] none by recorder
- [ ] literature search
- [ ] informant report
- [ ] remote sensing
- [ ] insp exposed ground
- [ ] posthole tests
- [ ] auger
- [ ] unscreened shovel
- [x] screened shovel
- [ ] block excavations
- [ ] estimate or guess

Other Methods:

SITE DESCRIPTION

Extent Size (m2): 2,200 Depth and Stratigraphy of cultural deposit:
Strata: disturbed, black organic sand from 0-35 cm, black organic sand with midden from 35-50 cm, brown-grey sand with midden from 50-70 cm, light orange sandy clay from 70-75 cm, and bedrock at 75 cm below surface. Cultural material recovered from 0-70 cm below surface.

Temporal Interpretation*- Components (check one): [ ] single [ ] prob single [ ] prob multiple [x] multiple [ ] uncertain [ ] unknown

Describe each occupation in plan (refer to attached large scale map) and stratigraphically. Discuss temporal and functional interpretations:
Prehistoric material recovered from 0-70 cmbd. Historic material recovered from 0-50 cmbd.

Integrity/ Overall Disturbance* [ ] none seen [ ] minor [x] substantial [ ] major [ ] redeposited [ ] destroyed-(document it!) [ ] unknwn

Disturbances/Threats/Protective Measures: Modern refuse dumped on the site.

Surface: Area Collected (m2): _____ # Collection Units: _____ Excavation: # noncontiguous blocks: _____

ARTIFACTS

Total Artifacts #: 14 (C)ount or (E)stimate?: C Surface #: 0 (C) or (E)?: C Subsurface #: 14 (C) or (E)?: C

COLLECTION SELECTIVITY *

- [ ] unknown
- [x] unselective (all artifacts)
- [ ] selective (some artifacts)
- [ ] mixed selectivity

SPATIAL CONTROL *

- [ ] uncollected
- [x] general (not by subarea)
- [ ] unknown
- [ ] controlled (by subarea)
- [ ] variable spacial control
- [ ] other _____

ARTIFACT CATEGORIES and DISPOSITIONS *

Pick exactly one code from the Disposition List

A	bone-animal:		exotic-nonlocal:
	bone-human:	A	glass:
	bone-unspecified:		lithics-aboriginal:
	bone-worked:	A	metal-nonprecious:
	brick/building debris:		metal-precious/coin:
A	ceramic-aboriginal:		shell-unworked:
	ceramic-nonaborig daub:		shell-worked:

Others: _____

Disposition List*
A- category always collected
S- some items in category collected
O- observed first hand, but not collected
R- collected and subsequently left at site
I- informant reported category present
U- unknown

Artifact Comments: Artifacts recovered include 2 glass fragments, 10 Sand tempered plain sherds, and 88.74 grams of faunal material.

DIAGNOSTICS * (Type or mode, and frequency: eg, Suwannee ppk, heat treated chert, Deptford Check-stamped, ironstone/whiteware)

1:	Sand Tempered Plain	N= 10	5:	N=	9:	N=	
2:		N=	6:	N=	10:	N=	
3:		N=	7:	N=	11:	N=	
4:		N=	8:	N=	12:	N=	

ENVIRONMENT

Nearest Fresh Water-Type/Name: unnamed wetlands Distance-(m)/bearing: adjacent
Natural Community (FNAI category* or leave blank): Everglades
Local Vegetation: Exotics removed, ficus and banyan
Topography: tree island Min Elevation (m): 0 Max Elevation (m): 1.5
Present Land Use: Green space in median of I-595
SCS Soil Series: Hallandale-Margate association Soil Association: Hallandale fine sand

FURTHER INFORMATION

Informant(s):

Describe field analysis notes, artifacts, photos. For each, give type* (eg., notes) curating organization*, accession #s, and short description:
Janus Research, 1300 N. Westshore Blvd., Suite 100, Tampa, FL 33607, 813.636.8200, janus@janus-resarch.com

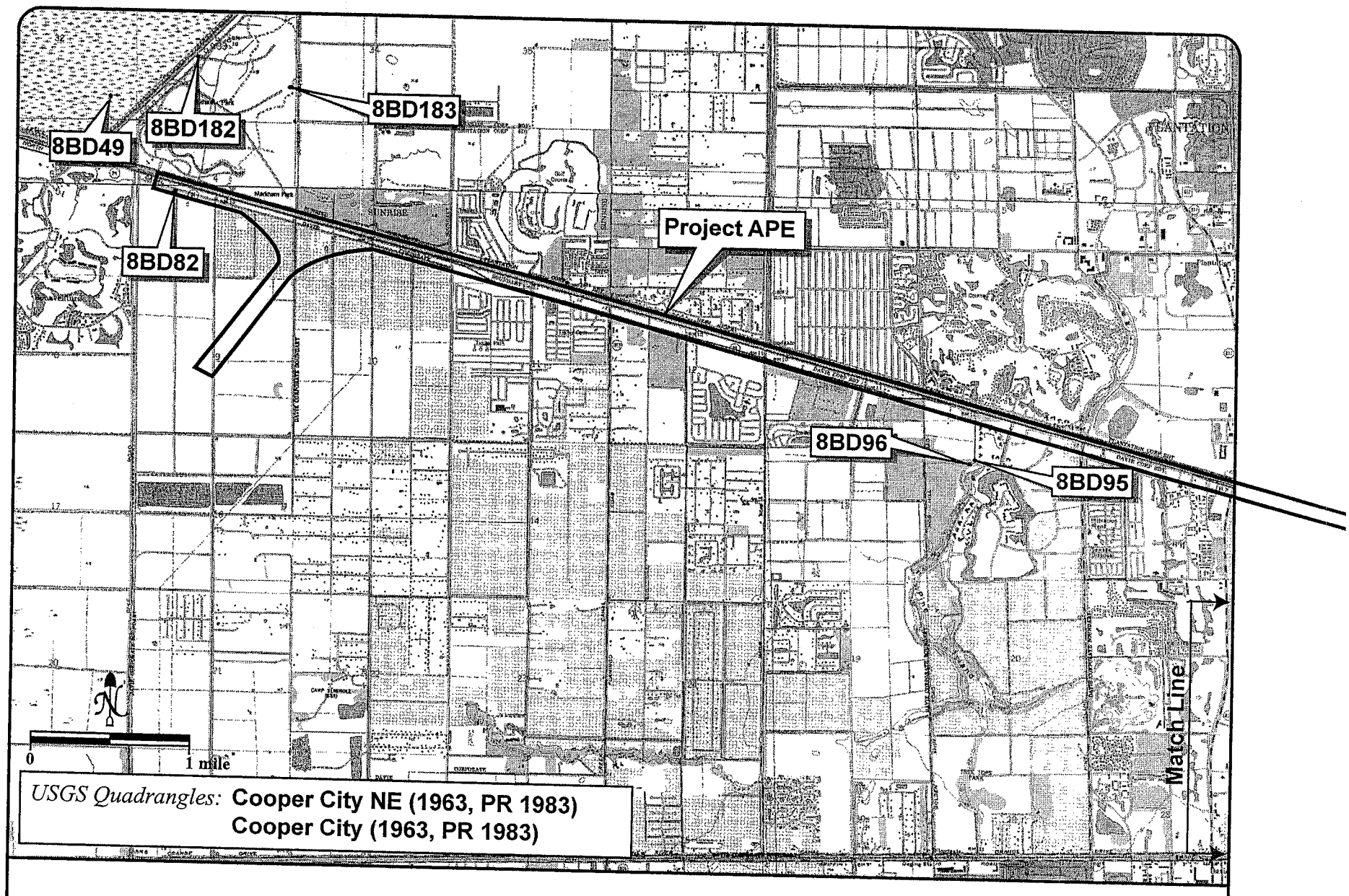
Manuscripts or publications on the site: Janus Research, 1300 N. Westshore Blvd., Suite 100, Tampa, FL 33607, 813.636.8200,
(Use continuation sheet, give FMSF# if relevant) janus@janus-resarch.com
Recorder(s): Shanna Schofield
Affiliation or FAS Chapter:

* Consult Guide to Archaeological Site Form for preferred descriptions not listed above (data are "coded fields" at the Site File).

SITE PLAN USGS REQUIRED At 1"=300' (1:3600 or larger scale, show: site boundaries, scale north arrow, datum, test/collection units, landmarks, mappers, date.

A. EXPLAINATION OF PREVIOUS ALTERNATIVE SITE NAME

Documentation strongly suggests that the Cherry Camp site was also known as the Buzzard Roost Campsite when it was first discovered in mid-1960 by the Broward County Archaeological Society (Robert Carr, Personal Communication 6-13-2005). During the 1970's Calvin Jones conducted a field visit for the State but did not formally record the site (FMSF form 8BD82, 1991). The Society conducted two excavations between 1965 and 1968. Subsequent survey was conducted by Robert Carr in 1974. The site was officially named Cherry Camp after the 1974 survey. This name was given to the site in-part so that it would not be confused with a site further south called Buzzards Roost (8BD92), also identified in 1974 (Robert Carr, Personal Communication 6-13-2005).



Recorded Archaeological Resources

ARCHAEOLOGICAL SITE FORM
FLORIDA MASTER SITE FILE
Version prepared by Janus Research, Inc.

Consult the Guide to Archaeological Site Forms for detailed instructions.

☐ Original
☑ Update (give site#)

Site #: 8BD3208
Recorder Site #: 2
Field Date: 9-15-2004
Form Date: 1-21-2005

Site Name(s): Hacienda Village — Multiple Listing [DHR only]
Project Name: CRAS of the SR-862 (I-595) PD&E Study, Broward County — FMSF Survey #:
Ownership: ☐ private-profit ☐ private-nonprofit ☐ private-indiv ☑ private-unspecifd ☐ city ☐ county ☐ state ☐ federal ☐ foreign ☐ Native Amer ☐ unknwn
USGS 7.5 Map Name / Date: Ft. Lauderdale South/ 1962, PR1983 — County: Broward
Township: 50S Range: 42E Section: 19/24 ☐ Irregular Section ? Qtr. Section (check all that apply) ☐ NE ☑ NW ☑ SE ☐ SW
Landgrant: — Tax Parcel #(s):
City/Town (if within 3 mi): — In Current City Limits? ☐Y ☐ N ☐ unknown
UTM Zone: 17 Easting: 580041 Northing: 2885499
Address/Vicinity/Route to:

Name of Public Tract (e.g., park):

TYPE OF SITE (Check all choices that apply; if needed, write others in at bottom)

SETTING *

- ☑ Land - terrestrial
- ☐ Cave/Sink - subterranean
  - ☐ terrestrial
  - ☐ aquatic
  - ☐ intermittently flooded
- ☐ Wetland - palustrine
  - ☐ usually flooded
  - ☐ sometimes flooded
  - ☐ usually dry
- ☐ Lake/Pond - lacustrine
- ☐ River/Stream/Creek - riverine
- ☐ Tidal - estuarine
- ☐ Saltwater - marine
  - ☐ marine unspecified
  - ☐ high energy marine
  - ☐ low energy marine

STRUCTURES - OR - FEATURES *

☐ aboriginal boat	☐ fort	☐ road segment	☐ none specified
☐ agric/farm building	☑ midden	☐ shell midden	☐ campsite
☐ burial mound	☐ mill unspecified	☐ shell mound	☐ extractive site
☐ building remains	☐ mission	☐ shipwreck	☑ habitation (prehist)
☐ cemetery/grave	☐ mound unspec.	☐ subsurface features	☑ homestead (historic)
☐ dump/refuse	☐ plantation	☐ surface scatter	☐ farmstead
☐ earthworks	☐ platform mound	☐ well	☐ village (prehistoric)

Other Site Type: prehistoric burial, variable density artifact scatter

FUNCTION *

- ☐ none specified
- ☐ campsite
- ☐ extractive site
- ☑ habitation (prehist)
- ☑ homestead (historic)
- ☐ farmstead
- ☐ village (prehistoric)
- ☐ town (historic)
- ☐ quarry

HISTORIC CONTEXTS (Check all that apply; use most specific subphase: e.g., if Glades Ia, don't use Glades I)

Aboriginal *

- ☐ Alachua
- ☐ Archaic, Early
- ☐ Archaic, Middle
- ☑ Archaic, Late
- ☐ Archaic Unspecified
- ☐ Belle Glade I
- ☐ Belle Glade II
- ☐ Belle Glade III
- ☐ Belle Glade IV
- ☐ Belle Glade Unspec.
- ☐ Cades Pond
- ☐ Deptford
- ☐ Englewood
- ☐ Fort Walton
- ☐ Glades Ia
- ☐ Glades Ib
- ☐ Glades I unsp
- ☐ Glades IIa
- ☐ Glades IIb
- ☑ Glades IIc
- ☐ Glades II unsp
- ☑ Glades IIIa
- ☑ Glades IIIb
- ☐ Glades IIIc
- ☐ Glades III unsp
- ☐ Glades unspec
- ☐ Hickory Pond
- ☐ Leon-Jefferson
- ☐ Malabar I
- ☐ Malabar II
- ☐ Manasota
- ☐ Mount Taylor
- ☐ Norwood
- ☐ Orange
- ☐ Paleoindian
- ☐ Pensacola
- ☐ Perico Island
- ☐ Safety Harbor
- ☐ St Augustine
- ☐ St Johns Ia
- ☐ St Johns Ib
- ☐ St Johns I unspecified
- ☐ St Johns IIa
- ☐ St Johns IIb
- ☐ St Johns IIc
- ☐ St Johns II unspecified
- ☐ St Johns unspecified
- ☐ Santa Rosa
- ☐ Santa Rosa-Swift Creek
- ☐ Seminole: Colonization
- ☐ Seminole: 1st War to 2nd
- ☐ Seminole: 2nd War to 3rd
- ☐ Seminole: 3rd War On
- ☐ Seminole unspecified
- ☐ Swift Creek, Early
- ☐ Swift Creek, Late
- ☐ Swift Creek, unspec.
- ☐ Transitional
- ☐ Weeden Island I
- ☐ Weeden Island II
- ☐ Weeden Island unspec.
- ☐ Prehistoric Nonceramic
- ☑ Prehistoric Ceramic
- ☐ Prehistoric unspecified

Nonaboriginal *

- ☐ First Spanish 1513-99
- ☐ First Spanish 1600-99
- ☐ First Spanish 1700-1763
- ☐ First Spanish unspecified
- ☐ British 1763-1783
- ☐ Second Spanish 1783-1821
- ☐ American Territorial 1821-45
- ☐ American Civil War 1861-65
- ☑ American 19th Century
- ☑ American 20th Century
- ☐ American unspecified
- ☐ African-American

Other Context:

* Consult the Guide to Archaeological Site Forms for preferred descriptions not listed above (data are "coded fields" at the Site File).

SURVEYOR'S EVALUATION OF SITE

Potentially eligible for local register?	☐ yes	☑ no	☐ insufficient info	Name of local register if eligible:
Individually eligible National Register?	☐ yes	☑ no	☐ insufficient info	
Potential contributor to NR district?	☐ yes	☑ no	☐ insufficient info	

Explanation of Evaluation: (Required if evaluated; limit to 3 lines; attach full justification) All available evidence indicates the site has been destroyed by modern land-clearing and development.

Recommendations Owner/SHPO: No further work.

DHR USE ONLY ******** OFFICIAL EVALUATIONS ********** DHR USE ONLY**

NR DATE — KEEPER-NR ELIGIBILITY ☐ yes ☐ no — Date
SHPO-NR ELIGIBILITY ☐ yes ☐ no ☐ potentially elig ☐ insufficient info — Date
DELIST DATE — LOCAL DESIGNATION — Date
Local office

National Register Criteria for Evaluation ☐ a ☐ b ☐ c ☐ d (See National Register Bulletin 15, p.2)

ARCHAEOLOGICAL SITE FORM

Consult the Guide to Archaeological Site Forms for detailed instructions.

Site #: 8BD3208
Recorder Site #: 2

FIELD METHODS (Check one or more methods for detection and for boundaries)

SITE DETECTION *

- [ ] no field check
- [ ] literature search
- [ ] informant report
- [ ] remote sensing
- [x] exposed ground
- [ ] posthole digger
- [ ] auger _____
- [ ] unscreened shovel
- [ ] screened shovel
- _____
- _____

SITE BOUNDARIES *

- [ ] bounds unknown
- [ ] none by recorder
- [x] literature search
- [ ] informant report
- [ ] remote sensing
- [x] insp exposed ground
- [ ] posthole tests
- [ ] auger
- [ ] unscreened shovel
- [ ] screened shovel
- [ ] block excavations
- [ ] estimate or guess

Other Methods: A pedestrian survey was conducted over the entire site where no building or other barriers prohibited investigation.

SITE DESCRIPTION

Extent Size (m2): 0 Depth and Stratigraphy of cultural deposit:
No cultural material encountered.

