

Fountain of Youth Park Site Archaeological Project  
2005 Field Report  
Continuing excavation at 1565 Spanish Campsite  
Principal Investigator Dr. Kathleen Deagan



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## **Summary of Investigations and Findings**

During the 8 week summer 2005 field season five 1.5m x 3m units were excavated in the eastern portion of the Fountain of Youth Park: 464.5N 548E, 461.5N 546.5E, 460N 545E, 456N 550E, 440N 550E. The 2005 field season had three specific objectives regarding questions of the Spanish occupation during the sixteenth century.

The first was to test the hypothesis of the location of a Spanish moat based on the results of previous excavations of moat-like features in 1991 by Gordon, 1994 by Shtulman and 2001 by Anderson (464.5N 548E and 456N 550E). The excavation of these two units in conjunction with the 2005 shovel tests of the eastern shore suggest the features previously thought to possibly be moat-like features may actually be a volatile shoreline that has subsequently filled.

The second was to continue the investigation from previous years of anomalies that had been detected by ground penetrating radar investigations (461.5N 546.5E, 460N 545E) (see Woods (2004); Woods and Schultz (2000)). A large, dense shell midden (F132) was revealed in both units, comprised of very few European associated artifacts.

The third was to conduct an initial investigation for architectural remains or trash dumps in the hypothesized middle-eastern portion of the settlement (440N 550E). This unit was partially excavated during the 2005 summer field season and subsequently reopened during the 2006 Spring field season (see Deagan 2006).

Lastly, during the 2005 summer field season four shovel tests were placed in a north to south line along the eastern shore of FOY. These shovel tests revealed a possible marsh surface in this region that sloped down from south to north.

## **Acknowledgements**

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FOY 2005 field season benefited from contributions by St Augustine City Archaeologist Carl Halbirt and his archaeological volunteers. Dr. Herschel Shepard, Dr. Lee Ann M. Newsom and Dr. Bonnie G. McEwan contributed to this research by sharing their expert opinions and interpretations of archaeological excavations at FOY during the Summer 2005 season.

The Principal Investigator of the Summer 2005 field season was Kathleen Deagan. The field supervisor was Ingrid Newquist and the site mapper was Ed Tennant. The student field school members included Willet Boyer, Amanda Erickson, Rebecca Gorman, Ashley Guba, Travis MacDonald, Kathy Morales and Mindy Seeman. The fall laboratory volunteers included Amanda Erickson and Travis MacDonald and were supervised by Dr. Gifford Waters, collections manager for the Florida Museum of Natural History, Historical Archaeology Collections.

Lastly, I would like to express my sincere gratitude and appreciation to Dr. Deagan, for her guidance and encouragement.

## **Introduction**

This report presents the findings of the continuing archaeological excavations (June 2005-July 2005) at the Fountain of Youth Park Site (FOY). The Summer 2005 archaeological excavations were conducted on the Eastern portion of the Fountain of Youth Park, St. Augustine, Florida (Figure 1: Project location overview of FOY Park; Figure 2: Map of FOY excavations 1951-2005). Fieldwork was conducted from June 2005-July 2005 and laboratory studies began during the Summer field season in space provided by Flagler College. After the close of the field season, the laboratory studies continued until November 2005 at the laboratories of the Florida Museum of Natural History, Historical Archaeology Collections, University of Florida. The project was directed by Dr. Kathleen Deagan (Distinguished Research Curator at the Florida Museum of Natural History at the University of Florida) and field work was supervised by Ingrid Newquist (Anthropology graduate student). This report presents and assesses the findings of field and laboratory research for the Summer 2005 Field School.

The 2005 archaeological excavations are part of ongoing investigations at the Fountain of Youth Park, a research program conducted by Kathleen Deagan with the University of Florida since 1976. Prior to the current archaeological program, excavations were conducted beginning in the 1930's by archaeologists Ray Dickson, Vernon Lamme, and Matthew Stirling and in the 1950's by John Goggin (Deagan 2002). Excavations resumed in 1976 with the current project directed by Dr. Deagan. The ultimate goal of the investigation is to determine the location of the 1565 Spanish fort and campsite and better understand early sustained culture contact communities and the sixteenth century period of occupation. The era of the first fort of St. Augustine provides a unique context to study both early contact interactions as well as the first phase of sustained Spanish settlement. Furthermore, the establishment of sound evidence for the

Figure 1: Project location overview of FOY Park

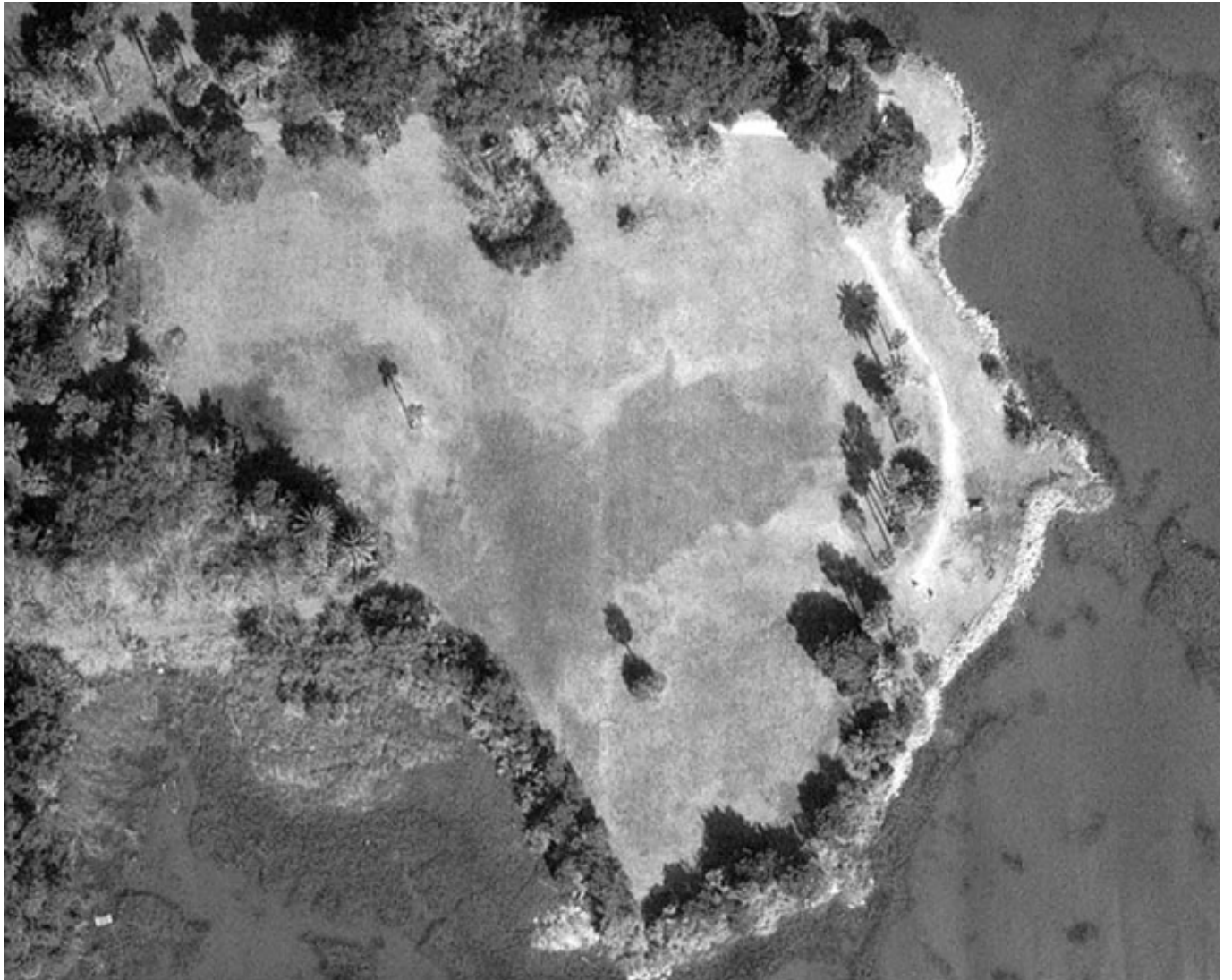
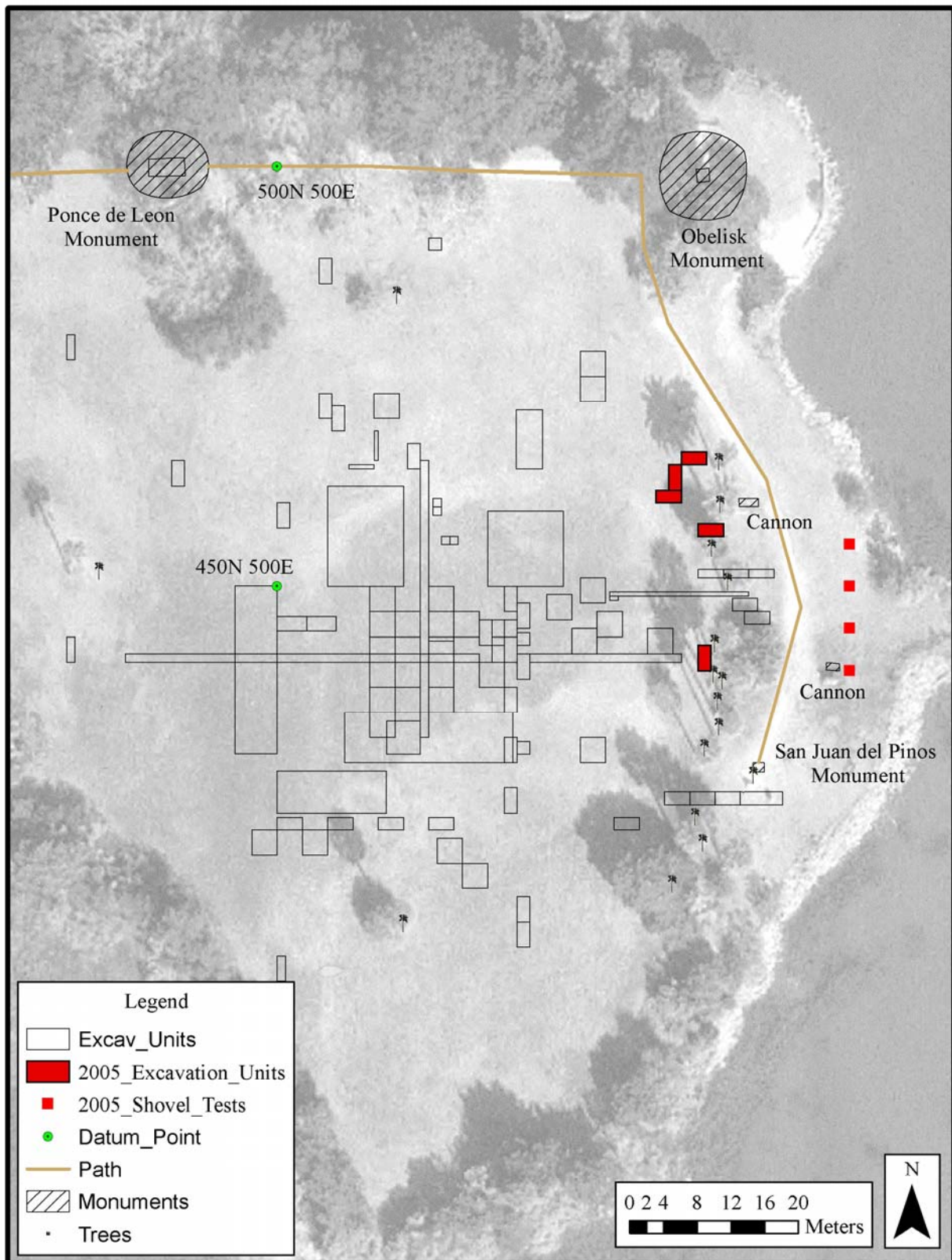


