

Form Date 06/11/03**Survey Log Sheet**

Florida Master Site File

Version 2.0 9/97

FMSF USE ONLY
FMSF Survey # 9193Consult *Guide to the Survey Log Sheet* for detailed instructions.Recorder of Log Sheet Joan Deming**Identification and Bibliographic Information**Survey Project (Name and project phase) Phase I, SR 50 PD&E Study Reevaluation from US 19 (SR 55) to the east SR 50/50A Intersection, Hernando County, FloridaIs this a continuation of a previous project? ☐ No ☒ Yes Previous survey#(s) _____Report Title (exactly as on title page) Cultural Resource Assessment Survey, SR 50 PD&E Study Reevaluation from US 19 (SR 55) to the east SR 50/50A Intersection, Hernando County, FloridaReport Author(s) (as on title page-individual or corporate) Archaeological Consultants, Inc. (ACI)Publication Date (month/year) 8/03 Total Number of Pages in Report (Count text, figures, tables, not site forms) 122Publication 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*.) Archaeological Consultants, Inc.P.O. Box 5103, Sarasota, FL 34277-5103Supervisor(s) of Fieldwork (whether or not the same as author[s]) Joan DemingAffiliation of Fieldworkers (organization, city) Archaeological Consultants, Inc.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). SR 50, US 19, Weeki Wachee Spring, Colorado Site

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

Name Florida Department of Transportation, District 7Address/Phone 11201 N. McKinley Drive, Tampa, FL 33612-6456**Mapping**Counties (List each one in which field survey was done-do not abbreviate) HernandoUSGS 1:24,000 Map(s): Names/Dates: Weeki Wachee Spring, Fla. 1954; Brooksville, Fla. 1954, PR 1988; Brooksville SE, Fla. 1954, PR 1988Remarks (Use supplementary sheet[s] if needed) Surveyed existing right of way between US 19 and Colorado Street. SR 50 from Colorado Street to east SR50/50A intersection previously surveyed in 1989 by George Ballo (archaeological survey only). Historical/architectural survey by ACI of the entire corridor. Also includes proposed ponds.**Description of Survey Area**Dates for Fieldwork: Start 04/03 End 06/03 Total Area Surveyed (fill in one) _____ hectares _____ acresNumber of Distinct Tracts or Areas Surveyed 10If Corridor (fill in one for each) Width _____ meters _____ feet Length _____ kilometers 13.7 milesTypes of Survey (check all that apply) ☒ archaeological ☒ architectural ☒ historical/archival ☐ underwater ☐ other: _____

HR6E06610-97 Florida Master Site File, Division of Historical Resources, Gray Building, 500 South Bronough St., Tallahassee, FL 32399-0250

Phone 850-487-2299, Suncom 277-2299, Fax 850-921-0372, Email fmsfile@mail.dos.state.fl.us, Web http://www.dos.state.fl.us/dhr/msf

\\C cf_graydhr\share\FSF\DOCS\FORMS\Logsheet.doc 10/03/97 11:07 AM

Survey Log Sheet of the Florida Master Site File

Research and Field Methods

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 survey |
| ☐ Florida Photo Archives (Gray Building) | ☒ library-special collection- (non local) | ☐ 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) _____ | | | |

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.

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

Historical/Architectural Methods (Describe the proportion of properties at which method was used by writing in the corresponding letter.

Blanks are interpreted as "None.")

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

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

- | | | | |
|-------------------------------|--|--------------------------|---|
| _____ building permits | _____ demolition permits | _____ neighbor interview | _____ subdivision maps |
| _____ commercial permits | ☒ A exposed ground inspected | _____ occupant interview | ☒ A tax records |
| _____ interior documentation | ☒ A local property records | _____ occupation permits | _____ unknown |
| _____ other (describe): _____ | | | |

Scope/Intensity/Procedures Background research, historical/architectural field survey, archaeological survey with systematic shovel tests at 25 m and 50 m intervals in high and moderate probability areas, respectively. Total 122 shovel tests in roadway and 89 in 9 proposed pond areas, .5 m diameter X 1 m deep; 1/4" screen. Artifacts analyzed. CRAS prepared.

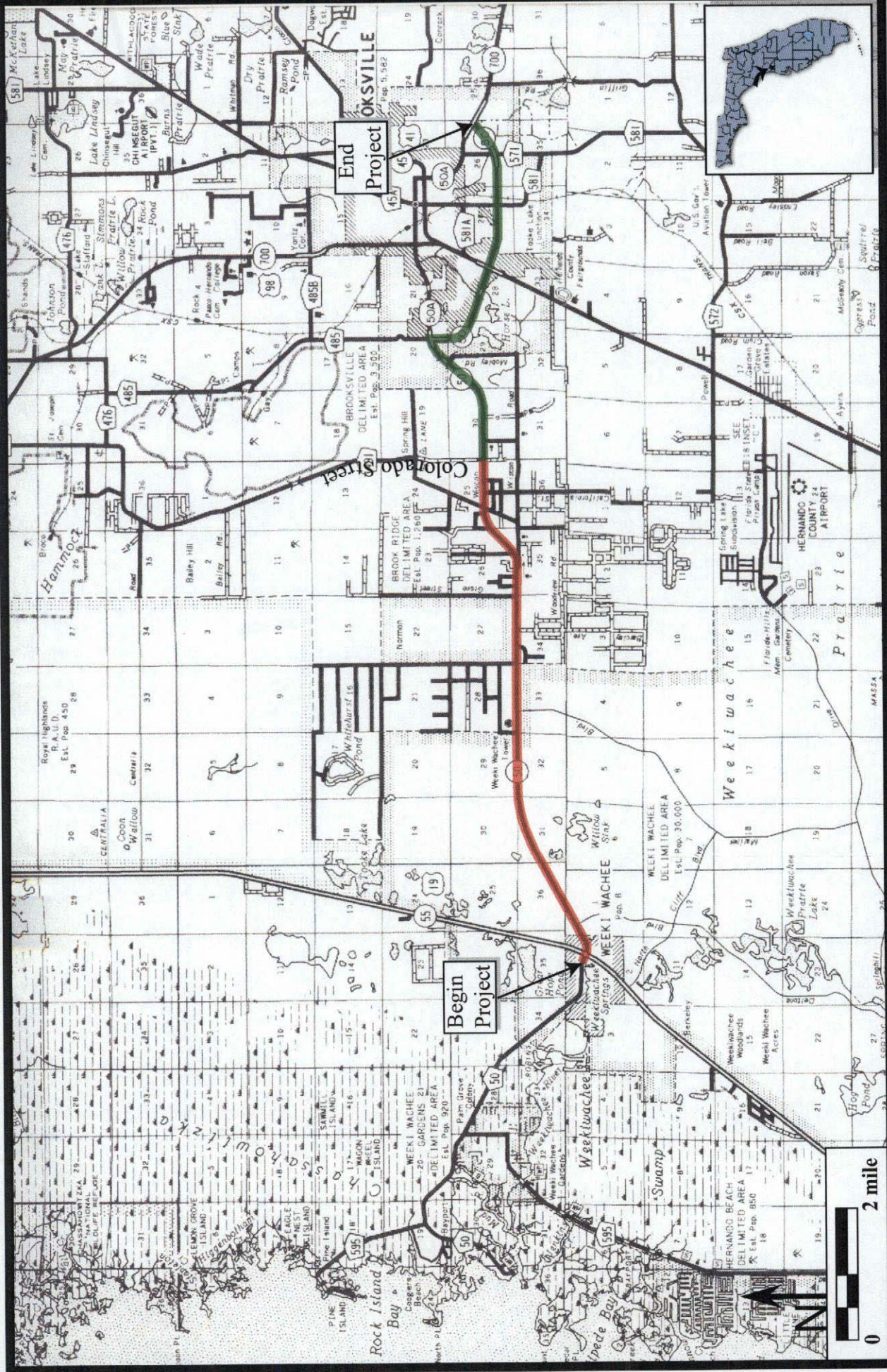
Survey Results (cultural resources recorded)

Site Significance Evaluated? ☒ Yes ☐ No If Yes, circle NR-eligible/significant site numbers below.Site Counts: Previously Recorded Sites 6 Newly Recorded Sites 5Previously Recorded Site #'s (List site #'s without "8." Attach supplementary pages if necessary) HE237, HE238, HE239, HE241, HE270, and HE391.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. HE365, HE490, HE491, HE494, and HE495.

Site Form Used: ☐ SmartForm ☐ FMSF Paper Form ☒ Approved Custom Form: Attach copies of written approval from FMSF Supervisor and Supervisor-signed form.

DO NOT USE		SITE FILE USE ONLY		DO NOT USE	
BAR Related				BHP Related	
☐ 872	☐ 1A32			☐ State Historic Preservation Grant	
☐ CARL	☐ UW			☐ Compliance Review CRAT # _____	

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



CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

Project Location Map. S.R. 50 PD&E Study Reevaluation from U.S. 19 (S.R. 55) to Colorado Street (red) and from Colorado Street to the east S.R. 50/50A Intersection (green) in Hernando County (General Highway Map, Hernando County, Florida, 1982).

FMSF NOTE TO IMAGE VIEWER

Some material contained in the corresponding paper Site file/manuscript has not been scanned.

Check material affected:

☐ Blueprints

☐ Map

☒ Site Forms

☐ Other, specify _____

This material can be viewed at the Florida Master Site File.



FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
 Secretary of State
 DIVISION OF HISTORICAL RESOURCES

Mr. James E. St. John
 U.S. Department of Transportation
 Federal Highway Administration, Florida Division
 227 N. Bronough Street, Suite 2015
 Tallahassee, Florida 32301

October 10, 2003

Attn: Marvin Williams

Re: DHR Project No. 2003-8151B / Revisions Based on Additional Information and
 Reevaluation of the Weeki Wachee Spring Mermaid Theater and Main Spring (8HE391)
 S.R. 50 PD&E Reevaluation Study
 WPI Segment No.: 407951-1 / Federal-Aid Project No.: 3001 (007)
 Hernando County

Dear Mr. St. John:

This office would like to inform your agency and other involved parties that we reevaluated the potential eligibility of the Weeki Wachee Spring Mermaid Theater, 8HE391. Based on new information it appears that the Weeki Wachee Spring itself and the 1959 Mermaid Theater are potentially eligible for listing in the *National Register of Historic Places*. We withdraw our concurrences of September 18, 2003 and December 22, 1998, at which time we were in agreement that the Weeki Wachee properties are not eligible for listing in the National Register.

The spring has attracted bathers and boaters since at least the 1920s, but the collapse of the Florida boom period and the onset of the Great Depression delayed development of the spring as a tourist attraction until after World War II.

It is the revised opinion of this office that the Weeki Wachee Spring appears to be potentially eligible as a site under Criterion A in the area of Entertainment/Recreation for its local significance in the development of local tourism, and perhaps at the national level in the area of Invention for the development of underwater breathing apparatus and underwater photography.

The Mermaid Auditorium in the spring appears to be potentially eligible as a building under Criterion C in the area of Engineering at the local, and perhaps state and national levels because of the techniques used to construct and auditorium that could withstand water pressure from the spring. It appears to meet Criteria Consideration C for resources less than 50 years old because of its unique construction. Furthermore, it is only 5-6 years shy of meeting the 50-year guideline of determining historicity.

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

☐ Director's Office
 (850) 245-6300 • FAX: 245-6435

☐ Archaeological Research
 (850) 245-6444 • FAX: 245-6436

☒ Historic Preservation
 (850) 245-6333 • FAX: 245-6437

☐ Historical Museums
 (850) 245-6400 • FAX: 245-6433

☐ Palm Beach Regional Office
 (561) 279-1475 • FAX: 279-1476

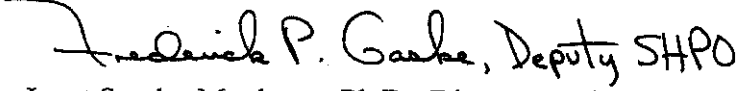
☐ St. Augustine Regional Office
 (904) 825-5045 • FAX: 825-5044

☐ Tampa Regional Office
 (813) 272-3843 • FAX: 272-2340

Mr. James St. John
October 10, 2003
Page 2

If you have any questions concerning our revised comments, please contact Laura Kammerer, Deputy State Historic Preservation Officer for Review and Compliance, or Barbara Mattick, Deputy State Historic Preservation Officer for Survey and Registration, at (850) 245-6333. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,


 Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer

Xc: Leroy Irwin, FDOT-CEMO
Rebecca Spain Schwarz, PBS&J
Sarah Payton, Archaeological Consultants, Inc.

TO: Laura Kammerer, Review and Compliance
FROM: Barbara Mattick, Survey & Registration
DATE: October 2, 2003
RE: Weeki Watchee Springs

Based on new information provided by Sherry Anderson after a recent site visit (late September 2003), it appears that the Weeki Watchee Spring itself and the 1959 Mermaid Theater are potentially eligible for listing in the National Register.

The spring has attracted bathers and boaters since at least the 1920s, but the collapse of the Florida Boom and the onset of the Great Depression delayed development as a tourist attraction until after World War II.

In the 1940s, the spring was also used for filming motion pictures under water, an experimental effort at that time.

New research shows that prior to those activities, important work in developing underwater breathing apparatus was carried at the spring, and was, in fact, the catalyst for the development of the Mermaid Show. Air chambers, developed as part of the experimentation and later used by the Mermaids, still exist in the spring.

In 1959, the present Mermaid Auditorium was built. The original auditorium building, located on another side of the spring was demolished in 1960. Although the present Mermaid Auditorium is less than 50 years old and has been superficially modified (e.g., roof), the significant design features of the building remain intact. The building actually provides an underwater auditorium and could be considered an engineering feat. Such a building would not be built today, and possibly no other such building exists.

The Weeki Wachee Spring appears to be potentially eligible as a site under **Criterion A** in the area of **Entertainment/Recreation** for its **local significance** in the development of local tourism, and perhaps at the **national level** in the area of **Invention** for the development of underwater breathing apparatus and underwater photography. The film work pursued at Weeki Watchee may be comparable to that being carried on contemporaneously at Marine Studios in Flagler County (NR 1986).

The Mermaid Auditorium appears to be potentially eligible as a building under **Criterion C** in the area of **Engineering** at the **local, and perhaps state and national levels** because of the techniques used to construct an auditorium that could withstand the water pressure from the spring. It appears to meet **Criteria Consideration G** for resources less than 50 years old because of its unique construction. Furthermore, it is only 5-6 years shy of meeting the 50-year guideline of determining historicity.



FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
 Secretary of State
 DIVISION OF HISTORICAL RESOURCES

Mr. James E. St. John
 Attn: Marvin L. Williams
 U.S. Department of Transportation
 Federal Highway Administration, Florida Division
 227 N. Bronough Street, Suite 2015
 Tallahassee, Florida 32301

September 18, 2003

Re: DHR Project No. 2003-8151 (988273) / Received by DHR: September 15, 2003 *LAHC 9/19/03*
 Financial Management No. 407951-1 / Federal-Aid Project No.3001 (007)
Cultural Resource Assessment Survey: S.R. 50 Project Development and Environment (PD&E)
Study Reevaluation from U.S. 19 (S.R. 55) to the East of S.R. 50/50A Intersection
Hernando County, Florida.

Dear Mr. St. John,

Our office received the referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992, and *36 C.F.R., Part 800: Protection of Historic Properties*. The State Historic Preservation Officer is to advise and assist federal agencies when identifying historic properties listed or eligible for listing in the *National Register of Historic Places*, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

Results of the survey indicate the identification and evaluation of three new archaeological sites (8HE490, 8HE491, and 8HE365), and the extension and update of one previously recorded site (8HE241). Four archaeological occurrences were also identified. The architectural survey resulted in the identification of two new historic structures (8HE494 and 8HE495) and one previously recorded resource (8HE391) within the Area of Potential Effect (APE).

8HE490, 8HE491, and 8HE365 are low-density lithic scatters with unknown temporal / cultural affiliation. It is the opinion of Archaeological Consultants, Inc. (ACI) that the proposed developmental plans will have no effect on properties of historical or archaeological value. Based on the information provided, our office concurs with this determination.

Site 8HE241 was evaluated as being potentially eligible for listing in the *National Register of Historic Places* in 1990. Although the current investigation expanded the western margin of this site, no new information was derived. It is the opinion of ACI that the "A" portion of site 8HE241, in the APE has low research potential, and is not considered potentially eligible for listing in the *National Register of Historic Places*. Based on the information provided, our office concurs with this determination.

The two historic structures 8HE494 and 8HE495 are Frame Vernacular Style residences representing commonly occurring types of local architecture. Due to common design, non-historic alterations, and lack of known significant historical associations, it is the opinion of ACI that these structures do not appear to meet the criteria for listing in the *National Register of Historic Places*. Based on the information provided, our office concurs with this determination.

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

☐ Director's Office
 (850) 245-6300 • FAX: 245-6435

☐ Archaeological Research
 (850) 245-6444 • FAX: 245-6436

☒ Historic Preservation
 (850) 245-6333 • FAX: 245-6437

☐ Historical Museums
 (850) 245-6400 • FAX: 245-6433

☐ Palm Beach Regional Office
 (561) 279-1475 • FAX: 279-1476

☐ St. Augustine Regional Office
 (904) 825-5045 • FAX: 825-5044

☐ Tampa Regional Office
 (813) 272-3843 • FAX: 272-2340

59

Mr. St. John
September 18, 2003
Page 2

8HE391, the Weeki Wachee Spring Mermaid Theatre and Main Spring, constructed in 1959 is a significant historic tourist attraction. However, due to the non-historic modifications and the site hitherto not completing 50 years of age, it is ACT's recommendation, that the property be re-evaluated for its NRHP-eligibility in 2009. Based on the information provided, our office concurs with this determination.

If you have any questions concerning our comments, please contact Mini Sharma, Historic Sites Specialist, at mtsharma@dos.state.fl.us or (850) 245-6333. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,



Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer

Xc: Leroy Irwin, FDOT-CEMO
Waddah Farah, FDOT, District Seven, Planning / EMO



U. S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
Florida Division
227 N. Bronough Street, Suite 2015
Tallahassee, Florida 32301
(850) 942-9650

HERNANDO 9193
SURVEY - FHWA-
DOT-1
2003-8151
FLORIDA
www.fhwa.dot.gov/fldiv
XREF: 3001
988273
September 12, 2003

IN REPLY
REFER TO: HPO-FL

Dr. Janet Snyder Matthews, Director
Division of Historical Resources
State Historical Preservation Officer
500 South Bronough Street
Tallahassee, Florida 32399-0250

Attention: Ms. Laura Kammerer

Dear Dr. Matthews:

Subject: Cultural Resources Assessment Survey
S.R. 50 from U.S. 19 to the east of S.R. 50/50 A Intersection
Financial Management I.D. #: 407951-1
Federal-aid Project I.D. #: 3001 (007)
Hernando County

RECEIVED
BUREAU OF
HISTORIC PRESERVATION
03 SEP 15 AM 10:04

The Federal Highway Administration (FHWA), in cooperation with the Florida Department of Transportation (FDOT), is conducting a reevaluation study for the subject project located in Hernando County. Proposed improvements to S.R. 50 (Cortez Boulevard) consist of capacity improvements including storm water retention and floodplain compensation areas, a distance of approximately 13.7 miles.

A 2003 Cultural Resource Assessment Study (CRAS) was conducted to identify archaeological sites and or historic structures contained within the Area of Potential Effect (APE), and to assess their eligibility for listing in the *National Register of Historic Places (NRHP)*.

Background research and the archaeological field survey resulted in the identification of five previously recorded archaeological sites (8HE237, 8HE238, 8HE239, 8HE241, and 8HE270), three previously unrecorded archaeological sites (8HE365, 8HE490, and 8HE491) and three archaeological occurrences. Four of the five previously recorded archaeological sites surveyed in 1988, were not archaeologically surveyed again for this reevaluation. These existing and newly-recorded archaeological sites are not considered *NRHP*-eligible.

The fifth site is the Colorado Site (8HE241), determined eligible for listing in the *NRHP* and a Memorandum of Agreement (MOA) was prepared in 1989. Phase II archaeological testing and Phase III mitigative excavations were subsequently performed at this site. During this survey, it was discovered that the boundary of 8HE241A extends further than originally proposed. Since no new information was derived, and this portion has low research potential, 8HE241A is not considered *NHRP*-eligible.

Dr. Janet Snyder Matthews
September 12, 2003

2

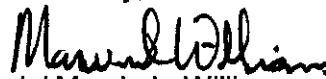
Historical background research indicated that two newly recorded structures (8HE494 and 8HE495) and one historical resource, the Weeki Wachee Spring Mermaid Theatre (8HE391), and is located within the project APE. The two Frame Vernacular structures are common to the area, and did not reveal significant historical associations. Although 8HE391 was considered by Archaeological Consultants, Inc. (ACI) as having significant historical associations as a tourist attraction, the original buildings are no longer extant, and the current facilities date from no earlier than 1959. Therefore, none of the historic resources are considered (*NRHP*) eligible. However, ACI recommends that the (*NRHP*) eligibility be reassessed in 2009 when (8HE391) becomes 50 years old.

Therefore, based on the information presented in the CRAS and the application of adverse effects criteria included in 36 CFR, Part 800.5, the FHWA has determined that this proposed undertaking would have no effect on any resources listed, or considered eligible for listing in the *NRHP*. Pursuant to 36 CFR, Part 800.8, we request your review and concurrence with the above stated determination of eligibility. Enclosed please find:

- One original copy of the CRAS (August 2003),
- One complete Survey Log Sheet (SLS),
- Five original Florida Master Site File (FMSF) forms (8HE365, 8HE490, 8HE491, 8HE494, 8HE495), and
- One updated FMSF form (8HE241A).

If you have any questions, please contact Mr. Marvin L. Williams at (850) 942-9650, extension 3029, or Mr. Preston W. Wilson extension 3111.

Sincerely,


/s/ Marvin L. Williams

For: James E. St. John
Division Administrator

Enclosures

cc: Mr. Waddah Farah, FDOT, District Seven, Planning/ EMO

Dr. Janet Snyder Matthews
September 12, 2003

2

Subject: Cultural Resources Assessment Survey
S.R. 50 from U.S. 19 to the east of S.R. 50/50 A Intersection
Financial Management I.D. #: 407951-1
Federal-aid Project I.D. #: 3001 (007)
Hernando County

The Florida Division of Historic Resources concurs with this determination, and finds the report complete and sufficient.

Janet Snyder Matthews, Ph.D.
Florida State Historic Preservation Officer

Date

DHR File No. _____ **Previous DHR File No.** **988273**

cc: Mr. Waddah Farah, FDOT District Seven, Planning/ EMO
Mr. Roy Jackson, FDOT CEMO (MS-37)



Florida Department of Transportation

11201 N. McKinley Drive • Tampa, FL 33612-6456 • Phone (813) 975-6000 • 1-800-226-7220
 Modal Planning and Development M.S. 7-500

JEB BUSH
 GOVERNOR

RECEIVED FHWA
 03 AUG 25 PM 1:10
 JOSE ABREU
 SECRETARY
 FLORIDA DIVISION

August 20, 2003

Mr. James E. St. John
 Division Administrator
 Federal Highway Administration
 227 N. Bronough Street, Room 2015
 Tallahassee, Florida 32301-2015

Attention: Mr. Marvin Williams, Urban Transportation Engineer

RE: WPI Segment No: 407951 1; FAP No. 300-1 (7)
 S.R. 50 from U.S. 19 to the East Intersection of S.R. 50/50A, Hernando County

Dear Mr. St. John:

Enclosed are two copies of the Cultural Resource Assessment Survey (CRAS) Report (August 2003) for the above referenced Project Development and Environment (PD&E) Study Reevaluation. Also enclosed are five original Florida Master Site File (FMSF) forms (8HE365, -490, -491, -494, and -495), one updated FMSF form (8HE241A), and one Survey Log Sheet. This report has been reviewed by our staff and we are fully in concurrence with its methodology, execution and conclusions.

The archaeological field survey resulted in the identification of three previously unrecorded archaeological sites (8HE365, -490, -491) and three archaeological occurrences. In addition, the boundary of previously recorded archaeological site 8HE241A was expanded. With the exception of the expanded western limit of 8HE241, five previously recorded archaeological sites (8HE237, -238, -239, -241, and -270) were not archaeologically surveyed again. One of the previously recorded archaeological sites, the Colorado Site (8HE241), had been determined eligible for listing in the National Register of Historic Places (NRHP) and a Memorandum of Agreement (MOA) was prepared in 1989. Phase II archaeological testing and Phase III mitigative excavations were subsequently performed on this site in 1992 and 1998 to fulfill the stipulations in the MOA. No other work is recommended at this site. The expanded portion of 8HE241A and the other archaeological sites are not considered NRHP eligible.

The historic structures field survey identified one previously recorded historic resource, the Weeki Wachee Spring Mermaid Theater (8HE391), and two newly recorded historic structures (8HE494 and 8HE495). None of the historic resources is considered NRHP eligible.

The enclosed documents are being provided for your review. If your office concurs with the findings, please transmit one copy of the report, along with the FMSF forms and Survey Log Sheet, to the SHPO for her formal review and concurrence. With the submittal of this report, we are confident that all requirements of Section 106 of the National Historic Preservation Act, as amended, as well as all provisions of the Department's PD&E Manual, have been fulfilled.

Mr. James E. St. John

Page 2

August 20, 2003

Please expeditiously coordinate the review of the enclosed documents with the SHPO. If you have any questions please do not hesitate to call me at (813) 975-6922.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Seifert", with a long horizontal flourish extending to the right.

Michael Seifert

PD&E Project Manager

Michael.seifert@dot.state.fl.us

Enclosure

cc: Rick Adair

Dan Kelley, Ayers Associates

Rebecca Spain Schwarz, PBS&J

9193

FINAL

CULTURAL RESOURCE ASSESSMENT SURVEY

**S.R. 50 PROJECT DEVELOPMENT AND ENVIRONMENT
(PD&E) STUDY REEVALUATION
FROM U.S. 19 (S.R. 55) TO THE EAST
S.R. 50/50A INTERSECTION,
HERNANDO COUNTY, FLORIDA**

**WPI Segment No.: 407951 1
FAP No.: 300-1(7)**

Prepared for:

**Florida Department of Transportation
District Seven
11202 North McKinley Drive
Tampa, Florida 33612-6456**

**CRAT #
2003 - 8151**

August 2003

FINAL

CULTURAL RESOURCE ASSESSMENT SURVEY

**S.R. 50 PROJECT DEVELOPMENT AND ENVIRONMENT
(PD&E) STUDY REEVALUATION
FROM U.S. 19 (S.R. 55) TO THE EAST
S.R. 50/50A INTERSECTION,
HERNANDO COUNTY, FLORIDA**

**WPI Segment No.: 407951 1
FAP No.: 300-1(7)**

Prepared for:

**Florida Department of Transportation
District Seven
11202 North McKinley Drive
Tampa, Florida 33612-6456**

Prepared by:

**Archaeological Consultants, Inc.
8110 Blaikie Court, Suite A
Sarasota, Florida 34240**

**Joan Deming - Principal Investigator
Elizabeth Horvath - Project Archaeologist
Sarah Payton - Architectural Historian
Tesa Norman - Graphics Specialist**

In association with:

**PBS&J
5300 West Cypress Street, Suite 300
Tampa, Florida 33607-1006**

August 2003

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study Reevaluation, which evaluates capacity improvement options along S.R. 50 (Cortez Boulevard) in Hernando County, Florida. The project corridor extends from U.S. 19 (S.R. 55) to the east S.R. 50/50A intersection, a distance of approximately 13.7 miles. The PD&E Study also includes proposed stormwater retention and floodplain compensation areas. A cultural resource assessment survey (CRAS) was undertaken to comply with Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-655), as amended, and the implementing regulations 36 CFR 800 (revised May 1999), as well as the provisions contained in the revised Chapter 267, Florida Statutes. All work was carried out in conformity with Part 2, Chapter 12 ("Archaeological and Historical Resources") of the FDOT's Project Development and Environment Manual (revised January 1999), and the standards contained in "The Historic Preservation Compliance Review Program of the Florida Department of State, Division of Historical Resources" manual (revised November 1990).

The purpose of the CRAS was to locate, identify, and bound any cultural resources within the project area of potential effect (APE) and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). The historical/architectural and archaeological field surveys for the roadway were conducted in April 2003; proposed pond sites were surveyed in June 2003. This report documents the results of the CRAS component of the PD&E Study Reevaluation, and includes the roadway alignment alternatives as well as proposed pond sites. A preliminary CRAS of proposed pond alternative sites was performed in May 2003. The results of this analysis are included in Appendix C.

For the purpose of the archaeological survey, the APE was defined as the existing right-of-way for the segment of S.R. 50 from U.S. 19 (S.R. 55) to Colorado Street. This segment of S.R. 50 was included in a 1988 archaeological survey prepared by FDOT. However, in view of changed standards since that time, this segment required a new

systematic archaeological survey. The segment of S.R. 50 between Colorado Street to the east intersection of S.R. 50/50A, however, was included in the archaeological survey of S.R. 50 from Colorado Street to U.S. 301, conducted in 1989 by George Ballo of the FDOT which followed currently accepted survey methods. Therefore, no additional archaeological survey was required for this segment. For the historical/architectural survey, the APE extended approximately 400 feet from the centerline to both sides of the existing right-of-way for the entire project length. The APE also included the proposed pond sites, including the outfall areas.

Archaeological background research, including a review of the Florida Master Site File (FMSF) and the NRHP, indicated that five previously recorded archaeological sites (8HE237, 8HE238, 8HE239, 8HE241, and 8HE270) are located within the PD&E Study Reevaluation project APE. Of these, the Colorado Site (8HE241) was determined eligible for listing in the NRHP. A review of relevant site locational information for environmentally similar areas within Hernando County and the surrounding region indicated a generally moderate to low probability for the occurrence of prehistoric (precontact) sites within the project APE. The background research also indicated that sites, if present, would most likely be small lithic or artifact scatters. The results of historical research suggested a low potential for historic period archaeological sites.

As a result of field survey for the roadway, two archaeological sites (8HE490 and 8HE491) were newly identified, and the boundary of previously recorded site 8HE241A was expanded. Neither the newly recorded sites, nor the expanded portion of 8HE241A are considered potentially eligible for listing in the NRHP. Two archaeological occurrences (AOs) also were discovered within the project right-of-way. With the exception of the western limit of 8HE241, the five previously recorded archaeological sites (8HE237, 8HE238, 8HE239, 8HE241, and 8HE270) were not archaeologically surveyed. In addition, CRAS of the proposed pond sites resulted in the discovery and evaluation of one new archaeological site (8HE365) within proposed Pond A, and two AOs within proposed Pond I-South and Pond J, respectively. The latter is probably

associated with 8HE241C. Neither 8HE365 nor the two AOs discovered within the two proposed pond sites are considered potentially NRHP-eligible.

Historical background research, including a review of the FMSF and the NRHP, indicated that one historic resource, the Weeki Wachee Spring Mermaid Theatre (8HE391) was recorded previously within the PD&E Study Reevaluation APE. This resource, identified and evaluated by Janus Research during survey of a segment of U.S. 19 (S.R. 55) (Janus Research 1998), was not considered potentially eligible for listing in the NRHP. Field survey for the roadway resulted in the identification and evaluation of two historic resources (8HE494 and 8HE495). Neither is considered potentially NRHP-eligible. No historic resources were located within or adjacent to the proposed ponds.

TABLE OF CONTENTS

Section	Title	Page
	EXECUTIVE SUMMARY	i
	TABLE OF CONTENTS	iv
	LIST OF FIGURES, TABLES, AND PHOTOGRAPHS	vi
1.0	INTRODUCTION	1-1
1.1	Purpose	1-1
1.2	Project Description	1-7
2.0	ENVIRONMENTAL SETTING	2-1
2.1	Project Location and Physical Environment.....	2-1
2.2	Physiography and Geology	2-1
2.3	Lithic Resources	2-6
2.4	Vegetation and Soils	2-9
2.5	Local Hydrology	2-11
2.6	Paleoenvironmental Considerations	2-12
3.0	PRECONTACT CULTURAL REVIEW	3-1
3.1	Paleo-Indian.....	3-1
3.2	Archaic.....	3-6
3.3	Formative.....	3-13
3.4	Mississippian/Acculturative	3-15
4.0	HISTORICAL OVERVIEW	4-1
5.0	RESEARCH CONSIDERATIONS AND METHODS	5-1
5.1	Background Research and Literature Review	5-1
5.1.1	Archaeological Considerations.....	5-1
5.1.2	Historical Considerations.....	5-8
5.2	Field Methodology.....	5-8
5.3	Laboratory Methods and Curation.....	5-9
5.4	Unexpected Discoveries	5-10
6.0	SURVEY RESULTS.....	6-1
6.1	Archaeological Survey Results.....	6-1
6.2	Historical/Architectural Survey Results	6-26
7.0	CONCLUSIONS AND SITE EVALUATIONS.....	7-1
7.1	Archaeological Sites	7-1
7.2	Historic Structures	7-2

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
8.0	REFERENCES CITED.....	8-1
8.1	Archaeological	8-1
8.2	Historical.....	8-14
 APPENDICES		
APPENDIX A:	Florida Master Site File (FMSF) Forms for Previously and Newly Recorded Archaeological Sites and Historic Structures	
APPENDIX B:	Request for Determination of Eligibility: Weeki Wachee Spring (Janus Research 1998) and SHPO Concurrence Letter	
APPENDIX C:	Preliminary Cultural Resource Assessment of Proposed Pond Alternative Sites (ACI May 2003)	
APPENDIX D:	Survey Log Sheet	

LIST OF FIGURES, TABLES, AND PHOTOGRAPHS

<u>Figure</u>	<u>Page</u>
Figure 1.1. Project Location Map.	1-2
Figure 1.2. Location of Proposed Pond Sites A, B, C, D, E-North, and E-South.....	1-3
Figure 1.3. Location of Proposed Pond Sites F-North, F-South, G/H, I-North, and I-South.....	1-4
Figure 1.4. Location of Proposed Pond Sites J, K, L, and "NE of Cobb Rd," and Areas A-D of the Colorado Site (8HE241).	1-5
Figure 2.1. Project Location and Environmental Setting.	2-2
Figure 2.2. Project Location and Environmental Setting.	2-3
Figure 2.3. Project Location and Environmental Setting.	2-4
Figure 2.4. Project Location and Environmental Setting.	2-5
Figure 2.5. Location of Florida Quarry Clusters.....	2-8
Figure 3.1. Florida Archaeological Regions.	3-2
Figure 6.1. Location of Newly Recorded Archaeological Sites 8HE490 and 8HE365, AO #1, and Previously Recorded Historic Structure 8HE391.	6-3
Figure 6.2. Location of Newly Recorded Archaeological Site 8HE491, AO #2 and AO # 3, and Newly Recorded Historic Structure 8HE494.	6-4
Figure 6.3. Location of Previously Recorded Archaeological Sites 8HE241 (A-D), 8HE237, 8HE238, 8HE239, and West Extension of 8HE241A (update), and AO # 4.....	6-5
Figure 6.4. Location of Previously Recorded Archaeological Site 8HE270 and Newly Recorded Historic Structure 8HE495.	6-6
Figure 6.5. Location of Shovel Tests and Approximate Boundaries of Newly Recorded Site 8HE490.	6-8
Figure 6.6. Location of Shovel Tests and Approximate Boundary of Newly Recorded Archaeological Site 8HE365 Within Proposed Pond A.....	6-11
Figure 6.7. Location of Shovel Tests and AO #2 Within Proposed Pond I-South.	6-13
Figure 6.8. Location of Shovel Tests, Approximate Boundary of Newly Recorded Archaeological Site 8HE491, and AO #3.....	6-15
Figure 6.9. Location of Shovel Tests and Boundary of West Extension of Archaeological Site 8HE241A.	6-21
Figure 6.10. Location of Shovel Tests and AO # 4 Within Proposed Pond J.....	6-23

Table

Table 2.1. Soil Types and Drainage Characteristics.....	2-10
Table 3.1. Cultural Chronology and Traits.....	3-3
Table 5.1. Archaeological Sites Located Within 3.2 km (2 mi) of the S.R. 50 Project...	5-2
Table 6.1. Summary of Survey Results for Proposed Pond Sites.....	6-2

Photo

Photo 1.1. Looking Northwest Along S.R. 50.....	1-8
Photo 1.2. Looking Northeast Along S.R. 50.....	1-9
Photo 6.1. Looking North Along East Side of U.S. 19, due North of S.R. 50, in the Area of 8HE490.....	6-7
Photo 6.2. Looking Southeast at Proposed Pond A in Vicinity of Surface Lithic Scatter.	6-10
Photo 6.3. Looking East Along the North Side of S.R. 50 in the Area of 8HE491.	6-14

1.0 INTRODUCTION

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study Reevaluation, which evaluates capacity improvement options along S.R. 50 (Cortez Boulevard) in Hernando County, Florida. The proposed project involves widening S.R. 50 from the existing 4-lane typical section to a 6-lane typical section from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/50A [along the Brooksville Bypass], a distance of approximately 13.7 miles. The widening of the segment of S.R. 50 from U.S. 19 (S.R. 55) to the west intersection of S.R. 50/50A is proposed to be widened to the outside; whereas the remainder of the project, from the west intersection of S.R. 50/50A to the east intersection of S.R. 50/50A [along the Brooksville Bypass], is proposed to be widened to the inside (Figure 1.1). The PD&E Study Reevaluation also includes proposed stormwater retention and floodplain compensation areas, hereinafter referred to as proposed ponds (Figures 1.2, 1.3, and 1.4).

1.1 Purpose

The purpose of this PD&E Study Reevaluation is to review the previous PD&E Study that was performed for the project and document any changes that have occurred since it was approved by the Federal Highway Administration (FHWA) on March 22, 1990. The previous PD&E study being reevaluated is S.R. 50 from U.S. 19 (S.R. 55) to the eastern intersection of S.R. 50/S.R. 50A. This PD&E Study Reevaluation includes analyses to determine the type, conceptual design, and location of improvements for accommodating present and future traffic demands, social and economic demands, and conformance to present plans and policies in a safe and efficient manner. This Reevaluation also satisfies the requirements of the National Environmental Policy Act (NEPA) and all other applicable federal requirements in order to receive federal funding for the design, right-of-way acquisition and construction of the project.

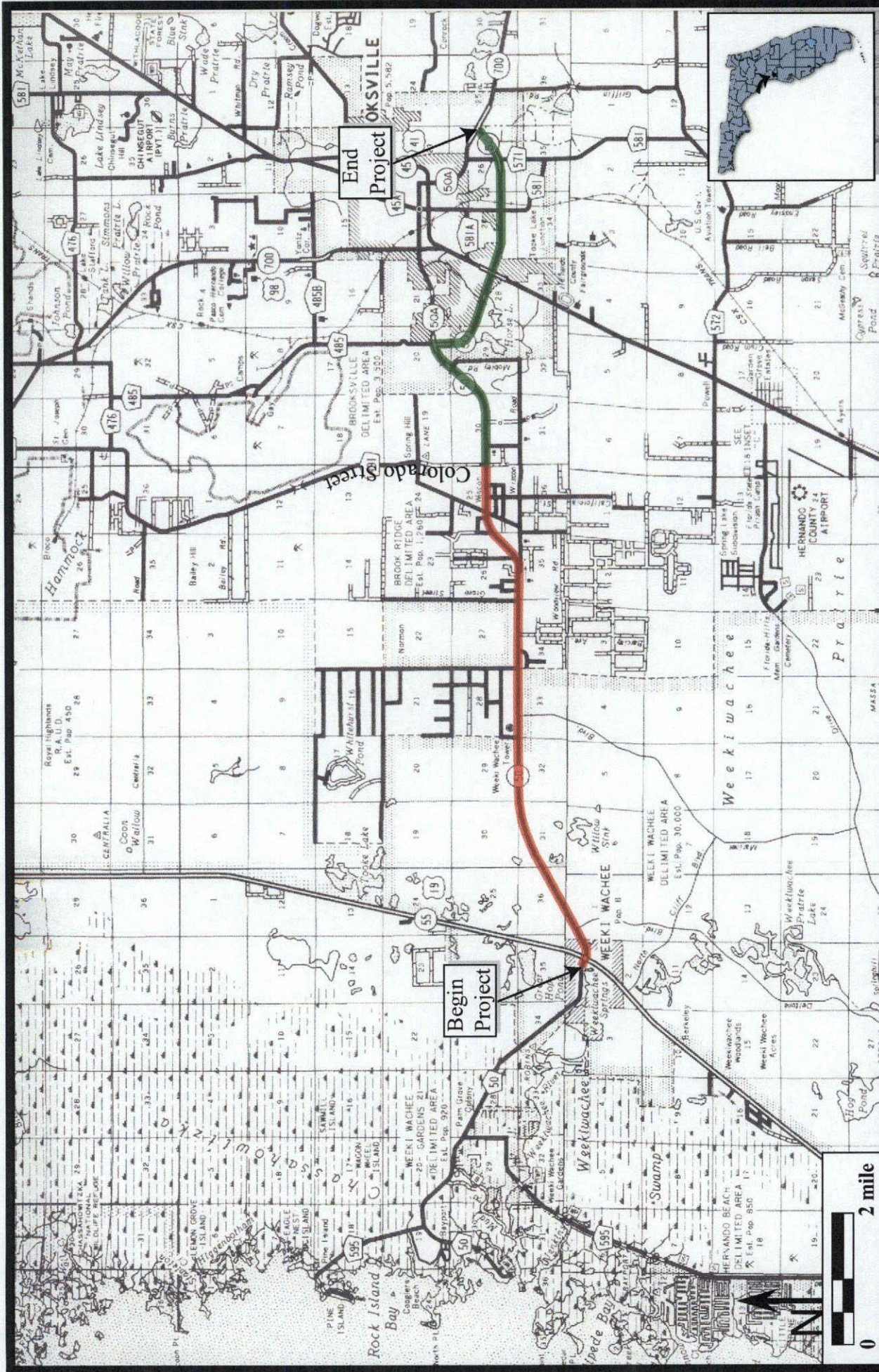


Figure 1.1. Project Location Map. S.R. 50 PD&E Study Reevaluation from U.S. 19 (S.R. 55) to Colorado Street (red) and from Colorado Street to the east S.R. 50/50A Intersection (green) in Hernando County (General Highway Map, Hernando County, Florida, 1982).

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

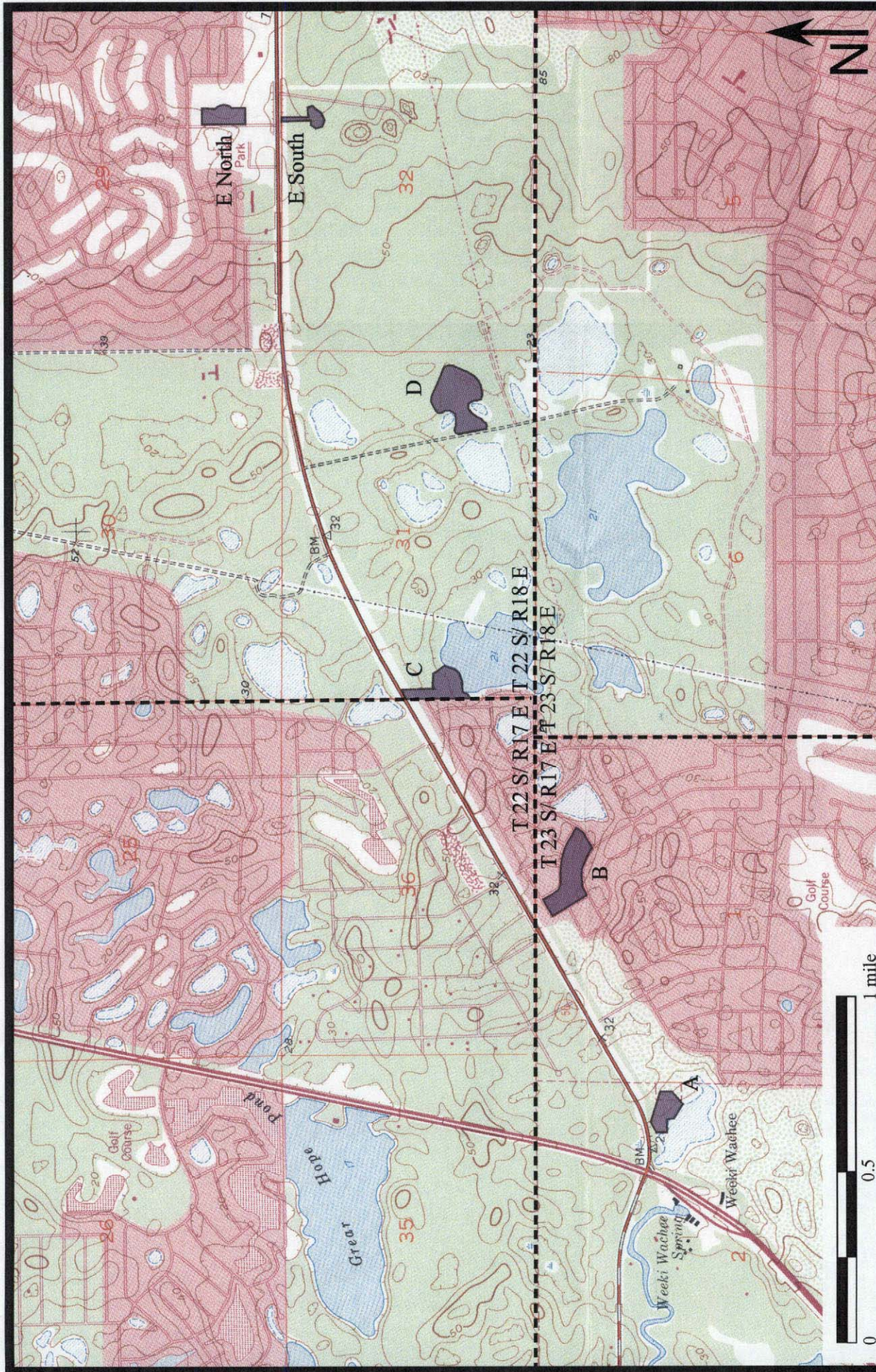


Figure 1.2. Location of Proposed Pond Sites A, B, C, D, E-North, and E-South. Townships 22 and 23 South, Ranges 17 and 18 East (USGS Weekly Wachee Spring, Fla. 1954, PR 1988).

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY



Figure 1.3. Location of Proposed Pond Sites F-North, F-South, G/H, I-North, and I-South. Township 22 South, Range 18 East (USGS Brooksville, Fla. 1954, PR 1988).

CRAS

S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

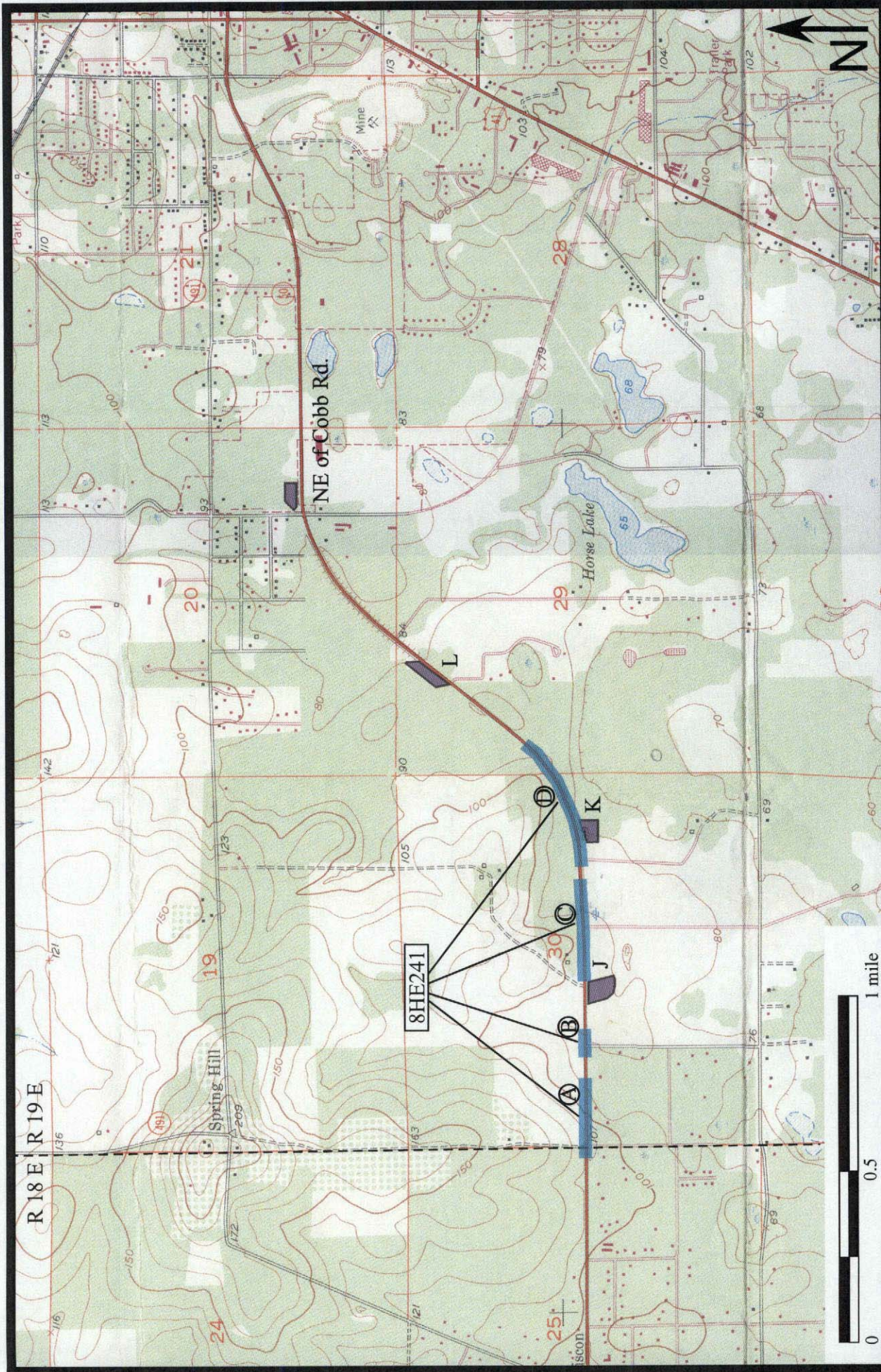


Figure 1.4. Location of Proposed Pond Sites J, K, L, and "NE of Cobb Rd.," and Areas A-D of the Colorado Site (8HE241). Township 22 South, Range 19 East (USGS Brooksville, Fla. 1954, PR 1988).

