FEC AMTRAK PASSENGER RAIL PROJECT VOLUME I: A CULTURAL RESOURCE ASSESSMENT SURVEY OF THE FEC MAINLINE IN BREVARD, DUVAL, FLAGLER, INDIAN RIVER, MARTIN, PALM BEACH, ST. JOHNS, ST. LUCIE, AND VOLUSIA COUNTIES, FLORIDA

Prepared for:

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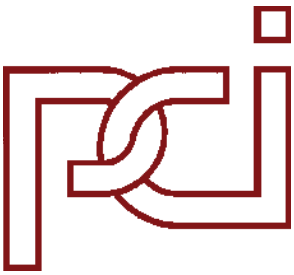

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Supplemental Summary Information for Mainline Reconnaissance Survey (Volume I)

Area of Potential Effect

The project calls for use of the existing FEC mainline between West Palm Beach and Jacksonville without major physical alterations to the tracks, bed, or alignment. As per consultation between FDOT District 4 and the SHPO, the APE of the project regarding archaeology was confined to the existing FEC mainline ROW. Also, archaeological testing was not required within the FEC ROW, since the proposed use of the FEC mainline corridor for passenger service will not involve any ground-disturbing construction activities. Previously recorded archaeological sites located beside the railroad corridor were considered, but also were not required to be reassessed through additional subsurface testing or surface inspection.

After reviewing plans and data provided by FDOT District 4 regarding the return of passenger service on the FEC mainline, FDOT and their consultants (Panamerican Consultants, Inc. and Janus Research) agreed that the historic resources to be considered near the grade crossings would be limited to existing or potential historic districts. Because there is more potential for noise impacts at grade crossings, the recommended APE at grade crossings would be based upon noise contours. It was earlier suggested by SHPO that close coordination take place with the noise study to develop the noise contours to guide Panamerican and their fieldwork. These noise studies were not completed until late July, too late for use in the reconnaissance study reported here. Subsequently, the APE regarding historic architecture was limited to areas immediately beside existing grade crossings (i.e., within 2 blocks of the crossing). As per the discussion of noise impacts below, this may have been a larger APE than would have been necessary if noise contours had been available.

The proposed improvements involve the addition of two passenger trains (two northbound and two southbound trips daily) to the existing FEC freight line and the existing SFRC Amtrak route. As of July 2010, the FEC Railway serves 24 freight trains daily, primarily during nighttime operations. Noise and vibration analyses were conducted for the existing conditions and the proposed conditions based on FRA/FTA guidance documented in the *FTA Noise and Vibration Impact Assessment Manual*. As part of this analysis, the noise monitoring and predicted noise levels were evaluated at approximately 70 feet from the track centerline to evaluate the noise effects associated with the proposed project. At typical locations, the FEC right-of-way is 100 feet so the existing and predicted noise levels correspond to approximately 20 feet from the FEC mainline. The noise analysis considered the horn noise on approaches to grade crossings and the increased train speeds up to 90 mph on the FEC. The predicted noise levels included an analysis of the hourly equivalent sound level and the day-night sound level (cumulative noise level over a 24-hour period). Based on the results of the Noise and Vibration Assessment (July 2010) conducted for the project, the proposed improvements will result in increased noise levels; however, the increased noise levels will not result in a change in the impact rating for any land use categories. Based on FRA and FTA criteria, the existing noise levels due to the freight trains create a moderate to severe impact rating and the predicted noise levels will not result in a change in the existing impact rating. Also, the estimated daytime noise

levels associated with the passenger trains will be approximately 5 dBA less than the existing nighttime noise levels associated with the existing freight trains throughout the FEC corridor. Therefore, no noise effects are anticipated to land uses adjacent to the FEC mainline due to the proposed project. As the noise analysis results resulted in the absence of noise effects at 70 feet from the track centerline, noise contours at distances greater than 70 feet were not necessitated. The analysis of predicted vibration levels showed the proposed project will increase the frequency of vibration levels; however, the predicted vibration levels associated with the passenger trains is less than the existing vibration levels associated with the existing freight trains. In summary, the noise and vibration analyses indicated the proposed project will have no effect on adjacent land uses. Based on these results, the Area of Potential Effect for cultural resources should be limited to the FEC Railway mainline since there are no noise or vibration effects to land uses adjacent to the FEC Railway as a result of the proposed action.

Summary of Findings

Thirty-three previously recorded resources (nine of which are segments of the FEC Railroad) were recommended as eligible or potentially eligible for listing on the National Register of Historic Places (NRHP).

In total, 22 bridges were documented during the FEC Amtrak Passenger Rail project mainline survey. Two bridges surveyed, the Myrtle Avenue Subway Bridge (8DU13284) and the St. Lucie River Bascule Bridge (8MT1382), are eligible for inclusion in the National Register according to the SHPO. Three additional bridges, the St. John's River Bridge, the Loxahatchee River Bridge, and the Sebastian River Bridge, are considered potentially eligible for individual listing in the National Register.

Fourteen surveyed bridges are considered contributing elements to a linear historic district for the entirety of the FEC Railroad corridor. One bridge, the northernmost bridge in Salerno crossing the Tributary to Manatee Creek, appears to be either substantially altered or non-historic, and would not be considered a contributing element within a linear historic district. Two bridges were not accessible from the ROW and there is insufficient information to determine whether they would be considered contributing elements to a potential historic district. Since the historic bridges along the FEC mainline will not be altered to accommodate the proposed passenger rail service and there is no work being planned for any of the bridges, the FEC Amtrak Passenger Rail project will not have any adverse impacts to these resources.

Commitment Considerations. Historic districts identified during field visits to 78 of 288 (27% sample) grade crossings include two dozen previously identified potential historic districts, and nearly two dozen potential districts. Some districts have been formerly identified and assigned site numbers (see accompanying table). Additional grade crossings may also require field visits to verify the accuracy of desktop methods employed in this study, as per DHR requests.

Summary of Potential Effects

Direct effects. As there are no proposed changes to the rail corridor or grade crossings, no direct effects on historic resources along the Mainline are anticipated.

Indirect effects. As outlined above, there will be an increase in the frequency of noise events but no change to the severity of noise levels (i.e., moderate noise levels will remain moderate with the addition of the four passenger trains each day). There are no noise or vibration effects to land uses adjacent to the FEC Railway as a result of the proposed action.

INTRODUCTION

The Federal Railroad Administration (FRA) and Amtrak are proposing to restore intercity passenger rail service along nearly 350 miles of Florida's east coast. This will be done using the existing Florida East Coast (FEC) Railway and by expanding Amtrak's long-distance passenger rail service from Jacksonville to West Palm Beach, with continuation to Miami through the existing South Florida Rail Corridor (SFRC) (Figure 1). This proposed project, referred to as the FEC Amtrak Passenger Rail project, is being considered for FRA High Speed Intercity Passenger Rail (HSIPR) Program Track 2 funding as part of the American Reinvestment and Recovery Act (ARRA) and is part of a phased approach to develop intercity passenger rail service. Florida Department of Transportation (FDOT), District 4, is providing support for the completion of a National Environmental Policy Act (NEPA) Environmental Assessment (EA) document through the use of their environmental compliance contractors, including cultural resources contractors.

Figure 1. FEC Amtrak Passenger Rail project corridor.

This report presents the results of a cultural resource assessment survey along the mainline of the FEC Amtrak Passenger Rail project corridor between Jacksonville and West Palm Beach. The project corridor runs through nine different Florida counties, which from north to south are Duval, St. Johns, Flagler, Volusia, Brevard, Indian River, St. Lucie, Martin, and Palm Beach. The purpose of this investigation was to identify known and potential historic properties that could be affected by the proposed passenger rail service along the FEC mainline corridor. This investigation was conducted to comply with Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-665, as amended), as implemented by 36 CFR Part 800 (Protection of Historic Properties), and Executive Order 11593. This project was designed to be consistent with both federal and state standards and guidelines as promulgated in Chapter 12 of the FDOT Project Development and Environmental Manual, as well as the Florida Division of Historical Resources Management Handbook and the Florida Division of Historical

Resources Historic Preservation Compliance Review Program (Florida Division of Historical Resources 2003).

The FEC Amtrak Passenger Rail project includes construction of several passenger stations along the route and construction of a short connection corridor referred to as the Northwood Connection to connect the existing FEC Railroad corridor with the Seaboard Air Line (SAL)/CSX Railroad corridor within West Palm Beach. The cultural resource surveys associated with the passenger stations and the Northwood Connection corridor are discussed in separate volumes. Physical alterations to the FEC mainline will be minor and are confined to the current FEC right-of-way (ROW). Alterations along the mainline involve addition of up to 6 inches of grade to the railbed at particular locations to super elevate curves to allow high-speed passenger trains. Currently, freight train traffic runs along the FEC mainline at speeds of roughly 60 miles per hour (mph). The proposed Amtrak Passenger trains, of which there will be four per day, will travel a speeds up to 90 mph. Existing bridges will not be altered by the proposed project. The main effect to be considered along the FEC mainline concerns noise increases at railroad grade crossings resulting from required blowing of horns immediately prior to and after the crossings. The effects of vibration resulting from passenger rail service are not expected to be greater than that already resulting from the current freight service, especially within urban areas where passenger trains must travel a slower speeds. A separate noise and vibration impact assessment is being performed for the FEC Amtrak Passenger Rail project concurrently with the cultural resource study.

Consultation with DHR staff in April 2010, particularly during a conference call on April 29, 2010, helped define the area of potential effects (APE) and guide and refine field methods for each aspect of the larger FEC Amtrak Passenger Rail project, including the current cultural resource assessment of the FEC mainline (Appendix A). Given that physical alterations outside the current FEC ROW are not planned, the APE for archaeology for the FEC mainline is limited to the ROW itself. The APE for historic architecture would ideally be based on determined noise and vibration contours at grade crossings. Given that the noise and vibration study was not yet completed at the time of the cultural resource survey, a general one block radius around grade crossings was considered during the current study, and it was agreed in consultation with DHR staff that the focus would be on identification of historic districts.

Fieldwork along the FEC mainline corridor consisted of two major aspects, namely field assessments at grade crossings and documentation of bridges along the mainline. Fieldwork at the grade crossings was conducted by PCI in May and June 2010, while documentation of the bridges was performed by Janus Research, Inc., in May 2010.

ENVIRONMENTAL SETTING

The FEC Amtrak Passenger Rail project area variably runs along the Eastern Valley and Atlantic Coastal Ridge physiographic provinces (White 1970:Map 1-C). The Eastern Valley region is described as a scarp that lies along the eastern edge of Peninsular Florida, stretching from St. Johns County in the north to Palm Beach County in the south. The valley topography becomes less defined as one travels south, eventually becoming almost flat. This topographical change is reflected in the St. Johns River valley as it becomes the St. Johns marsh (White 1970). The Eastern Valley has low sandy, poorly drained soils and consists of mostly Pineland, with prairies and cypress sloughs. One of these sloughs is the Loxahatchee Slough, which drains into the Atlantic Ocean. Within the Eastern Valley lies the Atlantic Coastal Ridge. The Atlantic Coastal Ridge extends from the southern Georgia border to an area southwest of Miami in Homestead. The ridge is composed of relic beach dunes and sandbars. The Atlantic Coastal Ridge is a product of the Pamlico Sea and represents a relict shoreline of this sea, which was likely 30 feet higher than the present sea level.

The east coast of Florida is fed by the Shallow Aquifer and the Floridan Aquifer. The Floridan Aquifer underlies all of Florida and parts of Alabama and Georgia. Water from the Floridan Aquifer is highly mineralized, specially along the Atlantic and Gulf coasts. Water from this aquifer will rise in artesian wells to altitudes of a few feet above mean sea level (amsl) near the coast to more than 130 feet (ft.) (40 meters [m]) amsl in central upland areas; however, it does not come to the surface anywhere within south Florida (Hyde 1975). The Shallow Aquifer is a nonartesian aquifer present throughout much of Florida. Within the southern part of the state, the Shallow Aquifer is the main source of groundwater.

The dominant drainage feature within the northern half of the FEC Amtrak Passenger Rail project is the St. Johns River. Anderson and Goolsby (1973) note that this river drains about one-sixth of the State of Florida, and that mixing of fresh and salt water near its lower reaches in the vicinity of Jacksonville creates a tidal estuary. Numerous small creeks drain the uplands in the St. Johns River basin. Much of the central and southern portions of the FEC mainline lie in proximity to the Indian River, which is part of a diverse estuary system running along the east coast of Florida from Volusia County in the north to Palm Beach County in the south. Several freshwater rivers and creeks flow into this estuary including the Eau Gallie River, St. Sebastian River, St. Lucie River, and the Loxahatchee River.

The climate of peninsular Florida generally consists of long humid summers and mild winters. Areas along the east coast are moderated by the Atlantic Ocean and the Gulf Stream, both cooling hot summer temperatures and warming cold winter temperatures. Annual temperatures vary somewhat along the long FEC mainline corridor with annual average highs and lows in Jacksonville being 79 degrees Fahrenheit (F) and 58 degrees F respectively and in West Palm Beach being 83 degrees F and 67 degrees F. Historically, the hottest month in Jacksonville has been July with an average high of 92 degrees F. The average high for the historically hottest month in West Palm Beach

(August) is actually slightly lower at 91 degrees F. Temperatures tend not to dip as much in the winter in West Palm Beach though with the coldest month averaging a high of 75 degrees F and a low of 57 degrees F. In Jacksonville, the coldest month averages a high of 65 degrees F and a low of 43 degrees F (Southeast Regional Climate Center 2010).

CULTURE HISTORY

PREHISTORIC CONTEXT

Paleoindian Stage (12,000 to 7500 B.C.)

Paleoindians were the first native inhabitants of Florida and are estimated to have entered the area approximately 10,000 BC. In the southeastern United States, the Paleoindian Stage lasts from approximately 10,000 to 7500 BC. The environment of Florida at that time was markedly different from the modern environment. Consequently, Paleoindian settlement and subsistence strategies are quite different from those used by later aboriginal inhabitants of Florida. Characteristics of the Paleoindian Stage include a nomadic settlement pattern, subsistence that included large-game mammals in addition to small-game hunting and gathering, and an absence of pottery. Paleoindian archaeological sites are generally defined solely on the basis of recovered lithic remains. The recovery of organic materials from paleo-components in waterlogged Paleoindian sites in Florida such as the Page/Ladson and the Little Salt Springs sites have greatly increased our understanding of this period; however, these sites are not very common and many questions remain about the Paleoindians.

Some of the earliest evidence for human occupation in south Florida comes from two sites in Sarasota County: Little Salt Springs and Warm Mineral Springs. These sites can be interpreted as sporadic hunting and gathering sites. The main area of human occupation would likely have occurred along what is now a submerged coastline (Griffin 1988). The climate during this time, however, was vastly different than today. Too dry to even support scrub oak, the inland areas of South Florida may have been "an area of high winds and shifting dunes, uninviting to human habitation" (Griffin 1988:129).

The environment in Florida during the Paleoindian Stage was so different because of lowered sea levels and a more arid climate. Pollen and charcoal samples recovered in cores taken from the bottoms of Lake Sheeler near Gainesville and Lake Tulane near Avon Park provide information on the local environment during the Paleoindian period (Watts and Hansen 1988). Between 13,000 and 10,000 BC, the dominant natural community was mesic broad-leafed forest. Water levels were as much as 26 meters below present. Warm summers and cool winters characterized the climate, and the frequency of natural fire was low. A significant result of lower sea levels was an increased land mass, about twice the size of present-day Florida. According to Milanich (1994:38) "about half of the land exposed 12,000 years ago is now inundated continental shelf."

Many modern inland rivers, lakes, springs, marshes, and wet prairies were almost nonexistent at this time. Fresh water was supplied by limestone-bottomed catchments such as water holes, lakes, and prairies, and very deep sinkholes. The presence of karst topography on which sinkholes formed is an indicator of potential Paleoindian

settlements. Climatically, Florida was much cooler and drier than today. The resulting vegetation included plant species that thrive in dry areas, such as scrub oaks, pine, open grassy prairies, and savannas.

The major settlement theory concerning Paleoindians was first put forth by Neill (1964), and later given substance through extensive recording and analysis of Paleoindian sites by Dunbar and Webb (Dunbar 1983, 1991; Dunbar et al. 1989; Webb et al. 1984). Neill's "oasis" model is based on the fact that limited water sources existed at this time. As such, the few that did exist would have been crucial to animals in the area for drinking water. For Paleoindian populations, these watering holes would have provided easy and dependable access to game, as well as to fresh water for themselves.

The oasis model has been substantiated by evidence of hunting and butchering activities near former water holes and other perched water sources, in the Tertiary limestone (karst) regions of Florida. Indeed, the majority of Suwannee and Clovis projectile points - the most diagnostic type of Paleoindian tools - have been found more commonly in Tertiary limestone regions (Dunbar and Waller 1983). Research by Carr (1986) has uncovered a filled-in solution hole and corresponding Early Archaic and Paleoindian site in southern Florida, the Cutler Fossil Site, which extends the area of settlement while still supporting the oasis model. This evidence also raises the possibility of more early sites along the Atlantic coastline (Griffin 1988).

In general, Paleoindian settlement followed a seasonal model. Settlement was probably determined more by availability of lithic resources and water than by availability of floral and faunal resources. Over time, the distribution of both of these resource types influenced settlement patterns. By the Middle Paleoindian period, settlement may have been more territorial, perhaps as a result of decreased resources and concomitant increased population (Anderson 1996).

Primarily through excavations at waterlogged sites in Florida, such as a paleo-component at the Page/Ladson site in Jefferson County, the subsistence of Paleoindians has been reconstructed (Dunbar et al. 1989). Both extinct and modern species seem to have made up the diet. Most of the extinct species were large mammals such as sloth, tapir, horse, camelids, and mammoth. Some smaller extinct animals were also consumed. Modern species in the diet included deer, fish, turtles, shellfish, gopher tortoise, diamondback rattlesnake, raccoon, opossum, rabbit, muskrat, and wood ibis. In addition, panthers and frogs have been recovered from Paleoindian sites.

The archaeological evidence suggests that Paleoindian cultures subsisted on both large and small game mammals. In addition to food, these animals were used for their furs and for tools. So far, there is little evidence of extensive reliance on coastal resources; however, coastal areas from the Paleoindian Stage would now be submerged. There have been Paleoindian artifacts recovered from oyster shell deposits along old river channels now submerged within Tampa Bay. Unfortunately, it is difficult to demonstrate that these represent culturally deposited middens given that the artifacts were found within private dredging spoil piles rather than controlled underwater archaeological

excavation (Goodyear 1999; Goodyear and Warren 1972; Warren 1964). It is likely that Paleoindians utilized plant foods extensively as well. Meltzer (1988; Meltzer and Smith 1986) argues for a generalized foraging subsistence strategy among Paleoindians within unglaciated eastern North America. His argument is based on ecology and ethnographic analogies in addition to comparison of Paleoindian tool kits and site distribution between major regions of North America.

Paleoindian sites in Florida are generally located on acidic soils. Because of this, and their age, artifacts besides lithics are rarely recovered, unless the site is submerged. As a result, the Paleoindian tool kit is the most characteristic and identifiable clue to their culture. In general, most Paleoindian tools are made from stone and are unifacial. Because of the limits of a mobile lifestyle, these tools likely served multiple purposes.

Lanceolate points are the most characteristic artifacts of the Paleoindian stage. These long, thin, bifacial blade-like points were sometimes hafted to ivory foreshafts, which were in turn attached to wooden spear shafts (Milanich 1994). Paleoindian hafted points and blades are characterized by basal thinning, which was sometimes achieved by removing a long flake from the base of the point upward. This practice is also referred to as fluting and was probably done in order to make the implement thinner at the haft and therefore easier to attach to a shaft or handle. Fluting was typically carried out early in the manufacture sequence as evidenced by flake scars that superimpose the flute scars (Goodyear and Warren 1972). While fluted points are typically associated with Paleoindian lithic technology, the practice is not commonly encountered on Paleoindian points recovered in Florida.

The basal edges and lateral margins of Paleoindian lanceolate forms also typically exhibit abrading and smoothing. This was probably done to reduce the possibility of the sharp edges of the implement from cutting the lashing that held it in the haft (Powell 1990). It should also be noted that much of the edge smoothing found on the basal areas of lithic tools could have also been caused by haft-wear. While basal grinding continued into the Early Archaic, this attribute is for the most part limited to the Paleoindian and Early Archaic periods.