Temporal Interpretation*- Components (check one): [ ] single [ ] prob single [ ] prob multiple [ ] multiple [ ] uncertain [ ] unknown

Describe each occupation in plan (refer to attached large scale map) and stratigraphically. Discuss temporal and functional interpretations:

Integrity/ Overall Disturbance* [ ] none seen [ ] minor [ ] substantial [ ] major [ ] redeposited [x] destroyed-(document it!) [ ] unknwn

Disturbances/Threats/Protective Measures: The area of the site is now a gated apartment complex called Stone Arch Apartments. The entire development is covered with grass and asphalt which has been graded.

Surface: Area Collected (m2): _____ # Collection Units: _____ Excavation: # noncontiguous blocks: _____

ARTIFACTS

Total Artifacts #: 0 (C)ount or (E)stimate?: _____ Surface #: 0 (C) or (E)?: _____ Subsurface #: 0 (C) or (E)?: _____

COLLECTION SELECTIVITY *

- [ ] unknown
- [x] unselective (all artifacts)
- [ ] selective (some artifacts)
- [ ] mixed selectivity

SPATIAL CONTROL *

- [ ] uncollected
- [x] general (not by subarea)
- [ ] unknown
- [ ] controlled (by subarea)
- [ ] variable spacial control
- [ ] other _____

ARTIFACT CATEGORIES and DISPOSITIONS *

Pick exactly one code from the Disposition List

bone-animal:		exotic-nonlocal:	
bone-human:		glass:	
bone-unspecified:		lithics-aboriginal:	
bone-worked:		metal-nonprecious:	
brick/building debris:		metal-precious/coin:	
ceramic-aboriginal:		shell-unworked:	
ceramic-nonaborig		shell-worked:	
daub:		Others:	

Disposition List*
A- category always collected
S- some items in category collected
O- observed first hand, but not collected
R- collected and subsequently left at site
I- informant reported category present
U- unknown

Artifact Comments: No artifacts were encountered during the survey of the site.

DIAGNOSTICS * (Type or mode, and frequency: eg, Suwannee ppk, heat treated chert, Deptford Check-stamped, ironstone/whiteware)

1:	N=	5:	N=	9:	N=
2:	N=	6:	N=	10:	N=
3:	N=	7:	N=	11:	N=
4:	N=	8:	N=	12:	N=

ENVIRONMENT

Nearest Fresh Water-Type/Name: South Fork Distance-(m)/bearing: adjacent
Natural Community (FNAI category* or leave blank): Everglades
Local Vegetation: Urban development
Topography: tree island Min Elevation (m): 00 Max Elevation (m): 1.5
Present Land Use: Apartment complex
SCS Soil Series: Hallandale fine sand Soil Association: Hallandale-Margate association

FURTHER INFORMATION

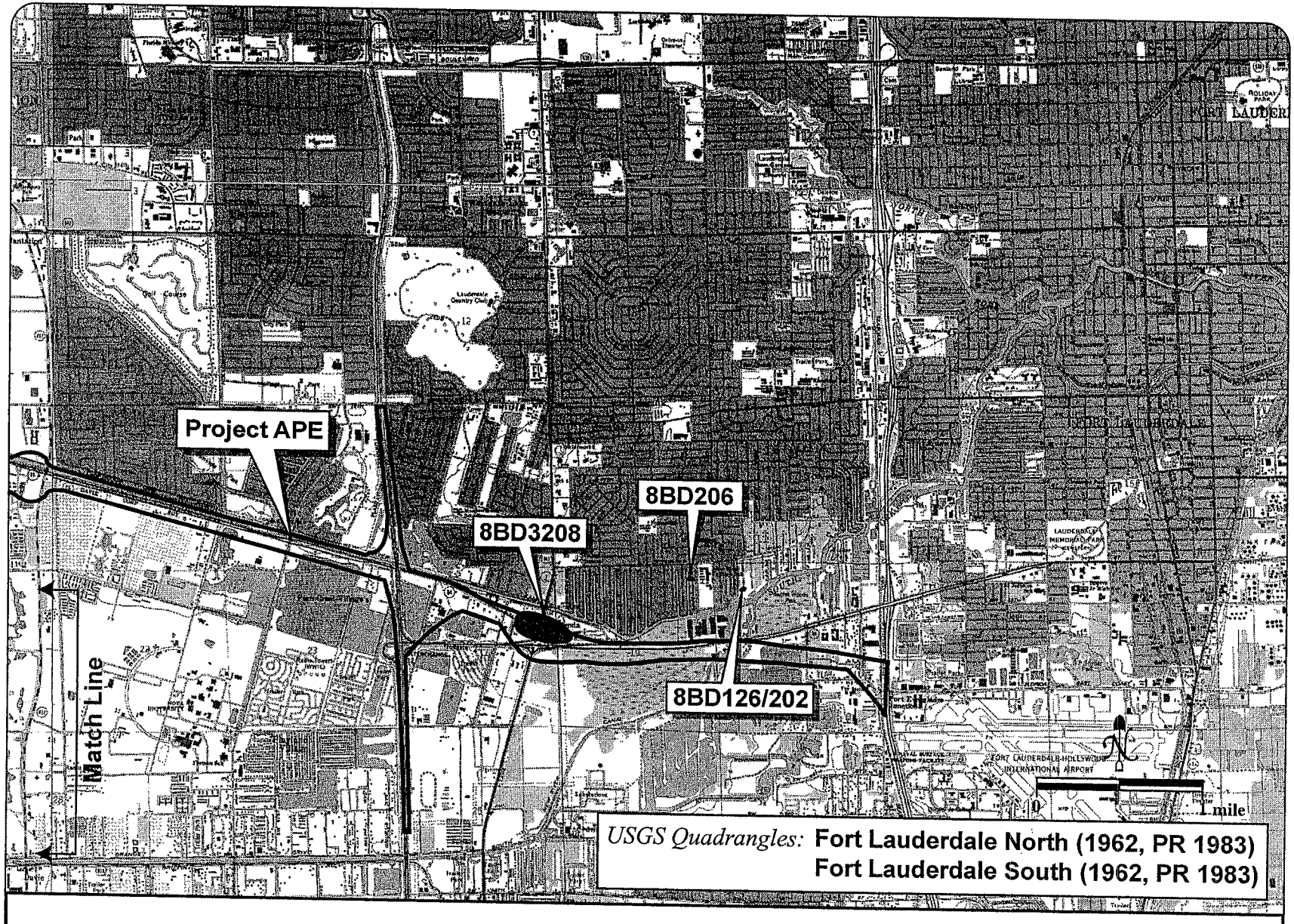
Informant(s): _____

Describe field .analysis notes, artifacts, photos. For each, give type* (eg., notes) curating organization*, accession #s, and short description:
Janus Research, 1300 N. Westshore Blvd., Suite 100, Tampa, FL 33607, 813.636.8200, janus@janus-resarch.com

Manuscripts or publications on the site: Janus Research, 1300 N. Westshore Blvd., Suite 100, Tampa, FL 33607, 813.636.8200,
(Use continuation sheet, give FMSF# if relevant) janus@janus-resarch.com
Recorder(s): Shanna Schofield
Affiliation or FAS Chapter: _____

* Consult Guide to Archaeological Site Form for preferred descriptions not listed above (data are "coded fields" at the Site File).

SITE PLAN USGS REQUIRED At 1"=300' (1:3600 or larger scale, show: site boundaries, scale north arrow, datum, test/collection units, landmarks, mappers, date.



Recorded Archaeological Resources

ARCHAEOLOGICAL SITE FORM
FLORIDA MASTER SITE FILE
Version prepared by Janus Research, Inc.

Consult the Guide to Archaeological Site Forms for detailed instructions.

☐ Original
☑ Update (give site#)

Site #: 8BD3279
Recorder Site #: 5
Field Date: 6/16/2005
Form Date: 6/24/2005

Site Name(s): North New River Canal — Multiple Listing [DHR only]
Project Name: CRAS of the SR-862 (I-595) PD&E Study — FMSF Survey #:
Ownership: ☐ private-profit ☐ private-nonprofit ☐ private-indiv ☐ private-unspecifd ☐ city ☐ county ☑ state ☐ federal ☐ foreign ☐ Native Amer ☐ unknwn
USGS 7.5 Map Name / Date: See Continuation Sheet — County: Palm Beach to Broward
Township: 50S Range: 41E Section: 14 ☐ Irregular Section ? Qtr. Section (check all that apply) ☐ NE ☐ NW ☐ SE ☐ SW
Landgrant: Unknown — Tax Parcel #(s):
City/Town (if within 3 mi): Plantation — In Current City Limits? ☐Y ☐ N ☐ unknown
UTM Zone: 17 Easting: 576988 Northing: 2886425
Address/Vicinity/Route to: Beginning at Lake Okeechobee in Palm Beach County, this canal runs southeast to the South Fork of the New River in Broward County.
Name of Public Tract (e.g., park):

TYPE OF SITE (Check all choices that apply: if needed, write others in at bottom)

SETTING *

- ☑ Land - terrestrial
- ☐ Cave/Sink - subterranean
  - ☐ terrestrial
  - ☐ aquatic
  - ☐ intermittently flooded
- ☐ Wetland - palustrine
  - ☐ usually flooded
  - ☐ sometimes flooded
  - ☐ usually dry
- ☐ Lake/Pond - lacustrine
- ☐ River/Stream/Creek - riverine
- ☐ Tidal - estuarine
- ☐ Saltwater - marine
  - ☐ marine unspecified
  - ☐ high energy marine
  - ☐ low energy marine

Other Site Type: Canal

STRUCTURES - OR - FEATURES *

- ☐ aboriginal boat
- ☐ agric/farm building
- ☐ burial mound
- ☐ building remains
- ☐ cemetery/grave
- ☐ dump/refuse
- ☐ earthworks
- ☐ fort
- ☐ midden
- ☐ mill unspecified
- ☐ mission
- ☐ mound unspec.
- ☐ plantation
- ☐ platform mound
- ☐ road segment
- ☐ shell midden
- ☐ shell mound
- ☐ shipwreck
- ☐ subsurface features
- ☐ surface scatter
- ☐ well

FUNCTION *

- ☐ none specified
- ☐ campsite
- ☐ extractive site
- ☐ habitation (prehist)
- ☐ homestead (historic)
- ☐ farmstead
- ☐ village (prehistoric)
- ☐ town (historic)
- ☐ quarry

HISTORIC CONTEXTS (Check all that apply; use most specific subphase: e.g., if Glades Ia, don't use Glades I)

Aboriginal *

- ☐ Alachua
- ☐ Archaic, Early
- ☐ Archaic, Middle
- ☐ Archaic, Late
- ☐ Archaic Unspecified
- ☐ Belle Glade I
- ☐ Belle Glade II
- ☐ Belle Glade III
- ☐ Belle Glade IV
- ☐ Belle Glade Unspec.
- ☐ Cades Pond
- ☐ Deptford
- ☐ Englewood
- ☐ Fort Walton
- ☐ Glades Ia
- ☐ Glades Ib
- ☐ Glades I unsp
- ☐ Glades IIa
- ☐ Glades IIb
- ☐ Glades IIc
- ☐ Glades II unsp
- ☐ Glades IIIa
- ☐ Glades IIIb
- ☐ Glades IIIc
- ☐ Glades III unsp
- ☐ Glades unspec
- ☐ Hickory Pond
- ☐ Leon-Jefferson
- ☐ Malabar I
- ☐ Malabar II
- ☐ Manasota
- ☐ Mount Taylor
- ☐ Norwood
- ☐ Orange
- ☐ Paleoindian
- ☐ Pensacola
- ☐ Perico Island
- ☐ Safety Harbor
- ☐ St Augustine
- ☐ St Johns Ia
- ☐ St Johns Ib
- ☐ St Johns I unspecified
- ☐ St Johns IIa
- ☐ St Johns IIb
- ☐ St Johns IIc
- ☐ St Johns II unspecified
- ☐ St Johns unspecified
- ☐ Santa Rosa
- ☐ Santa Rosa-Swift Creek
- ☐ Seminole: Colonization
- ☐ Seminole: 1st War to 2nd
- ☐ Seminole: 2nd War to 3rd
- ☐ Seminole: 3rd War On
- ☐ Seminole unspecified
- ☐ Swift Creek, Early
- ☐ Swift Creek, Late
- ☐ Swift Creek, unspec.
- ☐ Transitional
- ☐ Weeden Island I
- ☐ Weeden Island II
- ☐ Weeden Island unspec.
- ☐ Prehistoric Nonceramic
- ☐ Prehistoric Ceramic
- ☐ Prehistoric unspecified

Nonaboriginal *

- ☐ First Spanish 1513-99
- ☐ First Spanish 1600-99
- ☐ First Spanish 1700-1763
- ☐ First Spanish unspecified
- ☐ British 1763-1783
- ☐ Second Spanish 1783-1821
- ☐ American Territorial 1821-45
- ☐ American Civil War 1861-65
- ☐ American 19th Century
- ☑ American 20th Century
- ☐ American unspecified
- ☐ African-American

Other Context:

* Consult the Guide to Archaeological Site Forms for preferred descriptions not listed above (data are "coded fields" at the Site File).

SURVEYOR'S EVALUATION OF SITE

Potentially eligible for local register?	☑ yes	☐ no	☐ insufficient info
Individually eligible National Register?	☑ yes	☐ no	☐ insufficient info
Potential contributor to NR district?	☐ yes	☑ no	☐ insufficient info

Name of local register if eligible:

Explanation of Evaluation: (Required if evaluated; limit to 3 lines; attach full justification) See Continuation Sheet

Recommendations Owner/SHPO:

DHR USE ONLY ******** OFFICIAL EVALUATIONS ********** DHR USE ONLY**

NR DATE — KEEPER-NR ELIGIBILITY ☐ yes ☐ no — Date
SHPO-NR ELIGIBILITY ☐ yes ☐ no ☐ potentially elig ☐ insufficient info — Date
DELIST DATE — LOCAL DESIGNATION — Date
Local office

National Register Criteria for Evaluation ☐ a ☐ b ☐ c ☐ d (See National Register Bulletin 15, p 2)

ARCHAEOLOGICAL SITE FORM

Consult the Guide to Archaeological Site Forms for detailed instructions.

Site #: 8BD3279
Recorder Site #: 5

FIELD METHODS (Check one or more methods for detection and for boundaries)

SITE DETECTION *

- [ ] no field check
- [x] literature search
- [ ] informant report
- [ ] remote sensing
- [ ] exposed ground
- [ ] posthole digger
- [ ] auger _____
- [ ] unscreened shovel
- [ ] screened shovel _____
- _____

SITE BOUNDARIES *

- [ ] bounds unknown
- [ ] none by recorder
- [x] literature search
- [ ] informant report
- [ ] remote sensing
- [ ] insp exposed ground
- [ ] posthole tests
- [ ] auger
- [ ] unscreened shovel
- [ ] screened shovel
- [ ] block excavations
- [ ] estimate or guess

Other Methods:

SITE DESCRIPTION

Extent Size (m2): N/A Depth and Stratigraphy of cultural deposit:

Temporal Interpretation*- Components (check one): [x] single [ ] prob single [ ] prob multiple [ ] multiple [ ] uncertain [ ] unknown

Describe each occupation in plan (refer to attached large scale map) and stratigraphically. Discuss temporal and functional interpretations:

Integrity/ Overall Disturbance* [ ] none seen [x] minor [ ] substantial [ ] major [ ] redeposited [ ] destroyed-(document it!) [ ] unknwn

Disturbances/Threats/Protective Measures:

Surface: Area Collected (m2): _____ # Collection Units: _____ Excavation: # noncontiguous blocks: _____

ARTIFACTS

Total Artifacts #: _____ (C)ount or (E)stimate?: _____ Surface #: _____ (C) or (E)?: _____ Subsurface #: _____ (C) or (E)?: _____

COLLECTION SELECTIVITY *

- [ ] unknown
- [ ] unselective (all artifacts)
- [ ] selective (some artifacts)
- [ ] mixed selectivity

SPATIAL CONTROL *

- [ ] uncollected
- [ ] unknown
- [ ] general (not by subarea)
- [ ] controlled (by subarea)
- [ ] variable spacial control
- [ ] other _____

ARTIFACT CATEGORIES and DISPOSITIONS *

Pick exactly one code from the Disposition List

_____ bone-animal:	_____ exotic-nonlocal:
_____ bone-human:	_____ glass:
_____ bone-unspecified:	_____ lithics-aboriginal:
_____ bone-worked:	_____ metal-nonprecious:
_____ brick/building debris:	_____ metal-precious/coin:
_____ ceramic-aboriginal:	_____ shell-unworked:
_____ ceramic-nonaborig	_____ shell-worked:
_____ daub:	Others: _____

Disposition List*

- A- category always collected
- S- some items in category collected
- O- observed first hand, but not collected
- R- collected and subsequently left at site
- I- informant reported category present
- U- unknown

Artifact Comments: _____

DIAGNOSTICS *

(Type or mode, and frequency: eg, Suwannee ppk, heat treated chert, Deptford Check-stamped, ironstone/whiteware)

1:		N=	5:		N=	9:		N=
2:		N=	6:		N=	10:		N=
3:		N=	7:		N=	11:		N=
4:		N=	8:		N=	12:		N=

ENVIRONMENT

Nearest Fresh Water-Type/Name: North New River Canal Distance-(m)/bearing: 0

Natural Community (FNAI category* or leave blank): _____

Local Vegetation: _____

Topography: Fairly Flat Min Elevation (m): _____ Max Elevation (m): _____

Present Land Use: Canal

SCS Soil Series: _____ Soil Association: _____

FURTHER INFORMATION

Informant(s): _____

Describe field analysis notes, artifacts, photos. For each, give type* (eg., notes) curating organization*, accession #s, and short description:
Janus Research, 1300 N. Westshore Blvd., Suite 100, Tampa, FL 33607, 813.636.8200, janus@janus-resarch.com

Manuscripts or publications on the site:

(Use continuation sheet, give FMSF# if relevant) _____

Recorder(s): Janus Research, 1300 N. Westshore Blvd., Suite 100, Tampa, FL 33607, 813.636.8200, janus@janus-resarch.com

Affiliation or FAS Chapter: _____

* Consult Guide to Archaeological Site Form for preferred descriptions not listed above (data are "coded fields" at the Site File).