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

Improvements to this section of S.R. 50 are needed because the existing roadway will not be capable of providing an adequate Level of Service (LOS) based on the demands of the future traffic projections. Hernando County MPO's 2025 *LRTP* includes the widening of S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/50A [along the Brooksville Bypass], which is also included in an appendix of Hernando County's *Comprehensive Plan*. In addition, portions of the project corridor are included in the FDOT's *5-Year Tentative Work Program* for capacity improvements.

This Cultural Resource Assessment Survey (CRAS) Report was prepared as part of the PD&E Study Reevaluation undertaken by the FDOT for improvement alternatives to S.R. 50 from U.S. 19 (S.R. 55) to the east S.R. 50/50A intersection in Hernando County, Florida. The project segment from U.S. 19 (S.R. 55) to Colorado Street, indicated by red shading in Figure 1.1, was previously surveyed by FDOT in February 1988, but did not follow currently accepted survey methods. The segment from Colorado Street to the east S.R. 50/50A intersection, indicated by green shading, was, however, archaeologically surveyed in 1989 by FDOT, following currently accepted survey methods.

The purpose of the CRAS was to locate, identify, and bound any cultural resources located within and adjacent to the project area of potential effect (APE) and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). The historical/architectural and archaeological field surveys were conducted in April 2003. Field survey was preceded by background research. Such work served to provide both an informed set of expectations concerning the kinds of cultural resources which might be anticipated to occur within the project's APE, as well as a basis for evaluating any new sites discovered.

For the purpose of the archaeological survey, the APE was defined as the existing right-of-way for the segment of S.R. 50 from U.S. 19 (S.R. 55) to Colorado Street. This segment was included in a 1988 archaeological survey prepared by FDOT. However, in view of changed standards since that time, this segment required a new systematic

archaeological survey. The segment of S.R. 50 between Colorado Street to the east intersection of S.R. 50/50A, however, was included in the archaeological survey of S.R. 50 from Colorado Street to U.S. 301, conducted in 1989 by George Ballo of the FDOT which followed currently accepted survey methods. Therefore, no additional archaeological survey was required for this segment. For the historical/architectural survey, the APE extended approximately 400 feet from the centerline to both sides of the existing right-of-way for the entire project length. The APE for archaeological and historical/architectural surveys also included the proposed pond sites, including the outfall areas.

This survey was undertaken in order to comply with Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-655), as amended, and the implementing regulations 36 CFR 800 (revised May 1999), as well as the provisions contained in the revised Chapter 267, Florida Statutes. All work was carried out in conformity with Part 2, Chapter 12 ("Archaeological and Historical Resources") of the FDOT's *Project Development and Environment Manual* (revised January 1999), and the standards contained in "The Historic Preservation Compliance Review Program of the Florida Department of State, Division of Historical Resources" manual (revised November 1990).

English units of measure are used throughout most of this report. However, in accordance with standard archaeological convention, metric equivalents are provided in Sections 5 and 6.

1.2 Project Description

S.R. 50 is an east/west principal arterial facility. This Study Reevaluation examines the section of S.R. 50 from U.S. 19 (S.R. 55) to the east intersection of S.R. 50/50A [along the Brookville Bypass], a distance of approximately 13.7 miles (see Figure 1.1). The majority of the project is located within an unincorporated area of Hernando County; however, portions extend through the City of Weeki Wachee and the City of Brooksville.

The project is located in Section 36 of Township 22 South, Range 17 East; Sections 25 through 36 of Township 22 South, Range 18 East; Sections 20, and 25 through 30 of Township 22 South, Range 19 East; and Sections 1 and 2 of Township 23 South, Range 17 East.

Land use along the corridor is generally urbanized and suburban in nature with undeveloped tracts interspersed (Photos 1.1 and 1.2). The existing land use along S.R. 50 is predominantly commercial with areas of residential use as well as isolated areas of medical, institutional and recreational uses. The proposed project is consistent with future land use plans.



Photo 1.1. Looking Northwest Along S.R. 50.

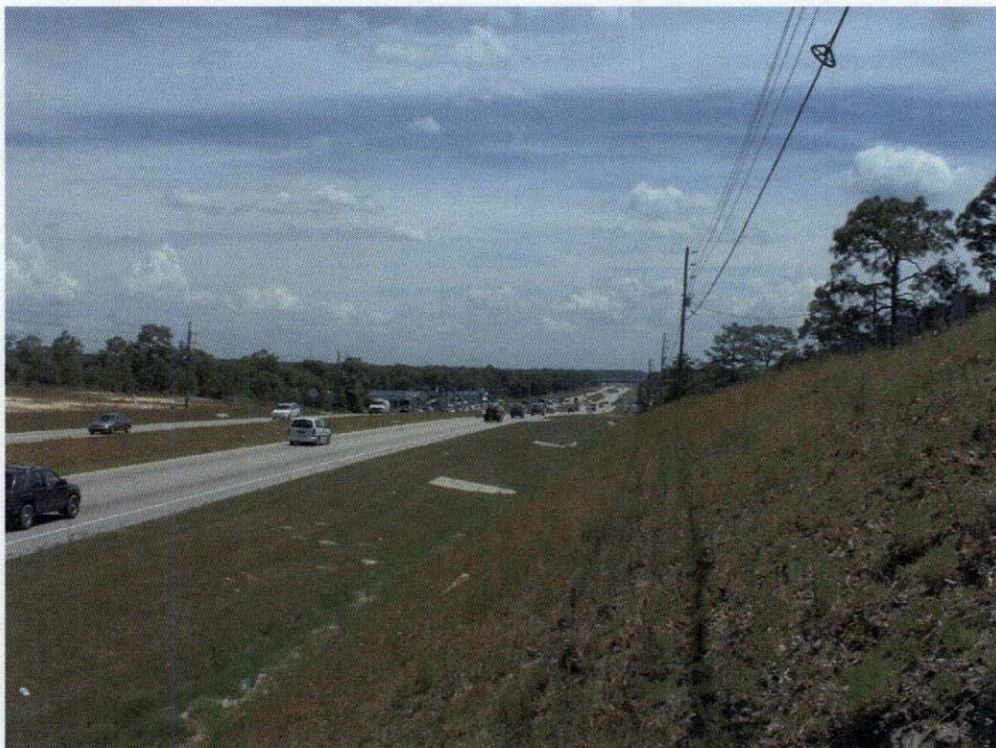


Photo 1.2. Looking Northeast Along S.R. 50.

S.R. 50, which is part of the Florida Intrastate Highway System (FIHS), is typically a 4-lane divided roadway with 12-foot travel lanes, which was constructed according to the original Type II Categorical Exclusion. The existing posted speed limit along S.R. 50 varies between 45 mph and 55 mph.

The S.R. 50 project corridor is divided into four segments for analysis purposes based on existing land use, projected traffic volumes, and roadway characteristics. The four segments are as follows:

- Segment 1: U.S. 19 (S.R. 55) to Mariner Boulevard (C.R. 587) (3.877 miles)
- Segment 2: Mariner Boulevard (C.R. 587) to the Suncoast Parkway (2.020 miles)
- Segment 3: Suncoast Parkway to the west S.R. 50/50A intersection (3.997 miles)
- Segment 4: West S.R. 50/50A intersection to the east S.R. 50/SR 50A intersection [along the Brooksville Bypass] (3.836 miles)

2.0 ENVIRONMENTAL SETTING

Environmental factors such as geology, topography, relative elevation, soils, vegetation, and water resources are important in determining where prehistoric and historic period archaeological sites are likely to be located. These variables influenced what types of resources were available for utilization in a given area. This, in turn, influenced decisions regarding settlement location and land-use patterns. Because of the influence of the local environmental factors upon the aboriginal inhabitants, a discussion of the effective environment is included.

2.1 Project Location and Physical Environment

The S.R. 50 project corridor is located in Sections 20 and 25 through 30 of Township (T) 22 South (S) , Range (R) 19 East (E); Sections 25 through 36 of T22S, R18E; Section 36 of T22S, R17E; and Sections 1 and 2 of T23S, R17E (USGS Brooksville, Fla. 1954, PR 1988; Brooksville SE, Fla. 1954, PR 1988; Weeki Wachee Spring, Fla. 1954) in Hernando County, Florida (Figures 2.1-2.4). The 13.7 mile project runs east from U.S. 19 (S.R. 55) to the east S.R. 50/50A intersection in Hernando County, Florida.

2.2 Physiography and Geology

Hernando County is located within the central or mid-peninsular physiographic zone, which is characterized by discontinuous highlands in the form of sub-parallel ridges aligned with the axis of the peninsula and separated by broad valleys (Puri and Vernon 1964). The ridges in this area tend to be above the piezometric surface while the valleys are below it. This influences the form and availability of water resources. S.R. 50 transects the Gulf Coastal Lowlands and the Brooksville Ridge physiographic regions. The Brooksville Ridge is characterized by irregular relief and elevations that vary by some 60 to 200 feet in very short distances (White 1970:129).

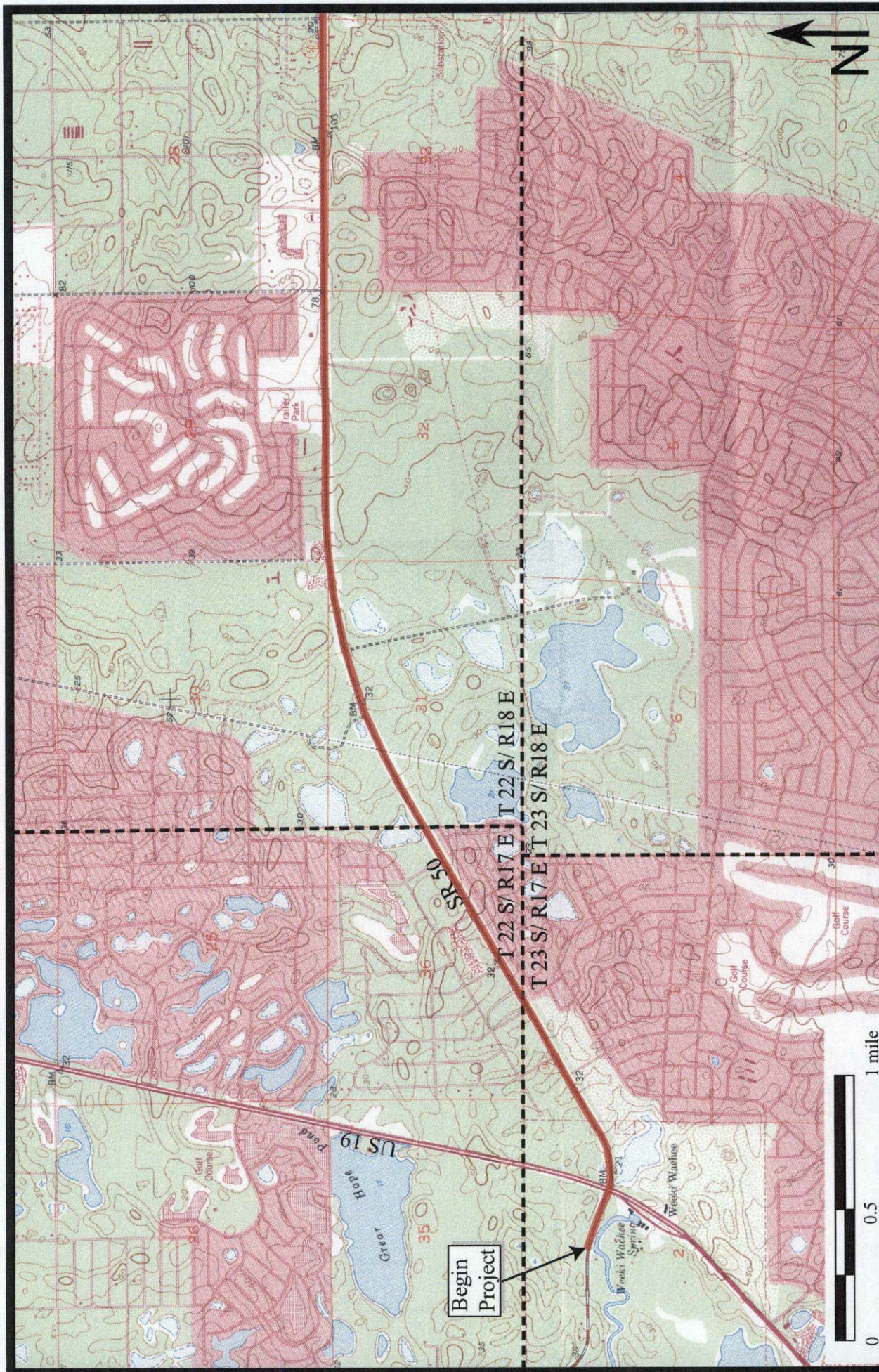


Figure 2.1. Project Location and Environmental Setting. Townships 22 and 23 South, Ranges 17 and 18 East (USGS Weeki Wachee Spring, Fla. 1954, PR 1988).

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

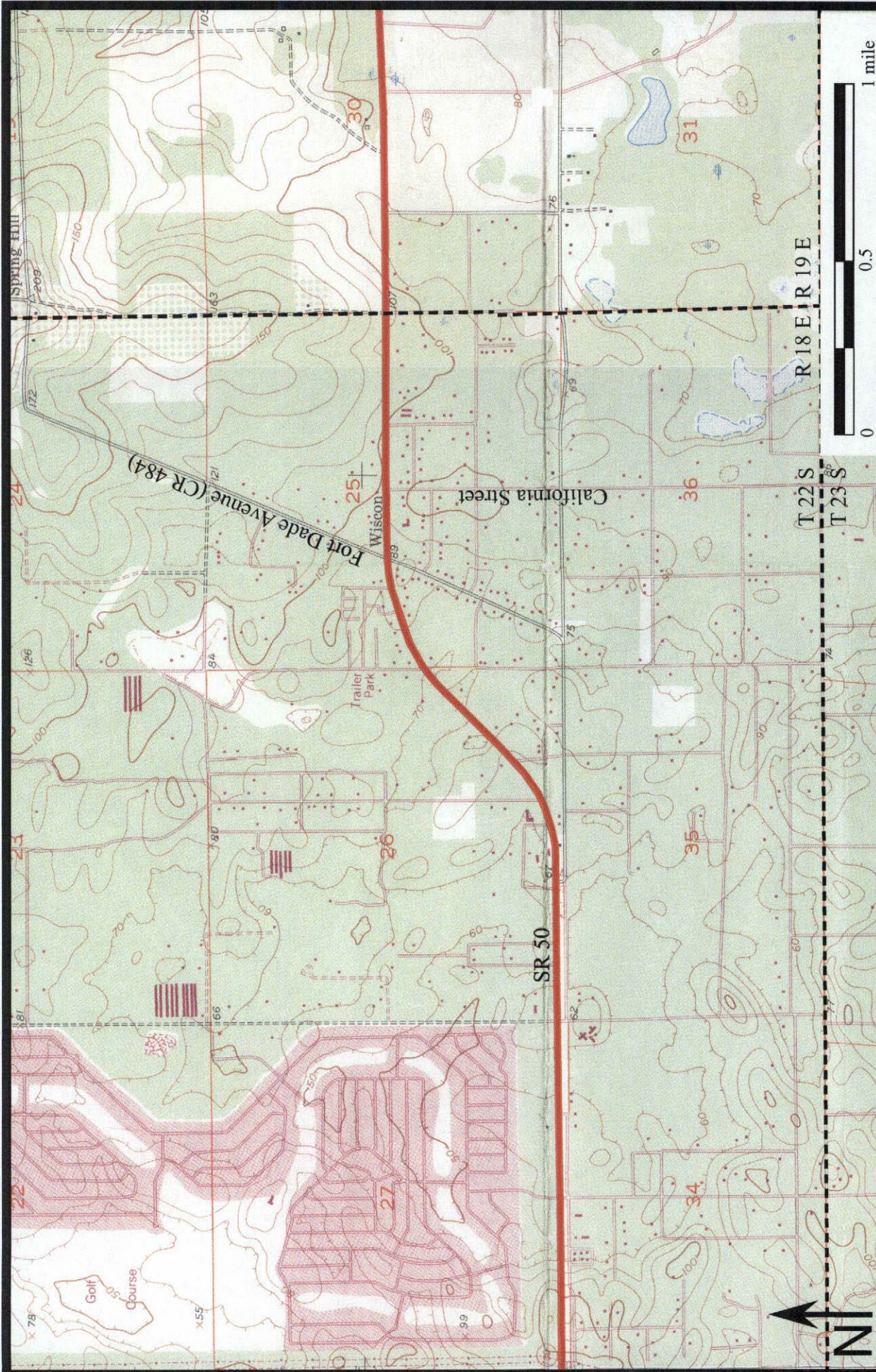


Figure 2.2 Project Location and Environmental Setting. Township 22 South, Ranges 18 and 19 East (USGS Brooksville, Fla. 1954, PR 1988).

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

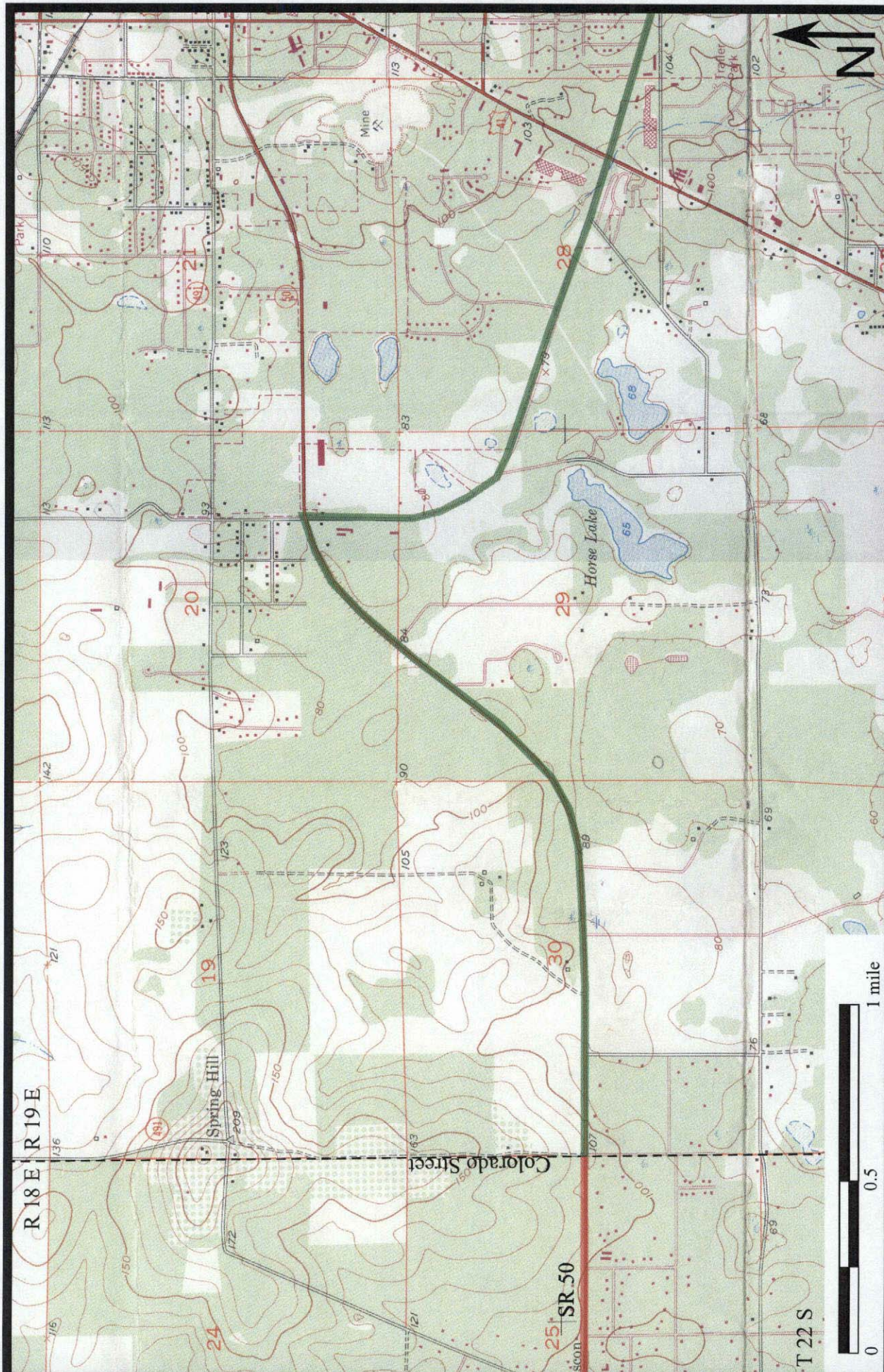


Figure 2.3. Project Location and Environmental Setting. Township 22 South, Ranges 18 and 19 East (USGS Brooksville, Fla. 1954, PR 1988).

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY



Figure 2.4. Project Location and Environmental Setting. Township 22 South, Range 19 East (USGS Brooksville, Fla. 1954, PR 1988 and Brooksville SE, Fla. 1954, PR 1988).

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

The Gulf Coastal Lowlands is a poorly drained area of low relief that extends along the coast. The Coastal Swamps developed proximate to the shoreline because of the shallow or absent deposits of sand (Deuerling and MacGill 1981). There are four ancient marine terraces within the Gulf Coast Lowlands: Silver Bluff, Pamlico, Talbot, and Penholoway (Deuerling and MacGill 1981; Healy 1975). The Pamlico Terrace is the most extensive in this region.

Geologically, Hernando County is underlain by the Crystal River formation of the Jackson Bluff Stage, the Suwannee Limestones, and the Hawthorne and Alachua Formations of the Alum Bluff Stage (Vernon and Puri 1964). Most of the Brooksville Ridge surface is covered with a layer of sand that is underlain by the Bone Valley and Alachua clastic sediments. These clays are usually red in color. Deuerling and MacGill (1981) indicate that the Suwannee Limestone is exposed or very near the surface in the Brooksville area. The surficial sediments include medium fine sand and silt and clayey sands, which overlie the limestone.

2.3 Lithic Resources

Stone played an important role in the lifeways of the prehistoric people that lived in this part of Florida. Due to the highly acidic nature of the Florida soils, preservation of organic cultural material is quite poor. Thus, stone tools and the debris from their manufacture are by far the most prevalent archaeological material present at inland prehistoric sites. Besides providing the medium from which implements utilized in hunting, butchering, and hide processing were produced, stone was also used in the production of tools for working bone, wood, shell, and vegetal fiber (Purdy and Beach 1980).

Two kinds of lithic raw material were utilized by prehistoric populations in west-central Florida, namely silicified limestone, known by geologists and archaeologists as chert, and silicified coral. Chert and silicified coral are the result of silicification of two host materials, i.e., Miocene limestones and coral, respectively (Upchurch et al. 1982).

A dominant structural feature, the Ocala Uplift, controls the outcrop patterns in this part of Florida (Deuerling and MacGill 1981). Chert is restricted to the flanks of areas of tectonic upheaval, in this case, the margins of the Ocala Uplift. Over the past several decades, researchers have attempted to isolate and identify the origins of specific types of chert based on physical properties, e.g., trace elements, chemical, mineralogical, and petrological properties (Purdy and Blanchard 1973; Upchurch et al. 1982). Upchurch and his students, whose work focused on the identification of quarry clusters, have produced the most successful efforts. Quarry clusters are defined as geographical areas containing outcrops of chert which are uniform in fabric, composition, and fossil content and which were visited and utilized by early humans (Upchurch et al. 1982). Nineteen quarry clusters have been identified in Florida, as well as several sub-areas within quarry clusters (Upchurch et al. 1982). This identification has allowed archaeologists to recognize variation in regional cherts and place them into a spatial framework with respect to location of archaeological sites.

There are four quarry clusters within and adjacent to Hernando County (Figure 2.5). The Brooksville Quarry Cluster (QC) is located in the central part of the county. Its cherts are derived from the Oligocene Suwannee Formation Limestone and occurs "as residual boulders in the soil or as isolated, large nodules in the unweathered limestone" (Upchurch et al. 1982:129). Brooksville QC cherts are variable in color, including white, very light gray, medium gray, pale orange pink, pale grayish orange, and/or grayish orange pink. This chert formed from grainstone or packstone. Miliolid foraminifera and the presence of quartz sand within the fabric distinguish this chert type (Upchurch et al. 1982:130). Numerous lithic procurement sites are associated with this cluster (Upchurch et al. 1982:100, 128). Chert quarry sites and/or exposures are often associated with collapsed sinks or other karst-related features. Numerous sinks and "stony" and "very stony" spots are located in the general project area (Hyde et al. 1977).

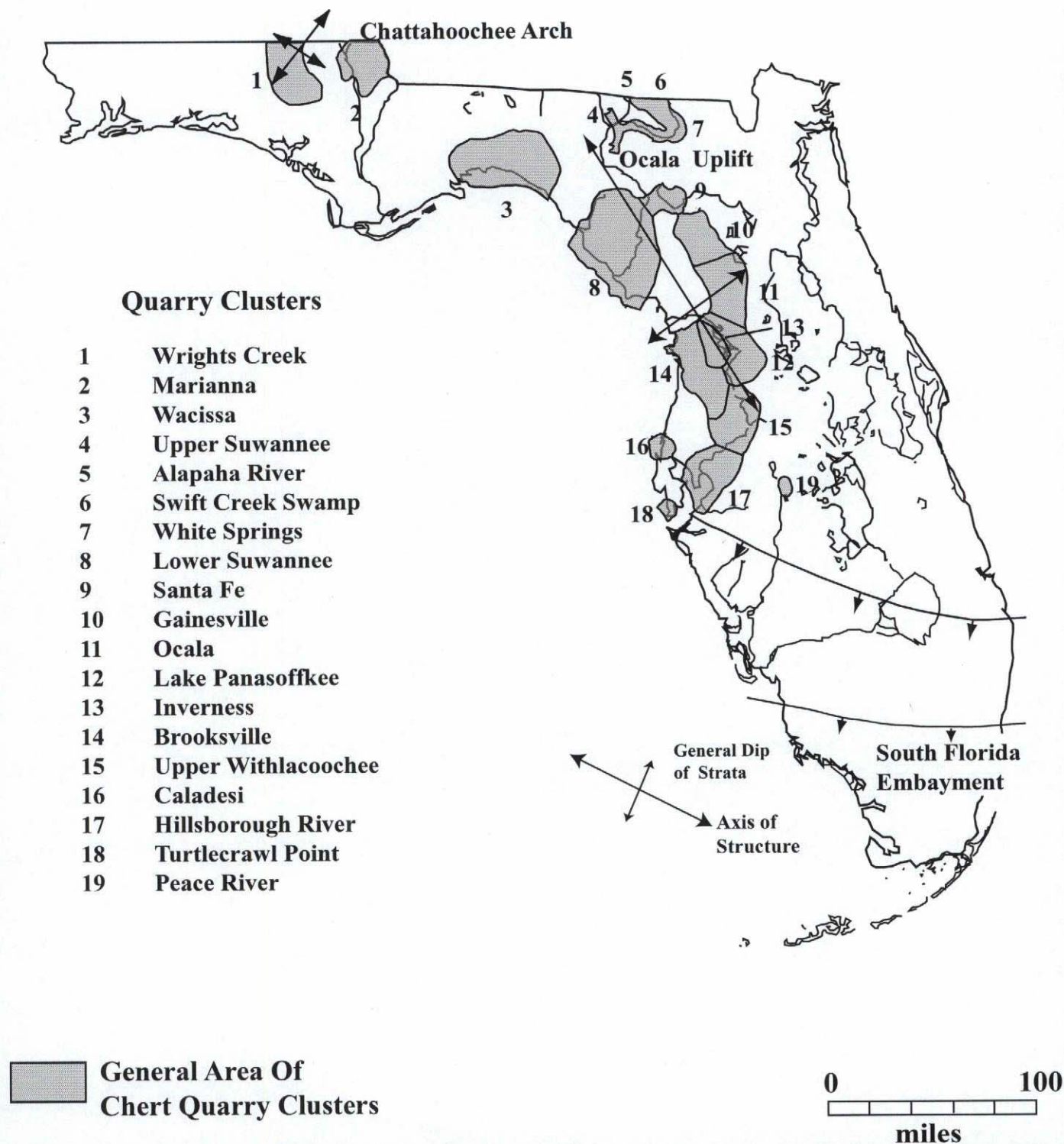


Figure 2.5. Location of Florida Quarry Clusters (from Upchurch et al. 1982).

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

The Upper Withlacoochee QC is adjacent to the south of the Brooksville QC. The cherts were formed when the Crystal River and Suwannee Limestones were replaced with various silicates. They are grayish black, medium gray, very light gray, pale yellowish orange, and/or grayish orange in color. When heat treated, the chert becomes a moderate reddish brown (Upchurch et al. 1982:134). Miliolids are also common in these cherts. This QC also is a significant source of silicified coral.

Silicified coral is the product of the replacement of the original coral aragonite skeletal material with silicates. Such replacement often preserved the fabric of the coral resulting in the distinctive "star" pattern in the stone if it is broken perpendicular to the plant's axis. The fossil genus most common is *Siderastrea*, a fossil found in Miocene and Oligocene formations of Florida and southern Georgia (Upchurch et al. 1982). To date, specific source locations of silicified coral are unknown. Known outcrops occur in the Green Swamp and along the Hillsborough and Suwannee Rivers (Upchurch et al. 1982). Prehistoric humans frequently thermally altered silicified coral in order to improve its workability. Silicified coral that is thermally altered often appears deep pink/red in color, possesses a waxy luster, and occasionally exhibits spalling in the form of potlid fractures, as well as small fissures known as crazing.

The other two quarry clusters are the Lake Panasoffkee QC and Inverness QC located to the northwest. Both of these derive from the Alachua, Hawthorn, and/or Crystal River Formations. Austin (1997; Austin and Estabrook 2000:117) suggests that these two QCs be combined with the Lower Suwannee QC due to the "lack of unambiguous criteria for assigning cherts derived from silica replacement of the Ocala Limestone to specific source areas."

2.4 Vegetation and Soils

Beginning at the U.S. 19 (S.R. 55)/S.R. 50 intersection and moving east to the eastern project limit, the study corridor crosses three soil association areas: Candler-Tavares-Paola, Arredondo-Sparr-Kendrick, and Nobleton-Blichton-Flemington. The first two

associations include excessively drained to somewhat poorly drained, nearly level to sloping soils of the upland ridge. The Nobleton-Blichton-Flemington association is characterized by “nearly level to strongly sloping, somewhat poorly drained and poorly drained fine sandy loams to sands less than 40 inches thick over loamy and clayey material” (Hyde et al. 1977). Specific soil types along the project corridor include Basinger, Candler, Kendrick, Myakka, Nobleton, Paola, Sparr, and Wauchula fine sands, Blichton, Floridana Variant, and Micanopy loamy fine sands, Flemington fine sandy loam, and the Aripeka-Okeelanta-Lauderhill association (Table 2.1).

Table 2.1. Soil Types and Drainage Characteristics.

Soil Type / Slope	Drainage Characteristics	Typically found on/in
Aripeka-Okeelanta-Lauderhill	somewhat poorly and very poorly drained	broad swamps interspersed with low ridges
Basinger fine sand	nearly level; poorly drained	flatwoods
Blichton loamy fine sand, 0-2%	nearly level; poorly drained	uplands
Blichton loamy fine sand, 2-5%	nearly level; poorly drained	uplands
Candler fine sand, 0-5%	nearly level to gently sloping; excessively drained	uplands
Candler fine sand, 5-8%	side slopes; excessively drained	uplands
Flemington fine sandy loam, 0-2%	nearly level; poorly drained	uplands
Flemington fine sandy loam, 2-5%	gently sloping; poorly drained	uplands
Floridana Variant loamy fine sand	nearly level; very poorly drained	depressions and poorly defined drainages
Kendrick fine sand, 0-5%	nearly level to gently sloping; well-drained	uplands
Micanopy loamy fine sand, 0-2%	nearly level; somewhat poorly drained	uplands
Micanopy loamy fine sand, 2-5%	gently sloping; somewhat poorly drained	uplands
Myakka fine sand	nearly level; poorly drained	flatwoods
Nobleton fine sand, 0-5%	nearly level to gently sloping; somewhat poorly drained	uplands
Paola fine sand, 0-8%	nearly level to sloping; excessively drained	uplands
Sparr fine sand, 0-5%	nearly level to gently sloping; somewhat poorly drained	seasonally wet sandy areas of the uplands
Wauchula fine sand, 0-5%	nearly level to gently sloping; poorly drained	flatwoods and hillsides

Many of the soils are associated with upland hardwood forests. The natural vegetation typically includes loblolly, slash, and longleaf pines; live, laurel, blue jack, post, turkey, and water oaks; magnolia, hickory, dogwood, red cedar, and sweetgum. The understory contains bluestems, huckleberry, paspalum, pineland threeawn, hornbeams, American holly, American beautyberry, deertongue, indiagrasses, panicums, annual forbs, saw

palmetto, inkberry, wax myrtle, toothache grass, goldaster, and runner oak. The excessively drained Paola sand also support sand pine, scrub live oak, creeping dodder, rosemary, cacti, mosses, and lichens. The very poorly drained Floridana Variant loamy fine sand and the Okeelanta and Lauderhill soils are associated with black gum, sweet gum, cabbage palm, sweet bay, cypress, red maple, water oak, willow, pond and slash pine with an understory of cattails, sawgrass, goat vine, muscadine vines, fedderbush, wax myrtle, inkberry, gallberry, pokeweed, and maidencane (Hyde et al. 1977).

2.5 Local Hydrology

Hernando County is situated within the Middle Gulf Hydrologic System (Cherry et al. 1970). The major permanent streams are the Withlacoochee, Little Withlacoochee, and Weeki Wachee Rivers. Numerous small streams and creeks are located in the coastal areas. Springs are common along the coast and there are approximately 130 lakes scattered throughout the county (Hyde et al. 1977). During the Late Pleistocene/Early Holocene, many of these water features were non-existent.

The surface drainage of the project area is very poorly developed, and this part of Hernando County is mostly drained through numerous sinks, closed depressions, lakes, and grassy prairies. The few streams that do occur in the interior portions of the county terminate in sinkhole drains. Local water sources within the region include Horse and Irvin Lakes, Willow Sink, and a few unnamed sinkhole lakes. The moderate to small size permanent lakes appear to be surface expressions of perched water tables (HDR Engineering 1987:17). The prairie (basin) lakes, also called sink outlet lakes, are usually dry during arid periods; flooding may occur during wet periods.

2.6 Paleoenvironmental Considerations

At the approximate time of human entry into the New World, the Laurentide and Cordilleran glaciers (together the Wisconsin glaciation) were at their full extent and covered the northern half of North America (Martin et al. 1985). Glaciation affected every facet of the North American environment. Temperatures were lower, vegetation zones shifted southward, now-extinct game roamed freely, lowered sea levels exposed currently submerged coastlines, and the weight of the ice sheets depressed the underlying continental crust. As deglaciation began, approximately 18,000 years ago, North America slowly began assuming its present environmental configuration. Regional data, including sea level curves, limnological analyses, and pollen samples from Florida's Lakes Sheelar and Mud, and Georgia's Lake Louise provide the following reconstruction of the local environmental past.

At glacial maximum, about 21,000 years ago, the vegetation of northern Florida was dominated by pine, oak, hickory, and various herbs (Watts and Hansen 1988). Arid and windy conditions prevailed, and sea levels were some 390 feet below present levels (Bloom 1983; Watts and Hansen 1988), resulting in the exposure of miles of Florida's broad and gently sloping Gulf Coast continental shelf. This exposed shelf was entrenched by ancient riverbeds (Haag 1962; Russell 1957). Lower sea levels also altered Florida's hydrological system. When sea level was lower, the freshwater sources originating from Florida's aquifer were also lower. The lowered aquifer, coupled with arid conditions, would have made potable water a scarce commodity. The overall effect of the Pleistocene hydrological condition would have resulted in relatively isolated freshwater sources in a dry and windy environment.

Global warming began approximately 18,000 years ago and maintained a steady rate of deglaciation for roughly 4000 years. Subsequently, onshore winds were warmer and deglaciation was accelerated (Pielou 1991). The Florida/Georgia pollen from 14,000 to 12,000 years ago reflects a radically different forest composition from the prior

assemblage. Pine was scarce and oak, hickory, beech, ash, hornbeam, and other mesic trees were abundant. This floral composition suggests a warm climate with high precipitation (Watts and Hansen 1988). By 12,000 years ago, sea level was approximately 164 feet below its present level.

Deglaciation was not a linear progression, but rather a trend marked by hiatus and regression. About 11,000 years ago, during a period known as the Younger Dryas, conditions similar to those at glacial maximum prevailed. Analysis of pollen from this period indicates a re-advance of the pine forests in north Florida (Watts and Hansen 1988), and a still stand, or possibly a regression, of sea level (Coastal Environments Inc. 1977; Fairbanks 1989; Fairbridge 1961). The Younger Dryas ended about 10,000 years ago. Its terminus marked the end of the Pleistocene and the beginning of the Holocene, a new epoch that began a period of rapid global warming. The climate of the Holocene produced substantial changes, including the extinction of the Pleistocene megafauna. The predominant species were large grazers, some of which were herd ungulates (Carbone 1983:10). Within Florida, the presence of long nosed peccary, spectacled bear, southern llama, and giant armadillo indicate that this region possessed a rich and diverse environment (Carbone 1983).

From 7,000 to 5,000 years ago, there was a transition in vegetation from oak scrub to the pine/swamp community that is characteristic of north Florida today (Watts and Hansen 1988). At this time, the final transgressive phase of sea level began. Rivers assumed their present courses and the current barrier island system was formed (Schnable and Goodell 1968). By roughly 5000 years ago, major environmental changes resulted in the establishment of modern floral and climatic conditions (Watts 1975). Southern pine forests replaced the oak savannahs, and extensive marshes and swamps developed along the coasts. Surface water was plentiful in karst terrains and the level of the Floridan aquifer rose to five feet above present levels. With the onset of modern environmental conditions, numerous microenvironments were available to the aboriginal inhabitants.

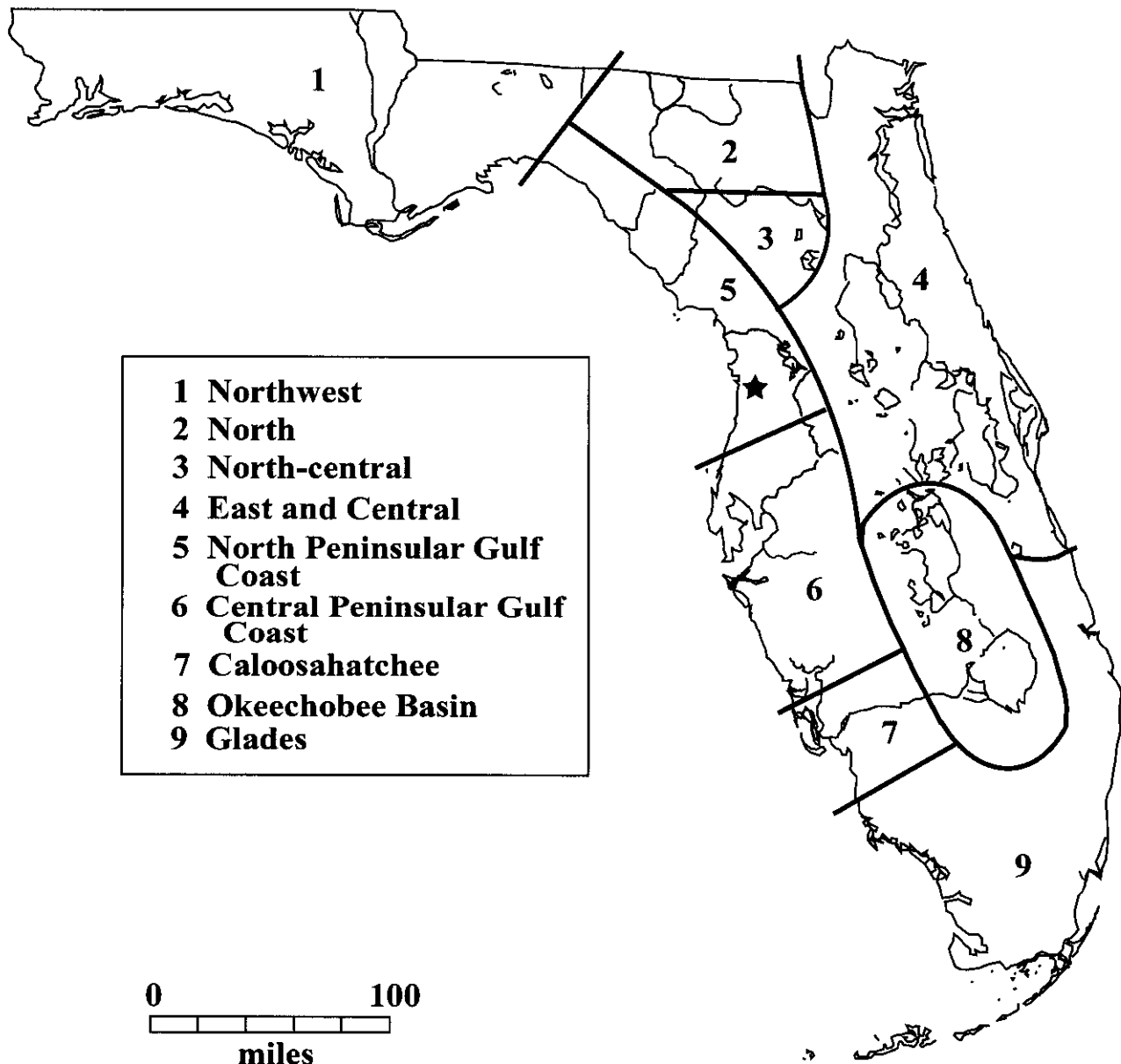
3.0 PRECONTACT CULTURAL REVIEW

A discussion of the regional prehistory, or culture history, of a given area is included in cultural resource assessment reports to provide a framework within which the local archaeological record can be examined. Archaeological sites are not individual entities, but rather are part of once dynamic cultural systems. As a result, individual sites cannot be adequately examined or interpreted without reference to other sites and resources in the general area.

In general, archaeologists summarize the prehistory of a given area (i.e. an archaeological region) by outlining the sequence of archaeological cultures through time. These cultures, largely defined in geographical terms, share environmental and cultural traits. The project area is located within the North Peninsula Gulf Coast archeological region as defined by Milanich and Fairbanks (1980:22). This area extends from Pasco County northward to the Apalachee Bay region (Figure 3.1). Within this zone, Milanich and Fairbanks (1980) and, more recently, Milanich (1994) have defined the Paleo-Indian, Archaic, Formative, and Mississippian/Acculturative stages on the basis of unique sets of material cultural traits such as characteristic stone tool forms and ceramics, as well as subsistence, settlement, and burial patterns (Table 3.1). These broad temporal units are further subdivided into culture periods or phases: Paleo-Indian, Archaic (Early, Middle, and Late), Orange, Florida Transitional, Deptford, Weeden Island, and Safety Harbor. The historic aboriginal culture is Seminole. A brief summary of these periods follows.

3.1 Paleo-Indian

The Paleo-Indian stage is the earliest cultural manifestation in Florida, dating from roughly 11,000 to 7500 B.C. (Austin 2001; Milanich 1994). Archeological evidence for Paleo-Indians consists primarily of scattered finds of diagnostic lanceolate projectile points. The Paleo-Indian period has been sub-divided into three horizons based upon characteristic tool forms (Austin 2001).



Post- 500 B.C. regions of precolumbian Florida

Figure 3.1. Florida Archaeological Regions (Milanich 1994:278). The project area (★) is in the North Peninsular Gulf Coast Region (#5).

CRAS
 S.R. 50 PD&E STUDY
 REEVALUATION FROM U.S. 19 TO
 THE EAST S.R. 50/50A
 INTERSECTION
 HERNANDO COUNTY

Table 3.1. Cultural Chronology and Traits.

Culture Period and Time Frame	Cultural Traits
Paleo-Indian 11,000 - 7500 B.C.	Migratory hunters and gatherers traveling between permanent and semi-permanent sources of potable water; Oasis model; Suwannee and Simpson projectile points; unifacial scrapers.
Early Archaic 7500 - 5000 B.C.	Hunters and gatherers; less nomadic; sites found in a variety of locations; stemmed projectile points such as Arredondo, Hamilton, and Kirk varieties; increase in population size and density; burials in wet environment cemeteries; fabric and cordage available.
Middle Archaic 5000 - 3000 B.C.	More evidence of coastal utilization; increased sedentism; increased variety of site types; burials occurring within midden deposits; stemmed broad bladed projectile points such as the Newnan; increased use of thermal alteration and silicified coral for stone tool manufacture.
Late (Ceramic) Archaic 3000 - 500 B.C.	Preceramic and ceramic sites; point types include Culbreath, Clay, and Lafayette; Orange series ceramics are initially fiber tempered and molded; plain type early on, by 1650 B.C. geometric designs and punctations decorate the vessels; increased use of estuarine resources and occupation along the coastal lagoons.
Deptford 500 B.C. - A.D. 200	Primarily a coastal manifestation with inland extractive camps; ceramics were sand tempered and decorated with simple, check, and linear check stamping; focused on the exploitation of the marine resources; permanent residences along the coast; increased complexity in burial practices.
Weeden Island-related A.D. 200 - 900	Ceramics tempered with sand or limestone (Pasco wares); most coastal shell middens made from oyster; farming may have occurred at inland sites; village ceramics were primarily plain; riverine and freshwater marsh environments also fairly heavily exploited; many burial mounds were continuously used.
Safety Harbor (pre-Columbian) A.D. 900 - 1500	Most sites are still along the coast, but some are inland; most village pottery is undecorated Pasco Plain; mound sites have decorated ceramics; hunter fisherfolk utilizing the estuarine resources; dispersed settlements; Southeast Ceremonial Complex influences though no intensive agricultural pursuits were undertaken.
Safety Harbor (Columbian) A.D. 1500 - 1725	European artifacts appear at the sites; settlement and subsistence patterns similar to pre-Columbian period until disease and warfare disrupt the aboriginal social system and decimate the population.

The Clovis Horizon (13,000-12,000 Before Present [B.P.]) represents the initial occupation of Florida. It is defined by the presence of the fluted Clovis points. These are somewhat more common in north Florida, although Robinson (1979) does illustrate a few points from the central Gulf Coast area. The Suwannee Horizon (12,000-11,000 B.P.) is the most well known of the three Paleo-Indian horizons. The lanceolate-shaped, unfluted Simpson and Suwannee projectile points are diagnostic of this time period (Bullen 1975a; Daniel and Wisenbaker 1987; Purdy 1981). The Suwannee tool kit includes a variety of

scrapers, adzes, spokeshaves, unifacially retouched flakes, flakes with beaked projections, and blade-like flakes as well as bone and ivory foreshafts, pins, awls, daggers, anvils, and abraders (Austin 2001:23). Following the Suwannee Horizon is the Late Paleo-Indian (Dalton?) Horizon (11,000-10,000 B.P.). The smaller Tallahassee, Santa Fe, and Beaver Lake projectile points traditionally were attributed to this horizon. However, Austin (Austin 2001:27) indicates that many of these points have been recovered stratigraphically from late Archaic and early Woodland period components and thus, may not date to this time period at all.

The majority of Paleo-Indian sites are associated with the rivers in the north-central portion of Florida (Dunbar and Waller 1983). At that time, the climate was cooler and drier with a vegetative regime typified by xerophytic species with scrub oak, pine, open grassy prairies, and savannas being the most common (Milanich 1994:40). Sea levels were as much as 115 feet below present levels and the coastal regions extended miles beyond present day shorelines (Milliman and Emery 1968). Miller's (1998) research suggests that around 10,000 years ago, along the Atlantic coast, the shoreline may have been about 62 miles to the east and sea level roughly 270 feet below present levels. It is probable that many of the sites dating from this time period have been inundated (Clausen et al. 1979; Dunbar 1997; Ruppé 1980; Scholl et al. 1969). Evidence of this includes sites that were discovered as a result of dredging activities in the Gulf (Karklins 1970) while other research has shown that some of the shell deposits bordering submerged river channels in Tampa Bay may have been Paleo-Indian midden deposits (Goodyear et al. 1983; Goodyear and Warren 1972).

Archaeologists hypothesize that Paleo-Indians lived in migratory bands and subsisted by gathering and hunting, including the now-extinct Pleistocene megafauna. Daniel (1985) has proposed a model of early hunter-gatherer settlement which suggests that some Paleo-Indian groups may have practiced a more sedentary lifestyle than previously believed. Since the climate was cooler and much drier, it is likely that these nomadic bands traveled between permanent and semi-permanent sources of water, exploiting seasonally available resources. This has been referred to as the Oasis hypothesis (Dunbar

1991). These watering holes would have attracted the animals upon which the Indians hunted, thus providing food and drink. In addition to being "tethered" to the water resources, most Paleo-Indian sites are also located proximate to sources of good quality lithic raw materials (Daniel 1985; Daniel and Wisenbaker 1987; Dunbar 1991; Goodyear et al. 1983). This settlement pattern is considered to logistical, i.e. the establishment of semi-permanent habitation areas and the movement of the resources from their sources of procurement to the residential locale by specialized task groups (Austin 2001:27).

Some of the information about the Paleo-Indian period is derived from underwater excavations at two inland spring sites in Sarasota County: Little Salt and Warm Mineral Springs (Clausen et al. 1979). Excavations at the Harney Flats Site in Hillsborough County (8HI507) has provided a rich body of data concerning Paleo-Indian lifeways (Daniel and Wisenbaker 1987). It has been suggested that Paleo-Indian settlement may "not have been related as much to seasonal changes as generally postulated for the succeeding Archaic period," but instead movement was perhaps related to the scheduling of "tool-kit replacement, social needs, and the availability of water," among other factors (Daniel and Wisenbaker 1987:175). The excavations at the Colorado Site in Hernando County revealed a Paleo-Indian lithic workshop and encampment where that manufacture of blanks appears to have been a major site function (Horvath et al. 1998). The numerous expedient flake tools and the relative lack of formal tool forms may suggest that this site may date from the later Paleo-Indian period when foraging adaptations characterized by high residential mobility and expedient technologies became more prominent (Anderson 1996; Cable 1996).