Of the lanceolate forms, the Suwannee point is the most widely recognized in Florida. As described by Bullen (1975:55), it is “slightly waisted” with a concave base, basal ears, and basal grinding on the bottom and waisted parts of the sides. The Suwannee is typically not fluted. Clovis points, indicative of Paleoindians throughout most of North America, are rarely recovered in Florida.

In addition to the above points, other tools in the Paleoindian tool kit include cores, bifacial knives, and oval ground stone weights, or bolas, which are thought to have been attached by thongs and thrown to bring down game such as water birds (Neill 1971; Purdy 1981). Bone tools include the double-pointed point, which may have functioned as pins to hold back tissue while animals were butchered (Waller 1976).

Toward the end of the Paleoindian Stage, large lanceolate points such as Suwannee disappear from the archaeological record and are replaced by smaller points such as the Greenbrier (Bullen 1975; Powell 1990). In addition, side-notched points such as Dalton and Hardaway appear. Such points may have replaced earlier lanceolate points, or they may have been in use concurrently. Side-notched points may have also functioned more as hafted knives rather than projectile points. In general, the smaller side-notched points are interpreted as a result of changes in environment and the subsequent shift from the hunting of large Pleistocene animals to smaller game such as deer. Towards this end, these smaller notched point forms were probably fitted to shafts that were propelled either by hand or with the aid of an atlatl.

Archaic Stage (7500 to 500 B.C.)

The Archaic Stage occurred from about 7500 to 500 BC and is associated with the Holocene geologic epoch. After the demise of some types of Pleistocene fauna, human subsistence strategies became more diverse and included new plant, animal, and aquatic species. These changes are seen in the way stone tools changed through time. Smaller side-notched spear points or knives replaced the large multifunctional lanceolate-shaped spear points used during the Paleoindian Stage. These smaller tools were designed to be thrown or launched with a spear thrower (atlatl), or hafted to a handle and used as a knife.

These changes in the way people lived were due in large part to the physiographic and climatic changes occurring in Florida. As a result, subsistence and settlement patterns of the Archaic hunting and gathering groups also changed. People began to live in larger groups, use different types of stone tools, and inhabit more of what is now Florida. While the atlatl was developed during the Archaic, pottery and the bow and arrow had yet to be invented in North America. These two major innovations would come later during the Transitional period. It is important to note that these changes in material culture, social organization, and settlement and subsistence did not occur quickly. As Milanich (1994) points out, the changes that are visible in the archaeological record took place over many generations and were the result of shifting adaptations to a gradually changing environment.

The Early Archaic (7500 to 5000 BC) represented a continuation of the Paleoindian occupation of Florida and occurred during a time of rising sea levels, a gradual warming trend with less arid conditions, and the spread of oak hardwood forests and hammocks. An obvious difference between the Paleoindian and Early Archaic is the shift from lanceolate blade-like points like Suwannee and Simpson points to smaller side-notched and stemmed projectile points/knife forms such as the Bolen and Kirk clusters.

Subsistence and settlement patterns also became more diversified during the Early Archaic. The shift in how people lived is reflected in the location of archaeological sites from this time period across the landscape. In general terms, subsistence and settlement patterns became more diversified during the Early Archaic, perhaps as a result of a shift in climate.

While thermal alteration of chert occurred for the first time during this period, the practice was limited (Powell 1990). Alternate beveling of the cutting edges of stone tools was a common practice and is interpreted as evidence of resharpening of lateral margins by pressure flaking. Evidence suggests that the wooden shaft would typically be held in the left hand while the right side of the actual point was resharpened with the right hand. This process resulted in the removal of flakes in a downward motion from one lateral margin, then when the point was flipped over, flakes would be removed from the opposite lateral margin in the same fashion. This method of resharpening results in beveled margins that appear as unifacially resharpened edges that occur on opposite sides of the implement.

Debate continues among southeastern archaeologists about whether to place early side-notched forms such as the Bolen in the Late Paleoindian or Early Archaic period. This is largely the result of conflicting evidence from archaeological sites in Florida and the Southeastern Coastal Plain. Milanich (1994) and Purdy (1981) both describe Bolens as Late Paleoindian period implements, and these points were recovered in association with lanceolate Suwannee and Simpson forms at the Harney Flats site in Hillsborough County (Daniel and Wisenbaker 1987). Other archaeologists, however, assign the Bolen to the Early Archaic (Goodyear 1982, 1999; Tesar 1994; Tuck 1974; Widmer 1988).

Numerous small Early Archaic special activity and campsites have been located throughout the Central Florida Highlands (Milanich 1994; Milanich and Fairbanks 1980). Tesar (1994) summarizes the Early Archaic as being characterized by relatively large base camps that were occupied at least semi-permanently and smaller seasonal camps and special use sites. These sites are often located near "ecotonal breaks" with dependable sources of freshwater nearby. Because these sites were typically in desirable locations, they were also sometimes reoccupied during later periods.

Paleoindian and Early Archaic artifacts are sometimes recovered in association with each other; however, overall Early Archaic settlement patterns appear to be more widespread than those of the Paleoindian Stage. This expansion in settlement patterns is probably due in part to the warming trend and increase in precipitation that occurred at the close of the Pleistocene. Early Archaic people also began to utilize coastal and riverine environments more heavily. However, as Milanich (1994) points out, our lack of knowledge about the full range of Early Archaic tools (lithic and bone) stems from the scarcity of artifact collections from professionally excavated sites.

As populations grew and the climate continued to become more like modern conditions, Archaic groups began to become more diversified. They slowly moved into previously unoccupied environmental niches and began producing stone tools that tended to be stemmed rather than notched. This diversification is seen in the types of stone tools produced, the exploitation of shellfish resources, and in the increase of archaeological sites that date to this time period. Archaeologists refer to this period as the Middle Archaic period (5500-3000 BC).

The Middle Archaic experienced a change in climate from the previous period. The Middle Archaic experienced more moisture and access to more water resources. This encouraged an intrusion of mixed pine and oak into the hardwood forest. As conditions became wetter after 6500 BC (Watts and Hansen 1988), large river systems and wetlands developed and people began to exploit the resources associated with these habitats (mainly freshwater shellfish). This trend toward more sedentary occupations and more circumscribed territories continued into the Late Archaic, as conditions became more similar to the modern environment. Milanich (1994) points out that Middle Archaic sites are found in a variety of locations around Florida including wetland systems. In sum, Middle Archaic habitation sites increased in size and the density of artifacts, and for the first time include large shell middens.

Lithic technology during the Middle Archaic is centered on the stemmed point. Few, if any Middle Archaic point types in Florida are side-notched. Stem configurations vary and some are no more than protrusions that extend from the basal region of the tool (e.g., Brier Creek or Morrow Mountain cluster). Other stem configurations are well formed and extend as obvious hafting attachments (e.g., the Newnan cluster). Alternate beveling of points was still practiced but to a lesser degree than during the Early Archaic period.

While basal grinding is seldom found on Middle Archaic forms, the use of thermal alteration increased during this time. Heat-treated chert is commonplace at Middle Archaic sites in Florida. Although the thermal alteration of chert took place throughout the Archaic, this practice appears to have peaked during the Middle Archaic (Ste. Claire 1987).

The Late Archaic (3000-500 BC) is characterized by the emergence of modern environmental conditions in Florida as major wetland systems developed (Watts and Hansen 1988:Table 3). Deposits from Lake Sheeler suggest that the dominant natural community was pine forests interspersed with swamps. Water levels were high and forest fires frequent during this time.

Due to the increase in wetland environments, a settlement and subsistence shift occurred emphasizing a greater use of marine, riverine, and wetland resources. While people did not necessarily occupy different environmental zones during this time, the use of shellfish intensified. Large shell middens that date to the Late Archaic are found throughout the state. This is thought to be the result of a reliance on riverine and coastal wetland resources. Extensive middens dating to the Late Archaic are found along the coast and inland waterways in many coastal areas of Florida, including Flagler County and north, Charlotte Harbor and south, and along the inland waterways of the St. Johns River. Although not apparent, many coastal areas not mentioned likely share the number and occurrence of Late Archaic sites; however, these areas, such as Tampa Bay, are thought to be inundated by rising sea levels, or anthropomorphic ecological changes (Warren 1970; Warren and Bullen 1965).

While many, if not most, of the same cultural traits were carried over from the Middle into the Late Archaic, certain developments separate the two periods. In particular, it is the use of steatite cooking vessels and the development of fiber-tempered pottery that are unique to the Late Archaic (Milanich 1994; Powell 1990).

The earliest ceramics in Florida are distinctively tempered with plant fibers and were developed ca. 2000 BC. This technology may have arisen independently in Florida, or diffused south from Georgia or South Carolina where earlier dates for fiber-tempered pottery have been obtained. Regardless of their origin, the earliest fiber-tempered wares were undecorated. By 1650 BC decorative techniques were used in their manufacture, including geometric shapes and punctuations. It is the advent of this fiber-tempered pottery that is associated with the Orange period cultures (Milanich 1994). The Orange period lasted from approximately 1650 BC to 500 BC.

The Orange ceramic tradition stretched along the Atlantic Coast between southern South Carolina and northern Florida. Orange Fiber-Tempered ceramics were first described by James Griffin (1945) and are considered among the earliest pottery types in North America. While fiber-tempered pottery is found throughout Florida, it is primarily recovered in eastern and central portions of the state. Orange Incised is recognizable by distinctive rectilinear incised and punctated designs that cover much of the exterior of the pot. Orange Plain is a variant that occurs on the same paste as Orange Incised; however, these wares are undecorated.

This pottery was hypothesized to exhibit changes in design and motif that designate different subperiods. The later subperiod, 1250-1000 BC, represents the introduction of sand into the ceramics as temper, as well as the introduction of the coiling method of manufacturing clay pots (Sassaman 1993). However, more recent work by Sassaman has rejected the claim the Orange period can be further broken down into subperiods based on decorative techniques applied to the exterior of the fiber-tempered ceramics. Recently, Sassaman has dated soot from the exterior of incised pottery that has produced dates as early as those extant for plain ceramics. Thus a cultural and not chronological explanation is hypothesized for the difference in Orange Plain and Orange Incised wares. In essence, the pottery manufactured with incisions tends to be thick, spiculate, tall, and used over fires, while the plain wares tend to be thin, non-spiculate, and never used over fire (Sassaman 2003). Thus, it appears that the difference between incised fiber-tempered wares and plain fiber-tempered wares is that the incised wares are for cooking over open flame, while the plain are not.

Another early fiber-tempered ceramic culture is hypothesized for the area that extends from the Gulf coast to the Orange series on the eastern coast. Called the Norwood culture, more resent research questions the necessity or validity of separating the fiber-tempered ceramic period into two cultures (Milanich 1994).

As the Late Archaic period progressed, more and more sand was added as a tempering agent for the clay used to make pottery. Eventually, this technique replaced the practice of using plant fibers as a tempering agent. Early sand and grit-tempered

pottery in north Florida was produced by the Deptford culture. Another dominant pottery tradition is called St. Johns ware. St. Johns pottery relies on microscopic sponge spicules, or endoskeletons, as temper. Although some sand was added to this pottery, St. Johns ware lacks the fiber, sand, and grit temper that is typical of other prehistoric pottery. Previously this pottery tradition was believed to follow in sequence the Orange fiber-tempered pottery tradition. However, recent work by Sassaman (2003) provides evidence that the Orange pottery sequence should be revised. According to Sassaman, the Orange periods (1-4) can effectively be condensed into one period, Orange 1. Soot samples dated from the exterior of Orange Incised pottery believed to date to the Orange 3 period have resulted in Orange 1 (4000-3650 radiocarbon years before present) period dates. Therefore the Orange 1 period also saw manufacture of incised as well as plain pottery, particularly in the middle St. Johns Valley and along the northeast coast of Florida. In addition, work by Cordell discussed by Sassaman (2003), also indicates the prevalence of speculate paste sherds, typical of the St. Johns manufacturing technique, present in Orange 1 period contexts. This evidence suggests that the advent of the St. Johns ceramic tradition occurred simultaneously with the very first pottery production during the Orange 1 period (ca. 4000 radiocarbon years before present) and extended beyond the Late Archaic period throughout the pre-contact period until the demise of the manufacturing culture.

Late Archaic sites, mainly extensive Archaic shell middens, are present along the coast of southwest Florida. Excavations resulted in the identification of Late Archaic middens on Useppa Island and Horr's Island in the 1980s (McMichael 1982). Marco Island also has several sites associated with the Late Archaic (Milanich 1994). The Late Archaic populations utilized all available resources along the coastline of Florida. The efficiency with which food was collected along the coast and other waterways allowed the populations of this period to become sedentary, and thus encouraging their social and cultural systems to become elaborated. By approximately 3000 BC it is believed that coastal and riverine cultures were characterized by "greater cultural complexity, sedentism, and regionalization." (Milanich 1994:104).

The general trend of the Late Archaic can be summarized as a shift towards large relatively permanent villages. Regional cultures continued to develop during this time and several examples of localized Late Archaic groups include Mount Taylor and Orange in northeast and east Florida, and the Elliot's Point Complex in northwest Florida.

Woodland Stage (500 B.C. to A.D. 1765)

Following the Late Archaic period, cultures associated with the Woodland Stage emerged. Woodland cultures can be briefly described as developing more regionalization than those during the preceding Archaic Stage. The current project area runs along the east coast of Florida and passes through two distinct archaeological regions, as described by archaeologists (Milanich 1994). These two archaeological regions are the East and Central and the Glades regions (Figure 2).

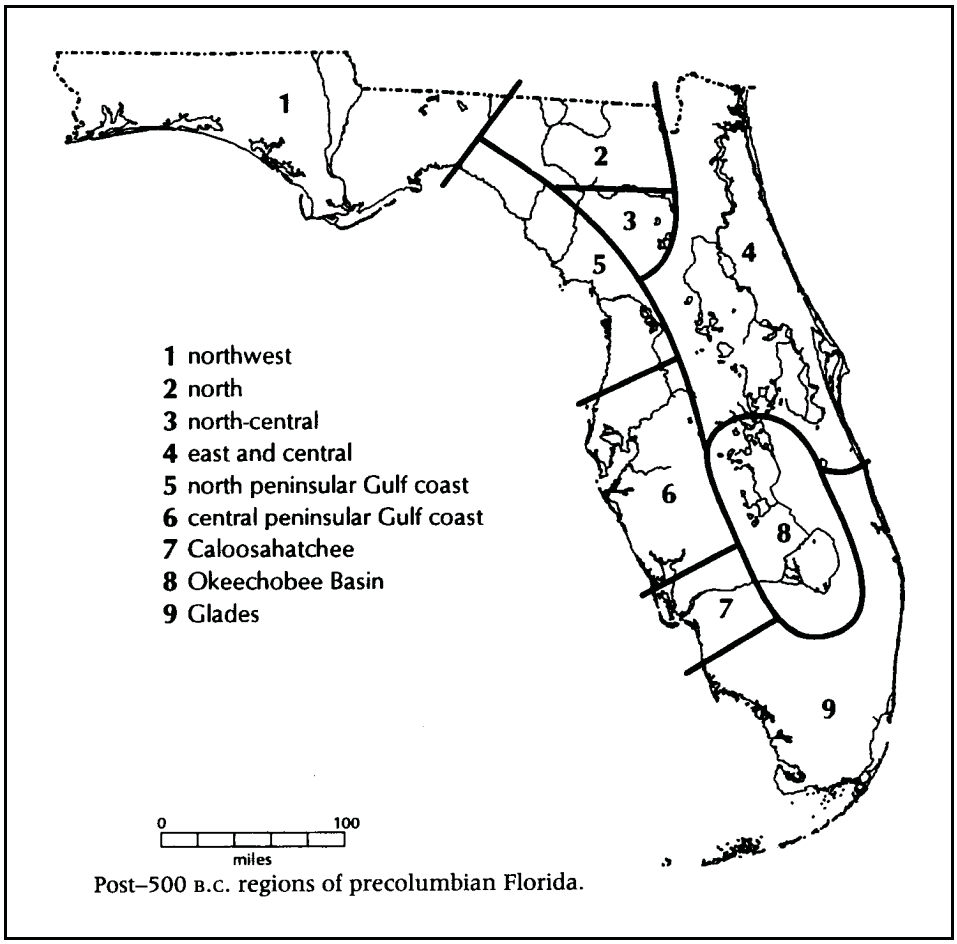

Figure 2. Post-500 B.C. archaeological regions of Florida (from Milanich 1994:xix).

East and Central Florida Region. The East and Central archaeological region of Florida is one of the largest archaeological regions found in the state. Although the area encompasses land that stretches from the eastern boundary with northern Georgia to the northern boundary of the Kissimmee River drainage (approximately the southern Indian River County boundary) and from the east coast of Florida to within 30 miles of Tampa Bay, the archaeological region is not a reflection of a unified culture area. Rather, it is an area that encompasses at least four distinct culture variations. Seven cultural regions border the extensive East and Central archaeological region creating distinct cultural areas within the region based on the mixing of archaeological traditions with neighboring culture areas. The primary trait by which this archaeological region is distinguished is the presence of St. Johns pottery. The four cultural areas found within the East and Central archaeological region include the St. Johns Heartland, Northeast Coastal Florida, Indian River Area, and the Central Lakes District (Russo 1992). The current project area exists within two of these, the St. Johns Heartland and the Indian River Area.

These four cultural areas have the presence of St. Johns pottery in common. The chronology for St. Johns pottery is divided into two parts, St. Johns I (500 B.C.–A.D. 800) and St. Johns II (A.D. 800-1565). The inception of the St. Johns II period is marked

by the production of St. Johns Check-stamped, and the terminus of this period is marked by the arrival of the Spanish. The two St. Johns periods are further subdivided based on adoption of incising techniques, red-slipping and the presence of trade wares.

St. Johns Heartland. The St. Johns Heartland encompasses an area that stretches from the mouth of the St. Johns River on the Atlantic Coast west to Lake Harney and south to the Indian River. The culture along this thin strip of area along the Atlantic Coast was initially believed to have arisen out of the earlier Late Archaic Orange culture period (Bullen 1972; Rouse 1951). With Sassaman's (2003) work indicating that St. Johns wares may occur simultaneously with Orange fiber or semi-fiber tempered wares, this may indicate that the St. Johns wares occurred earlier than previously believed. Regardless, the St. Johns wares show a continuity of design similar to the Orange incised wares. In general, St. Johns plain wares are common both temporally and spatially. Linear incisions are common in the early and late types. Dunns Creek Red is a red-filmed St. Johns type. Exotic wares are also located within burial contexts, these types include Deptford, Glades, Belle Glade, Swift Creek Complicated Stamped, Weeden Island, Savannah Cord Marked, Safety Harbor, and Fort Walton types.

Few if any chert outcroppings are located along this portion of the Atlantic coast, as a result, there are fewer lithic materials, resulting in a lack of a formal projectile point chronology for the area. Although chert is rare, some soft limestone is common, and limestone abraders are found throughout the area. In addition exotic steatite vessels are found in mortuary contexts. Due to the paucity of lithic material, coastal St. Johns peoples used bone and shell for tool and ornamental manufacture. Shellfish species were often used to create adzes, dippers cups, and terrestrial faunal bones were used for tools such as awls and ornamental objects such as pins and beads. The settlement patterns of the area include shell middens and mounds along the coast and less dense inland artifact scatters.

Indian River Area. Goggin (1952) and Rouse (1951) believed that the Indian River area, from its northern headwaters to its southern boundary near the St. Lucie Inlet, was remarkably different than the St. Johns heartland area found to the north. The lack of corn production and different social linguistic and religious customs were observed by the initial Spanish observers who came to the area. Archaeologically, this area is differentiated by an increase in sand-tempered pottery. Rouse (1951) gave this area a slightly different chronology termed Malabar and separated this chronology into two parts, Malabar I and Malabar II, based on similar variations as those found within the St. Johns heartland area. Due to the lack of differentiation found archaeologically, many archaeologists did not follow Rouse's example and grouped this area as a variation of the St. Johns culture region. In general differences extend to burial practices and site types. Although snails are the common midden type located in the heartland, mussels are the preferred shellfish midden located in the Indian River area. In addition, evidence suggests (Russo 1986) that the Indian River people inhabited inland areas during winter months, unlike those groups located to the north.