SITE PLAN USGS REQUIRED At 1"=300' (1:3600 or larger scale, show: site boundaries, scale north arrow, datum, test/collection units, landmarks, mappers, date.

A. NARRAVTIVE DESCRIPTION OF SITE

For purposes of this survey only the portion of the North New River Canal located within the Project APE, beginning in Township 50S, Range 40E, Section 4 (Cooper City NE USGS Quadrangle 1963 PR 1983), and flowing southeast and ending in Township 50 South, Range 42 East, Section 19 (Fort Lauderdale South USGS Quadrangle 1962 PR 1983) in Broward County, Florida, was surveyed. Within the project APE, the North New River Canal traverses through Township 50 South, Range 40 East, Sections 2, 3, 4, 11, and 12, Township 50 South, Range 41 East, Sections 7, 8, 13, 14, 15, 16, 17, and 24, Township 50 South, Range 42 East, Section 19 (Cooper City NE, Cooper City, and Fort Lauderdale South USGS Quadrangles), for a total length of approximately 10.71 miles (17.23 km). The width of the canal throughout the project APE is approximately 100 feet (30 m), except in the area of the Sewell Lock (8BD58) where the width of the canal is expanded to approximately 150 feet (45 m). In its entirety, the North New River Canal extends from Lake Okeechobee in Palm Beach County to the South Fork of the New River in Broward County, for a total length of 66.3 miles (106.69 m). Presently, the North New River Canal, within the project APE, is bordered by SR 84 and I-595 to the south, and non-historic residential construction to the north.

B. DISCUSSION OF SIGNIFICANCE

Construction of the North New River Canal began in 1906. In order to reduce the water level of the Everglades, the State of Florida established the Everglades Drainage District in 1905, with the authorization to tax local landowners to pay for the construction of the canals needed to drain the Everglades. The state designed this act because it predicted that through the drainage of the Everglades three million acres of land would be created for agricultural and habitable purposes (Werndli and Kirk 1978). One of the first elements of the project was the dredging of the North New River Canal, which runs parallel to the north of the I-595 project alignment. By 1908, under the constant supervision of Governor Broward, the North New River Canal extended 6.25 miles into the Everglades west of Fort Lauderdale (Knetsch 1991:39).

By 1909, the State of Florida had decided that it would allow contracts to private corporations to complete the construction of the canals. In June of 1910, a bid was accepted from the Furst-Clark Construction Company of Baltimore, Maryland to complete the dredging of the North New River Canal, along with the South New River Canal, Miami Canal, and the Gulf Coast Canal. Under the direction of the Furst-Clark Construction Company, it was realized that locks would need to be constructed to control both the water level and water traffic along the canals. The construction of these locks, including the *NRHP*-listed Sewell Lock, located within the project APE on the North New River Canal, was begun in October of 1911 (Werndli and Kirk 1978).

By 1912, the North New River Canal, one of six primary canals of the Everglades Drainage Project, was operational and extended all the way from the South Fork of the New River to Lake Okeechobee. It became the major transportation artery between Lake Okeechobee and Fort Lauderdale, and it also served as part of the first unobstructed

waterway across peninsular Florida (Janus Research 1999:236). The shipping of agricultural products along the water route was immediately the preferred method of transportation (Historic Property Associates 1995:44). The locks, including the Sewell Lock, which was also operational by 1912, facilitated this traffic along the canal route, and made the agricultural lands created by the draining of the Everglades easily accessible and profitable. Crops grown around the area of Lake Okeechobee and the newly-drained Everglades were transported down the North New River Canal to Fort Lauderdale where they were shipped via railroad to other destinations.

Originally engineered to provide agricultural lands and transportation in South Florida, the North New River Canal was eventually used to control flooding around proposed and existing residential lands. Control of the canals was given to the Army Corps of Engineers in the 1940s (Janus Research 1999:236).

As an example of an early water management system and as one of the primary canals of the Everglades Drainage District, the North New River Canal maintains its important engineering significance. It is historically significant due to its role in the development of South Florida. This resource was initially documented as part of the *Cultural Resource Assessment Survey for the Gulfstream Natural Gas System* (Janus Research 1999), and determined potentially eligible for listing in the *NRHP*. In a letter dated December 20, 1999 from DHR/SHPO to Janus Research the SHPO concurred with the finding. This historic resource is still considered potentially eligible for listing in the *NRHP*.

C. HISTORY AND REFERENCES CITED OF PAST WORK AT SITE

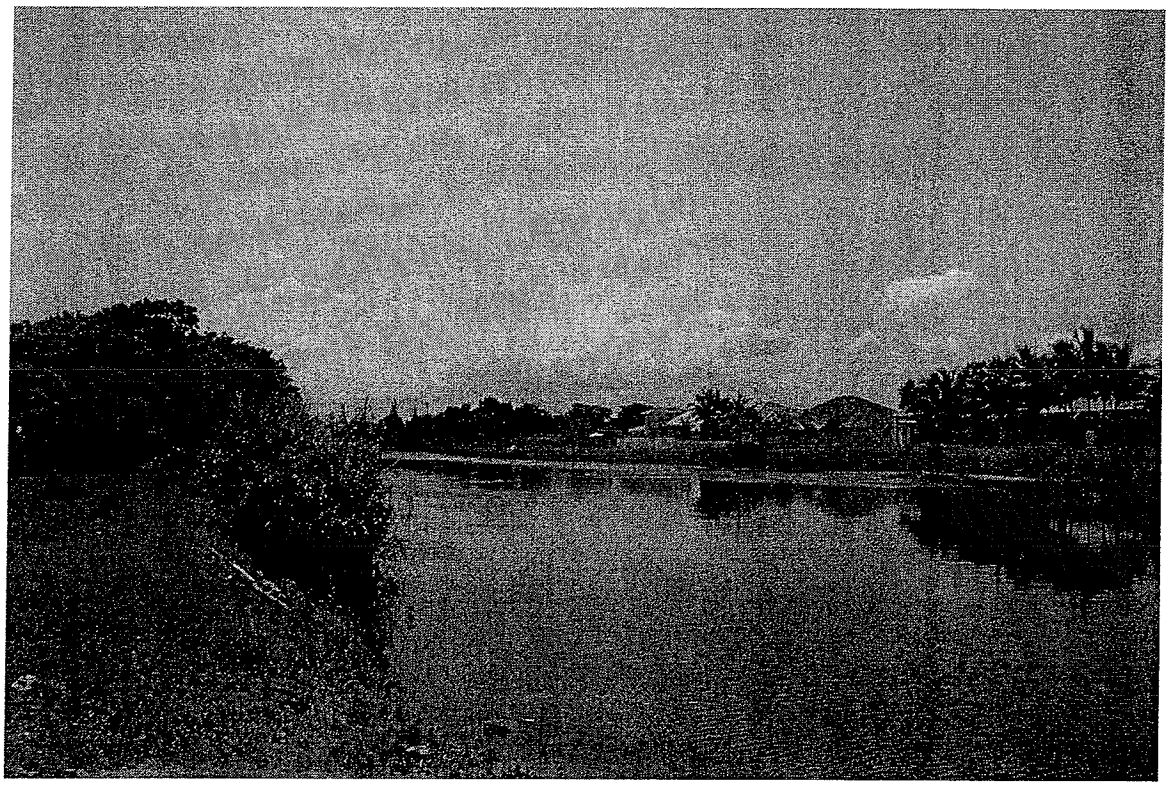
Historic Property Associates
1995 Architectural & Historical Survey of Fort Lauderdale: Original Town Limits. November, 1995.

Janus Research
1999 Cultural Resource Assessment Survey for the Gulfstream Natural Gas System. On file, Janus Research, Tampa Florida.

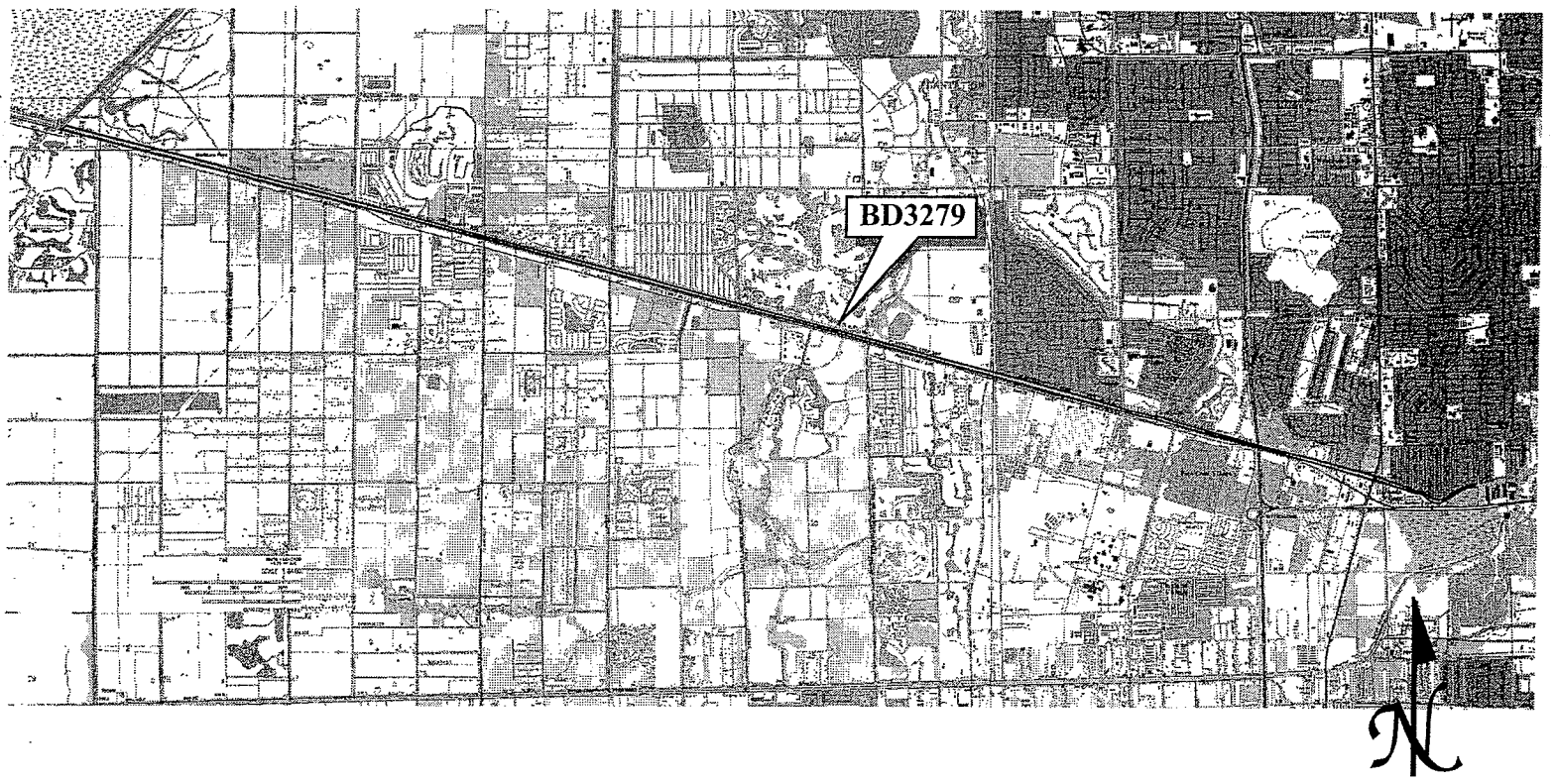
Knetsch, Joe
1991 Governor Broward and the Details of Dredging: 190b. *Broward Legacy* 14:1-2.

Werndli, Phillip A. and Dr. Cooper Kirk
1978 National Register of Historic Places Inventory—Nomination Form, February 17, 1978.

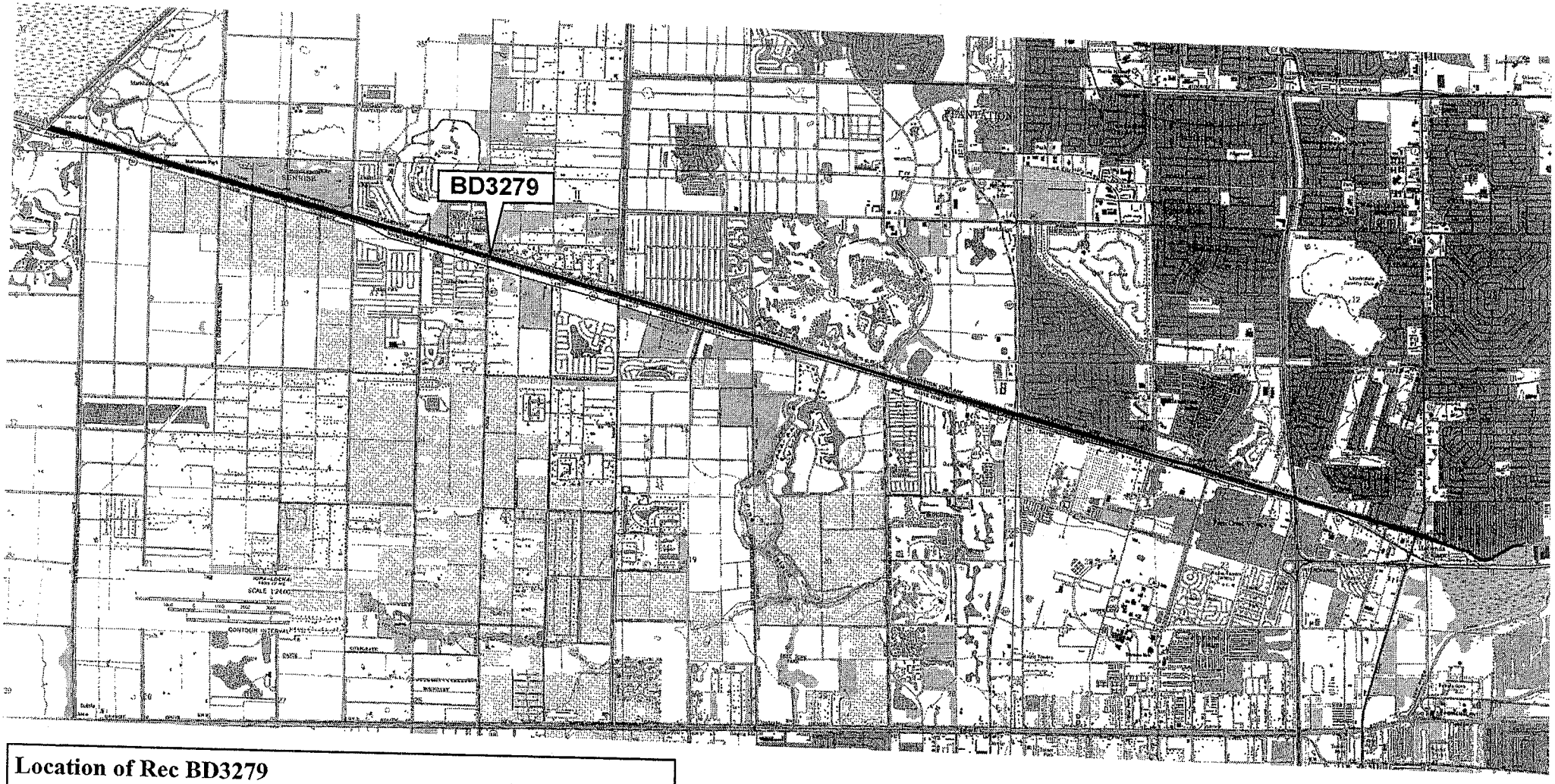
PHOTOGRAPH



SKETCH MAP



USGS QUADRANGLE MAP



Location of Rec BD3279

USGS Quadrangles: **Cooper City NE (1963, PR 1983)**
Cooper City (1963, PR 1983)
Fort Lauderdale North (1962, PR 1983)
Fort Lauderdale South (1962, PR 1983)

N

0 1 mile

☑Original
☐Update (give site #)

HISTORICAL BRIDGE FORM
FLORIDA MASTER SITE FILE
Version 2.0 10/97
Consult *Guide to the Historical Bridge Form* for detailed instructions

Site #8 BD4072
Recorder # 3
Field Date 10-21-2004
Form Date 10-21-2004

Bridge Name(s) South Fork of New River Bridge *Multiple Listing [DHR only]* _____
Survey Name CRAS of the SR-862 (I-595) PD&E Study, Broward County FDOT Bridge # 860008
Route(s) Carried/Feature(s) Crossed SR 84/New River FMSF Survey # _____

LOCATION & IDENTIFICATION

Nearest City/Town if within 3 mi Ft. Lauderdale In city limits: ☑yes ☑no ☐unknown
County Broward
Ownership Type: ☐private-profit ☐private-nonprofit ☐private-individual ☐private-unspecified ☐city ☐county ☑state ☐federal ☐foreign ☐Native American ☐unknown
Name of Public Tract (e.g., park) _____
N/E End: Township 50S, Range 42E, Section 20, ¼ section: ☐NW ☐SW ☐SE ☐NE ☐Irregular-name: _____
S/W End: Township 50S, Range 42E, Section 20, ¼ section: ☐NW ☐SW ☐SE ☐NE ☐Irregular-name: _____
USGS 7.5' Map (Photocopy OK; show map name, pub. date) Ft. Lauderdale South (1962 PR 1983)
Landgrant Unknown

DESCRIPTION

GENERAL

Overall Bridge Design* bascule-single
Overall Condition ☑excellent ☐good ☐fair ☐poor ☐deteriorated ☐ruinous
Style and Decorative Details:
This bridge has a single bascule design with concrete railings capped with simple metal handrails consisting of oval horizontal rails joined by vertical I-beams.