Figure 2: Map of FOY excavations 1951-2005



location of the first Spanish fort and campsite will provide a powerful and compelling substantiation for the boundaries of preservation of the cultural heritage of the historic site as well as create the potential for accurate depictions for public interpretation and outreach.

Archaeological excavations, paired with documentary research from the period, are critical components to further understanding the first Spanish-colonial period. The FOY site is located within the traditional territory of native Floridians, whose presence archaeologists have documented to as early as 1500 BCE. Pre-Columbian indigenous occupation periods for the St. Augustine region have been distinguished by archaeologists based on ceramic evidence and include the Pre-Columbian Orange Period (ca. 1500BCE to ca. 500BCE), possibly the Pre-Columbian St. Johns I Period (ca. CE200 to ca. CE750), and the Pre-Columbian St. Johns II period (ca. CE 750- CE1580) (Deagan 2002). St. Augustine is the place of early sustained contact between these native Floridians and Spanish colonizers beginning in 1565, and thought to be the location of the first fort of St. Augustine based on archaeological research and documentary descriptions. After the burning of the first wooden fort, the Spanish traveled across Mantanzas Bay to establish the second fort on what is now Anastasia Island. The site then continued to be inhabited after Menéndez by Native Americans during the mission period until around 1650. During the British period through the Civil War years the site was used as an agricultural field and after the Civil War, the site was used as a garden (Deagan 2002). In 1900, the site was purchased by Louella Day McConnell and developed as a tourist attraction, which it remains today (Deagan 2002).

Known archaeological deposits at Fountain of Youth date from the pre-historic period (prior to 1565) to the modern day. For a more complete history of St. Augustine and

archaeological investigations at the Fountain of Youth Park see Deagan (2002) and Woods (2004).

The Summer 2005 field season and laboratory research focused on the pre-20<sup>th</sup> century depositions of the Eastern portion of the FOY park. The proposed Spanish campsite area at FOY Park is bordered to the east by a marshy area and Hospital Creek, to the west by present-day Magnolia Avenue, to the north by a condominium complex in the process of being built during the excavation and writing of this report, and to the south by the Catholic Church-owned shrine of Nuestra Señora de la Leche (Figure 1). All excavation units and shovel tests were located on the eastern portion of the Fountain of Youth Park (8-SJ-31) (Figure 2). The Summer 2005 field investigations were located on either side of the north-south path connecting the Ponce de Leon obelisk monument to the San Juan del Piños Monument. Excavation units were placed to the west of the path while shovel tests were placed to the east of the path, following a north-south line. These units are tied into an arbitrary project grid system first created in 1976, and roughly parallel to the cardinal directions.

### **2005 Field Season and Research Design**

The Summer 2005 consisted of field and laboratory studies at the Fountain of Youth Park. Since there has been extensive archaeological research at the Fountain of Youth Park, the primary objectives of the 2005 field and laboratory analysis addressed questions about the Project area based on results of past excavations and investigations. The resulting data will be

used by the University of Florida to specifically develop a broader understanding of the settlements of the late 16<sup>th</sup> century.

Research during the June 2005 – July 2005 investigations was conducted in two major phases: field (June 6, 2005 – July 29, 2005) and laboratory (August 2005 – November 2005).

### **Site Excavation Strategy**

The Summer 2005 excavations followed the general protocol used by the University of Florida at the Fountain of Youth Archaeological Research Project. During the 2005 field season, a total of 22.5 square meters was excavated, not including the four shovel tests. The areas excavated consisted of five 1.5m x 3m units. The placement of the excavation units within the Fountain of Youth Park was based on the results from previous excavations. Units were placed either to investigate an anomaly detected during previous investigations by ground penetrating radar (see Woods (2004); Woods and Schultz (2000)), to test hypotheses predicting where the possible defensive-ditch features might be located, and to investigate a Spanish period trash pit previously excavated in the 1987 field season.

### **Excavation Controls**

A modified Chicago grid system was employed at the site to maintain horizontal control. The system was reestablished off the iron rebar placed at 500N 500E, in the main east to west path, originally set up by Merritt in 1976, and used in each season thereafter. This iron rebar is located 11 meters due east (magnetic east) from the base of the south east corner of the lowermost flagstone of the Ponce de Leon statue. A second rebar at 500N 530E, also placed in the main east to west path, was also used. The second rebar can be located either by measuring

30 meters due east from the 500N 500E rebar, or measuring approximately 41 meters due east from the above-noted point on the Ponce de Leon statue. Finally, a third rebar placed at 450N 500E was also located in the field, and from these two reference points several wooden stakes were placed running north to south along the 500 E line.

Using a 50 meter tape measure, a wooden stake was set at 460N 500E, using the southwest corner of the stake as the datum measurement. A transit was then set on 460N 500E to establish a 460N meridian. Wooden stakes were placed at the following points to establish the southern line of excavation units: 460N 540E, 460N 545E, and 460N 548E. This process was repeated to set up the northern boundary of the projected units, the 466N meridian. Wooden stakes were placed at the following points 466N 540E, 466N 545E, 466N 548E, 466N 551E, 466N 560E.

A fixed datum plane was established to obtain a vertical control across the site. Several problems arose during the field season with regards to the datum plane, causing the establishment of a second datum plane early in the 2005 field season. It was tied into the datum planes used in previous field seasons by taking elevations at the SW corner of the concrete base of the San Juan de Piños Monument, which measured 1.52 meters below datum. A nail was placed in the northernmost palm tree on the eastern edge of the site at the elevation of the datum plane to be used daily as datum references for back sighting. Two days later it was decided that the placement of the datum level was too close to excavation units, creating a problem of general maneuverability for excavators and a higher chance of disturbing the level. A permanent transit was placed to the north of 2005 excavation units, midway between the Ponce De Leon Obelisk to the North and the San Juan del Piños Monument to the south, and to the West of the path between the two monuments. The new level placement was chosen approximately 5 meters

north of the northernmost excavation unit (464.5N 548E). The datum plane was re-established using the southeast corner of the obelisk (San Juan de Piños Monument) and the northernmost palm tree in the eastern line of palms. A nail was reinserted into palm to mark the datum level. The re-established level for the 2005 field season was 1.51 meters above the SW corner of the concrete base of the San Juan de Piños Monument. Previous elevations prior to the re-establishment of the datum level were retaken, and all provenience elevations of the 2005 field season were recorded in meters below datum, written as “mbd” throughout this report. The majority of provenience elevations of the 2005 season were recorded in meters below datum (mbd) using the datum transit and stadia rod. Those that were not recorded using the transit were recorded using a metric tape measure and line level. The line level was placed on a string tied to a corner nail of the unit, such that the depth of the line level was known (measured in mbd) and the depth of the provenience elevation was added to the depth of the line level.

Excavations units were designated by the grid coordinates of their southwest corner. The corners of each unit were marked with wooden stakes. These wooden stakes were either removed or pounded into the ground at the end of the 2005 field season. The following wooden stakes were pounded into the ground: 460N 548E, 440N 550E, 443N 550E, 440N 551.5E, 443N, 551.5E. A 10-centimeter baulk was left around each unit unless noted otherwise. Nails and string were used to delimit baulk walls. Each unit was excavated to culturally sterile soil unless noted otherwise. Each provenience was designated as one of the following categories that have been established through the archaeological work conducted in St. Augustine by the University of Florida. These six designations and their field abbreviations are:

- 1) Zone (Z): a naturally occurring deposit or non-intrusive sheet midden that covers the entire site or large portions of it

- 2) Area (A): an amorphous soil discoloration or intrusion into the soil matrix of a unit. These areas could not be confidently identified as cultural in origin, and were given consecutive numbers within each unit.
- 3) Feature (F): a deposit that was known to be the result of human activity and possessing an identifiable function. Feature numbers were carried over from the previous field seasons and new features that were discovered were given the next consecutive feature number, with this year's first new feature being labeled F130.
- 4) Postmold (PM): a stain resulting from the deterioration of a post, often expressed in plan view as a circular stain. Postmolds were numbered consecutively within each unit. Postmolds were pedestaled and then vertically sectioned and drawn in cross section and the soil associated with the postmold was retained for screening and analysis.
- 5) Possible Postmold (PPM): a deposit that could not be confidently identified as a post mold, but retaining the outline of a circular stain in plan view. Possible postmolds were often treated like postmolds in terms of pedestaling and vertical sections, but some were simply excavated in arbitrary levels, based on the context and composition of the possible post mold. Possible postmold and Postmold were often used interchangeably
- 6) Posthole (PH): the area surrounding a postmold of the hole into which a post was placed. Postholes were also numbered consecutively within each unit. Postholes were excavated in the same manner as postmolds.

## **Recording Procedures**

During excavation, attributes of the proveniences were recorded with a series of standardized forms. During excavations, each provenience was given its own unique field specimen (FS) number. A provenience was defined as “a deposit in the ground resulting from a single behavioral event or process” (Deagan 1983). When deep deposits were encountered, they were excavated in 10 centimeter arbitrary levels, with each level of a provenience being given a separate FS number. During the excavation of Zone 1 for some units, the Zone was removed in its entirety, even if this was more than 10 cm. FS numbers along with all other field records were continued from those used in the 2002 field season. Specimens were numbered sequentially starting with F.S. 2815 for the 2005 summer field season. All provenience information including top and base elevations was recorded in the field specimen log; shell weights were also recorded in the FS log.