During the late Paleo-Indian period, the large lanceolate-shaped Suwannee and Simpson points may have been replaced by the smaller Tallahassee, Santa Fe, and Beaver Lake types (Milanich 1994:53). Austin (2001:27), however, has noted that most of these point types that have been recovered in stratigraphic context have been from late Archaic and/or early Woodland period components.

A few Paleo-Indian campsites have been found in North Central Florida. These are concentrated along the Ocala Lime Rock Ridge (Dunbar and Waller 1983). River crossings, sink holes, spring caverns, or other karst features are the most common site locations. In Hernando County, Paleo-Indian materials have been recovered from the Hospital Hole and Clay Sink Sites (FMSF) as well as from Bayport, Royal Highlands, and from the beds of the Weekiwachee and Chassahowitzka Rivers (Robinson 1979:82, 100). Sites containing Paleo-Indian points and the bones of now-extinct mammals have been found at the bottom of the Withlacoochee River at the Marion/Citrus County line, Silver Springs, and Silver Glen Springs in Marion County (Hemmings 1975; Neill 1958, 1964). Along the project corridor, the Colorado Site (8HE241), has yielded Suwannee/Simpson preforms and unifaces indicative of the Paleo-Indian period (Horvath et al. 1998). Paleo-Indian land sites are rare because they are often deeply buried and, thus, are not easily detected. Other possible Paleo-Indian sites in the county include the Sunshine Withlacoochee North (8HE380) (FMSF), Alexsux Site (8HE426) (Janus Research 2001), and Brooksville Cemetery Site (8HE463) (FMSF).

3.2 Archaic

The beginning of the Archaic is denoted by interrelated environmental and cultural changes. The environmental changes associated with the end of the Pleistocene necessitated modification of the extant prehistoric settlement patterns and subsistence strategies. Whereas the Paleo-Indians depended more heavily upon the Pleistocene megafauna and the relatively limited number of freshwater sources, Archaic populations hunted smaller game and learned to effectively exploit their changing environment. The gradual environmental changes led in part to the extinction of the Pleistocene fauna as well as resulted in the change in composition and distribution of various vegetative communities (Miller 1998). The adaptive changes of the aboriginal populations resulted in an increase in the number and types of archeological sites, such as marine and freshwater shell middens. The effects of the changing environment also are seen in the variation in site locations. Although Early Archaic materials are often found in association with Paleo-Indian deposits (e.g. Clay Sink 8HE39, Colorado 8HE241),

especially around water sources, other Early Archaic sites are located in areas devoid of Paleo-Indian components.

The Archaic stage has traditionally been divided into three periods: Early, Middle, and Late (Milanich 1994). Bullen (1959; 1975a) separates the Orange [ceramic Archaic] (2000 to 1000 B.C.) and the Transitional (1200 to 500 B.C.) periods from the Late Archaic. Milanich (1994:35, 88) notes that even with the advent of fired clay pottery, the basic lifestyles of the aboriginal occupants of the Late Archaic remained relatively unchanged and due to the difficulty of identifying Transitional period sites, suggests that its use be discontinued. Austin has proposed even further subdivisions to the Archaic stage, based on diagnostic tool forms and tool kits from the Middle Hillsborough River drainage (Austin 2001).

Early Archaic sites are recognized by the presence of Greenbriar and Bolen points as well as Kirk, Hardee Beveled, Hamilton, Arredondo, Sumter, and Thonotosassa varieties (Bullen 1975a). Milanich (1994:64) notes that there are no well-documented Early Archaic coastal or riverine shell midden sites. This may be due to sea level rise as opposed to avoidance of these areas. The Douglas Beach Site, located off the coast in St. Lucie County, however, does provide evidence for the utilization of fish weirs (Dickel and Doran 2002; Murphy 1990).

The Bolen Horizon, ca. 10,000 to 9000 B.P., is well documented in Florida and is generally recognized by the presence of the side-notched projectile points such as the Bolen variants and possibly the Greenbriar (Austin 2001). Included in the tool kit are a variety of scrapers, Waller knives, spokeshaves, adzes, and flake tools, as well as bone, antler, and wood implements. Austin (2001:35) suggests that the Bolen people continued to practice a logistical strategy with periodic movements between permanent sources of water. None of the sites in the County appears to have materials from this period.

The Kirk Horizon, dating from 9000-8000 B.P., is identified by the presence of Kirk Stemmed and Serrated projectile points. The Hardee Beveled, Sumter, and Thonotosassa

points may also be indicative of an Early Archaic component (Bullen 1975a; Milanich 1994). This period is poorly understood due to the lack of controlled excavations of sites containing Kirk materials. Austin (2001:36) suggests that some of the problems in identifying these sites may be with the identification of Kirk point as such. They may have been classified as the more common Florida Archaic Stemmed point. A Kirk Serrated point was recovered from Area A of the Colorado site (8HE241) (Horvath et al. 1998).

A Post-Kirk Horizon (8000-7000 B.P.) was suggested to bridge the gap between the Kirk Horizon and the subsequent Middle Archaic period (Austin 1997; Widmer 1988). The only site that can firmly be attributed to this period is the Windover Site in Brevard County (Doran 2002a). Bone, antler, dentary, and wood tools were also used (Adovasio et al. 2002; Penders 2002). The Thonotosassa, Sumter, and Hardee Beveled points are most diagnostic of this period. Other sites that may date to this time period include the Fletcher Davis Site (Warren 1971), Tampa Palms (Austin and Ste. Claire 1982), and West Williams (Austin et al. 2001).

Discoveries at Little Salt Spring in Sarasota County (Clausen et al. 1979) and the Windover Site (Doran 2002b) in Brevard County indicate that bone and wood tools, as well as fabric and cordage, were an important part of the Early Archaic material culture. The Early Archaic tool assemblages are more diverse than the preceding Paleo-Indian tool kits, and include specialized stone tools for performing a variety of tasks (Milanich and Fairbanks 1980). The archaeological record suggests a pattern of exploiting both coastal and interior resources. Although Miller (1998:64) has suggested that marine and estuarine resources had virtually no role in Early and Middle Archaic adaptation, the Windover Site has artifacts manufactured from sharks teeth as well as marine shell in addition to six whole marine shells that were likely used as grave goods (Purdy 1988). Most Early Archaic sites are small, seasonal campsites. This type of site may suggest that small bands moved seasonally in search of food. Dickel and Doran (2002:54) note that in some areas, localized resources were plentiful enough that large population aggregates could form. These groups developed an intensive exploitation strategy of inland aquatic

resources that was supplemented by upland game. In those areas where water resources were scarcer, the traditional relatively small, scattered campsite, indicative of high mobility, would be expected.

Geographically, there are several Middle Archaic horizons in the state. In the west-central part of the state, it is referred to as the Newnan Horizon. Sites recorded throughout the state include large base camps, smaller special-use campsites, quarries, and burial areas. The large stemmed projectile points, especially the Newnan type, are diagnostic of Middle and Late preceramic Archaic period sites. Other common point types include Hillsborough, Levy, Putnam, Alachua, and Marion (Bullen 1975a). In addition, silicified coral was more prevalent as a lithic tool raw material (Milanich 1994) and thermal alteration of the stone became more common (Ste. Claire 1987). Austin (2001:3) notes that there was a decrease in the use of shaped tools other than bifaces and an increased dependence on expedient flake tools. A few regional cemetery sites [e.g., Bay West in Collier County (Beriault et al. 1981), Republic Groves in Hardee County (Wharton et al. 1981), and Nona in Charlotte County (Luer 2002)], with interments in bogs, springs and other wetlands, provide evidence for mortuary ceremonialism during this time.

During the Middle Archaic, wetter conditions prevailed, sea levels began to rise, and pine forests and swamps began to emerge (Holloway 2002; Stout and Spackman 2002; Watts et al. 1996). The climate was changed to one of more pronounced seasonality with warmer summers and colder winters, though by 4000 B.C. the climate became essentially the same as that of today (Watts et al. 1996:29). Settlement became focused within coastal and riverine locales (Milanich 1994:64). A shift from the dispersed settlement pattern of the preceding period to a system of base camps with numerous, smaller satellite camps has been hypothesized (Milanich 1994). Daniel (1985) has suggested that the Middle Archaic people were actually more mobile than their predecessors, with seasonal sedentism. Chance's (1983a; 1983b) discussion of the Diamond Dairy Site (8HI476), within the Central Gulf Coast region, suggests a more flexible system that postulates varied uses and lengths of stay depending on specific and variable conditions (Austin 2001:43). Where resources are more dependable and abundant, such as along the

coast (cf., Russo 1991; Ste. Claire 1990) and St. Johns River, permanent settlements could be achieved, with special-use extractive camps away from the home base. For the rest of the state, however, people had to move to find the resources they required. This is seen in the variety of chert types with individual site lithic assemblages (cf., Austin 1997; Austin and Estabrook 2000).

Newnan Horizon sites are found in a variety of locations including the Hillsborough River drainage northeast of Tampa Bay (Milanich 1994:76). Several sites dating from this time have been identified in the Gulf Coast region. These include the West Williams (8HI509) (Austin et al. 2001), Enclave A (8PA1139) (Estabrook et al. 2000), Colorado (8HE241) (Horvath et al. 1998), 8HE325 and 8HE506 (ACI 1995), Shired Island (8DI17) and 8CI45 (Dorian and Stoutamire 1980), 8HE50 and 8HE53 (Deming and Almy 1983b), 8PA320 and 8HE247 (Wharton 1990), and 8HE426 (Janus Research 2001). The excavations at the West Williams Site have provided new information on the Newnan Horizon due to the recovery of subsurface features and faunal remains (Austin et al. 2001). The features suggest that structures were present and the faunal materials are indicative of reliance on aquatic as well as terrestrial resources. Faunal remains were also recovered from the Enclave C Site (8PA1269) indicating use of fish, turtle, alligator, deer, raccoon, and dog, among others (Estabrook et al. 2000; Quitmyer et al. 2001). No evidence, however, was recovered to suggest use of freshwater snails or mussels.

During the Late Archaic, ca. 5000 to 2500 B.P., populations increased and became more sedentary as the result of the arrival of essentially modern environmental conditions (Milanich 1994). Vegetation had changed from those species that preferred moist conditions to pines and mixed forests (Watts and Hansen 1988). The beginning of this period is referred to as the Preceramic Late Archaic Horizon (5000-3000 B.P.) and is followed by the Orange Horizon (3000-2500 B.P.). The preceramic horizon began during the "climatic optimum" which was a period of high rainfall and higher temperatures than today (Austin et al. 2001:45). Sea levels rose, inundating sites located along coastal and riverine shorelines (McGee and Wheeler 1994; Ruppé 1988). The adaptation to this environment allowed for a wider variety of resources to be exploited and greater

variability in settlement patterns. Shellfish, fish, and other food sources were now available from coastal and freshwater wetlands resulting in an increase in population size.

A greater reliance on marine resources is indicated in the gulf coastal areas by the preceramic strata of the shell middens at Bay Pines (Braley 1978) and Maximo Beach (Williams 1979). The Palmer Site, in Sarasota, is one of the best-known and preserved sites of this type. It is a horseshoe-shaped shell midden apparently encircling a freshwater spring adjacent to Sarasota Bay (Bullen and Bullen 1976). Culbreath Bayou, along the shores of Tampa Bay, also has a preceramic component (Warren et al. 1967). Preceramic Archaic sites in the vicinity of the study corridor include the Priscilla Site (8HI559) (Austin and Ste. Claire 1982) and the Ranch House Site (8HI452) (Estabrook and Newman 1984). The Blackwater Pond Site (8HE66) in Hernando County also produced a corner notched point (Whitney 1985).

Broad-bladed, stemmed projectile points of the Middle Archaic continued, in addition to the basally notched Culbreath and the corner notched Clay and Lafayette points (Bullen 1975a). Other items in the tool kit include a variety of scrapers, ovate and triangular bifaces, and stone "picks" (Austin 2001:46). By about 2000 B.C., the firing of clay pottery made its appearance in Florida. The first ceramic types had fibers (Spanish moss or palmetto) as the tempering agents within the clay. These wares are referred to as the Orange series. The Orange period was divided into subperiods based on a variety of ceramic attributes (Bullen 1955, 1972; Milanich 1994). The ceramics lacked decoration until about 1650 B.C. (Subperiod 1). Orange 2 ceramics are occasionally decorated with concentric vertical diamonds with horizontal lines and Tick Island styles that include incised spirals with rare background punctations. Orange 3 has incised straight lines, some parallel and slanting, some punctations or ticks, but no Tick Island types. Orange 4 sees the first use of the coiling techniques of pottery manufacture as well as the introduction of quartz sand with the fiber-temperers. There are simple incised decorative motifs. Orange 5 continues to have sand mixed with the fibers, bowl shaped vessels become more common, and there is some incising, triangular punctuations, and/or side

lugs. The introduction of the St. Johns series of ceramics, a chalky feeling ceramic, occurred late in this period.

Milanich (1994) and Miller (1998) indicate that there is little difference between Middle/Late Archaic and Orange populations except that there are more Orange sites and the density of sites is higher. Orange settlements were primarily located near wetland locales. The abundance of resources located in and near the wetlands permitted larger settlements. This change in settlement patterns may be related to environmental changes resulting from the establishment of current sea levels. According to Milanich (1994:87) the major areas of occupation at this time were along the Atlantic Coast and northwest Florida. Within the central gulf coast area, relatively few Orange period sites have been recorded. The Johns Island Site (8HE4) and Canyon Swallow Site (8HE247) date from this time period (Bullen and Bullen 1950; Wharton 1990).

Bridging the close of the Archaic stage and the beginning of the Formative is the Florida Transitional period, circa 1200 to 500 B.C., as defined by Ripley Bullen (1959). Milanich (1994), Miller (1991), Russo et al. (1993), Shannon (1986), and others suggest that assemblages from this "period" can not be discerned with any accuracy from the preceding or following periods. In general, this time was characterized by increased regionalism, population growth, and socio-cultural complexity (Bullen 1959, 1970). Exploitation of shellfish, fish and wild plants, as well as a reliance on hunting, was continued (Bullen 1959, 1970; Bullen et al. 1978), and limited horticulture may have been engaged in at this time (Milanich and Fairbanks 1980). Russo (1992:114) however, notes that there is no known evidence in this area for horticulture during this time. The Florida Transitional period is identified by the presence of St. Johns Incised ceramics (Bullen 1955, 1972; Milanich 1994; Miller 1998). Bullen hypothesized that during the Florida Transitional period, the diffusion of culture traits, resulting from the movements of small groups of people, led to the spread of several ceramic and tool traditions (Bullen 1959). "The major changes in post-Transitional cultures cannot be attributed to environmental changes but rather appear to be the result of social, political, religious, and

technological innovations introduced from elsewhere in the eastern United States (Miller 1998:76).

During the Transitional stage of the Late Archaic, regional differences in cultural adaptation developed. For example, along Florida's west coast, sand was mixed with the fibers as a tempering agent, whereas the manufacture of a temperless paste (St. Johns ware) characterized the St. Johns region, and limestone-tempered ceramics (Pasco wares) dominated the Citrus/Hernando/Pasco County area. Nonetheless, because the same basic settlement and subsistence patterns were being followed, Bullen (1959; 1965) suggests that there was a diffusion of cultural traits as a result of the movement of small groups. Among the sites that date to this period are the Battery Point (Bullen and Bullen 1953, 1954; Coates 1955) and Johns Island (Bullen and Bullen 1950) Sites in coastal Hernando County. The Blackwater Pond Site (8HE66) also dates to the Transitional (Whitney 1985). In addition, Transitional stage semi-fiber-semi-sand tempered pottery has been found at the Canyon Swallow Road Site (8HE247) identified along the North Suncoast Expressway (Wharton 1990:36).

3.3 Formative

The Formative stage in the North Peninsula Gulf Coast archaeological region is comprised of the Deptford and Weeden Island-related periods, circa 500 B.C. to A.D. 900. The Deptford period (500 B.C. to A.D. 200) has been well-documented as a coastal culture along the Gulf and Atlantic shorelines. The sites tend to be located in live oak-magnolia hammocks immediately adjacent to saltwater marshes. Sea level rise has inundated some sites (Bullen 1975b) and formed islands out of others. Smaller inland sites, probably for hunting, are also known, but less well understood. Deptford subsistence strategies were based on hunting and gathering with an emphasis on the coastal resources. Coastal sites, often located in saltwater marshes, are easily identified by the presence of shell middens. Archaeologists believe the Deptford people spent most of the year along the lagoons and salt marshes. Seasonally, small groups may have moved

inland and up the rivers to exploit the riverine and hammock resources (Milanich and Fairbanks 1980:72).

Deptford pottery is easily identified and is characterized by linear patterns of small rectangles or squares on the outside of pots. Simple stamp, linear check stamp, and check stamp patterns were applied by pressing a carved wooden paddle into the moist clay prior to firing. Other pottery was decorated by wrapping the wooden paddle with a cord and pressing it into the moist clay. Spanish moss was replaced by better tempering agents such as sand and grit.

Some archaeologists believe maize horticulture was probably introduced to the Deptford people by about 200 B.C. (Milanich 1971). The beginning of food production ushered in a more complex culture. Burial mounds and other ceremonial mounds were constructed. There is some evidence that around A.D. 200, soils better suited to cultivation were sought inland by the expanding Deptford populations (Kohler 1991). The Crystal River Site in Citrus County (Bullen 1953) and the Battery Point and Johns Island Sites (Bullen and Bullen 1950, 1953, 1954; Coates 1955) have a component which dates from this time period.

The Weeden Island-related cultures (A.D. 200 - 900) evolved out of the preceding Deptford period. Ceremonialism and its expressions, such as the construction of complex burial mounds containing exotic and elaborate grave offerings, reached their greatest development during this time. Similarly, the subsistence economy, divided between maritime and terrestrial animals and perhaps horticultural products, represents the maximum effective adjustment to the environment. In general, Weeden Island period sites are found along the coast, on bay shores, or on streams, and nearly all are marked by shell refuse with burial mounds of sand situated near the middens (Willey 1949).

Many Weeden Island sites consist of villages with associated mounds, as well as ceremonial/burial mound sites. The artifact assemblage is distinguished by the presence of Weeden Island ceramic types. These are among some of the finest ceramics in the

southeast; they are often thin, well-fired, burnished, and decorated with incising, punctation, complicated stamping, and animal effigies (Milanich 1994:211). Coastal sites are marked by the presence of shell middens, indicating a continued pattern of exploitation of marine and estuarine resources. Interaction between the inland farmer/gatherers and coastal hunter/gatherers may have developed into mutually beneficial exchange systems (Kohler 1991:98). This could account for the presence of non-locally made ceramics at some of the Weeden Island period sites. There is no definitive evidence for horticulture (e.g., charred cobs, kernels, or beans) in the coastal area (Milanich 1994:215).

In the North Peninsula Gulf Coast archaeological region, sites from this period are often described as "Weeden Island-related" because Weeden Island ceramics are not the dominant wares. There is a higher percentage of plain ceramics as well as an increased prevalence of St. Johns series of pottery. Weeden Island sites have been identified both on the coast and in proximity to the more productive agricultural soils of the inland areas of the region (Kohler and Johnson 1986). Burial mounds are present at the Bayport and Indian Bend (Moore 1903) sites. Shell midden sites dating from this time period include the Palm Grove Gardens and First Garden (Ferguson 1976). The Hart Pond Site (8HE251) discovered along the North Suncoast Expressway is dated, in part, to the Weeden Island period (Wharton 1990:30). Horse Lake Mound, south of S.R. 50, is also attributed to this period (FMSF). Several of the sites recorded within the River Pines and Oak Sound DRI tracts, near Weeki Wachee, date from this period as well (Deming and Almy 1983a, 1983b).

3.4 Mississippian/Acculturative

The final aboriginal cultural manifestation in the North Peninsula Gulf Coast archaeological region is Safety Harbor, named for the type-site in Pinellas County. Archaeologists believe that, over time, the Weeden Island-related cultures evolved into another culture -- Safety Harbor (A.D. 900-1725). This period has been divided into four phases: Englewood (A.D. 900-1100), Pinellas (A.D. 1100-1500), Tatham (A.D. 1500-

1567), and Bayview (A.D. 1567-1725) (Mitchem 1989a). The first two phases are pre-Columbian. These temporal divisions are based upon radiocarbon dates associated with certain ceramic types during the pre-Columbian phases and datable European artifacts during the colonial phases. The project area is within the Northern Safety Harbor region. Safety Harbor components have been identified at the Bayport (Moore 1903; Willey 1949) and Weeki Wachee (Mitchem 1989b; Mitchem et al. 1985) burial mounds. Artifacts associated within this time have also been recovered from the Colorado Site (8HE241C) (Horvath et al. 1998), the Alexsux Site (8HE426) (Janus Research 2001), and the Sprayfield Site (Estabrook 2002).

As with the preceding Weeden Island period, the utilitarian village wares tend to be devoid of decoration. Pasco Plain is the most common type recovered from village and camp sites (Milanich 1994:392). Sand-tempered Plain, St. Johns Plain, St. Johns Check Stamped, and cord marked pottery are also recovered from these sites. Decorated ceramics recovered from burial mound contexts allow for easy dating of a site. The projectile points most commonly associated with this period are the Pinellas, Ichetucknee, and Tampa varieties. The other tool types are basically the same as during the previous periods.

Most settlements, including the residential sites and isolated burial mounds, are dispersed (Milanich 1994:392). Sites within this Northern Safety Harbor region tend to be located along the coast, as evidenced by oyster shell middens, and within the Cove of the Withlacoochee, as evidenced by freshwater shell middens. The relationship between the coastal and interior Safety Harbor sites is poorly understood. In the Circum-Tampa Bay area, the sites tend to be nucleated villages with associated mounds. There is a possibility that the Crystal River Site may reflect this more southern settlement pattern.

The subsistence economy of the Safety Harbor people is basically the same as the preceding Weeden Island period. The focus was on the exploitation of the maritime and riverine resources. Evidence for horticulture has been recovered within the Cove of the Withlacoochee (Mitchem 1989a:588), but not within the coastal areas. Evidence to date

suggests that extensive agricultural pursuits were not an important factor in the diet as was the case with the Mississippian chiefdoms (Fort Walton culture) of northern Florida. This is not to say, however, that influences from the northern areas were limited. The evolution of the socio-political system and the influences of the Southeastern Ceremonial Complex can be seen in the burial practices and grave offerings placed in the mounds.

The Timucuan Indians are the historic counterparts of the Safety Harbor people. With the arrival of the Pánfilo de Narvaéz expedition in 1528 and Hernando de Soto in 1539, the Native American cultures came into contact with direct and indirect European influences. The de Soto expedition headed north from Tampa Bay and passed through several towns on its way to Apalachee. These towns included Plain of Guancozo near Dade City, Luca near Lacoochee, Vicela reportedly near Istachatta, and Tocaste reportedly on Duval Island at the southern end of Lake Tsala Apopka (Milanich 1995:77). Spanish influence and contact are indicated by the presence of European objects, especially beads, at a number of different sites in this region. The presence of cut marks on bones that could only be the result of metal swords and knives also reflected the European presence. The introduction of European diseases, warfare, and the general disruption of their cultural system resulted in the demise of these aboriginal populations.

4.0 HISTORICAL OVERVIEW

The following overview summarizes the historic development and land use patterns in the general project area. It focuses on the salient events of local history, and addresses such issues as regional exploration, colonization, settlement, industry, and transportation. In addition to providing pertinent background information, the historical overview provides a basis for the analysis and evaluation (in terms of NRHP eligibility criteria) of historic period archaeological sites as well as historic structures and landscapes identified along the S.R. 50 project corridor.

Protohistory and European Exploration

The cultural traditions of the native Floridians ended with the European expeditions to the New World. The initial events, authorized by the Spanish Crown in the 1500s, ushered in devastating European contact. The first European to have contact with present-day Hernando County was Ponce de León. Arriving in St. Augustine in 1513, his journals record his expedition through the Gulf Coast of Florida, from Charlotte Harbor to Apalachee Bay. Fifteen years later, Pánfilo de Narvaéz arrived in the Tampa Bay area. His party explored northward from Tampa Bay to Apalachicola. Hernando de Soto landed in the Tampa Bay area in 1539, seeking the allegedly rich Indian village of Cale. De Soto's company marched northward through the western portion of Hernando County, crossing the Withlacoochee River (Dunn 1989:13-14).

The following two centuries witnessed a power struggle in Florida between the English, the Spanish, and the French. The Native American populations of Florida were largely decimated by conquest and disease. Despite the ongoing warfare, the colonial holdings remained essentially the same until the 1763 Treaty of Paris, in which England acquired Canada and Florida, and Spain received France's Louisiana holdings. England governed Florida until the 1783 Treaty of Paris returned the territory to Spain. However, Spanish influence was nominal during this second period of ownership.

The Chocochatti Seminole

Prior to the American colonial settlement of Florida, portions of the Creek Nation and remnants of other Indian groups from Alabama, Georgia, and South Carolina moved into Florida and began to repopulate the vacuum created by the decimation of the aboriginal inhabitants. The Seminoles, as these migrating groups of Native Americans became known, formed loose confederacies for mutual protection against the new American Nation to the north (Tebeau 1971:72).

The Chocochatti Seminole (also spelled Chukochati, Chucachate, Chocachatte, Choacachattee, Chucochati, Chuckochatty, etc), a group of Upper Creeks from Eufala, Alabama, along the Chattahoochee River, settled the Big Hammock region in 1767, also known as the Chocochatte Hammock, just south of present-day Brooksville, and east of the project APE (Swanton 1946; McKethan 1989). They called their town "Tcuko Tcati" or Red House (Romans 1961; Boyd 1951:13; McKethan 1989). The Muscogee-speaking Chocochatti Seminoles lived in log houses and worked as farmers, pastoralists, and hunters. They resided in a central town and scattered satellite villages and homesteads where they grew corn, peas, beans, pumpkins, sweet potatoes, watermelons, and oranges, and raised cattle, pigs, horses and chickens (HDR Engineering 1987:51). The impetus for Seminole prosperity and expansion was trade with British suppliers. Between the 1770s and 1820, the Florida Seminole increased their numbers ten fold (Mahon and Weisman 1996:189, 192). However, the prosperity of the Seminole was their undoing, and during the 1820s and 1830s, white encroachments culminated in war.

The Seminole Wars

The bloody conflict between the Americans and the Seminoles over Florida came to a head in 1818, and was subsequently known as the First Seminole War. As a result of the war and the Adams-Onis Treaty of 1819, Florida became a United States Territory in 1821. Andrew Jackson, named provisional governor, divided the territory into St. Johns and Escambia Counties. At that time, St. Johns County encompassed all of Florida lying

east of the Suwannee River, including present-day Hernando County. Escambia County included the land lying to the west. In 1825, the first territorial census of St. Johns County was conducted, reporting 5,077 residents. By 1830, that number had risen to 8,956 (Tebeau 1971:134).

Even though the First Seminole War was fought in north Florida, the Treaty of Moultrie Creek in 1823 was to affect the settlement of all of south Florida. The Seminoles relinquished their claim to the whole peninsula in return for occupancy of approximately four million acres south of Ocala and north of Charlotte Harbor (Mahon 1967:46-50). This reservation included the Big Hammock region, which was occupied by the Chocochatti Seminole. The treaty was an unsatisfactory compromise for both the Seminoles and whites. The inadequacy of the reservation and desperate situation of the Seminoles living there, plus the mounting demand of the whites for their removal, soon produced another conflict.

In 1824, Colonel George Mercer Brooke established Cantonment (later Fort) Brooke on the south side of the mouth of the Hillsborough River, in what is now downtown Tampa, to oversee the angered Seminoles. Frontier families followed the soldiers and started settling the Tampa Bay area. This caused problems for the military as civilian settlements were not in accord with the military Camp Moultrie Agreement of 1823 (Guthrie 1974:10). By 1830, the United States War Department found it necessary to establish a military reserve around Fort Brooke with boundaries extending 16 miles to the north, west, and east of the fort (Chamberlin 1968:43). With the establishment of Fort Brooke, a military road called Fort King Road was cleared in 1825, connecting Fort Brooke and Fort King, now Ocala (Horgan et al. 1992:40).

On December 28, 1835, Major Francis Langhorne Dade was leading a company of soldiers from Fort Brooke to Fort King along the Fort King Road when they came under attack by the Seminoles, under the command of Chief Jumper. Only five of the 111 U.S. soldiers survived the attack. This served as a trigger for the Second Seminole War (1835-1842). Two years later, while traveling from Fort King to Fort Brooke, General Thomas

Jessup realized the need for a supply depot between the two forts. To commemorate the slain company and their leader, General Jessup established Fort Dade in 1837, near the site of the original battle. However, it was only operational for a few months before closing. Due to increasing unrest, Fort Dade was reestablished in 1849, south of the original site in present-day Dade City (Horgan et al. 1992:25, 94-96). During the seven-year war, trails and military roads used by the American military also included the road from Fort Clinch to Tampa Bay, located along the western edge of Annuteliga Hammock (north of S.R. 50, and the project APE).

In 1837, Fort Brooke became the headquarters for the Army of the South and the main garrison for the Seminole wars. The fort also served as a haven for settlers who had to leave their farms and seek protection from the warring Seminoles (Janus Research 1992:27-28). Several forts were established in the area at this time, and used as military garrisons or supply depots. Others were built to protect the nearby settlers during Indian retaliations. These included Fort Alabama, on the south bank of the Hillsborough River later named Fort Foster, Fort Thonotosassa near the Dade massacre site, Fort Simmons near Plant City, and Fort De Soto (Bruton and Bailey 1984; Thacker 2001). Fort De Soto, located approximately one and one half miles north of present-day Brooksville, sheltered some of the earliest settlers of Hernando County (e.g., the Rowe, Thrasher, Mills, Wiley, and Parish families) from Indian attacks (Stanaback 1976:12; Thacker 2001). The early civilian settlements of Fort De Soto, Melendez, and Pierceville were located along a three mile, north/south oriented corridor centered on the modern community of Brooksville. Fort De Soto was eventually abandoned due to the lack of available fresh water, and the settlers established a town just south of present-day Brooksville named Melendezville. Melendezville, which later became Melendez, was renamed Pierceville and eventually became the community of Brooksville. Three military forts were also established in the Brooksville area – Fort Dade (1837) near Lacoochee, Fort Cross (1837), and Fort Annutteelega (1840). Based upon the Mackay/Blake Map of 1839, Fort Cross was located near S.R. 50, approximately two miles east of the present-day Suncoast Parkway, and Fort Annutteelega was situated near Stafford Lake, eight miles northwest of Brooksville (Wharton 1990:20). Military camps were established between 1836 and 1837 at Camp

Lindsay, Camp Allen (west of Brooksville), and Camp Broadnax (east of Brooksville). Civilian forts or blockhouses also were constructed to shelter the pioneer settlers (Covington 1957).

The Big Hammock area was the scene of several skirmishes between the Seminoles and American troops during the later phases of the Second Seminole War. On June 2, 1840, Lieutenant Colonel Bennett Riley of the Second Infantry led his troops in an action against the Seminoles at Chocachatte. Flourishing agricultural fields were destroyed, and with them, an important Seminole stronghold (Mahon 1967:267).

The Second Seminole War lasted until 1842, when the Federal Government decided to end the conflict by withdrawing troops from Florida. Some of the battle-weary Seminoles were persuaded to migrate west, where the government had set aside land for Native American inhabitation. By the following year 3,824 Seminoles were transported west. However, those who wished to remain were allowed to do so, but were pushed further south into the Everglades and Big Cypress Swamp (Mahon 1967:321). Billy Bowlegs became the principal chief over the 300-400 Seminoles remaining in Florida (Mahon and Weisman 1996:179).

The Armed Occupation Act and Early Anglo-American Settlement

Upon conclusion of the war, the Armed Occupation Act was passed in 1842. It was designed to promote settlement and protect the Florida frontier, encouraging Anglo-American pioneers and their families to move south through Florida. The Act made available 200,000 acres outside the already developed regions south of Gainesville to the Peace River, barring coastal lands and those within a two-mile radius of a fort. The Armed Occupation Act stipulated that any family or single man over 18 years of age able to bear arms could earn title to 160 acres by erecting a habitable dwelling, cultivating at least five acres of land, and living on it for five years. During the nine month period the law was in effect, 1,184 permits were issued totaling some 189,440 acres (Covington 1961:48). Of these permits, at least 180 claims were for lands within or adjacent to

Annuteliga Hammock, north of the project APE (Covington 1957:57). The claimants were attracted to the fertile lands of the hammock area, including old fields left by the Chocochatti Seminole. Among the permit recipients in this region were Jesse Carlisle (Permit #9), Richard R. Crum (Permit #7), Joseph Eaton (Permit #137), William Hope (Permit #129), Daniel S. Whitehurst (Permit #556), Mary Darby (Permit #104), John S. Taylor (Permit #20), Richard O. Wiggins (Permit #122), and Richard Wiggins (Permit #115). All of the permits were located in Township 22 South, Range 19 East; no evidence of habitation west of the Range line was depicted on the plat maps for Ranges 17 and 18 (State of Florida 1849, 1852a, 1852b). Most of these settlers were simple farmers who grew corn, oats, potatoes, cotton, sugar cane, rice, and tobacco, and raised cattle, hogs, and other livestock (Stanaback 1976:14). Joshua Stafford, for whom Stafford Lake is named, is credited with planting the region's first orange grove (Covington 1957:110).

The influx of people into South Florida created the need for smaller localized administrative bodies. As a result, Hernando County was carved from Alachua County in 1843, and included present-day Hernando, Citrus, and Pasco Counties. Although the name was changed to Benton County in 1844, in honor of the author of the Armed Occupation Act, it reverted back to Hernando in 1850, when it was discovered that Senator Benton was a leader in the anti-slavery movement. Between 1843 and 1846, the homestead claims increased 375 percent, representing the tremendous immigration into Florida during this period. By 1850, nearly 1,000 settlers occupied the general project area, which included the former communities of Melendez and Chocachatte, south of present-day Brooksville.

Within a year of the establishment of the county, federal surveys of public lands were conducted. It was not until two years later, in 1845, that the Union admitted the State of Florida with Tallahassee as the capital. T. H. Weightman surveyed the exterior boundaries of T22S, R17, 18, and 19 East (State of Florida 1845). George Mackay also surveyed some of the exterior lines of T22S, R18E and George Watson surveyed some of the exterior lines of T22S, R17E (State of Florida 1846, 1851). In 1846, Mackay surveyed the interior lines of T22S, R19E and described the land as consisting of first and

second rate pine, hammock. Several homestead claims were depicted on the plat (State of Florida 1846, 1847).

The current project corridor, as contained within T22S, R18E, was described as third-rate pine land. There were no Armed Occupation permits recorded (State of Florida 1843a, 1843b). An old wagon trail ran along the southern portion of the township and range, an Indian trail transected this area on a northeastern trend, and the Tampa Road was depicted in the northeast quadrant of this area (State of Florida 1843b). Within T22S, R17E, the wagon road is referred to as the "Road to Spring Hill" (State of Florida 1852a). There are no historic features depicted on the plat for T23S, R17E, although the rise of the Weeki Wachee River (unnamed on the map) is drawn in the northeast quarter of Section 2 (State of Florida 1849).

The early 1850s witnessed a second migration of pioneers to Hernando County (Stanaback 1976). Among these individuals was Frederick Eugene Lykes, who settled in 1851 on a 160-acre farm in Spring Hill, about four miles west of Pierceville, north of the project corridor (McKethan 1989). Lykes was one of the earliest citrus growers in Florida and established the first school in the area for his son Howell Tyson Lykes. The school was private and a number of the students boarded at the Lykes home. The young Lykes became a cattle baron and fathered seven sons who founded the Lykes Brothers Enterprises (Truxal 1985). Another pioneer settler was Matthew Raiford Howell, who came to Hernando County from South Carolina in 1852. He purchased 160 acres south of present-day Fort Dade Avenue, which intersects S.R. 50 within the project corridor (Stanaback 1976:21).

Although primitive roads were created by federal troops during the Seminole wars of the 1830s and 1840s, they did little to facilitate the transportation of goods. At this early point in the county's development, building materials, goods, and supplies were imported, and cotton, farm produce, and timber were exported, through the coastal village of Bayport. Bayport's vital role in Hernando County's economy led to its selection as the county seat in 1854. A post office was established here that same year. However,

Bayport's remote location, on the western margin of the county, was not easily accessible and failed as an administrative hub. With growing dissatisfaction, the Bayport post office was discontinued and services transferred to Brooksville (then Pierceville) in 1855 (Bradbury and Hallock 1962:11). The following year the county seat was also moved there. By 1857, Pierceville had begun to grow, now having its own school located at the First Baptist Church (McKethan 1989). It was not until January 10, 1871, that the city of Pierceville was officially changed to Brooksville (Bradbury and Hallock 1962:11). The town was renamed for Preston Brooks, a South Carolina Congressman known for his heated debates over secession prior to the Civil War (Federal Writers' Project 1939:390).

The Third Seminole War (1855-1858)

The third Seminole War, like the Civil War that followed, ushered in a period of economic stagnation. In December of 1855, the Third Seminole War, also known as the Billy Bowlegs War, began as a result of pressure placed on the Native Americans remaining in Florida to emigrate to the west. The war started in what is now Collier County when Seminole Chief Holatter-Micco, also known as Billy Bowlegs, and 30 warriors attacked an army camp, killing four soldiers and wounding four others. This hostile action renewed state and federal interest in the final elimination of the Seminoles from Florida (Covington 1982). No forts were established or reestablished in the project area, as most of the fighting during the Third Seminole War took place to the south.

On May 14, 1856, a Seminole war party attacked the Hernando County home of Robert D. Bradley, a Captain in the Second Seminole War. The attack on the Bradley homestead was the last such attack east of the Mississippi River (McKethan 1989:32). Military action was not decisive in this Third Seminole War; therefore, in 1858 the U.S. Government resorted to monetary persuasion to induce the Seminoles to migrate west. Chief Billy Bowlegs accepted \$5,000 for himself and \$2,500 for his lost cattle. Each warrior received \$5,000, and \$100 was given to each woman and child. On May 4, 1858, the ship *Grey Cloud* set sail from Fort Myers with 38 Seminole warriors and 85 Seminole women and children. Stopping at Egmont Key, 41 captives and a Seminole woman guide

were added to the group. This made for a total of 165 Seminoles migrating west. On May 8, 1858, the Third Seminole War was officially declared at an end (Covington 1982:78-80).

The Civil War and Aftermath

In 1861, Florida followed South Carolina's lead and seceded from the Union in a prelude to the American Civil War. Florida had much at stake in this war, as evidenced in a report released from Tallahassee in June of 1861. It listed the value of land in Florida's 35 counties as \$35,127,721 and the value of the slaves in the state at \$29,024,513 (Dunn 1989:59). Despite the fact that Florida's coast was blockaded during the Civil War, the interior of the state saw very little military action (Robinson 1928:43). Many male residents abandoned their farms and settlements to join the Hernando Wildcats, part of the Third Florida Infantry (McKethan 1989:35). An alternative to active service was the Confederate Cow Cavalry, which supplied beef to the troops (Akerman 1976:93-95). In 1861, a militia was formed in Brooksville under the command of Captain LeRoy G. Lesley. His command was filled with veteran cowmen and other citizens committed to protecting blockade runners out of Bayport, the county's main port. The militia also provided cow drivers to move cattle north to feed the armies of the Confederacy (Wharton 1990:23). Salt works along the Gulf Coast also functioned as a major contributor to the efforts of the Confederacy. The war lasted until 1865, when General Robert E. Lee surrendered to General U. S. Grant at Appomattox Courthouse in Virginia.

Immediately following the Civil War, the South underwent a period of reconstruction to prepare the Confederate States for readmission to the Union. The program was administered by the U. S. Congress, and on July 25, 1868, Florida officially returned to the Union (Tebeau 1971:251). During Reconstruction, Florida's financial crisis, borne of pre-war railroad bonded indebtedness, led Governor William Bloxham to search for a buyer for an immense amount of state lands. Bloxham's task was to raise adequate capital in one sale to free the remainder of state lands from litigation, for desperately needed revenue. In 1881, Hamilton Disston, a Philadelphia investor and friend of Governor

Bloxham, formed the Florida Land and Improvement Company. The company then purchased four million acres of swamp and overflow land for one million dollars from the State of Florida in order to clear the state's debt. This transaction, which became known as the Disston Purchase, enabled the distribution of large land subsidies to railroad companies, inducing them to begin extensive construction programs for new lines throughout the state. Hamilton Disston and the railroad companies, in turn, sold off smaller parcels of land (Tebeau 1971). The Disston Purchase along with the end of the Civil War stimulated growth in the area. Southerners sought new homes to escape the continued unrest in the neighboring ex-Confederate states, and the war brought prosperity to a large number of Northerners desiring vacation homes in warmer climates (Shofner 1995:83).

Impact of the Railroads

Improvements in Florida's transportation systems played a major role in establishing cities and fostering growth. Six miles west of Brooksville, just north of the project corridor, the town of Wiscon was founded in 1882 by C. C. Peck. Wiscon, was named for the town's first settlers, most of who came from Wisconsin (Stanaback 1976:203). A post office was established here on August 4, 1884 (Bradbury and Hallock 1962:90). In 1883, 500 acres were purchased by the father, uncle, and aunt of Ella Wilder Metcalf and Doctor McClure in and around Weeki Wachee Springs for \$5,000 (Stanaback 1976:203).

With the completion of the Florida Southern Railroad and the Orange Belt Railroad in the 1880s, Hernando County was no longer isolated. In 1883, Henry Bradley Plant, a prominent railroad operator in Georgia and South Carolina, wanted to expand his railway lines into Florida. He purchased a charter from Alfred M. Parslow to build a railroad from Kissimmee to Tampa. Because the charter had only a seven-month life remaining, Plant constructed the railroad from both ends to meet in the middle. With the final segment complete, there was a cross-state railroad from Sanford, near Lake Monroe, connecting Tampa with Jacksonville (Bruton and Bailey 1984:72).

In 1885, a spur line developed by the Plant System was extended from Pemberton's Ferry on the Withlacoochee River to Brooksville. A direct thoroughfare was later established in 1907 (Covington 1957:181). This line provided direct access for the transport of agricultural products to markets, and thus began a steady expansion of the agricultural sector (HDR Engineering 1987:59).

At this time the population of Hernando County was 7,173, an increase of 2,925 from just five years prior. The population of Brooksville at this time (800) was larger than that of Miami (150) (Dunn 1989). Although the railroad alleviated many of the transportation problems associated with wagon teams and stagecoaches, the large size of the county continued to make access to and from Brooksville difficult. As a result, Pasco and Citrus Counties were carved from Hernando County in 1887. Following this reapportionment, Hernando County was reduced to one-third its original size (McKethan 1989: 44).

Early Industrial and Commercial Development

Following Reconstruction through the 1890s, the citrus industry, lumber business, and phosphate mining fueled Hernando County's economy. The diversity of agricultural products produced in the county at this time is a testament to the natural bounty of the area: sugar, sea island cotton, corn, rice, oats, rye, peas, potatoes, tobacco, sisal hemp, agave, manilla, indigo, cassava, Japanese plums, grapes, pineapple, figs, guava, citrus, pecans, hickory nuts, tea, and coffee.

By 1885, Hernando County produced a variety of citrus products, including lemons, limes, citrons, and oranges. Among the major growers were John Bell, Fred Springstead, John J. Hale, Howell T. Lykes, and William S. Jennings (Stanaback 1976:273-4). Despite damages from the Big Freeze of 1894-95, citrus dominated agricultural productivity in the southern part of the Big Hammock area (Covington 1957:59; HDR Engineering 1987). With the groves in full production, some growers began experimenting with citrus grafts. John J. Hale, utilizing orange varieties, created the tangerine, thereby making Hernando County the home of the popular citrus fruit (McKethan 1989). He was also

instrumental in founding the Brooksville Citrus Growers Association in 1909. The association had its own modern packing plant, which was able to process oranges, grapefruit, and tangerines at a rate of 700,000 boxes a year (McKethan 1989; Stanaback 1976:276).

First developed in the 1870s and 1880s, commercial lumbering played a major role in the economy of the region as well. In the coastal area, red cedars were cut for pencil manufacture. Lumber, mill, crate, and turpentine companies operated in Hernando County until the forests were depleted in the 1920s. L. B. Varn, along with his family, established an extensive turpentine business that employed hundreds of people. During the days of prosperity, 1900-10, large mills were established at Enville (present-day Masaryktown, south of the project corridor) and Centralia, north of Spring Hill and the project corridor. During the 1920s, several small sawmills continued to operate in Hernando County, as the Florida real estate boom created a need for lumber. "Even after the boom collapsed in 1929, the Brooksville Hardwood Manufacturing Company opened a hardwood mill north of the Seaboard Railroad Crossing at Brooksville" (Stanaback 1976:183-184).

Limerock mining began in the Annuteliga Hammock area in 1913, with the construction of the region's first rock crushing plant by John J. Bell at the Florida Rock Products Company site near Brooksville (HDR Engineering 1987:60; Stanaback 1976:188). The industry enjoyed tremendous growth during the mid to late 1920s, when the Florida land boom created a great demand for construction and road building materials. In 1925, the Camp Concrete Company opened its quarry east of Brooksville. The Florida Portland Cement Company purchased 1,000 acres in Annuteliga Hammock, and three more mining companies were established within five years. Despite a slowdown during the Depression years, construction by the State Road Department during the 1930s stimulated the industry. In 1939, the Camp Concrete Rock Company opened a new rock mine four miles northwest of Brooksville. Limerock mining continues today as a mainstay of Hernando County's economy (Stanaback 1976:190, 193).

Cattle ranching in Hernando County may be traced to the Lykes family enterprises, beginning in the 1860s. The cattle business of Dr. Howell T. Lykes eventually passed to his eldest son Frederick, who, along with his brothers, founded Lykes Brothers Inc. in 1911. During the 1920s and 1930s, extensive acreages of improved pasture were planted for the growing cattle industry, and Hernando County cattlemen shipped their stock to the Lykes packing plant in Tampa for processing (Stanaback 1976:289). In 1934, the Hernando County Cattlemen's Association was formed. Frederick Lykes managed his family's cattle operations in Hernando County until his death in 1951.

Late Nineteenth and Early Twentieth Century Developments

With growing prosperity during the late nineteenth century, local real estate agents began aggressive promotional campaigns. A brochure promoting the Annuteliga Hammock area (in McKethan 1989 Appendix), published in 1885, described Brooksville as follows:

Present population about 1,000; four churches, two white and two colored. Four hotels, two restaurants, seventeen mercantile business houses, three real estate agencies, two meat and vegetable markets, two millinery and mantua [mantle] makers, one shoe shop, two barber shops, two livery stables, and one weekly newspaper, the *Brooksville Register*. In the professions, eleven lawyers, one dentist and two physicians.

The town is incorporated, with excellent officials, who will preserve peace and order at any hazard. The drainage of the place is excellent, with no local cause for sickness. The streets are firm and free from sand, with good hard-road drives for many miles around to points of interest.

The great freezes of 1894 and 1895 had a less positive effect on the area. The town of Wiscon was abandoned and the post office was discontinued. Service was rerouted to Brooksville on May 10, 1895 (Stanaback 1976:208; Bradbury and Hallock 1962:90).

The first decades of 1900 saw exponential growth in the infrastructure and industry of Hernando County. The Gulf Coast railroad line, from Brooksville to Hudson, and the Brooksville to Tampa railroad line were completed, and two banks were established (McKethan 1989). Early communities in Hernando County, in the vicinity of the project area, included Hammock Hills, which appears on a May 1901 county map, and Ringgold, both located north of the project area (McKethan 1989). Hammock Hills was the site of a “for whites only” school in 1900. It was one of twenty-four schools in the county at the time. Little is documented about the former community of Ringgold. A post office was established here on May 19, 1909, and discontinued five years later (Bradbury and Hallock 1962).

The town of Wiscon experienced a rebirth as the post office was reestablished on February 15, 1902 (Bradbury and Hallock 1962:90). Townspeople were seeking investors to help in the development and growth of the community. For a short time a turpentine plant was established in the area, until it closed in 1908, when the City of Brooksville and Wiscon Land Company purchased the land. In 1910, Mr. William Lazon of Wiscon Land Company induced developers from Tampa, describing Wiscon as having “economic opportunities” as it was “next to the Tampa Northern Railroads Tooke Lake Branch, which connected Centralia, a sawmill town [north of the project area] to Brooksville” (Stanaback 1976:208). Despite the real estate investments, Wiscon again went into decline, permanently discontinuing postal service on July 31, 1910 (Bradbury and Hallock 1962:90).

The 1920s real estate boom and improved transportation, along with land investment speculation, led to growth and development in the area. Florida State Road 5 was Hernando County’s first highway, constructed in the 1920s. Linking Brooksville with Tampa, it is now known as U.S. 41. Land along these major highways became the most sought after for development, as they became major thoroughfares for tourists throughout the state. Tourist attractions or roadside attractions began to develop all over Florida, including Hernando County. The Florida tourist attraction generally met certain criteria including locating near a natural occurrence or landscape feature, along a major highway,

and containing an elaborate and creative entrance. Weeki Wachee Springs became an area for development speculation at this time. Since the turn of the century the spring had been a popular picnic area and swimming hole, so it was a natural choice for recreational development in the area. In 1925, the Wilder family sold Weeki Wachee Springs to J. M. Rogers of Brooksville, and L. L. Buchanan and Frank P. Bentley of Tampa for \$100,000. The new owners then formed the Glenarden Company with the intention of developing the spring and river all the way to the Gulf. A golf course and country club were also being planned for development of the area at the cost of \$50 million, along with hotels, tourism, and a hunting preserve. The Weeki Wachee area was to be a "recreational paradise" (Stanaback 1976:222).

The Great Depression years began early in Florida with the collapse of the real estate market in 1927. The economic collapse brought all plans for the development of Weeki Wachee to a halt (Stanaback 1976:230). The following decade saw the closing of banks, mines, mills, and citrus packing plants, followed by widespread unemployment. In 1933, the Seaboard Air Line discontinued passenger rail service to Brooksville. By the mid-1930s, federal programs implemented under the Roosevelt administration began employing large numbers of construction workers, helping to revive the economy. The programs were instrumental in the construction of parks, bridges, and public buildings. In April 1935, a Civilian Conservation Corps (CCC) camp was constructed at Chinsegut Hill, just north of Brooksville. "Within a few months two to three hundred young men were housed there while they worked on public projects such as schools, roads, and bridges. The cost was borne by the Works Project Administration (WPA), which spent \$47,473.79 in the county during 1936" (Stanaback 1976:87). Both the Spring Lake and Lake Lindsey schools in Hernando County were constructed with funds provided by the WPA. A new county hospital, built mainly with WPA labor, opened for business in October 1936 (McKethan 1989:97).