SUPERSTRUCTURE:

Spans: Number 5 Total Length(ft) 234.9
Main Span(s): Number 1 Length(ft) 53.1 Width(ft) 61.6 Roadway width(ft) _____
Main Span Type(s): (Designs*/Materials*) concrete and steel
Approach Span(s): Number 4 Length(ft) _____ Width(ft) 61.6 Roadway width(ft) _____
Approach Span Type(s): (Designs*/Materials*)
concrete
Deck Materials*
asphalt and steel

SUBSTRUCTURE:

Abutments (Materials*/Description) man-made concrete sloping
Piers (Materials*/Description) metal and concrete

Alterations: Dates and Descriptions
new metal railings, re-surfaced, tender station windows, lighting, retrofitted mechanical guards

Tender Station Description
Masonry Vernacular, shallow hipped roof, metal SHS 1/1 windows, bi-level-room-over-room, stucco, reinforced piers/undercarrige

*Consult *Guide to the Historical Bridge Form* for preferred descriptions (coded fields at the Site File).

DHR USE ONLY — OFFICIAL EVALUATIONS — DHR USE ONLY

NR DATE __/__/____	*KEEPER-NR ELIGIBILITY:* ☐yes ☐no Date __/__/____
	SHPO-NR ELIGIBILITY: ☐yes ☐no ☐potentially elig. ☐insufficient info. Date __/__/____
DELIST DATE __/__/____	*LOCAL DESIGNATION:* _____ Date __/__/____
	Local office _____
National Register Criteria for Evaluation ☐a ☐b ☐c ☐d (See *National Register Bulletin 15*, p. 2)	

HISTORICAL BRIDGE FORM

Consult *Guide to the Historical Bridge Form* for detailed instructions

Site #8 BD4072

HISTORY OF BRIDGE

Prior Fords, Ferries, or Bridges at this Location
unknown

Year(s) Built 1956 Still in use? ☑yes ☐no ☐ restricted use (describe)

Bridge Use: original and current with dates *(Standard descriptions: auto, railway, pedestrian, fishing pier, abandoned)**
Auto and pedestrian

Ownership history FDOT

Designers/Engineers (last name first) Unknown

Builders/Contractors (last name first) Unknown

Text of Plaque or Inscription (Write "None" if absent)
"1956" etched and inlayed with ceramic tile in concrete railing end, "SOUTH FORK NEW RIVER" etched in concrete railing end, "860008 SOUTH FORK OF NEW RIVER" inlayed with ceramic tile in concrete railing.

Narrative History (How did the bridge come to be built? How was it financed, etc... If necessary, attach separate sheet)
Unknown

RESEARCH METHODS (Check all choices that apply; if needed write others at bottom)

☐ FDOT database search Records	☐ FL Photo Archives (Gray Building)	☐ Local library research	☐ Public Lands Survey
☐HABS/HAER search	☑ Past surveys search at FMSF	☐ Local newspaper files	
☑ Past sites search at FMSF	☐ Non-local library research	☐ Informal archaeological inspection	
☐ FL Archives (Gray Building)	☐ Informant interview	☐ Formal archaeological survey	

☐ Other methods (specify)

SURVEYOR'S EVALUATION OF BRIDGE (Check one choice on each of first 3 lines)

Potentially eligible for a local register?	☐yes: name register at right	☑no	☑insufficient info.	Name of local register if eligible:
Individually eligible for National Register?	☐yes	☑no	☐insufficient info.	
Potential contributor to Nat. Reg. district?	☐yes	☑no	☐insufficient info.	

Area(s) of historical significance (See *National Register Bulletin 15*, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
Transportation

Explanation of Evaluation (**required,** whether significant or not; limit to three lines; attach longer statement, if needed, on separate sheet)
While the bridge has not undergone many notable alterations, it exhibits a simple design with a standard railing and represents a particularly common bridge type in Florida. Therefore, a common engineering design and lack of distinctive architectural elements limit the significance of this bridge. It is considered ineligible for listing in the NRHP on an individual basis, or as part of a historic district.

DOCUMENTATION (Photos, Plans, etc.)

Bibliographic References (Use Supplement Sheet, give FMSF Manuscript # if relevant)

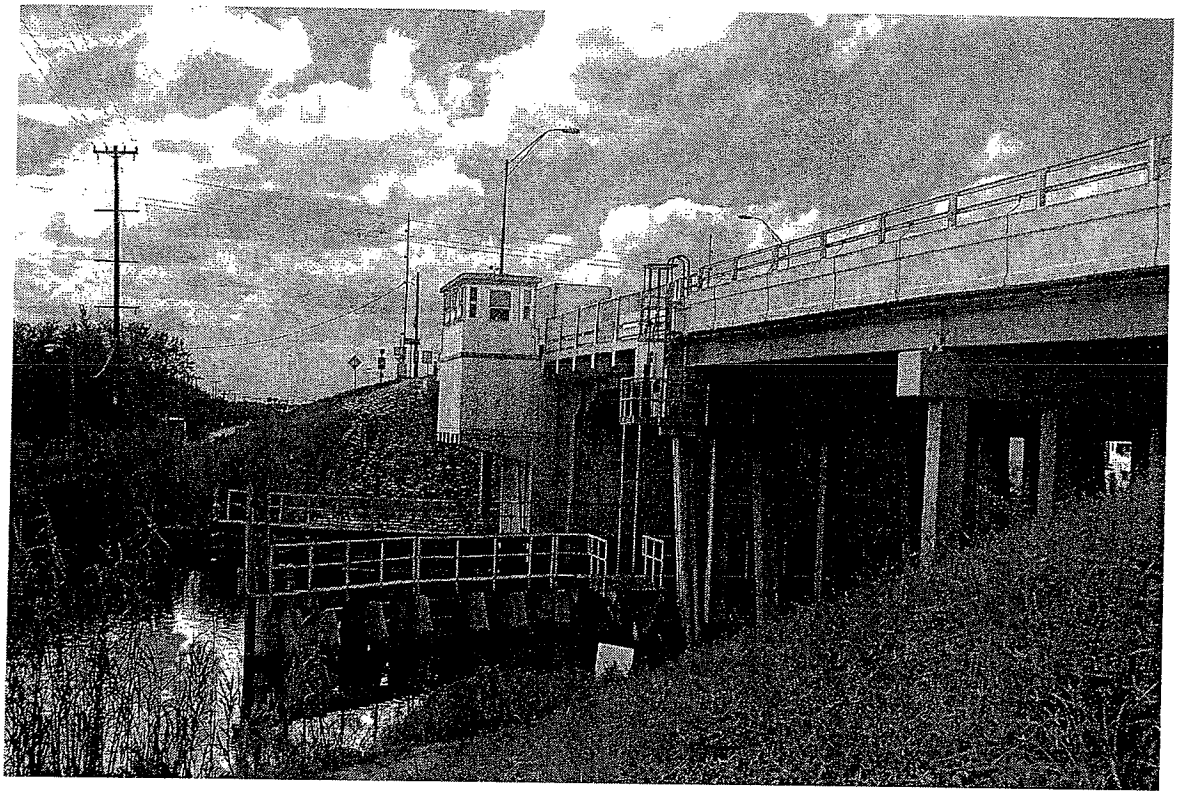
ACCESSIBLE DOCUMENTATION NOT FILED WITH FMSF, including field & analysis notes, photos, plans, other important documents that are permanently accessible: For each separately maintained collection, describe (1) document type(s),* (2) maintaining organization,* (3) file or accession nos., and (4) important descriptive information.
Photo negatives on file at Janus Research.

*Consult *Guide to the Historical Bridge Form* for preferred descriptions (coded fields at the Site File).

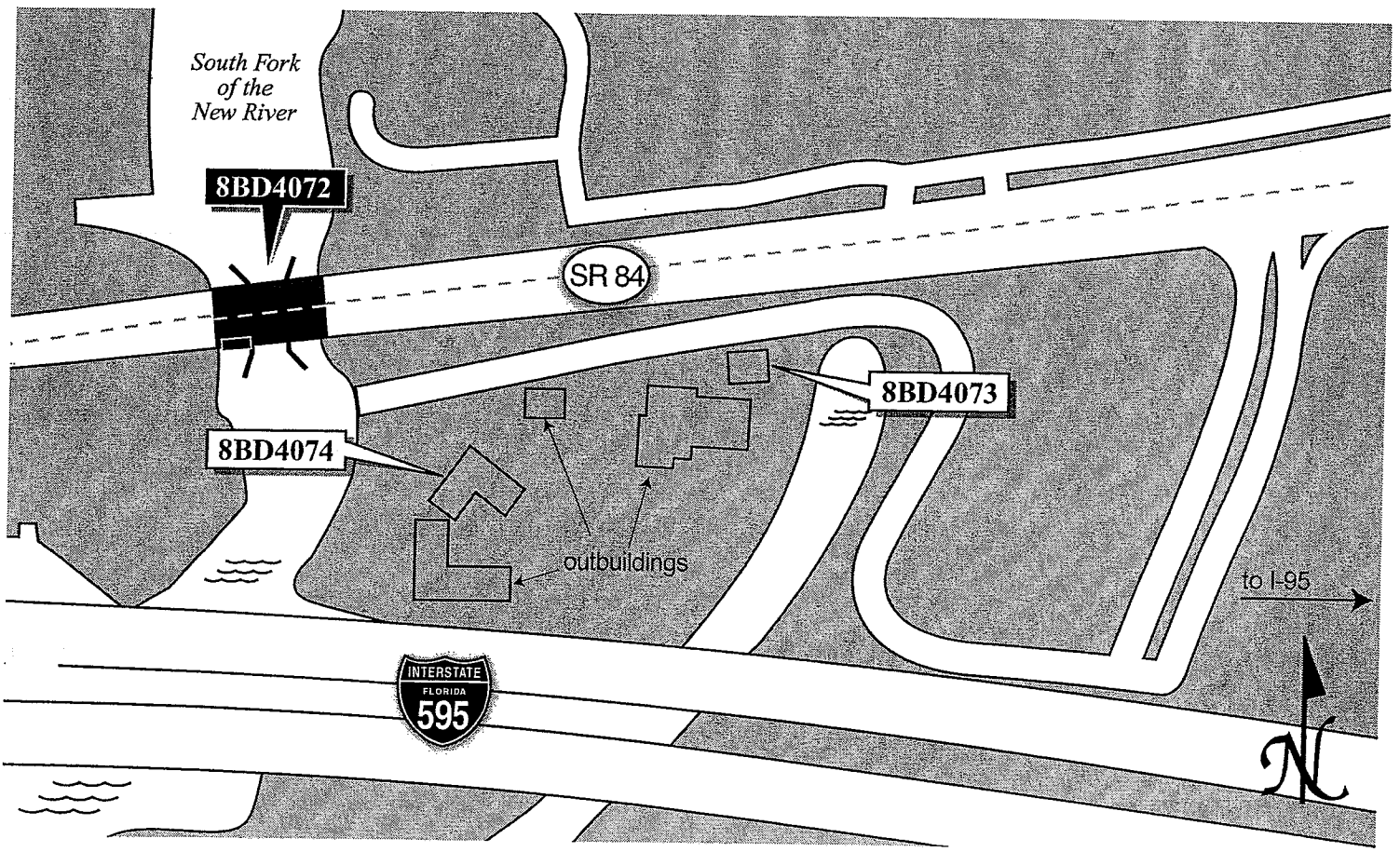
RECORDER

Name (last name first) / Address / Phone / Fax / Email / Affiliation
Hooks, Kisa/ 1300 N Westshore Boulevard, Suite 100, Tampa, Florida 33607/ Phone 813-636-8200/ Fax 813-636-8212/ Janus Research

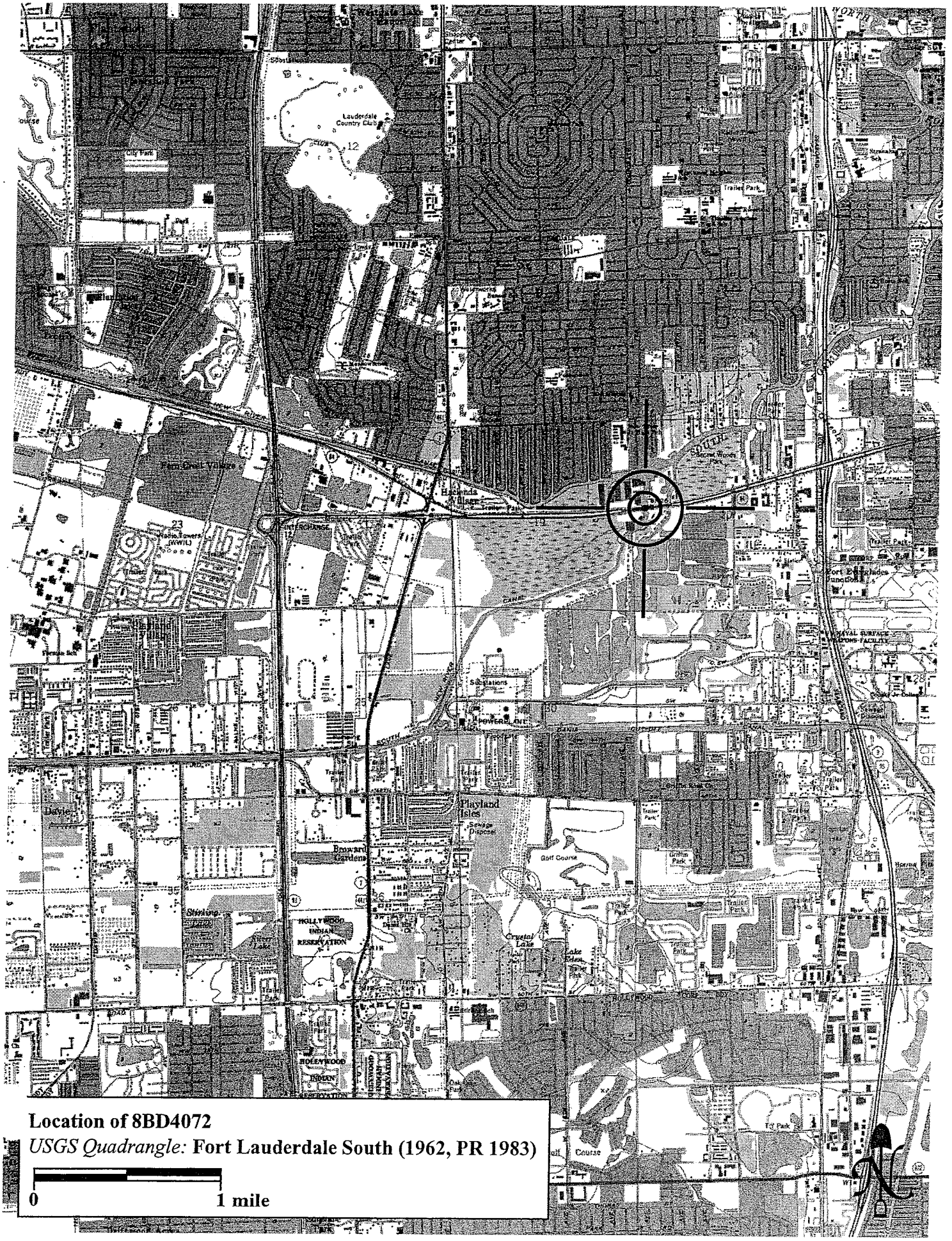
PHOTOGRAPH



SKETCH MAP



USGS QUADRANGLE MAP



Location of 8BD4072

USGS Quadrangle: **Fort Lauderdale South (1962, PR 1983)**

0 **1 mile**

Page 1

Original ☑
Update ☐

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8BD4073
Recorder # 1
Recorder Date 10/04