Glades Region. The Glades region includes coastal portions of St. Lucie, Martin, Palm Beach, Broward, Miami-Dade, and Monroe counties and most of Collier County. This area is bordered by the St. Johns/Malabar cultures to the northeast and the Caloosahatchee culture to the northwest. The Okeechobee Basin culture is present to the northwest and north-central of the Glades area, but is excluded from the Glades region. Researchers have divided the Glades area into differing culture regions. In general the Glades region can be divided into three geographical districts or culture areas, the East Okeechobee, the Ten Thousand Islands, and the Everglades. The current project area lies within the Everglades culture area.

The most dominant feature of the Glades region is the Everglades. The large marsh is mostly covered by sawgrass punctuated by higher ground or tree islands, called hammocks. The Big Cypress Swamp is another major physiographic and environmental area in the Glades regions. Coastal areas are dominated by estuaries, and saltwater marshes, and mangroves (Kozuch 1992).

Because the underlying rock of the area is porous limestone, and no chert outcrops exist in this region, lithic artifacts are fairly rare, in particular on the southeast coast. If chert is recovered from the Glades area, it is likely to have been imported, or traded from another area, such as the Tampa Bay area, where chert outcrops are numerous. Although chert artifacts are rare, limestone artifacts due exist, such as plummets, grooved pebbles, net sinkers, and hammerstones. Shell an abundant resource along the coast, is often even more dominant than limestone in the artifact assemblages from the area. The heavy stones such as *Busycon*, *Strombus*, and *Pleuroploca* (whelks and conchs) were the most common types to be used for the manufacture of picks, adzes, celts, chisels, awles, gouges, knives, scrapers, cups, saucers, dippers, and spoons. Smaller bivalves are thought to be used for smaller items such as net weights, sinkers, and on occasion, beads (Kozuch 1992). Bone tools, often made of deer bone or antler, were also common in inland sites. It is also known that prehistoric people used wood and plant fibers for cordage and decorative items through excavations at the Key Marco site where preservation in anaerobic muck was excellent.

As would be expected, settlement and subsistence had much to do with the local environment of the area. The coastal areas were capable of sustaining large populations with the abundant harvesting of shellfish, resulting in large shell middens at habitations sites along the coast. Inland sites are typically exhibited as earthen middens and indicate a subsistence heavily based on fish, mammals and reptiles, readily available in the inland environments.

The Glades area is divided into three temporal periods, with subsequent subperiods, including the Glades I (early and late), Glades II (a, b, and c) and Glades III (a and b). These periods and subperiods are based on ceramic seriation and the presence/absence of certain decorated ceramic wares.

Beginning with Glades I early (500 BC – AD 500), this period is marked by the predominance of pottery types that are undecorated, by Glades I late (AD 500-750),

decorative wares appear and include types such as Sanibel incised, Cane Patch incised and Fort Drum incised. Glades II a (AD 750-900) also is marked by incised wares such as Key Largo incised, Opa Locka incised, and Miami incised. Glades II b (AD 900-1100) is marked by the appearance of Matecumbe incised and vessel shapes are predominantly bowl-types. Glades II c (AD 1100-1200) exhibits a decrease in decoration, although some decorative wares exist, such as Plantation Pinched wares. Glades III a (AD 1200-1400) exhibit decorative wares such as Surfside Incised, Safety Harbor incised, and St. Johns Check Stamped. Glades III b (AD 1400-1513) marks a time when there are few decorated ceramics, with the exception of lightly decorated Glades tooled rims. Throughout all periods the pervasive sand-tempered plain is also present (Griffin 1988; Milanich 1994).

HISTORIC CONTEXT

At the time of the arrival of the first Europeans, the east coast of Florida was populated by several different Native American groups. The Indians living in northeastern Florida along the St. Johns River were Timucua, that is, they spoke a dialect of the language the Spaniards called Timucua. Although Timucuan groups had spread across northern Florida and into southern Georgia, they were not a unified group. Various dialects represent different cultures that probably never considered themselves a single entity (Milanich 1995). These people lived at least some of the time in medium-sized sedentary villages and their subsistence relied, at least in part, on agriculture. Cultivated products included corn, beans, and squash. The Indians also relied heavily on marine life and shellfish. Life continued in a fashion very similar to the previous St. Johns II period with a gradual population loss and cultural changes caused by increasing contact with Europeans and European disease.

The Indian River area at this time was occupied by the Ais, and the area immediately south of this was occupied by the related Jeaga. There is ethnohistoric evidence to suggest a vassal or similar type relationship between the cacique (chief) of the Jeaga and the Ais (Andrews and Andrews 1985). The Ais and Jeaga subsisted primarily by hunting, fishing, and gathering, with a large portion of their diet composed of oysters and other shellfish, fish, turtles, palm berries, and sea grapes. The Ais population density was greatest along the estuaries, rather than on the beaches (Dickel 1992). Similar to the Calusa of southwestern Florida, the Ais had a complex sociopolitical system with a paramount chief, who held power over local village chiefs. Tribal alliances were often cemented by rather tenuous elite marriages, and as marriages dissolved, alliances ceased as well. Rouse (1951) asserts that the Jeaga and the Ais are linguistically linked to the Calusa, and share more in common with their south Florida neighbors than the Timicuan tribes to the north. "Their culture was of the south Florida type, and their language belonged to the Calusa group. Politically too, their friendly relationships were almost entirely to the south of them" (Rouse 1951:34). Unlike their more northerly neighbors, the Jeaga and the Ais did not engage in horticulture. In addition, Rouse (1951) asserts that the Ais were not on good terms with their Timicuan neighbors to the north, nor their Mayami neighbors to the west.

The first recorded European to reach Florida was Juan Ponce de Leon who landed on the east coast near St. Augustine in 1513. Panfilo de Narvaez followed him in 1528, landing near Tampa Bay and trekking into the interior of Florida reaching the Apalachee region of west Florida. Hernando de Soto landed near Tampa Bay in 1539 and proceeded to march inland through Florida in search of gold. The de Soto trail, as reconstructed, headed north from the village of Ocale (approximately 25 miles southwest of present day Ocala) to the west of Gainesville, in the area of the San Felasco Hammock that was inhabited by Potano and Utina bands of Timucua Indians. From there, de Soto continued north into Georgia (Milanich and Hudson 1993).

In 1522 a *flota*, or convoy system, had been implemented to provide protection for ships bound to Spain from the colonies. By this time the sailing directions provided for the *flota* to follow the Gulf Stream northward, along the east coast of Florida, until turning east off the Carolinas and following the trade winds past Bermuda and onward to Spain. Although there had been previous attempts by the Spanish to establish colonies on the mainland, events in Europe were soon to provide an impetus for another, more determined effort to secure a base in Florida.

With the Protestant Reformation came the opportunity for non-Catholic interests to ignore the papal bulls of demarcation that had created a virtual Spanish monopoly in the Caribbean basin. Circumvention of these papal ordinances provided non-Catholic countries, such as England, Holland, and France, with a legal basis for moving into areas that heretofore had been the sole province of the Spanish Crown. These incursions threatened the maritime trade between Spain and her colonies, both by direct intervention and economic competition.

On May 1, 1562 French Protestants under the command of Jean Ribault found and explored a large river in the northern reaches of the Florida peninsula. Within a year the French successfully established Fort Caroline on what is today the St. Johns River, which they called the River of May. In 1564 an additional force of three hundred French Protestants joined the garrison already in place, and a foothold for the French was secured on the Florida mainland. This French presence created a strong threat to the Spanish shipping that had to follow the Gulf Stream and pass through the Bahamas Channel between the mainland and the Bahamas Islands (Franklin and Morris 1996).

The colony suffered from lack of supplies and poor relations with the local Indians. Jean Ribault was sent from France with supplies and a contingent of 600 soldiers and settlers to reinforce the fort (Tebeau 1971). The French and Spanish were in direct competition for Florida and the Spanish king, Phillip II, sent Admiral Pedro Menendez de Aviles to destroy Fort Caroline and reclaim the land for Spain.

Menendez established a base to the south of St. Augustine and continued to periodically attack the French. In response, Ribault formulated a plan to attack St. Augustine from the sea and organized a group of French ships to carry this out. The ships ran aground during a hurricane at Matanzas Inlet to the south of St. Augustine. With 500 soldiers, Menendez took advantage of the loss of the French fleet and attacked

the poorly defended colony at Fort Caroline on September 20, 1565. Almost all of the settlers were massacred except for approximately 60 women and children who were captured (Gannon 2003). About fifty other settlers escaped Menendez and sailed for France. Fort Caroline was claimed by the Spanish and renamed San Mateo (Milanich and Hudson 1993).

Menendez then turned south and engaged the shipwrecked French fleet, Ribault among them, at Matanzas Inlet. The French surrendered, but Menendez, believing they were heretics and faced with the problem of caring for about 350 prisoners, killed all but those professing to be Catholic or a musician. To secure the northern boundaries of Spanish La Florida against any further invasions from other colonial powers, a small town was settled at Santa Elena on the coast of South Carolina. The St. Augustine settlement was maintained and a string of Spanish missions were established west across Florida towards Tallahassee (Tebeau 1971).

Menendez went on to found the city of St. Augustine in 1565. Chosen for its strategic location, St. Augustine existed as a military outpost and as a base for missionaries, who worked at converting the native population to Catholicism. Military operations took place in the form of land patrols to keep other colonial powers (such as France and Britain) from infringing on the Spanish claim. Spanish military ships also used St. Augustine as a base of operations for protecting the gold-laden ships that passed through the Florida Straits en route to Spain from Mexico and South America.

In an effort to convert the local Indians and recruit Native American labors for Spanish projects such as the construction of the fort in St. Augustine, Menedez instituted a mission system across north Florida in 1565 (Hann 1996; Milanich and Hudson 1993). Timucuan villages were targeted for the construction of missions and accounts of both mission and Indian life were included in Spanish documents throughout the seventeenth century. These accounts mention skirmishes between native groups and the Spanish, disease epidemics, and the decline of indigenous populations (Buchholz 1929; Gannon 1965; Johnson 1991; Milanich and Hudson 1993).

In 1586, Sir Francis Drake, with 2,000 men and 23 heavy war ships, overpowered the eighty armed Spanish men defending the Spanish city via a hastily erected wooden fort, located at the site of the Castillo de San Marcos. Drake looted the town and ordered it burned. During the reconstruction of St. Augustine, the Castillo de San Marcos was reinforced. As the number of Timucuan Indians living in this region of Florida had sharply declined since the arrival of the Spanish, Guale and Yamassee Indians from the Georgia coast and Apalachee Indians from western Florida began to move into the area around St. Augustine during the 1600s. The efforts to Christianize the Timucua, Guale, and Apalachee Indians increased through the mission system. By 1684 the English settled in Charleston, South Carolina, and influenced the Indians to overthrow the Spanish in Florida (Tebeau 1971).

In their effort to take the town of St. Augustine, the English destroyed the missions north of the city in 1702, but failed to take the stone fort. Like Drake, the English burned St.

Augustine. St. Augustine was rebuilt, however, and by 1708 it was the only remaining Spanish mission in Florida.

After continual struggle for control of the coast, Spain ceded all of Florida to England in the Treaty of Paris dated 1763. The British split Florida into two parts: East Florida, with its capital in St. Augustine, and West Florida, with its capital at Pensacola. While the Spanish cession caused an immediate rush from Carolina for land to use for rice cultivation in the areas above the St. Mary's, the area south of the St. Mary's was for the most part ignored, since it was characterized as "dismal swamp" (Chesnutt 1978:6). Yet the area was full of timber to be harvested and cultivated for the production of naval stores.

The American Colonies declared their independence from British rule in 1776. According to Coomes (1975), Georgia and South Carolina required their citizens to take a strict oath of loyalty to the Revolutionary cause, and this forced loyalists to seek shelter in the Province of East Florida.

Commerce with Charleston and other British colonies also quickly increased as the trade restrictions that the Spanish Crown had imposed on the colony were removed with the arrival of the British. A greater emphasis was soon placed on the export of naval stores and ships timbers, and the Royal Navy's demand for more vessels was a constant consideration as well. Even the coming of the American Revolution did little to impact the export of these products, and in 1782 alone over 20,000 barrels of turpentine were exported (Fairbanks 1975).

The native population had been ravaged by war and disease, which had left much of Florida uninhabited by Native Americans by ca. 1750. This void allowed the Creeks from Alabama, Georgia, and the Carolinas to migrate into Florida. In 1765, these migrating Indians were referred to with the Spanish term *cimarrone,* or "wild" and "runaway", in the field notes accompanying de Brahm's 1765 map of Florida. The term "seminole" is thought to have derived from this reference (Fernald and Purdum 1992).

The Seminoles prospered in Florida raising cattle and growing their traditional crops of corn, beans, squash, and tobacco, as well as crops such as sweet potatoes and melons borrowed from the Spaniards (Fairbanks 1973). The Seminoles established permanent towns from the Apalachicola River to the St. Johns River. Instead of the mission system of the Spanish, the British set up several trading posts in Florida. Seminoles traded deer, wild cattle, and furs in exchange for guns, iron tools, cloth, and a variety of ornamental jewelry (Fairbanks 1973). During this time, runaway black slaves from the Carolina colonies fled to Florida and sought refuge either in a black colony outside St. Augustine, where they were to become farmers and, occasionally, soldiers, or in the Seminole settlements in the interior of the colony. The Seminoles helped the runaways form their own settlements, and often prevented slave-catchers from capturing them (Fairbanks 1973).

The Spanish continued the British system of controlling the Seminoles through trade. Rum became a common trade good and credit was extended to the Seminoles, who were unable to produce enough skins to balance their accounts. Seminole land was often accepted as payment (Fairbanks 1973).

At the Revolutionary War's end, the British defeat at the hands of the American colonists saw a new Treaty of Paris, which returned sovereignty of Florida to the Spanish and began the Second Spanish Period. With the return of the Spanish to East Florida came the attempt to reassert Spanish religious and cultural dominance in the region, which had adopted a multi-cultural character under British rule. Although St. Augustine returned to its position of a Spanish trade entrypoint, it was no longer an essential military position guarding the route of Spanish shipping returning to the Old World. Trade also took on a more international aspect, with more vessels entering the harbor under foreign flags than under the flag of Spain (Griffin 1983). The influx of foreign nationals into the north Florida region likewise contributed to the continued deterioration of Spanish dominance in the area, along with a growing sentiment that the new United States should control Florida (Franklin and Morris 1996).

Indian refugees from the Creek War of 1814 fled to Florida and almost doubled the Seminole population. The new Seminoles were mostly Upper Creeks, originating from central Alabama, and spoke the Muskogean language. The Florida Seminoles spoke the Mikasuki language (Fairbanks 1973). Border conflicts between the Seminole and white settlers increased and culminated in 1817 with the First Seminole War. General Andrew Jackson, known to the Seminoles as Sharp Knife, invaded Seminole territory killing Indians and burning houses. This military effort was largely responsible for Florida becoming a United States Territory in 1819 with Andrew Jackson as a military governor. Florida became an U.S. territory in 1821. Landowners who had been granted land under Spanish rule were permitted to keep their land. Governor Jackson organized the Territory of Florida into two counties, Escambia and St. Johns, with the legislative council meeting in Pensacola in 1822, and in St. Augustine in 1823 (Tebeau 1971). The First Seminole War ended with the Treaty of Moultree Creek in 1823, which stipulated that the Seminoles would move to a reservation in the middle of Florida.

During the territorial period, methods of transportation to connect the coasts to the interior became a priority. In addition to road improvement and new road construction, increased travel up inland rivers through the harness of steam power, and the constant consideration of a canal to be cut through the state, rail routes began to crisscross the state of Florida. In 1845 Florida became a state, though by 1861 it would again leave the Union.

The Payne's Landing Treaty of 1832 required the Seminoles to relinquish their land within three years and move onto reservations in the western United States. The Seminole leader Osceola killed Chief Charley Emathla who had agreed to move his town to Oklahoma. When the three years had expired, 180 Seminoles attacked a column of 108 men led by Major Francis Dade. The attack took place near the Withlacoochee River near present-day Bushnell while Dade and his men were en route from Ft. Brooke

(present-day Tampa) to Ft. King (near present-day Ocala). The Seminoles left only three men alive at the battle and they died within a matter of weeks from their wounds (Chamberlin 1995). With minimal Seminole casualties, the raid was an overwhelming victory. The battle demonstrated to the U.S. Army that the Seminole, when organized, represented a considerable military force. In addition, the victory resulted in the capture of over one hundred U.S. Army muskets by the Seminole.

On the same day as the attack on Dade, Osceola led an assault on Fort King. These incidents sparked the Second Seminole War. The federal forces were confused by the Seminole raid-and-run tactics and were unfamiliar with the wooded and swampy terrain. The war spread to the south, in the vicinity of Lake Okeechobee, in the Everglades. In 1837, Osceola was taken prisoner under a white truce flag and brought to Fort Marion (Castillo de San Marcos) in St. Augustine. His fellow Seminole prisoners starved themselves until they were able to escape through their cell windows. Osceola, however, contracted malaria and later died in Fort Moultree, South Carolina. His head was removed prior to the burial of his body by the attending physician, Dr. Frederick Weeden, and was later brought back to St. Augustine as a personal souvenir (Nolan 1995). The war continued until 1842, when several hundred Seminoles were shipped to the western territories. In total, the Second Seminole War cost the United States an estimated $40,000,000 and the lives of 1,500 troops.

The Third and final Seminole War erupted in 1849 when an Everglades army surveying party led by Lieutenant Hartsuff happened upon Chief Bowlegs' field of corn, beans, pumpkins, and bananas. The surveyors destroyed the plot and kicked Bowlegs to the ground. The next day Bowlegs returned with his men and severely wounded the surveyors in a skirmish. Because of these events, the Third Seminole War is also referred to as Billy Bowleg's war. During this period forts were reactivated and war was again declared. By 1858, after a series of sporadic skirmishes, the Third Seminole War ended with the shipment of 123 Seminoles to Oklahoma. However, 100-300 Seminoles who evaded capture remained in the Everglades (Fernald and Purdum 1992). The present-day Seminole and Miccosukee Tribes of Florida and the Independent Seminole of Florida are direct descendants of the Seminole that could not be forcibly removed during the Seminole Wars. As a result of forced removal, Seminole Indians also now live in Texas and Oklahoma.

During the Civil War, Florida had joined the Confederate States of America. Small militia bands formed in 1861 when Florida seceded from the Union. Many locals joined the Confederate Army and later spent their time flushing out Union supporters. Florida's primary role in the Civil War was to provide supplies and troops to the Confederacy. In a blockaded south where supplies were difficult to obtain, the Confederate Impressment Act collected food supplies including beef, pork, rice and potatoes from Floridians that were stored in warehouse depots throughout the state. Few significant battles were fought within the state. The west coast of Florida was a major salt producing area throughout the south during the War Between the States (Dayton 1986).

In early 1862 Federal forces began to occupy Florida. Sailors and marines from the *U.S.S. Hatteras* landed at Cedar Key, destroying the wharf and depot. Cedar Key was virtually unprotected since Confederate troops had been sent along the railroad to protect Fernandina. Yet when Federal troops reached Amelia Island on March 3, they found the Confederates leaving, and simply took possession of Fort Clinch, St. Mary's, and Cumberland Island (Tebeau 1971).

Coastal communities in Florida continued to be raided and occupied at will by Union forces. Fortunately there were no military objectives in the interior to draw attention, and no invasion occurred until 1864 (Tebeau 1971). Jacksonville was invaded and abandoned four separate times. In April of 1862, as the Confederates withdrew after the first invasion, they destroyed eight of their own sawmills, along with four million board feet of lumber, an iron foundry, and an ironworks. Retreating Confederate forces followed the tracks inland towards Baldwin, nineteen miles west of Jacksonville, where three railway lines converged. To prevent it falling into enemy hands, the Confederate troops pulled up several miles of railroad track along the route (Tebeau 1971).

During the fourth invasion, Union troops again entered Jacksonville and moved towards Baldwin along the rail track route. Confederate forces withdrew along the track of the advance, and finally a definitive battle was fought at Olustee. The Confederate troops retained control of Florida's interior.

After the Civil War, reconstruction proceeded in Florida at a decidedly slow pace, but by the end of the nineteenth century, Florida's population had increased to approximately 400,000 people (Marth and Marth 1988). This was due to homesteading acts as well as the citrus, naval stores, lumber, cattle, phosphate, and tourist industries. Major railroads were constructed throughout the state during this time. The railroads built by Henry Plant, William Chipley, and Henry Flagler opened up previously undeveloped areas of the state. Freezing temperatures in northern parts of Florida encouraged the development of the citrus industry in south Florida, and growers began the long process of converting swampland to farmland (Gannon 2003).