In 1939, Brooksville had a population of 1,405. In that year, the Federal Writers' Project of the WPA described Brooksville:

The business district overlooks a rolling country dotted with summer camps and suburban estates. Tangerines are grown extensively throughout this section, dairy products are shipped to State-wide markets, but the quarrying of limestone rock is the leading industry (Federal Writers' Project 1939:390).

The major introduction of the roadside attraction in Florida began before the Depression. Roadside attractions in Florida generally developed along the most traveled areas, which were U.S. 1 (Dixie Highway on the east coast), U.S. 27 (Orange Blossom Trail in central Florida), and U.S. 41 (Tamiami Trail on the west coast), the latter of which bisects Brooksville. These three major highways contained over half of the roadside attractions in the state, and 92 percent of these were south of a line across the state extending from St. Augustine in the east to Brooksville in the west. U.S. 441, U.S. 301, and U.S. 19 also became heavily traveled routes which resulted in their tourist attraction popularity (Breslauer 2000:9, 16).

Among the local roadside attractions was the Lewis Plantation and Turpentine Still, located along U.S. 41 in Brooksville. It operated between 1936 and 1960 (Breslauer 2000:84). Pearce Lewis, the owner, transformed his turpentine business into a replica of a pre-Civil War plantation. The park offered mule wagon rides for ten cents and viewing of turpentine production from period equipment. In 1939 the Federal Writers' Project of the Works Project Administration described the Lewis Plantation in this way:

A large group of frame and log cabins clustered around a turpentine still (open 8:30-5:30, admission 50 cents) can be observed the various processes in the distillation of pine sap. Almost all workers are Negroes. One of the larger cabins is occupied by aged Negroes, billed as ex-slaves, who sing, plunk banjoes, and tell tall tales for the entertainment of their visitors and the profit of themselves (Federal Writers' Project 1939:390-391).

1940s to the Present

The outbreak of World War II temporarily reduced student enrollment throughout Hernando County, resulting in the closure of some rural schools. In 1941, the Hammock Consolidated School was constructed to replace the rural schools at Hebron and Lake Stafford. After the war ended, the county's efforts centered on school consolidation allowing the school system to provide higher quality education, while limiting the number of school facilities. It was determined that three white schools could cover the educational needs of the entire county. Students living near the Brooksville area were brought to Brooksville for schooling, while the Hammock Consolidated and Istachatta schools were merged with the Lake Lindsey School, and the Garden Grove and Masaryktown schools were merged with the Spring Lake School (Stanaback 1976:261-262). The Hammock Consolidated School closed in 1953, at which time it was converted to a community center.

World War II saw the end of the Great Depression. During the war, a pilot training airfield was established in Brooksville (Covington 1957:247). After the war, the population was more mobile and many who had served at Florida's military bases during the war returned with their families to live. The population of Florida dramatically increased and tourism boomed. The 'vacationer' accounted for one-third of the state's economy by 1948, generating \$790 million. An estimated four million tourists came through Florida in that year alone. "Over 30 significant tourist attractions opened in Florida from 1946-1954" (Breslauer 2000:15).

In 1946, Newton Perry the founder and original instructor for the U.S. Navy frogman unit, "conceived the idea of staying under water and breathing through an air hose supplied with air by a compressor" (Weeki Wachee Springs Waterpark n.d.). Perry came to Weeki Wachee Springs in order to test and perfect his underwater breathing apparatus. There, due to the clarity of the water and beauty of the marine life and terrain, he developed the idea for an underwater show. With this idea in hand, Perry and three associates set out to develop Weeki Wachee Springs for this purpose. The previous

development plans were abandoned, because of the Depression and World War II. They formed the St. Petersburg Corporation and developed a plan to spend anywhere from \$100,000 to \$500,000 “for landscaping, erecting tourist cabins, and constructing some type of underwater viewing room” (Stanaback 1976:230). In 1946, they received a 25-year lease from the City of St. Petersburg, who had purchased the spring as an emergency water supply, as well as 526 acres surrounding the site. The St. Petersburg Corporation agreed to spend \$100,000 a year for three years in development of the area, and made plans to open during the summer of 1947 (Stanaback 1976:230). Construction began immediately on creating the first underwater theatre in the world, which consisted of “a tank with a small viewing window and a canvas cover” (Weeki Wachee Springs Waterpark n.d.).

On October 13, 1947, when Weeki Wachee Springs opened, there was no highway leading to the area. Only a “winding hard surfaced road with barely enough room for two cars to pass” existed (Weeki Wachee Springs Waterpark n.d.). There also was no electricity or telephone service in the community. The introduction of the tourist attraction induced these services, allowing the entire area surrounding the park to develop. Population growth generally followed along the modern highway routes. In 1949, two major thoroughfares, S.R. 50 and U.S. 98 were constructed (McKethan 1989:104). Road building in the late 1940s and 1950s resulted in the expansion of the mining industry, and a large increase in population, which doubled in 1950 from 1925, reaching 2.8 million (Breslauer 2000:15). Interstate 75, constructed in the mid-1960s, increased access and visibility, resulting in a real estate boom (Hernando Chamber of Commerce 2002). The community of Spring Hill, constructed by the Mackle Brothers in the mid-1960s, helped to make Hernando one of the fastest growing counties in the nation. By 1969, 500 homes and 14,000 home sites had been sold at Spring Hill (Stanaback 1976:235).

The major tourist attractions began to take a different course during the 1960s. The introduction of the interstate system, the opening of Disney World in Orlando in 1965, air travel, and the popularity of professional sports all led to the decline of the roadside

attraction in the state of Florida. Lewis Plantation and Turpentine Still closed in 1960. Although the parks were heading for decline, new tourist attractions continued to open until the early 1970s. Foxbower Wildlife, also known as the Wildlife Museum, opened in 1961 near Brooksville on U.S. 19, south of Weeki Wachee Springs. The tourist attraction was classified as a zoological park containing “the world’s largest collection of taxidermied animals” (Breslauer 2000:16). Created by Jacob S. Foxbower, the attraction was marked by a 22-foot pink concrete dinosaur at the entrance. Foxbower Wildlife featured a variety of different animals including birds, fish, and reptiles and over 1,000 dead animals. Eventually all of the living animals were sold so the attraction could focus strictly on taxidermy. The site remained open until 1980, when it was dismantled, leaving only the pink dinosaur as a reminder of the roadside attraction. One hundred thirty roadside attractions were developed in Florida from 1929 to 1971; however only thirty were still in operation at the end of 1998. With the recent closure of Cypress Gardens in April 2003, the roadside attractions are becoming a thing of the past. Weeki Wachee Springs has remained in operation despite the hardships. In order to keep “Weeki Wachee Springs” on the map, ABC, the owner at the time, managed to have the City of Weeki Wachee Springs incorporated. It still appears on street signs and is noted on maps today, and has contributed to its continued operation (Janus Research 1998:6).

In 1993, Hernando County had a population of 111,695 and ranked 28th among Florida’s counties. Ninety-three percent of the population resided in unincorporated areas (Purdum 1994:54). Hernando County is the second fastest growing county in Florida. Much of this growth is occurring in the retirement communities, such as Spring Hill. Limerock mining and stone production are Hernando County’s major industries. Cattle and pigs are the leading agricultural products with 20 percent of the county’s land devoted to agriculture (Purdum 1994:54). From 1970 to 2000, the population of Hernando County increased seven-fold, from roughly 17,000 to 131,000 (County of Hernando 2001).

5.0 RESEARCH CONSIDERATIONS AND METHODS

5.1 Background Research and Literature Review

A comprehensive review of archaeological and historical literature, records and other documents and data pertaining to the project area was conducted. The focus of this research was to ascertain the types of cultural resources known in the project area and vicinity, their temporal/cultural affiliations, site location information, and other relevant data. This included a review of sites listed in the NRHP, the FMSF, cultural resource survey reports, published books and articles, unpublished manuscripts, maps, and interviews. In addition to the FMSF at the Division of Historical Resources in Tallahassee, other data relevant to the historical research were obtained from the Hernando Historical Museum Association, Inc., the Hernando County Property Appraiser's Office, and from the files of Archaeological Consultants, Inc. (ACI). It should be noted that the FMSF information in this report was obtained, most recently, in April 2003. However, according to Dr. Marion Smith, administrator of the FMSF, input may be a few months behind receipt of reports and site files.

5.1.1 Archaeological Considerations

For archaeological survey projects of this kind, specific research designs are formulated prior to initiating fieldwork in order to delineate project goals and strategies. Of primary importance is an attempt to understand, on the basis of prior investigations, the spatial distribution of known resources. Such knowledge serves not only to generate an informed set of expectations concerning the kinds of sites which might be anticipated to occur within the project corridor, but also provides a valuable regional perspective, and thus, a basis for evaluating any new sites discovered.

A review of the FMSF indicated that 39 previously recorded archaeological sites are located within approximately 3.2 km (2 mi) of the S.R. 50 project corridor (Table 5.1). Many of these sites were recorded during surveys conducted within the last 20 years. The majority of these sites are represented by variable density lithic and artifact scatters

characterized by small areal extent and low artifact densities. These are believed to represent limited activity, short term residential or hunting camps. The debris from stone tool manufacture and/or modification with or without a small quantity of ceramics defines the site assemblages. In addition, a Weeden Island period mound is also located in the general area (8HE13). The mound, originally described as 20 m (65 ft) in diameter and 1 m (3 ft) in height, was partially excavated by the Hernando Historical Society Archaeological Club in the early 1970s (FMSF).

Numerous cultural resource assessment surveys have been conducted in the vicinity of the S.R. 50 project. These include several projects performed by Robert Marsh in the late 1970s to early 1980s: the Brooksville 201 facilities (Marsh 1976); the Brooksville West water treatment and elevated storage tank site (Marsh 1977); the 465 and the 411 single family development tracts south of S.R. 50 (Marsh 1979); the Cone Quarry/McKethan Park tract (Marsh 1980); the Holland Springs tract (Marsh 1981a); and the Lykes property (Marsh 1981b). As a result of these investigations, a few small lithic and artifact scatter type sites were recorded.

Table 5.1. Archaeological Sites Located Within 3.2 km (2 mi) of the S.R. 50 Project.

Site # ++	Site Name	Twp	Rng	Sec	Site Type*	Culture**	Reference
8HE12	Weekiwachee Springs	23S	17E	2	MOUN	SAFE	Mitchem et al. 1985
8HE13	Horse Lake	22S	19E	29	MOUN	WE	FMSF
8HE31	Berkley 1	22S	17E	2	MIDD; SCAR	WE	Browning 1979
8HE32	Berkley 2	22S	17E	2	MIDD; SCAR	WE	Browning 1979
8HE45	no name	22S	17E	33	SCLI	INDE	Deming & Almy 1983a, 1983b
8HE56	Lykes 1	22S	17E	33	SCAR	WE	Deming & Almy 1983a
8HE57	Lykes 2	22S	17E	34	SCAR	WE	Deming & Almy 1983a
8HE58	Lykes 3	22S	17E	34	SCAR	WE	Deming & Almy 1983a
8HE59	Lykes 4	22S	17E	34	SCLI	INDE	Deming & Almy 1983a
8HE60	Lykes 5	23S	17E	3	SCLI	INDE	Deming & Almy 1983a
8HE236	Hilton Cedar	22S	20E	30	SCLI	UNKN	Ballo 1989
8HE237	Horselake Road	22S	19E	29	SCLI	UNKN	Ballo 1989
8HE238	Shopping Center	22S	19E	28	SING	UNKN	Ballo 1989
8HE239	Pumping Station Road	22S	19E	28	SCLI	UNKN	Ballo 1989

Site # ++	Site Name	Twp	Rng	Sec	Site Type*	Culture**	Reference
8HE240	Sardis Road	22S	19E	26	SCAR	UNKN	Ballo 1989
8HE241	Colorado	22S	19E	29, 30	SCAR; CAMP; SCLI	PALE; ARCE; ARCM; ARCL; SAFE	Ballo 1989; Estabrook 1992; Horvath et al. 1998
8HE270	Choacachatte Town	22S	19E	25	NOFR; TOWN	UNSP	FMSF
8HE271	East Brooksville	22S	19E	24	HABI; TOWN; NOFR	UNSP	FMSF
8HE272	Experimental Farm	22S	20E	30	BLDG; HABI; NOFR	SPAW	FMSF
8HE273	Fort Desoto	22S	19E	24	CAMP; FORT; NOFR	AMER	FMSF
8HE309	Military Landing	22S	17E	34	NOFR; WHAR	CIVL; 20 th	FMSF; Lammers et al. 1999
8HE324	Norman	22S	18E	22	TOWN	19 TH ; 20 TH	FMSF
8HE325	New Town	22S	19E	27	TOWN; VADE	19 TH	FMSF
8HE326	Pierceville	22S	19E	22	TOWN	19 TH	FMSF
8HE328	Spring Hill (Old)	22S	18E	24	TOWN	19 TH	FMSF
8HE329	Turpentine Still	22S	19E	32	MILL; TURP	19 TH ; 20 th	FMSF
8HE330	Wiscon	22S	18E	25	TOWN	19 TH ; 20 TH	FMSF
8HE335	Garrison	23S	19E	2	TOWN	19 TH	FMSF
8HE336	Hannibal	23S	19E	5	TOWN; VADE	19 TH ; 20 TH	FMSF
8HE337	Melendez	22S	19E	22	TOWN	19 TH	FMSF
8HE341	Parcel 102 Northwest	22S	20E	31	SCLI	PREA	Deming 1993
8HE342	Parcel 102 Northeast	22S	20E	31	SCLI	PREA	Deming 1993
8HE363	42-7	22S	18E	22	SCAR	20 th	Athens et al. 1994
8HE372	Twin Lakes	22S	19E	28	LAND	PREA; PREH	Deming 1994
8HE392	Weeki Wachee Wall	22S	17E	34	REFU; SCAR	PREC; 20 th	Lammers et al. 1999
8HE393	Winding Waters	22S	17E	34	CAMP; SCAR	PREC	Lammers et al. 1999
8HE418	Tank Target Site	22S	18E	23	HEAR; SCLI	OTHR; PREH	Stevens and Lorenzini 2001
8HE436	River Country	23S	17E	3	SCLI	ARC	FMSF
8HE457	Pond Holes	22S	17E	27	SCLI, SCNQ	PREA	FMSF
8HE463	Brooksville Cemetery Site	22S	19E	26	SCNQ	ARC; POPI	FMSF

++ Bolded site numbers indicate sites within the S.R. 50 project.

* MOUN=mound; MIDD=midden; SCLI=lithic scatter; SING=single artifact; SCAR=artifact scatter; NOFR=no field research; HABI=habitation site; BLDG=building; VADE=variable density artifact scatter; TURP=turpentine camp; REFU=refuse; HEAR=historic earthworks; SCNQ=lithic scatter, non-quarry

** WE=Weeden Island; INDE=indeterminate; UNK=Unknown; PALE=Paleo-Indian; ARCE=Early Archaic; ARCM=Middle Archaic; ARCL=Late Archaic; SAFE=Safety Harbor; UNSP=Unspecified; SPAW=Spanish-American War; PREA=Prehistoric, no ceramics; PREH=prehistoric; PREC= prehistoric ceramic; ARC=Archaic

William Browning, an FDOT archaeologist, conducted an archaeological survey of U.S. 19 from the Pasco-Hernando county line to S.R. 50 in 1979. As a result, two Weeden Island period artifact scatters (8HE31 and 8HE32) were recorded (Browning 1979). In 1986, Browning also surveyed U.S. 19 between S.R. 50 and U.S. 98, resulting in the discovery of three lithic scatters (Browning and Wiedenfeld 1986). Browning later surveyed S.R. 50, between U.S. 19 and Colorado Street, in February 1988, as indicated in the State Environmental Impact Report (SEIR) dated May 1988 (RS&H 1988). The SEIR stated that as a result of the background research and on site surveys, no historic structures, districts, or archaeological sites were identified.

In 1983, ACI conducted surveys of two proposed development tracts located west of the S.R. 50/US 19 intersection. The first, Oak Sound DRI, resulted in the recording of 15 archaeological sites, many of which are temporally indeterminate lithic scatters, such as 8HE45 (Deming and Almy 1983b). Several years later, a damage assessment report was completed for one of the archaeological sites, a burial mound (8HE55), located within the Oak Sound property (Almy 1994). Just east of Oak Sound, ACI also surveyed the Lykes property (aka River Pines DRI). As a result, two culturally indeterminate lithic scatters (8HE59 and 8HE60) and three Weeden Island period artifact scatters (8HE56, 8HE57, and 8HE58) were identified and recorded, and previously recorded site 8HE45 was updated (Deming and Almy 1983a).

In 1989, FDOT archaeologist George Ballo performed an archaeological survey of S.R. 50/50A from Colorado Street to U.S. 301. Several sites were discovered, including the NRHP-eligible Colorado Site (8HE241), and three other sites (8HE237, 8HE238, and 8HE239) located within the S.R. 50 PD&E Study Reevaluation project, and several others in the vicinity (Table 5.1). The Colorado Site (8HE241) was the focus of subsequent Phase II testing (Estabrook 1992) and Phase III mitigative excavation (Horvath et al. 1998).

Two surveys of the North Suncoast Expressway, which crosses S.R. 50, were conducted by Wharton (1990) and ACI (1995). As a result, Wharton recorded eight archaeological sites within Hernando County, including six lithic scatters and two multi-component historic and aboriginal artifact scatters (Wharton 1990). The subsequent work by ACI included a revisit to four of the previously recorded sites, as well as the recording of one new lithic scatter (ACI 1995).

In 1990, Ken Sutherland, of the Hernando County Planning Department, recorded several historic sites on the basis of archival research only. Therefore, the exact site locations have not been verified through field survey. These sites include ten towns (Choacachatee [8HE270], East Brooksville [8HE271], Norman [8HE324], New Town [8HE325], Pierceville [8HE326], Spring Hill (Old) [8HE328], Wiscon [8HE330], Garrison [8HE335], Hannibal [8HE336], and Melendez [8HE337]), a turpentine mill (8HE329), an experimental farm and homesite (8HE272), and a fort (Fort DeSoto [8HE273]).

Other local projects include archaeological surveys of proposed pond and wetland mitigation sites along S.R. 50 (Deming 1993, 1994), which resulted in the identification of a few small lithic scatter type sites (8HE341, 8HE342, and 8HE372). In addition, surveys within the Chassahowitzka Wildlife Management Area have resulted in the recording of a number of archaeological sites (e.g., 8HE309, 8HE392, and 8HE393), a few of which are proximate to the western limit of the S.R. 50 PD&E Study Reevaluation project (Lammers et al. 1999; Weisman and Newman 1994). R. Christopher Goodwin and Associates conducted the survey of the West Leg Mainline portion of the proposed Florida Gas Transmission Company's Phase III expansion project corridor, which crosses S.R. 50 about 6.5 km (4 mi) west of Weeki Wachee. Numerous archaeological sites and structures were recorded, only one of which (8HE363), a 20th century artifact scatter, was recorded proximate to the S.R. 50 project (Athens et al. 1994). In 1998, Janus Research conducted a Study Reevaluation along U.S. 19 from Toucan Trail to S.R. 50. At this time, 8HE31, a lithic scatter previously recorded by Browning, was found to be almost destroyed, as evidenced by the excavation of 43 shovel tests and the recovery of only two flakes from the surface.

More recently, Parsons Engineering Science, Inc. conducted an archaeological investigation of the Brooksville Turret Gunnery Range, located west of the S.R. 50 project. Two archaeological sites and an artifact occurrence were reported. Among these, the Tank Target Site (8HE418), a WWII training facility, was considered potentially significant (Parsons Engineering Science 2001). A portion of the Tampa Northern Railroad bed (8HE427) also was recorded. Archaeological survey of the Gregg Mine Extension property, located approximately one mile north of S.R. 50, directly east and west of C.R. 491, resulted in the identification of one previously recorded site (8HE38) and the discovery of 11 new sites (8HE479-489) (ACI 2002). Finally, in 2003 ACI surveyed the Cobb Road (CR 485)/US 98 PD&E Study project, which begins at S.R. 50 (ACI 2003). No archaeological sites were discovered proximate to S.R. 50.

Several local sites were recorded independently; that is, not part of a survey project. These sites include the Weekiwachee Springs Site (8HE12), recorded in 1969 and test excavated by Robert Allen of the University of Florida (Mitchem et al. 1985). This site was originally recorded as a burial mound. However, more recently, Ryan Wheeler documented the presence of at least three canoes within the spring run (FMSF). Three lithic scatters (8HE436, 8HE463, and 8HE457) were recorded by Brenda Swann with the Florida Division of Historical Resources, Bureau of Archaeological Research.

In general, these and other previous surveys and investigations illustrate that above all other factors, proximity to a source of fresh water, including lakes, ponds, wet prairies, marshes and sinks, is a key to prehistoric site location in Hernando County. In her assessment of the archaeological resources of Hernando County, Horvath (1986) found that, in general, most sites are within 1312 feet (400 meters) of a potable water source, are associated with sand ridges, and are found in relatively better drained locations in areas of poorly drained soils. Quarries are associated with sinkholes. Roughly one-third of the sites in Hernando County are within 33 ft (10 m) of a fresh water source, and 95% are within 1509 ft (460 m) (Horvath 1986:105, 137). Lithic scatter type-sites, which comprised 33% of the recorded sites in the county at the time of study, tend to be located

on sand ridges. The site locations are characterized by well-drained soils, and the average distance to a fresh water source is 544 ft (166 m). Artifact scatters have similar environmental correlates. In an earlier study by Marsh (1975), it was found that "... it is the lack of water which best accounts for the absence of sites in the dry sandhills." As demonstrated by the results of archaeological survey of the proposed North Suncoast Expressway, sites in the upland areas occupy slopes, knolls, and other elevated terrain adjacent to ponds or other wetlands (Wharton 1990:11). In the pine flatwoods, sites are associated with ridges and knolls. No sites are found in the broad flats and sloughs (Wharton 1990:11).

On the basis of these data, informed expectations concerning the types of sites expected to occur within the project corridor and proposed pond areas, as well as their likely environmental settings, was generated. It should be noted that the settlement patterns noted above cannot be applied to sites of the Paleo-Indian and Early Archaic periods, which precede the onset of modern environmental conditions. In applying these known site location predictive factors and historical information to the project area, locations along the project corridor considered to have the potential for prehistoric and historic period site occurrence were identified. Specifically, the better drained, elevated hill slopes proximate to fresh water sources were considered to have the potential for lithic or artifact scatter type-sites. Overall, given the relative scarcity of potable water sources proximate to the S.R. 50 project APE, a low to moderate probability for the occurrence of unrecorded archaeological sites was anticipated for the right-of-way area between U.S. 19 (S.R. 55) and Colorado Street. The project corridor located between Colorado Street and the east S.R. 50/50A intersection was not archaeologically surveyed since it was previously surveyed (Ballo 1989). Approximately half of the proposed pond sites were considered to have a high or moderate site location potential (Appendix C). Proposed ponds J and K are adjacent to 8HE241 (Subareas C and D, respectively) (Ballo 1989).

In addition to prehistoric (precontact) archaeological sites, the potential for yet unrecorded historic period archaeological sites was assessed, on the basis of historical documents and literature. These data indicated the potential for evidence of Anglo-

American homestead activity, Second Seminole War period military activity, and occupation by the Chocochatti Seminole (1767-1836). Work camps and cultural materials associated with the early timber, naval stores, and limerock mining industries also were considered possible.

5.1.2 Historical Considerations

A check of the FMSF indicated that one previously recorded historic property, the Weeki Wachee Spring Mermaid Theatre (8HE391) is located within the project corridor, west of the U.S. 19/S.R. 50 intersection. A Request for Determination of Eligibility (DOE) was prepared in 1998 (Appendix B) but it was not considered NRHP-eligible (SHPO concurrence letter dated December 22, 1998 in Appendix B). A review of the USGS Weeki Wachee Spring, Fla. 1954; Brooksville, Fla. 1954 (PR 1988); and Brooksville SE, Fla. 1954 (PR 1988) quadrangle maps revealed the potential for approximately 16 historic buildings within or adjacent to the project APE.

5.2 Field Methodology

Archaeological field survey methods consisted of an initial windshield survey of the S.R. 50 project area. Field survey efforts were focused on all areas identified in the background research as having a high or moderate probability for prehistoric and historic period site occurrence, including proposed pond areas. Those localities deemed to have a low site potential were archaeologically sampled. Following ground surface inspection, subsurface shovel testing was carried out to test for the presence of buried cultural deposits.

Subsurface testing was systematically carried out at 82 ft (25 m) and 164 ft (50 m) intervals in the high and moderate probability zones. Additional shovel tests also were dug at 328 ft (100 m) intervals within a sample of the low probability zone, as well as judgmentally around productive shovel tests in order to determine site dimensions. Shovel tests were circular and measured approximately 1.6 ft (0.5 m) in diameter by at

least 3.3 ft (1 m) in depth. All soil removed from the test pits was screened through a 0.25 in (6.4 mm) mesh hardware cloth to maximize the recovery of artifacts. The locations of all shovel tests were plotted on the aerial maps, and, following the recording of relevant data such as stratigraphic profile and artifact finds, all test pits were refilled.

Historic resources field survey consisted of a preliminary reconnaissance of the area to determine the location of all buildings and other structures (i.e., bridges and culverts) believed to have been built prior to 1953, and to ascertain if any such resources could be adjudged eligible or potentially eligible for the NRHP. This was followed by an in-depth study of each identified historic resource. Photographs were taken and information needed for the completion of FMSF forms was gathered. In addition to architectural descriptions, each historic structure was reviewed to assess style, historic context, condition, and potential NRHP eligibility. Pertinent records housed at the Florida State Archives, Hernando County Property Appraiser's Office and the Hernando County Historical Museum were examined, and residents or other knowledgeable persons were interviewed to obtain information concerning site-specific building construction dates and/or possible association with individuals or events significant to local or regional history. A reconnaissance of the project area vicinity also was conducted to ascertain whether any potential historic districts existed within or adjacent to the project study corridor and proposed pond sites.

5.3 Laboratory Methods and Curation

All the cultural materials recovered as the result of field survey were lithic artifacts. These were initially cleansed, then divided into tools and debitage on the basis of gross morphology. Tools were measured, and the edges examined with a 7-45x stereo-zoom microscope for traces of edge damage. Lithic debitage was subjected to a limited technological analysis focused on ascertaining the stages of stone tool production. Flakes and non-flake production debris (i.e., cores, blanks, preforms) were measured, and examined for raw material types and absence or presence of thermal alteration. Flakes were classified into four types (primary decortication, secondary decortication, non-

decortication, and shatter) on the basis of the amount of cortex on the dorsal surface and the shape (White 1963). Artifacts and associated project-related records are being stored at the ACI office in Sarasota pending transfer to the FDOT, or a designated curatorial facility.

5.4 Unexpected Discoveries

If human burial sites such as Indian mounds, lost historic and prehistoric cemeteries, or other unmarked burials or associated artifacts were found, then the provisions and guidelines set forth in Chapter 872, F.S. (Florida's Unmarked Burial Law) were to be followed. However, it was not anticipated that such sites would be found during this survey.

6.0 SURVEY RESULTS

6.1 Archaeological Survey Results

Background research indicated that five previously recorded archaeological sites (8HE237, 8HE238, 8HE239, 8HE241, and 8HE270) are located within the S.R. 50 PD&E Study Reevaluation project APE between U.S. 19 (S.R. 55) and the east S.R.50/50A intersection. The discussion of these known resources is based solely upon the previous archaeological investigations; no fieldwork was conducted within those sites as part of this study. Twelve areas along the S.R. 50 roadway to the west of Colorado Street were subject to archaeological investigations. A total of 122 shovel tests were excavated, resulting in the discovery of two new archaeological sites (8HE490 and 8HE491), the expansion of the Colorado Site (8HE241A) boundaries, and the identification of two archaeological occurrences (AO).

Also conducted as part of this effort was a survey of proposed pond sites. Of the total 15 proposed ponds (Figures 1.2-1.4), nine, which were considered to have a high or moderate site location potential (Table 6.1), were the focus of ground surface reconnaissance and systematic subsurface testing. A total of 89 shovel tests were excavated, mostly at 25 m (82 ft) and 50 m (164 ft) intervals, within the nine proposed pond areas. As a result, one new archaeological site (8HE365) was discovered within proposed Pond A, and two AOs were identified in proposed Pond I-South (AO #2) and Pond J (AO #4). The latter is probably associated with previously recorded site 8HE241C.

The following discussion of previously and newly recorded archaeological sites and AOs located within the project APE, including the roadway and proposed pond areas, is organized from west to east. Copies of the original and updated FMSF forms are contained in Appendix A, and site locations are illustrated in Figures 6.1-6.4.

Table 6.1. Summary of Survey Results for Proposed Pond Sites.

POND SITE	ARCHAEO. POTENTIAL	NO. STs	RESULTS/COMMENTS
A	High	12	Newly identified site 8HE365/Not potentially NRHP-eligible
B	Moderate	6	Negative
C	High	10	Negative
D	Low	0	Not surveyed
E-North	Low	0	Not surveyed
E-South	High	8	Negative
F-North	Low	0	Not surveyed
F-South	Low	0	Not surveyed
G/H	Low	0	Not surveyed
I-North	Moderate	7	Negative
I-South	Moderate	14	One waste flake (AO #2)
J	High	14	One waste flake (AO #4)/Adjacent to NRHP-eligible 8HE241C
K	High	12	Negative/Adjacent to NRHP-eligible 8HE241D
L	Moderate	6	Negative
NE of Cobb Rd.	Low	0	Not surveyed

8HE490: The U.S. 19/S.R. 50 Intersection Site is located in the northeast quarter of Section 2 in Township 23 South, Range 17 East in Hernando County, Florida (USGS Weeki Wachee Spring, Fla. 1954, PR 1988). It occupies relatively level land at the northwest and northeast corners of the U.S. 19 and S.R. 50 intersection (Figure 6.1; Photo 6.1). The local soil is Paola fine sand, an excessively drained type, which supports a native vegetation of sand pine, scrub live oak, and scattered turkey and blue jack oaks (Hyde et al. 1977). The Weeki Wachee River is located approximately 100 m (328 ft) south of the site. 8HE490 has been disturbed by roadway construction, as well as through the installation of utilities.

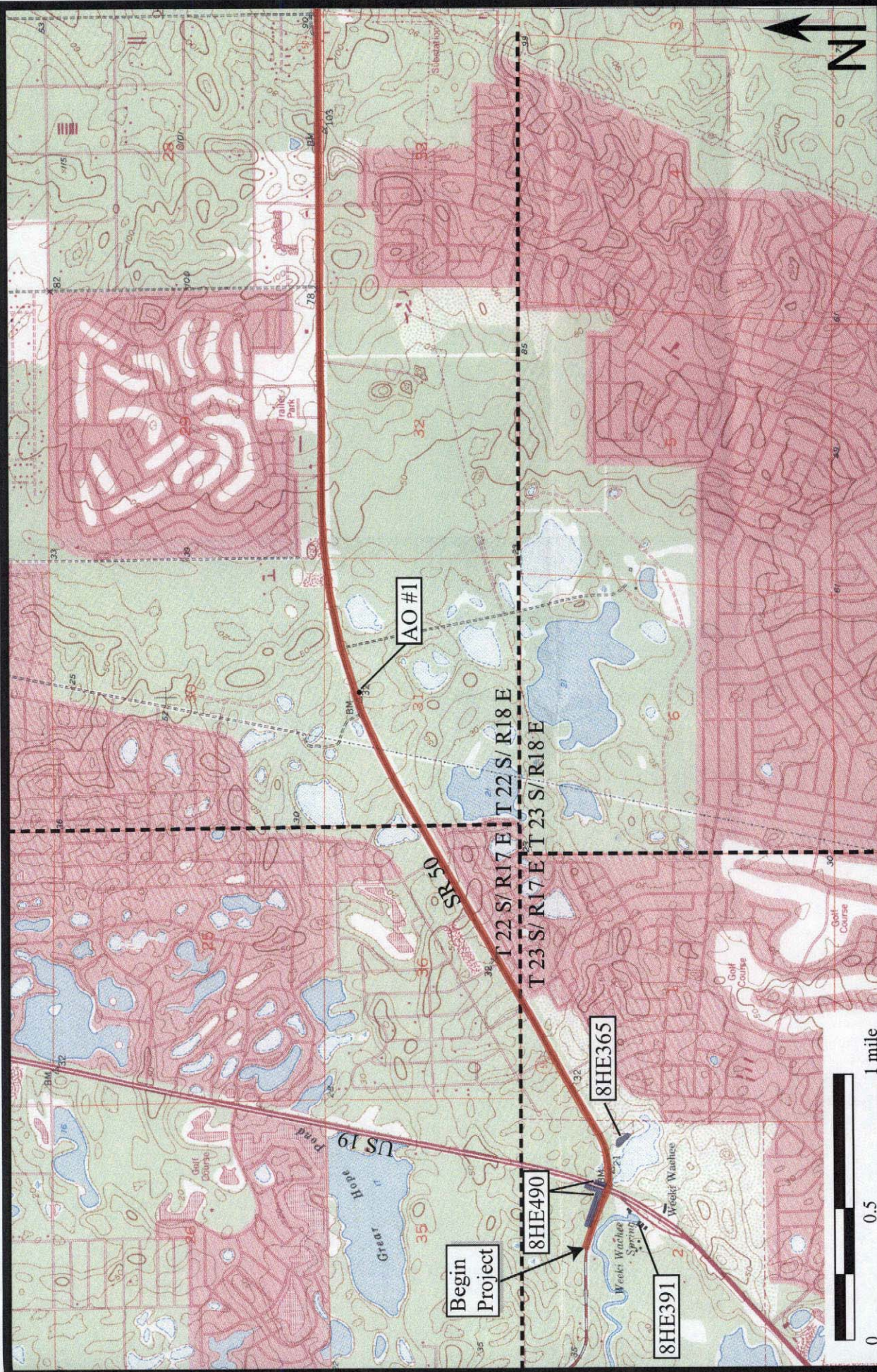
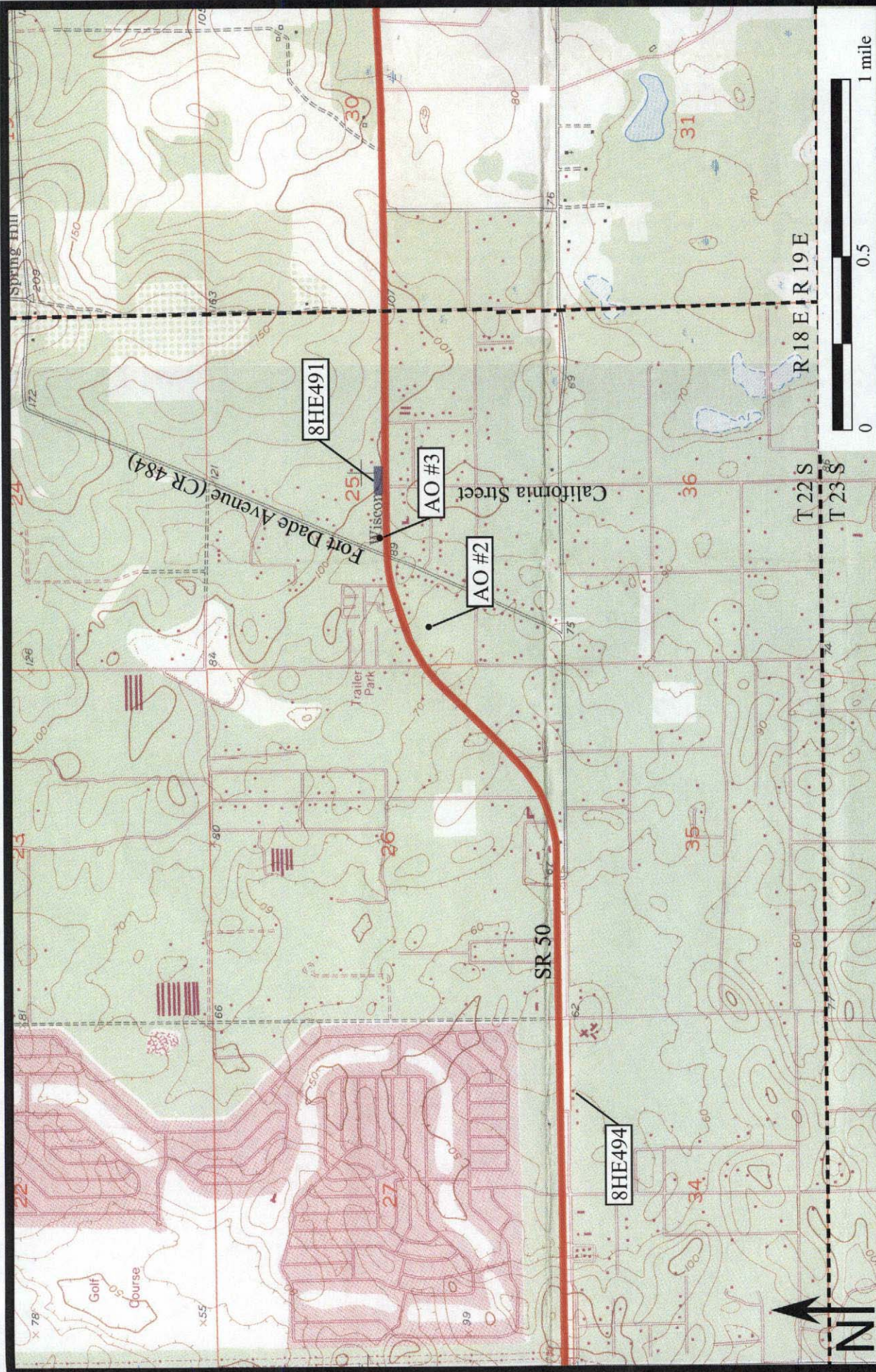


Figure 6.1. Location of Newly Recorded Archaeological Sites 8HE490 and 8HE365, AO #1, and Previously Recorded Historic Structure 8HE391 (USGS Weeki Wachee Spring, Fla. 1954, PR 1988).

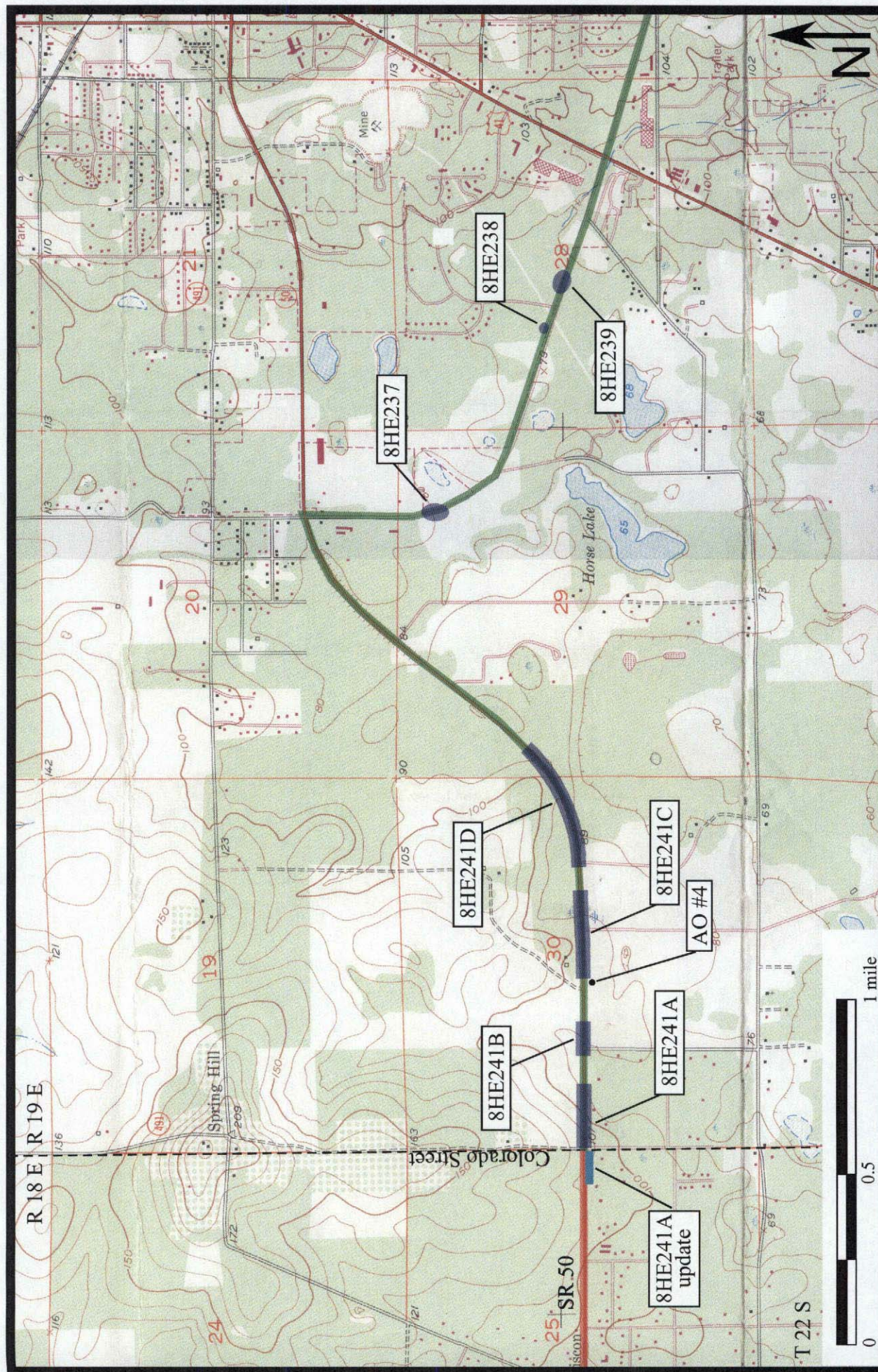
CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY



CRAS

S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

Figure 6.2. Location of Newly Recorded Archaeological Site 8HE491, AO #2 and AO #3, and Newly Recorded Historic Structure 8HE494 (USGS Weeki Wachee Spring, Fla. 1954, PR 1988; Brooksville, Fla. 1954, PR 1988).



6.3. Location of Previously Recorded Archaeological Sites 8HE241 (A-D), 8HE237, 8HE238, 8HE239, and West Extension of 8HE241A (update), and AO #4 (USGS Brooksville, Fla. 1954, PR 1988).

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY



Figure 6.4. Location of Previously Recorded Archaeological Site 8HE270 and Newly Recorded Historic Structure 8HE495 (USGS Brooksville, Fla. 1954, PR 1988; Brooksville SE, Fla. 1954, PR 1988).

CRAS

S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY



Photo 6.1. Looking North Along East Side of U.S. 19, Due North of S.R. 50, in the Area of 8HE490.

8HE490 was discovered through a combination of systematic and judgmental subsurface testing within the existing right-of-way. Of the 15 shovel tests excavated (Figure 6.5), four yielded lithic artifacts between 40-90 cm (16-35 in) below surface. No surface cultural materials were observed. The general stratigraphy consists of an upper 30 cm (12 in) of very light gray to white sand underlain by 70 cm (28 in) of pale tan to light orange sand. The artifact assemblage includes seven pieces of lithic debitage and one tool. The latter is an expedient flake tool manufactured from a medium sized, non-heat-treated chert non-decortication flake. It has a 60° edge angle, which is most suitable for scraping activities. There is no crushing and the margin has been somewhat rounded, suggesting that the tool was used on relatively soft materials. The debitage assemblage consists entirely of chert non-decortication flakes, four of which were thermally altered. There are four medium (1-2 cm / .4-.8 in), two large (2-3 cm / .8-1.2 in), and one extra large (3-4 cm / 1.2-1.6 in) flakes.

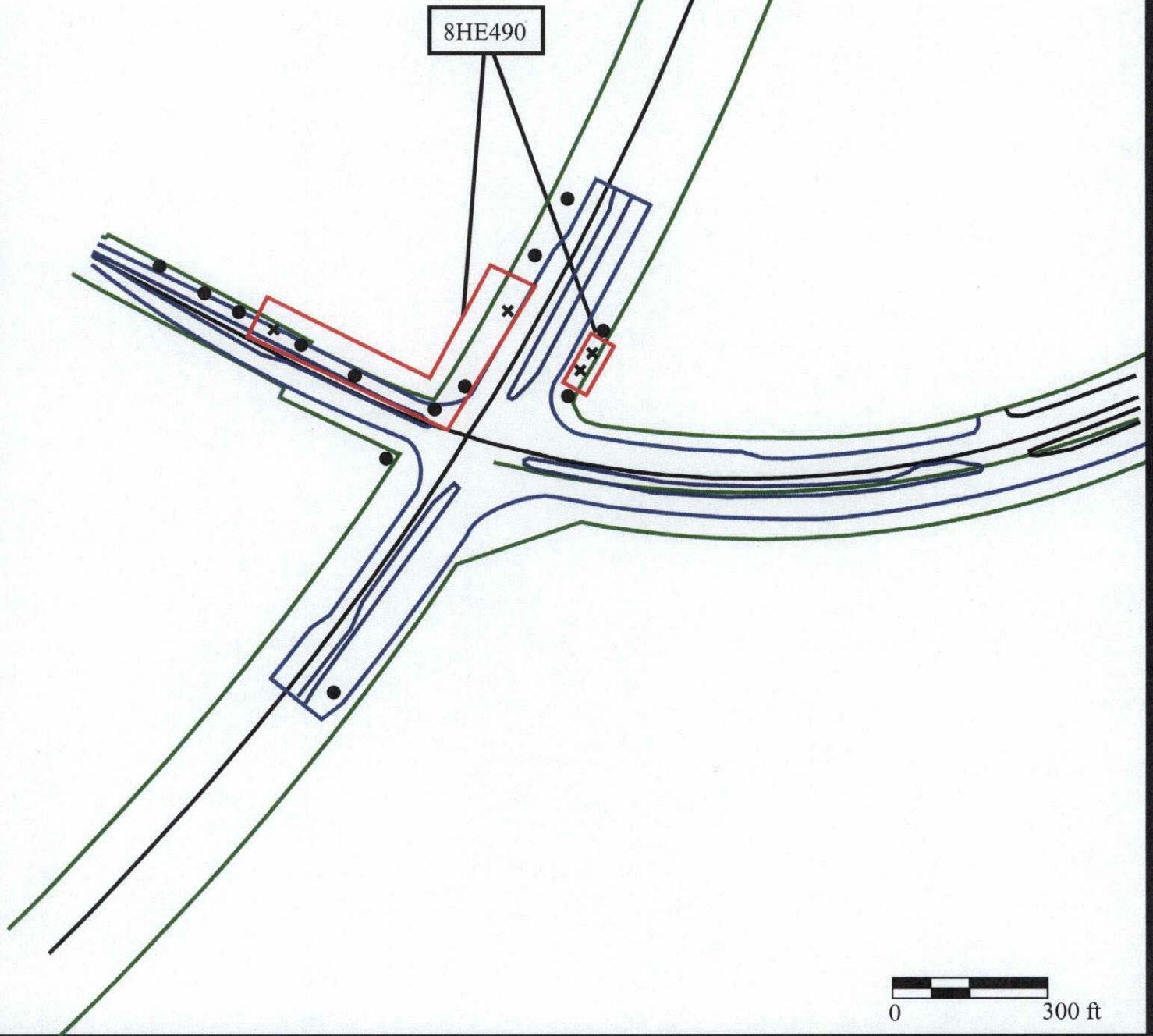


Figure 6.5. Location of Shovel Tests and Approximate Boundaries of Newly Recorded Archaeological Site 8HE490 (indicated in red). (X) indicates positive shovel tests; (●) indicates negative. Shovel test size is not to scale.

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

This lithic scatter is considered to represent a short-term encampment established to utilize the locally available resources, perhaps those associated with the nearby Weeki Wachee Spring. 8HE490 is estimated to measure approximately 200 m (656 ft) northeast/southwest by 25 m (82 ft) northwest/southeast, as contained within the existing right-of-way. The site boundaries, however, may extend outside of the project APE. Given the small size of the artifact assemblage, and absence of patterned tool forms, this site most likely was occupied for a short period. The limited flake debris recovered is indicative of the middle to late stages of lithic reduction, and may represent the reduction of blanks into tools or the maintenance of previously completed tool forms. No temporally or culturally diagnostic artifacts were found, and thus, the period of site occupation is unknown.

The U.S. 19/S.R. 50 Intersection Site has provided data relative to settlement pattern studies in the region. However, given the paucity of cultural materials, lack of diagnostic artifact types, absence of subsurface features, and the degree of site disturbance, the research potential for 8HE490 is low. Hence, the site, as contained within the project APE, is not considered potentially eligible for listing in the NRHP.

8HE365: The Pond A Site is located in the northeast quarter of Section 2 in Township 23 South, Range 17 East in Hernando County, Florida (USGS Weeki Wachee Spring, Fla. 1954, PR 1988) (Figure 6.1). The general site area is gently sloping, with an elevation of approximately 9 m (30 ft) above mean sea level. The local soil is Paola fine sand, 0-8% slopes, an excessively drained type which supports a native vegetation of sand pine, scrub live oak, and scattered turkey and blue jack oaks (Hyde et al. 1977). Weeki Wachee Spring is located approximately 500 m (1640 ft) to the southwest of the site.

8HE365 initially was discovered as the result of surface examination, which yielded a total of 14 pieces of lithic debitage and one expedient flake tool. The general area where surface cultural materials were found is illustrated in Photo 6.2. The debitage assemblage includes 10 chert non-decortication flakes, two coral secondary decortication flakes, and

two coral non-decortication flakes. None of the debitage was thermally altered. There are two small (less than 1 cm/.4 in), seven medium (1-2 cm / .4-.8 in), three large (2-3 cm / .8-1.2 in), and one extra-extra large (4-5 cm / 1.6-2.0 in) flakes. The single tool form is a retouched coral flake that exhibits minor flake removals at the tip, and edge damage along one lateral margin. Following ground surface inspection, a total of 12 shovel tests were excavated (11 at 25 m (82 ft) intervals and 1 at a 12.5 m (41 ft) interval) throughout the proposed pond area (Figure 6.6). As a result, one shovel test produced three chert non-decortication waste flakes. These artifacts were found between 70-90 cm (28-36 in) below surface in a matrix of mixed white and brown sand. The single productive shovel test is located approximately 105 m (344 ft) distant from the area of surface artifacts.