Site Name Marine Propulsion Lauderale Propeller **Other Names**
Project Name CRAS of the SR-862 (I-595) PD&E Study, Broward County
Historic Contexts Modern **National Register Category** Building

LOCATION and IDENTIFICATION

Address 2990 S.R. 84
Vicinity of South of S.R. 84 between SW 29th Avenue and the South Fork of the New River
City Ft. Lauderdale **County** Broward
Ownership Private **Subdivision** **Block #** **Lot #**

MAPPING

USGS Map FORT LAUDERDALE SOUTH **Township** 50S **Range** 42E **Section** 20
Quarter **Qtr Qtr** **Irregular Section** ☐ **UTM Zone** 17
Easting 581778 **Northing** 2885374 **Land Grant** Unknown
Latitude **Longitude** **Plat or Other Map** Aerial Photographs

HISTORY

Architect/Builder Unknown **Construction Date** 1955 **Circa** ☑
Alterations ☑ **Date** c. 1980 **Type/Location** hurricane shutters added to all windows
Additions ☐ **Date** **Type/Location**
Moved ☐ **Original Location**
Original Commercial **Use Present** Commercial

DESCRIPTION

Style Masonry Vernacular **Exterior Plan** Rectangular **Interior Plan** Unknown **Stories** 1
Structural System Concrete block **Exterior Fabric** Stucco
Foundation Slab **Foundation Materials** Poured concrete **Foundation Infill** N/A
No. of Porches 0 **Locations/Features** N/A
Dormers ☐ **Number/Location** N/A
Outbldgs. ☑ **Number** 3 **Nature/Location (Describe below)**
SW/one-story, gable roof, steel girder frame, sheet metal exterior, connected together
Roof Type Flat **Roofing Materials** Built-up roof
Secondary Structures ☐ **Comments** Not applicable **Location** N/A
Chimneys ☐ **Number** 0 **Orientation** N/A **Location** N/A **Material** Not applicable
Wood Windows ☐ **Type** **Light #**
Metal Windows ☑ **Type** Awning **Light #** 4
Exterior Ornament wide overhanging eaves
Condition Good **Surroundings** Commercial
Narrative (general, interior, landscape, context; 3 lines only)
This single story stucco building has paired awning windows with a double glass door entrance on the west side. Ornamentation is limited.

Archaeological Remains Presen ☐ **FMSF Archaeological Site Form Completed (if yes, attach)** ☐

Printed #Name?

HISTORICAL STRUCTURE FORM

Site # 8BD4073

Consult Guide To Historical Structure Forms for detailed instructions

RECORDER'S EVALUATION OF SITE

ible for National Register?	Yes ☐	No ☑	Likely, Need Information ☐	Insufficient Information ☐
Significant as Part of District?	Yes ☐	No ☑	Likely, Need Information ☐	Insufficient Information ☐
Significant at Local Level?	Yes ☐	No ☑	Likely, Need Information ☐	Insufficient Information ☐

Areas of Significance

Community planning & development

Summary of Significance

This building represents a common building type and style found throughout South Florida, which limits its architectural significance. In addition, limited research revealed no significant historical associations with important persons or events. Therefore, this building is considered ineligible for listing in the NRHP, on an individual basis or as part of a historic district.

DHR USE ONLY	OFFICIAL EVALUATIONS	DHR USE ONLY
NR DATE __/__/____	*KEEPER-NR ELIGIBILITY* ☐ *yes* ☐ *no*	*Date* __/__/____
	SHPO-NR ELIGIBILITY: ☐ *yes* ☐ *no* ☐ *potentially elig.* ☐ *insufficient info*	*Date* __/__/____
DELIST DATE __/__/____	*LOCAL DESIGNATION:* _____	*Date* __/__/____
	Local office _____	
National Register Criteria for Evaluation ☐ *a* ☐ *b* ☐ *c* ☐ *d* (See National Register Bulletin 15, p. 2)		

DOCUMENTATION

Research Methods Florida Site File for past architectural surveys; Florida Site File search; Local library; Tax records; Pedestrian; Windshield

ɪ ɔgraphic Reference

Location of Negatives Janus Research **Negative Numbers** Roll 1, #15, Facing S

RECORDER INFORMATION

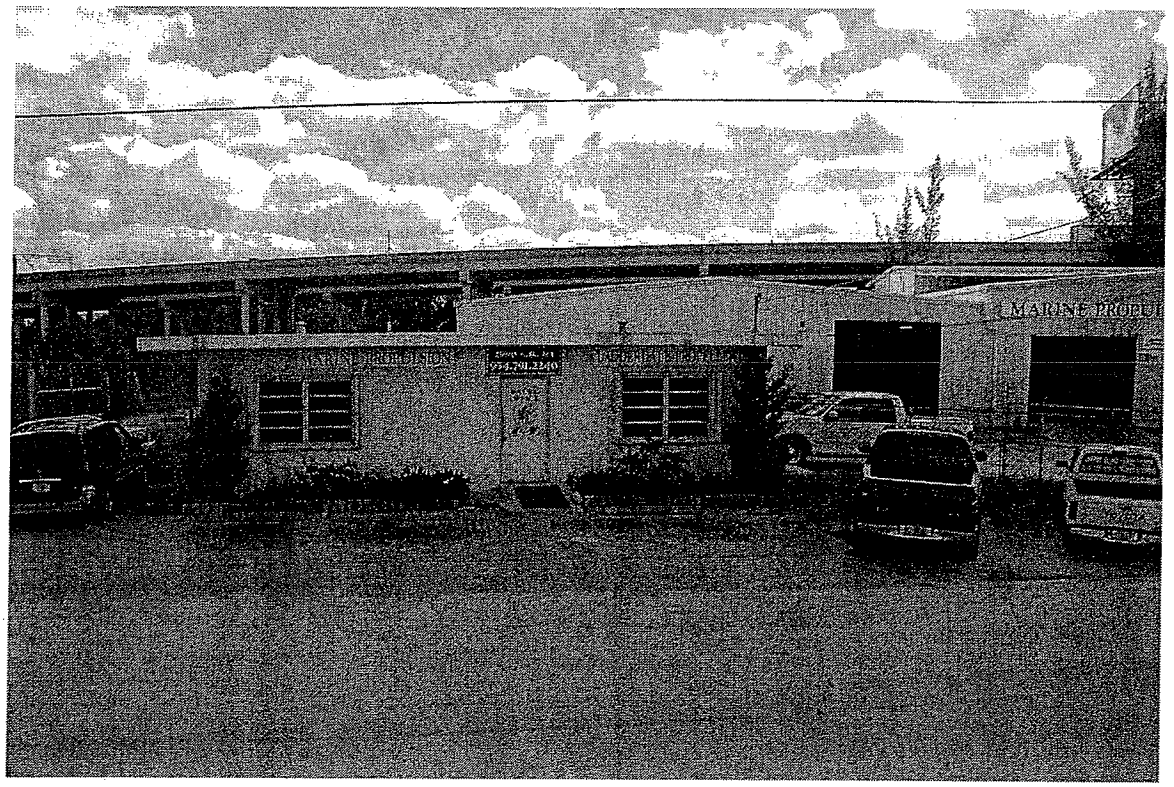
Recorder Name M. Kenneally

Recorder Affiliation JANUS RESEARCH, 1300 N Westshore Boulevard, Suite 100, Tampa, Florida 33607 Telephone 813-636-8200

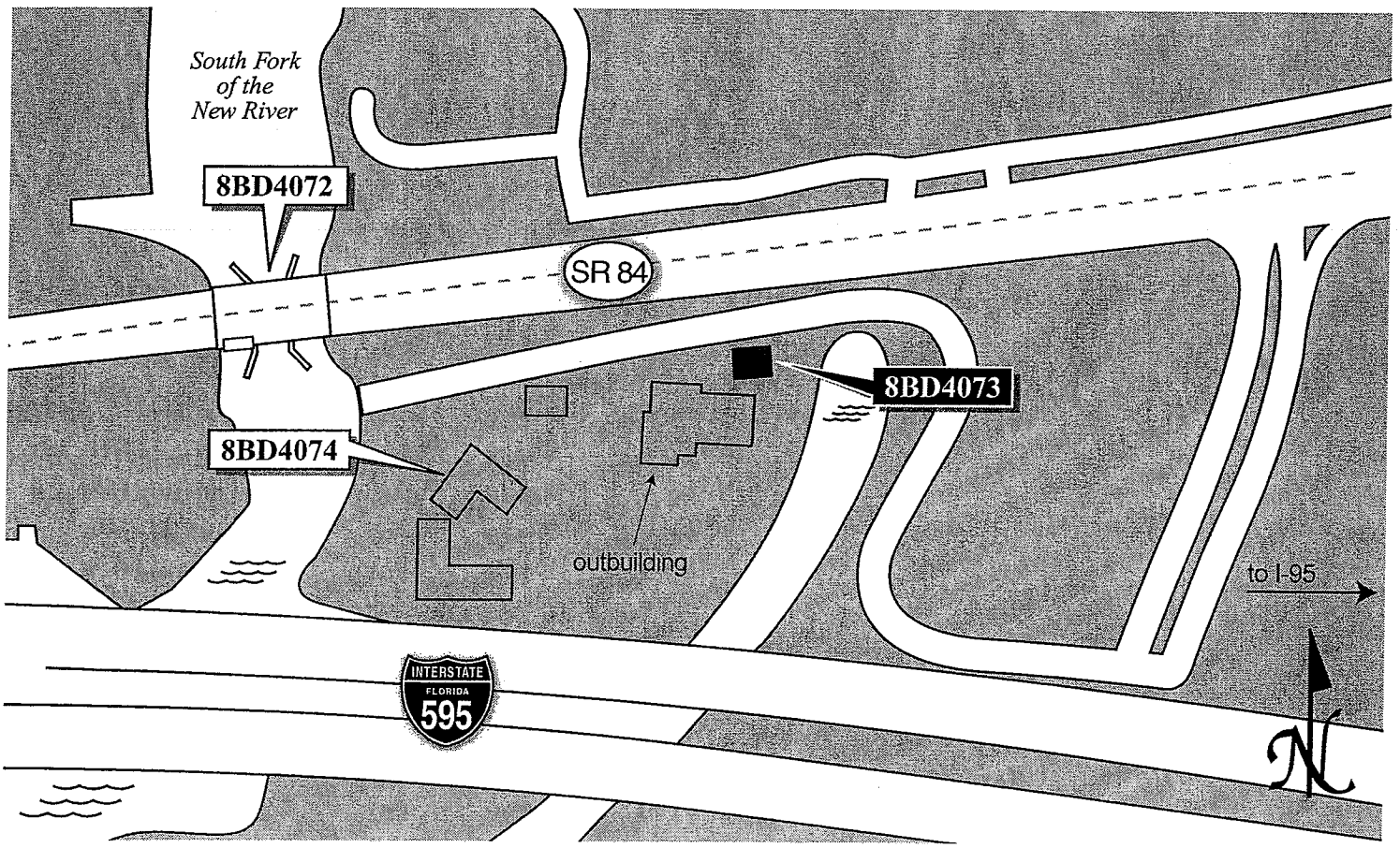
REQUIRED:

1. **USGS 7.5' MAP WITH STRUCTURES PINPOINTED IN RED**
2. **LARGE SCALE STREET OR PLAT MAP**
3. **PHOTO OF MAIN FACADE, PREFERABLY B&W, AT LEAST 3x5**

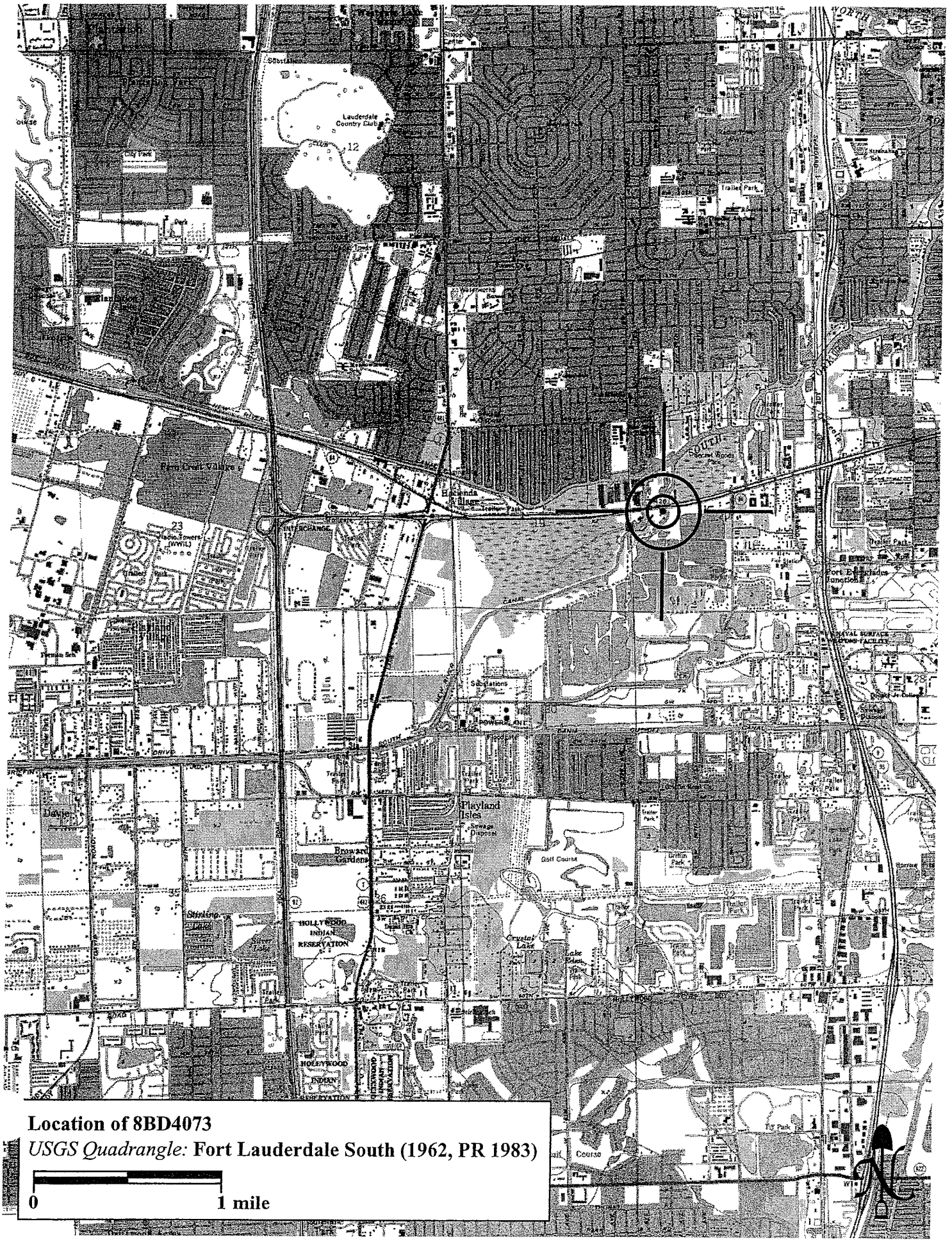
PHOTOGRAPH



SKETCH MAP



USGS QUADRANGLE MAP



Location of 8BD4073

USGS Quadrangle: **Fort Lauderdale South (1962, PR 1983)**

0 **1 mile**

Page 1

Original ☑
Update ☐

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE

Consult Guide To Historical Structure Forms for detailed instructions

Site # 8BD4074
Recorder # 2
Recorder Date 10/04

Site Name New River Boating Center **Other Names**
Project Name CRAS of the SR-862 (I-595) PD&E Study, Broward County
Historic Contexts Modern **National Register Category** Building

LOCATION and IDENTIFICATION

Address 3000 SR 84
Vicinity of South of SR 84 between the South Fork of the New River and SW 29 Avenue
City Ft. Lauderdale **County** Broward
Ownership Private **Subdivision** **Block #** **Lot #**

MAPPING

USGS Map FORT LAUDERDALE SOUTH **Township** 50S **Range** 42E **Section** 20
Quarter **Qtr Qtr** **Irregular Section** ☐ **UTM Zone** 17
Easting 581681 **Northing** 2885303 **Land Grant** Unknown
Latitude **Longitude** **Plat or Other Map** Aerial Photographs

HISTORY

Architect/Builder Unknown **Construction Date** 1955 **Circa** ☑
Alterations ☑ **Date** 1980s **Type/Location** new windows/doors, parapet awning, window A/C units
Additions ☑ **Date** 1970s **Type/Location** SE/non-historic, one-story, gabled roof
Moved ☐ **Original Location** N/A
Original Commercial **Use Present** Commercial

DESCRIPTION

Style Masonry Vernacular **Exterior Plan** Irregular **Interior Plan** Unknown **Stories** 2
Structural System Concrete block **Exterior Fabric** Stucco
Foundation Continuous **Foundation Materials** Poured concrete **Foundation Infill** N/A
No. of Porches 2 **Locations/Features** SW/second-story, metal railing, parapet awning, no supports/SW; S/one-story, flat roof, open-air, metal posts
Dormers ☐ **Number/Location** N/A
Outbldgs. ☑ **Number** 2 **Nature/Location (Describe below)**
E/hut, one-story, flat roof, T1-11 and flagstone veneer/E; N/non-historic boat-lifting structure/N
Roof Type Flat **Roofing Materials** Built-up roof
Secondary Structures ☐ **Comments** Not applicable **Location** N/A
Chimneys ☐ **Number** 0 **Orientation** N/A **Location** N/A **Material** Not applicable
Wood Windows ☐ **Type** **Light #**
Metal Windows ☑ **Type** SHS; Fixed; Awning **Light #** 1/1; 1; 3
Exterior Ornament
Condition Good **Surroundings** Marina

Narrative (general, interior, landscape, context; 3 lines only)

This commercial parcel has numerous boats associated with the boating center. The non-historic addition connects two previously independent buildings of similar building type. All windows are recessed.