Governor Napoleon Bonaparte Broward brought Progressive politics to Florida at the turn of the century, calling for improved education, health standards, natural resource protection, development of south Florida, and prison reform, among other issues. Social change occurred rapidly in Florida in the early twentieth century. Electrical and telephone service reached many parts of the state, and commercial goods were more accessible (Gannon 2003). The early twentieth century also saw the beginning of prohibition. Florida's geographical location and miles of coastline made it very attractive to smugglers bringing liquor from the Bahamas and other Caribbean islands (Gannon 1996).

For Florida, the 1920s were a time of boom and bust, both fueled by real estate and land development. Swelling property prices and land values fed booms in transportation, construction, and banking. The state became a desirable vacation and retirement destination. In 1926, Florida's economy collapsed and bank failures became

daily occurrences. Two major hurricanes in 1926 and 1928 and the arrival of the Mediterranean fruit fly in 1929 complicated matters. Despite the blow to the citrus industry, agriculture (fruit and truck farming, cotton, corn, and cattle) remained the economic mainstay of the state. Although real estate and tourism rebounded slightly towards the end of the decade, the forward momentum was halted by the stock market crash of 1929 (Gannon 1996).

In sharp contrast to the glamorous lifestyles of the wealthy on Florida's coasts, African-American life in Florida for the first half of the twentieth century was defined by political and social repression. Blacks were kept from voting by the Poll Tax and all-white primaries. The turpentine industry imposed a type of forced labor on many black workers (Gannon 2003).

New Deal politics and tourism dollars helped during the depression of the 1930s, yet Florida's economy benefited from the onset of World War II. Its temperate climate led to its extensive use for training troops, and it was not unheard of to spot German submarines off the Atlantic coast. The development of the highway system that accompanied this military growth contributed to a boom in tourism after the war ended. Industry and agriculture also rebounded during the 1940s. Both migrant labor and labor unions became more common (Gannon 2003).

In the second half of the twentieth century, Florida has experienced a tremendous influx of population from within the United States and from other countries, including Cuba and Haiti. Cape Canaveral on the Atlantic coast has been the site of many historic advances in space exploration. Tourist attractions bring millions of visitors from around the world to Florida every year. Industry and agriculture continue to thrive in Florida today.

Florida East Coast Railway

One of the most important developments in the history of Florida was the coming of the railroads in the late 1800s. Key among them along the east coast of the state was the Florida East Coast Railway (FEC). This railroad, which in large part spurred the growth of southeast Florida by allowing for a great increase in the movement of people and goods to and from the area, owed itself to the initiative of Henry M. Flagler. Making his first fortune in 1867 as a founding member of the company that became the Standard Oil Company, Flagler did not set out to be a railroad magnate when he first visited Florida as a tourist in the winter of 1877-1878 (Bramson 2003). Due to the poor health of his wife, the Flaglers were advised to spend some time in the favorable climate of Florida. They visited Jacksonville, which was about as far south as the railroad extended at that time. After returning to New York, his wife’s condition eventually worsened, and she died of tuberculosis in 1881. In 1883, Flagler remarried, and he and his new wife Ida honeymooned in St. Augustine. The Flaglers fell in love with the city along with the beautiful vegetation and pleasing climate and began to spend more and more time away from their home on Long Island (Harner 1973; Turner 2003).

While Flagler was infatuated with St. Augustine, he also recognized that the lodgings were not to his standard and would never be able to entice wealthy visitors from the North (Bramson 2003). He decided to change this and, in 1885, purchased some land on the edge of town and began construction on a luxury hotel named the Ponce de Leon. He began construction on a more modest hotel, the Alcazar, across the street before the Ponce de Leon was even finished and also purchased the adjacent Casa Monica hotel. Construction materials for the hotels were brought in on the existing narrow gauge Jacksonville, St. Augustine & Halifax Fiver Railway. While serviceable for materials, this rail line was cheaply built and was known for poor passenger service. In order to meet the exacting standards of Flagler and his future hotel guests, it required upgrading. In 1886, Flagler purchased a controlling share of the railroad and set about installing standard gauge rails and adding new cars and locomotives. He even added a bridge over the St. Johns River to bypass the ferry service that was fraught with delays (Harner 1973; Turner 2003).

When the Ponce de Leon hotel formally opened in 1888, Flagler and his wife made it to the festivities in their private railroad car that traveled between Jacksonville and St. Augustine on the railroad Flagler purchased (Harner 1973). With a railroad to get them to Florida and a grand hotel in which to stay, get-rich-quick land speculators quickly arrived. They were thinking of development, and so was Flagler. But Flagler was also interested in the transportation side of development—he wanted to move agricultural products out and manufactured products in to Florida, and he wanted people to move in both directions on his railroads. Repeating what he had done before, Flagler bought more small railroads, changed them to standard gauge, and put passenger cars on them. For free property along the right of way, Flagler extended the railroad south to Rockledge on the Indian River in modern-day Brevard County. The first locomotives arrived in Rockledge in February 1893. The railroad was slowly fulfilling one of its goals, which was to reach the newly opened citrus and truck farming lands (Harner 1973).

In 1892, the Jacksonville, St. Augustine & Indian River Railway was formed and gathered up the various railroads that Flagler had purchased. It also became a holding tank for Flagler's properties given the new land grant policy in Florida whereby 8,000 free acres of land were granted for each mile of railroad constructed (Turner 2003). In May 1893, Flagler broke ground for a new luxury hotel, the Royal Poinciana in Palm Beach. The railroad was continued south towards this location reaching Eau Gallie in June 1893, Fort Pierce in January 1894, and eventually West Palm Beach in March 1894 a month after the Royal Poinciana opened (Bramson 2003; Turner 2003).

Julia Tuttle and William Brickell, large landowners near the Miami River, tried to entice Flagler to continue the railroad to Biscayne Bay, but Flagler initially resisted because the area was so sparsely populated. Following the devastating freezes of 1894-1895 however, which did not affect citrus crops along Biscayne Bay, Flagler was convinced. Construction began south of West Palm Beach towards Miami in September 1895 (Turner 2003). That same month, the name of the railroad was formerly changed to the Florida East Coast Railway (Bramson 2003). Early in 1896, Flagler began

construction on a new luxury hotel, the Royal Palm, on Biscayne Bay, and the extension of the FEC to the Miami River was completed in April 1896. Owing its growth to the coming of the railroad, the city of Miami was incorporated a few months later in July 1896 (Turner 2003).

The end of the nineteenth century and early twentieth century saw the further expansion of the FEC including acquisition of a line between Enterprise and Titusville, extension of the railroad near Jacksonville to Mayport, and extension of the southern portion of the line to Homestead. The most ambitious FEC project was started in 1905 and was the Key West Extension. This monumental task involved bridging the expanses between individual keys and even adding to the island of Key West itself to create enough space to accommodate a railway terminal and docks. Despite hardships, including an October 1906 hurricane that killed almost 150 workers, the Key West extension was completed seven years after it began. The first train arrived at Key West on January 22, 1912 with the 82-year-old Henry Flagler on board (Bramson 2003; Turner 2003).

During the 1920s boom years in Florida, the FEC saw substantial growth. New locomotives and cars were added, new lines were built, and new stations and other facilities were constructed. A line along the east side of Lake Okeechobee running mostly through western Martin County was added. Most significantly, the mainline between Jacksonville and Miami was double tracked to allow for increased traffic. In 1926, twelve trains per day operated on the FEC mainline (Bramson 2003; Turner 2003).

The Depression hit the FEC hard, with bankruptcy declared in 1931. The corporation went into receivership and operated at a much smaller scale. The FEC witnessed ups and downs in revenue as the years progressed as well as legal wrangling resulting from the bankruptcy. It was not until 1961 that the FEC finally emerged from bankruptcy as a new corporation under the direction of Edward Ball. The early 1960s also saw labor disputes and strikes that interrupted service. Although passenger service was resumed in 1965 on a limited basis, it was finally suspended in 1968. After this, the FEC focused on freight and piggyback containers. Revenues increased drastically and the $100 million mark was surpassed in 1980 (Bramson 2003; Turner 2003). The FEC currently operates 351 miles of mainline track along the east coast of Florida (Florida East Coast Railway, LLC 2009).

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RESEARCH DESIGN

A research design is a plan to coordinate the investigation from the inception to the completion of the project. This plan should minimally account for three things. It should make explicit the goals and intentions of the research. It should define the sequence of events to be undertaken in pursuit of the research goals. A research design should also provide a basis for evaluating the findings and conclusions drawn from the investigation.

OBJECTIVES

The goal of this cultural resource assessment survey is to locate and document the existence of potentially important historic occupation or use along the FEC mainline between the northern and southern termini of the FEC Amtrak Passenger Rail project and to evaluate any possible viewshed issues or other effects related to increased rail traffic. These activities typically manifest as archaeological or historic sites, historic structures, or archaeological occurrences (single artifact finds). Cultural resource assessment surveys typically attempt to locate evidence of any past human activities that are archaeologically discernable with current investigative techniques. The techniques employed must be able to identify the kinds of sites expected in the region, yet be cost effective, as not to expose the public to excessive expense.

The current project calls for use of the existing FEC mainline between West Palm Beach and Jacksonville without major physical alterations. As per consultation between FDOT District 4 and the SHPO, the APE of the project regarding archaeology was confined to the existing FEC mainline ROW. Additionally, the APE regarding historic architecture was limited to areas immediately beside existing grade crossings. After reviewing plans and data provided by FDOT District 4 regarding the return of passenger service on the FEC mainline, SHPO and all other parties involved agreed that the historic resources to be considered near the grade crossings were limited to existing or potential historic districts. Also, archaeological testing was not required within the FEC ROW, since the proposed use of the FEC mainline corridor for passenger service will not involve any ground-disturbing construction activities. Previously recorded archaeological sites located beside the railroad corridor were considered, but also were not required to be reassessed through additional subsurface testing or surface inspection.

The research strategy is typically composed of four interrelated and roughly sequential components: a background investigation, a historic document search, the formulation of an aboriginal site location predictive model, and the field survey. The background investigation included a review of the relevant archaeological literature produced a summary of previous archaeological work in Florida and a discussion of previous survey work undertaken near the project area. The Florida Master Site File was checked for any previously recorded sites within the project area and to provide an indication of the prehistoric settlement and land-use patterns for the region. Soil surveys,

vegetation maps, and relevant literature were consulted to provide a description of the physiographic and geological region of which the project area is a part.

The historic document search involved a review of both primary and secondary historic sources. Relevant historical sources were checked for any information pertaining to the existence of historic structures, sites of historic events, and historically occupied or noted aboriginal settlements within the project limits. Because no new archaeological testing within the FEC mainline corridor was required, as determined through consultation between FDOT District 4 and the SHPO, an aboriginal site location predictive model was not formulated for this survey.

EXPECTED RESULTS

The most common historic sites along much of the eastern coast of Florida are late-nineteenth to early-twentieth-century homesteads. It was not until the arrival of the railroads, including the FEC, that extensive development of the area began. In fact, many of the early historic towns developed along the railroads and were focused on these features. We expected to encounter historic neighborhoods and commercial districts that had the railroad as a major focus, particularly within the southern half of the project area.

Historic settlement within the northern portion of the project area, particularly within St. Augustine and Jacksonville, was established much earlier. Within these areas, there was the potential for historic resources that predated the railroad.

SURVEY METHODOLOGY

Desktop Phase

Prior to undertaking fieldwork along the FEC mainline, a GIS analysis of the project corridor was completed. Railroad and transportation related data was downloaded from the Florida Geographic Data Library (FGDL). Railroad data included the Florida Rail Network – 2009 dataset, which included statewide coverage. This dataset is a subset of the national rail network at a 1:100,000 scale. The FEC line was extracted from this dataset and plotted on 1:24,000 scale USGS topographic quadrangles. Because slight differences were noted between the railroad data and the route portrayed on the topographic quadrangles, due to the differences in scale, the quadrangles were used as guides during replotting of the railroad corridor according to the smaller scale maps.

Also downloaded from the FGDL was the Florida Highway-Rail Grade Crossings – 2009 dataset. This also represents a subset of a national inventory at a scale larger than 1:24,000. However, because it included reference information, specifically road names and crossing number designations, that were to be used to locate them in the field, this data was used as is.

A search was made using information on the topographic quadrangles and FMSF data dated January 2010 for recorded or potential historic resources beside grade crossings. At each grade crossing along the project corridor, it was noted if previously recorded structures or resource groups were located nearby. If any resource groups were noted, it was determined if they represented historic districts that were either recommended as potentially eligible for NRHP listing or were already listed on the NRHP. If so, the corresponding crossings were noted on a list of crossings to be visited in the field to be visually assessed for potential adverse effects.

If any previously recorded structures were noted within two blocks of a grade crossing, it was determined if any were recommended as potentially eligible for a district or were simply not evaluated for a district. If all of the structures within the general vicinity were recommended as ineligible for contributing to a district, the corresponding grade crossings were not field visited. Otherwise the grade crossings were visited to briefly assess the potential for a historic district visible from them.

If no previously recorded structures were noted nearby a grade crossing, but the topographic map depicted structures possibly predating 1965, these structures were further examined on the property appraisers' websites. Property appraiser information was used to determine if a grouping of similarly aged structures built prior to 1965 were located within the vicinity of the grade crossing. If so, the crossing would be added to the list to be visited in the field to briefly assess the potential for a historic district that might be adversely affected by the project. If many of the buildings were constructed after 1965, usually indicating modern infilling, then the corresponding crossings were not field visited.

Fieldwork Phase – Grade Crossings

Prior to undertaking fieldwork along the FEC mainline, a list of grade crossings to be visited was compiled based on the desktop GIS study. Of the 288 grade crossings along the project area corridor, 78 were thought to have the potential for issues and were visited in the field. Because the statement of work called for consideration of possible adverse effects to only recorded or potential historic districts rather than individual structures, new historic structures were not recorded and information was not gathered to updated previously recorded structure forms.

During the fieldwork, photographs were taken of the crossings and from the crossings in directions parallel to both the railroad and roadways to illustrate the viewshed. If recorded historic districts were located nearby, shots were also taken towards them from the grade crossings. Photographs were also taken of particular adjacent structures of interest. Notes were taken that constituted brief field assessments of the potential for historic districts that might be affected by increased rail traffic at the grade crossings.

Bridge Study Methodology

The methodology established for the bridge study was agreed upon at the April 29, 2010 conference call between the SHPO/DHR, FDOT District 4, FDOT Environmental Management Office (EMO) and FDOT's cultural resources consultants, Janus Research and Panamerican Consultants, Inc. During the April 2010 conference call, an extensive discussion regarding the proposed improvements took place; the project team stated that no structural changes would be made to the existing bridges. The APE for the railroad mainline was limited to the existing ROW of the mainline, and the railroad bridges documented during the survey fall within this established APE.

A list of bridges along the mainline was provided by the FEC. For the majority of the bridges along the mainline this list included the year built and basic information, such as length and facility crossed. A field review of the bridges listed as historic (built in 1962 and earlier) or without construction dates was then conducted by Janus Research. Comprehensive background research and a historic resources field study were conducted for the APE in order to identify historic and potentially historic bridges. An architectural historian and one technical assistant conducted field visits to photograph and document the bridges along the FEC mainline that were built during or before 1962, and bridges for which construction dates were not available. Using the milepost and locational information provided by the FEC, each historic and potentially historic bridge was mapped on aerial photographs prior to the field visit in order to ensure best possible access. FMSF and GIS records were examined prior to field work in order to note historic bridges already recorded in the FMSF.

Because of the restricted access, surveyors could not walk on the actual mainline ROW. When possible, photographs were taken of each historic and potentially historic bridge from outside of the railroad ROW. A log was kept to record each bridge's physical location and compass direction of each photograph. Each bridge then received a visual reconnaissance and preliminary evaluation. Historic physical integrity was determined from the limited site observations, field data, and photographic documentation. Bridge types were evaluated using the *Context For Common Historic Bridge Types,* a 2005 document by Parsons Brinckerhoff and Engineering and Industrial Heritage. In addition, a history of the FEC Railway, *Rails 'Neath the Palms* by Robert W. Mann and *Florida's Historic Railroad Resources National Register of Historic Places Multiple Property Submission* was reviewed for any relevant bridge information.

DESKTOP STUDY

GIS SEARCH

A basic search of the FMSF GIS dated January 2010 was performed as part of the desktop study of the FEC mainline corridor. Although the focus of the study was on the grade crossings within the project area, the search was made for cultural resources in proximity to the entire FEC Amtrak Passenger Rail project mainline corridor to get a sense of total amount of resources presently recorded. Since we were interested only in those areas immediately adjacent or in very close proximity to the FEC railroad and the road grade crossings, an arbitrary buffer distance of 100 m from the centerline was used in the GIS search.

Sixty-one resource groups have been previously recorded within 100 m of the FEC mainline corridor (Table 1). More than half of these (n=33) represent linear resources including roads, canals, and railroads. These include portions of the FEC railroad itself within seven of the nine counties through which the project corridor runs. No segments of the FEC railroad have been previously recorded within Indian River County prior to the current project. A branch of the FEC railroad has been recorded within Martin County as 8MT1450, but it is a branch that runs through the western portion of the county, not the portion of the FEC mainline that constitutes the FEC Amtrak Passenger Rail corridor. Of the 61 resource groups identified, 41 are located within 100 m of a grade crossing.

Table 1. Previously Recorded Resource Groups within 100 m of the FEC Mainline.