Photo 6.2. Looking Southeast at Proposed Pond A in Vicinity of Surface Lithic Scatter.

This lithic scatter, similar to 8HE490, is considered to represent a short-term encampment established to utilize the locally available resources. 8HE365 is substan-

tially disturbed, and the original site dimensions are difficult to estimate. The mixed nature of the soils, and proximity to a created pond, suggest that the original site area was impacted by construction of the pond located due south of proposed Pond A. Based upon the surface finds and the results of subsurface testing, this site covers a linear distance of about 105 m (344 ft). Given the small and non-diagnostic nature of the artifact assemblage, the period of site use/occupation is unknown. 8HE365 most likely was occupied for a short period. The limited flake debris recovered is indicative of the middle to late stages of lithic reduction, and may represent the reduction of blanks into tools or the maintenance of previously completed tool forms.

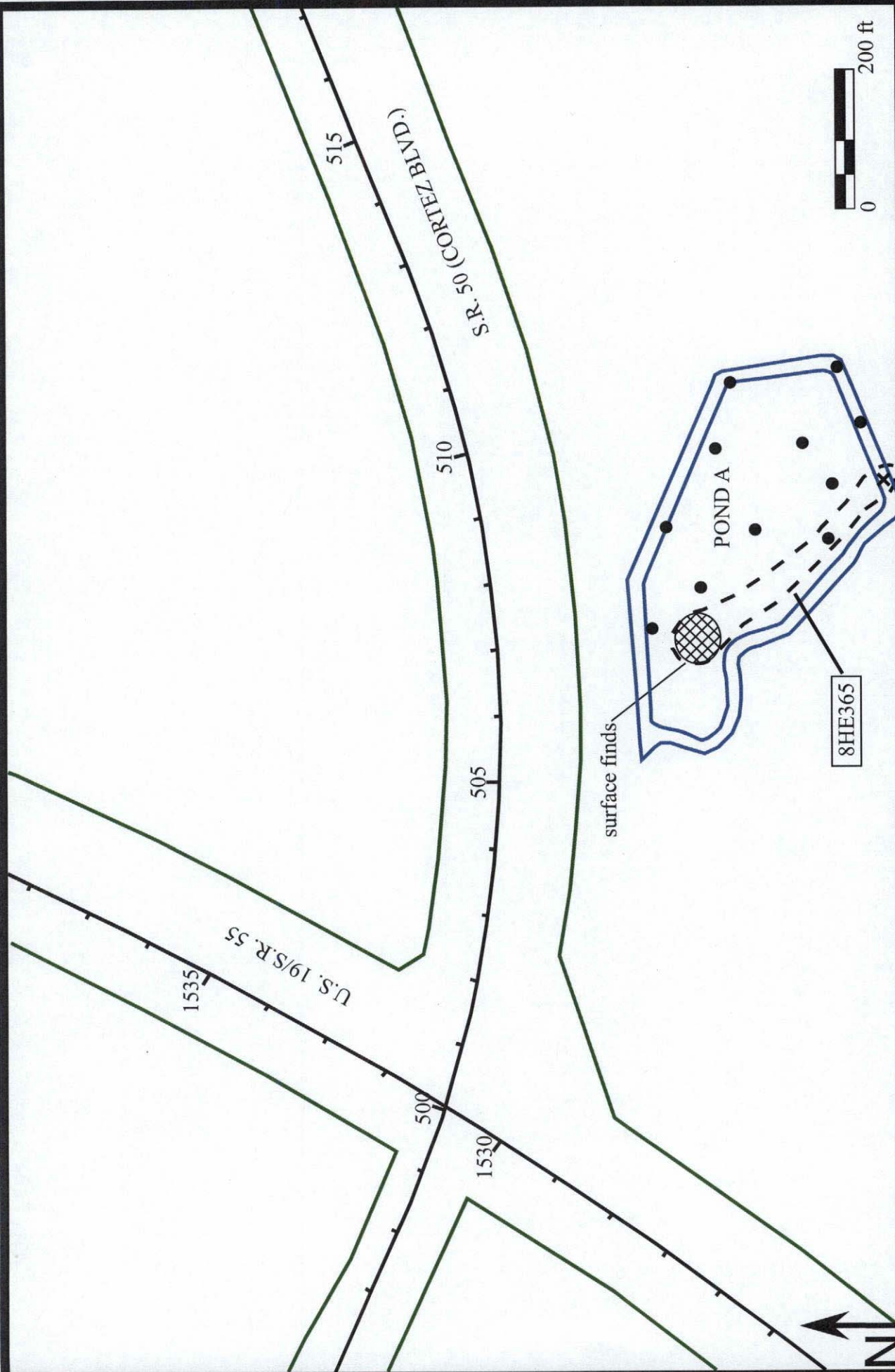


Figure 6.6. Location of Shovel Tests and Approximate Boundary of Newly Recorded Archaeological Site 8HE365 Within Proposed Pond A. (x) indicates positive shovel tests; (•) indicates negative. Shovel test size is not to scale.

CRAS

S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

The Pond A Site has provided data relative to settlement pattern studies in the region. However, given the paucity of cultural materials, lack of diagnostic artifact types, absence of subsurface features, and the degree of site disturbance, the research potential for 8HE365 is low. Hence, the site, as contained within the project APE, is not considered potentially eligible for listing in the NRHP.

AO #1: AO # 1 is located on a low ridge in the northeast quarter of Section 31 (irregular) in Township 22 South, Range 18 East in Hernando County, Florida (USGS Weeki Wachee Spring, Fla. 1954, PR 1988) (Figure 6.1). The local soil type is Candler fine sand, an excessively drained soil of the uplands. Natural vegetation consists of bluejack, post, and turkey oaks with a scattering of longleaf and slash pine (Hyde et al. 1977). This AO was discovered during systematic subsurface testing within the existing right-of-way on the south side of S.R. 50. Of the six shovel tests excavated, one produced a single medium-sized, non-thermally altered chert non-decortication flake. It was found at 90 cm (35 in) below surface. The artifact is not temporally diagnostic, and is not considered significant.

AO #2: AO # 2 is located within proposed Pond I-South in the southwest quarter of Section 25 in Township 22 South, Range 18 East in Hernando County, Florida (USGS Brooksville, Fla. 1954, PR 1988) (Figure 6.2). The local soil type is Candler fine sand, 0-5% slopes, an excessively drained soil of the uplands. Natural vegetation consists of bluejack, post, and turkey oaks with a scattering of longleaf and slash pine (Hyde et al. 1977). This AO was discovered during systematic subsurface testing within the proposed pond area. Of the 14 shovel tests excavated at 25 m (82 ft) and 50 m (164 ft) intervals within and adjacent to the proposed pond (Figure 6.7), one shovel test near the western margin produced a single, large-sized, thermally altered chert non-decortication flake. It was recovered from 80 cm (32 in) below surface in a matrix of orangish tan sand. The artifact is not temporally diagnostic, and is not considered significant.

AO #3: AO # 3 is located on level land approximately 75 m (260 ft) east of Fort Dade Avenue, on the north side of S.R. 50, and in the southwest quarter of Section 25,

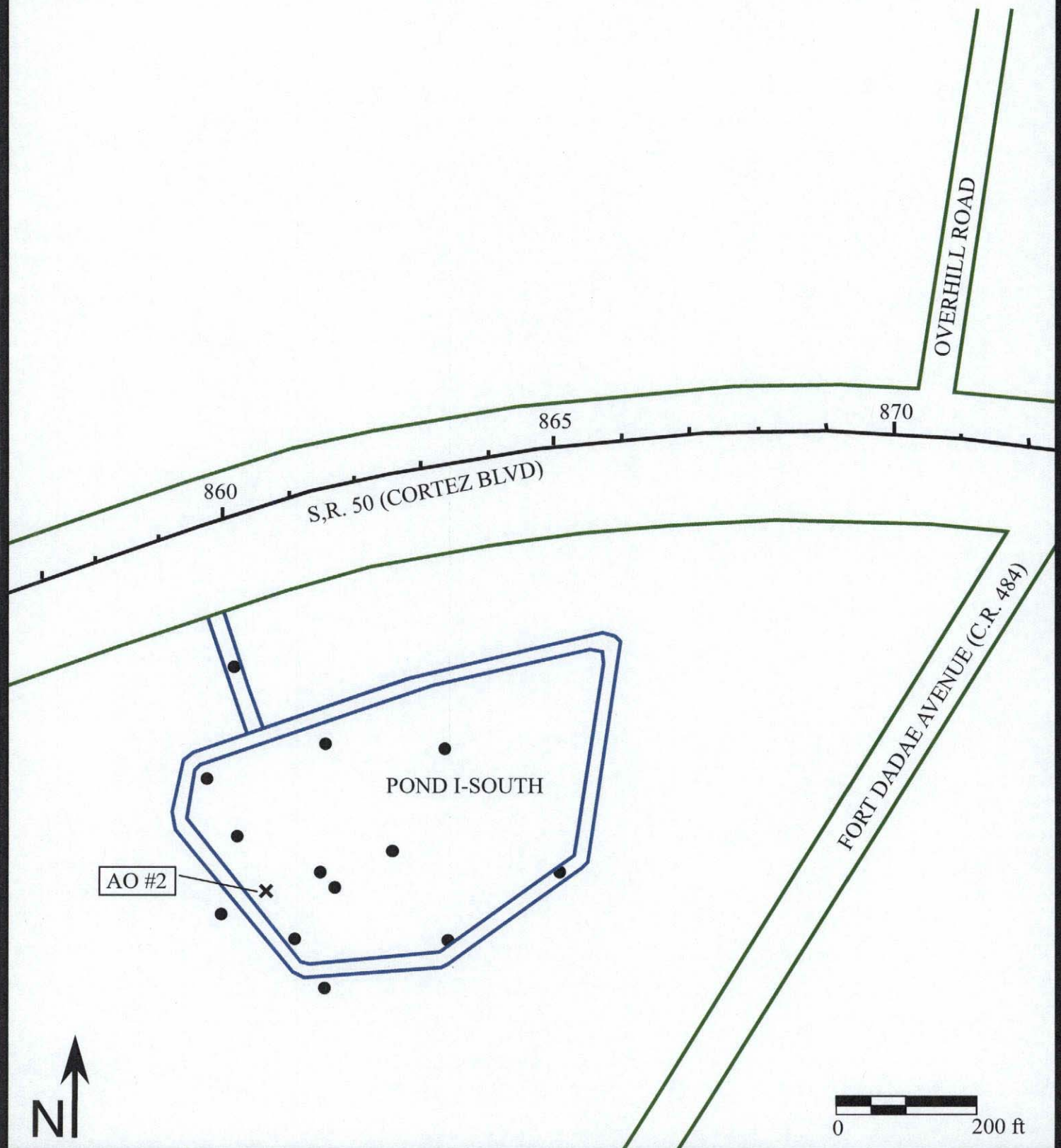


Figure 6.7. Location of Shovel Tests and AO #2 Within Proposed Pond I-South. (x) indicates positive shovel tests; (●) indicates negative. Shovel test size is not to scale.

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

Township 22 South, Range 18 East in Hernando County, Florida (USGS Brooksville, Fla. 1954, PR 1988) (Figure 6.2). The local soil type is Candler fine sand, which supports a natural vegetation of bluejack, post, and turkey oaks, with a scattering of longleaf and slash pine (Hyde et al. 1977). This AO was discovered during systematic testing within the existing right-of-way. Of the five shovel tests excavated (Figure 6.8), one produced a single small-sized, non-thermally altered chert non-decortication flake. It was recovered from a depth of 90-100 cm (35-39 in) below surface. This artifact is not temporally diagnostic, and is not considered significant.

8HE491: The California Site is located in the southwest quarter of Section 25, Township 22 South, Range 18 East in Hernando County, Florida (USGS Brooksville, Fla. 1954, PR 1988) (Figure 6.2). It is situated on a wooded hill on the north side of S.R. 50, to the north and east of the California Street/S.R. 50 intersection (Photo 6.3). The local soil type is excessively drained Candler fine sand, which supports a natural vegetation of bluejack, post, and turkey oaks, with a scattering of longleaf and slash pine (Hyde et al. 1977). There are no permanent sources of water in the vicinity, although the soil survey depicts a “wet spot” approximately 600 m (2000 ft) southeast of the site. The site area has been disturbed through road construction and maintenance, as well as the construction and demolition of several residential units.



Photo 6.3. Looking East Along the North Side of S.R. 50 in the Area of 8HE491.

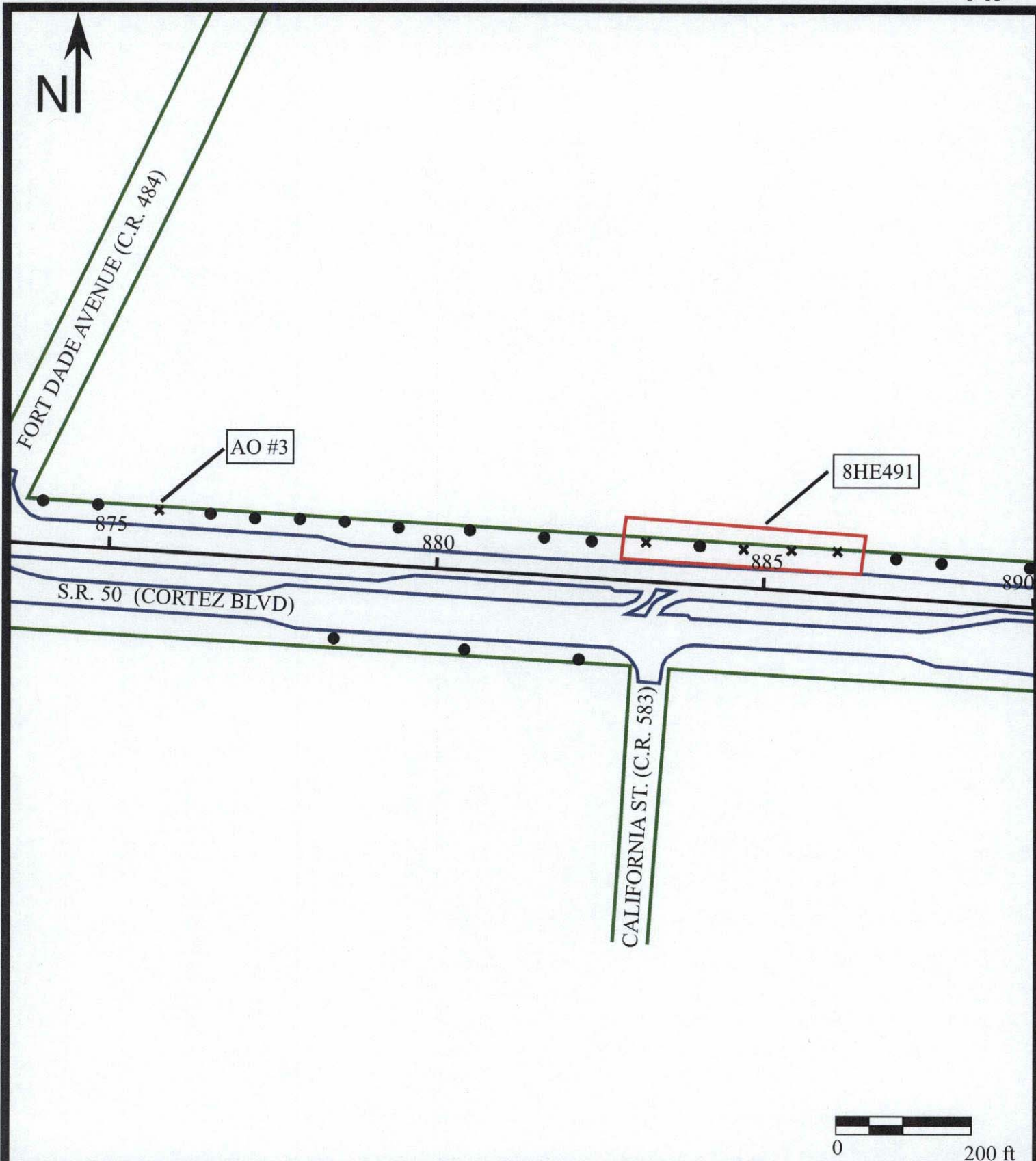


Figure 6.8. Location of Shovel Tests, Approximate Boundary of Archaeological Site 8HE491 (indicated in red), and AO #3. (x) indicates positive shovel tests; (•) indicates negative. Shovel test size is not to scale.

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

8HE491 was discovered during systematic subsurface testing. Of the 11 tests excavated (Figure 6.8), four produced lithic debris from the surface to a depth of 120 cm (47 in). The site stratigraphy consists of an upper 20 cm (8 in) of grayish brown sand underlain by 100 cm (39 in) of tan sand. The artifact assemblage recovered includes nine chert non-decortication flakes, of which three were thermally altered. In terms of size, there are two small, five medium, one large, and one extra large flake. This limited assemblage is most likely indicative of the later stages of tool manufacture and/or maintenance.

8HE491 is estimated to measure approximately 100 m (328 ft) east/west by 25 m (82 ft) north/south, as contained within the existing right-of-way. The boundaries, however, may extend outside of the project APE. This lithic scatter is considered to represent a short-term encampment established to made expedient use of locally available resources. Given the absence of temporally diagnostic artifacts, the period of site use is indeterminate. The California Site has provided useful data relative to settlement pattern studies in the region. However, given the paucity of cultural materials, lack of diagnostic artifact types, absence of subsurface features, and the previous site disturbance, the research potential of 8HE491 is low. Hence, the site, as contained within the project APE, is not considered potentially eligible for listing in the NRHP.

8HE241: The Colorado Site, originally discovered by FDOT archaeologist George Ballo in 1989 during the survey of the S.R. 50/50A project corridor, is located primarily in Section 30 of Township 22 South, Range 19 East. Portions of this large site extend eastward into Section 29 and westward into Section 25, Range 18 East, in Hernando County, Florida (USGS Brooksville, Fla., 1954, PR 1988) (Figure 6.3). The site area extends a linear distance of approximately 2 km (6500 ft) on both the north and south sides of S.R. 50. Ballo's survey involved an extensive surface examination within the 91 m (300 ft) wide project impact zone, plus the excavation of 29 shovel tests and 40 posthole tests (Ballo 1989:46). Based on a consideration of "physiographic and hydrologic features, as well as the recovered artifact type, density, and distribution," he divided 8HE241 into four subareas which he labeled A, B, C and D, moving from west to east (Figure 1.4).

Area A, largely coterminous with a ridge situated due east of Colorado Street, was estimated to measure 303 m (1000 ft) east/west by at least 91 m (300 ft) north/south, as contained within the project impact zone. Within this zone, an area of artifact concentration measuring 76 m (250 ft) east/west was discerned. Ballo excavated a total of eight shovel tests and 40 posthole tests. Of these, six of the shovel tests and 28 posthole tests produced lithic debitage, mostly small and medium sized chert non-decortication flakes. These artifacts were recovered from 0-120 cm (0-47 in) below surface (cmbs), with most concentrated between 60-120 cmbs (24-47 in). Ballo concluded that the artifact assemblage recovered was indicative of late stage biface production. An increased quantity of charcoal found in two tests "may reflect the presence of campfires or hearths" (Ballo 1989:52).

Area B, occupying a knoll overlooking two ponded depressions in the general vicinity of the Dublin Road/S.R. 50 intersection, was estimated to measure 121 m (400 ft) east/west by 91 m (300 ft) north/south. Of the total seven shovel tests excavated, the three dug on the north side of S.R. 50 yielded three pieces of debitage and one Sand-tempered Plain pottery sherd. These artifacts were recovered from 0-60 cmbs (0-24 in). The lithic assemblage was probably indicative of middle to late stage stone reduction activity (Ballo 1989:54). The pottery, found at none of the other three site subareas, provided the only evidence for a post-Archaic occupation.

Area C, situated along a section of low ridge adjacent to ponds, a sinkhole, and an intermittent stream, begins about 1.0 km (0.6 mi) east of Colorado Street. It was estimated to measure 303 m (1000 ft) east/west by 91 m (300 ft) north/south. The six shovel tests excavated produced a total of 42 pieces of debitage, two modified flakes, one graver, and one tool blank. These were recovered from 0-85 cmbs (0-34 in), with most found between 50 and 80 cmbs (20-32 in). Ballo concluded that the debitage was indicative of the middle to late stages of bifacial stone tool manufacture. In addition, the higher amounts of charcoal in one test, he noted, may reflect the presence of campfires or hearths (Ballo 1989:58).

Area D, which extends 454 m (1500 ft) east/west by 91 m (300 ft) north/south, occupies portions of two ridges and the saddle between them. Of the eight shovel tests excavated by Ballo, four produced a total 16 pieces of lithic debitage from 20-70 cmbs (8-28 in). Noteworthy was the recovery of three coral flakes, representing the only coral found by Ballo at the Colorado Site. He also reported the presence of limestone boulders containing chert and small chert cobbles occurring throughout the area. Thus, Area D was concluded to be the possible site of aboriginal quarrying or raw material acquisition.

On the basis of these findings, Ballo (1989:61, 63) concluded that 8HE241 was a significant archaeological site, and potentially eligible for listing in the NRHP. Subsequently, the Colorado Site was determined NRHP-eligible by the Florida SHPO. In 1990, a Memorandum of Agreement (MOA) was executed between the FHWA, FDOT, and SHPO which stipulated that archaeological excavation and data recovery sufficient to permit mitigation of adverse effects to the site be conducted.

In January 1992, Janus Research conducted systematic archaeological testing (Phase II) within the existing 30 m (100 ft) right-of-way (Estabrook 1992). This work supported Ballo's division of the site into four subareas. Area A yielded debitage indicative of stone tool manufacture, as well as one Archaic Stemmed preform suggesting a Middle Archaic (5000 to 3000 B.C.) date of occupation. Only a small number of waste flakes were found in Area B. Testing in Area C revealed evidence of possible Early Archaic, Weeden Island-related, and historic occupations. The temporal determinations were based on the recovery of a broken uniface, an eroded St. Johns Check-Stamped sherd, and a glass stoppered bottleneck fragment, respectively. An "extensive though ill-defined series of positive test pits" in Area D indicated two small ridgetop artifact concentrations of questionable contextual integrity (Estabrook 1992:3). In conclusion, no further work within the existing right-of-way was recommended; SHPO concurred with this assessment (Walker 1992).

In 1995, ACI conducted systematic shovel testing within the 91 m (300 ft) expanded right-of-way, as previously surveyed by Ballo, in addition to two proposed off site

stormwater management areas (Floodplain Compensation Area 102-C and Pond 3) which had not been the focus of prior archaeological investigation (Horvath et al. 1998). The purpose of this effort was to isolate areas within the larger site universe suitable for unit excavation as stipulated by the 1990 MOA. A total of 196 shovel tests was excavated, of which 110 were dug in Area A (including the Floodplain Compensation Area); 20 in Area B; 38 in Area C; six in Area D; and 22 in the Pond 3 area lying south of S.R. 50 between Areas C and D. Most noteworthy were the results of testing in the Pond 3 area, which evidence for early stage lithic reduction activities, found in no other portion of the Colorado Site.

Phase III mitigative excavations were conducted within Areas A, C, and the proposed Pond 3 area to mitigate the adverse effect of the anticipated construction activities (Horvath et al. 1998). There were three 2 m x 2 m (6.6 ft x 6.6 ft) units excavated in Area A. This portion of the site is considered a lithic workshop dating from the Early to Middle Archaic period, with a possible post-Archaic component. The site's primary function appeared to be the manufacture of chipped stone tools from previously prepared blanks. The tools recovered also suggest that hunting, butchering, and meat-processing activities were also taking place.

Area C was tested with the excavation of two 2 m by 2 m (6.6 ft x 6.6 ft) and five 1 m by 2 m (3.3 ft x 6.6 ft) units. This portion of the site dates from the Early Archaic through Safety Harbor periods based on the recovery of a uniface, a Tampa projectile point, the high occurrence of thermal alteration, and a variety of ceramic types (Horvath et al. 1998). The lithic debitage assemblage indicates the early to middle stages of lithic tool manufacture. Cooking and storage activities were indicated by the recovery of the ceramics.

The Pond 3 area was subject to extensive archaeological testing consisting of the initial shovel testing, the excavation of eight 1 m by 2 m (3.3 ft x 6.6 ft) units, three 2 m by 2 m (6.6 ft x 6.6 ft) units, 55 m² (592 ft²) of trenches, and a 220 m² (2376 ft²) block excavation (Horvath et al. 1998). This portion of the site dates from the Paleo-Indian and

Middle to Late Archaic periods based on the recovery of Suwannee/Simpson preforms, unifacial tools, and Florida Archaic Stemmed points. ACI concluded that the mitigative excavations were sufficient to mitigate the adverse effects of the project, and that no further archaeological investigations were deemed necessary.

Consistent with the project scope of work, no archaeological survey was performed within the S.R. 50 PD&E Study Reevaluation project APE, as located between Colorado Street and the east intersection of S.R. 50/50A. However, due west of Colorado Street, systematic archaeological testing at 12.5, 25, and 50 m (41, 82, and 164 ft) intervals along the north and south sides of S.R. 50 resulted in the expansion of the original 8HE241A west boundary. Of the 19 shovel tests excavated (Figure 6.9), four yielded lithic debitage and one stone tool. These materials were found between 30 and 90 cm (12-35 in) below surface. The site stratigraphy in this area consists of an upper 30 cm (12 in) of gray sand underlain by 70 cm (28 in) of pale tan sand. On the basis of subsurface testing results, 8HE241A extends approximately 168 m (550 ft) to the west of Colorado Street, along the south side of S.R. 50.

The debitage assemblage recovered includes 19 flakes, all but one of which is chert. The other is a medium-sized, thermally altered coral non-decortication flake. Of the 18 pieces of chert debitage, six had been thermally altered. There are 14 non-decortication flakes, three secondary decortication flakes, and one small piece of shatter. Flake size was variable. The flake tool was manufactured from a non-heat-treated chert non-decortication flake. It measures 5.6 cm long, 3.8 cm wide, and 0.8 cm thick, and weighs 6.0 g (2.2 x 1.5 x 0.3 in / 0.2 oz). The lateral margin exhibits bifacial scalar scars along its entire length. The use damage and acute edge angle (30°) are most indicative of cutting and slicing activities.

This assemblage is similar to that recovered from Area A of the Colorado Site (8HE241A), and thus is likely part of that site area. The debitage assemblage is indicative of the middle to late stages of lithic reduction, and probably represents the thinning and shaping of previously prepared blanks. The flake tool indicates that cutting activities also

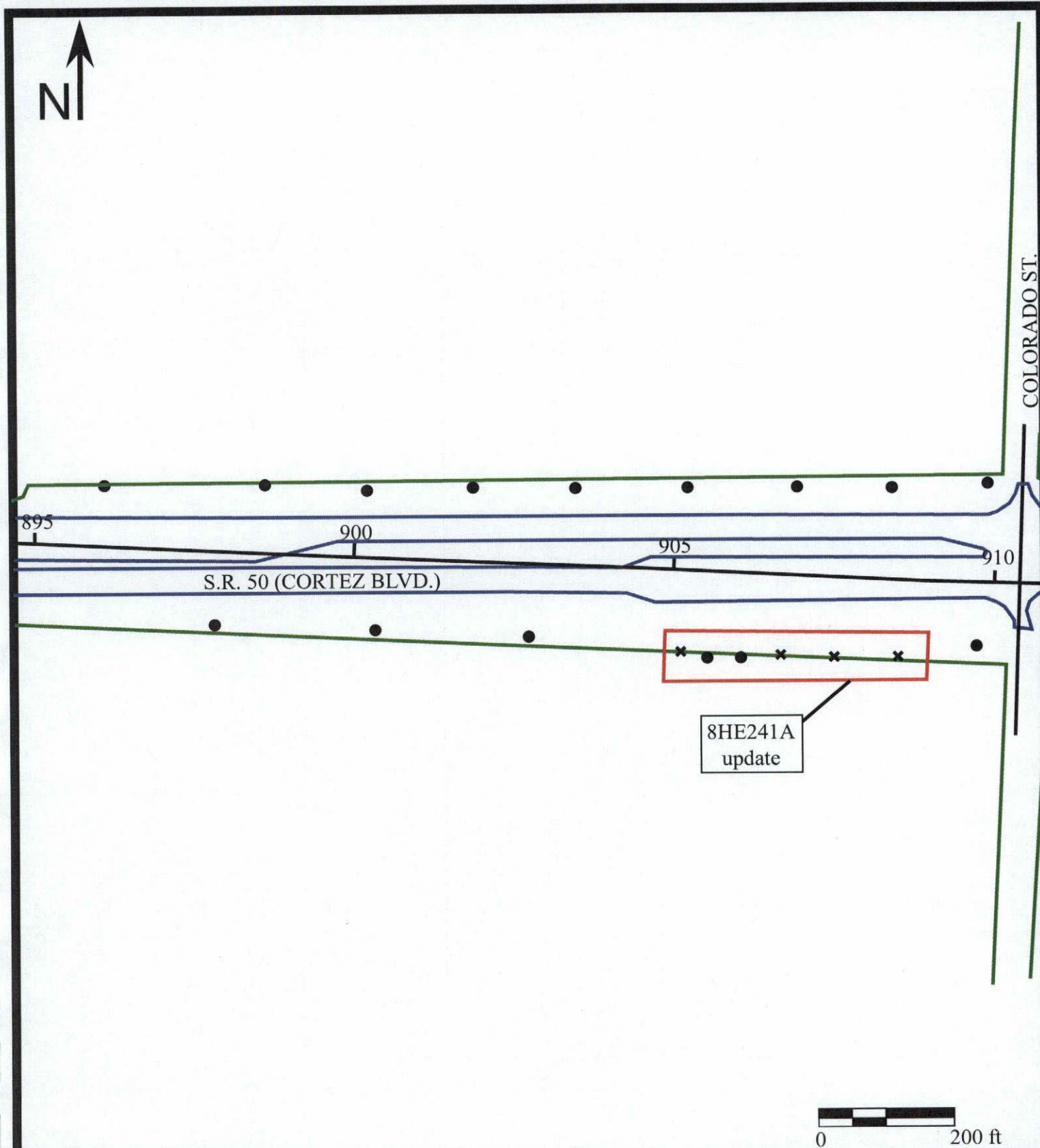


Figure 6.9. Location of Shovel Tests and Boundary of West Extension of Archaeological Site 8HE241A (indicated in red). (×) indicates positive shovel tests; (●) indicates negative. Shovel test size is not to scale.

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

were occurring on site. Although the current investigation has slightly expanded the western margin of the Colorado Site, no new information was derived. Therefore, this portion of 8HE241A has low research potential, and is not considered potentially eligible for listing in the NRHP. The original FMSF forms for 8HE241 Areas A, B, C, and D, as well as the updated FMSF form for 8HE241A, are included in Appendix A.

AO # 4: AO # 4 is located within proposed Pond J in the southwest quarter of Section 30 in Township 22 South, Range 19 East in Hernando County, Florida (USGS Brooksville, Fla. 1954, PR 1988) (Figure 6.3). The local soil type is Nobleton fine sand, 0-5% slopes, a somewhat poorly drained soil of the uplands. Natural vegetation consists of live, laurel and water oaks; slash and longleaf pines; hickory; magnolia; and sweetgum (Hyde et al. 1977:29). This AO was discovered during systematic subsurface testing within the proposed pond area. No surface cultural materials were observed. Of the total 14 shovel tests, all but one of which was excavated at 25 m (82 ft) intervals within the proposed pond (Figure 6.10), one shovel test yielded a single, medium-sized, thermally altered chert non-decortication flake. It was recovered from 30-40 cm (12-16 in) below surface in a disturbed context of mottled tan colored sand. The artifact is not temporally diagnostic, and is not considered significant. Proposed Pond J is located adjacent to the western limit of previously recorded Area C of 8HE241 (8HE241C), a NRHP-eligible archaeological site. Thus, this isolated find may be associated with this known site.

8HE237: The Horselake Road Site, a lithic scatter, was discovered by George Ballo in September 1988 during archaeological survey for the S.R. 50/50A project. The site is located in the northeast quarter of Section 29 in Township 22 South, Range 19 East, to both sides of S.R. 50 (Figure 6.3). It is 0.6 km (0.4 mi) south of the S.R. 50/50A intersection on the west side of Brooksville and 183 m (600 ft) northwest of the S.R. 50/Horselake Road intersection. The local soil types are somewhat poorly drained Nobleton fine sand and well-drained Kendrick fine sand (Hyde et al. 1977). The site is located on a small rise, with an elevation of 24 m (80 ft) above mean sea level. A small seasonal pond is about 60 m (220 ft) to the northeast.

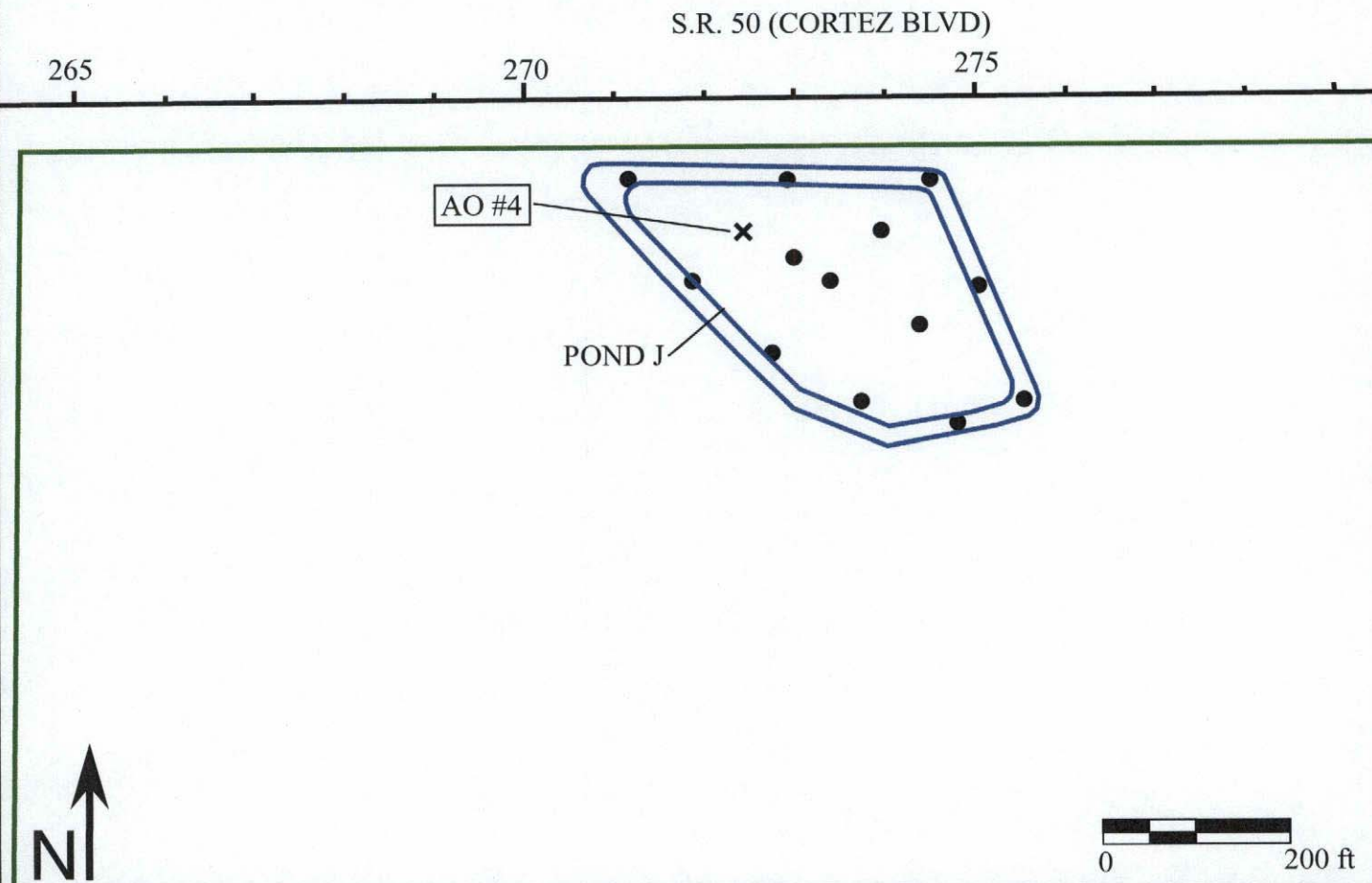


Figure 6.10. Location of Shovel Tests and AO #4 Within Proposed Pond J. (x) indicates positive shovel tests; (•) indicates negative. Shovel test size is not to scale.

CRAS
S.R. 50 PD&E STUDY
REEVALUATION FROM U.S. 19 TO
THE EAST S.R. 50/50A
INTERSECTION
HERNANDO COUNTY

Ballo's survey entailed surface reconnaissance and the excavation of 15 shovel tests (Ballo 1989). As a result, four pieces of lithic debitage were recovered between the surface and 50 cm (20 in) below surface from four of the 15 shovel tests. Ballo estimated the site size as 152 m (500 ft) north/south by 76 m (150 ft) east/west. Given the absence of temporally diagnostic artifacts, the period of site use/occupation was indeterminate. The degree of site disturbance was recorded as "major." 8HE237 was evaluated as not potentially eligible for listing in the NRHP (Ballo 1989:39). A copy of the original FMSF form is contained in Appendix A. In accordance with the scope of work for the S.R. 50 PD&E Study Reevaluation, ACI did not conduct any archaeological testing within the site area.

8HE238: The Shopping Center Site, a single artifact site, was discovered by George Ballo in September 1988 during archaeological survey for the S.R. 50/50A project. The site is located on the north side of S.R. 50, approximately 0.9 km (0.55 m) west of the intersection of S.R. 50 and U.S. 41, in the northwest quarter of Section 28 in Township 22 South, Range 19 East (Figure 6.3). A large shopping center is directly to the east. The local soil type is Nobleton fine sand, a somewhat poorly drained soil of the uplands (Hyde et al. 1977). The site occupies a low rise, with an elevation of 24 m (80 ft) AMSL. 8HE238 is about 100 m (328 ft) east of a seasonal wetland and 244 m (800 ft) north of a pond.

Of the seven shovel tests excavated by Ballo, one produced a single piece of lithic debitage. The degree of site disturbance was recorded as "major," and the Shopping Center Site was evaluated as not potentially eligible for listing in the NRHP (Ballo 1989:40-41). A copy of the original FMSF form is contained in Appendix A. In accordance with the scope of work for the S.R. 50 PD&E Study Reevaluation, ACI did not conduct any archaeological testing within the site area.

8HE239: The Pumping Station Site, a lithic scatter, was discovered by George Ballo in September 1988 during archaeological survey for the S.R. 50/50A project. The site is located to both sides of S.R. 50, approximately 0.6 km (0.36 mi) west of the S.R. 50/US

41 intersection, in the southwest quarter of Section 28 in Township 22 South, Range 19 East (Figure 6.3). It is located along both sides of a small unnamed creek. The site occurs on Micanopy loamy fine sand, a somewhat poorly drained soil of the uplands (Hyde et al. 1977). Elevation of the site area is 24 m (80 ft) AMSL.

Of the nine shovel tests excavated by Ballo, three pieces of lithic debitage and one tool blank were recovered from three productive tests. Based upon these findings, the site size was estimated as 213 m (700 ft) east/west by 60 m (200 ft) north/south. Given its nature and heavily disturbed condition, 8HE239 was evaluated as not potentially eligible for listing in the NRHP (Ballo 1989:42). A copy of the original FMSF form is contained in Appendix A. In accordance with the scope of work for the S.R. 50 PD&E Study Reevaluation, ACI did not conduct any archaeological testing within the site area.

8HE270: The Choacachatte Town Site, a Seminole village/town, was recorded by Ken Sutherland of the Hernando County Planning Department in 1990. The site was recorded on the basis of historical research only (i.e., examination of the 1846 Plat of T22S, R19E prepared by federal surveyor George Mackey); no field visit was made. This Seminole town was inhabited from 1767-1836 (Mahon 1967 in Ballo 1989:63). According to the information contained in the FMSF, 8HE270 is located at the intersection area around Cortez Boulevard (S.R. 50E) and Melendez Road (S.R. 50) in the northeast quarter of Section 26 in Township 22 South, Range 19 East (USGS Brooksville SE, Fla. 1954, PR 1988) (Figure 6.4). Sutherland recorded the present land use in the site area as “single family units, commercial.”

In 1989, George Ballo surveyed the 8HE270 site area, as situated within and proximate to the S.R. 50/50A project impact zone. This investigation included surface reconnaissance, subsurface testing, and a metal detection survey along the road, as well as to the northwest in an area of higher elevation. As a result, no evidence of the Seminole town was discovered. Ballo noted the poorly drained nature of the recorded site area, and concluded that “It is extremely doubtful that a Seminole Indian town/village occupied for a lengthy period would be established in such a low-lying, frequently inundated area

(Ballo 1989:63). Ballo also suggested that the depiction of the town on the original federal surveyor's plat "was added to the plat after the survey was completed and therefore reflects only an approximate or speculative location for the town (Ballo 1989:64). A copy of the original FMSF form is contained in Appendix A. ACI did not conduct any archaeological testing within the site area.

6.2 Historical/Architectural Survey Results

Historical/architectural field survey of the project APE resulted in the identification and evaluation of three historic resources, including previously recorded site 8HE391 and two newly identified Frame Vernacular style residences (8HE494 and 8HE495). Site descriptions follow, and FMSF forms are contained in Appendix A.

8HE391: The Weeki Wachee Spring Mermaid Theatre and Main Spring, located at the southwest corner of U.S. 19 (S.R. 55) and S.R. 50 (Figure 6.1), was originally recorded in 1998 by Janus Research, during survey of a segment of U.S. 19 (S.R. 55) (Janus Research 1998). According to the information contained in the FMSF, this tourist attraction was constructed in 1947. The first mermaid show in the theatre was on October 13, 1947. The theatre building has been extensively modified, and the "historic physical integrity is compromised" (FMSF).

In November 1998, a National Register request for a Determination of Eligibility (DOE) form was prepared by Tiffany Luxon and Amy Groover of Janus Research. In this document, Luxon and Groover noted that the Weeki Wachee Spring property "has significant historical associations with Florida's post-World War II tourism boom and roadside attractions, though the site's historic integrity no longer remains. All of the structures and landscape features extant today were constructed in 1959 or later." The original 1947 theatre was demolished and the existing Mermaid Theatre was constructed in 1959-1962 to the east of the original building. This replacement theatre was significantly altered in 1975 (Luxon and Groover 1998). Luxon and Groover concluded that the Weeki Wachee Spring tourist attraction does not meet the age requirement for

listing in the NRHP since the original buildings were replaced with modern buildings. In December 1998, the Florida SHPO concurred that the site is not NRHP-eligible (FMSF). A copy of the DOE and SHPO letter are contained in Appendix B.

Today, the Weeki Wachee Spring attraction contains a number of non-historic wood frame buildings placed along a meandering concrete path amid lush landscaping. These buildings include the Gift Locker (ca. 1965), Treasure Chest gift shop (ca. 1965), an entrance kiosk (ca. 1960s), former employee cottages (ca. 1960s or 1970s), an administration office (ca. 1972), Mermaid Museum (ca. 1975), boat dock (ca. 1975), and other facilities (Luxon and Groover 1998). The eastern part of the spring is fenced off, and is the site of Buccaneer Bay, a water-slide park.

8HE391 was visited and examined by ACI during the S.R. 50 PD&E Study Reevaluation project. As a result, ACI concurs with Janus Research that Weeki Wachee Spring has significant historical associations as a tourist attraction. However, since the original buildings are no longer extant, and the current facilities date from no earlier than 1959, at this time, 8HE391 is not considered potentially eligible for listing in the NRHP. ACI recommends that the NRHP eligibility be reassessed in 2009 when the Mermaid Theatre becomes 50 years old.

8HE494: This Frame Vernacular style residence, located at 14432 Cortez Boulevard (S.R. 50) (Figure 6.2), was constructed ca. 1953. The wood frame building, constructed on a concrete slab foundation, features asbestos shingles and a cross gable roof with louvered gable vents and cornice returns. One-story in height, the rectangular residence has a brick chimney on the center interior of the roof, and a variety of window types including 2/2 paired and independent wood double-hung sash, as well as 1-light ribbon wood fixed. A porch is located on the front (north) of the building at the entry. Brick columns extend from the porch to the front gable roof. Another porch, which is screened in, is located on the rear. A garage addition is east of the house. Limited research uncovered no significant historical associations. This structure is an example of a

residential house type common in the immediate area and throughout Hernando County. Thus, it appears that 8HE494 is not potentially NRHP-eligible.

8HE495: This Frame Vernacular style residence, constructed ca. 1953, is located at 1245 S. Main Street (Figure 6.4). This one-story, wood frame building has asbestos shingles, a continuous concrete block foundation, and a cross gable roof. A portico with a shed roof is located at the entry on the west elevation. The building features 1/1 wood double-hung sash windows, some of which are shielded by decorative metal awnings with wood shake shingles. Because many examples of residences with these characteristics remain throughout Hernando County, and available data revealed no significant historical associations, 8HE495 does not appear to be potentially eligible for listing in the NRHP.

7.0 CONCLUSIONS AND SITE EVALUATIONS

All cultural resources identified as a result of this survey were evaluated for their significance, as per the criteria of eligibility for listing in the NRHP. A discussion of site evaluations follows.

7.1 Archaeological Sites

Archaeological survey of the S.R. 50 PD&E Study Reevaluation project, as located between U.S. 19 (S.R. 55) and Colorado Street, as well as proposed pond sites considered to have a high or moderate site location potential, resulted in the identification and evaluation of three new archaeological sites (8HE490, 8HE491, and 8HE365), and the extension and update of one previously recorded site (8HE241A). Four archaeological occurrences, each evidenced by a single waste flake, also were found. In addition, background research indicated that five previously recorded archaeological sites (8HE237, 8HE238, 8HE239, 8HE241, and 8HE270) were recorded previously along S.R. 50, as located between Colorado Street and the east S.R. 50/50A intersection. Of these previously recorded resources, 8HE241 was determined eligible for listing in the NRHP by the Florida SHPO. In accordance with the scope of work, since this section of the project was previously surveyed (Ballo 1989), no fieldwork was conducted in the area between Colorado Street and the eastern limit of the project, with the exception of proposed pond sites.

8HE490, 8HE491, and 8HE365 are lithic scatters of unknown temporal/cultural affiliation. All are viewed as limited activity camps, probably associated with the procurement of local resources. The site assemblages are limited in terms of both density and functional diversity, and the research potential of each is considered low. These sites commonly occur in the region, and thus, are not considered to be among the best examples of their type for the region. Thus, none is evaluated as potentially eligible for listing in the NRHP. Previously recorded site 8HE241 is an NRHP-eligible property. However, the extension of the western boundary of this site, as contained within the

existing S.R. 50 right-of-way, is not believed to contribute to the significance of the larger site. Similarly, the AO discovered in proposed Pond J, located adjacent to 8HE241C, does not contribute to the significance of the site.

7.2 Historic Structures

Historical/architectural survey and background research resulted in the identification of two new historic structures (8HE494 and 8HE495) and one previously recorded resource (8HE391) within the S.R. 50 PD&E Study Reevaluation APE. Both 8HE494 and 8HE495 are Frame Vernacular Style residences constructed ca. 1953. They both represent commonly occurring types of architecture for the locale, and available data did not indicate any significant historical associations. In addition, alterations appear to preclude their eligibility for the NRHP.

8HE391, the Weeki Wachee Spring Mermaid Theatre and Main Spring, originally was recorded by Janus Research in 1998. Although this site is considered historically significant as one of few historic tourist attractions from the post World War II Era still in operation, all the original buildings, constructed in 1947, have been demolished and replaced. The existing Mermaid Theatre was built in 1959, and subsequently modified. Thus, since the site is not 50 years of age, and since it is not of exceptional significance, 8HE391 is not considered potentially eligible for listing in the NRHP at this time. However, in 2009, the Mermaid Theatre will become 50 years old, and based upon the historical importance of the disappearing roadside attraction in Florida, as well as Weeki Wachee's status as the first theater of its kind, it is recommended that the property be re-evaluated for its NRHP-eligibility.

8.0 REFERENCES CITED

8.1 Archaeological

Adovasio, J. M., D. C. Hyland, R. L. Andrews, and J. S. Illingsworth

- 2002 Wooden Artifacts. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*. Edited by G. H. Doran, pp. 166-190. University Press of Florida, Gainesville.

Almy, Marion M.

- 1994 Oak Sound DRI/Site Damage Assessment Report for 8 HE 55C, Hernando County, Florida. Manuscript on file, ACI, Sarasota.

Anderson, David G.

- 1996 Models of Paleoindian and Early Archaic Settlement in the Lower Southeast. In *The Paleoindian and Early Archaic Southeast*. Edited by D. G. Anderson and K. E. Sassaman, pp. 29-57. University of Alabama Press, Tuscaloosa.

Archaeological Consultants, Inc. (ACI)

- 1995 A Cultural Resource Assessment Survey, Suncoast Parkway Reevaluation Areas, Hillsborough, Pasco, and Hernando Counties, Florida. Manuscript on file, ACI, Sarasota.
- 2002 Cultural Resource Assessment Survey of the Gregg Mine Extension, Hernando County, Florida. Manuscript on file, ACI, Sarasota.
- 2003 Cultural Resource Assessment Survey, Cobb Road (CR 485)/US 98 PD&E Study from S.R. 50 to Suncoast Parkway in Hernando County, Florida. Manuscript on file, Florida Department of Transportation, District Seven, Tampa, and ACI, Sarasota.

Athens, William P., Charlotte Donald, Jon Berkin, Paul V. Heinrich, Ralph Draughon, Julie McClay, Thomas Fenn, Dan Dolensky, Jennifer Cohen, Lynn Berg, Julian Granberry, and Thomas Neumann

- 1994 Phase I Cultural Resources Investigation of the West Leg Mainline Portion of the Proposed Florida Gas Transmission Company Phase III Expansion Project. Manuscript on file, R. Christopher Goodwin & Associates, Inc., New Orleans.