Archaeological Remains Present ☐ **FMSF Archaeological Site Form Completed (if yes, attach)** ☐

Printed #Name?

HISTORICAL STRUCTURE FORM

Site # 8BD4074

Consult Guide To Historical Structure Forms for detailed instructions

RECORDER'S EVALUATION OF SITE

ible for National Register?	Yes ☐	No ☑	Likely, Need Information ☐	Insufficient Information ☐
Significant as Part of District?	Yes ☐	No ☑	Likely, Need Information ☐	Insufficient Information ☐
Significant at Local Level?	Yes ☐	No ☑	Likely, Need Information ☐	Insufficient Information ☐

Areas of Significance

Community planning & development

Summary of Significance

This building represents a common building type and style found throughout South Florida. Non-historic additions and modifications, such as the gable roof addition, and parapet awning, limit its architectural significance and compromise its historic physical integrity. In addition, limited research revealed no significant historical associations with important persons or events. Therefore, this building is considered ineligible for listing in the NRHP, on an individual basis or as part of a historic district.

DHR USE ONLY	OFFICIAL EVALUATIONS	DHR USE ONLY
NR DATE __/__/__	*KEEPER-NR ELIGIBILITY* ☐ *yes* ☐ *no*	*Date* __/__/__
	SHPO-NR ELIGIBILITY: ☐ *yes* ☐ *no* ☐ *potentially elig.* ☐ *insufficient info*	*Date* __/__/__
DELIST DATE __/__/__	*LOCAL DESIGNATION:*	*Date* __/__/__
	Local office	
National Register Criteria for Evaluation ☐ *a* ☐ *b* ☐ *c* ☐ *d* (See *National Register Bulletin 15*, p. 2)		

DOCUMENTATION

Research Methods Florida Site File for past architectural surveys; Florida Site File search; Local library; Tax records; Pedestrian; Windshield

Bibliographic Reference

Location of Negatives Janus Research **Negative Numbers** Roll 1, #17, Facing S

RECORDER INFORMATION

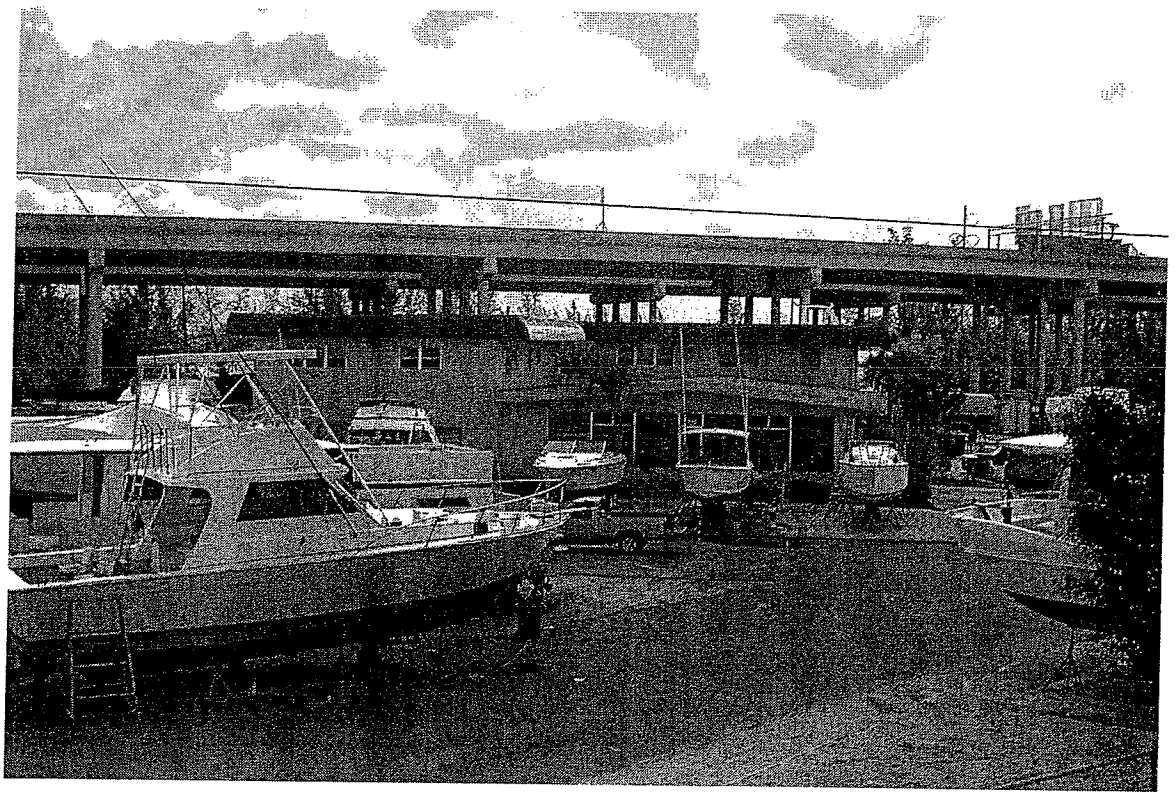
Recorder Name K. Hooks

Recorder Affiliation JANUS RESEARCH, 1300 N Westshore Boulevard, Suite 100, Tampa, Florida 33607 Telephone 813-636-8200

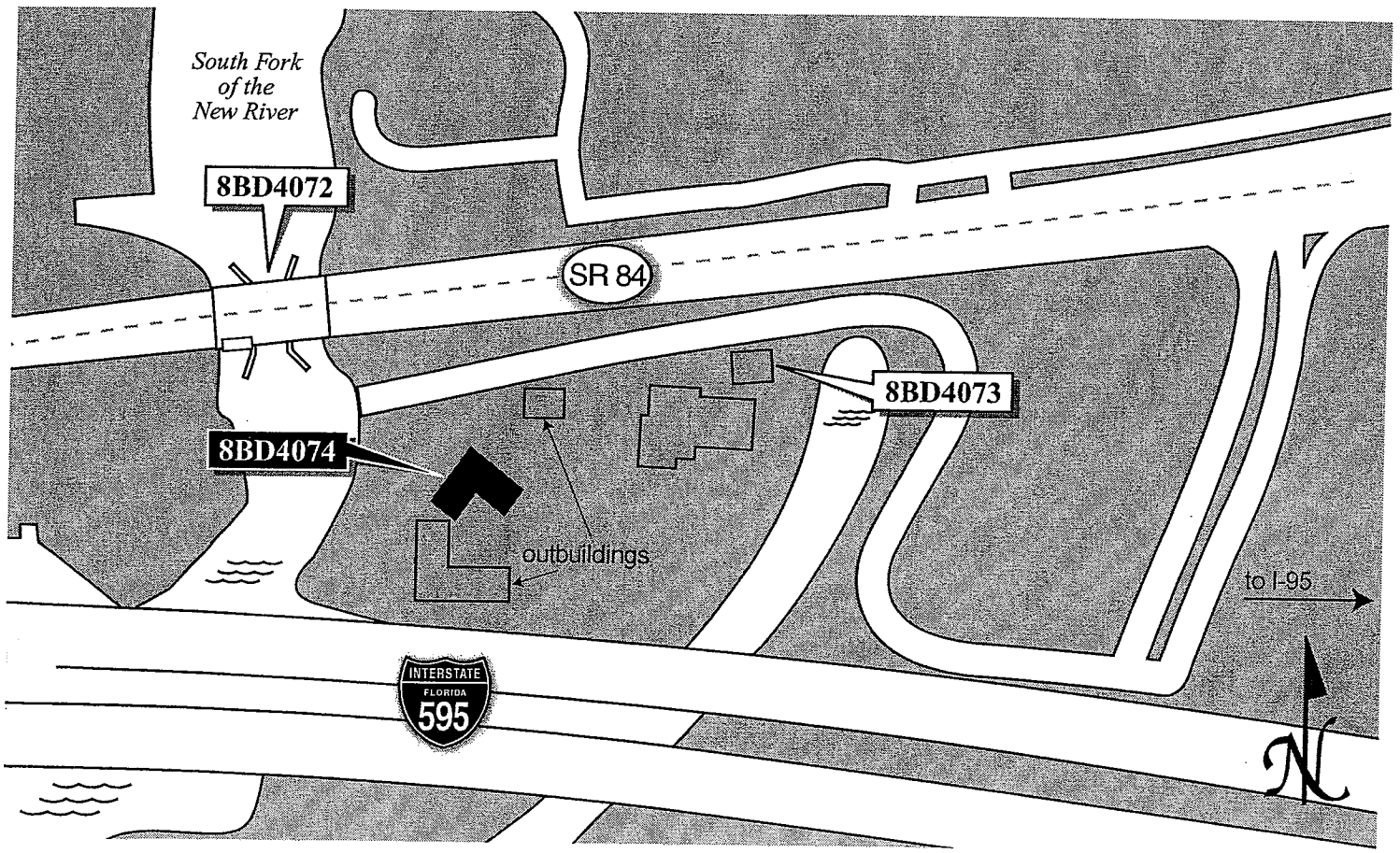
REQUIRED:

1. **USGS 7.5' MAP WITH STRUCTURES PINPOINTED IN RED**
2. **LARGE SCALE STREET OR PLAT MAP**
3. **PHOTO OF MAIN FACADE, PREFERABLY B&W, AT LEAST 3x5**

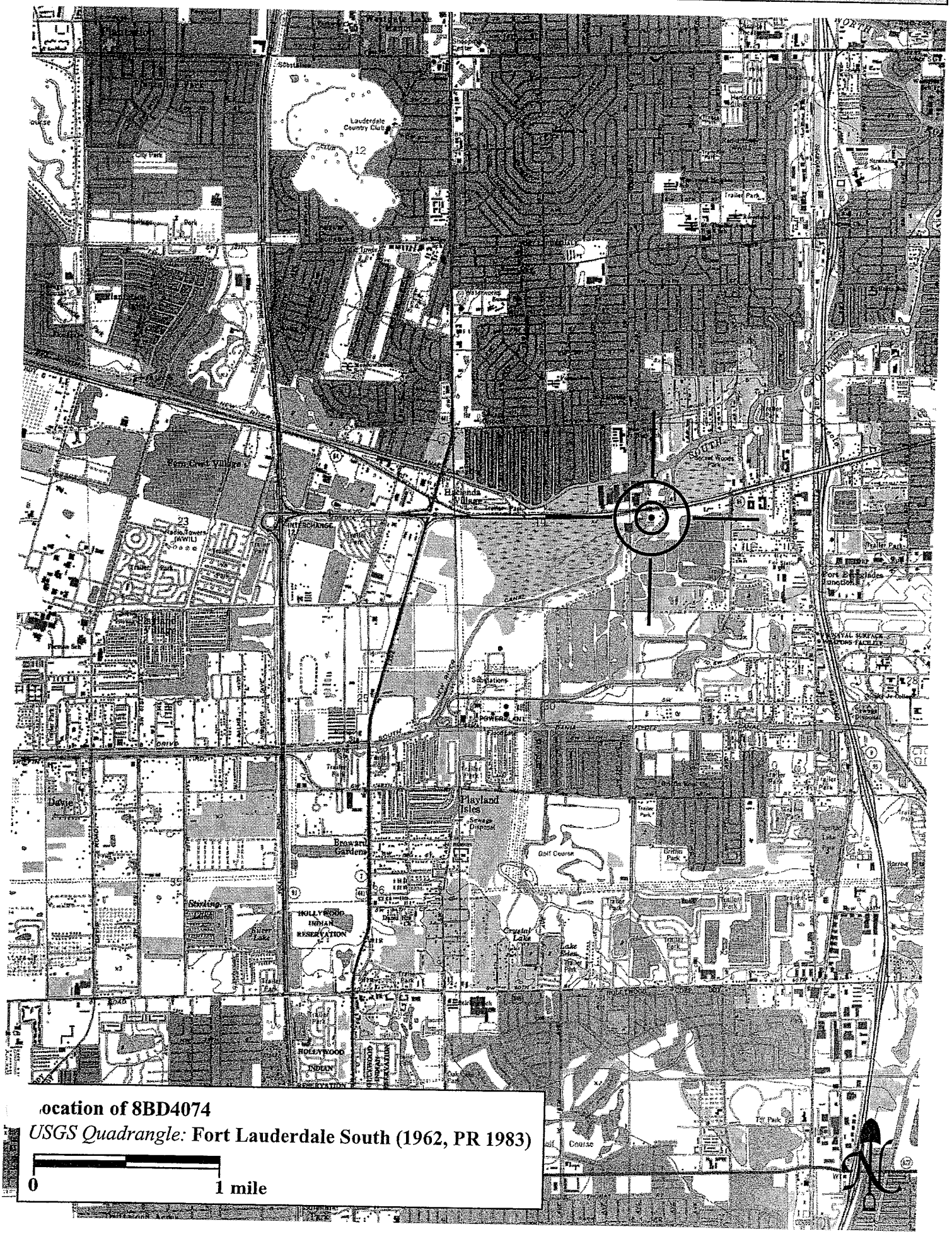
PHOTOGRAPH



SKETCH MAP



USGS QUADRANGLE MAP



ocation of 8BD4074

USGS Quadrangle: **Fort Lauderdale South (1962, PR 1983)**

0 1 mile

APPENDIX B
SEWELL LOCK NRHP NOMINATION

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED
DATE ENTERED

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC
Lock #1, North New River Canal

ORIGINAL - NOT TO BE REMOVED FROM FILES

AND/OR COMMON
Sewall Lock; Davie-Sewall Lock; Lock #4, North New River Canal

2 LOCATION

STREET & NUMBER
6521 West State Road 84

CITY, TOWN
Plantation

__NOT FOR PUBLICATION

X VICINITY OF

CONGRESSIONAL DISTRICT
10

STATE
Florida

CODE
12

COUNTY
Broward

CODE
011

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	X PUBLIC	__OCCUPIED	__AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	X UNOCCUPIED	__COMMERCIAL	__PARK
X STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
__SITE	PUBLIC ACQUISITION	ACCESSIBLE	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	X YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	__YES: UNRESTRICTED	__INDUSTRIAL	__TRANSPORTATION
		__NO	__MILITARY	X OTHER: Not in use

4 OWNER OF PROPERTY

NAME
Bureau of State Lands

STREET & NUMBER
Department of Natural Resources, The Capitol

CITY, TOWN
Tallahassee

__ VICINITY OF

STATE
Florida

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Broward County Courthouse

STREET & NUMBER

CITY, TOWN
Ft. Lauderdale,

STATE
Florida

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
Florida Master Site File

DATE
1974

__FEDERAL X STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS
Division of Archives, History, & Records Management

CITY, TOWN
Tallahassee,

STATE
Florida

SEE CONTINUATION SHEET FOR STAFF PICS ORIGINAL PHOTO(S) ON FILE

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
—EXCELLENT	—DETERIORATED	—UNALTERED	X ORIGINAL SITE
—GOOD	—RUINS	X ALTERED	—MOVED DATE_____
X FAIR	—UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Lock No. 1 (now known as Lock No. 4) is located on the south bank of the North New River Canal approximately 54 miles north and east of the Canal's origin at Lake Okeechobee. The structure consists of a single lock about 149' long with a wing dam extending to the north and connected to a large movable sluice dam. An earthen coffer dam has been constructed on the upstream side of the lock wing-dam structure to protect it from upstream water pressure and damage; this has effectively closed the lock to use.