Field notes were taken throughout the day by the field supervisor. The field notes contain observations on the excavations of each unit, sketch maps of units at various points during excavation, records of when a unit was photographed, mapped, profiled, etc., and notes on the general procedure of the field work and any relevant comments. Additional notebooks were kept at each individual unit that included the unit’s field level form, maps of plan views, and feature forms.

During excavation, attributes of the deposits were recorded with a series of standardized forms. During excavation each unit was mapped in plan view with each change in soil configuration, to show the size, shape and depth of all intrusive proveniences. Each map was given a consecutive number following those map numbers used in the 2002 field season. Maps were numbered sequentially starting with Map 320 for the 2005 summer field season.

Photographic records were also made of the units. Photographs were taken with two digital cameras. After the photographs were compiled, the best quality photo was given a photographic log (PL) number, which began with the year (05) and then continued with the corresponding log number (Table E – SJ-31 Photo Log, 2005). All other digital photos were labeled as to their unit designation and content. Stratigraphic records (SR) were drawn after each unit (except unit 440N 550E) was completely excavated. All four walls of each unit were drawn unless otherwise noted, and each SR was given a consecutive number following the 2002 field season. SR's were numbered sequentially starting with SR 48, and each unit was given only one SR. In those units in which the profiles suggest that separate proveniences could be linked to other units, effort was made to streamline the descriptions of those proveniences in the separate stratigraphic record forms.

In addition to formal records, a number of other records were maintained for each unit. Proveniences were given soil descriptions and color descriptions by use of the Munsell Soil Color chart. Records were kept daily at each unit through the use of a unit provenience log, which consisted of a sketch map in plan view of the unit at various levels, the Munsell value for each provenience, and the top and bottom elevations for each provenience within the unit. There were also feature forms containing important information such as sketch maps, elevations, FS numbers, and stratigraphic relationships for each individual feature. After each unit was completely excavated, an excavation unit record was completed, recording the map numbers, stratigraphic records, photo log numbers for each unit, along with all the proveniences excavated in that unit and their respective FS numbers.

## Excavation Methods

All test units were excavated by hand using trowels and shovels. Excavation units were laid out using coordinates relative to the project datum and project grid. Each 1.5m x 3m unit was referred to by the northing and easting coordinates of its southwest corner (ex 456N 550E). Shovel tests were kept to a 50 cm x 50 cm areas. Units were initially excavated in 10 cm deep arbitrary strata, numbered sequentially from top to bottom. When sediment changes or other stratigraphic indicators were observed, excavators shifted to removing sediment by cultural or natural strata.

During excavation, soils, artifacts, and matrix constituents were recovered through three methods:

- 1) Soil Sample: A 2 liter soil sample was taken before the excavated soil was wet screened for all features, areas, PPM/PM/PH and Zones unless otherwise noted. Occasionally, the soil sample size was increased to include all excavated soil associated with a PPM/PM/PH.
- 2) Wet Screening: All soils, unless otherwise noted, were collected in labeled wheelbarrows or buckets and transported to the wet screens. The excavated soil was water screened through 1/4 inch mesh. The soil from areas and features were screened through 1/16 inch mesh in addition to the 1/4 inch mesh and then dried and bagged. The 1/4 inch screen functioned to gather cultural material and larger faunal and floral samples, with the 1/16 inch mesh recovered finer faunal and floral materials. Soils such as those from some Zone 1, baulk fall, and sacrificed areas (baulk fall, clean-up, flooding, mixing, sump pump) were not wet screened and soils from the upper Zone 1 of all units suffered substantial

disturbance such that 1/16 inch mesh was not used. The materials found in the 1/4 inch screen was then separated into cultural materials, charcoal, faunal remains and shell, and then bagged separately. The shell recovered from each provenience was weighted, recorded and discarded, and a random sample equaling one large bag of approximately 5 liters of whole and hinged shells was taken.

- 3) Special Artifacts: Delicate, unusual, or unprovenienced artifacts were collected during excavation with separate FS numbers. Some special artifacts were given three-dimensional provenience when appropriate.

### **Laboratory Methods**

The artifacts were analyzed either in the lab at Flagler College in St. Augustine or at the historical archaeology lab in Dickinson Hall. All charcoal, faunal and shell samples were weighted and recorded in the lab, if they had not already been recorded in the field. The artifacts that were weighted and recorded only include rust and metal flakes, plaster, clay daub, rock fragments, charcoal, most building construction items (including categories of coquina, plaster, brick, mortar). The cultural artifacts that were analyzed and descriptions were recorded for type, frequency, weight and any other pertinent information. The information that was obtained from the artifact analysis was used to determine the terminus post quem (TPQ) of each provenience. Using the TPQ, along with stratigraphic information, the cultural period of each provenience was assigned, where possible (Table A - SJ-31 Period Designations and Corresponding Dates and Table D - SJ-31 Provenience Guide). All of the information generated from the artifact analysis, including the cultural period, was then entered into Florida Museum of Natural History's

Historical Archaeology Database using Microsoft Access. All artifacts and records are stored at the Florida Museum of Natural History in Gainesville, Florida (Accession # 2005-9).

### **General Site Stratigraphy**

The Stratigraphy at the FOY park has over the years been consistent enough such that a description and type for common stratigraphic layers was established. The Fountain of Youth Park site consists of three zones or sheet deposits that are found through the site. Underneath these three zones lies a golden yellow sandy soil that through the years of excavation has been determined to be culturally sterile. The depth, thickness, and sometimes presence of these zones varies throughout the site. However, their sequence of deposition is consistent.

Zone 1 (Z1): Medium to dark grey/brown sandy soil that may contain small pieces of shell and charcoal, and root disturbances. This zone lies directly under, and is disturbed by, the sod layer and contains mixed cultural material from the 16<sup>th</sup> through the 20<sup>th</sup> centuries. It is characterized as a “plow zone,”.

Zone 2 (Z2): Medium brown/grey sandy soil with a heavy content of whole and broken shell. This zone is associated with shell midden thought to date after the Menéndez occupation, and is found in noncontiguous, discrete areas throughout the site, including south of the east/west path, along the extreme eastern edge near the water, and in the southernmost portion.

Zone 3 (Z3): Lighter golden tan and grey/brown mottled sandy soil with rust colored flecking that contains no shell. This zone is associated with the prehistoric and Menéndez occupations at the site.

The Munsell values for each zone have been fairly consistent throughout the site and numerous field seasons, with any variations being attributed to the numerous people reading the soil colors. During the 2005 excavations, the Zones were often divided into an “A” and “B” zone and descriptions were recorded.

## **Excavation Results**

The following subsections summarize the findings of the excavations, grouped based on specific investigation questions. Each subsection contains a description of each of the excavation units, including the reasoning behind the placement of the unit, and the results of the excavation.

### **Field Excavations: 2005**

Excavations conducted from 1976-2002 (Anderson 2001; Chaney 1987; Chaney and Deagan 1989; Gordon 1992; Merritt 1977; Shtulman 1995; White 2000; Woods 2004; Woods and Schultz 2000) suggest the presence of a mid-sixteenth century European occupation on the Eastern portion of the FOY park. The 2005 field season had three specific objectives regarding questions of the Spanish occupation during the sixteenth century. The first was to test the hypothesis of the location of a Spanish moat based on the results of previous excavations of moat-like features in 1991 by Gordon, 1994 by Shtulman and 2001 by Anderson. The second was to continue the investigation from previous years of anomalies that had been detected by ground penetrating radar investigations (see Woods (2004); Woods and Schultz (2000)). The third was to conduct an initial investigation for architectural remains or trash dumps in the

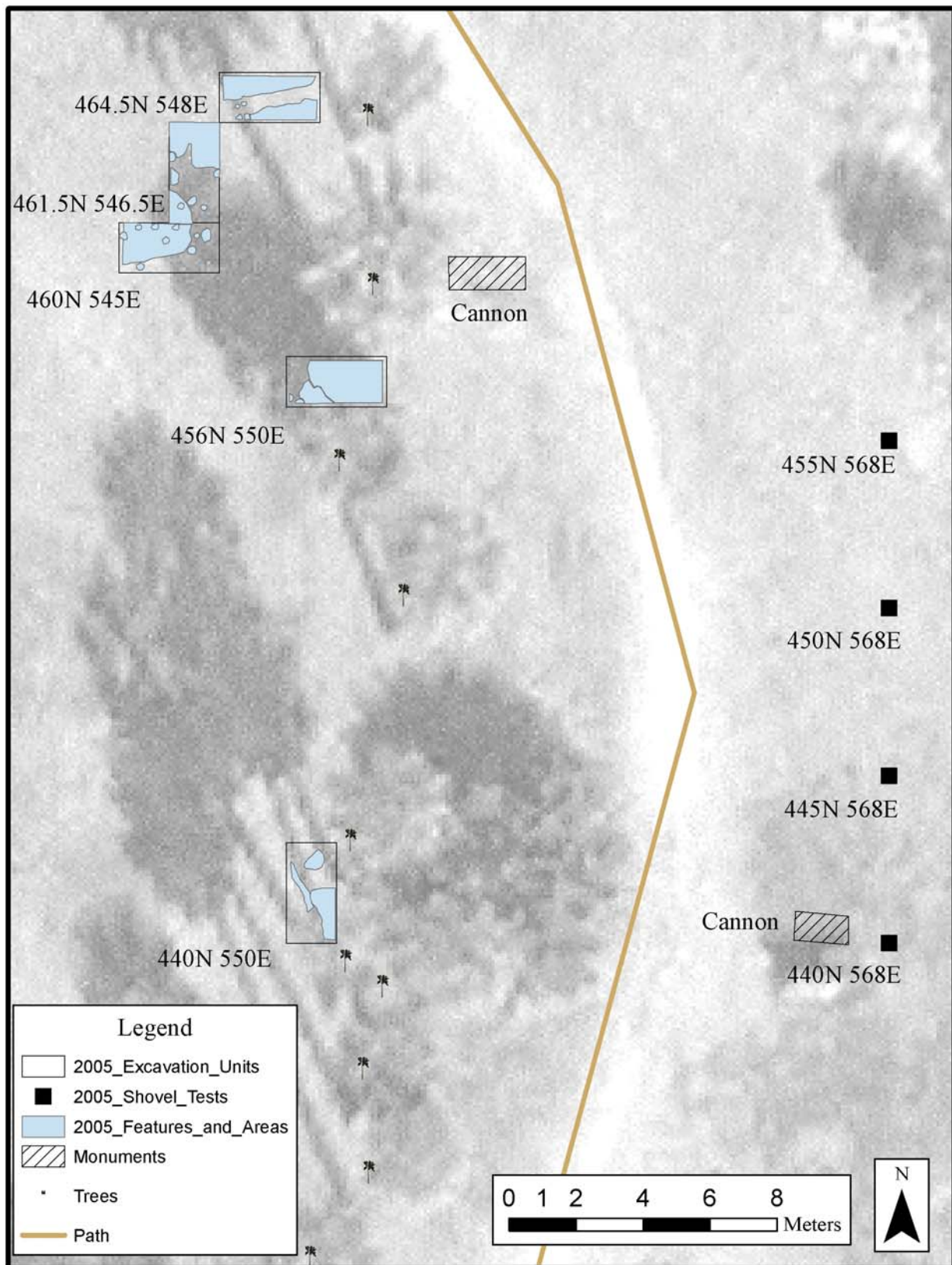
hypothesized middle-eastern portion of the settlement. The 2005 excavations are discussed below in accordance with these three topics.