Austin, Robert J.

- 1997 *The Economics of Lithic-Resource Use in South-Central Florida*. Ph.D. dissertation, Department of Anthropology, University of Florida, Gainesville.
- 2001 Paleoindian and Archaic Archaeology in the Middle Hillsborough River Basin: A Synthetic Overview. Manuscript on file, SEARCH, Gainesville.

Austin, Robert J., Brad E. Ensor, and Lisbeth Carlson

- 2001 Phase II Excavation at the West Williams Site, 8HI509, A Prehistoric Archaeological Site located within Florida Gas Transmission Company's Proposed Bayside Lateral Pipeline Corridor, Hillsborough County, Florida. Manuscript on file, SEARCH, Gainesville.

Austin, Robert J. and Richard W. Estabrook

- 2000 Chert Distribution and Exploitation in Peninsular Florida. *The Florida Anthropologist* 53(2-3): 116-131.

Austin, Robert J. and Dana Ste. Claire

- 1982 The Deltona Project: Prehistoric Technology in the Hillsborough River Basin. Manuscript on file, Department of Anthropology, University of South Florida, Tampa.

Ballo, George R.

- 1989 Archaeological Assessment of S.R. 50/50A in Hernando County Including National Register of Historic Places Determination of Eligibility for 8HE00241, the Colorado Site. Manuscript on file, Florida Department of Transportation., Tallahassee.

Berriault, John, Robert Carr, Jerry Stipp, Richard Johnson and Jack Meeder

- 1981 The Archaeological Salvage of the Bay West Site, Collier County, Florida. *The Florida Anthropologist* 34(2): 39-58.

Bloom, Arthur L.

- 1983 Sea Level and Coastal Changes. In *Late-Quaternary Environments of the United States: Volume 2 The Holocene*. Edited by H. E. Wright, Jr., pp. 42-51. University of Minnesota Press, Minneapolis.

Braley, Chad O.

- 1978 Cultural Resource Data Recovery at the Bay Pines Veterans Administration Center, Florida. Department of Anthropology, Florida State University, Tallahassee.

Browning, William D.

- 1979 Letter Report on William D. Browning Survey: Project No. 08020-1510, S.R. 55 (US 19) from the Pasco/Hernando County Line to S.R. 50, Hernando County, FAP #FF-185-1(21). Letter report on file, Florida Division of Historical Resources, Tallahassee.

Browning, William D. and Melissa Wiedenfeld

- 1986 Archaeological Resources Assessment Survey of Proposed Improvements to S.R. 55/US 19, from S.R. 50 Northerly to U.S. 98, Hernando and Citrus Counties. Manuscript on file, Florida Division of Historical Resources, Tallahassee.

Bullen, Adelaide K. and Ripley P. Bullen

- 1950 The Johns Island Site, Hernando County, Florida. *American Antiquity* 16(1): 23-45.
- 1953 The Battery Point Site, Bayport, Hernando County, Florida. *The Florida Anthropologist* 6(3): 85-92.
- 1954 Further Notes on the Battery Point Site, Bayport, Hernando County, Florida. *The Florida Anthropologist* 7(3): 103-108.

Bullen, Ripley P.

- 1953 The Famous Crystal River Site. *The Florida Anthropologist* 6(1): 9-37.
- 1955 Stratigraphic Tests at Bluffton, Volusia County, Florida. *The Florida Anthropologist* 8(1): 1-16.
- 1959 The Transitional Period of Florida. *Southeastern Archaeological Conference Newsletter* 6(1): 43-53.
- 1965 Florida's Prehistory. In *Florida -- From Indian Trail to Space Age*. Edited by C. W. Tebeau and R. L. Carson, pp. 305-316. Southern Publishing Co., Delray Beach.
- 1970 The Transitional Period of Southern Southeastern United States as Viewed from Florida, or the Roots of the Gulf Tradition. *Southeastern Archaeological Conference Bulletin* 13: 63-70.
- 1972 The Orange Period of Peninsular Florida. In *Fiber-Tempered Pottery in Southeastern United States and Northern Columbia: Its Origins, Context, and Significance*. Edited by R. P. Bullen and J. B. Stoltman, pp. 9-33. *Florida Anthropological Society Publications* 6.
- 1975a *A Guide to the Identification of Florida Projectile Points*. Kendall Books, Gainesville.
- 1975b Implications from Some Florida Deposits and Their Archaeological Contents. *The Florida Anthropologist* 28(2): 73-84.

Bullen, Ripley P., Walter Askew, Lee M. Feder, and Richard L. McDonnell

- 1978 The Canton Street Site, St. Petersburg, Florida. *Florida Anthropological Society Publications* 9.

Bullen, Ripley P. and Adelaide K. Bullen

- 1976 The Palmer Site. *Florida Anthropological Society Publications* 8.

Cable, John S.

- 1996 Haw River Revisited: Implications for Modeling Terminal Late Glacial and Early Holocene Hunter-Gatherer Settlement Systems in the Southeast. In *The Paleoindian and Early Archaic Southeast*. Edited by D. G. Anderson and K. E. Sassaman, pp. 107-148. University of Alabama Press, Tuscaloosa.

Carbone, Victor

- 1983 Late Quaternary Environment in Florida and the Southeast. *The Florida Anthropologist* 36(1-2): 3-17.

Chance, Marsha A.

1983a Climatic Influence on Maintenance Site Assemblages in the South Florida Archaic. Presented at the 35th Annual Florida Anthropological Society Meeting, Tallahassee.

1983b The Diamond Dairy Site: Archaic Intrasite Function and Variability. Manuscript on file, Florida Division of Historical Resources, Tallahassee.

Cherry, R. N., J. W. Stewart and J. A. Mann

1970 General Hydrology of the Middle Gulf Area, Florida. *Report of Investigations* 56. Florida Department of Natural Resources, Bureau of Geology, Tallahassee.

Clausen, Carl J., A.D. Cohen, Cesare Emiliani, J.A. Holman, and J.J. Stipp

1979 Little Salt Spring, Florida: A Unique Underwater Site. *Science* 203(4381): 609-614.

Coastal Environments Inc.

1977 Cultural Resources Evaluation of the Northern Gulf of Mexico Continental Shelf. Department of the Interior, Washington D.C.

Coates, Gordon C.

1955 Recent Tests at Battery Point Site, Bayport, Hernando County, Florida. *The Florida Anthropologist* 8(1): 27-30.

Daniel, I. Randolph

1985 A Preliminary Model of Hunter-Gatherer Settlement in Central Florida. *The Florida Anthropologist* 38(4): 67-80.

Daniel, I. Randolph and Michael Wisenbaker

1987 *Harney Flats: A Florida Paleo-Indian Site*. Baywood Publishing Co., Inc., Farmingdale, NY.

Deming, Joan

1993 Technical Memorandum: PD&E Evaluation, Cultural Resources S.R. 50 Floodplain Mitigation Site, Hernando County, Florida (Parcels 102, 105, and 106) WPI # 7112129. Manuscript on file, ACI, Sarasota.

1994 Technical Memorandum: Cultural Resource Assessment, S.R. 50 Ponds - 13 Site Alternatives (plus ditch treatment) Hernando County (State Project No. 08002-1501; WPI No. 7112122). Manuscript on file, ACI, Sarasota.

Deming, Joan and Marion M. Almy

1983a A Cultural Resources Survey of the Lykes Property (River Pines DRI) in Southwest Hernando County, Florida. ACI, Sarasota. MS# 973.

1983b A Cultural Resources Survey of the W. L. Cobb Construction Company Property (Oak Sound DRI) in Southwest Hernando County, Florida. ACI, Sarasota.

Deuerling, Richard J. and Peter L. MacGill

- 1981 Environmental Geology Series: Tarpon Springs Sheet. *Map Series 99*. Florida Department of Natural Resources, Bureau of Geology, Tallahassee.

Dickel, David N. and Glen H. Doran

- 2002 An Environmental and Chronological Overview of the Region. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*. Edited by G. H. Doran, pp. 39-58. University Press of Florida, Gainesville.

Doran, Glen H.

- 2002a The Windover Radiocarbon Chronology. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*. Edited by G. H. Doran, pp. 59-72. University Press of Florida, Gainesville.
- 2002b *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*. University Press of Florida, Gainesville.

Dorian, Alan and James W. Stoutamire

- 1980 Literature Search and Partial Cultural Resource Inventory of Chassahowitzka, Cedar Keys, and Lower Suwannee National Wildlife Refuge. Manuscript on file, Interagency Archaeological Services, National Park Service, Atlanta.

Dunbar, James S.

- 1991 Resource Orientation of Clovis and Suwannee Age Paleoindian Sites in Florida. In *Clovis: Origins and Adaptations*. Edited by R. Bonnicksen and K. L. Turnmire, pp. 185-213. Center for the Study of the First Americans, Oregon State University, Corvallis.
- 1997 Paleoindian and Early Archaic Potentials of the Continental Shelf in the Southeast US. Paper presented at the AAAS-97, Anthropology Section.

Dunbar, James S. and Ben I. Waller

- 1983 A Distribution Analysis of the Clovis/Suwannee Paleo-Indian Sites of Florida - A Geographical Approach. *The Florida Anthropologist* 36(1-2): 18-30.

Estabrook, Richard W.

- 1992 Archaeological Testing of the Colorado Site (8HE241), Hernando County, Florida. Manuscript on file, Piper Archaeological Research, Inc. (now Janus Research), St. Petersburg.
- 2002 An Archaeological and Historical Survey of the Wal Mart, Spring Hill (Store #967-02 RSC) Project in Hernando County, Florida. Manuscript on file, Panamerican Consultants, Inc., Tampa.

Estabrook, Richard W., Paul L. Jones, Shelia K. Stewart and Lucy D. Jones

- 2000 Archaeological Testing of Nine Sites Along the Buccaneer Gas Pipeline Corridor in Pasco and Polk Counties, Florida. Manuscript on file, Panamerican Consultants, Inc., Tampa.

Estabrook, Richard W. and Christine Newman

- 1984 Archaeological Investigations at the Marita and Ranch House Sites, Hillsborough County, Florida. *Archaeological Report* 15. Manuscript on file, Department of Anthropology, University of South Florida, Tampa.

Fairbanks, Richard W.

- 1989 A 17,000 Year Old Glacio-Eustatic Sea Level Record: Influence of Glacial Melting Rates on the Younger Dryas Event and Deep Ocean Circulation. *Nature* 342: 637-642.

Fairbridge, Charles

- 1961 Eustatic Changes in Sea Level. In *Physics and Chemistry of the Earth*. Edited by L. H. Ahrens, pp. 99-185. Pergamon Press, London.

Ferguson, George R.

- 1976 The Weekiwachee Site, Hernando County, Florida. *The Florida Anthropologist* 29(2 Part 1): 69-83.

Florida Department of Transportation, District Seven

- 2003 *5-Year Tentative Work Program (Fiscal Years July 1, 2003 through June 30, 2008)*. On file, Florida Department of Transportation, District Seven, Tampa. February 10.

FMSF

Various Site File Forms. On file, Florida Division of Historical Resources, Tallahassee.

Goodyear, Albert C., Sam B. Upchurch, Mark J. Brooks and Nancy N. Goodyear

- 1983 Paleo-Indian Manifestations in the Tampa Bay Region, Florida. *The Florida Anthropologist* 36(1-2): 40-66.

Goodyear, Albert C. and Lyman O. Warren

- 1972 Further Observations on the Submarine Oyster Shell Deposits of Tampa Bay. *The Florida Anthropologist* 25(52-66).

Haag, William G.

- 1962 The Bering Strait Land Bridge. *Scientific American* 206(1): 112-123.

HDR Engineering, Inc.

- 1987 Hernando County's Big Hammock Region - Ecological and Historical Overview. On file, HDR Engineering, Inc., Tampa.

Healy, Henry G.

- 1975 Terraces and Shorelines of Florida. *Map Series* 71. Florida Department of Natural Resources, Bureau of Geology, Tallahassee.

Hemmings, E. Thomas

- 1975 The Silver Springs Site, Prehistory in the Silver Springs Valley, Florida. *The Florida Anthropologist* 28(4): 141-158.

Hernando County Metropolitan Planning Organization (MPO)

- 2001 *2025 Long Range Transportation Plan*. On file, Hernando County MPO, Hernando County.

Hernando County Planning Department

- 1999 *Hernando County Comprehensive Plan*. On file, Hernando County Planning Department. Amended December 21, 1999.

Holloway, Richard G.

- 2002 Pollen Analysis of Holocene Sediments. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*. Edited by G. H. Doran, pp. 211-226. University Press of Florida, Gainesville.

Horvath, Elizabeth A.

- 1986 *The Archaeological Resources of Hernando County, A Site Location Predictive Model*. MA thesis, Department of Anthropology, University of South Florida, Tampa.

Horvath, Elizabeth A., Joan Deming, Lee Hutchinson-Neff, Sylvia Scudder and Susan L. White

- 1998 Phase III Mitigative Excavation at the Colorado Site (8HE241), Hernando County, Florida. Manuscript on file, ACI, Sarasota.

Hyde, Adam G., Lloyd Law, Jr., Robert L. Weatherspoon, Melvin D. Cheyney and Joseph J. Eckenrode

- 1977 *Soil Survey of Hernando County, Florida*. USDA, Soil Conservation Service.

Janus Research

- 1992 A Cultural Resource Assessment of the Interstate 4 Improvements Project Right-of-Way from 50th Street to the Hillsborough/Polk County Line, Hillsborough County, Florida. Manuscript on file, Janus Research, St. Petersburg.
- 1998 Cultural Resource Assessment Survey for S.R. 55 (US 19) Toucan Trail to S.R. 50 Re-Evaluation Project, Hernando County, Florida. Manuscript on file, Janus Research, St. Petersburg.
- 2001 Cultural Resource Assessment Survey of C.R. 578 (County Line Road) PD&E Study from U.S. 41 (S.R. 45). Manuscript on file, Janus Research, St. Petersburg.

Karklins, Karlis

- 1970 The Fish Creek Site, Hillsborough County, Florida. *The Florida Anthropologist* 23(2): 67-73.

Kohler, Timothy A.

- 1991 The Demise of Weeden Island and Post-Weeden Island Cultural Stability in Non-Mississippianized Northern Florida. In *Stability, Transformation, and Variations: the Late Woodland Southeast*. Edited by M. S. Nassaney and C. R. Cobb, pp. 91-110. Plenum Press, New York.

Kohler, Timothy A. and G. Michael Johnson

- 1986 Dixie County Archaeological Reconnaissance, Winter 1985-86. Manuscript on file, Florida Division of Historical Resources, Tallahassee.

Lammers, Jonathan, Melissa Memory, Christine Newman and William M. Stanton

- 1999 Cultural Resource Assessment of Recent C.A.R.L. Acquisitions, Including the Former Town of Centralia, Chassahowitzka Wildlife Management Area, Hernando County, Florida. Manuscript on file, C.A.R.L. Archaeological Survey, Florida Bureau of Archaeological Research, Tallahassee.

Luer, George M.

- 2002 Three Middle Archaic Sites in North Port. *Florida Anthropological Society Publications* 15: 3-34.

Mahon, John K. and Brent R. Weisman

- 1996 Florida's Seminole and Miccosukee Peoples. In *The New History of Florida*. Edited by M. Gannon, pp. 183-206. University Press of Florida, Gainesville.

Marsh, Robert G.

- 1975 Archaeological Research Design, Hernando Transect. On file, Department of Anthropology, University of South Florida, Tampa.
- 1976 An Archaeological Survey of the Brooksville 201 Facilities Plan, Hernando County, Florida. Manuscript on file, Florida Division of Historical Resources, Tallahassee.
- 1977 An Environmental Assessment Survey for Brooksville West Water Treatment and Elevated Storage Tank Site. Manuscript on file, Florida Division of Historical Resources, Tallahassee.
- 1979 An Archaeological Survey of the Proposed 465 Single Family Development, Hernando County, Spring Hill, Florida. Manuscript on file, Florida Division of Historical Resources, Tallahassee.
- 1980 An Archaeological Survey of the Proposed McKethen Park (Cone Quarry) Site, Hernando County, Florida. Manuscript on file, Florida Division of Historical Resources, Tallahassee.
- 1981a An Archaeological Survey of the Proposed Holland Spring Development Unit One. Manuscript on file, Florida Division of Historical Resources, Tallahassee.
- 1981b An Environmental Archaeological Survey of the Lykes Site Hernando County, Florida. Manuscript on file, Florida Division of Historical Resources, Tallahassee.

Martin, Larry D., R. A. Rodgers and A. M. Neuner

- 1985 The Effect of the End of the Pleistocene on Man in North America. In *Environments and Extinctions: Man in Late Glacial North America*. Edited by J. Mead and D. Meltzer, pp. University of Maine Press, Orono.

McGee, Ray M. and Ryan J. Wheeler

- 1994 Stratigraphic Excavations at Groves' Orange Midden, Lake Monroe, Volusia County, Florida: Methodology and Results. *The Florida Anthropologist* 47(4): 333-349.

Milanich, Jerald T.

- 1971 *The Deptford Phase: An Archaeological Reconstruction*. Ph.D. dissertation, Department of Anthropology, University of Florida, Gainesville.
1994 *Archaeology of Precolumbian Florida*. University Press of Florida, Gainesville.
1995 *Florida Indians and the Invasion from Europe*. University Press of Florida, Gainesville.

Milanich, Jerald T. and Charles H. Fairbanks

- 1980 *Florida Archaeology*. Academic Press, New York.

Miller, James J.

- 1991 *The Fairest, Frutefullest and Pleasantest of all the World: An Environmental History of the Northeast Part of Florida*. Ph.D., Department of Landscape Architecture and Regional Planning, University of Pennsylvania, Pittsburgh.
1998 *An Environmental History of Northeast Florida*. University Press of Florida, Gainesville.

Milliman, John D. and K.O. Emery

- 1968 Sea Levels During the Past 35,000 Years. *Science* 162: 1121-1123.

Mitchem, Jeffrey M.

- 1989a *Redefining Safety Harbor: Late Prehistoric/Protohistoric Archaeology in West Peninsular Florida*. Ph.D. dissertation, Department of Anthropology, University of Florida, Gainesville.
1989b The Ruth Smith, Weeki Wachee, and Tatham Mounds: Archaeological Evidence of Early Spanish Contact. *The Florida Anthropologist* 42(4): 317-339.

Mitchem, Jeffrey M., Marvin T. Smith, Albert C. Goodyear, and Robert R. Allen

- 1985 Early Spanish Contact on the Florida Coast: The Weeki Wachee and Ruth Smith Mounds. In *Indians, Colonists, and Slaves: Essays in Memory of Charles H. Fairbanks*. Edited by K. W. Johnson, J. M. Leader and R. C. Wilson, pp. 179-219. Florida Journal of Anthropology, Special Publication Number 4, Gainesville.

Moore, Clarence B.

- 1903 Certain Aboriginal Remains of the Central Florida West-Coast. *Journal of the Academy of Natural Sciences* 12: 361-438. In *The West and Central Florida Expeditions of Clarence Bloomfield Moore*, Edited by J. M. Mitchem, 1999. University of Alabama Press, Tuscaloosa.

Murphy, Larry E.

- 1990 8SL17: Natural Site Formation Processes of a Multiple Component Underwater Site in Florida. *Professional Papers* 39. Southwest Cultural Resources Center, New Mexico.

Neill, Wilfred T.

- 1958 A Stratified Early Site at Silver Springs, Florida. *The Florida Anthropologist* 11(2): 35-52.
1964 The Association of Suwannee Points and Extinct Animals in Florida. *The Florida Anthropologist* 14(3-4): 17-32.

Parsons Engineering Science, Inc.

- 2001 Archaeological Investigation Report: Engineering Evaluation / Cost Analysis Former Brooksville Turret Gunnery Range, Hernando County, Florida. Parsons Engineering Science, Inc., Norcross, GA. MS# 8377.

Penders, Thomas

- 2002 Bone, Antler, Dentary, and Lithic Artifacts. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*. Edited by G. H. Doran, pp. 97-120. University Press of Florida, Gainesville.

Pielou, E.C.

- 1991 *After the Ice Age*. The University of Chicago Press, Chicago.

Purdy, Barbara A.

- 1981 *Florida's Prehistoric Stone Tool Technology*. University Press of Florida, Gainesville.
1988 *Wet Site Archaeology*. Telford Press, Caldwell, NJ.

Purdy, Barbara A. and Laurie M. Beach

- 1980 The Chipped Stone Tool Industry of Florida's Preceramic Archaic. *Archaeology of Eastern North America* 8: 105-124.

Purdy, Barbara A. and Frank N. Blanchard

- 1973 Petrographs as a Means of Tracking Stone Tools from Florida. *The Florida Anthropologist* 26(1): 121-125.

Puri, Harbans S. and Robert O. Vernon

- 1964 Summary of the Geology of Florida and a Guide to the Classic Exposures. *Special Publication* 5. Florida Geological Survey, Tallahassee.

Quitmyer, Irvy R., Patrick O'Day and Anthony Reppas

- 2001 Phase II Zooarchaeological Analysis of the Faunal Materials from the Enclave Site (8PA1139), Pasco County, Florida. Environmental Archaeology Laboratory, Florida Museum of Natural History., Gainesville.

Reynolds, Smith and Hills Architects - Engineers - Planners, Inc. (RS&H)

- 1988 *State Environmental Impact Report - S.R. 50 U.S. 19 to Colorado Street*. Manuscript on file, Florida Department of Transportation, District Seven, Tampa.
- 1990 *Final Preliminary Engineering Report - S.R. 50 and S.R. 50A from Colorado Street to U.S. 301*. On file, Florida Department of Transportation, District Seven, Tampa.

Robinson, Major George D.

- 1979 *Outlines and Other Data on West Central Florida Projectile Points*. Central Gulf Coast Archaeological Society, St. Petersburg.

Ruppé, Reynold J.

- 1980 The Archaeology of Drowned Terrestrial Sites: A Preliminary Report. *Bulletin* 6: 35-45. On file, Florida Bureau of Historic Sites and Properties, Tallahassee.
- 1988 The Location and Assessment of Underwater Archaeological Sites. In *Wet Site Archaeology*. Edited by B. A. Purdy, pp. 55-68. Telford Press, Caldwell, NJ.

Russell, Richard

- 1957 Instability of Sea Level. *American Scientist* 45(5): 414-430.

Russo, Michael

- 1991 *Archaic Sedentism of the Florida Coast: A Case Study from Horr's Island*. Ph.D. dissertation, Department of Anthropology, University of Florida, Gainesville.
- 1992 Chronologies and Cultures of the St. Marys Region of Northeast Florida and Southeast Georgia. *The Florida Anthropologist* 45(2): 107-138.

Russo, Michael, Ann S. Cordell and Donna L. Ruhl

- 1993 The Timucuan Ecological and Historic Preserve, Phase III Final Report. Manuscript on file, Southeast Archeological Center, National Park Service, Tallahassee.

Schnable, J.E. and H.G. Goodell

- 1968 Pleistocene-Recent Stratigraphy, Evolution, and Development of the Apalachicola Coast, Florida. *Special Paper* 112. Geological Society of America.

Scholl, David W., Frank C. Craighead and Minze Stuvier

- 1969 Florida Submergence Curve Revisited: Its Relation to Coastal Sedimentation Rate. *Science* 162: 562-564.

Shannon, George, Jr.

- 1986 The Southeastern Fiber-tempered Ceramic Tradition Reconsidered. In *Ceramic Notes* 3. Edited by P. Rice, pp. 47-80. Florida Museum of Natural History, Occasional Publications of the Ceramic Technology Laboratory, Gainesville.

Ste. Claire, Dana

- 1987 The Development of Thermal Alteration Technologies in Florida: Implications for the Study of Prehistoric Adaptation. *The Florida Anthropologist* 40(3): 203-208.
- 1990 The Archaic in East Florida: Archaeological Evidence for Early Coastal Adaptations. *The Florida Anthropologist* 43(3): 188-197.

Stout, Scott A. and William Spackman

- 2002 Paleoecology Interpreted by Peat Petrology and Chemistry. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*. Edited by G. H. Doran, pp. 227-235. University Press of Florida, Gainesville.

Upchurch, Sam B., Richard N. Strom and Mark G Nuckels

- 1982 Methods of Provenance Determination of Florida Cherts. Geology Department, University of South Florida, Tampa.

USGS

- 1954 Brooksville SE, Fla. PR 1988.
- 1954 Brooksville, Fla. PR 1988.
- 1954 Weeki Wachee Spring, Fla.

Vernon, R. O. and H. S. Puri

- 1964 Geologic Map of Florida. *Map Series* 18. Florida Board of Conservation, Division of Geology, Tallahassee.

Walker, Suzanne P.

- 1992 Letter to Mr. C. Leroy Irwin, FDOT, RE: S.R. 50 Resurfacing from Colorado Street to C.R. 485, Archaeological Testing of the Colorado Site (8HE241), Hernando County, Florida. On file, Florida Division of Historical Resources, Tallahassee.

Warren, Lyman O.

- 1971 The Fletcher Davis Site, Florida. *The Florida Anthropologist* 24(2): 81-90.

Warren, Lyman O., William Thompson and Ripley P. Bullen

- 1967 The Culbreath Bayou Site, Hillsborough County, Florida. *The Florida Anthropologist* 20(3-4): 146-163.

Watts, William A.

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

Watts, William A., Eric C. Grimm and T. C. Hussey

- 1996 Mid-Holocene Forest History of Florida and the Coastal Plain of Georgia and South Carolina. In *Archaeology of the Mid-Holocene Southeast*. Edited by K. E. Sassaman and D. G. Anderson, pp. 28-38. University Press of Florida, Gainesville.

Watts, William A. and Barbara C. S. Hansen

- 1988 Environments in Florida in the Late Wisconsin and Holocene. In *Wet Site Archaeology*. Edited by B. A. Purdy, pp. 307-323. Telford Press, Caldwell, NJ.

Weisman, Brent R. and Christine Newman

- 1994 An Archaeological Inventory of the Chassahowitzka Wildlife Management Area, Hernando County, Florida. Manuscript on file, C.A.R.L. Archaeological Survey, Florida Bureau of Archaeological Research, Tallahassee.

Wharton, Barry R.

- 1990 An Archaeological and Historical Resource Assessment of the Proposed North Suncoast Expressway, Hillsborough, Pasco, and Hernando Counties, Florida. Manuscript on file, HDR Engineering, Inc., Tampa.

Wharton, Barry R., George R. Ballo and Mitchell E. Hope

- 1981 The Republic Groves Site, Hardee County, Florida. *The Florida Anthropologist* 34(2): 59-80.

White, William A.

- 1970 Geomorphology of the Florida Peninsula. *Geological Bulletin* 51. Florida Department of Natural Resources, Bureau of Geology, Tallahassee.

Whitney, Theodore

- 1985 The Blackwater Pond Indian Site, Hernando County, Florida. *Bulletin, Chenango Chapter, New York State Archaeological Association* 21(3).

Widmer, Randolph J.

- 1988 *The Evolution of the Calusa*. University of Alabama Press, Tuscaloosa.

Willey, Gordon R.

- 1949 Archaeology of the Florida Gulf Coast. *Smithsonian Miscellaneous Collections* 113. 1982 Reprint. Florida Book Store, Gainesville.

Williams, J. Raymond

- 1979 Excavations at the Maximo Point Site, Pinellas County, Florida. On file, Department of Anthropology, University of South Florida, Tampa.

8.2 Historical

Akerman, Joe A.

- 1976 *Florida Cowman: A History of Florida Cattle Raising*. 4th edition. Florida Cattlemen's Association, Kissimmee.

Boyd, Mark F.

- 1951 The Seminole War: Its Background and Onset. *Florida Historical Quarterly* 30(1): 3-115.

Bradbury, Alford G. and E. Storey Hallock

- 1962 A Chronology of Florida Post Offices. *Handbook* 2. The Florida Federation of Stamp Clubs.

Breslauer, Ken

- 2000 *Roadside Paradise: The Golden Age of Florida's Tourist Attractions 1929-71*. Retro Florida, Inc., St. Petersburg.

Bruton, Quintilla Geer and David E. Bailey

- 1984 *Plant City: Its Origins and History*. Hunter Publishing Co., Winston-Salem.

Chamberlin, Donald L.

- 1968 *Fort Brooke: A History*. MA thesis, Florida State University, Tallahassee.

Covington, James W.

- 1957 *The Story of Southwestern Florida*. Lewis Historical Publishing Company, Inc., New York.
- 1961 The Armed Occupation Act of 1842. *Florida Historical Quarterly* 40: 41-53.
- 1982 *The Billy Bowlegs War 1855-1858: The Final Stand of the Seminoles Against the Whites*. The Mickler House Publishers, Chuluota.

Dunn, Hampton

- 1989 *Back Home: A History of Citrus County, Florida*. 2nd edition. Citrus County Historical Society, Inverness.

Federal Writers' Project

- 1939 *Florida: A Guide to the Southernmost State*. Oxford University Press, New York.

Guthrie, Sarah M. W.

- 1974 *Land of Promise, Land of Change: An Examination of the Population of Hillsborough County, Florida*. MA thesis, Emory University, Atlanta.

HDR Engineering, Inc.

- 1987 Hernando County's Big Hammock Region - Ecological and Historical Overview. On file, HDR Engineering, Inc., Tampa.

Horgan, James J., Alice F. Hall and Edward J. Jermann

- 1992 *The Historic Places of Pasco County*. Pasco County Historical Preservation Committee.

<http://www.co.hernando.fl.us>

- 2001 Hernando County, Florida. Hernando County Board of County Commissioners, Brooksville. Date accessed, 1/18/2003.

<http://www.hernandochamber.com>

- 2002 About Hernando County. Greater Hernando County Chamber of Commerce, Brooksville. Date accessed, 1/18/2003.

Janus Research

- 1992 A Cultural Resource Assessment of the Interstate 4 Improvements Project Right-of-Way from 50th Street to the Hillsborough/Polk County Line, Hillsborough County, Florida. Manuscript on file, Janus Research, St. Petersburg.
- 1998 Cultural Resource Assessment Survey for S.R. 55 (US 19) Toucan Trail to S.R. 50 Re-Evaluation Project, Hernando County, Florida. Manuscript on file, Janus Research, St. Petersburg.

Luxon, Tiffany and Amy Groover

- 1998 National Register of Historic Places Registration Form - Weeki Wachee Spring. Florida Division of Historical Resources, Tallahassee.

Mahon, John K.

- 1967 *History of the Second Seminole War 1835-1842*. University Press of Florida, Gainesville.

Mahon, John K. and Brent R. Weisman

- 1996 Florida's Seminole and Miccosukee Peoples. In *The New History of Florida*. Edited by M. Gannon, pp. 183-206. University Press of Florida, Gainesville.

McKethan, Alfred A.

1989 *Hernando County Our Story*. Privately Published, Brooksville.

Purdum, Elizabeth D.

1994 *Florida County Atlas and Municipal Fact Book*. Florida State University, Tallahassee.

Robinson, Earnest L.

1928 *History of Hillsborough County*. The Record Company Printers, St. Augustine.

Romans, Bernard

1961 *A Concise Natural History of East and West Florida*. Published 1775, Reprinted by Pelican Publishing Company, New Orleans.

Shofner, Jerrell H.

1995 *A History of Altamont Springs*. City of Altamont Springs, Altamont Springs.

Stanaback, Richard J.

1976 *A History of Hernando County 1840-1976*. Action '76 Steering Committee, Brooksville.

State of Florida, Department of Environmental Protection

1843a *Field Notes*. T. H. Weightman, Vol. 94.

1843b *Field Notes*. T. H. Weightman, Vol. 117.

1846 *Field Notes*. G. Mackay, Vol. 70.

1847 *Plat Map*. Township 22 South, Range 19 East.

1849 *Plat Map*. Township 23 South, Range 17 East.

1851 *Field Notes*. G. Watson, Vol. 142.

1852a *Plat Map*. Township 22 South, Range 17 East.

1852b *Plat Map*. Township 22 South, Range 18 East.

Swanton, John R.

1946 The Indians of the Southeastern United States. *Bulletin* 137. Smithsonian Institution, Bureau of American Ethnology, Washington, D.C.

Tebeau, Charlton W.

1971 *A History of Florida*. University of Miami Press, Coral Gables.

Thacker, K.C.

2001 Origin of Hernando County. <http://www.rootsweb.com/flhernan>.

Truxal, Nellie L.

1985 *Early Schools in Hernando County, Florida*. Hernando Historical Museum Association, Brooksville.

Weeki Wachee Springs Waterpark

n.d. *The Story of Weeki Wachee Springs*. Spring Hill, Florida. Manuscript available at the Weeki Wachee Springs Waterpark.

Wharton, Barry R.

1990 An Archaeological and Historical Resource Assessment of the Proposed North Suncoast Expressway, Hillsborough, Pasco, and Hernando Counties, Florida. On file, HDR Engineering, Inc., Tampa.

**APPENDIX B: Request for Determination of Eligibility: Weeki Wachee Spring
(Janus Research 1998) and SHPO Concurrence Letter**

United States Department of the Interior
National Park ServiceNATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Weeki Wachee Springother names/site number 8HE391

2. Location

street & number 6131 Commercial Way (US 19) ☐ not for publicationcity or town Weeki Wachee Spring ☐ vicinitystate FLORIDA code FL county Hernando code 053 zip code 34606

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ☐ nomination ☒ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. I recommend that this property be considered significant ☐ nationally ☐ statewide ☐ locally. (☐ See continuation sheet for additional comments.)

Signature of certifying official/Title

Date

Florida State Historic Preservation Officer, Division of Historical ResourcesState or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See continuation sheet for additional comments.)

Signature of certifying official/Title

Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

Signature of the Keeper

Date of Action

- ☐ entered in the National Register
☐ See continuation sheet

- ☐ determined eligible for the
National Register
☐ See continuation sheet.

- ☐ determined not eligible for the
National Register
☐ See continuation sheet.

- ☐ removed from the National
Register.

- ☐ other, (explain) _____

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section number _____ Page 1 Weeki Wachee Spring
Hernando County, Florida

SECTION 7: DESCRIPTION

SUMMARY

Weeki Wachee Spring is located on the west side of US 19 at the intersection of US 19 and SR 50 in Weeki Wachee Spring, Florida. This post-World War II tourist attraction consists of several buildings placed along the Weeki Wachee Spring, also known as the Main Spring. The main attraction, an underwater theatre featuring swimmers called Mermaids, is located on the banks of the clear spring and under the water (Photograph 1). To the north of the water is a grassy area; adjacent to the grass is a roadway, which leads to Weeki Wachee's parking lot. The eastern part of the spring is fenced off where a sandy beach and water-slide park, Buccaneer Bay, can be found (Photograph 2). The original 1947 Underwater Theatre was demolished and the existing Mermaid Theatre was constructed in 1959 at a different location than the original building. The second building was significantly altered in 1975. The only remaining feature of the 1947 Weeki Wachee tourist attraction is the underwater airlock, a space where the Mermaids can breathe air and change clothes. Weeki Wachee's historical associations with Florida's post-World War II tourism boom and roadside attractions are significant; however, no historic fabric or buildings remain to convey its significance. The original 1947 Underwater Theatre was demolished and extant buildings were constructed in 1959 or later; therefore, they do not meet the age requirement for listing in the **National Register of Historic Places**.

PHYSICAL DESCRIPTION

Weeki Wachee Spring is an approximately 50-acre tourist attraction located along the Weeki Wachee Spring and River. The Main Spring measures 100 feet across, and is the surfacing point of an underground river that pumps over 170 million gallons of water each day. The rock formations underneath the surface of the water remain in their natural form.

Weeki Wachee Spring's buildings are a collection of nonhistoric wood frame buildings serving different uses (Photograph 3, 4). Building materials include vertical cedar siding, wood shingle roofing, thatched roofs, and fixed metal-framed windows and metal-framed doors. The buildings are placed along a meandering concrete path surrounded by lush tropical landscaping (Photograph 5). Large birdcages containing hawks, eagles, and parrots are scattered throughout the park. Buildings include the Gift Locker, c. 1965; Treasure Chest gift shop, c. 1965; an entrance kiosk, c. 1960s; and employee cottages, c. 1960s or 1970s. Originally, Mermaids lived in the cottages, but now park personnel live there and others are occupied by renters (Photograph 6). In 1973, the park was expanded with the Birds of Prey outdoor concrete arena and the Exotic Birds outdoor concrete auditorium (Photograph 7). Later buildings include an administrative office, c. 1972; the Mermaid Museum, c. 1975; the boat dock, c. 1975; the Spring Overlook pavilion, c. 1980s; and the Mermaid Galley Restaurant c. 1980s (Photograph 8). There are several additional nonhistoric buildings used for storage located in the west portion of the park. Building materials include wood siding, compositions shingle roofs, metal siding, and

Weeki Wachee Spring
Name of Property

Hernando County, Florida
County and State

5. Classification

Ownership of Property

(Check as many boxes as apply)

- ☒ private
☐ public-local
☐ public-State
☐ public-Federal

Category of Property

(Check only one box)

- ☐ buildings
☒ district
☐ site
☐ structure
☐ object

Number of Resources within Property

(Do not include any previously listed resources in the count)

Contributing

Noncontributing

0

28

buildings

sites

structures

objects

total

Name of related multiple property listings

(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed in the National Register

N/A

6. Function or Use

Historic Functions

(Enter categories from instructions)

RECREATION AND CULTURE/auditorium

Current Functions

(Enter categories from instructions)

RECREATION AND CULTURE/auditorium

7. Description

Architectural Classification

(Enter categories from instructions)

OTHER

Materials

(Enter categories from instructions)

foundation concrete slab

walls wood siding, stucco, concrete

roof composition shingle, wood shingle

other

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- ☐ A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- ☐ B Property is associated with the lives of persons significant in our past.
- ☐ C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- ☐ D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- ☐ A owned by a religious institution or used for religious purposes.
- ☐ B removed from its original location.
- ☐ C a birthplace or grave.
- ☐ D a cemetery.
- ☐ E a reconstructed building, object, or structure.
- ☐ F a commemorative property.
- ☐ G less than 50 years of age or achieved significance within the past 50 years

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- ☐ preliminary determination of individual listing (36 CFR 36) has been requested
- ☐ previously listed in the National Register
- ☐ previously determined eligible by the National Register
- ☐ designated a National Historic Landmark
- ☐ recorded by Historic American Buildings Survey

- ☐ recorded by Historic American Engineering Record

Areas of Significance

(Enter categories from instructions)

N/A

Period of Significance

1947-present

Significant Dates

1947

Significant Person

N/A

Cultural Affiliation

N/A

Architect/Builder

unknown/unknown

Primary location of additional data:

- ☐ State Historic Preservation Office
- ☐ Other State Agency
- ☐ Federal agency
- ☐ Local government
- ☐ University
- ☒ Other

Name of Repository

City of St. Petersburg library, Janus Research library, Weeki

Wachee Spring archives, USF library

Weeki Wachee Spring
Name of Property

Hernando County, Florida
County and State

10. Geographical Data

Acreage of Property 50

UTM References

(Place additional references on a continuation sheet.)

1	1	7	3	4	4	8	0	0	3	1	5	5	2	8	0
Zone			Easting						Northing						
2															

3															
Zone			Easting						Northing						
4															

☐ See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Tiffany Luxon and Amy Groover, Architectural Historians

organization Janus Research date November 13, 1998

street & number P.O. Box 919 telephone (727) 821-7600

city or town St. Petersburg state Florida zip code 33713

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A Sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items

(check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Florida Leisure Attractions

street & number telephone

city or town state zip code

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and amend listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reduction Projects (1024-0018), Washington, DC 20503.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section number _____ Page 2 Weeki Wachee Spring
Hernando County, Florida

metal roofs. These buildings generally are in poor condition and some have been moved from other places in the park (Photograph 9).

Mermaid Theatre

The Mermaid Theatre is Weeki Wachee Spring's main attraction (Photograph 10). The two-story building has an irregular plan with a shed roof and offset gable dormer. Its concrete and steel structural system is mostly underwater; however, the aboveground exterior is clad in smooth stucco. The main building has a shed roof covered in composition shingles while the second floor has an offset gable roof. On the west elevation, fixed single pane windows are evident in a dormer-like structure (Photograph 11). The only other windows present are 15 fixed single pane types located beneath the surface of the water (Photograph 12). Visitors enter the building from an entrance located at the south elevation. The second floor contains a locker room, costume room, and shower for the performers. The theatre's main interior space has five sections of wood benches placed in auditorium style on a downward slope. A small fiberglass stage has been built underwater and props such as the existing castle change periodically. Located at a depth of 65 feet is an airlock used by the mermaids; this was installed around 1947, but moved in 1959.

The original theatre, now demolished, was built in 1947. Named the Underwater Theatre, the building was a rectangular tank with a canvas cover and small rectangular windows located under water (Photograph 13 - 15). The original building was one-story and had a flat roof. There were two flat roofed structures on the main roof, one on each end. The roofs were painted in stripes and the above-water portion of the building had a painted sign that read "The Underwater Theatre." There was an open shed structure to the east of the building with a sign that said "Aquatic Zoo." Originally, there had been a Frame Vernacular building with screened southern facing porch to the west of the theatre. Following the completion of the Mermaid Theatre in 1962, the Underwater Theatre was demolished (Photograph 16).

The Mermaid Theatre was built in 1959-62 to the east of the original Underwater Theatre. It was a larger building than the previous theatre and able to seat 450 people (Photograph 17). The one-story building had a steel structure and a stucco exterior aboveground. The shed roof was clad in curved concrete panels. Much larger single-paned fixed windows to view the Mermaid show were installed (Photograph 18). Plastic auditorium seating was divided into five sections and angled on several levels down to the glass. A mosaic-tiled wall was below the windows and solid panels above the windows. The ceiling featured curved insets. A tube room from which the Mermaids swim 15 feet down and 50 feet out to enter the underwater stage was located in the theatre building and still remains.

The 1959 building exists today, but was notably altered in 1975 (Photograph 19). The concrete roof was removed, a second story added, and the roofs were sheathed in composition shingles. The interior has been significantly altered as well. Wood bench seating replaced the plastic auditorium chairs and an acoustic tile

United States Department of the Interior
National Park Service

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number _____ Page 3 Weeki Wachee Spring
Hernando County, Florida

ceiling has replaced or covered the original inset panel ceiling. The tiled wall under the windows was removed. A fiberglass stage was built in the spring on top of the airlock. The Mermaids enter the airlock where they can breath air and change clothes between numbers. Natural rock formations remain; however, props are added for performances. Attached to the theatre, a technical booth controls bubble curtains along the glass, perimeter, and deep hole of the underwater theatre.

SECTION 8: SIGNIFICANCE

SUMMARY OF SIGNIFICANCE

The Weeki Wachee Spring tourist attraction is considered to be not eligible for the **National Register of Historic Places**. Under Criteria A, in the areas of Entertainment and Recreation, Weeki Wachee Spring maintains significant historical associations with Florida's post-World War II tourism boom and roadside attractions. However, no extant buildings or structures remain which convey these historical associations. All historic fabric or historic buildings that convey its historical significance have been replaced by newer construction. The original Underwater Theatre was demolished in 1962 and the extant buildings were constructed in 1959 or later. Therefore, they do not meet the age requirement for listing in the **National Register of Historic Places**. Because the original buildings associated with the founding of the roadside attraction have been replaced with modern buildings, Weeki Wachee Spring is not exceptionally important as required for properties under 50 years old to be listed on the **National Register of Historic Places**.

STATEMENT OF SIGNIFICANCE

Entertainment/Recreation (Criterion A)

From side-of-the-road amusements advertised miles ahead to the great theme parks of Walt Disney World and Sea World, tourist attractions were a growing trade in Florida after World War II (Hatton 1987: 183). The post-World War II tourist attraction had its roots in early automobile vacations. Before automobiles, hotels had been the vacation destination where tourists arrived by rail, enjoyed the hotel, and then left by rail. With the invention and ensuing popularity of the automobile, travelers did not have to remain in one place. Two factors led to the popularity of car travel and vacations: headlights and roads. The invention of carbide-gas headlights enabled motorists to travel at night. At the same time, highways were created that bisected the country from east to west and north to south. Florida's main north-south highway, the Dixie Highway, brought tourists to Florida. Early 20th century auto vacationers camped on farmlands. As cars became widely available to everyone and car driving became the national pastime, municipalities established free campgrounds in the 1920s. In turn, automobile travel spurred eating and sleeping establishments along the roadways (Hatton 1987:

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section number _____ Page 4 Weeki Wachee Spring
Hernando County, Florida

175; Margolies 1981: 14). Florida took the lead in establishing camps after World War I (Hatton 1987: 175-176) during the burgeoning economy of the prosperous Land Boom times.

These free camps soon earned a reputation as places of corruption populated with "flivver bums" and "white gypsies." In response to the needs of family travelers, private camps were established. They charged fees, but offered better facilities such as cabins, indoor plumbing, and kitchenettes. Car travelers did not have to bring stoves or tents. The early camps were built around themes such as fairy tales or teepees. Over the next four decades, these private camps evolved into the motel, a string of rooms in one building. From 1948 through 1960 the number of motels doubled in response to increased automobile travel after World War II (Hatton 1987: 176-77). The post-World War II economic boom and end of gasoline rations led to increased tourism. Roadside attractions appeared all over Florida (Anderson 1995: 50). Weeki Wachee Spring is an example of this type of roadside attraction born for the automobile traveler.

The automobile traveler started a trend of roadside businesses competing for tourist dollars (Hatton 1987: 181). Florida's early attractions were pre-existing natural features such as a spring, flora, or fauna. Aimed at families, the main tourists of Florida, the sites operated year round because of the mild weather (Hatton 1987: 184). The early roadside attractions captured motorists' attention with catchy names, giant statues, and signs that promised incredible things (Hatton 1987: 183). An early brochure promoting Weeki Wachee Spring used catchy phrases such as, "Spring of the Mermaids," "Featuring the World's only Underwater Theatre," "Weekiwachee is acclaimed by motion picture companies as the underwater film capital of the world!" and "No one has been disappointed." (Photograph 20) Besides Weeki Wachee Spring, examples of other roadside attractions that enticed tourists with signs and unbelievable sights are Gatorland Zoo, with an alligator jaw entrance in Kissamee; Sunken Gardens, with large billboard signage in St. Petersburg; and Cypress Gardens' Florida-shaped pool.

In the 1950s, the construction of Walt Disney World affected all small roadside attractions. It was grander than previous attractions and major interstate highways took the tourist to it. Generally, once an attraction was cut off from the main travel route by an Interstate Highway, it would close down. Smaller attractions survived when their location remained along a heavily traveled roadway or when large corporations took them over. For example, today Cypress Gardens survives because it was bought by Sea World's parent corporation which advertises the two attractions together (Hatton 1987: 187). Likewise, Weeki Wachee Spring survives because it is owned by Florida Leisure, a corporation that owns Silver Springs as well.

Weeki Wachee Spring, part of the Weeki Wachee River, means Little Spring (Bloodworth 1978: 192). Indians used the spring and river as a source of food, water, and transportation. Later, it was used in the logging industry to float logs to the Gulf of Mexico (History of Weeki Wachee). The first known owners of the spring are the father, uncle and aunt of Ella Wilder Metcalf and Doctor McClure. In 1883, they purchased 500 acres for \$5,000 (Stanaback 1976: 231). At the turn-of-the-century, locals used Weeki Wachee as a picnic ground

United States Department of the Interior
National Park Service

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number _____ Page 5 Weeki Wachee Spring
Hernando County, Florida

and a swimming hole. During this period, glass-bottom boat tours were offered to view the underwater terrain and wildlife (History of Weeki Wachee) (Photograph 21, 22). Developers J.M. Rogers, Frank P. Bentley, and L.L. Buchanan spurred by the Land Boom of the 1920s, purchased the property in 1925 for \$100,000. Unfortunately, the financial collapse of 1927 ended development plans for a tourist attraction. However following World War II promoters were again interested in Weeki Wachee Spring (Stanaback 1976: 222, 231).

In the meantime, the City of St. Petersburg bought the spring in 1940 to provide an auxiliary source of water in case of future need (History of Weeki Wachee) (SPT 5/9/83 1B). In 1946, after witnessing the success of Cypress Gardens and Silver Springs, Newton Perry began plans for Weeki Wachee Spring (Anderson 1995: 74). A former U.S. Navy frogman and swimming instructor, Perry conceived the idea of staying under water and breathing through an air hose fueled by an air compressor. After searching for a body of water to conduct experiments, he discovered Weeki Wachee Spring and perfected hose breathing. Perry saw the possibilities of producing an underwater show due to the spring's clarity and beautiful cavern, rock formations, and plant life. He enlisted an enthusiastic supporter and pioneer skin-diver, Hall Smith, who shared his vision of an underwater show (History of Weeki Wachee). Together they secured financial backing by a group of Kansas City men and formed a St. Petersburg Corporation. This company leased 526 acres from the city of St. Petersburg and promised \$100,000 to \$500,000 in development of landscaping, tourist cabins, and construction of the first underwater theatre in the world. The first theatre was a tank with small viewing windows and a canvas cover. Only a two-lane hard-surfaced road led to the spring and there was no electrical power. The developers enticed the local R.E.A. Power Company to run a power line to the area. The theatre was set six feet below the water's surface and was ready for the attraction's first show on October 13, 1947 (History of Weeki Wachee; Stanaback 1976: 231-32).

The Underwater Theatre featured a Mermaid show consisting of several women in Mermaid costumes complete with tails that performed underwater ballet, fed the fish, and ate apples under the water. The City of Mermaids was 15 feet underwater and featured choreographed performances that required stamina, grace, and dramatics. The attraction received worldwide acclaim and served as the location for movies and television shows. Two movies, "Mr. Peabody and the Mermaid" (1948) with William Powell and "Cross Winds" (1951) with Rhonda Fleming were filmed at the site. Episodes of Route 66 and Sea Quest and a live television show "Minnie the Mermaid" with Arthur Godfrey, were filmed at the spring (SPT 9/30/97 6D; Kimberlie Burch interview). To appeal to all tourists, Mr. Perry expanded Weeki Wachee with attractions such as an orchid garden, a wild jungle cruise, and animals. However, the Mermaids remained the most popular feature (Anderson 1995: 74-75, Stanaback 1976: 232).