Site No.	Name	Type	Time Significance	Historic Association	SHPO Evaluation	Near Crossing
8BR1612	Valencia Subdivision Residential District	Historical District	Boom Times, 1921-1929	Architecture; Community planning & development	Not Evaluated	no
8BR1868	Historic Canal	Linear Resource	Twentieth century American		Not Evaluated	no
8BR1870	Florida East Coast Railroad	Linear Resource	1881-1932	Community planning & development; Local; Transportation	Potentially Eligible for NRHP	yes
8BR2173	Union Cypress Saw Mill Historic District	Mixed District	1912-1932	African American history; Architecture; Engineering; Industry; Invention; Other	Not Evaluated	yes
8DU3798	Fletcher Park Historic District	Historical District	World War I & Aftermath, 1917-1920	Architecture; Community planning & development	Not Evaluated	yes
8DU13980	King's Road	Linear Resource	British, 1763-1783; Nineteenth century American	Exploration/ settlement; Transportation	Potentially Eligible for NRHP	no
8DU17719	Railroad Segment - 8SX	Linear Resource	Disston Era of Consolidation and Expansion (1881-1903)	Community planning & development; Transportation	Potentially Eligible for NRHP	yes

Site No.	Name	Type	Time Significance	Historic Association	SHPO Evaluation	Near Crossing
8DU17729	Seaboard Airline Railway	Linear Resource	Nineteenth century American, Twentieth century American	Transportation	Potentially Eligible for NRHP	no
8DU18995	US1, Phillips Highway	Linear Resource	Twentieth century American	Transportation	Ineligible for NRHP	yes
8DU19019	Georgia Southern & Florida Railroad	Linear Resource	Twentieth century American	Transportation	Insufficient Information	no
8FL291	US-1	Linear Resource	1915-1959	Community planning & development; Transportation	Ineligible for NRHP	yes
8FL298	Florida East Coast Railroad	Linear Resource	1892-1957	Community planning & development; Transportation	Potentially Eligible for NRHP	yes
8IR859	McKee Jungle Gardens	FMSF Building Complex	1931-1947	Commerce; Entertainment/ recreation; Landscape architecture	Potentially Eligible for NRHP	no
8IR989	Dinky Line	Linear Resource	Nineteenth century American, Twentieth century American	Community planning & development; Transportation	Not Evaluated	no
8IR1048A	Old Town Sebastian Historic Dist West	Historical District	Nineteenth century American, Twentieth century American	Community planning & development	Potentially Eligible for NRHP	yes
8IR1048B	Old Town Sebastian Historic Dist East	Historical District	Nineteenth century American, Twentieth century American	Community planning & development; Social/humanitarian	Potentially Eligible for NRHP	yes
8IR1138	Quay Bridge Road Segment	Linear Resource	Nineteenth century American	Transportation	Ineligible for NRHP	no
8IR1148	Indian River Farms Main Canal	Linear Resource	Twentieth century American	Community planning & development; Local	Ineligible for NRHP	no
8IR1189	Williamz Resource Group	Rural Historic Landscape	1927-1957		Ineligible for NRHP	yes
8MT1410	Blue Heron Cottage Mobile Home Park	Historical District	Modern, 1950-present	Unspecified by surveyor on site form	Ineligible for NRHP	yes
8MT1440	Driftwood Motel Resource Group	Historical District	Modern, 1950-present		Ineligible for NRHP	no
8MT1481	Camp Murphy Railroad Spur	Linear Resource	1942-1944	Military; Other	Insufficient Information	no
8MT1513	Indian River Drive/Church Street District	Historical District	Nineteenth century American	Architecture; Community planning & development	Potentially Eligible for NRHP	no
8PB9906	Northwood Hills Historic District	Historical District	1920+	Architecture; Community planning & development	Potentially Eligible for NRHP	yes
8PB11371	Dixie/Beach Drive-In Theater Complex	FMSF Building Complex	Modern, 1950-present	Architecture; Community planning & development; Entertainment/ recreation	Ineligible for NRHP	yes
8PB12102	Florida East Coast Railway	Linear Resource	1892-present	Community planning & development; Transportation	Insufficient Information	yes
8PB13330	Old Dixie Highway	Linear Resource	Twentieth century American	Transportation	Insufficient Information	yes

Site No.	Name	Type	Time Significance	Historic Association	SHPO Evaluation	Near Crossing
8PB13340	Kelsey City Layout	Historical District	1921-1940	Community planning & development; Landscape architecture	Not Evaluated	yes
8SJ2462	Model Land Company Historic District	Historical District	1839-1930	Agriculture; Archaeology-historic; Architecture; Commerce; Community planning & development; Education	Potentially Eligible for NRHP	no
8SJ2492	Railroad Park	Designed Historic Landscape	+1894	Community planning & development; Other; Transportation	Potentially Eligible for NRHP	no
8SJ3476	Old King's Road	Linear Resource	1763-early 20th century	Exploration/ settlement; Transportation	Potentially Eligible for NRHP	no
8SJ3482	Old King's Road	Linear Resource	American, 1821-present	Transportation	Potentially Eligible for NRHP	yes
8SJ5036	FEC: St. Augustine and Palatka	Linear Resource	1892-1957	Community planning & development; Transportation	Potentially Eligible for NRHP	yes
8SJ5270	County Road 210	Linear Resource	Twentieth century American	Transportation	Ineligible for NRHP	yes
8SJ5271	US 1	Linear Resource	Twentieth century American	Transportation	Ineligible for NRHP	yes
8SJ5273	Nine Mile Road	Linear Resource	First Spanish, Later 1700-1763; Nineteenth century American	Transportation	Insufficient Information	yes
8SJ5298	King Street	Linear Resource	Nineteenth century American, Twentieth century American	Transportation	Potentially Eligible for NRHP	yes
8SJ5348	Nocatee/ US-1 Annex Resource Group	Historical District	Mid-20th Century	Unspecified by surveyor on site form	Ineligible for NRHP	no
8SJ5395	Leo C. Chase Park	Designed Historic Landscape	Twentieth century American		Not Evaluated	yes
8SL1648	A1A	Linear Resource	Nineteenth century American, Twentieth century American	Transportation	Ineligible for NRHP	yes
8SL1655	Indian River Drive	Linear Resource	Twentieth century American	Transportation	Not Evaluated	yes
8SL1657	Midway Road	Linear Resource	1890s	Community planning & development; Transportation	Ineligible for NRHP	yes
8SL1663	US1	Linear Resource	1900s	Community planning & development; Transportation	Ineligible for NRHP	yes
8SL1665	Indrio Road	Linear Resource	Twentieth century American	Transportation	Ineligible for NRHP	yes
8SL1666	Dixie Highway	Linear Resource	Twentieth century American	Transportation	Not Evaluated	yes
8SL2799	Downtown Historic District	Historical District	1910-1957	Architecture; Community planning & development	Not Evaluated	yes

Site No.	Name	Type	Time Significance	Historic Association	SHPO Evaluation	Near Crossing
8SL2801	Edgar Town Historic District	Historical District	ca. 1880-1957	Architecture; Community planning & development	Not Evaluated	yes
8SL2802	River's Edge Historic District	Historical District	ca. 1900-1957	Architecture; Community planning & development	Not Evaluated	no
8SL3014	FEC RR- Lake Harbor Branch	Linear Resource	Nineteenth century American, Twentieth century American	Community planning & development; Transportation	Potentially Eligible for NRHP	yes
8VO255	Old King's Road	Linear Resource	American Acquisition/Territorial Develop; American Civil War	Transportation	Potentially Eligible for NRHP	yes
8VO3132	New Smyrna Beach Historic District	Historical District	1885-1935	Architecture; Commerce; Exploration/settlement	Potentially Eligible for NRHP	no
8VO7125	Dunlawton Avenue Historic District	Historical District	ca. 1885-1941	Architecture; Community planning & development; Other	Not Evaluated	yes
8VO7188	Southwest Daytona Beach Black Heritage	Historical District	1884-1948	Architecture; Community planning & development; Ethnic heritage	Potentially Eligible for NRHP	yes
8VO7195	Rose Bay Causeway	Linear Resource	Nineteenth century American, Twentieth century American	Transportation	Potentially Eligible for NRHP	yes
8VO7599	Florida East Coast Railroad Buildings	Historical District	1921-1950	Architecture; Transportation	Insufficient Information	no
8VO7655	Lake Helen to Daytona Rd.	Linear Resource	Nineteenth century American, Twentieth century American	Transportation	Insufficient Information	yes
8VO8305	Holly Land Park	Designed Historic Landscape	unspecified by recorder	Architecture; Community planning & development	Not Evaluated	yes
8VO8538	Westside Community	Historical District	1903-1946	African American history; Architecture; Commerce; Community planning & development; Local	Not Evaluated	yes
8VO8606	Florida East Coast Railroad	Linear Resource	1892 - present	Agriculture; Commerce; Community planning & development; Exploration/ settlement; Industry; Transportation	Not Evaluated	yes
8VO8610	Hall Machine Works	FMSF Building Complex	ca. 1910 - present	Commerce; Community planning & development; Industry; Local	Not Evaluated	no
8VO8652	507 N Duss St	FMSF Building Complex	1880 - 1940	Architecture; Commerce; Exploration/ settlement; Industry; Local	Not Evaluated	yes

Twenty-six National Register (NR)-listed resources are located within 100 m of the FEC mainline corridor (Table 2). These include 15 individual buildings, 7 historic districts, 2 sites, 1 bridge, and 1 linear resource (a canal). Three of the seven NR-listed historic districts are also located within 100 m of a grade crossing. Considering all of the NR-listed resources, 11 are located within 100 m of a grade crossing.

Table 2. Resources Listed on the NRHP within 100 m of the FEC Mainline.

Site No.	Name	Address	Type	Year Listed	Near Crossing
8BR177	St. Gabriel's Episcopal Church	414 Palm Ave.	building	1972	yes
8BR215	Florida Power and Light Company Ice Plant	1604 S. Harbor City Blvd.	building	1982	no
8BR759	Whaley, Marion S., Citrus Packing House	2275 US 1	building	1993	no
8BR1612	Valencia Subdivision Residential District	14--140 Valencia Rd., 825--827 Osceola Dr. and 24--28 Orange Ave.	district	1992	no
8BR1710	Jorgensen's General Store	5390 US 1	building	1999	yes
8FL86	Bunnell State Bank Building, Old	101--107 N. Bay St.	building	1992	yes
8IR68	Vero Railroad Station	2336 Fourteenth St.	building	1987	no
8IR149	Lawson, Bamma Vickers, House	1133 US 1	building	1990	no
8IR624	Vero Beach Community Building, Old	2146 14th Ave.	building	1993	no
8IR859	McKee Jungle Gardens	350 US 1	site	1998	no
8IR975	Vero Beach Diesel Power Plant	1246 19th St.	building	1999	yes
8IR1048A	Old Town Sebastian Historic District, West	Bounded by Palmetto Ave, Lake and Main Sts.	district	2004	yes
8IR1048B	Old Town Sebastian Historic District East	Main and Washington Sts., Riverside Dr., FEC Railroad	district	2003	no
8MT86	Lyric Theatre	59 SW. Flagler Ave.	building	1993	yes
8MT348	Martin County Court House, Old	80 E. Ocean Blvd.	building	1997	no
8SJ2462	Model Land Company Historic District	Roughly bounded by Ponce de Leon Blvd., King, Cordova, and Orange Sts.	district	1983	no
8SL31	Fort Pierce Site	South Indian River Dr.	site	1974	no
8SL71	Cresthaven	239 S. Indian River Dr.	building	1985	no
8SL289	Fort Pierce City Hall, Old	315 Avenue A	building	2001	yes
8SL799	Sunrise Theatre	117 S. 2nd St.	building	2001	no
8SL1141	Moores Creek Bridge	N. 2nd St. between Aves. B and C	bridge	2001	no
8VO697	Port Orange Florida East Coast Railway Freight Depot	415C Herbert St.	building	1998	yes
8VO3132	New Smyrna Beach Historic District	Roughly bounded by Riverside Dr., US 1, Ronnoc Ln., and Smith St.	district	1990	no

Site No.	Name	Address	Type	Year Listed	Near Crossing
8VO7056	Turnbull Canal System	Address Restricted	linear resource	2007	yes
8VO7125	Dunlawton Avenue Historic District	Roughly along Dunlawton Ave. to Lafayette Ave., and Orange Ave. and Wellman St.	district	1998	yes
8VO7188	Southwest Daytona Beach Black Heritage District	Roughly bounded by Foote Court, South St., Dr. Martin Luther King Blvd., and the FEC RR tracks.	district	1997	yes

Fifty-one archaeological sites have been previously recorded within 100 m of the FEC mainline corridor (Table 3). Only seven of these archaeological sites are located within 100 m of a grade crossing. One of those is 8IR1049, which is defined as structural remains of an FEC railroad platform. Of the sites near grade crossings, most have not been evaluated by the SHPO, one has been evaluated as ineligible for the NRHP, and one has been listed on the NRHP. The listed site is 8VO7056, the Turnbull Canal System, a part of which the railroad crosses.

Table 3. Previously Recorded Archaeological Sites within 100 m of the FEC Mainline.

Site No.	Name	Type	Cultures	SHPO Evaluation	Near Crossing
8BR572	UWF 10	Single artifact or isolated find	Prehistoric lacking pottery	Not Evaluated	no
8BR1867	Brick Chimney	Building remains	Twentieth century American	Not Evaluated	no
8DU35	Low Mound A	Destroyed; Prehistoric mound(s)	St. Johns I	Not Evaluated	yes
8DU36	Low Mound B	Destroyed; Prehistoric burial mound(s)	St. Johns Ib	Not Evaluated	yes
8DU14637	Site 1	Artifact scatter-low density	Twentieth century American	Ineligible for NRHP	no
8DU19047	Brooklyn Miles	Historic refuse / Dump; Artifact scatter-dense	Twentieth century American	Ineligible for NRHP	no
8DU19847	Gary Street	Historic refuse / Dump	Nineteenth century American; Twentieth century American	Ineligible for NRHP	yes
8FL152	Tank Lake	Water control structure or dam	Twentieth century American	Not Evaluated	no
8IR1	Vero Man	Prehistoric burial(s); Paleontological in addition to cultural evidence; Redeposited site (to this location)	Prehistoric	Not Evaluated	no
8IR7	Gifford Bones Site	Campsite (prehistoric); Land-terrestrial; Artifact scatter-low density	Other; Prehistoric lacking pottery; Prehistoric	Insufficient Information	no
8IR9	Vero Locality	Land-terrestrial; Other; River/Stream/Creek-riverine; Artifact scatter-low density	Archaic; Malabar I; Malabar II; Paleoindian; Prehistoric with pottery	Not Evaluated	no

Site No.	Name	Type	Cultures	SHPO Evaluation	Near Crossing
8IR846	Railroad	Prehistoric shell midden; Variable density scatter of artifacts	Malabar	Not Evaluated	no
8IR982	Lipfert B	Land-terrestrial	Other	Ineligible for NRHP	no
8IR1049	FEC RR Platform Structural Remains	Land-terrestrial	Twentieth century American	Not Evaluated	yes
8MT20	Jonathan Dickinson State Park		Historic; Prehistoric; Spanish-First Period	Not Evaluated	no
8MT372	Roosevelt Bridge Site	Habitation (prehistoric); Prehistoric shell midden; Artifact scatter-low density	Prehistoric	Not Evaluated	no
8MT1279	Hobe Sound National Wildlife Refuge #1	Specialized site for procurement of raw materials; Habitation (prehistoric); Prehistoric shell midden; Artifact scatter-dense	Prehistoric with pottery	Not Evaluated	no
8MT1287	Hobe Sound National Wildlife Refuge #3	Campsite (prehistoric); Prehistoric shell midden	Prehistoric	Not Evaluated	no
8MT1331	Big Knife Site			Not Evaluated	no
8MT1482	Camp Murphy's Quartermaster's Warehouse	Building remains	Twentieth century American	Insufficient Information	no
8SJ3178	Fairbanks Plantation	Building remains; Cistern; Historic refuse / Dump	African-American; American	Not Evaluated	no
8SJ3179	Fort Mose Line	Historic earthworks	Spanish-First Period	Not Evaluated	no
8SJ4814	Twin Creek Historic #1	Historic refuse / Dump; Artifact scatter-low density; Artifact scatter-dense; Store site or ruin; Historic town	Nineteenth century American; Twentieth century American; Modern	Ineligible for NRHP	no
8SJ4845	The Gate Hinge Site	Building remains	Twentieth century American	Ineligible for NRHP	no
8SJ4965	Mark W. Lance	Historic refuse / Dump	Twentieth century American	Ineligible for NRHP	no
8SJ5005	Miller Shops	Building remains	Twentieth century American	Ineligible for NRHP	no
8SJ5034	Waste Transfer - 1	Land-terrestrial	Twentieth century American; Late Archaic; Orange; Prehistoric	Ineligible for NRHP	no
8SJ5256	Charao II	Agriculture/Farm structure; Building remains; Homestead	Twentieth century American	Ineligible for NRHP	no

Site No.	Name	Type	Cultures	SHPO Evaluation	Near Crossing
8SJ5286	Oakbrook - 2	Land-terrestrial; Other	Twentieth century American; Late Archaic; British; Orange; Prehistoric; St. Johns Ia; St. Johns Ib; St. Johns IIa	Ineligible for NRHP	no
8SJ5312	Hilden Road Site	Homestead; Land-terrestrial; Other	Twentieth century American	Not Evaluated	no
8SJ5358	San Sebastian Bridge Remains	Bridge; River/Stream/Creek-riverine	Nineteenth century American; Twentieth century American	Ineligible for NRHP	no
8SJ5399	Duprez/Durbin Structure Remains	Historic town	Twentieth century American; Prehistoric lacking pottery	Not Evaluated	no
8SJ5436	K-367-3	Land-terrestrial	Twentieth century American	Not Evaluated	no
8SL3	Ft. Pierce Mound and Midden	Habitation (prehistoric); Prehistoric burial mound(s); Prehistoric shell midden; Prehistoric midden(s)	Nineteenth century American; Twentieth century American; Malabar I; Malabar II	Not Evaluated	no
8SL8	(no name)	Prehistoric midden(s)	Prehistoric with pottery	Not Evaluated	no
8SL31	Fort Pierce	Historic fort	American Acquisition/Territorial Development; American, 1821-present	Not Evaluated	no
8SL41	Ft. Capron	Historic fort	Nineteenth century American; American Acquisition/Territorial Development; American, 1821-present	Not Evaluated	yes
8SL292	Walton Railroad 1	Building remains; Habitation (prehistoric); Artifact scatter-low density; Artifact scatter-dense	Nineteenth century American; Twentieth century American; Historic	Not Evaluated	yes
8SL1121	Makielski Mound	Prehistoric burial mound(s)	Prehistoric	Not Evaluated	no
8SL1136	Pineapple	Building remains; Campsite (prehistoric); Farmstead; Habitation (prehistoric); Homestead	Nineteenth century American; Twentieth century American	Ineligible for NRHP	no
8SL1174	M-8 Historic Scatter 2	Building remains; Subsurface features are present; Homestead; Historic refuse / Dump; Artifact scatter-low density	Twentieth century American	Ineligible for NRHP	no
8SL1175	M-8 Historic Scatter 3	Subsurface features are present; Historic refuse / Dump	Twentieth century American	Ineligible for NRHP	no
8SL1719	Indian River Dr (site #2)	Homestead; Historic refuse / Dump	Nineteenth century American; Twentieth century American	Insufficient Information	no

Site No.	Name	Type	Cultures	SHPO Evaluation	Near Crossing
8SL1720	Indian River Dr (site #4)	Campsite (prehistoric); Specialized site for procurement of raw materials	Malabar I	Potentially Eligible for NRHP	no
8SL1724	Indian River Dr (Site #8)	Campsite (prehistoric); Specialized site for procurement of raw materials; Homestead; Prehistoric midden(s); Historic refuse / Dump	Nineteenth century American; Twentieth century American; Malabar I	Potentially Eligible for NRHP	no
8SL3016	Eden Outbuildings and Tennis Courts			Not Evaluated	no
8VO239	Spruce Creek Midden	Prehistoric shell midden	Prehistoric	Not Evaluated	no
8VO627	J D	Homestead; Prehistoric burial mound(s); Prehistoric shell midden; Historic refuse / Dump	Twentieth century American; American, 1821-present; Early Archaic; St. Johns I; St. Johns II; Early Woodland	Insufficient Information	no
8VO633	Osborne Place	House	American, 1821-present; Reconstruction	Not Evaluated	no
8VO2596	Laura's Landing	No field investigation--record based on informant; Wharf / Dock / Pier	Historic	Not Evaluated	no
8VO7056	Turnbull Canal System	Canal; Historic earthworks; Inundated land site; Land-terrestrial; Other; Freshwater submerged site	Twentieth century American; British; Other	NR-listed	yes

A total of 1,079 previously recorded historic structures are situated within 100 m of the FEC mainline corridor. Of these, 412 are located within 100 m of grade crossings. Given the focus on districts rather that individual buildings, these structures are not listed individually.

Thirteen historic bridges have been previously recorded within 100 m of the FEC mainline corridor (Table 4). These include bridges along roads near the FEC and two railroad bridges (8DU13284 and 8MT1382) along the FEC corridor. Only one of the 13 previously recorded bridges is located within 100 m of a grade crossing. Finally, 10 historic cemeteries have been recorded within 100 m of the corridor, only two of which are located within 100 m of grade crossings (Table 5).

Table 4. Previously Recorded Historic Bridges within 100 m of the FEC Mainline.

Site No.	Name	Year	Engineers	Design	Materials	SHPO Evaluation	Near Crossing
8DU1556	St. Elmo W. Acosta Bridge			Girder--Floorbeam; Movable--Lift	Steel	Not Evaluated	no
8DU9170	Beaver St. Viaduct	1929	MacDougal Construction Company (Atlanta)	Stringer--Girder Box/ Multi Beam	Concrete; Steel	Not Evaluated	yes
8DU13284	Myrtle Avenue Subway Bridge	c1908	unknown	Arch--Deck	Concrete	Potentially Eligible for NRHP	no
8DU17724	I-95/ Myrtle Ave.	c1955	unknown	Arch--Through	Concrete; Steel	Potentially Eligible for NRHP	no
8FL184	Bunnell Overpass	1935		Girder--Floorbeam	Concrete	Not Evaluated	no
8FL289	US1 Northbound/Black Branch Creek bridge	1958		Other	Concrete	Ineligible for NRHP	no
8FL290	US1 Southbound/Black Branch Creek bridge	1948		Other	Concrete	Ineligible for NRHP	no
8MT930	Old US1 / Roosevelt Bridge	1933	unknown	Movable--Bascule; Stringer--Girder Box/ Multi Beam	Pre-stress Concrete	Ineligible for NRHP	no
8MT1382	Florida East Coast Railway Bridge	1938	unknown	Movable--Bascule	Steel	Potentially Eligible for NRHP	no
8SJ3266	FDOT 784006	1927	unknown	Slab	Concrete	Not Evaluated	no
8SJ3297	San Sebastian Bridge	1935	Department of Transportation Central Office	Unspecified	Concrete; Steel	Ineligible for NRHP	no
8SJ5295	San Sebastian Bridge	1960	T.W. Jennings	Other	Concrete	Ineligible for NRHP	no
8SL1141	Moores Creek Bridge	1925	Luten Bridge Company	Arch--Deck	Concrete	Potentially Eligible for NRHP	no

Table 5. Previously Recorded Historic Cemeteries within 100 m of the FEC Mainline.