During the 8 week field season a total of approximately 22.5 square meters were excavated. The units consisted of five 1.5m x 3m, in which 3 of those units were directly adjacent to another unit (Figure 3: 2005 Excavation Units and Shovel Tests). In addition to 5 excavated units, four shovel tests were excavated to the east of the path connecting the Ponce de Leon obelisk monument to the San Juan del Piños Monument (Figure 3).

Due to inclement weather and exceptionally high tide, the three units initially begun to be excavated (464.5N 548E, 461.5N 546.5 E, and 460N545E) were completely submerged under water twice and endured subsequent processes of natural draining as well as water removal by a pump. The damage to these units as a result of standing water and drainage included the collapse of a baulk separating 461.5N 546.5 E, and 460N 545E and the sacrifice of disturbed soil on the excavation surfaces of the units. Due to standing water at the base of these units, excavations were temporarily suspended in favor of working on units located on higher ground (including 456N 550E and 440N 550E) until the water receded and the ground became firmer.

Lastly, the decision to close and discontinue the excavation units of 2005 was based on two criteria. The first criterion was that the distinctive, gold sandy culturally sterile soil had been reached. This was confirmed by the lack of artifacts recovered during the wet-screening process of the excavated soil and at times, by the absence of artifacts in the subsurface core. Where possible post molds remained on the surface of the base of the units intruding into culturally sterile soil, the post molds were often removed to their final depth. The second criterion for stopping the excavation of a unit was the lack of time to complete excavation in a manner consistent with prior excavation techniques and standards. The unit 440N 550E was suspended

Figure 3: 2005 Excavation Units and Shovel Tests



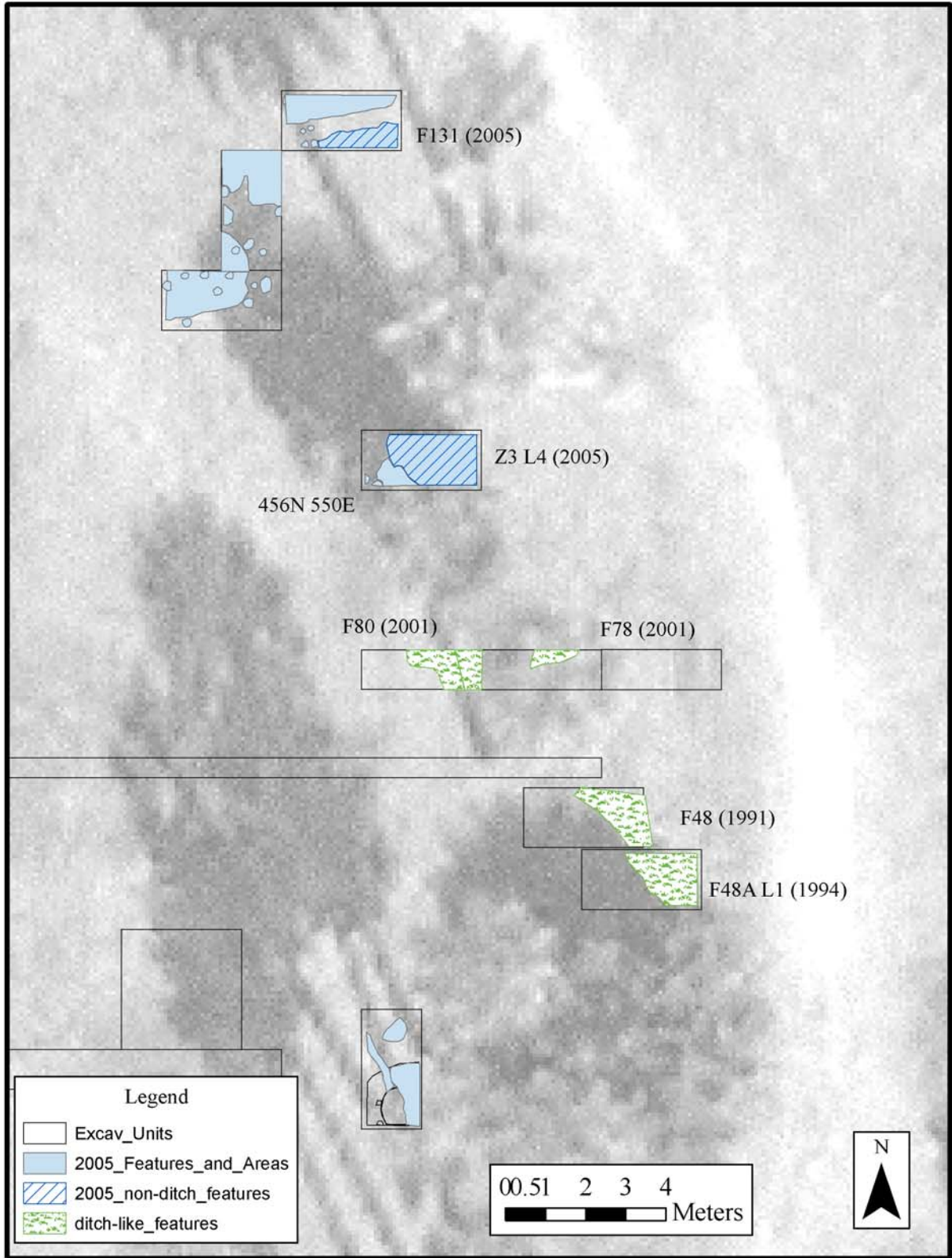
at the end of the 2005 field season, lined with visqueen, and filled with sterile sand. A more in depth description of this unit and reasons for suspension are discussed below.

### **Phase I: In Search of the Moat**

During excavations conducted over the last 25 years, there have been multiple features excavated that are possibly associated with the moat-like architectural construction that is thought to have surrounded the original Menéndez Fort (Lyon 1997). These features are located on the eastern portion of the FOY park, parallel to the coast and were excavated by Gordon, Shtulman and Anderson (Figure 4 - Map of ditch-like features). The excavations supervised by Gordon in 1991 were the first to recover what appears to be a Mendez-Era occupation ditch (Feature 48) (Gordon 1992). The excavations supervised by Shtulman in 1994 further explored the possible ditch of Feature 48 by the excavation of unit (445.5N 555.5E?). The excavations supervised by Anderson in 2001 investigated this question of a fortification ditch by excavating an East to West trench and recovered a feature that is speculated to also have been a large ditch (Feature 78) (Anderson 2001).

In 1991, when Gordon was investigating midden stratigraphy on the eastern portion of the central basin of FOY park with a large excavating machine, commonly referred to as a “Ditch Witch,” he noted a large feature (Feature 48) extending from the Northern to Southern wall in a northwest to southeast direction (Gordon 1992). Feature 48 was described as a “wide, shell-bearing intrusion of dark soil at the extreme east end of D.W.#3,” that appeared to be two meters wide and 50 cm deep (Gordon 1992). An excavation unit (Unit #73: 447N 554E) opened 40 cm south of the observed F48 in Ditch Witch 3 also confirmed the presence of the feature. Due to the finer excavation technique, Gordon was able to describe the soil in more detail as

Figure 4: Map of ditch-like features



“dark brownish grey soil with some tannish brown mottling” (Gordon 1992). Feature 48 was hypothesized by Gordon to have possibly been a “substantial wall or fortification ditch” (Gordon 1992). Due to the submersion of the feature as a result of the water table, F48 was not further excavated by Gordon (Gordon 1992). Associated with F48 were three Areas (5, 6, 7) composed of “dark brownish grey soil with dense whole and broken shell fill” that were hypothesized to have possibly been post holes” (Gordon 1992).

The excavations in 1994 aimed to continue exploration of a possible moat-feature, but, again, due to problems with the water table during excavation, no further inferences could be made (Shtulman 1994, as reported in Anderson 2001)

Following the excavations of 1991 and 1994, the 2001 field season continued the search for the moat feature, placing a 1m x 9m excavation trench on the easternmost of the site, slightly north and west of F48 in Gordon’s 1991 DW 3 trench and excavation unit. This excavation trench revealed Feature 78, a “very dark brown sandy soil that was densely filled with whole and broken oyster shell.... measuring almost four meters in across at its widest point” (Anderson 2001). Feature 78 was approximately 40 cm deep (from first identification to base), and the width tapered with depth. The presence of concentrations of whole and broken shell in F78 were excavated contiguous with F78, rather than as Areas, due to the soil matrix’s similarity to the rest of the feature. Based on the artifacts recovered within the feature, including both aboriginal ceramics and artifacts of European manufacture, Anderson dated the trench to the cultural period of ca. 1565-1580 (16A). While Anderson is hesitant to conclude that this is the possible moat-like trench described in historical documents, she does suggest future excavation of the potential northern extent of the feature.

Due to the uncertainty of the moat-like feature, both in form and boundary, these excavations compelled further inquiry of the potential placement and direction of the moat-like feature. Both Gordon (1992) and Anderson (2001) speculated a northwest to southeast orientation for the moat-like feature that parallels the modern coast of the peninsula. Specific interest in the 2005 field season was initially focused on the speculation of the limits of the northern boundary. The potential continued direction of the moat-like feature was determined by drawing a tangent line connecting the Western edges of F48 and F78, and extending that line to the north, with the assumption that the moat was dug in a straight (as opposed to curving) line. One east-west unit was initially positioned for excavation on the theory that it would intersect with the hypothesized north-western extent of the moat-like feature and help to define the north-western extent of possible fortification ditch previously excavated as F48 and F78. This unit was 464.54N 548E. The location is also adjacent to a sub-surface anomaly, located in 2002 through ground-penetrating radar (see Woods (2004); Woods and Schultz (2000)).