In 1959, the American Broadcasting Companies, Inc. bought Weeki Wachee from Perry and spent \$1 million building a new underwater theatre that seated 450 people (Florida Trend 59). The new theatre with a wave-like concrete roof was located east of the existing theatre and took several years to complete. It featured larger

United States Department of the Interior
National Park Service

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number _____ Page 6 Weeki Wachee Spring
Hernando County, Florida

windows, an extended underwater view and plastic auditorium seating. The original Underwater Theatre was demolished once the new theatre was completed.

Now named the Mermaid Theatre, the theatre building was remodeled around 1975. The concrete roof was removed, a second story for a locker room and a costume room was added, and plastic seating was replaced with bench seating.

In 1973, ABC added two open-air arenas for the Birds of Prey and Exotic Birds shows. A river cruise was opened in 1978, and Buccaneer Bay, a \$1 million water park with flume, spring swimming and picnic areas, was added in 1982. In 1984, ABC sold Weeki Wachee to Florida Leisure Attractions, a group of former ABC executives. At that time, they spent \$25 million to buy Weeki Wachee Spring and Silver Springs outside of Orlando (Florida Trend 60).

When US 19 was replaced by I-75 as the primary north-south thoroughfare, Weeki Wachee Spring was located 25 miles away from tourist traffic (Florida Trend 61). ABC requested a city charter from the City of St. Petersburg to keep the attraction's name on state maps. In January 1966, the City of Weeki Wachee Spring was incorporated. The attraction's name appeared on Florida maps because it was a Florida city. As a city, signs to Weeki Wachee went up on I-75. Today, the attraction remains popular as an attraction for Florida residents and out-of-state travelers.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section number _____ Page 7 Weeki Wachee Spring
Hernando County, Florida

SECTION 9: MAJOR BIBLIOGRAPHICAL REFERENCES

- Anderson, Sherry
1995 Pre-1955 Tourist Attractions in Florida: A Developmental History and Analysis of Significance. University of Georgia.
- Barnes, Robert
5/9/83 *Weeki Wachee: City of Mermaids Could Lose Its Water to St. Petersburg – Its Landowner.* St. Petersburg Times.
- Birch, Kimberlie
1998 Personal Communication. Interview conducted by Amy Groover and Tiffany Luxon, Janus Research, St. Petersburg. November 10, 1998.
- Bloodworth, Bertha E.
and Alton C. Morris
1978 Places in the Sun: The History and Romance of Florida Place Names. University Press of Florida.
- Hatton, Hap
1987 Tropical Splendor: An Architectural History of Florida. Alfred A. Knopf: New York.
- Glidewell, Jan
9/30/97 *Former Mermaid Creates Art That Emphasizes . . . Mermaids.* St. Petersburg Times.
- Margolies, John
1981 The End of the Road. 3rd printing. The Viking Press. New York.
- N.A.
N.A. History of Weeki Wachee.
- N.A.
N.A. Weeki Wachee: Spring of the Mermaids.
- Stanaback, Richard J.
1976 A History of Hernando County 1840-1976. Action '76 Steering Committee. Brooksville, Florida.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section number _____ Page 8 Weeki Wachee Spring
Hernando County, Florida

Wilson, Elizabeth
August 1987

Growth Gushes at Weeki Wachee. Florida Trend.

United States Department of the Interior
National Park Service

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number _____ Page 9 Weeki Wachee Spring
Hernando County, Florida

INVENTORY OF PHOTOGRAPHS

1. Weeki Wachee Spring
2. Hernando County, Florida
3. November 1998
4. Janus Research
5. Amy Groover
6. Facing southwest
7. Photograph 1 of 23 (Roll 9871-1, Exp 21)

Items 1-5 are the same for the remaining photographs 1 - 12.

6. Facing North
7. Photograph 2 of 23 (Roll 9871-1, Exp 22)

6. Facing northwest
7. Photograph 3 of 23 (Roll 9871-1, Exp 18)

6. Facing northwest
7. Photograph 4 of 23 (Roll 9871-1, Exp 1)

6. Facing southwest
7. Photograph 5 of 23 (Roll 9871-1, Exp 24)

6. Facing southwest
7. Photograph 6 of 23 (Roll 9871-1, Exp 15)

6. Facing West
7. Photograph 7 of 23 (Roll 9871-1, Exp 10)

6. Facing southeast
7. Photograph 8 of 23 (Roll 9871-1, Exp 14)

6. Facing northwest
7. Photograph 9 of 23 (Roll 9871-1, Exp 11)

6. Facing West
7. Photograph 10 of 23 (Roll 9871-1, Exp 19)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section number _____ Page 10 Weeki Wachee Spring
Hernando County, Florida

- 6. Facing southwest
- 7. Photograph 11 of 23 (Roll 9871-1, Exp 6)

- 6. Facing northeast
- 7. Photograph 12 of 23 (Roll 9871-1, Exp 4)

- 1. Weeki Wachee Spring
- 2. Hernando County, Florida
- 3. C. 1950
- 4. Florida State Archives Photographic Collection
- 5. Facing South
- 6. Photograph 13 of 23

Items 1-2 are the same for the remaining photographs.

- 3. 1952
- 4. Florida State Archives Photographic Collection
- 5. Facing East
- 6. Photograph 14 of 23

- 3. c. 1950s
- 4. Weeki Wachee Spring Archives
- 5. Facing northwest
- 6. Photograph 15 of 23

- 3. c. 1959
- 4. Weeki Wachee Spring Archives
- 5. Facing southeast
- 6. Photograph 16 of 23

- 3. c. 1958
- 4. Weeki Wachee Spring Archives
- 5. Facing West
- 6. Photograph 17a of 23

- 3. c. 1958
- 4. Weeki Wachee Spring Archives

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section number _____ Page 11 Weeki Wachee Spring
Hernando County, Florida

-
5. Facing northwest
6. Photograph 17b of 23
3. c. 1960
4. Florida State Archives Photographic Collection
5. Facing southeast
6. Photograph 18 of 23
3. c. 1975
4. Weeki Wachee Spring Archives
5. Facing East
6. Photograph 19 of 23
3. c. 1950
4. Weeki Wachee Spring Archives
5. Photograph 20 of 23
3. c. 1920
4. Florida State Archives Photographic Collection
5. Photograph 21 of 23
3. 1933
4. Florida State Archives Photographic Collection
5. Photograph 22 of 23
3. c. 1960s
4. Weeki Wachee Spring Archives
5. Aerial
6. Photograph 23 of 23

Weeki Wachee Spring



Photograph 1
Mermaid Theatre and Overlook Pavilion
Roll 9871-1, #21; Facing southwest

Weeki Wachee Spring



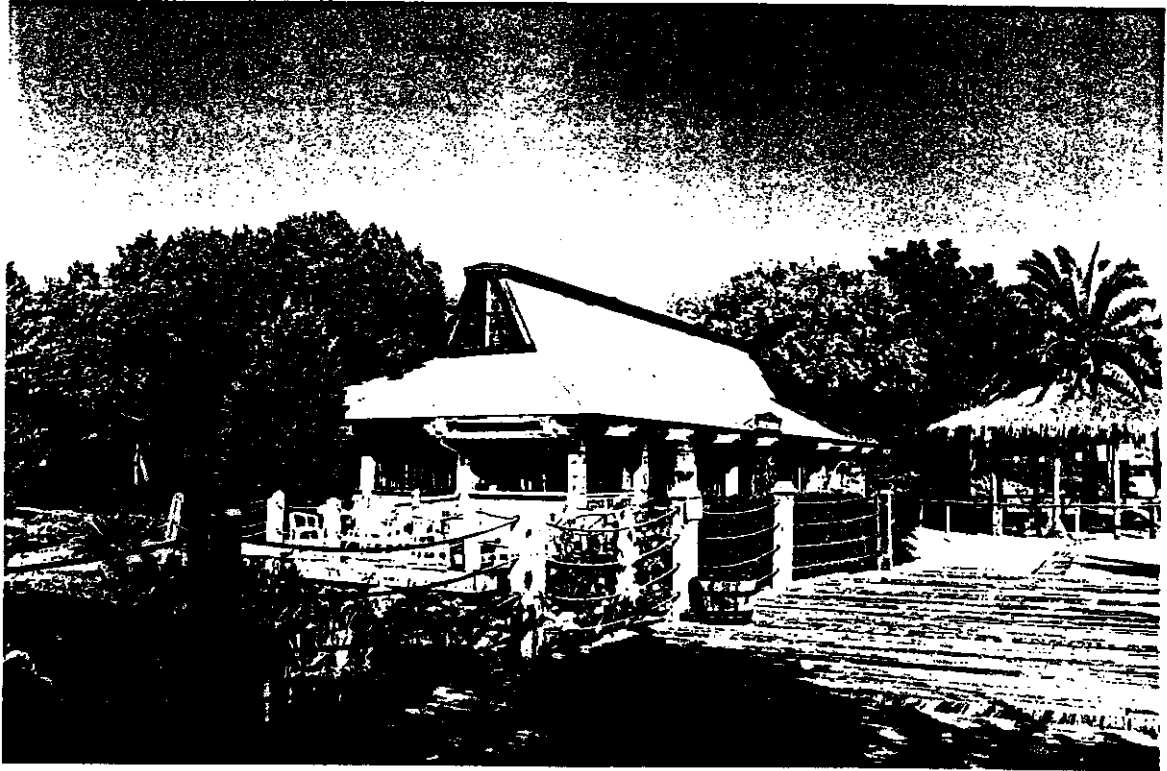
Photograph 2
Buccaneer Bay Water Park
Roll 9871-1, #22; Facing North

Weeki Wachee Spring



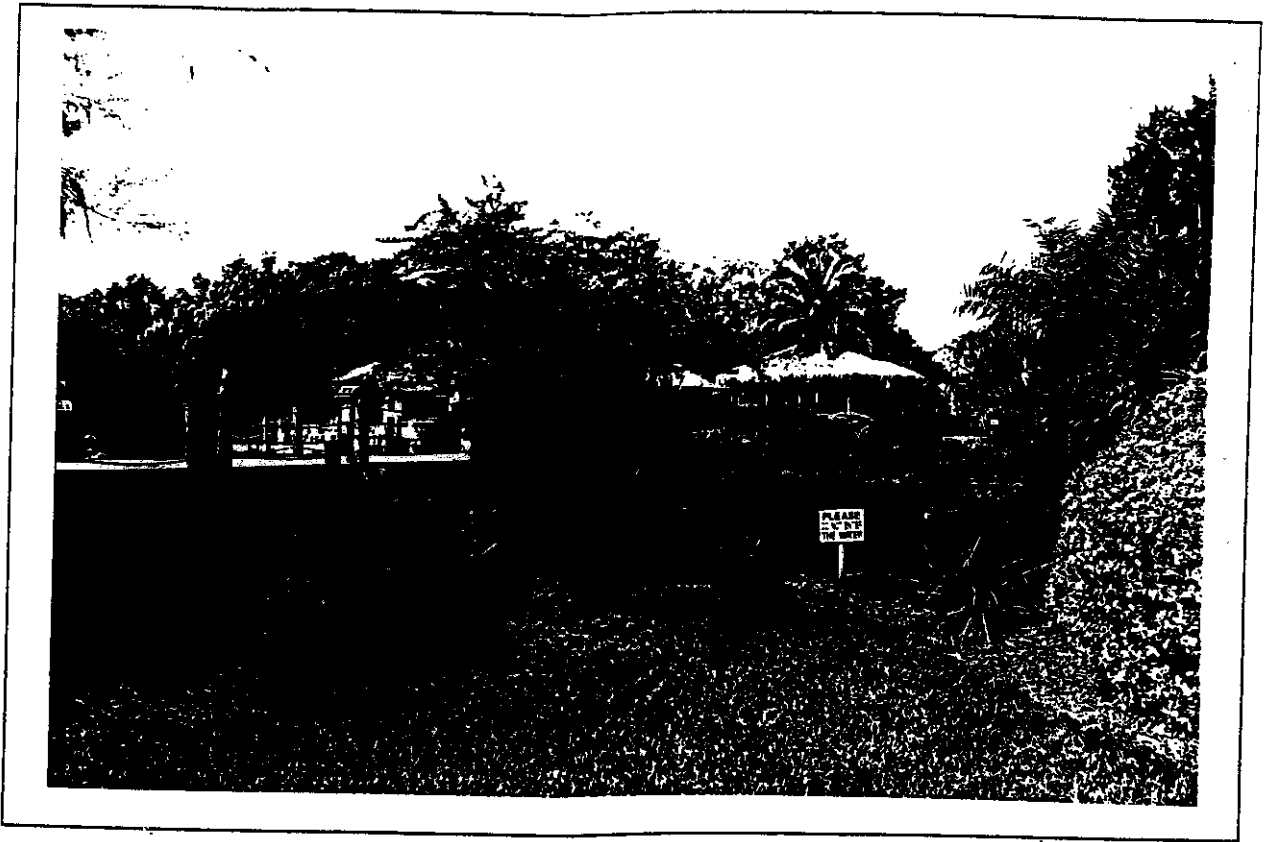
Photograph 3
Entrance Kiosk
Roll 9871-1, #18; Facing northwest

Weeki Wachee Spring



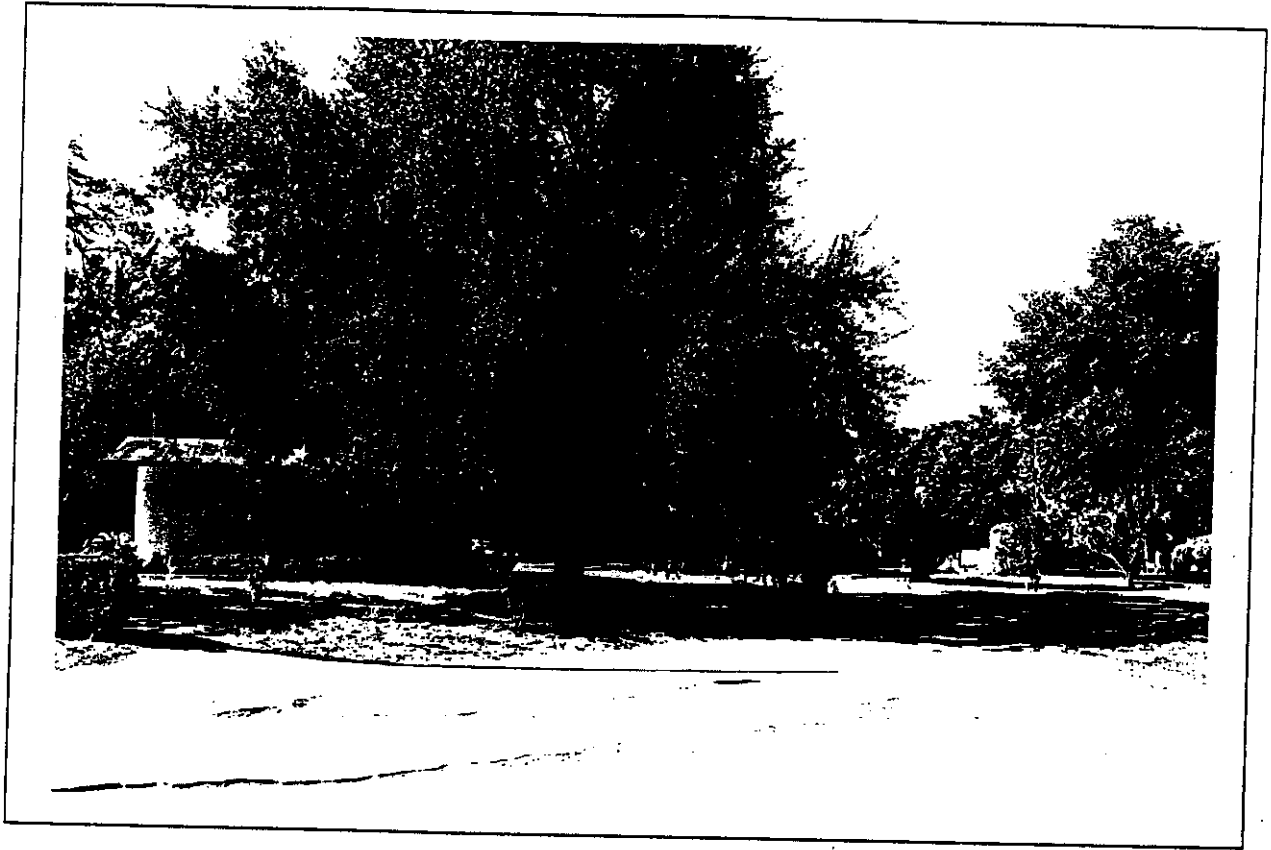
Photograph 4
Gift Locker
Roll 9871-1, #1; Facing northwest

Weeki Wachee Spring



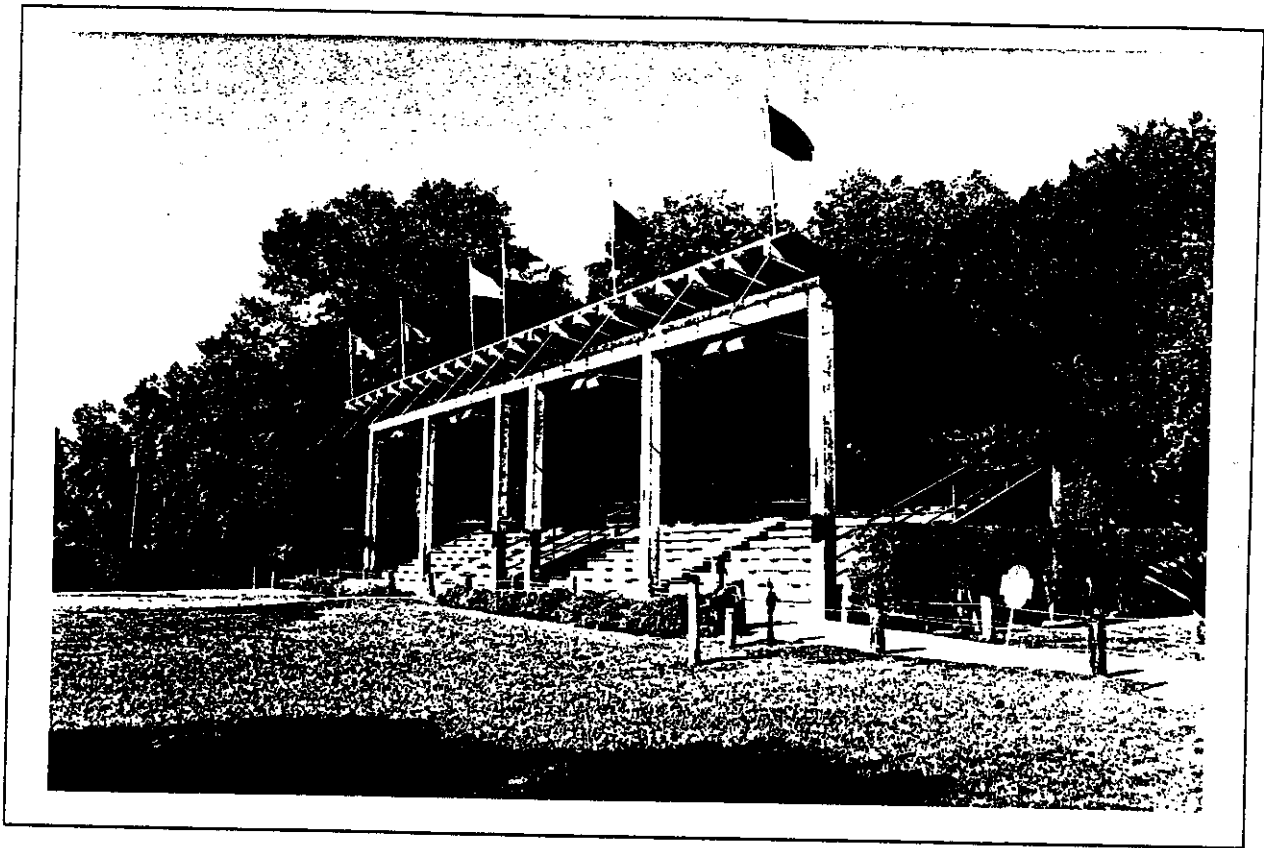
Photograph 5
Landscaping
Roll 9871-1, #24; Facing southwest

Weeki Wachee Spring



Photograph 6
Employee Housing
Roll 9871-1, #15; Facing southwest

Weeki Wachee Spring



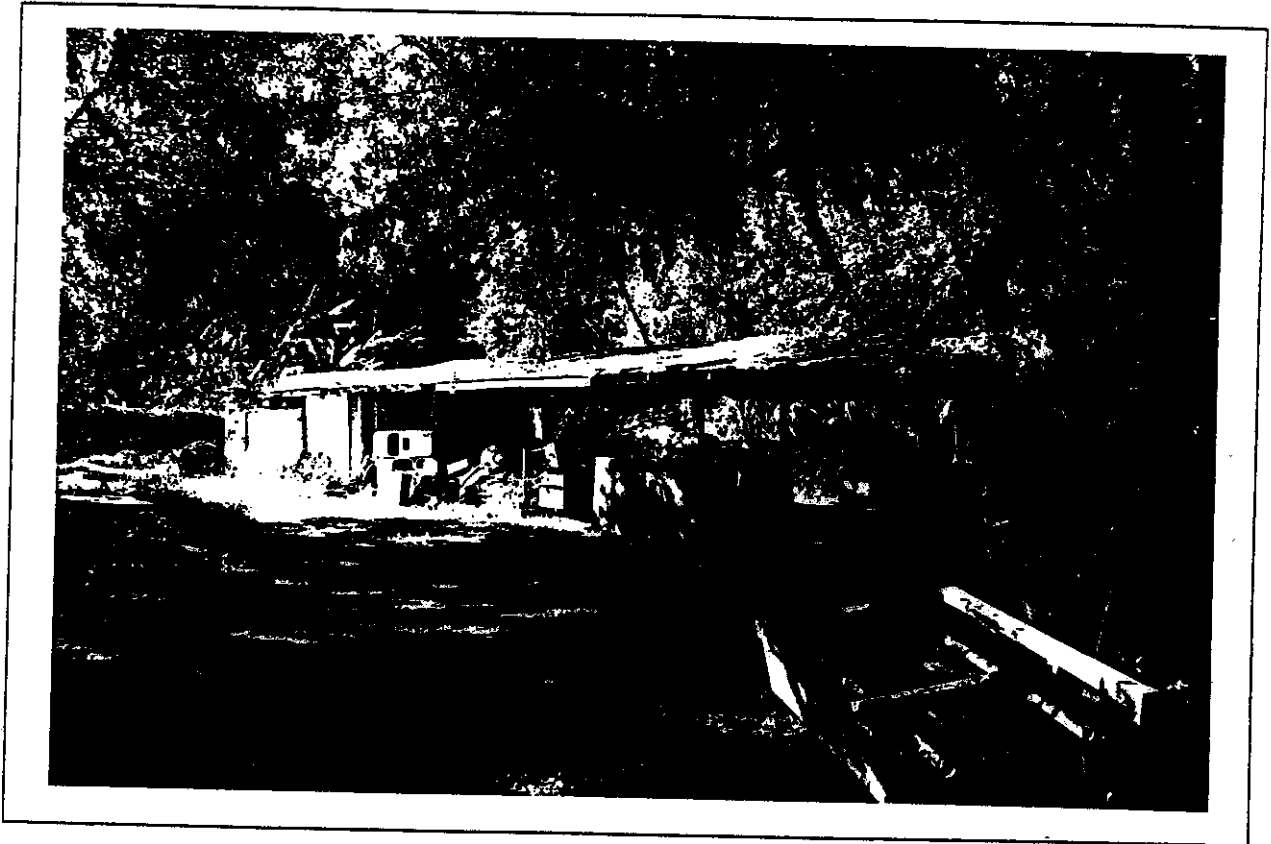
Photograph 7
Birds of Prey Arena
Roll 9871-1, #10; Facing West

Weeki Wachee Spring



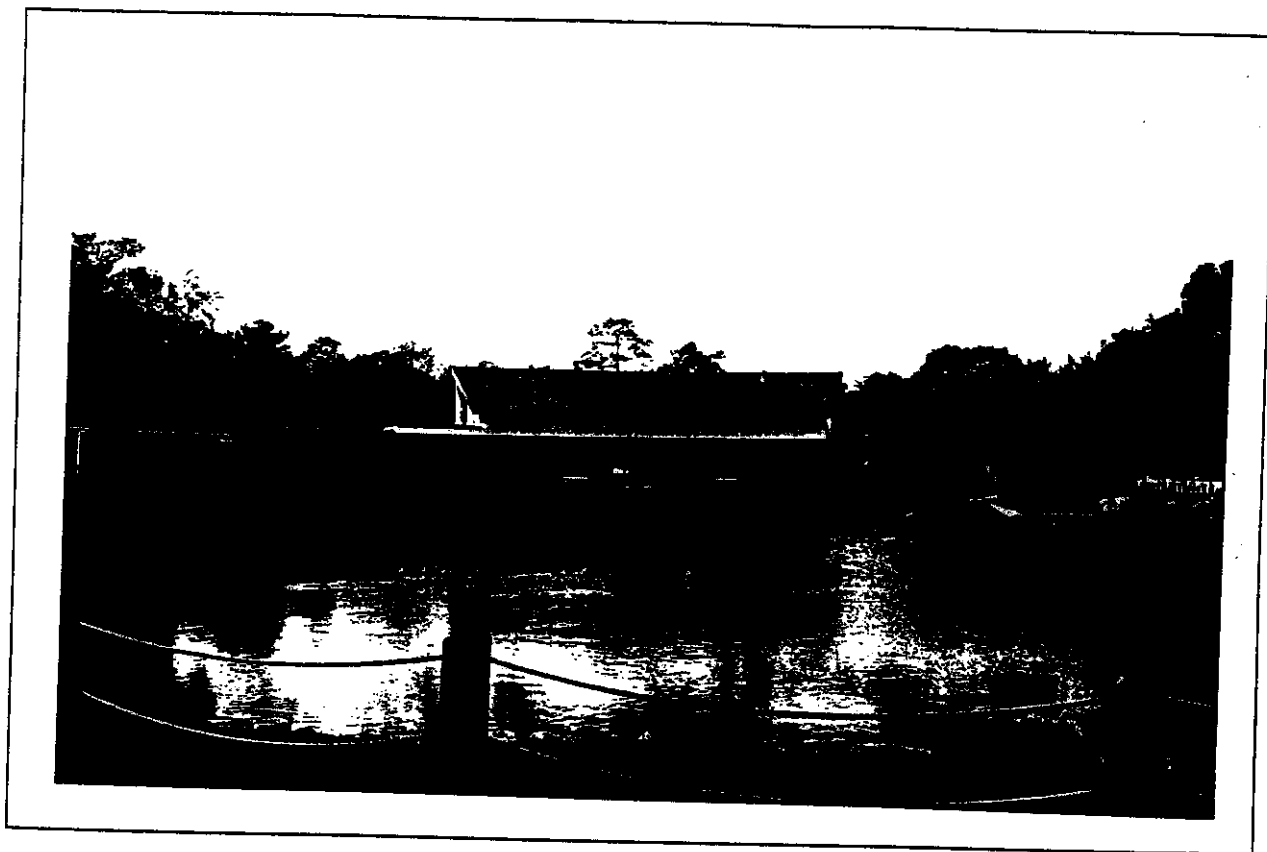
Photograph 8
Administration Building
Roll 9871-1, #14; Facing southeast

Weeki Wachee Spring



Photograph 9
Maintenance Building
Roll 9871-1, #11; Facing northwest

Weeki Wachee Spring



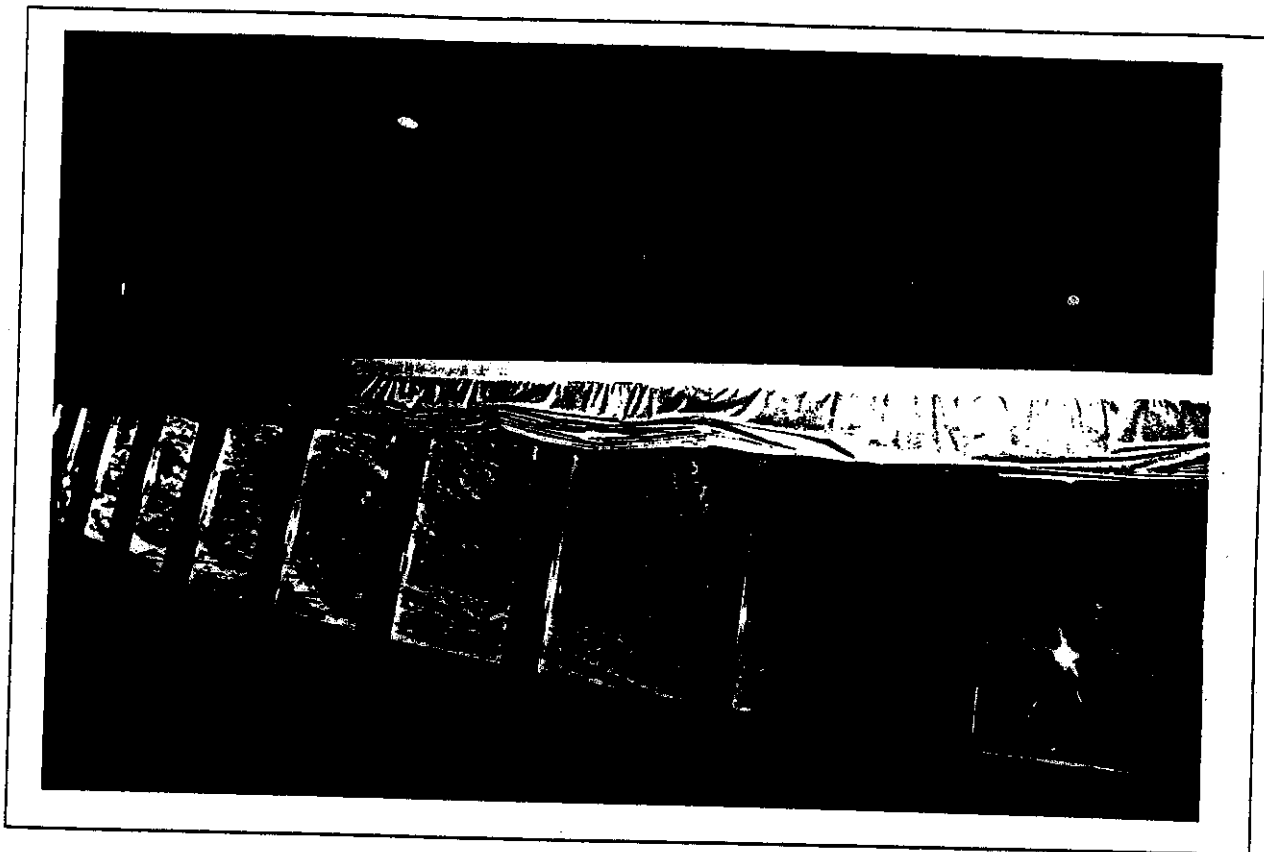
Photograph 10
Mermaid Theatre exterior
Roll 9871-1, #19; Facing West

Weeki Wachee Spring

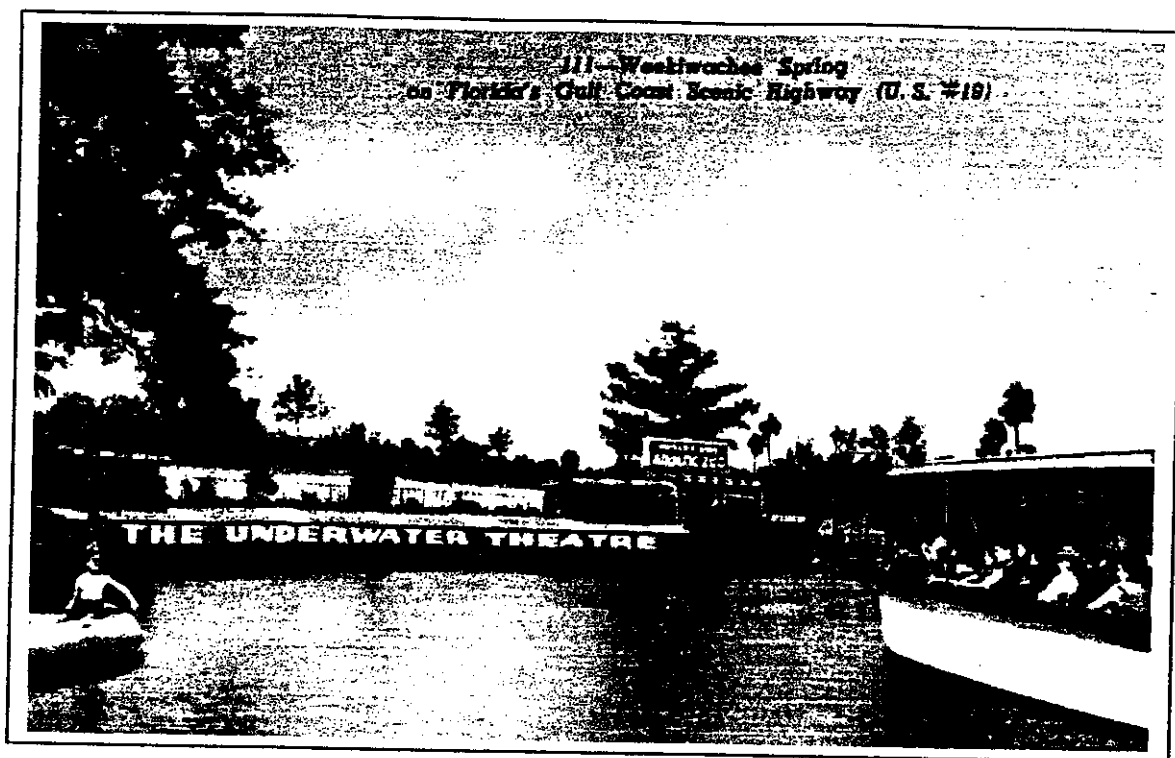


Photograph 11
Mermaid Theatre exterior
Roll 9871-1, #6; Facing southwest

Weeki Wachee Spring



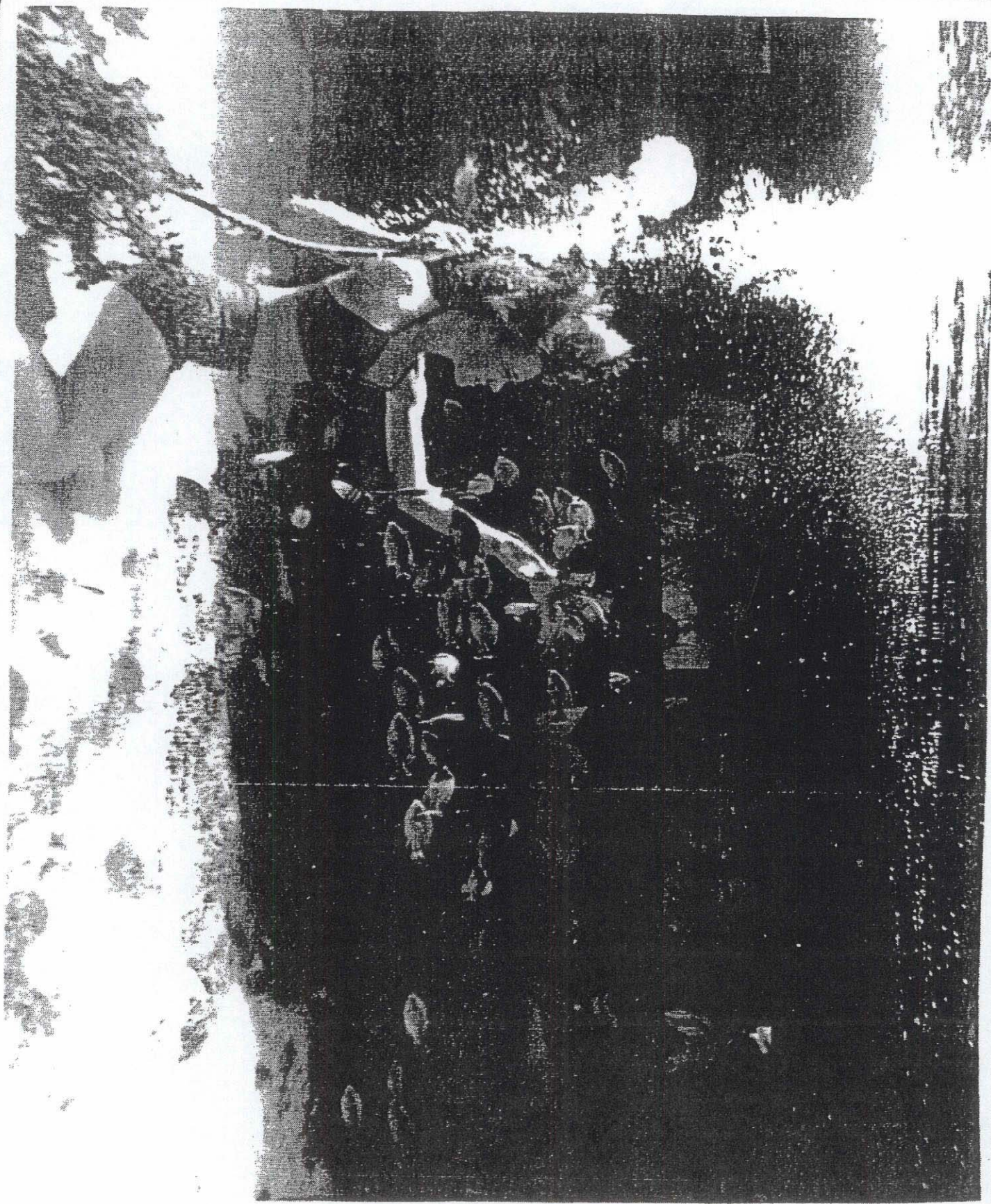
Photograph 12
Mermaid Theatre interior
Roll 9871-1, #4; Facing northeast



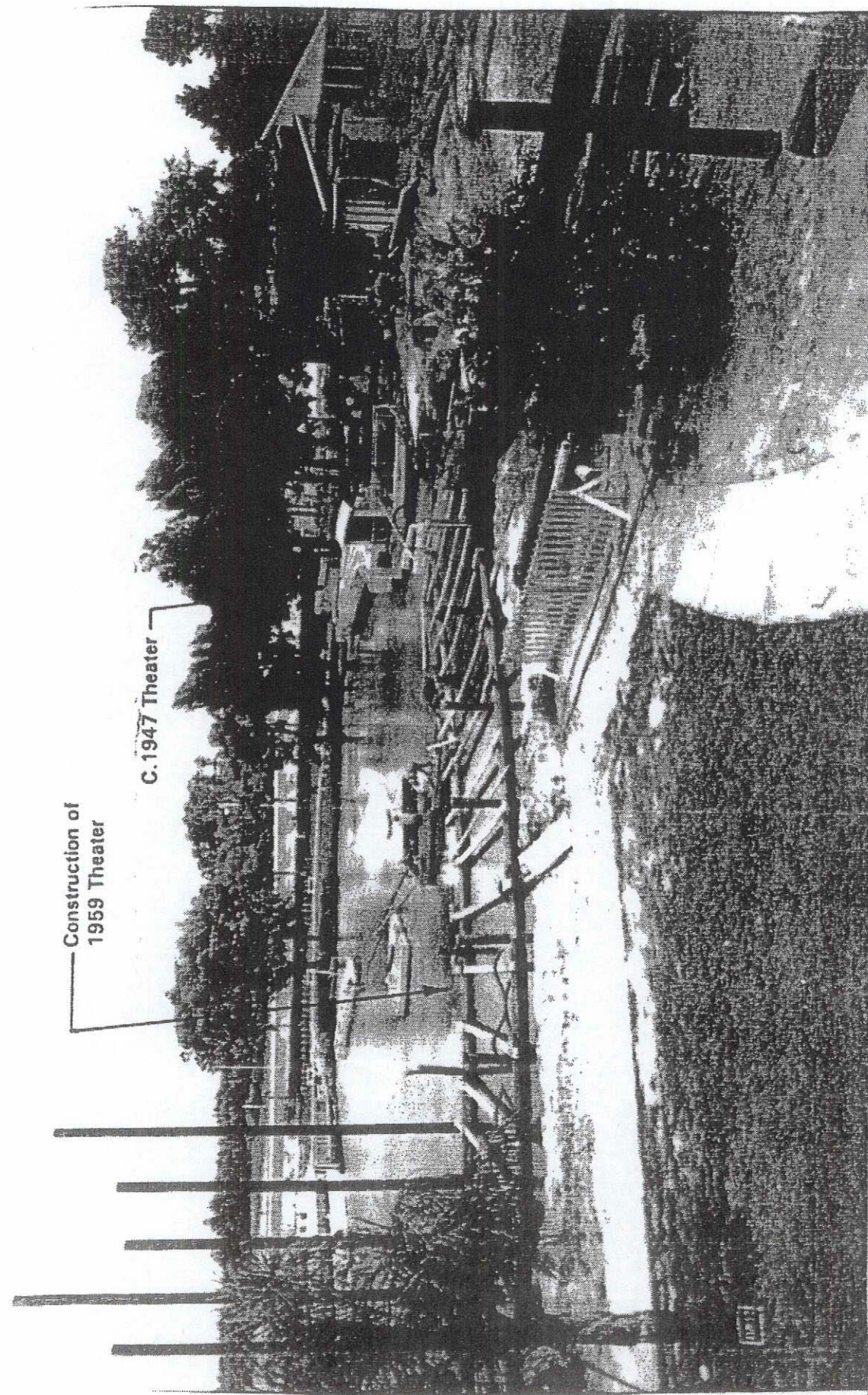
Photograph 13
Weeki Wachee Postcard c. 1950
Facing South
Florida State Archives Photographic Collection



Photograph 14
Underwater Theatre in 1952
Facing East
Florida State Archives Photographic Collection



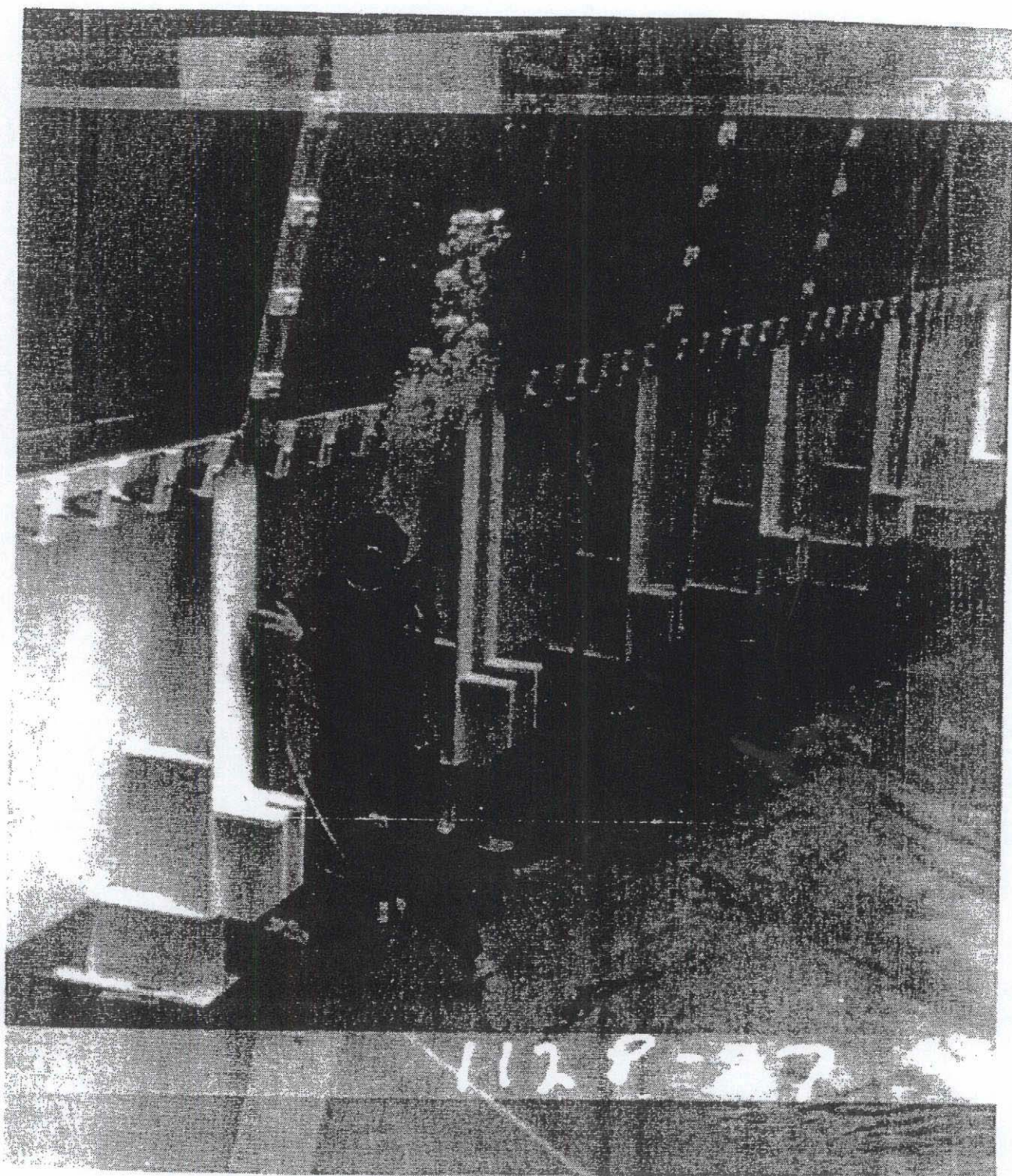
Photograph 15
Underwater Theatre and Mermaid c1950s
Facing Northwest
Weeki Wachi Spring Archives



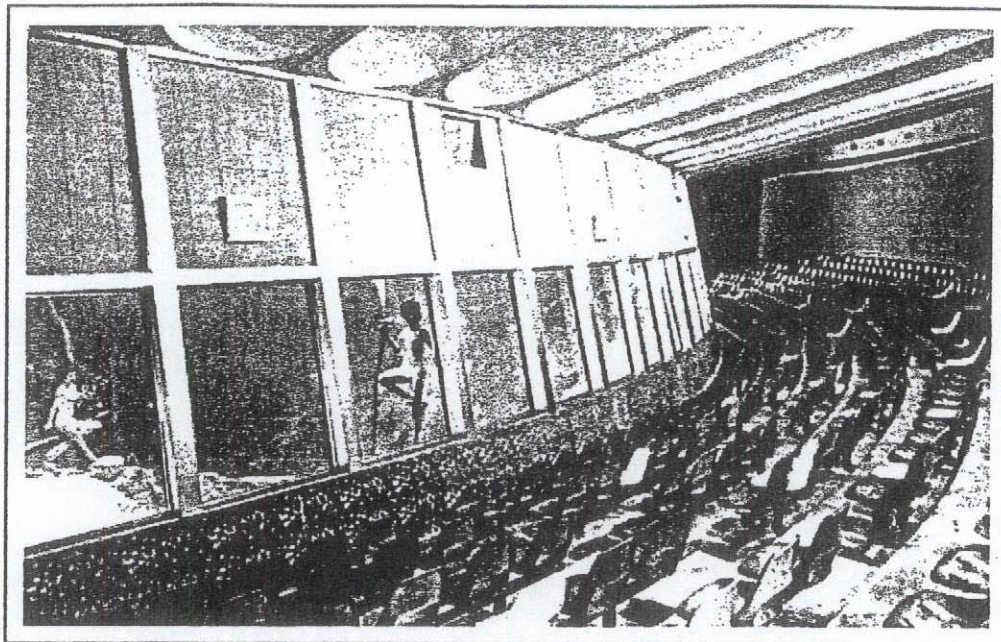
Photograph 16
Construction of new theatre
adjacent to original theatre
Weeki Wachi Springs Archives



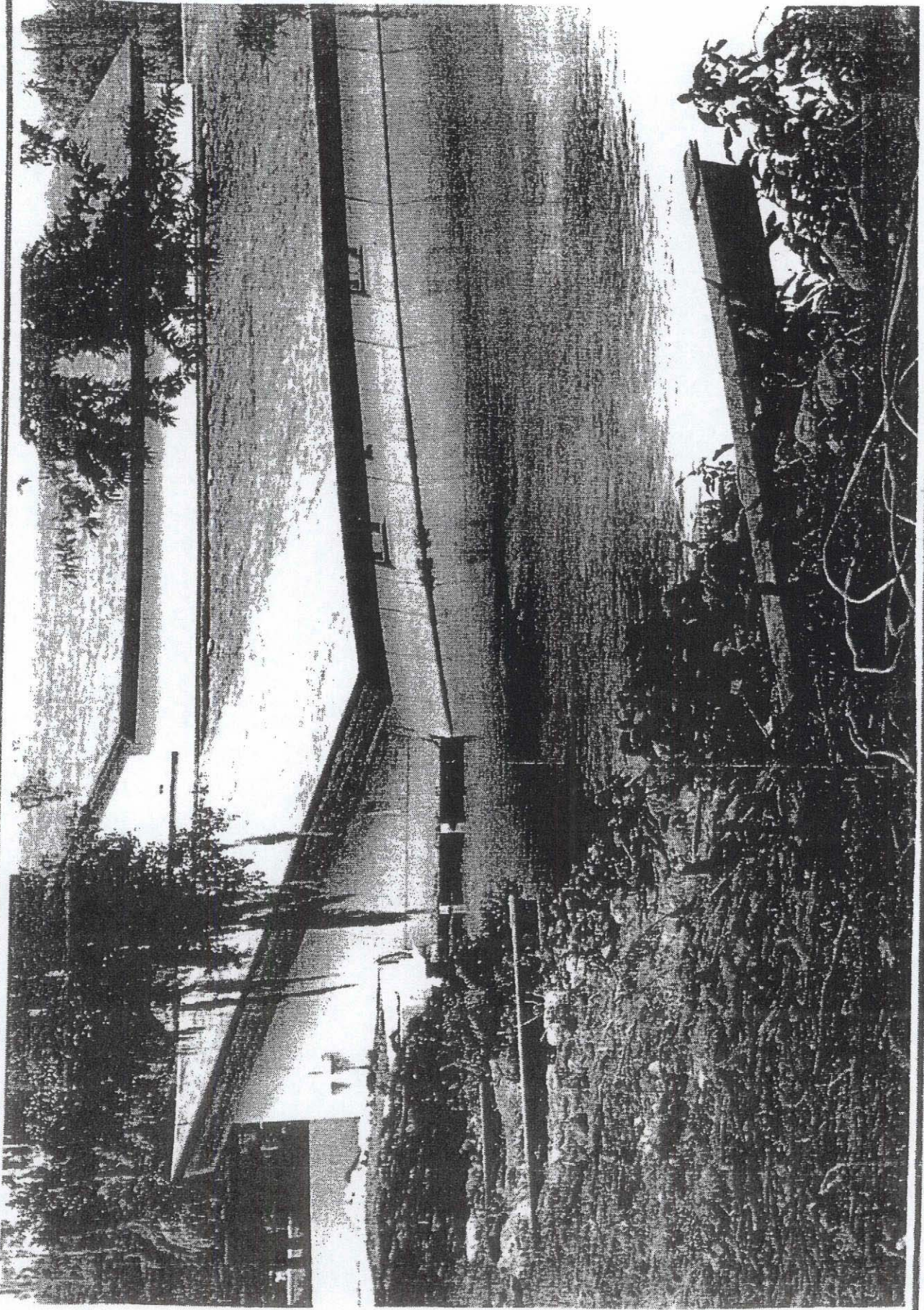
Photograph 17a
Construction of new theatre c1958
Facing West
Weeki Wachi Spring Archives



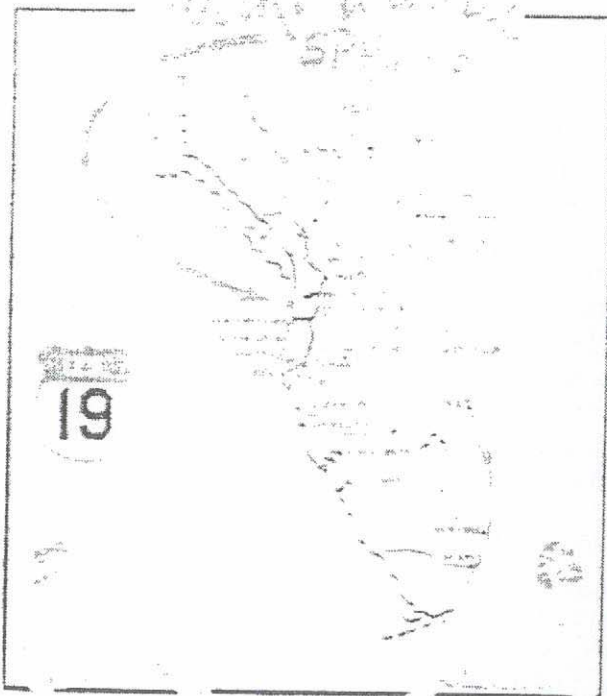
Photograph 17b
Underwater construction of new
theater c1958
Weeki Wachi Spring Archives



Photograph 18
Mermaid Theatre interior c. 1960
Facing southeast
Florida State Archives Photographic Collection



Photograph 19
Mermaid Theatre c1975
Facing East
Weeki Wachee Spring Archives



Weeki Wachee Spring is one of the most beautiful and interesting places in the State. It is a natural wonder, a place where the water is so clear that you can see the bottom of the lake. The water is so clear that you can see the bottom of the lake. The water is so clear that you can see the bottom of the lake.