Site No.	Name	Year	Type	Ethnic Group	Near Crossing
8BR1724	Hilltop Cemetery	1887	Community	African American	no
8BR1777	Cocoa Cemetery	1890	Community	White, Non-Hispanic	yes
8BR2406	Mt. Carmel Missionary Baptist Church Cem	c1915	Community; Religious	African American	yes
8DU14263	Craig Swamp Cemetery	c1867	Community; Religious	White, Non-Hispanic	no
8MT1290	Hobe Sound AME Church Cemetery	c1937	Religious	African American	no
8PB218	Evergreen Cemetery	1916	Community	African American	no
8SL1579	St. Lucie Cemetery	1882	Family	White, Non-Hispanic	no
8SL1629	Bethel Memorial Park	1950	Religious	Other; White, Non-Hispanic	no
8VO7058	Clinton Family Cemetery	c1894	Community	White, Non-Hispanic	no
8VO7320	Woodland Cemetery	1875	Community	Unspecified by surveyor	no

FEC Railroad Segments

The FEC Amtrak Passenger Rail project mainline runs through nine different counties within Florida. The FEC is assigned separate site numbers within the FMSF for each individual county. It has been the practice of FMSF staff to group all branches of the FEC within a single county under a single number, sometimes combining previously assigned numbers under a single designation to do so. Under this system, the FEC mainline corridor corresponds to nine different linear resources (Table 6).

Table 6. FEC Railroad Segments Recorded along FEC Mainline.

Site No.	Name (within FMSF)	County	Multiple Branches Recorded	SHPO Evaluation
8BR1870	Florida East Coast Railroad	Brevard	yes	Potentially Eligible for NRHP
8DU17719	Railroad Segment-8SX	Duval	no	Potentially Eligible for NRHP
8FL298	Florida East Coast Railroad	Flagler	no	Potentially Eligible for NRHP
8IR1497	Florida East Coast Railroad	Indian River	no	Not Evaluated
8MT1450	FEC Railroad	Martin	yes	Insufficient Information
8PB12102	Florida East Coast Railway	Palm Beach	no	Insufficient Information
8SJ5036	FEC: St. Augustine and Palatka	St. Johns	yes	Potentially Eligible for NRHP
8SL3014	Florida East Coast Railroad	St. Lucie	yes	Potentially Eligible for NRHP
8VO8606	Florida East Coast Railroad	Volusia	yes	Not Evaluated

The northern end of the FEC Amtrak Passenger Rail project corridor corresponds to a portion of 8DU17719 in Duval County. As previously recorded, this linear resource consists of a single railroad corridor running from the northern to the southern boundary of Duval County. The FEC Amtrak Passenger Rail project runs along the southern half

of this previously recorded linear resource. Linear resource 8DU17719 has been evaluated as potentially eligible for the NRHP by the SHPO.

As recorded within St. Johns County, 8SJ5036 consists of the FEC mainline and the Palatka Branch. The Palatka Branch was actually the original mainline of the railroad as constructed by the Jacksonville, St. Augustine and Halifax River Railway and later acquired by the company that would become the FEC. The portion of the current mainline south of St. Augustine, along which the FEC Amtrak Passenger Rail project runs, was built in 1925 and is referred to as the Moultrie Cutoff (Bramson 2003). There is a short section, roughly 1.25 miles (2 km) in length, immediately north of St. Augustine where the recorded site 8SJ5036 and the FEC mainline deviate slightly from each other due to a recent realignment of the tracks in this area. Linear resource 8SJ5036 has been evaluated as potentially eligible for the NRHP by the SHPO.

Moving south, the linear resource recorded within Flagler County as 8FL298 consists of a single line running north-south through the county. This corresponds to the current alignment of the FEC mainline and is the route of the FEC Amtrak Passenger Rail project. A portion of the Palatka Branch runs through Flagler County, but it has not yet been mapped along with the 8FL298 linear resource. Being outside the scope of the current project, it was not mapped at this time either. Linear resource 8FL298 has been evaluated as potentially eligible for the NRHP by the SHPO.

Within Vousia County, the FEC is recorded as 8VO8606 and consists of multiple branches. As currently mapped, 8VO8606 includes the mainline, a segment running between Edgewater and Maytown which corresponds to the northern portion of the Kissimmee Valley Extension, and a short section of the Enterprise Branch running from Maytown to the southern county line. The FEC Amtrak Passenger Rail project runs along the mainline portion of 8VO8606. This resource has not been evaluated by the SHPO. Based on our survey of the mainline, it is clear that it retains its historical alignment. The FEC was significant in the development of the county and represents an important part of the commercial and transportation history of the county. For these reasons, PCI recommends that 8VO8686 as potentially eligible for inclusion on the NRHP under Criterion A.

Immediately south of this, the FEC within Brevard County is recorded as 8BR1870. As previously recorded within the FMSF, 8BR1870 consisted of the portion of the Enterprise Branch running through the county to Titusville and the portion of the mainline between Titusville and the southern county line. The portion of the FEC mainline running between Titusville and the northern county line was not previously mapped, despite it being an historic segment of the FEC mainline. Since the FEC Amtrak Passenger Rail project runs along the entire FEC mainline within Brevard County, this section was added to 8BR1870 as part of the current project. Linear resource 8BR1870 has been evaluated as potentially eligible for the NRHP by the SHPO.

The FEC within Indian River County was not previously recorded within the FMSF. As part of the current project, the FEC mainline running through the county, on

which the FEC Amtrak Passenger Rail project runs, was assigned the number 8IR1497. Although the track materials have been replaced over the years, the historical alignment of the FEC mainline through the county still exists. Given its importance for transportation and commerce within the county and the fact that it was a major impetus in the growth of several towns including the City of Vero Beach, 8IR1497 is recommended as potentially eligible for inclusion in the NRHP under Criterion A.

The FEC was previously recorded within St. Lucie County as 8SL3014 under the name "FEC RR – Lake Harbor Branch." As it was mapped, it consisted of the northern portion of the FEC mainline between the northern county line and just south of Fort Pierce and the Lake Harbor Branch running southwest from this point through the county. Since it consists of more than just the Lake Harbor Branch, the name has been altered to simply "Florida East Coast Railroad," and the southern portion of the FEC mainline has been added to the linear resource as part of the current project. The FEC Amtrak Passenger Rail project runs along the entirety of the mainline through the county. Linear resource 8SL3014 has been evaluated as potentially eligible for the NRHP by the SHPO.

To the south within Martin County, the FEC was previously recorded within the FMSF as 8MT1450 under the name "FEC Railroad." As it was mapped, it consisted of only the Lake Harbor Branch running through the western portion of the county. The FEC Amtrak Passenger Rail project runs along the FEC mainline existing within the eastern portion of the county. As part of the current project, we have added the mainline section to the mapping for 8MT1450. The SHPO has noted that there was insufficient information to evaluate 8MT1450. The current survey of the mainline portion suggests that the historical alignment remains intact, although the materials have been replaced over the years. Given this along with the historical importance of the FEC within the developmental history of the county, it is PCI's recommendation that 8MT1450 is potentially eligible for inclusion on the NRHP under Criterion A.

The southern end of the FEC Amtrak Passenger Rail project corresponds to a portion of 8PB12102 in Palm Beach County. This previously recorded linear resource is mapped as the FEC mainline running from the northern to the southern county lines. A section of the Lake Harbor Branch also runs through Palm Beach County, but it has not yet been mapped within 8PB12102 and is out of the scope of the current project. The SHPO has noted that there was insufficient information to evaluate 8PB12102. The current survey of the northern section of the mainline within the county suggests that the historical alignment remains intact, although the materials have been replaced over the years. Given this along with the historical importance of the FEC within the developmental history of the county, it is PCI's recommendation that 8PB12102 is potentially eligible for inclusion on the NRHP under Criterion A.

ANALYSIS OF GRADE CROSSINGS

Located along the FEC Amtrak Passenger Rail project mainline are 288 grade crossings (Figures 3-12, Table 7). Previously recorded structures were located nearby 117 of these crossings. An analysis of these previously recorded structures indicated that

68 crossings were surrounded by structures that had been recommended by their surveyors as being ineligible to contribute to a historic district. As a result, these particular crossings were not visited in the field. The remaining 49 crossings with previously recorded structures nearby were slated for field visits due to a variety of reasons including some of the structures recommended as potentially eligible to contribute to a district, not being evaluated by the surveyor or the SHPO, or NR-listed or eligible resources within the area.

No previously recorded structures were noted nearby 171 of the grade crossings. Examination of topographic quadrangles indicated that 39 of these crossings did have potentially historic structures located nearby them. These particular locations were further examined via the county property appraisers' websites. The property appraiser searches indicated that 14 of the crossings were surrounded by modern structures either completely or in large part. These corresponding 14 crossings were not field visited. The remaining 25 crossings appeared to have groupings of structures that were 45 years old or older and should be assessed briefly for the potential of historic districts. These 25 crossings were visited in the field.

In addition, four crossings that did not have previously recorded structure or potentially historic structures depicted on topographic quadrangles were visited in the field. These included one in Jacksonville that had two apparently destroyed prehistoric mounds nearby, one in St. Johns County in which the crossing road was recorded but not evaluated, one near New Smyrna Beach where a NR-listed canal was located, and one near Vero Beach nearby the NR-listed McKee Jungle Gardens. In all, 78 grade crossings were determined to require field visits for visual assessments to be made (see Figures 3-12).

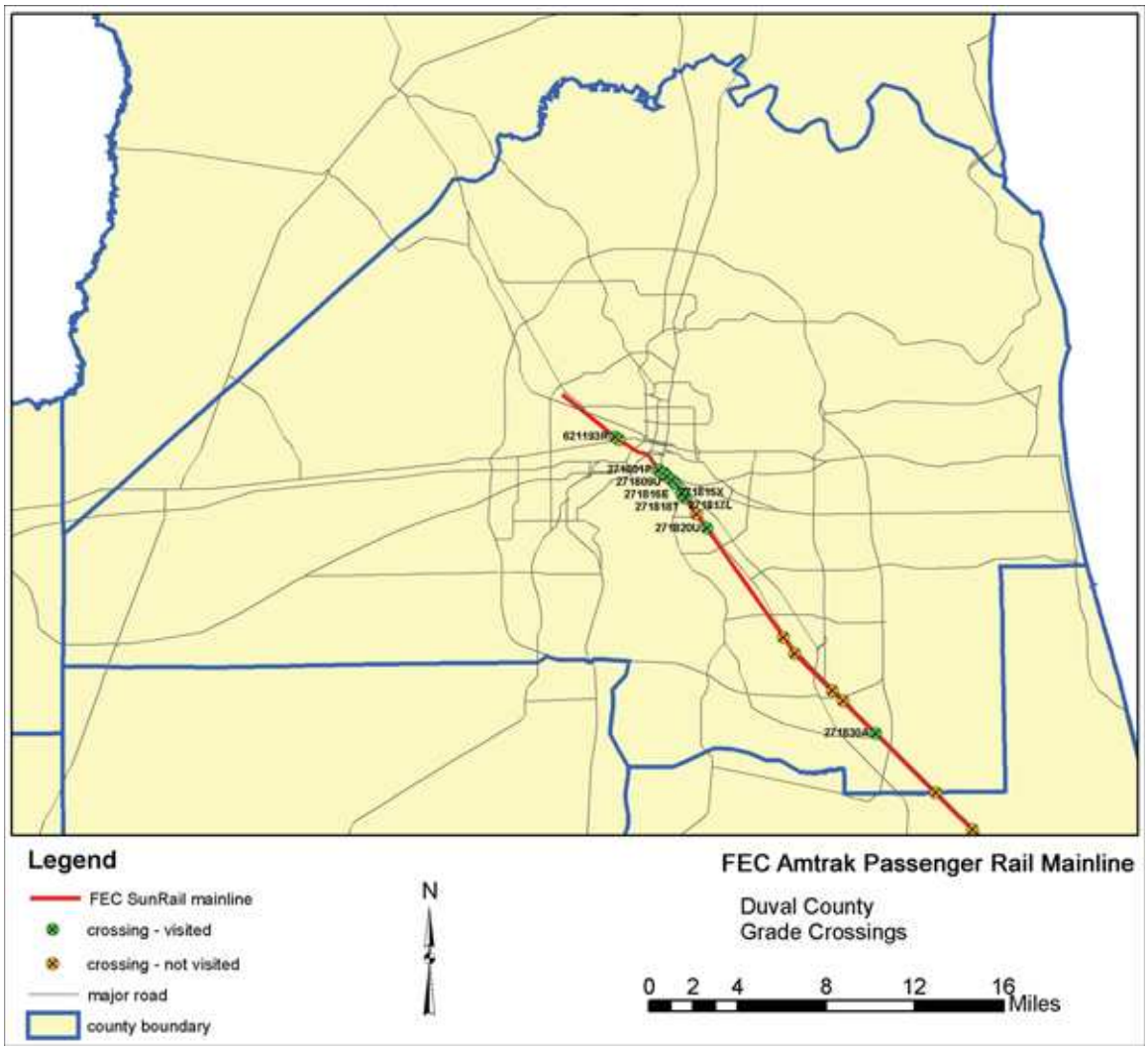

Figure 3. Map of Duval County showing FEC Amtrak Passenger Rail mainline and grade crossings.

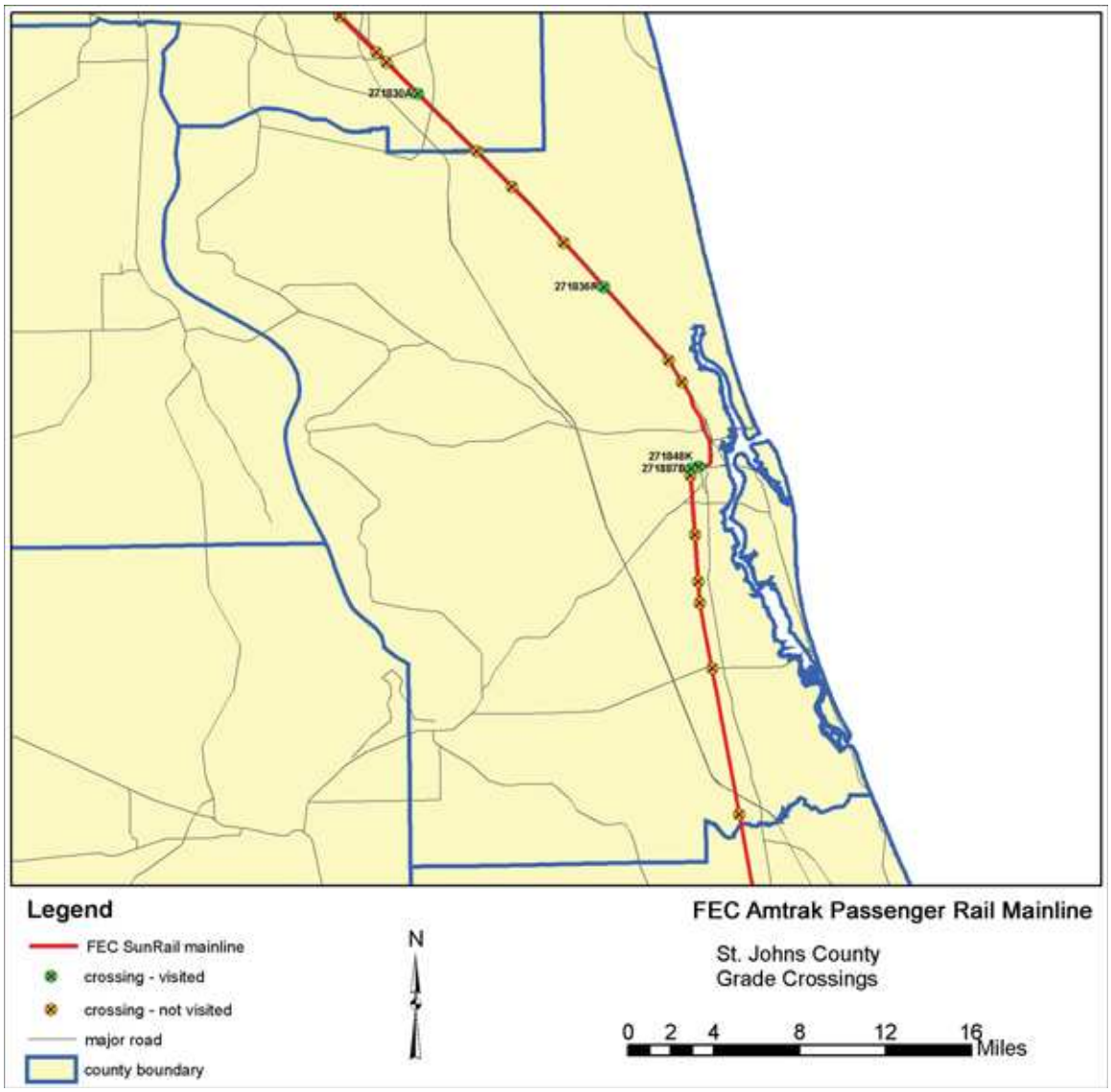

Figure 4. Map of St. Johns County showing FEC Amtrak Passenger Rail mainline and grade crossings.

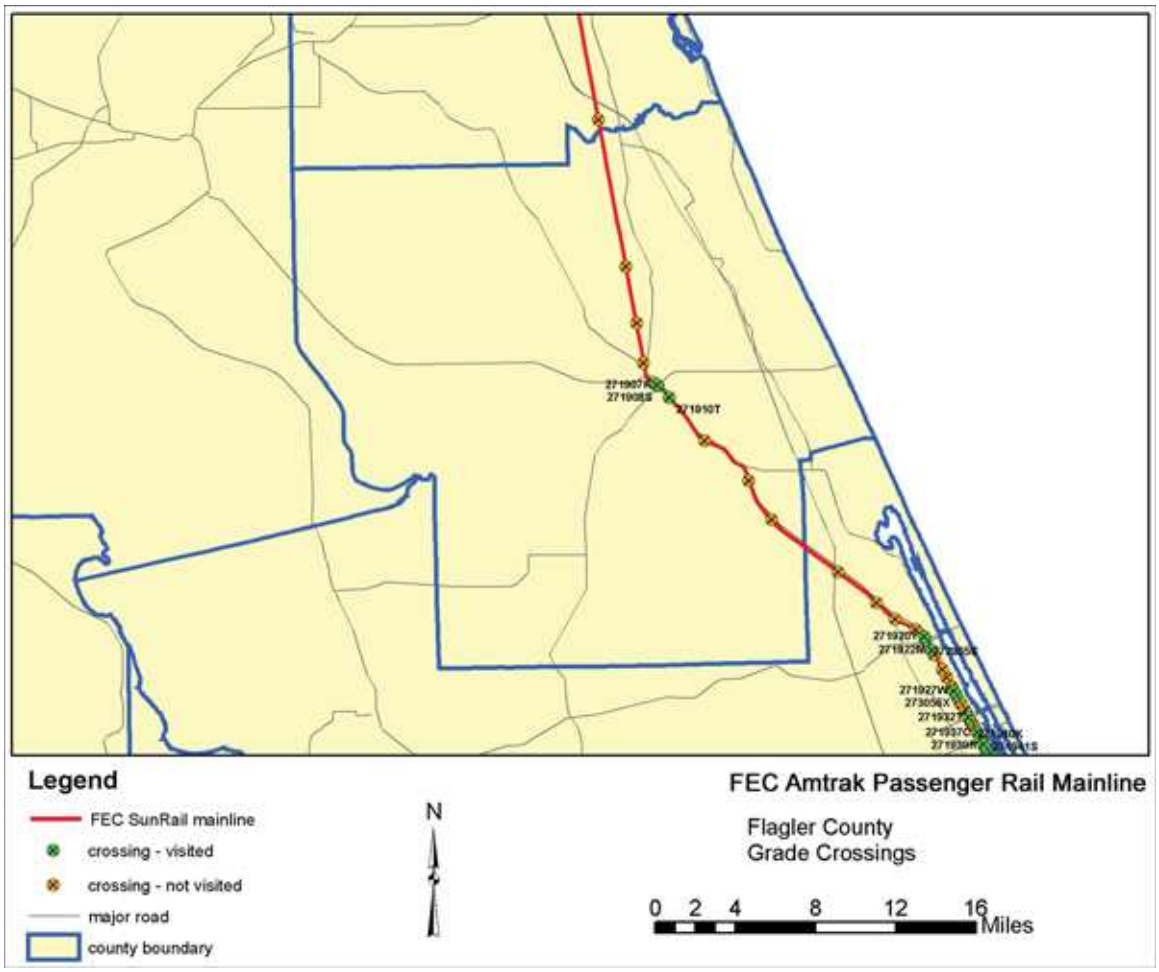

Figure 5. Map of Flagler County showing FEC Amtrak Passenger Rail mainline and grade crossings.