The lock is constructed of parallel poured concrete walls which are 25' apart. The walls are about 14' from top to foundation, measuring 6' thick at the foundation and tapering in along the exterior to 3' at the top. Extending south from the east end of the south wall is a small wing dam of poured concrete. This dam was used to retain the water in the space which was left unfilled between the canal bank and the lock wall. The main wing dam of the complex extends about 42' to the north from the west end of the north wall. Also of poured concrete, the structure is strengthened by buttresses on the east, o downstream side. A metal pipe handrail extends across the top of the wing dam, a wooden catwalk which opens with the lock gates extends across the lock to provide access to the wing dam.

Entry to the lock is controlled by paired wooden gates at either end which also control water level. The gates close to form an interior angle of 142° and point upstream. Horizontal 12" x 12" timbers, spaced at each end wit 12" x 12" and 12" x 10" blocks all spiked together using 3 1/2" x 3/8" strap iron, form the main gate structure. The gates are sheathed on one side, the upstream (west) side, with vertical 2" x 8" boards nailed in a butt joint forming a water-tight seal. At the base of each gate is a hand operated butterfly valve which is used to control the water level in the lock when a boat is being raised or lowered.

The gates were operated by a geared rack and pinion mechanism. The racks which were connected to the center of the gates no longer remain. The geared pinion mechanism does survive and could be made operational.

There are two structures which are adjacent to the lock and which have historical association with it. To the southwest of the lock is a poured concrete U.S.G.S. recording station which remains in use and was constructed about the time of the lock. Completing the complex is the lock tender's quarters which is south of the control structure. This building is a small, wood frame bungalow with clapboard siding and a low, gable roof supported by simple eave brackets. The rectangular building has a shed roof porch extending to the west of the house. A carport is located to the east under a shed roof which is an extension of the main roof. The current structure does not bear any resemblance to plans which exist for the original cottage designed for the lock. Local tradition insists that this building is the original dwelling which has been altered. This cannot be determined for certain without a more extensive examination of the building.

8. SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
__PREHISTORIC	__ARCHEOLOGY-PREHISTORIC	__COMMUNITY PLANNING	__LANDSCAPE ARCHITECTURE	__RELIGION	
__1400-1499	__ARCHEOLOGY-HISTORIC	__CONSERVATION	__LAW	__SCIENCE	
__1500-1599	__AGRICULTURE	__ECONOMICS	__LITERATURE	__SCULPTURE	
__1600-1699	__ARCHITECTURE	__EDUCATION	__MILITARY	__SOCIAL/HUMANITARIAN	
__1700-1799	__ART	X ENGINEERING	__MUSIC	__THEATER	
__1800-1899	__COMMERCE	__EXPLORATION/SETTLEMENT	__PHILOSOPHY	X TRANSPORTATION	
X 1900-	__COMMUNICATIONS	__INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)	
		__INVENTION			

SPECIFIC DATES +1911-1912 BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The Everglades drainage program which was begun in 1905 has probably had a greater historical and continued impact on South Florida than any other single factor. One of the canals, the North New River Canal was, in the early years, a major transportation artery between Ft. Lauderdale and Lake Okeechobee. In order to make the canal useful for transportation, locks had to be constructed.

Lock No. 1 at the south end of the canal was the first to be built on th canal as well as in South Florida. It remains the best preserved of all of the surviving locks in the canal system in South Florida.

After many years of abortive public and private efforts at draining the Everglades, the State of Florida in 1905 established the Everglades Drainage District and authorized taxation of local landowners for the cost of drainage. Drainage was to be accomplished by lowering the waters of Lake Okeechobee and reducing the water level in the Everglades through the use of canals. It was hoped that this act would result in the creation of 3,000,000 acres of fertile, habitable land upon which could be raised "many tropical fruits that grow in [the] area and not elsewhere in the United States" (Everglades of Florida, p. 18).

Dredging of the needed canals began in July 1906 with the construction of the dredges Everglades and Okeechobee on the North New River Canal (Everglades, p. 16). In 1909 it was determined that the state would let contracts to private construction firms to complete the dredging operation. In doing this it was hoped that the canal construction would move along at a quicker pace. In June 1910, the Board of Drainage Commissioners accepted a bid from the Furst-Clark Construction Company of Baltimore, Maryland for the construction of five canals; the North New River Canal, the South New River Canal, Miami Canal and the Gulf Coast Canal.

Within nine months after the Furst-Clark Construction Company began operations it was determined that permanent locks would have to be built on the canal in order to control the water level and allow water traffic access to the land along the canal. On March 12, 1911, the company obtained an amendment to their contract for the "placing of permanent locks in said canals" (Everglades, 194-195, Minutes, p. 139). These locks were to be located on the Miami Canal, South New River Canal and the North New River Canal. Each structure was to be located at or near the head of tide water and would replace the existing earth and stone dams (Minutes, pp. 148-149). Work on

these locks, including Lock No. 1 on the North New River Canal, was begun by October 1911 (Minutes, p. 200). By March, 1912, the Lock No. 1 was operational (Minutes, p. 20). The following July it was decided that a caretaker's house would be built at Lock No. 1 (Minutes, p. 58). A weather station was ordered established at the lock in October 1912 (Minutes, pp. 101-105).

It has not been determined exactly when the lock was open for river traffic, but the structure was being used regularly by September 1913 since its toll receipts were used as a basis for projecting revenue to be received from lock traffic (Minutes, pp. 332-333).

The opening of the lock lead to an increased agricultural exploitation of the newly drained land along the New River Canal. Produce grown in this area and around Lake Okeechobee was brought down the canal through the locks to the railroad at Ft. Lauderdale. An even more important cargo was Okeechobee catfish. New River was lined with fish houses, overhanging the river. The fish were brought down by small launches which had box-like cabins for storing the fish. Boats traversed the distance between the lake and Ft. Lauderdale in groups. This made the trip go faster since more than one boat could get into the hand operated lock and thus make its use more efficient. (Will, pp.82-90)

The locks also made it possible for small steamboats to operate on a regular basis between Ft. Lauderdale and the lake as well as Ft. Myers via the Caloosahachee River. Regular scheduled steamers included the Suwannee, Lily and Passing Thru. These boats carried passengers, cargo, and tourists up and down the river. By 1926 the canals had shoaled to the point that boat traffic was no longer practical and the waterway had been replaced by a railroad and highway as the primary transportation artery to and from the lake. In that year the locks were closed permanently and allowed to deteriorate due to the lack of use. (Will, pp. 82-90)

9 MAJOR BIBLIOGRAPHICAL REFERENCES

(See continuation sheet)

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY LT 1

UTM REFERENCES

	ZONE	EASTING	NORTHING
A	17	570,790	2818,580
B			
C			
D			

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

(See continuation sheet)

ORGANIZATION — DATE

STREET & NUMBER — TELEPHONE

CITY OR TOWN — STATE

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL ___ STATE XX LOCAL ___

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE L. Ross Morrell

TITLE Deputy State Historic Preservation Officer DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST: DATE

KEEPER OF THE NATIONAL REGISTER

GPO 888-445

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

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DATE ENTERED

Lock No. 1, North New River Canal
CONTINUATION SHEET ITEM NUMBER 9 PAGE 1

Florida. Board of Commissioners, Everglades Drainage District. Minutes. Volume I & II, December 5, 1911 - December 20, 1916. Library, Central and Southern Florida Flood Control District Office, West Palm Beach, Florida.

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Will, Lawrence E. A Pioneer Boatman Tells of Okeechobee Boats and Skippers. St. Petersburg, Florida: Great Outdoors Publishing Co. 1965. pp. 82-91.

Form No 10-300a
(Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED
DATE ENTERED

Lock No. 1, North New River Canal
CONTINUATION SHEET ITEM NUMBER 11 PAGE 1

Phillip A. Werndli, Historic Sites Specialist
Division of Archives, History, and Records Management
Department of State, The Capitol
Tallahassee, Florida

June, 1976
(904) 487-2333

Dr. Cooper Kirk, County Historian
Broward County Historical Commission
Room 800, Courthouse, 201 S.E. 6th Street
Ft. Lauderdale, Florida

ENTRIES IN THE NATIONAL REGISTER

STATE FLORIDA

Date Entered FEB 17 1978

Name	Location	
Lock #1, North New River Canal	Plantation vicinity Broward County	yes
St. Mary's Church (Episcopal)	Green Cove Springs Clay County	no

3-13-77

Also Notified

Hon. Lawton Chiles
Hon. Richard (Dick) Stone
Hon. J. Herbert Burke
Hon. William V. Chappell, Jr.

COPY OF CONGRESSIONAL NOTIFICATION

United States Department of the Interior

HERITAGE CONSERVATION AND RECREATION SERVICE

WASHINGTON, D.C. 20240

IN REPLY REFER TO:

MAR 8 1978

HISTORIC PRESERVATION SECTION

The Director of the Heritage Conservation and Recreation Service

Chris Therral Delaporte

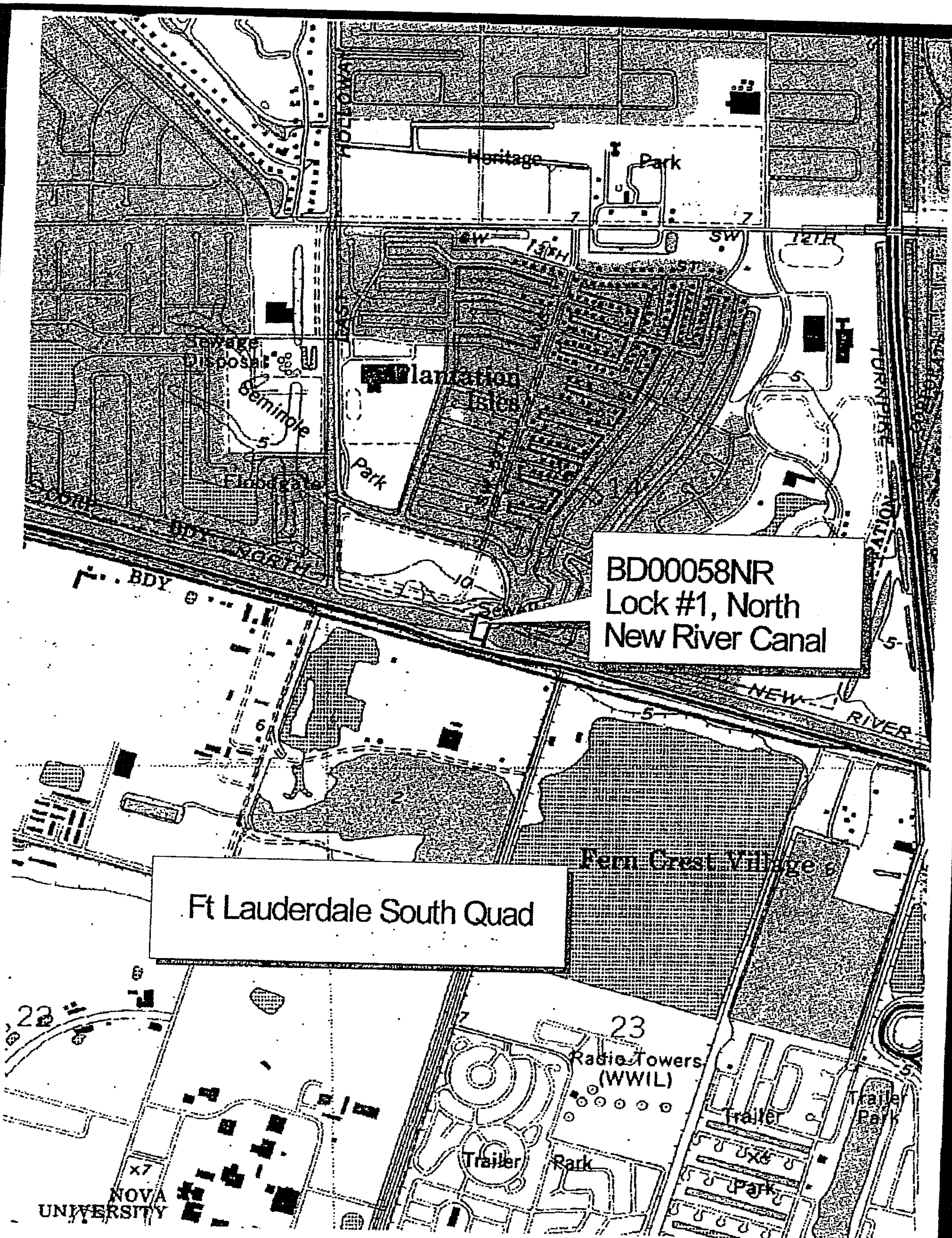
is pleased to inform you that the historic property listed on the enclosed sheet has been nominated by the State Historic Preservation Officer responsible for your State's implementation of the National Historic Preservation Act of 1966, P.L. 89-665 (80 Stat. 915), as amended. It has accordingly been entered in the National Register of Historic Places. A leaflet explaining the National Register is enclosed for your information and convenience.

Enclosures

RECEIVED

MAR 6 1978

DIVISION OF ARCHIVES
History & Records
Management


Heritage
Park
SW
12TH
13TH
ST
Sewage
Disposal
Plantation
Isles
Seminole
Park
Floodgate
BDY NORTH
BDY
BD00058NR
Lock #1, North
New River Canal
NEW
RIVER
TURNPIKE
Fern Crest Village
Ft Lauderdale South Quad
22
23
Radio Towers
(WWIL)
Trailer
Park
Trailer
Park
Trailer
Park
NOVA
UNIVERSITY

APPENDIX C
SURVEY LOG SHEET

Ent D (FMSF only)__/__/__

Survey Log Sheet

Florida Master Site File
Version 2.0 9/97

Survey # (FMSF only)_____

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

Identification and Bibliographic Information

Survey Project (Name and project phase)
CRAS of the SR-862 (I-595) PD&E Study

Report Title (exactly as on title page)
CRAS of the SR-862 (I-595) PD&E Study, Broward County

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

Publication Date (year) 2005 **Total Number of Pages in Report** (Count text, figures, tables, not site forms) 105

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

Supervisor(s) of Fieldwork (whether or not the same as author[s]; last name first) Hardin, Ken and Streelman, Amy Groover

Affiliation of Fieldworkers (organization, city) Janus Research

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.)
I-595; SR-862; Sewell Lock; Cherry Camp; Hacienda Village; North New River Canal

Survey Sponsors (corporation, government unit, or person who is directly paying for fieldwork)
Name FDOT District 4
Address/Phone

Recorder of *Log Sheet* M. Kenneally **Date *Log Sheet* Completed** 7/29/05

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)
Broward

USGS 1:24,000 Map(s) : Map Name/Date of Latest Revision (use supplement sheet if necessary):
Fort Lauderdale South 1962 PR 1983; Cooper City 1963 PR 1983; Cooper City NE 1963 PR 1983

Description of Survey Area

Dates for Fieldwork: Start 9/15/04 End 10/15/05 **Total Area Surveyed** (fill in one) _____ hectares _____ acres
Number of Distinct Tracts or Areas Surveyed 1
If Corridor (fill in one for each): **Width** _____ meters 600 feet **Length** _____ kilometers 12 miles

Survey Log Sheet of the Florida Master Site File

Research and Field Methods

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

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

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

☑ other (describe) Janus Research Library

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

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

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

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

___ other (describe): _____

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

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

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

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

A other (describe): Pedestrian Survey

Scope/Intensity/Procedures

Cultural Resource Assessment Survey: Ten round shovel tests; 40-50 cm diameter; at judgemental intervals; dug to at least 1m; screened through 1/4 in. mesh. Surface inspection/pedestrian survey of entire project area.

Survey Results (cultural resources recorded)

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

Site Counts: Previously Recorded Sites 4 Newly Recorded Sites 3

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

BD58, BD82, BD3208, BD3279

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.)