One of the first of three excavation units placed at the beginning of the 2005 season, 464.5N 548E was placed in an east-west orientation measuring 1.5m x 3m in an effort to hit the hypothesized northern extent of the continuation of F48 and F78. The surface of the unit naturally sloped down slight from east to west and the unit, therefore, was initially dug following the natural slope, rather than flat. Due to the unit being one of the first units excavated, for educational purposes Zone 1 Level 2 was screened after the top of the modern fill zone was discarded (Zone 1, level 1).

Excavation of the unit revealed Feature 130 and Feature 131 at approximately 1.86 mbd. Feature 130 was a series of six narrow linear stains of very dark, humic grey brown to black soil with shell flecking defined by brown sandy soil bordering each of the north-south linear

segments. Feature 130 is in the northern half of the unit, spanning from the northeast corner to the northwest corner. The stains of F130 were complemented by similar, but wider very dark, humic grey brown to black soil with shell flecked stains in the southern half of the unit, divided into three segments and defined by brown sandy soil bordering the segments (F131). While the F130 and F131 stains were excavated as individual elements, the composition of recovered artifacts and the northern and southern stratigraphic profiles suggest that the features were probably associated with the same depositional process and that the divisions of the segments by brown sandy soil was primarily a surface attribute (Figure 5 - 464.5N 548E, Feature 130 and 131, Photo Plan view). Both F130 and F131 most likely date to 1565-1599 (cultural period 16?) and include such artifacts as aboriginal ceramics (St. Johns, San Pedro and San Marcos), middle olive jar, lead glazed coarse earthenware, dark and light green glass and iron fragments. A southeastern portion of F131 went significantly deeper than the rest of the feature, but very few cultural materials were recovered from these levels, and it appears that the lowest level was probably not associated with the higher levels, and instead probably from St. Johns cultural period. A strip of Zone 3-like soil (light tan-gray smooth sand) approximately 50 cm wide and extending from the southeast corner to the northwest corner separates F130 and F131.

Within this Zone 3-like soil ten possible post molds were discovered in a general west to east line. PPMs 2, 3 and 4 were ephemeral and no longer visible after mapping and surface cleaning and thus not excavated as discrete units, PPM 7 was not excavated due to problems associated with flooding, and PPM 10 (approx. 10 cm diameter) was only 5 cm deep. PPMs 1 (25 cm diameter), PPM 5 (22cm diameter) and PPM 6 (22 cm diameter) were profiled and 8 to 9 cm deep each. Lastly, PPM 8 and 9 (8 and 6 cm diameters, respectively) were over 10 cm deep, and associated with the St. Johns period. While not recognized as a post mold while excavating,

F 141 (originally excavated as F133, but since duplicate feature number, changed to F141) consisted of a concentration of shell that appears to be a 37 cm deep post with shell support dating between 1565-1599 (16).

The west to east line of PPMs suggest that there may have been a semi-linear series of small and large posts associated with an architectural feature. It was speculated that F130 and F131 may have been the result of claw scars from a backhoe, agricultural furrows, or associated with architecture, but it is currently unclear as to what action resulted in the creation of the features. What appears to be clear is that the moat-like feature did not intersect with 464.5N 548E, as evidenced by the southern profile (Figure 6 - 464.5N 548E, Southern Profile). The southern profile contains no visible differentiation between the eastern and western soils of the unit and the discrete layer of F130 soil matrix (very dark, humic grey brown to black soil with shell flecked stains) does not appear to exhibit the moat-like features described by earlier excavations.

Due to the inconclusive evidence of a moat-like feature in 464.5N 548E while excavating and rain delays excavating lower, flooded units, it was decided to excavate the new unit 456N 550E. 456N 550E was chosen for its location both on higher ground due to problems associated with the water table and, more importantly, it intersects the hypothetical line between the western limit of F131 in 464.5N 548E and the western limit of the moat in 451N 553E. The 1.5m x 3 m unit, with its longest axis running east to west, is located south of 464.5N 548E and approximately in the middle of this hypothetical line.



Figure 5 – Photo of Plan View 464.5N 548E, facing West  
Surface of feature 130 and feature 131



Figure 6 – Photos of 464.5N 548E, Southern Profile

Unfortunately, the hypothetical line from the western edge of F131 and the western limit of the moat in 451N 553E (2001 excavations) intersected a large clump of palm trees. We endeavored not to place the unit too close to any of the palm trees, but it was known that there would be intense root disturbance from the palm root ball associated with a palm tree approximately 1.5m north of the unit. The palms to the south of the unit were not as close or large, but nonetheless contributed numerous roots.

Below Zone 1 and Zone 2, excavation of 456N 550E revealed feature 140 (originally excavated as F134, but duplicate feature number, so later assigned as F140), a whole and broken shell concentration in the southwest quarter of the unit, that served as a dividing line between two different soils (Figure 7 – Photo of 456N 550E F140). The surface of feature 140 was located 1.95mbd, and dated between 1565 to 1580 (16A) based on the presence of Columbia Plain, olive jar fragment and a nail fragment, but predominantly included artifacts of aboriginal ceramics. To the east of F140, the soil resembled Zone 2 soil, a grey brown humic soil with flecks of shell, while to the west of F140, the soil resembled Zone 3 soil, lighter tan and grey/brown mottled sandy soil. This differentiation of soil continued in depth and became more distinct, such that at a deeper level the eastern soil of the unit was designated feature 138 (Figure 8 – Photo of 456N 550E F138). Feature 138 was described as very dark brown to black soil extending primarily along the southern wall, with gray mottling included in dark brown to black soil in northern part of unit. This feature's deposit and associated soil differentiation had a low density of artifacts and appears to date to the St. Johns period based on the presence of aboriginal ceramics and no European manufactured artifacts. The transition between F138 and the Zone 3 soil to the west had 4 PPM's (PPM 1, 2, 3, 8). These PPM's are most likely associated with the

St. Johns period, as are the other PPM's (PPM 4, 5, 6, 7) based on their depth, context and few associated artifacts.

While the soil differentiations between the east and the west unit are visible both in plan and profile view, and the width of the darker soil to the east does decrease with depth, the characteristics of these features and their associated artifacts suggest that this does not represent the western edge of the moat feature (Figure 9 – Photo of 456N 550E North Profile). It is unclear what caused the darker soil of F138 and its associated lens of grey soil, but the characteristic dense shell described in the moat-like F78 (2001 excavations) is not present in 456N 550E.



Figure 7 – Photo of 456N 550E Feature 140, showing shell concentration and soil change



Figure 8 – Photo of 456N 550E Feature 138, showing soil difference



Figure 9 - Photo of 456N 550E, North profile

## **Phase II: Investigating Anomalies**

One of the first two units excavated in the Summer 2005 field season was unit 460N 545E measured 1.5m x 3m, with the longest axis running from East to West. The primary reason for opening the unit was to investigate anomalies that were uncovered during by ground penetrating radar investigations in the region (see Woods (2004); Woods and Schultz (2000)). The anomalies were recorded at two locations for this area: 462.5N to 465.5N and 549E to 550E, and 461N to 463N and 546E to 547E. While unit 464.5N 548E overlapped with the northeastern anomaly described above, the reason for the indication of the anomaly is unclear as compared to 460N 545E.

Excavation of the unit revealed at the base of Zone 1-Level 2 dark gray to black soil with heavy deposits of shell that were amorphous in shape, at 1.93 mbd. These were designated as 9 distinct areas and excavated approximately 5 cm. Areas 1-9 contained a high density of shell, and mostly non-European artifacts were recovered, except for a wrought nail recovered in A3 and a green glazed olive jar sherd recovered in A9. Beneath the areas and the Zone emerged a contiguous shell deposit named Feature 132, and it appears that the areas were simply the top-most elements of the feature. Feature 132 was described as an irregular area of densely packed concentration of shell in the northwest quadrant of the unit, extending from the northern wall of the unit to the south and east (Figure 10 - Photo of 460N 545E, F 132). Unfortunately, after F132 and associated areas were mapped and initial excavation had begun, the unit flooded due to rain, resulting in the need to remap (flooding from rains would become a persistent problem with this unit). Descriptions, identification, and surface levels of the areas changed after the flooding and were recorded on the new map. Feature 132 was 19 cm deep, and contained very few aboriginal ceramics (9 total) and no European artifacts. Feature 132 was removed in two levels

(excluding the removal of the areas 1-9 above) and dated to the cultural periods within 1565 to 1599 (16 and 16A). The density of shell within F132 is revealed by the large amount of shell recovered, 81,106 grams.

Beneath F132 was stained soil defined as feature 137, and composed of an ashy and flaked shell concentration beneath F132 with dark-stained soil. When excavated, F137 revealed very little cultural material (1 St Johns plain ceramic sherd). At the base of F137, and in roughly the same area as F132, was a dark stain that appeared to have no cultural material, but was described as tan mottled charcoal stained sand and labeled as F139. The stain was probably associated with the shells and dark soil of F132 and F137, and was not excavated. Along the northern edge of the wall and adjacent to F139 was area 15. Area 15 was composed of concreted crushed shell and lime, with a surrounding border of dark brown sticky sand. There was very little cultural material recovered from A15, composed of three aboriginal ceramic sherds. The stratigraphic layers of F132 above F137, above area 15 are visible in 460N 545E's profile (Figure 11 - Photo of 460N 545E, North Profile).

PPM2 and PPM3 were characterized as circular-shaped voids absent of shell in F132. PPM 3 was excavated by mistake with F132, and PPM2 appeared to be only 3 cm deep. The great depth of PPM3 was visible in the west wall profile, described as gray brown sand, and marking a noticeable void of shell in F132 (Figure 12 – Photo of 460N 545E, West wall profile). As PPM3 was not excavated as its own provenience, the cultural period for PPM3 is unknown, however it clearly post-dates F132. PPM 1 and 2 are associated with the cultural period from 1565 to 1580, while the other PPM's (4, 5, 7, 8, 9) were associated with the St. Johns period. PPM 6 and PPM 10 were not excavated.