It is a natural wonder, a place where the water is so clear that you can see the bottom of the lake. The water is so clear that you can see the bottom of the lake. The water is so clear that you can see the bottom of the lake.

Weeki Wachee Spring is one of the most beautiful and interesting places in the State. It is a natural wonder, a place where the water is so clear that you can see the bottom of the lake. The water is so clear that you can see the bottom of the lake.

NO ONE HAS BEEN DISAPPOINTED

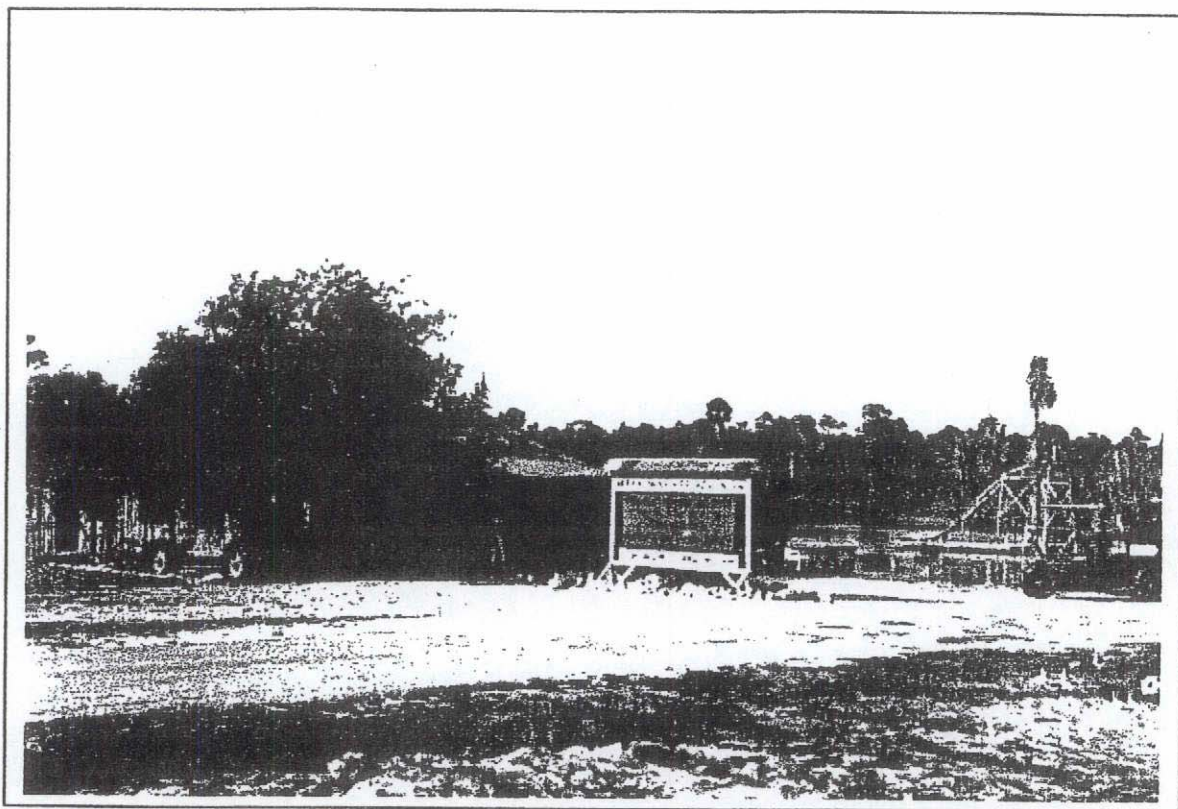
For information, write Weeki Wachee Spring
P. O. Box 97, Brooksville, Florida.
Phone 343, Brooksville, Florida.

WEEKIWACHEE

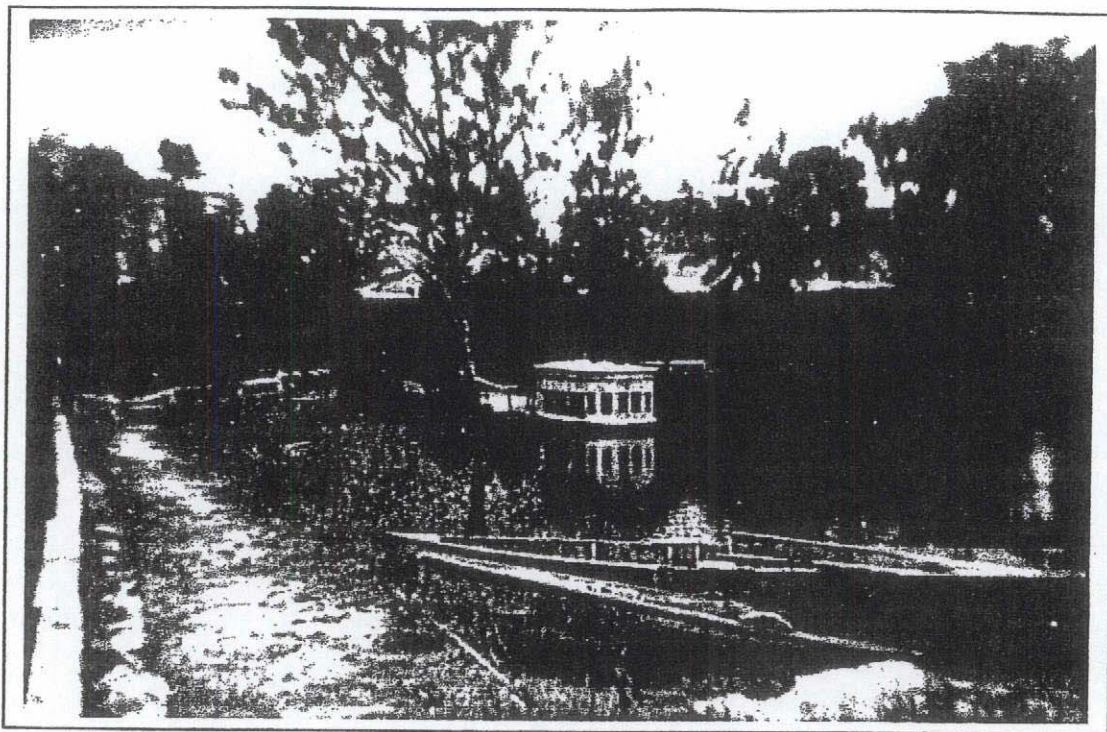
SPRING OF THE MERMAIDS

U.S. 19 ON FLORIDA'S MAIN GULF COAST HIGHWAY

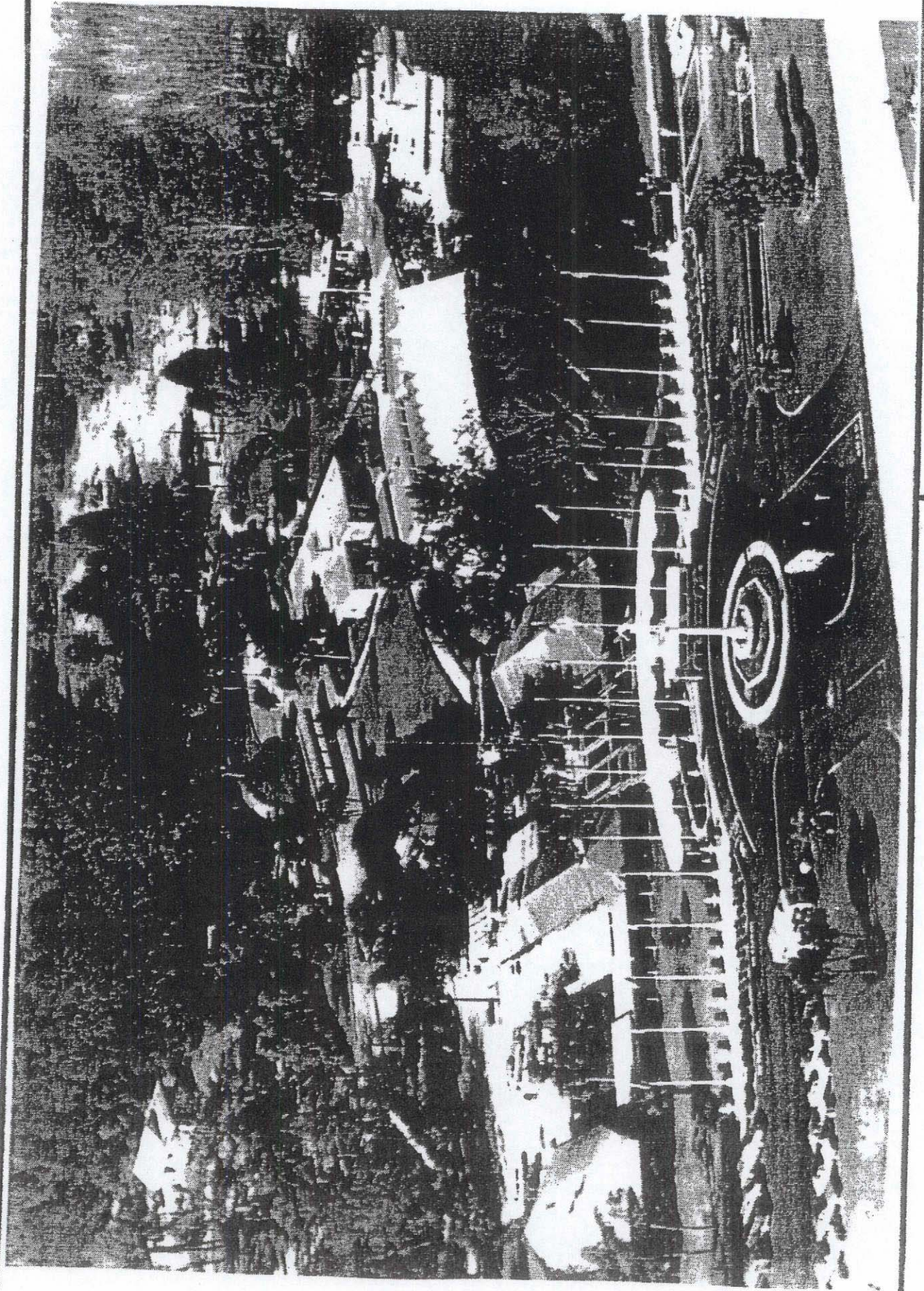
In all the world there is nothing else like
WEEKIWACHEE!



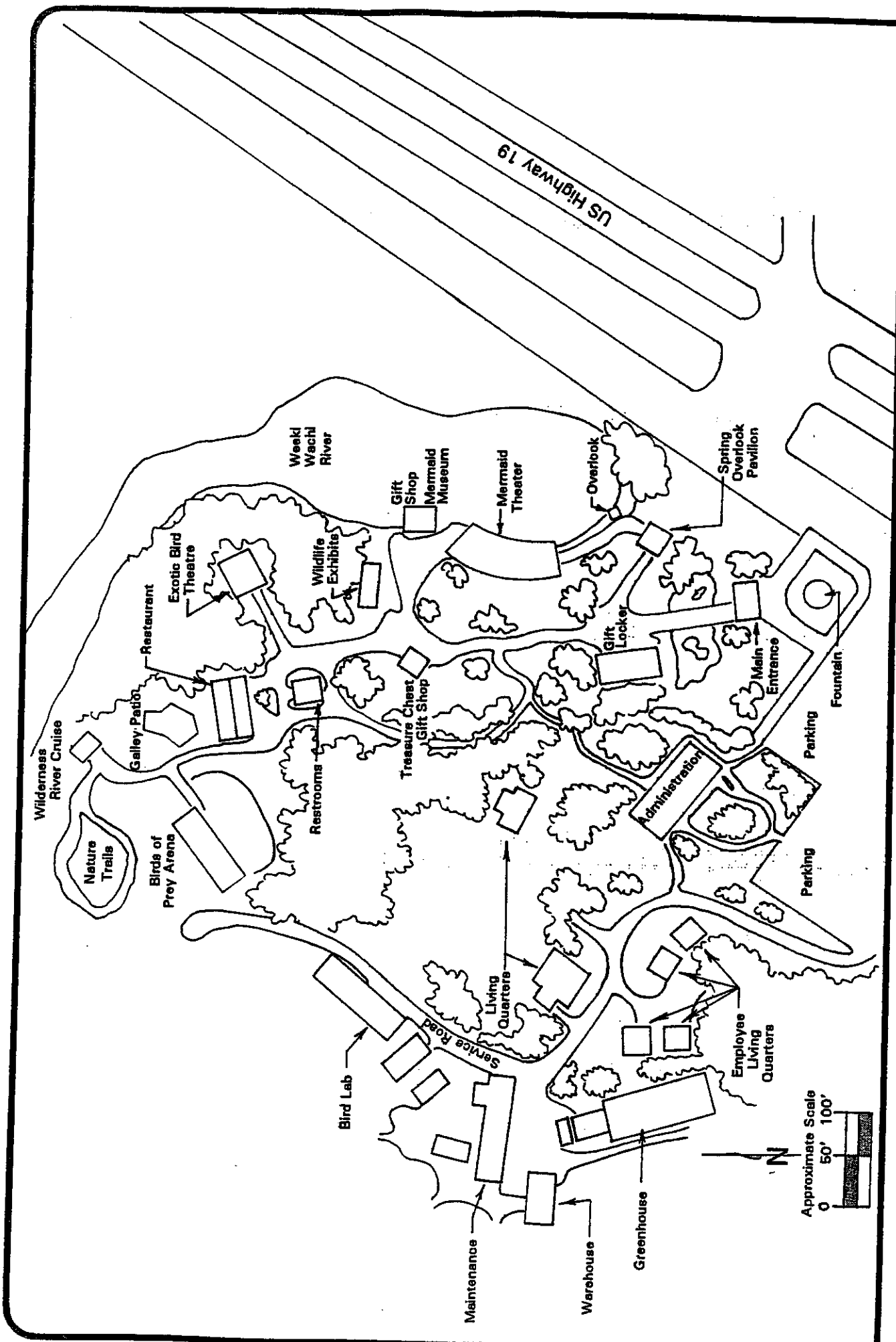
Photograph 21
Weeki Wachee c. 1920
Sign advertises "You can never believe it until you
see it through the glassbottomed boat"
Florida State Archives Photographic Collection



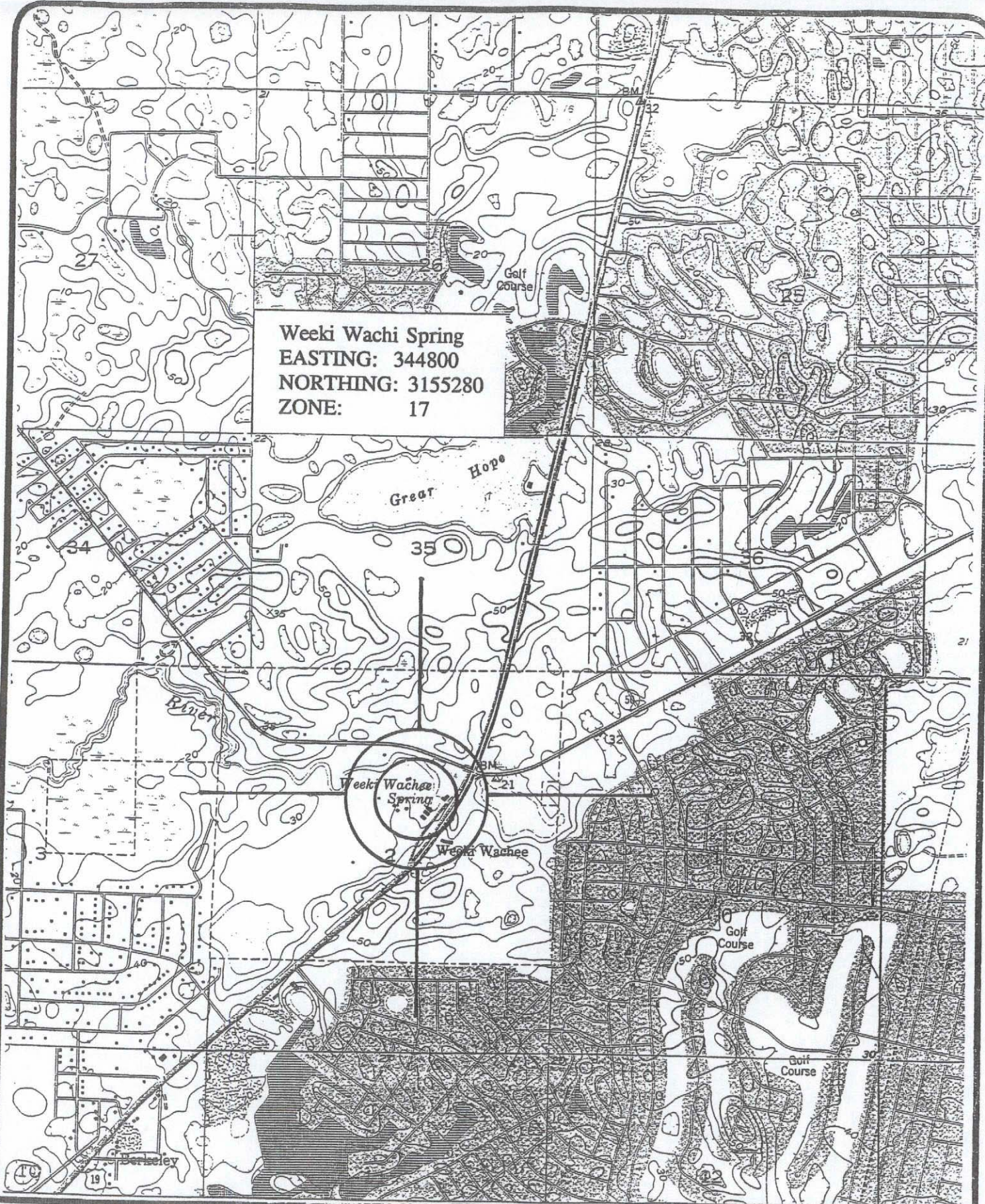
Photograph 22
Glass bottom boat on Weeki Wachee Spring
1933
Florida State Archives Photographic Collection



Photograph 23
Aerial of Weeki Wachee Spring c1960
Weeki Wachee Spring Archives



Site Sketch of Weeki Wachee Spring



Weeki Wachi Spring
EASTING: 344800
NORTHING: 3155280
ZONE: 17

The map is a topographic representation of the Weeki Wachi Spring area in Florida. It features a grid system with Easting and Northing coordinates. Contour lines are drawn at 10-foot intervals, with labels such as 20, 30, 40, and 50. A prominent road, likely US Highway 19, runs diagonally from the bottom left towards the center. To the right of the road, there are two golf courses labeled 'Golf Course'. A large body of water, 'Great Hope', is situated in the upper middle section. The 'Weeki Wachi Spring' is marked with a circle and a line pointing to it from the coordinate text box. Other labels include 'Berkeley' in the bottom left and 'BM' (benchmark) points. The map is overlaid with a coordinate grid.

Weeki Wachi Spring, FLA
USGS 7.5' Series (Topographic)
1956 Photorevised 1988
Scale 1:24,000



RECEIVED PD & E

1998 DE 28 AM 10:07

FLORIDA DEPARTMENT OF STATE

Sandra B. Mortham

Secretary of State

DIVISION OF HISTORICAL RESOURCES

December 22, 1998

Mr. James E. St. John
Division Administrator
Federal Highway Administration
U.S. Department of Transportation
227 N. Bronough Street, Suite 2015
Tallahassee, Florida 32301

RE: DHR Project File No. 988273
Cultural Resource Assessment Review Request
*Cultural Resource Assessment Survey for SR 55 (US 19) Toucan Trail to SR 50
Re-evaluation Project, Hernando County, Florida* By Janus Research, July 1998.
SPN: 08020-1515
WPN: 7112107
FPN: 254793-1-52-01

Dear Mr. St. John:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), as well as the provisions contained in Chapter 267.061, *Florida Statutes*, we have reviewed the results of the field survey of the referenced project performed by Janus Research and find them to be complete and sufficient.

We note that two previously unrecorded historic structures, Kingsley Auto Service (8HE390) & Weeki Wachee Springs Mermaid Theater and Main Springs (8HE391) were recorded and one recorded archaeological site (8HE31) was revisited during the course of the survey. Based on the results of the survey, the properties were determined to be ineligible for listing in the National Register. We concur with the determinations. Therefore, it is the opinion of this office that the proposed undertaking will have no effect on historic properties listed or eligible for listing in the *National Register of Historic Places* or otherwise of historical or archaeological value.

Finally, this office notes that under section 'e', of the Sufficiency Checklist the following topic were not addressed: "*curation location of artifacts and project records*." Please note that this should be included in all future survey reports in order for staff to complete our review in a timely manner.

DIRECTOR'S OFFICE

R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250 • (850) 488-1480
FAX: (850) 488-3353 • WWW Address <http://www.dos.state.fl.us>

☐ ARCHAEOLOGICAL RESEARCH
(850) 488-3300 • FAX: 488-3307

☒ HISTORIC PRESERVATION
(850) 488-3322 • FAX: 488-3322

☐ HISTORICAL MUSEUMS
(850) 488-1481 • FAX: 488-1481

Mr. St. John
December 22, 1998
Page 2

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservation Planner, at 850-487-2333 or 800-847-7278. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammere
for

George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/Ese

xc: C. L. Irwin, FDOT
Rick Adair, FDOT, District 7

**APPENDIX C: Preliminary Cultural Resource Assessment of Proposed Pond
Alternative Sites (ACI May 2003)**

DRAFT

**PRELIMINARY CULTURAL RESOURCE ASSESSMENT OF
PROPOSED POND ALTERNATIVE SITES**

**SR 50 PD&E STUDY REEVALUATION
FROM US 19 (SR 55) TO THE EAST SR 50/50A INTERSECTION
HERNANDO COUNTY, FLORIDA**

Work Program Item Segment No.: 407951 1

Prepared for:

**Florida Department of Transportation
District Seven
11201 North McKinley Drive
Tampa, Florida 33612-6456**

Prepared by:

**Archaeological Consultants, Inc.
8110 Blaikie Court, Suite A
Sarasota, Florida 34240**

In association with:

**PBS&J
5300 West Cypress Street, Suite 300
Tampa, Florida 33607-1006**

May 2003

**PRELIMINARY CULTURAL RESOURCE ASSESSMENT OF
PROPOSED POND ALTERNATIVE SITES
SR 50 PD&E STUDY REEVALUATION
FROM US 19 (SR 55) TO THE EAST SR 50/50A INTERSECTION
HERNANDO COUNTY, FLORIDA**

1.0 INTRODUCTION

The purpose of this study was to determine, preliminarily, if any significant or potentially significant cultural resources, including archaeological sites and historic structures, will be impacted by the construction of proposed stormwater retention and floodplain compensation areas associated with improvements for SR 50 from US 19 (SR 55) to the east SR 50/50A Intersection in Hernando County. Known or potentially significant cultural resources are defined as those sites which are listed, determined eligible, or considered potentially eligible for listing in the National Register of Historic Places (NRHP). This work was conducted in compliance with the provisions of the National Historic Preservation Act of 1966 (Public Law 89-665), as amended, and the implementing regulations 36 CFR 800, as well as with the provisions contained in the revised Chapter 267, Florida Statutes (F.S.).

The 15 proposed pond sites are located in Sections 1 and 2 of Township 23 South, Range 17 East; Sections 25, 26, 27, 29, 31, 32, 34 of Township 22 South, Range 18 East; and Sections 20, 29, and 30 of Township 22 South, Range 19 East (USGS Weeki Wachee Springs, Fla. 1954; Brooksville, Fla. 1954, PR 1988) (Figures 1-3). The study methodology included an examination of project aerials, and a review of Florida Master Site File (FMSF) records, NRHP listings, relevant cultural resource assessment survey reports (ACI 1995, 2002; Ballo 1989; Browning 1979; Browning and Wiedenfeld 1986; Deming and Almy 1983a, 1983b; Athens et al. 1994; Deming 1993, 1994; Estabrook 1992; Horvath et al. 1998; Janus Research 1998; Lammers et al. 1999; Marsh 1977, 1979, 1980, 1981a, 1981b; Parsons Engineering Science 2001; Weisman and Newman 1994; Wharton 1990), U.S. Department of Agriculture (USDA) soil survey maps (Hyde et al. 1977), and the U.S. Geological Survey (USGS) Weeki Wachee Springs and Brooksville quadrangle maps. In addition, a windshield survey was conducted in April 2003 to determine if there are any potential historic structures (50 years of age or older) associated with the proposed pond sites.

As a result of this preliminary study, it was determined that Subareas C and D of the Colorado Site (8HE241), an archaeological site determined eligible for listing in the NRHP, is located within or adjacent to proposed pond sites J and K. All other proposed pond alternatives are not associated with previously identified NRHP-listed or eligible cultural resources, including archaeological sites and historic structures. Windshield survey indicated an absence of unrecorded historic structures within or adjacent to the 15 proposed pond alternatives. Based upon the results of the background research, as well as the windshield survey, nine pond alternatives are considered to have a high or moderate potential for archaeological site occurrence.

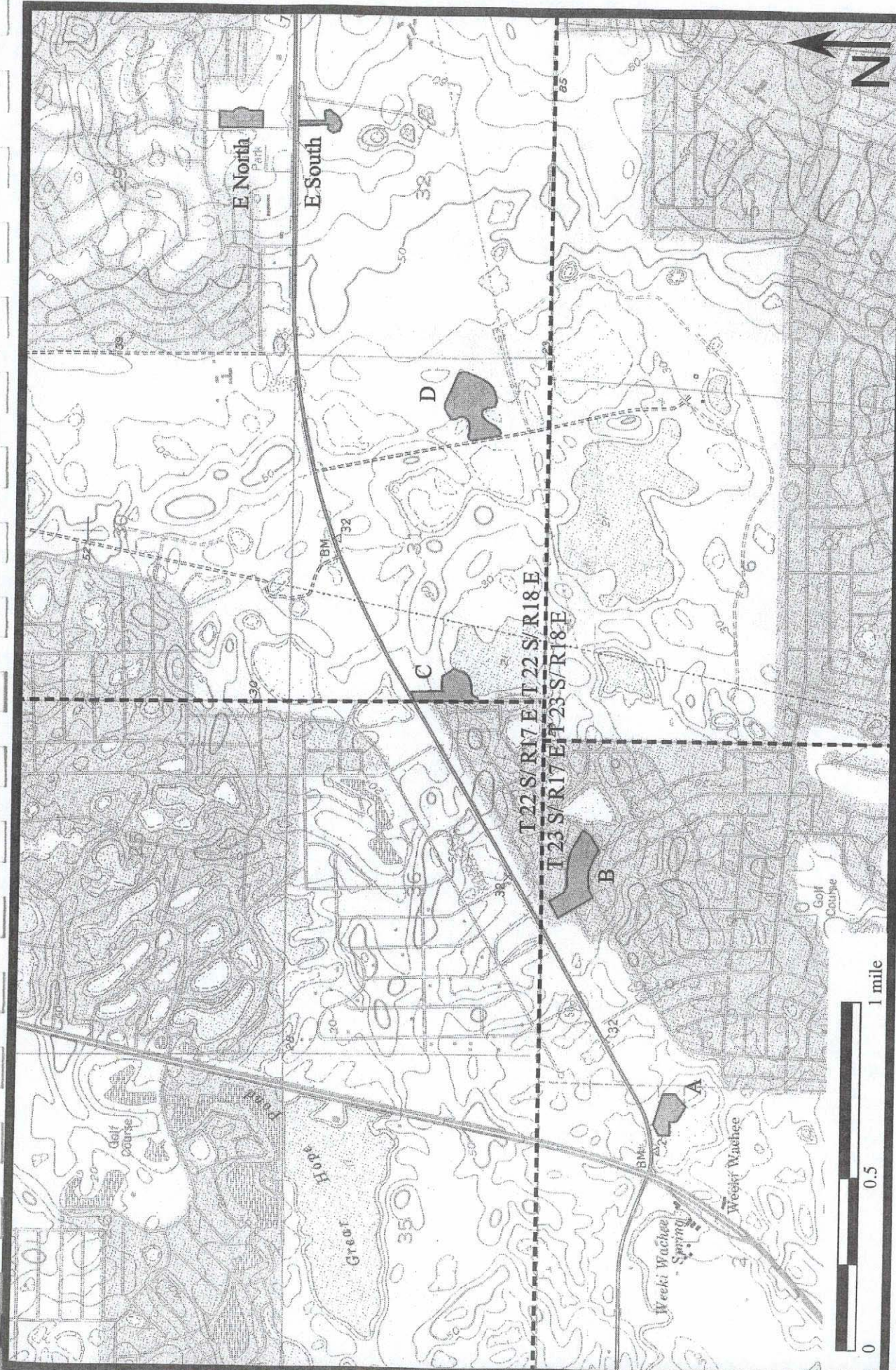


Figure 1. Location of Proposed Pond Alternative Sites A,B,C, D, E North, and E South. Townships 22 and 23 South, Ranges 17 and 18 East (USGS Weeki Wachee Spring, Fla. 1954, PR 1988).

Preliminary Cultural Resource
Assessment of Proposed Pond
Alternative Sites
SR 50 PD&E STUDY
REEVALUATION
Hernando County

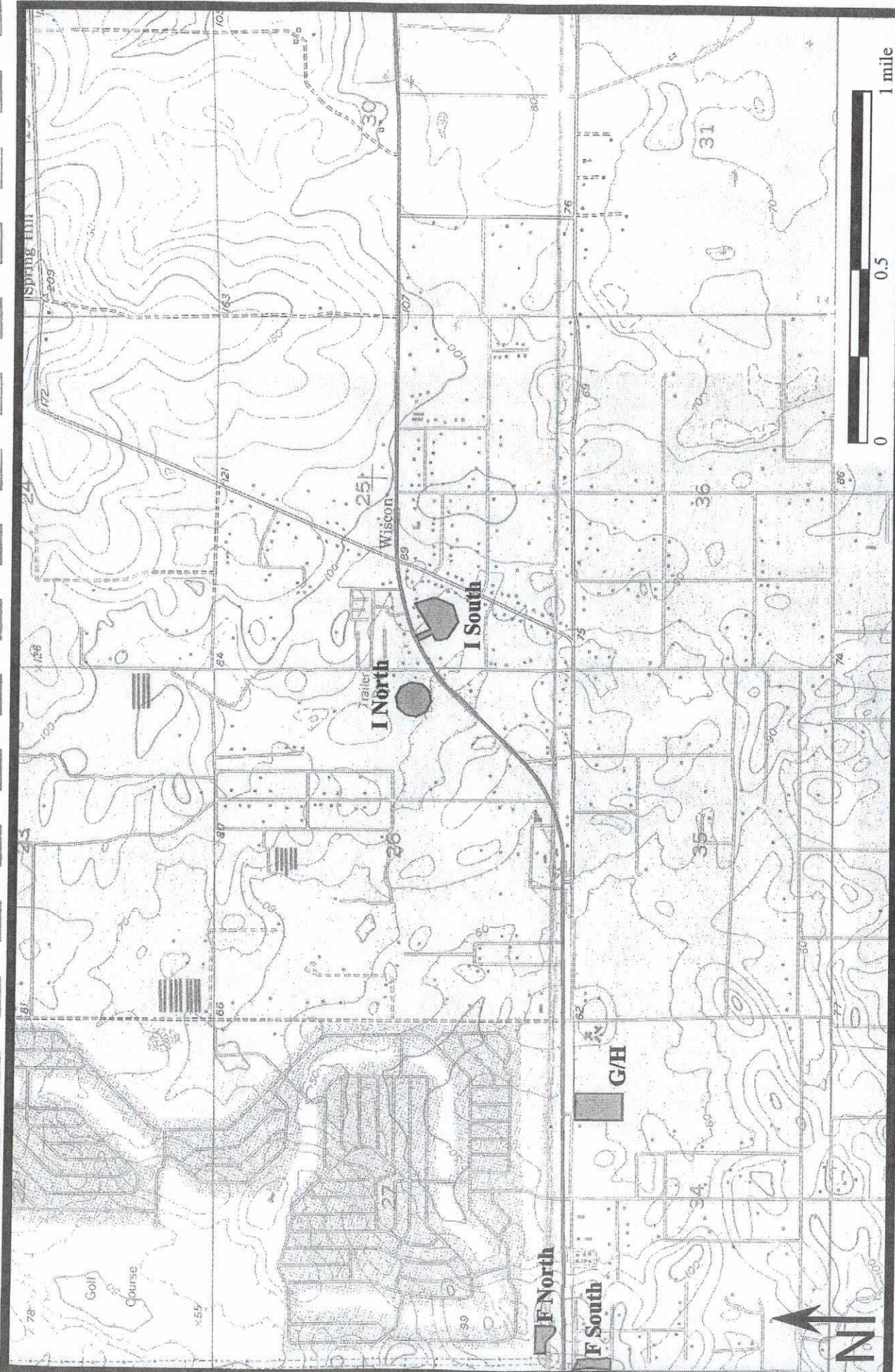


Figure 2. Location of Proposed Pond Alternative Sites F North, F South, G/H, I North and I South. Township 22 South, Range 18 East (USGS Brooksville, Fla. 1954, PR 1988).

Preliminary Cultural Resource
Assessment of Proposed Pond
Alternative Sites
SR 50 PD&E STUDY
REEVALUATION
Hernando County

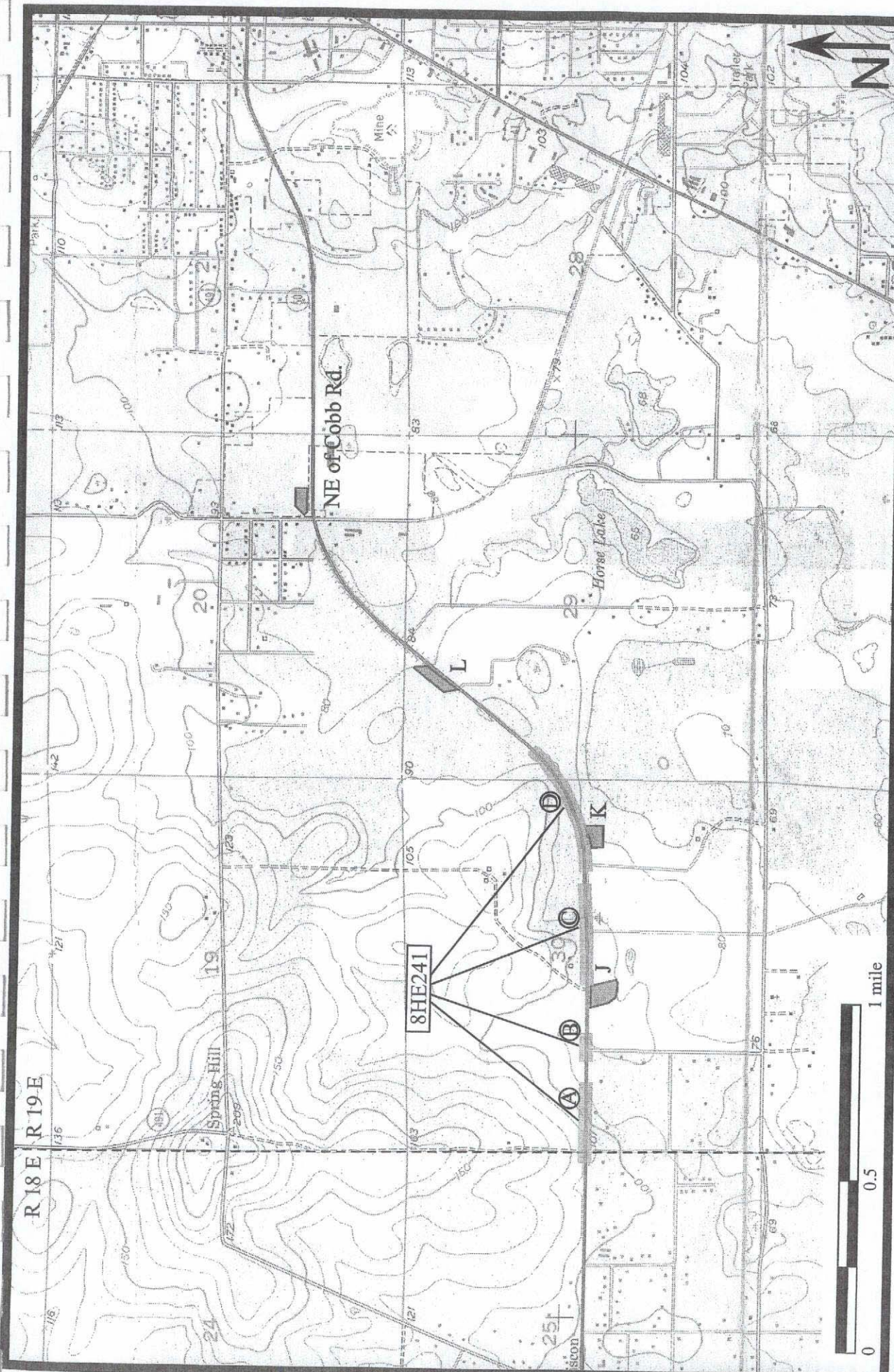


Figure 3. Location of Proposed Pond Alternative Sites J,K,L, and "NE of Cobb Rd" and Subareas A-D of the Colorado Site (8HE241) Township 22 South, Range 19 East (USGS Brooksville, Fla. 1954, PR 1988).

Preliminary Cultural Resource
Assessment of Proposed Pond
Alternative Sites
SR 50 PD&E STUDY
REEVALUATION
Hernando County

2.0 DESCRIPTION OF KNOWN ARCHAEOLOGICAL AND HISTORICAL RESOURCES

A check of the FMSF and a review of the results of previous cultural resource assessment surveys along SR 50 indicated that one previously recorded archaeological site (8HE241) is located adjacent to proposed Ponds J and K (Ballo 1989). This site was determined NRHP-eligible by the Florida SHPO. 8HE241 extends a linear distance of approximately 6000 feet on both the north and south sides of SR 50 (Figure 3). The site was discovered by FDOT archaeologist George Ballo in 1989 during survey of the SR 50/50A project corridor. Ballo divided the Colorado Site into four subareas (A, B, C, and D) (Figure 3). On the basis of his survey findings, he evaluated the site as potentially eligible for listing in the NRHP; additional work was recommended. Subsequently, in 1992, Janus Research conducted systematic archaeological testing of the site area, as contained within the existing right-of-way (Estabrook 1992), and in 1995, ACI conducted archaeological survey within the expanded right-of-way, as well as two proposed stormwater management areas (Floodplain Compensation Area 102-C and Pond 3). Neither the floodplain compensation area nor pond area had been surveyed previously. In 1995 and 1997, Phase III excavation at 8HE241 was conducted by ACI (Horvath et al. 1998), in compliance with a Memorandum of Agreement executed in 1990.

No other previously recorded archaeological sites or historic structures are located within or adjacent to the other proposed pond sites.

3.0 ARCHAEOLOGICAL AND HISTORICAL RESOURCE POTENTIAL AND RECOMMENDATIONS

Archaeological Sites: Based upon the results of previous archaeological surveys in the vicinity, an understanding of the known patterns of aboriginal settlement in the general region (cf., Horvath 1986), as well as a review of the USGS Weeki Wachee Springs and Brooksville quadrangle maps and the 1977 USDA soil survey, each of the proposed pond sites was evaluated for its archaeological site potential. All proposed pond areas were initially assigned to one of three site potential categories: high, moderate and low. Following a field visit, site potential classifications were adjusted, as appropriate, to take into account the existing conditions.

As a result, five of the proposed pond sites (Ponds A, C, E South, J and K) were considered to have a high site location potential and four (Ponds B, I North, I South, and L) were considered to have a moderate site location. Sites, if present, are expected to be low artifact density lithic or artifact scatters. The remaining six proposed pond alternatives were considered to have a low site location potential, given the generally level and poorly drained conditions, and/or the extent of land alteration and development. The results of this analysis are summarized in Table 1.

Table 1. Recorded and Potential Archaeological Sites and Historic Structures Located within or Adjacent to the Proposed Pond Alternatives.

PROPOSED POND SITE	RECORDED SITES: ARCHAEOLOGICAL AND HISTORICAL	POTENTIAL HISTORIC STRUCTURES	ARCHAEOLOGICAL SITE POTENTIAL/COMMENTS
A	None	None	High/Reconnaissance indicated waste flakes on ground surface
B	None	None	Moderate
Cc	None	None	High
D	None	None	Low
E-North	None	None	Low
E-South	None	None	High
F-North	None	None	Low
F-South	None	None	Low
G/H	None	None	Low
I-North	None	None	Moderate
I-South	None	None	Moderate
J	One archaeological: 8HE241	None	High - Adjacent to Subarea C of NRHP-eligible 8HE241
K	One archaeological: 8HE241	None	High - Within Subarea D of NRHP-eligible 8HE241
L	None	None	Moderate
NE of Cobb Rd.	None	None	Low

Historic Structures: Background research indicated an absence of previously recorded historic structures. The potential for as yet unrecorded historic structures within or adjacent to the proposed ponds was determined by examining the quadrangle maps, as well as a windshield survey. As a result, no structures which appear to be 50 years of age or older are located within or adjacent to the 15 proposed pond alternative sites.

Recommendations: At this preliminary stage, Ponds J and K should be avoided since they are located within the boundary of the NRHP-eligible Colorado Site (8HE241). It is recommended that systematic archaeological survey be conducted in the total nine proposed pond sites considered to have a high or moderate site location potential (Table 1). Such work should include systematic subsurface testing at 25 m (82 ft) intervals in the high and 50 m (164 ft) intervals in the moderate. The purpose of this investigation will be to locate, identify, and evaluate any precontact or historic period archaeological sites present. Architectural/historical field survey is not recommended given an absence of structures which appear to be 50 years of age or older.

4.0 REFERENCES CITED

- Archaeological Consultants, Inc. (ACI)
 1995 A Cultural Resource Assessment Survey, Suncoast Parkway Reevaluation Areas, Hillsborough, Pasco and Hernando Counties. ACI, Sarasota. Florida Division of Historical Resources (FDHR) Manuscript number (MS#) 4889.

Archaeological Consultants, Inc.

- 2002 Cultural Resource Assessment Survey, Cobb Road (CR 485)/US 98 PD&E Study from SR 50 to Suncoast Parkway in Hernando County, Florida. ACI, Sarasota.

Athens, William P., Charlotte Donald, Jon Berkin, Paul V. Heinrich, Ralph Draughton, Julie McClay, Thomas Fenn, Dan Dolensky, Jennifer Cohen, Lynn Berg, Julain Granberry and Thomas Neumann.

- 1994 Phase I Cultural Resources Investigation of the West Leg Mainline Portion of the Proposed Florida Gas Transmission Company Phase III Expansion Project. R. Christopher Goodwin and Associates, Inc., New Orleans. FDHR MS# 4386.

Ballo, George R.

- 1989 Archaeological Assessment of SR 50/50A in Hernando County Including National Register of Historic Places Determination of Eligibility for 8HE00241, the Colorado Site. Florida Department of Transportation, Tallahassee. FDHR MS# 1928.

Browning, William D.

- 1979 Letter Report : Project No. 08020-1520, SR 55 (US 19) from the Pasco/Hernando County Line to SR 50, Hernando County, FAP #FF-185-1(21). Florida Department of Transportation, Tallahassee. FDHR MS# 711.

Browning, William D. and Melissa Wiedenfeld

- 1986 Archaeological Resources Assessment Survey of Proposed Improvements to SR 55/US 19, from SR 50 Northerly to US 98, Hernando and Citrus Counties. Florida Department of Transportation, Tallahassee. FDHR MS# 2028.

Deming, Joan

- 1993 Technical Memorandum: PD&E Reevaluation, Cultural Resources SR 50 Floodplain Mitigation Site, Hernando County, Florida (Parcels 102, 105, and 106). ACI, Sarasota.
- 1994 Technical Memorandum: Cultural Resource Assessment, SR 50 Ponds -13 Site Alternatives (plus ditch treatment), Hernando County (State Project No. 08002-1501; WPI No. 7112122). ACI, Sarasota.

Deming, Joan and Marion M. Almy

- 1983a A Cultural Resources Survey of the Lykes Property (River Pines DRI) in Southwest Hernando County, Florida. ACI, Sarasota. FDHR MS# 973
- 1983b A Cultural Resources Survey of the W.L. Cobb Construction Company Property (Oak Sound DRI) in Southwest Hernando County, Florida. ACI, Sarasota. FDHR MS# 914

Estabrook, Richard W.

- 1992 Archaeological Testing of the Colorado Site (8HE241), Hernando County, Florida. Piper Archaeological Research, Inc. (Now Janus Research), St. Petersburg. FDHR MS# 3985.

Horvath, Elizabeth A.

- 1986 *The Archaeological Resources of Hernando County: A Site Location Predictive Model*. M.A. Thesis, Department of Anthropology, University of South Florida, Tampa.

Horvath, Elizabeth A., Joan Deming, Lee Hutchinson-Neff, Sylvia Scudder and Susan L. White

- 1998 Phase III Mitigative Excavation at the Colorado Site (8HE241), Hernando County, Florida. FDHR MS# 5516.

Hyde, Adam G., Lloyd Law, Jr., Robert L. Weatherspoon, Melvin D. Cheyney, and Joseph J. Eckenrode

- 1977 *Soil Survey of Hernando County, Florida*. USDA, Soil Conservation Service.

Janus Research

- 1998 Cultural Resource Assessment Survey for SR 55 (US 19) Toucan Trail to SR 50 Re-Evaluation Project, Hernando County, Florida. Janus Research, St. Petersburg. FDHR MS# 5485.

Lammers, Jonathan, Melissa Memory, Christine Newman and William M. Stanton.

- 1999 Cultural Resource Assessment Survey of Recent C.A.R.L. Acquisitions, Including the Former Town of Centralia, Chassahowitzka Wildlife Management Area, Hernando County, Florida. Florida Bureau of Archaeological Research. FDHR MS# 5559.

Marsh, Robert G.

- 1977 An Environmental Assessment Survey for Brooksville West Water Treatment and Elevated Storage Tank Site. FDHR MS# 1461.
1979 An Archaeological Survey of the Proposed 465 Single Family Development, Hernando County, Spring Hill, Florida. FDHR MS# 506.
1980 An Archaeological Survey of the Proposed McKethan Park (Cone Quarry) Site, Hernando County, Florida, FDHR MS# 1463.
1981a An Archaeological Survey of the Proposed Holland Spring Development Unit One. FDHR MS# 554.
1981b An Archaeological Survey of the Lykes Site, Hernando County, Florida. FDHR MS# 1465.

Parsons Engineering Science, Inc.

- 2001 Archaeological Investigation Report: Engineering Evaluation/Cost Analysis Former Brooksville Turret Gunnery Range, Hernando County, Florida. Parsons Engineering Sciences, Inc., Norcross, Georgia. FDHR MS# 8377.

United States Geological Survey (USGS)

1954 Weeki Wachee Springs, Fla.

1954 Brooksville, Florida, Photorevised 1988.

Weisman, Brent R. and Christine Newman

- 1994 An Archaeological Inventory of the Chassahowitzka Wildlife Management Area, Hernando County, Florida. C.A.R.L. Archaeological Survey, Florida Bureau of Archaeological Research. FDHR MS# 3700.

Wharton, Barry R.

- 1990 An Archaeological and Historical Resource Assessment of the Proposed North Suncoast Expressway, Hillsborough, Pasco, and Hernando Counties, Florida. HDR Engineering, Inc., Tampa. FDHR MS# 2684.