BD4072, BD4073, BD4074

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

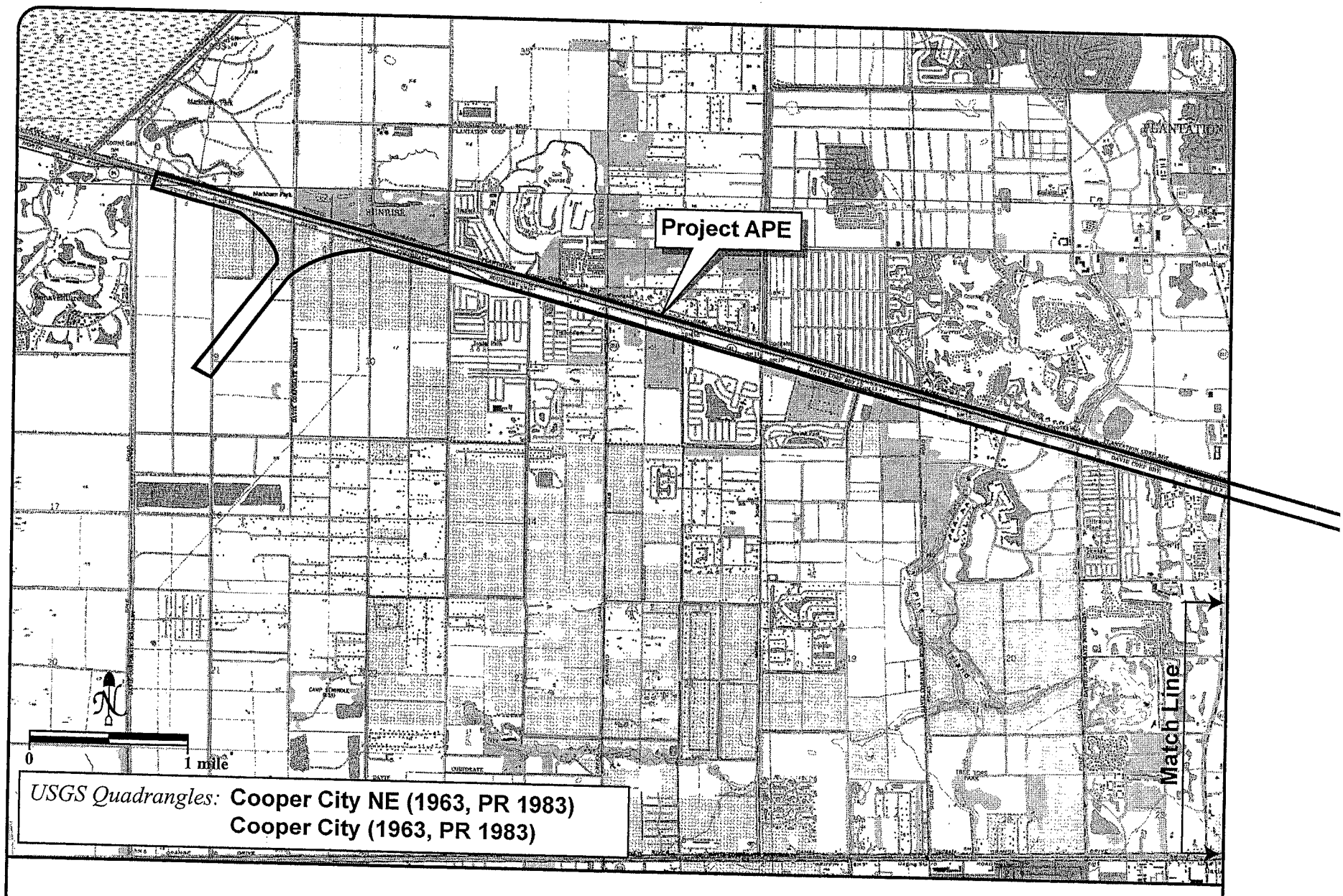
BAR Related

☐ 872 ☐ 1A32
☐ CARL ☐ UW

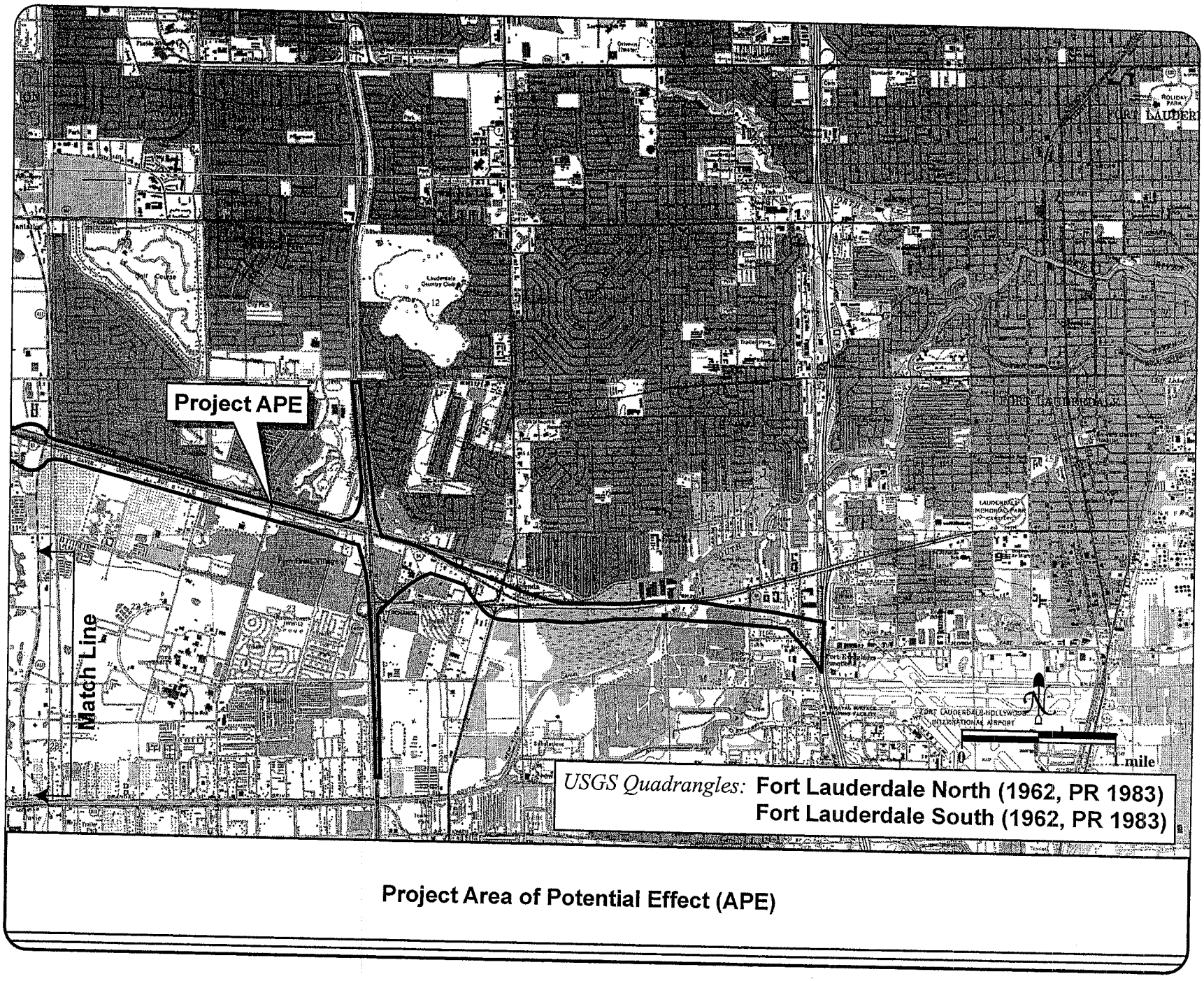
BHP Related

☐ State Historic Preservation Grant
☐ Compliance Review: CRAT #_____

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



Project Area of Potential Effect (APE)

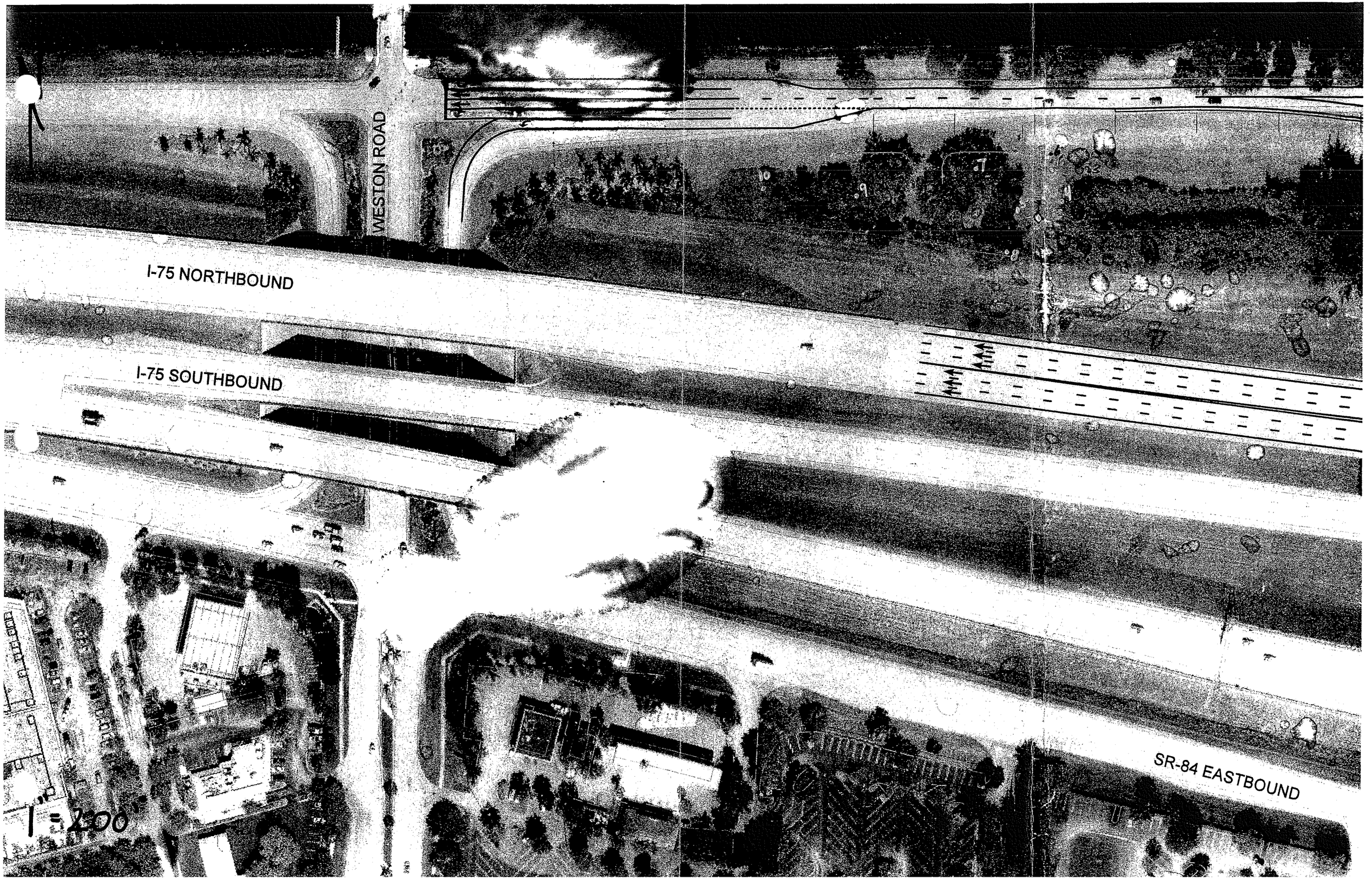


Project Area of Potential Effect (APE)

NOTE: Field map does not reflect current preferred alignment, however no additional testing was required in relation to the alignment change.

APPENDIX D

FIELD AERIALS WITH SHOVEL TEST LOCATIONS


WESTON ROAD
I-75 NORTHBOUND
I-75 SOUTHBOUND
SR-84 EASTBOUND
1" = 200'

NOR

60 MPH

SR-84 WESTBOUND

e=0.058 1500'R

e=0.058 1500'R

e=0.10 694.49'R

1" = 200'

N

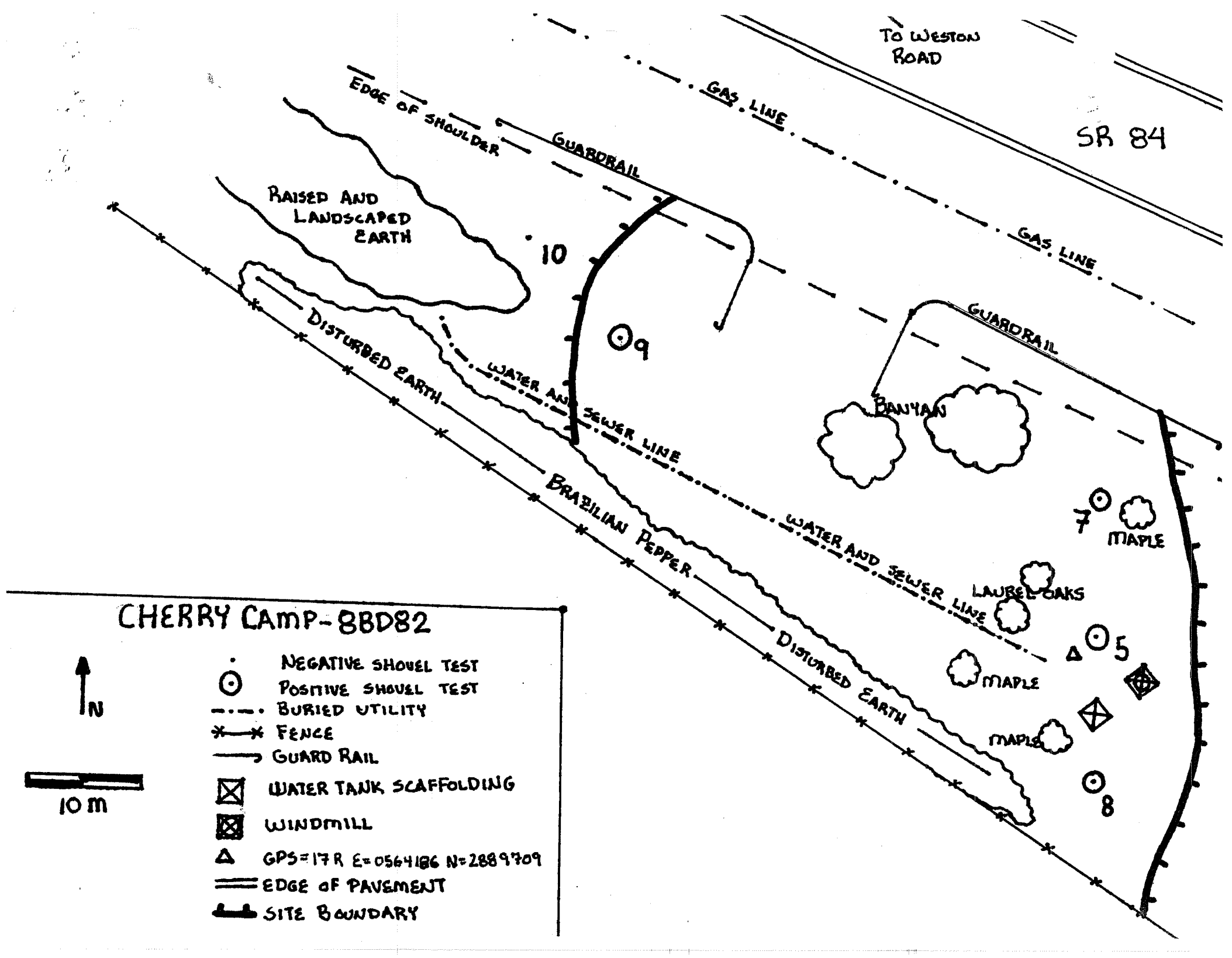
NORTH NEW RIVER CANAL

SR-84 WESTBOUND

SR-84 EASTBOUND

1" = 200'

APPENDIX E
8BD82 SITE SKETCH


TO WESTON ROAD
SR 84
EDGE OF SHOULDER
GUARDRAIL
GAS LINE
GAS LINE
RAISED AND LANDSCAPED EARTH
10
9
GUARDRAIL
DISTURBED EARTH
WATER AND SEWER LINE
BANYAN
WATER AND SEWER LINE
7
MAPLE
LAUREL OAKS
5
MAPLE
BRAZILIAN PEPPER
DISTURBED EARTH
MAPLE
8
CHERRY CAMP-8BD82
N
10 m
NEGATIVE SHOVEL TEST
POSITIVE SHOVEL TEST
BURIED UTILITY
FENCE
GUARD RAIL
WATER TANK SCAFFOLDING
WINDMILL
GPS=17R E=0564186 N=2889709
EDGE OF PAVEMENT
SITE BOUNDARY