Beyond having a high number of PPM's, the unit also had a high number of areas. Area 10 was the most defined and least ephemeral area, described as a "large circular stain of darker soil", and area 12 and area 14 surrounded area 10. Area 12 was an amorphous area of dense shell and dark stained soil to the northeast of area 10, and area 14 was a medium brown soil that was darker than the adjacent Zone to the south of area 10. Area 10 was treated as a possible postmold, and pedestaled and cross sectioned (Figure 13 – Photo of 460N 545E, Area 10 Section). The area had a pointed base and contained 5 sherds of St. Johns ceramics, and dated to the cultural period of 1565 to 1580 (16A). The majority of areas, excluding Area 15, dated to cultural period 16A.



Figure 10 - Photo of 460N 545E  
Surface Feature 132



Figure 11 - Photo of 460N 545E, North Profile,  
Showing F132, F137, F139 and Area 15



Figure 12 - 460N 545 E, West Wall profile



Figure 13 - 460N 545 E, Area 10 section

To investigate the shell feature in 460N 545E (F132) and the linear dark soil features in 464.5N 548E (F130 and F131), a north-south aligned unit was placed between these two units. Unit 464.5N 548E shared its southern wall with the northeastern wall of 460N 545E, resulting in a mere 20 cm baulk that separated the two units. 461.5N 546.5E was opened after the suspension of 464.5N 548E and when the F132 in 460N 545E had not been completely removed to get a better visual understanding of the relationships between the three units (Figure 14 - Photo of 461.5N 546.5 E and 460N 545 E).

The matrix of Z1:L1 was not screened and instead discarded and visible artifacts were removed and bagged. Excavation of the unit revealed two features at the base of Zone 3 Level 1: F133 and F134. Feature 133 was described as two rectangular stains of dark gray brown soil that were connected along the eastern wall. The northern stain of F134 was more square than the southern stain of the feature, and the two stains were separated by Zone 3-Level 2 matrix soil. Feature 134 was a much larger dark gray stain, described as an irregularly shaped stain extending from the northeast portion of the unit to the western portion with a high concentration of charcoal. The charcoal seemed to concentrate in a possible post mold in the northwest portion of the wall. The surfaces of F133 and F134 were recorded at 1.92, while slightly higher surface depths for the beginning of F130 and F131 had been recorded (1.86 and 1.87, respectively). Features 133 and 134 were visible in the eastern wall profile, and (Figure 15 - Photo of 461.5N 546.5 E, profile). Beneath F133 and F134 was Zone 3 soil, but the soil was differentiated by medium dark brown Zone 3 soil in the northern half of the unit and dark brown Zone 3 soil with rust mottling in the southern half of the unit. The northern, darker Zone 3 soil may be a result of staining from F 134.

Area 2 was dark stained soil with a high concentration of shell and a surface of 1.92 mbd. After initial excavation, the large shell appeared to be contiguous with F132 of 460N 545E, confirmed by a similar surface elevation and composition. Area 2 was renamed as F132 for 461.5N 546.5E. The artifacts recovered from F132 in 461.5N 546.5E had similar ratios to those recovered from F132 of 460N 545E (no European associated artifacts and only two St. Johns plain aboriginal ceramic sherds). The final depth of F132 at 2.09 mbd is also congruent to F132 of 460N 545E, with 2.11 mbd.

Area 11, along the eastern wall, was an amorphous area of darker soil with shell and charcoal flecking.

There were a large number of PPM's in 461.5N 546.5E, totaling 14. The PPM's were in no real discernable pattern, although PPMs 3, 4, 6, 7, 9, 10, 11, and 14 could arguably be clustered along the northeastern wall of the unit, while PPM's 1, 2, and 12 are clustered along the northwestern wall of the unit, and PPM 5, 8, and 13 are clustered in the southern portion of the unit. While the PPM's ranged in depth, PPM's 1, 2, 5, 6, and possibly 3, 4, and 7 are associated with the cultural period from 1565 to 1599 (16, SJ/16, 16A). The other PPM's (8 through 14) are associated with the earlier St. Johns period.



Figure 14 - Photo of 461.5N 546.5 E and 460N 545 E,  
Shows surface of F133 and F134 in 461.5N 546.5 E



Figure 15 - Photo of 461.5N 546.5 E, profile

### **Phase III: Middle-east Site Testing**

The middle-eastern unit 440N 550E measured 1.5m x 3m, with the longest axis running from North to South. This was one of the last two units to be opened and the location of this unit was chosen for two reasons. The primary reason for opening 440N 550E was to investigate a Spanish period trash pit associated with the linear trench of Feature 15 (excavated in 1987) that had been partially excavated in a later field season as Feature 23. Both the fill of F15 and the sheet deposit of F23 contained early Spanish materials that would date the deposits to the Menendez era (Deagan 2002). Unit 440N 550E is also located slightly to the southwest of Ditch Witch Trench #3 and unit 447N 554E excavated by Gordon, in which Gordon speculated that F48 could represent evidence of fortifications (Gordon 1992). Unit 440N 550E was placed to further investigate the Menendez-era trash pit and design a unit that contained less water-saturated soil. The secondary reason for opening the unit was attributed to the suspension of units 464.5N 548E, 461.5N 546.5 E, and 460N545E due to flooding. The choice in location for the new unit was thus partially based on the need for an elevation that was higher than the raised water-table and standing water.

While 440N 550E was only partially excavated during the Summer 2005 field season, those levels that were removed contained the highest amount of 16<sup>th</sup> century associated cultural material for the excavated units of 2005 reflecting the units dense deposits and stratigraphy. The following analysis of 440N 550E is based on data obtained from field descriptions, plan drawings and artifact analysis but does not include stratigraphic analysis derived from profiles. Profiles were not drawn for any of the walls of unit 440N 550E during the summer 2005 season.

The ground surface of unit 440N 550E sloped down from east to west and differed by approximately 10 cm. It was decided to excavate Zone 1 levelly rather than to follow the surface

slope, due in part to the presence of a clump of trees and brush directly to the east of the unit. The resulting root density and turbation from the palm tree roots caused intense disturbance such that excavating with the surface slope would prove needlessly difficult. Zone 1 was excavated as a complete matrix to a depth ranging from 18 to 30 cm below ground surface. Zone 1 soil was not screened and all artifacts were discarded as a result of the dense root mat from the palm and in an effort to save time.

Zone 2 soil changed from dark grey-brown soil to Zone 2B soil, which was of a darker, more organic and heavily shell flecked soil that was more friable. At this soil transition there is also a transition from a disturbed level dating to the 18<sup>th</sup> century (period designation 19) to a deposit dating to between 1580-1599 (period designation 16B). Zone 2B included a substantial increase in shell volume as well as nail fragments and a spike fragment. Zone 2B (level 2) quickly transitioned to a mottled medium brown soil in portions of the unit revealing a dense number of areas, features and PPM's.

Underlying the organic shell matrix of Zone 2 were a large number of deposits. Most prominent were two linear stains, each designated as a feature (Figure 16 - Photo of 440N 550E F135 and F136). Feature 135 consisted of a linear stain extending from the Western wall to the southeast composed of very dark, black soil with shell flecking and some whole shell. Feature 135 was bisected on an East-West line during excavation to provide a cross section. The cross section of F135 revealed a maximum width of approximately 28 cm, a depth of approximately 14 cm, outlining a trench with sloped sides and a rounded base with a slight point. The shape of the cross section of F135 resembles the cross sections of the previous excavated trenches in the southern parts of the FOY occupation area in form, but F135 does not have a width greater than 50 cm, as do these compared southern trenches (Deagan 2002). Deagan suggests that the

characteristics of the southern trenches are similar to that of “mud sleeper stains created by split-log foundations for wood or thatch houses” (Deagan 2002). While F135 is not as wide as the other southern trenches, the consistent shape and depth suggest that it may have been a smaller form of a sleeper trench. Furthermore, the presence of such artifacts as metal and olive jar among the aboriginal ceramics recovered from the trench of F135 confirms that the feature is related to the early 16<sup>th</sup> century occupation and dates to between 1565 to 1580 (16A), barring potential contamination from artifact drift.

Feature 136 was a shell concentration mixed with black soil in the eastern wall with some whole shell. Feature 136 underlayed three Areas (5,6,7) of whole shell concentrations and whole shell had also been removed from the Eastern wall of the unit during the close of Zone 2B-Level 2. As excavation of F136 occurred, it became clear that the dark soil with shell flecking characteristic of the feature continued to the west of the initial mapping delineations, but it cannot be said with certainty that F136 underlied F135. As viewed in the cross section of F135 (Figure 17 – Photo of F135 Cross section), a shell concentration is visible beneath F135 and most likely associated with the northern extension of F136. Feature 136 (and extensions) also dated to the early 16<sup>th</sup> century occupation and dates to between 1565 to 1580 (16A), and there was a large number of iron fragments (spike and UID) and lead sprue recovered from the feature.

Feature 135 also appeared to bisect Zone 3 into two similar but distinct soils. Zone 3A that bordered F135 to the northeast was a mottled brown soil while Zone 3B that bordered F135 to the southwest was a darker mottled brown soil. The two different soils suggest a hypothesis that F135 may be an architectural feature and the two soils represent two distinct activity areas, such as an interior and an exterior. Intruding into Zone 3A was Area 3, composed of dark soil with shell flecks and grey mottling. Included in the artifacts recovered from Area 3 were high

concentrations of charcoal and, at the lower level of area 3, an unidentified nail fragment was recovered.

At this point in the Summer 2005 field season, 440N 550E was leveled, photographed and remapped to address the new features and areas, but there was no longer time to continue excavations. The unit was augered in various places to understand the depth of the cultural materials, and then covered and refilled, with the knowledge that further excavation was necessary. This excavation was completed in the Spring of 2006 and discussed in the 2006 field report by Deagan.