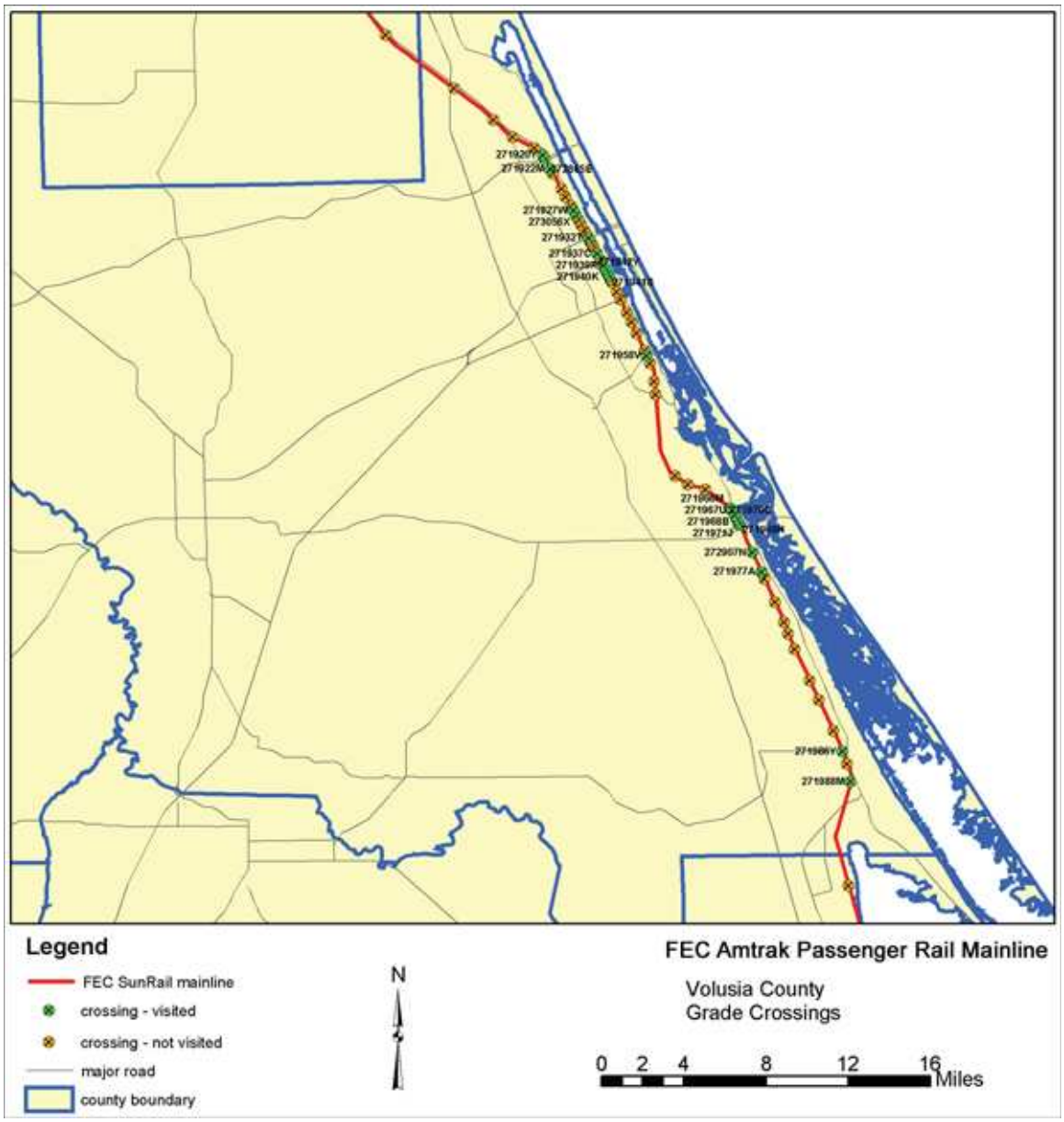

Figure 6. Map of Volusia County showing FEC Amtrak Passenger Rail mainline and grade crossings.

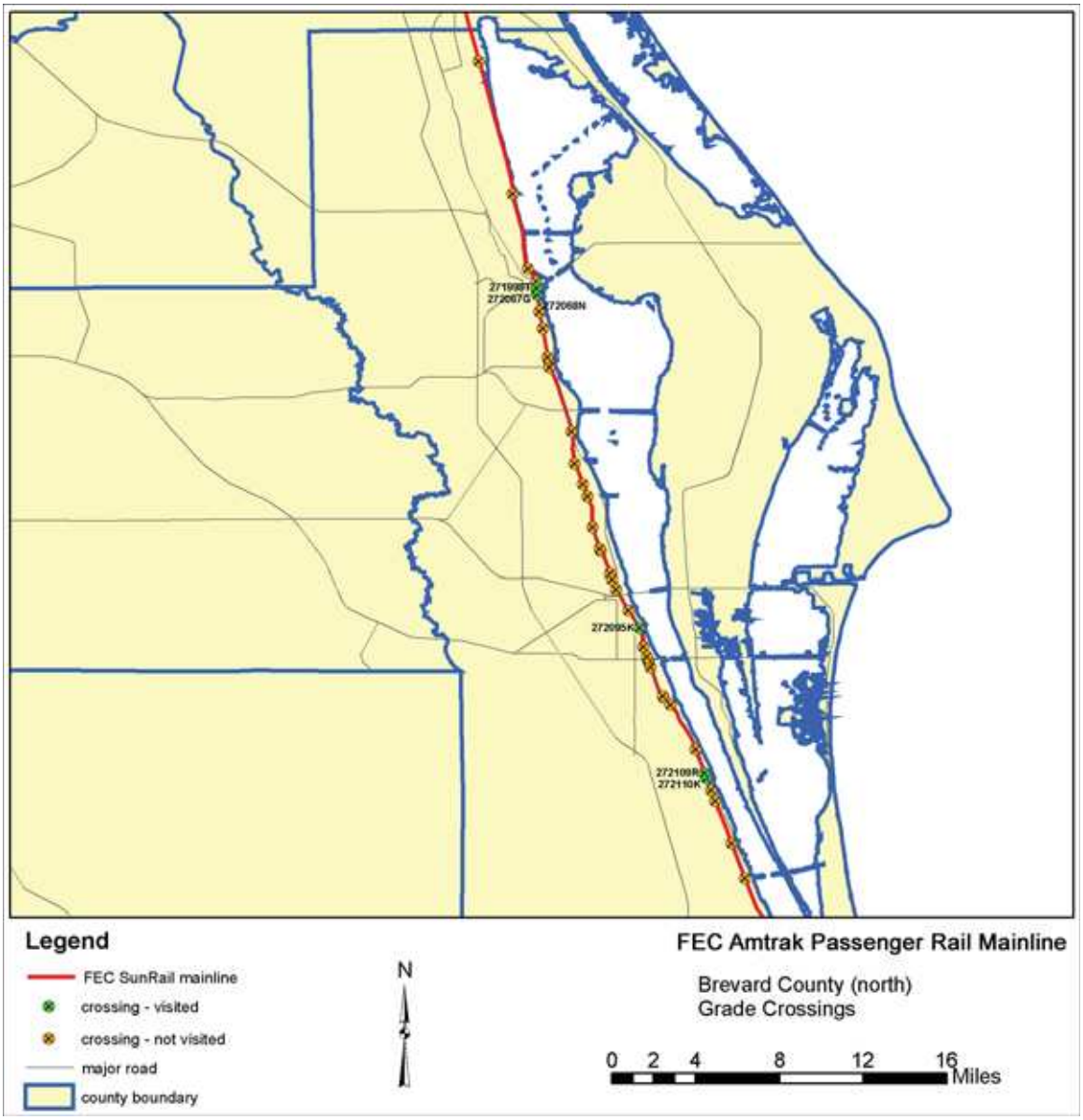

Figure 7. Map of northern Brevard County showing FEC Amtrak Passenger Rail mainline and grade crossings.

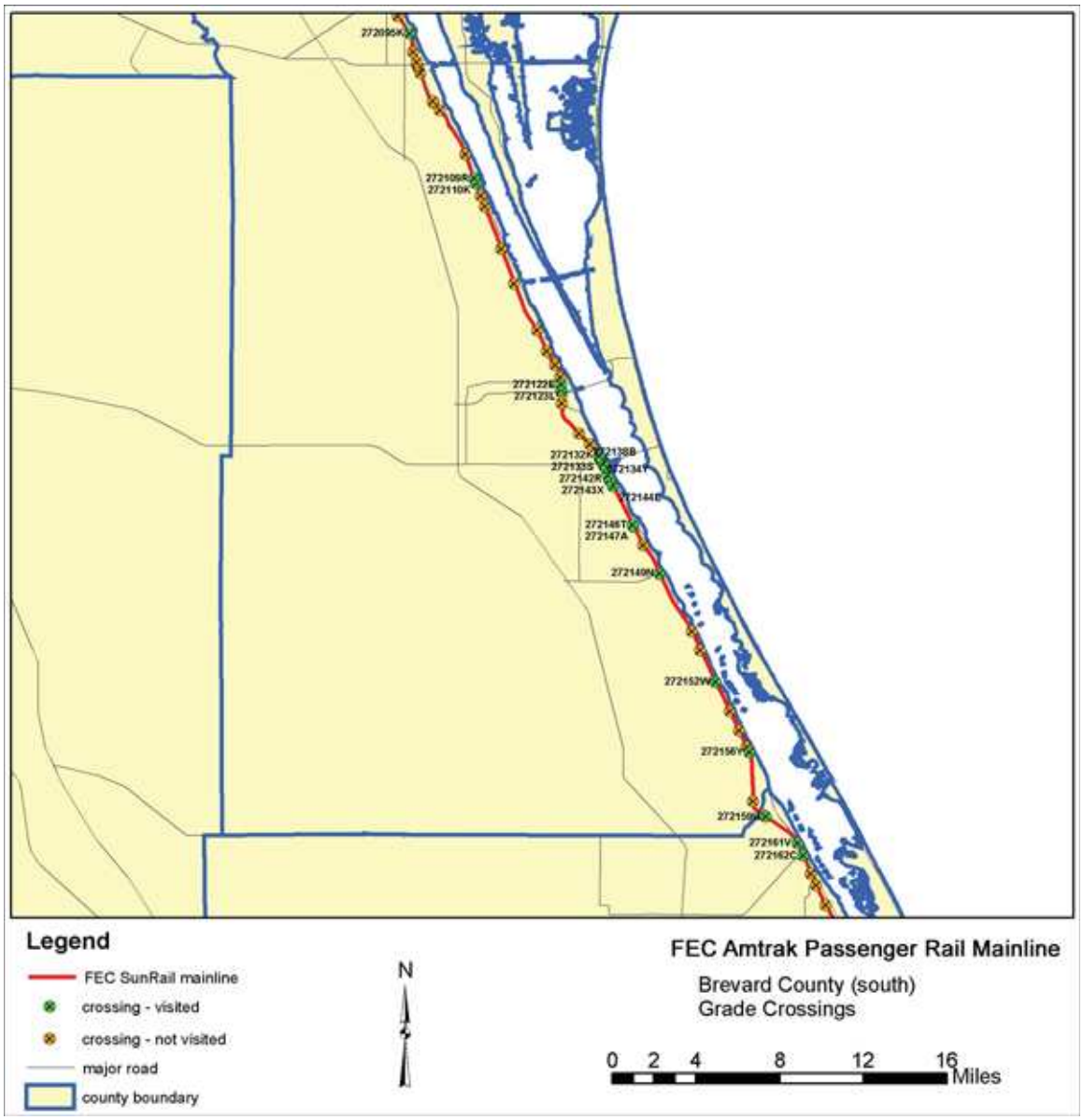

Figure 8. Map of southern Brevard County showing FEC Amtrak Passenger Rail mainline and grade crossings.

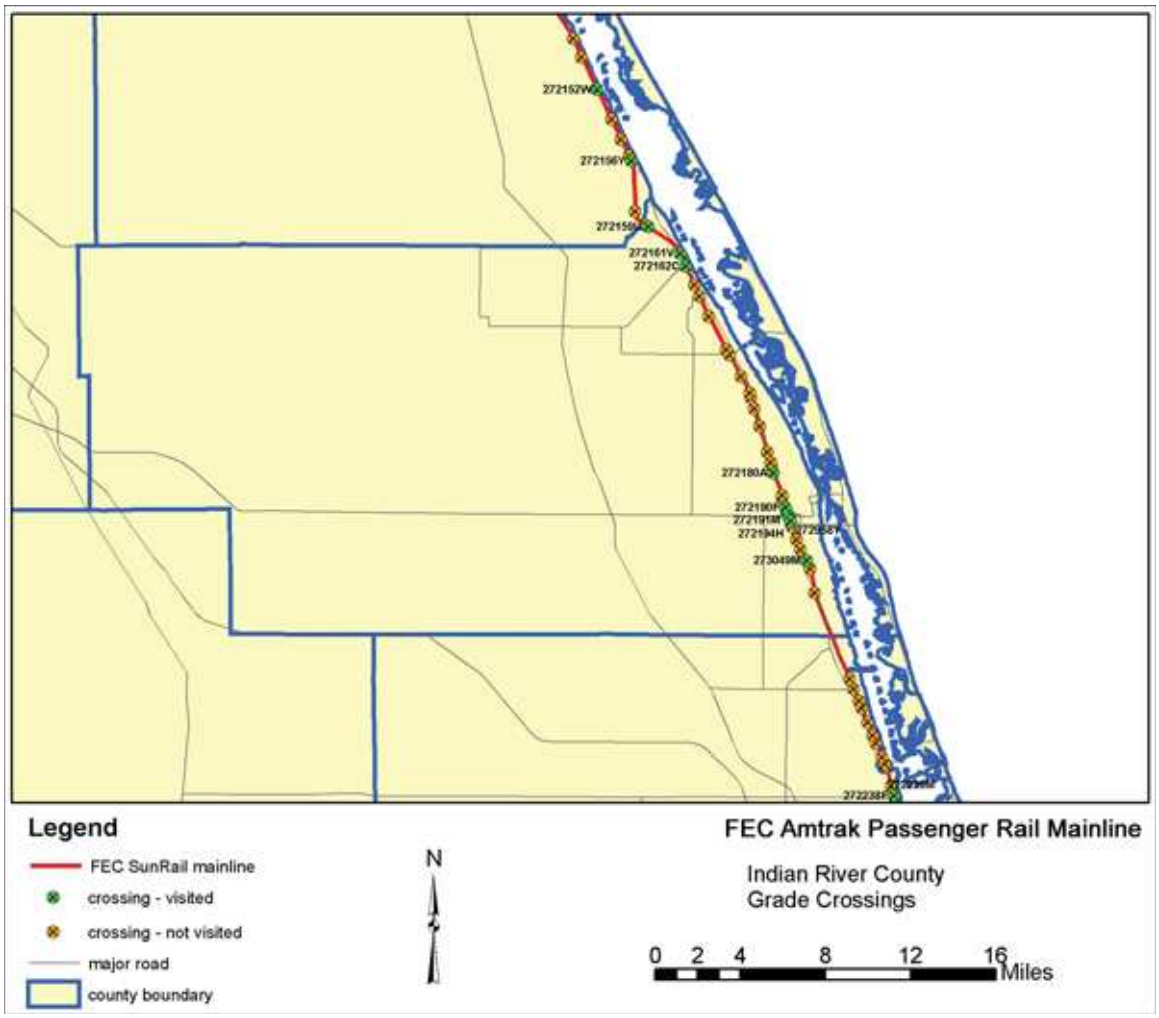

Figure 9. Map of Indian River County showing FEC Amtrak Passenger Rail mainline and grade crossings.

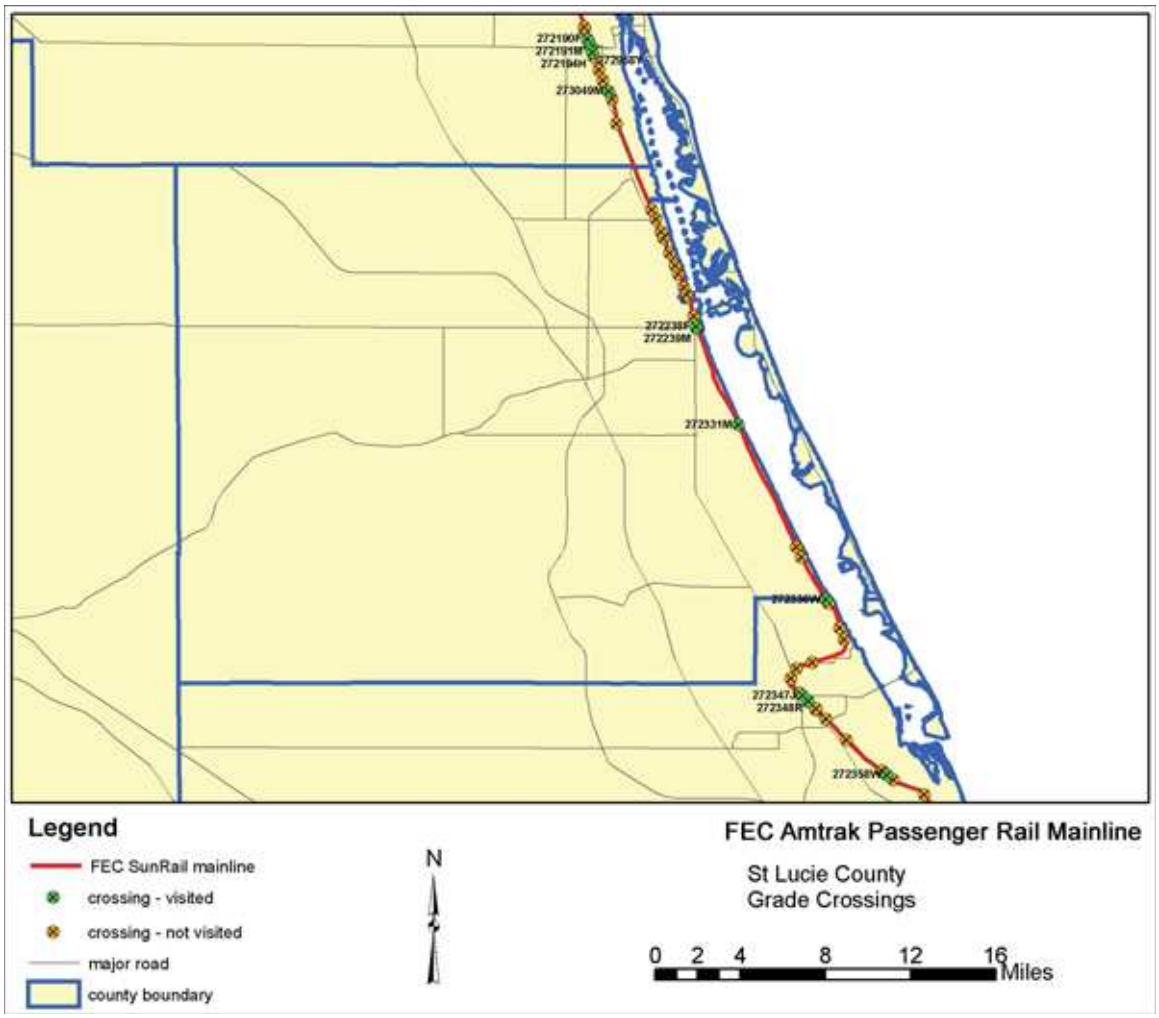

Figure 10. Map of St. Lucie County showing FEC Amtrak Passenger Rail mainline and grade crossings.