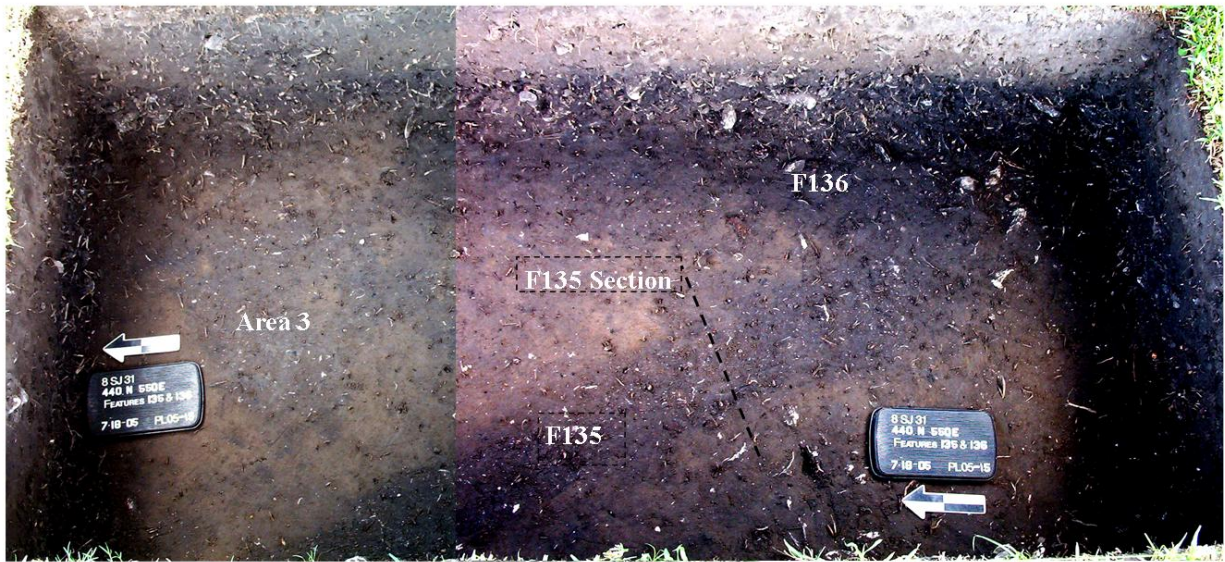


Figure 16 - Photo of 440N 550E,  
showing the surface of F135 and F136, and Area 3



Figure 17 - Photo of 440N 550E,  
F 135 Cross Section

## Shovel Tests

Shovel tests were placed to the east of the path connecting the Ponce de Leon obelisk monument to the San Juan del Piños Monument to address questions regarding the relationship of the easternmost surface and stratigraphy of this previously unexcavated and unknown area (see Figure 2). No known excavations had occurred in the area to the east of the path. It was hypothesized that these shovel tests would potentially shed light on the changes made to the shoreline. Four shovel tests were excavated in an approximate North-South transect, each separated by five meters. The four shovel tests include 455N 568E, 450N 568E, 445N 568E, 440N 568E. Shell was recovered in all layers of the shovel tests, but the highest density of shell was recovered in the lowest layer of gray, clayey marsh sand.

Shovel Test 455N 568E had the highest surface elevation of 1.31 mbd, and was excavated a meter prior to reaching the gray, sandy clayey marsh and broken shell. The shovel test's stratigraphy included topsoil and a deposition episode of modern fill consisting of light grey soil (artifacts recovered include baked clay tile, brick, glass, tarpaper, construction materials, aboriginal ceramics and shell) (0-20 cmbd). Below this layer was light brown mottled soil in which a shingle fragment and iron fragment were recovered (20-48 cmbd). The next layer was a pale brown mottled soil (similar to "Zone 3") with a high concentration of shell as well as metal, concrete, glass, construction material and aboriginal ceramics (48-90 cmbd). The base of the shovel test consisted of clayey marsh sand with broken shell.

Shovel Test 450N 568E revealed a decrease from north to south in surface elevation (surface was 1.46mbd) and a slight rise from north to south in the elevation of the surface of the gray, clayey marsh sand with broken shell. The shovel test's stratigraphy included topsoil and a deposition episode of modern fill consisting of light grey and brown mottled soil and a layer of

dark brown soil (artifacts recovered include shingle, glass, iron fragments, slag, tile, construction materials and bone) (0-30 cmbd). The next layer was a pale brown mottled soil (similar to “Zone 3”) (cultural artifacts not recovered in this level) (30-65 cmbd). Gray, clayey marsh soil with a high concentration of shell began at 65 cmbd and recovered artifacts also included aboriginal discard, concrete and metal.

Shovel Test 445N 568E continued the decrease in surface elevation (surface was 1.56 mbd) and a slight increase in the elevation of the surface of the gray, clayey marsh sand with broken shell. The shovel test’s stratigraphy included topsoil and a deposition episode of modern fill consisting of light gray soil (artifacts recovered include glass, iron fragments, construction material, modern ceramics, rope, tile and bone) (0-18 cmbd). The next layer was a pale brown mottled soil (similar to “Zone 3”) (artifacts recovered include glass, slag, iron fragments, shingle, bone and aboriginal ceramics) (18-40 cmbd). Gray, clayey marsh soil with a high concentration of shell began at 40 cmbd and recovered artifacts included glass, iron fragments, brick, asphalt, construction material, bone, and aboriginal ceramics.

Shovel Test 440N 568E was the southernmost shovel test and had the lowest surface elevation (1.65) and the highest elevation for the gray, clayey marsh sand with broken shell. The shovel test’s stratigraphy included topsoil and mottled light gray soil (0-12 cm) and a pale brown mottled soil (similar to “Zone 3”) (artifacts recovered for these levels include glass, iron fragments, brick, construction material and asphalt). Gray, clayey marsh soil with a high concentration of shell began at 24 cmbd and recovered artifacts included iron fragments, tabby, slag, and bone.

Stratigraphy of the shovel tests revealed a pre-occupation marsh slope at the base of the shovel test, with culturally sterile fill layered above, and modern fill at the top. The bases of the

four shovel tests potentially reveal the past elevations of the marsh (Figure 18 –Profile View of Shovel Tests). The slope of the surface of the marsh decreases from south to north. These results support the hypothesis that the central portion of the peninsula was originally more depressed and marshy, but has since filled. This hypothesis was made based on the extant features of the peninsula and the shallow depression visible in satellite photos. This marshy slope (depth changes 50 cm gradually over a 15 meter north-south line) later filled with soil that resembles “Zone 3,” a pale brown mottled soil. The surface of “Zone 3”-like soil generally did not follow the surface of the marshy soil’s declining slope to the same degree and instead somewhat leveled off (depth changes 17 cm gradually over a 15 meter north-south line). While cultural artifacts were recovered from the layers of pale brown mottled soil, the total quantity was significantly less than artifacts recovered from levels closer to the surface, and it is likely that these artifacts occurred either as a result of bioturbation or mixing of layers during the excavation of the shovel tests. Above the surface of the “Zone-3”-like soil is modern fill (light grey soil), with occasional transitional light brown mottled soil between the two layers. Recovered from the matrix of modern fill was construction debris and glass. The modern fill is probably associated with the turn-of-the-century “Ponce-de-Leon” road construction, in which fill was placed on the “Zone-3”-like soil for stabilization of the road. In all of the shovel tests, primarily modern material was recovered and shell density increased with depth. This stratigraphy suggests confirmation that Spanish colonial settlement was to the west of the path and/or within the boundary of the potential moat excavated in 2001.

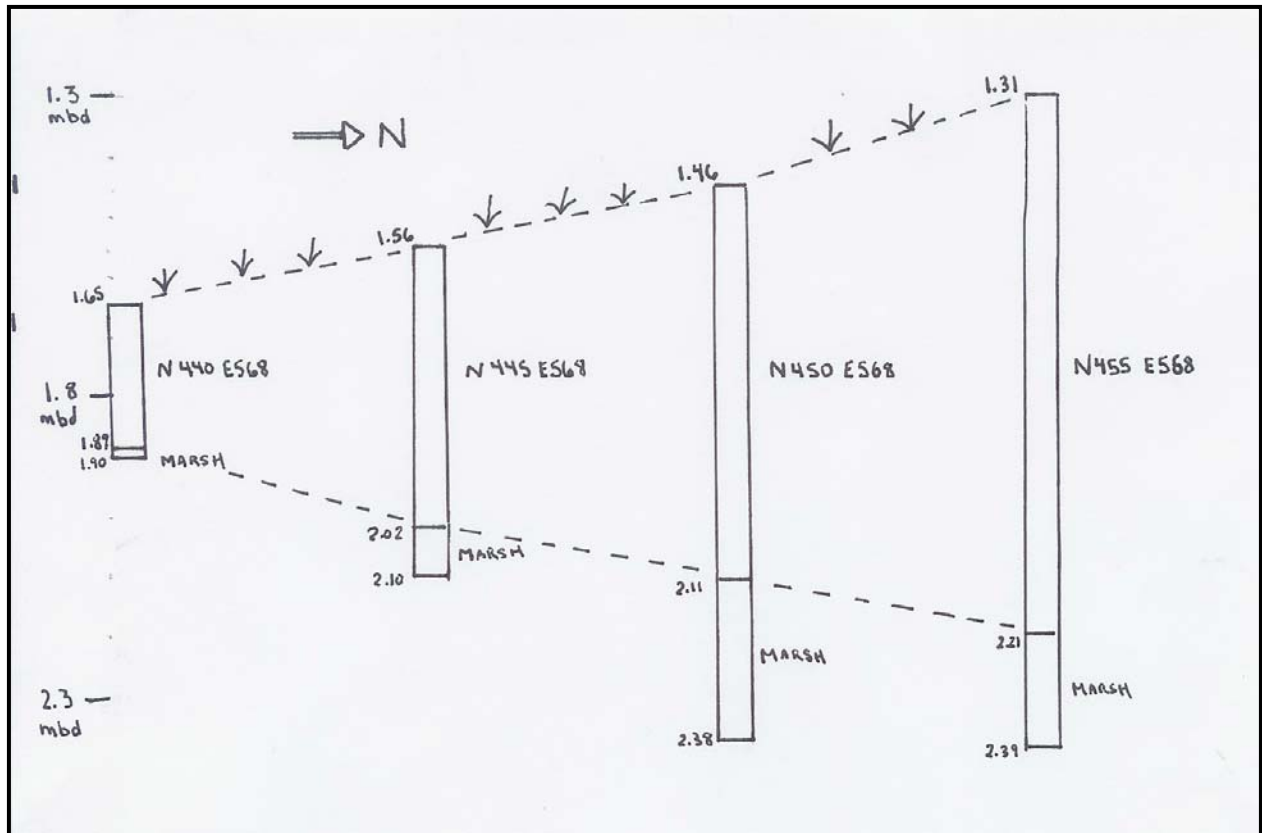


Figure 18: Profile View of Shovel Tests (not to scale)

## Artifacts

Below is a summary of findings of artifacts, based on broad artifact classes and the cultural periods in which they were recovered. For the artifact distributions for all 5 units and shovel tests in the summer 2005 field school, see Table B, SJ-31 Artifact Distributions, 2005 (summary). For the artifact distributions by unit, see Table C, SJ-31 Artifacts Distributions by unit, 2005.

Aboriginal pottery was the most frequently recovered artifact type, with 2410 ceramic sherds recovered, or 84% of all artifacts. Orange Fiber Tempered ware was recovered, which is distinctive of the later part of the Orange Period, ca. 1500BCE- ca. 200 CE. The recovery of these ceramic sherds further confirms the presence of occupation during this period. These ceramic sherds, though are overlaid by or mixed with deposits from the St. Johns II occupation (ca. BCE 1200- 1580 CE), represented by the presence of St. Johns plain, incised and check stamped ceramics. Other aboriginal ceramics include variations of San Marcos, variants of Altamaha, Savannah Cord marked, San Pedro, and Colorinda wares. While aboriginal ceramics were recovered throughout the site, 456N 550E had the majority within the entire unit, with 603 recovered ceramics, while the partially excavated 440N 550E had the largest number of aboriginal ceramics recovered within the cultural periods of the 16<sup>th</sup> century and earlier (total of 374 recovered).

European pottery was also ubiquitous in the units, representing 6% of the assemblage, with 182 ceramic sherds recovered. The majority of these were unglazed earthenwares, such as olive jars (n = 89). These ceramics also included majolicas, such as Columbia Plain (n = 6) and Mexico City white/plain (n = 2). There were also a large number of tablewares (55 total), including annularware (n = 3), variations of pearlware (n = 11), whiteware (n = 14), and

porcelain (n = 5), two of which were Ming porcelain. The majority of these tablewares were recovered from proveniences associated with the 19<sup>th</sup> century and more recent.

The majority of kitchen items (such as glass) recovered was found in proveniences associated with the 19<sup>th</sup> century and more recent, while architectural items (such as nails) were evenly recovered through out the cultural periods. Very few artifacts directly associated with weaponry were found, a musketball was found in 16A cultural period while the shot and a projectile point were respectively found in a modern context and a provenience without a given cultural period.

There were 16 non-ceramic artifacts associated with European items, including buttons (n = 5), beads (n = 5), pipes (n = 2), rope and sprue. Two of the more interesting finds were a Spanish military button and a chevron glass bead. There were 15 non-ceramic artifacts associated with Aboriginal items, including shell beads (n = 1), bone object (n = 1), debitage (n = 10), and shell tools (n = 3). There was a total of 1428.2 grams of bone recovered and 391,164 grams of shell recovered.

Excluding those proveniences in which no cultural period was assigned, the cultural period of 16A had the highest density of total artifacts (total 533), while the sixteenth century deposit (including 16A, 16AD, 16B, 16 and 16D) was the general time period that had the most artifacts (total 1235).

## Conclusions

The 2005 summer field school was a continuation of the multi-year Fountain of Youth Archaeological Project. In brief, during the Summer 2005 field season we continued investigations of the moat-like defensive ditch features, investigated two anomalies and located a shell midden beneath one, continued excavation of the less known middle eastern portion of the site and examined changes to the eastern shore line through shovel tests.

Results from the 2005 field season concerning the investigations of the moat-like defensive ditch features suggest that explorations closer to the features excavated in earlier years (F48 and F78) should be carried out, as the 2005 field season excavations appeared to be beyond the northern boundary of the potential moat-like defensive ditch. Moreover, the data recovered from excavations of 456N550E and 464.5N 548E, coupled with the shovel tests, support the idea that what was previously thought to be a ditch-like feature may actually be a volatile shoreline that has been heavily filled in.

The excavation of the anomaly in 460N 545E and 461.5N 546.5E revealed the southern and eastern edge of a dense shell midden. This midden, while low in European cultural artifacts could be continued to be excavated to the north and west to get a better idea of the function of the midden, if any.

Finally, a team should also return to FOY to continue excavation of 440N 550E. This occurred in the Spring 2006, and can be found in the accompanying report by Deagan.

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[illegible]

PW										1		2	3
PWDEC										1		1	2
PWHP								1			1	1	3
PWSE								1				1	2
PWTP		1											1
WW									1	1	1	6	9
WWDEC										1			1
WWTP		1							1	2			4
IRNSTN		1								2	2	6	11
IRNSTNTP										1			1
PORMING		1									1		2
PORMOD												1	1
POROR												1	1
PORUID												1	1
SLIPSTF											2		2
UIDSW													0
<b>subtotals</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>16</b>	<b>7</b>	<b>23</b>	<b>55</b>
<b>% of time period</b>	0.00%	0.75%	0.00%	0.00%	0.00%	0.00%	0.51%	1.53%	1.41%	4.30%	3.18%	3.33%	1.92%
<b><u>Utilitarian Wares</u></b>													
BSGS												1	1
<b>subtotals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>
<b>% of time period</b>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	0.03%
<b><u>Aboriginal Ceramics</u></b>													
ABOFTDEC	1	1					3						5
ABOFTP	42	20		3			35			2		12	114
ABOGGTDEC					1					1			2
ABOGGTP		3					2			2	1	4	12
ABOGRGSTP		1			2					9			12
ABOGRITDEC					2							1	3
ABOGRITP		20			1	5	14	12	9		13	33	107
ABOGROGDEC										1			1
ABOGROGP		20	2	4	3	4	2	8	5	13		8	69
ABOGRITSTP		26			1	1					1	6	35
ABOSTDEC		1		1		2	3	4	4	1	1	3	20

ABOSTP	6	63	2	19	18	15	19	8	28	5	30	67	280
ALTA						1							1
ALTAINC												1	1
ALTAPUNC									1				1
COLORINDA					2					1			3
IRENINC		1											1
MISSRF												1	1
ORNG	3	14											17
ORNGINC				1		1	5						7
ORNGP						5	68						73
SAN PEDRO						1						7	8
SAVCORDMA		1											1
SJDEC		1											1
SJINC						1				1		2	4
SJP	26	244	18	91	83	53	74	67	60	224	106	287	1333
SJS	1	56	2	9	35	18	5	17	16	64	18	32	273
SM		3			2			1		3		2	11
SMDEC										1			1
SMINC												2	2
SMP		6				4				1			11
SMS													0
<b>subtotals</b>	<b>79</b>	<b>481</b>	<b>24</b>	<b>128</b>	<b>150</b>	<b>151</b>	<b>190</b>	<b>117</b>	<b>123</b>	<b>329</b>	<b>170</b>	<b>468</b>	<b>2410</b>
<b>% of time period</b>	98.75%	90.24%	100.00%	91.43%	86.71%	90.42%	95.96%	89.31%	86.62%	88.44%	77.27%	67.83%	83.97%
<b><u>Kitchen Items</u></b>													
BOTMED												1	1
GLAS		1											1
GLASAMB												2	2
GLASBLK												1	1
GLASBLU										1		1	2
GLASBRN												3	3
GLASDKGRN						1						2	3
GLASDRKBRN										1			1
GLASGRN		1						1	1	3		1	7
GLASLITBLU												1	1
GLASOLIVE												4	4

GLASPINK												1	1
GLASUID						1		1			4	4	10
GLASLTGRN						1							1
MORT									1				1
<b>subtotals</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>21</b>	<b>39</b>
<b>% of time period</b>	0.00%	0.38%	0.00%	0.00%	0.00%	1.80%	0.00%	1.53%	1.41%	1.34%	1.82%	3.04%	1.36%

#### Architectural

GLASFLT									1		1	10	12
NAILUID		8		8	5	1	1		2	6	6	92	129
NAILWI												2	2
NAILWR		1					1				5		7
SPIKEUID		4			1						1	1	7
SPIKEWR		1									1		2
STAPLE												1	1
<b>subtotals</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>8</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>6</b>	<b>14</b>	<b>106</b>	<b>160</b>
<b>% of time period</b>	0.00%	2.63%	0.00%	5.71%	3.47%	0.60%	1.01%	0.00%	2.11%	1.61%	6.36%	15.36%	5.57%

#### Weaponry

PPOINT											1		1
SHOT												2	2
MUSKBAL		1											1
<b>subtotals</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>4</b>
<b>% of time period</b>	0.00%	0.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.45%	0.29%	0.14%

#### European Items

BUT		1						1	1			1	4
BEADCHEV								1		1			2
BEADGLAS										1		1	2
BEADUID		1											1
BUTBAK												1	1
PIPES5										1			1
PIPES6												1	1
ROPE												1	1
SPRUE		1										2	3
<b>subtotals</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>7</b>	<b>16</b>

<b>% of time period</b>	0.00%	0.56%	0.00%	0.00%	0.00%	0.00%	0.00%	1.53%	0.70%	0.81%	0.00%	1.01%	0.56%
<b><u>Aboriginal Items</u></b>													
BEADSHL					1								1
BONEOBJ	1												1
DEBIT		3					2		2		3		10
TOOLSHELL				1		1						1	3
<b>subtotals</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>15</b>
<b>% of time period</b>	1.25%	0.56%	0.00%	0.71%	0.58%	1.80%	0.00%	0.00%	1.41%	0.00%	1.36%	0.14%	0.52%
<b><u>Substances</u></b>													
SILVOBJ		1											1
QRTZ												1	1
COPOBJ									1				1
<b>subtotals</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>
<b>% of time period</b>	0.00%	0.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.14%	0.10%
<b><u>Misc. Modern Material</u></b>													
SCREWUID											1		1
PLAS											3		3
GLASLTGRN												5	5
GLASCLR										2	1	28	31
<b>subtotals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>33</b>	<b>40</b>
<b>% of time period</b>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.54%	2.27%	4.78%	1.39%
<b>GRAND TOTAL</b>	<b>80</b>	<b>533</b>	<b>24</b>	<b>140</b>	<b>173</b>	<b>167</b>	<b>198</b>	<b>131</b>	<b>142</b>	<b>372</b>	<b>220</b>	<b>690</b>	<b>2870</b>
<b>% of Grand</b>	2.79%	18.57%	0.84%	4.88%	6.03%	5.82%	6.90%	4.56%	4.95%	12.96%	7.67%	24.04%	100.00%
<b><u>Faunal WEIGHTS (g)</u></b>													
BONE	52.6	411.42	7	77.11	96.8	192.25	22.9	29.1	21.9	106.2	34.48	376.39	1428.15
<b>% of ALL BONE</b>	3.68%	28.81%	0.49%	5.40%	6.78%	13.46%	1.60%	2.04%	1.53%	7.44%	2.41%	26.36%	100.00%
SHELL	4872.3	93905.3	2600.3	1851.7	67058	16617.7	4300	10650	53988.5	82250		53169.9	391264
<b>% of ALL SHELL</b>	1.25%	24.00%	0.66%	0.47%	17.14%	4.25%	1.10%	2.72%	13.80%	21.02%	0.00%	13.59%	100.00%