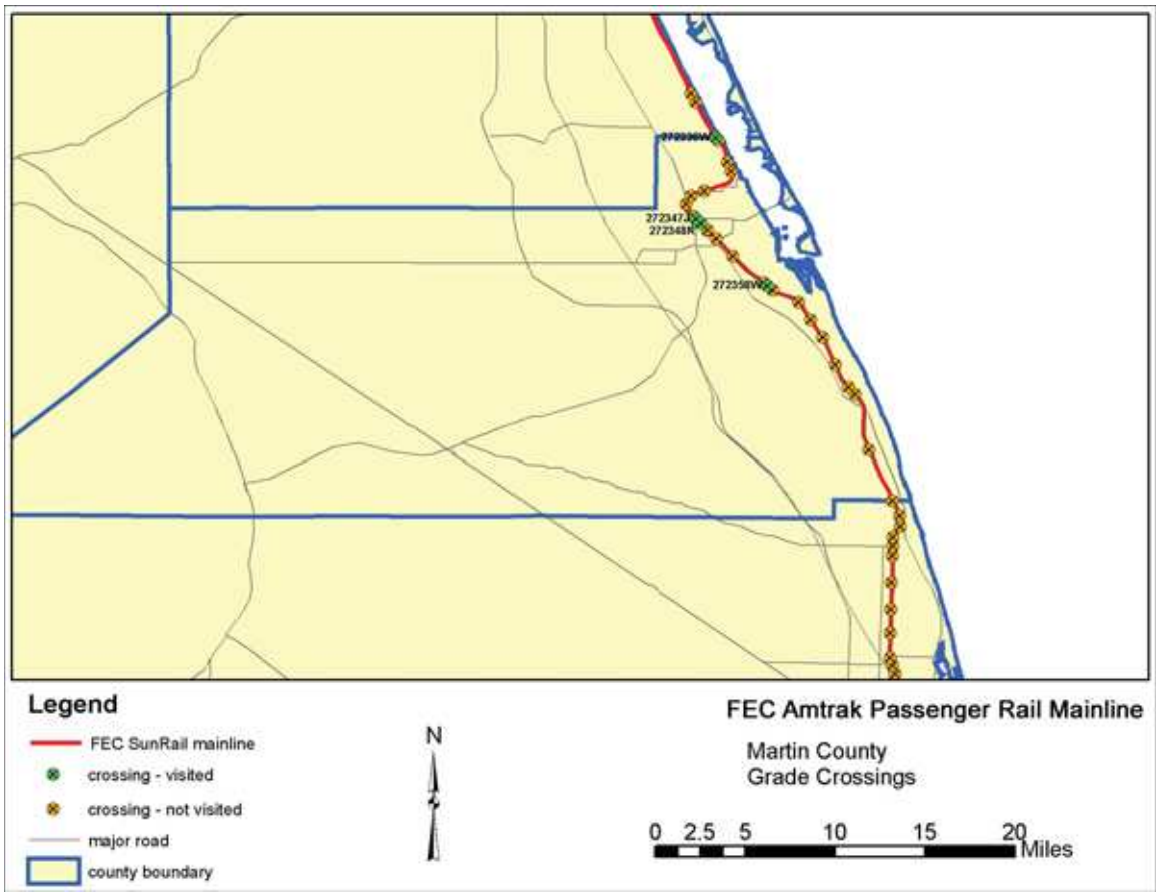

Figure 11. Map of Martin County showing FEC Amtrak Passenger Rail mainline and grade crossings.

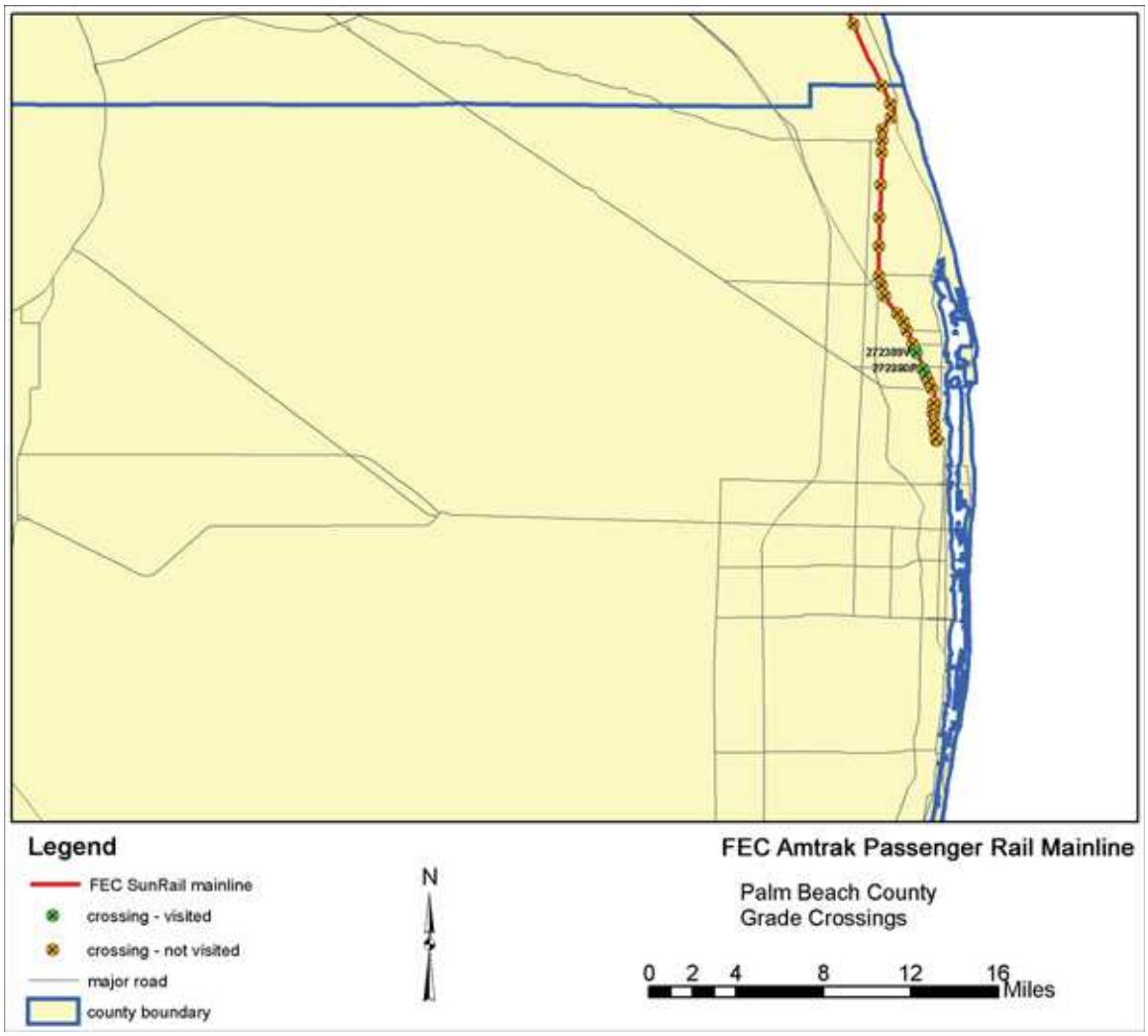

Figure 12. Map of Palm Beach County showing FEC Amtrak Passenger Rail mainline and grade crossings.

Table 7. List of Grade Crossings from North to South along FEC Mainline within Project Area (from Florida Geographic Data Library).

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Duval	Jacksonville	621193R	McQuade/Broadway	yes	no	yes	PA*: 1940s-1950s commercial and residential
Duval	Jacksonville	620626R	W. Beaver St.	yes	no	no	PA: mostly modern
Duval	Jacksonville	620618Y	Beaver St./Wamsley	yes	no	no	PA: mostly modern
Duval	Jacksonville	271801P	San Marco Ave.	no	no	yes	no structures but two destroyed prehistoric mounds at this location
Duval	Jacksonville	271803D	Gary St.	yes	yes	no	previously recommended ineligible for district
Duval	Jacksonville	271806Y	Flagler Ave.	yes	yes	no	previously recommended ineligible for district
Duval	Jacksonville	271807F	Nira St.	yes	yes	no	previously recommended ineligible for district
Duval	Jacksonville	271808M	Naldo Ave.	yes	yes	no	previously recommended ineligible for district
Duval	Jacksonville	271809U	SR 13 - Hendricks Ave.	yes	yes	yes	previously recommended ineligible for district, but Old Jacksonville City Hall (8DU6573) here
Duval	Jacksonville	271815X	Landon Ave.	yes	yes	yes	structures to east not evaluated for district
Duval	Jacksonville	271816E	Atlantic Blvd.	yes	yes	yes	previously recommended potentially eligible for district or not evaluated
Duval	Jacksonville	271817L	River Oaks Rd.	yes	yes	yes	previously recommended potentially eligible for district
Duval	Jacksonville	271818T	St. Augustine Rd.	yes	no	yes	PA: 1950s neighborhood
Duval	Jacksonville	271819A	Emerson St.	yes	no	no	PA: mostly 1980s, a few 1965
Duval	Jacksonville	271820U	Reba Ave.	yes	no	yes	PA: 1940s-1960s residential to west, modern retail to east
Duval	Bayard	271824W	SR 116 - Sumbeam Rd.	yes	no	no	PA: all modern commercial
Duval	Bayard	271825D	Shad Rd.	yes	no	no	PA: all modern commercial
Duval	Bayard	271828Y	Cedar St.	yes	no	no	PA: modern commercial and wide mix of 1940s-1980s residential
Duval	Bayard	271829F	Greenland Rd.	yes	no	no	PA: few buildings, mostly 1980s
Duval	Bayard	271830A	Old St. Augustine Rd.	yes	yes	yes	previously recommended ineligible for district, but SHPO evaluation of potentially eligible individually
St. Johns	Durbin	271831G	CR 1324 - Racetrack Rd.	no	no	no	
St. Johns	Durbin	271832N	CR 210	no	no	no	
St. Johns	Durbin	271835J	Stratton Rd.	no	no	no	

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
St. Johns	Durbin	271836R	International Golf Pkwy.	no	no	yes	road recorded, insufficient info
St. Johns	St. Augustine	271837X	Big Oak Rd.	no	no	no	
St. Johns	St. Augustine	271838E	5th St.	yes	yes	no	previously recommended ineligible for district
St. Johns	St. Augustine	271848K	Palmer St.	yes	yes	yes	structures not evaluated for district
St. Johns	St. Augustine	271887B	CR 214 - W King St.	yes	yes	yes	potentially eligible district adjacent, 8SJ5395 - Leo C. Chase Park; road recorded, potentially eligible
St. Johns	St. Augustine	271889P	Madeore St.	yes	yes	no	previously recommended ineligible for district
St. Johns	St. Augustine Beach	271892X	Kings Estates Rd.	no	no	no	
St. Johns	St. Augustine Beach	271893E	Wildwood Dr.	no	no	no	
St. Johns	St. Augustine Beach	271894L	Watson Rd.	no	no	no	
St. Johns	St. Augustine Beach	271895T	SR 206 - Crescent Beach Rd.	no	no	no	
St. Johns	Dinner Island NE	271897G	CR 204	no	no	no	
Flagler	Espanola	271901U	Henderson Rd.	no	no	no	
Flagler	Espanola	271902B	Espanola Rd.	no	no	no	canal recorded, not evaluated
Flagler	Bunnell	271904P	CR 13C / SR 13	no	no	no	
Flagler	Bunnell	271906D	Dean Rd.	yes	yes	no	previously recommended ineligible for district
Flagler	Bunnell	271907K	W Lambert St.	yes	yes	yes	previously recommended potentially eligible for district
Flagler	Bunnell	271908S	SR 11 - W Moody Blvd.	yes	yes	yes	previously recommended potentially eligible for district
Flagler	Bunnell	271910T	Elm Ave.	yes	yes	yes	previously recommended potentially eligible for district
Flagler	Flagler Beach West	272932W	CR 304 - Dupont Rd.	no	no	no	
Flagler	Flagler Beach West	271913N	St. Marys Cemetery	no	no	no	
Flagler	Favoretta	271914V	Favoretta	no	no	no	

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Volusia	Favoretta	271917R	Broadway St.	no	no	no	
Volusia	Ormond Beach	271918X	CR 2813 - Airport Rd.	no	no	no	
Volusia	Ormond Beach	271919E	SR 5A - Daytona By-Pass	no	no	no	
Volusia	Ormond Beach	273055R	Wilmette Ave.	no	no	no	
Volusia	Ormond Beach	271920Y	Lincoln Ave.	yes	yes	yes	structures not evaluated for district
Volusia	Ormond Beach	272865E	SR 40 - W Granada Blvd.	yes	yes	yes	structures not evaluated for district
Volusia	Ormond Beach	271922M	Division Ave.	yes	yes	yes	structures not evaluated for district
Volusia	Ormond Beach	271923U	SR 4004 - Hand Ave.	no	no	no	
Volusia	Ormond Beach	271924B	Calle Grande	no	no	no	
Volusia	Ormond Beach	271925H	SR 4018 - Flomich Ave.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271926P	SR 4022 - Walker St.	yes	no	no	PA: mostly 1970s-1980s commercial
Volusia	Daytona Beach	271927W	SR 4019 - LPGA Blvd.	no	yes	yes	recorded park (8VO8305), recommended ineligible
Volusia	Daytona Beach	273056X	10th St.	yes	yes	yes	structures previously recommended ineligible for district; recorded park (8VO8305), recommended ineligible
Volusia	Daytona Beach	271928D	SR 4026 - 8th St.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271929K	6th St.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271930E	SR 4044 - 3rd St.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271931L	2nd St.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271932T	SR 430 - Mason Ave.	yes	no	yes	PA: mostly 1950s-1960s
Volusia	Daytona Beach	271933A	Kingston Ave.	yes	yes	no	previously recommended ineligible for district

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Volusia	Daytona Beach	271934G	SR 4048 - Madison St.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271935N	North St.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271936V	SR 4040 - Cypress St.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271937C	SR 4052 - Dr. Mary McLeod Bethune Blvd.	yes	yes	yes	some previously recommended potentially eligible for district
Volusia	Daytona Beach	271938J	US 92 - Volusia Ave.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271939R	SR 4050 - Orange Ave.	yes	yes	yes	NR district (8VO7188) nearby
Volusia	Daytona Beach	271940K	Live Oak Ave.	yes	yes	yes	NR district (8VO7188) nearby
Volusia	Daytona Beach	271941S	Loomis Ave.	yes	yes	yes	NR district (8VO7188) nearby
Volusia	Daytona Beach	271942Y	Cedar St.	yes	yes	yes	NR district (8VO7188) nearby
Volusia	Daytona Beach	271943F	South St.	yes	yes	yes	NR district (8VO7188) nearby
Volusia	Daytona Beach	271944M	SR 4062 - Bellevue St.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271945U	Fremont St.	yes	yes	no	previously recommended ineligible for district
Volusia	Daytona Beach	271946B	Wilder Blvd.	no	no	no	
Volusia	Daytona Beach	271949W	SR 400 - Beville Rd.	no	no	no	
Volusia	Daytona Beach	271950R	SR 4072 - Big Tree Rd.	no	no	no	
Volusia	Daytona Beach	271953L	SR 4076 - Ridge Blvd.	no	no	no	
Volusia	Daytona Beach	271954T	SR 4076 - Reed Canal Rd.	no	no	no	
Volusia	Port Orange	271956G	Charles St.	no	no	no	
Volusia	Port Orange	271957N	SR 4082 - Herbert St.	yes	yes	no	previously recommended ineligible for district
Volusia	Port Orange	271958V	SR 421 - Dunlawton Ave.	yes	yes	yes	NR district (8VO7125) nearby
Volusia	Port Orange	271959C	Oak St.	yes	yes	no	previously recommended ineligible for district

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Volusia	New Smyrna Beach	271961D	SR 4084 - Commonwealth Ave.	no	no	no	
Volusia	New Smyrna Beach	271962K	SR 5A - Daytona By-Pass	no	no	no	
Volusia	New Smyrna Beach	271963S	CR 4093 - Turnbull Rd.	no	no	no	
Volusia	New Smyrna Beach	271964Y	Mooneyham Rd.	no	no	no	
Volusia	New Smyrna Beach	271965F	Whispering Pine	no	no	no	
Volusia	New Smyrna Beach	271966M	Eleanore Ave.	yes	yes	yes	previously recommended potentially eligible for district
Volusia	New Smyrna Beach	271967U	CR 4122 - Wayne Ave.	yes	yes	yes	previously recommended potentially eligible for district
Volusia	New Smyrna Beach	271968B	Ronnoc Ln.	yes	yes	yes	near NR district (8VO3132); near unevaluated district (8VO8538)
Volusia	New Smyrna Beach	271969H	Mary Ave.	yes	yes	yes	near NR district (8VO3132); near unevaluated district (8VO8538)
Volusia	New Smyrna Beach	271970C	Washington St.	yes	yes	yes	near NR district (8VO3132); near unevaluated district (8VO8538)
Volusia	New Smyrna Beach	271971J	Julia St.	yes	yes	yes	near NR district (8VO3132); near unevaluated district (8VO8538)
Volusia	New Smyrna Beach	271972R	SR 44 - Canal St.	yes	yes	yes	near NR district (8VO3132); near unevaluated district (8VO8538); NR-listed canal (8VO7056)
Volusia	New Smyrna Beach	272907N	10th St.	no	no	yes	NR-listed canal (8VO7056)
Volusia	Edgewater	271977A	CR 4136 - W Park Ave.	yes	no	yes	PA: some 1940s left, several modern in and around
Volusia	Edgewater	271978G	Ocean Ave.	no	no	no	
Volusia	Edgewater	271979N	SR 442 - Indian River Blvd.	no	no	no	
Volusia	Edgewater	271980H	26th St.	no	no	no	
Volusia	Edgewater	271981P	30th St.	no	no	no	
Volusia	Edgewater	271982W	CR 4147 - Volco Rd.	no	no	no	
Volusia	Edgewater	271983D	Clinton Rd.	no	no	no	
Volusia	Ariel	271984K	CR 4138 - Ariel Rd.	no	no	no	
Volusia	Ariel	271985S	Brooks Cir.	no	no	no	
Volusia	Oak Hill	271986Y	CR 4146 - Halifax Ave.	yes	no	yes	PA: 1915, 1933, 2006

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Volusia	Oak Hill	271987F	N Putnam Grove Dr.	yes	no	no	PA: one 1946, rest 1968 or later
Volusia	Oak Hill	271988M	W Putnam Grove Rd.	yes	no	yes	PA: 1960s and 1970s, very few buildings
Brevard	Oak Hill	271991V	CR 4454 - Huntington Rd.	no	no	no	
Brevard	Mims	271992C	Jones Rd.	yes	no	no	PA: 1960s and 1970s, very few buildings
Brevard	Mims	271995X	SR 406	no	no	no	
Brevard	Titusville	271997L	SR 406 - Garden St.	no	no	no	
Brevard	Titusville	271998T	CR 4464 - Main St.	yes	yes	yes	structures not evaluated for district
Brevard	Titusville	272067G	Tropic St.	yes	yes	yes	structures not evaluated for district
Brevard	Titusville	272068N	CR 405 - South St.	yes	yes	yes	structures not evaluated for district
Brevard	Titusville	272069V	Sycamore St.	no	no	no	
Brevard	Titusville	272070P	CR 4468 - Harrison St.	no	no	no	
Brevard	Titusville	272072D	Knox McCrae Ave.	no	no	no	
Brevard	Titusville	272073K	Coquina Ave.	no	no	no	
Brevard	Titusville	272074S	SR 50 - Cheney Hwy.	no	no	no	
Brevard	Titusville	272076F	Airport Rd.	no	no	no	
Brevard	Sharpes	272077M	Kings Hwy.	no	no	no	
Brevard	Sharpes	272078U	Fay Blvd.	no	no	no	
Brevard	Sharpes	272079B	Broadway St.	no	no	no	
Brevard	Sharpes	272080V	Camp Rd.	no	no	no	
Brevard	Sharpes	272081C	CR 5004 - Sharpes Rd.	no	no	no	
Brevard	Sharpes	272082J	Railroad Rd. East	no	no	no	
Brevard	Sharpes	272936Y	Cross Rd.	no	no	no	
Brevard	Sharpes	272086L	Railroad Ave.	yes	no	no	PA: mostly modern, one 1955
Brevard	Sharpes	272090B	Beau Gest Rd.	no	no	no	
Brevard	Courtenay	272092P	CR 5023 - Michigan Ave.	yes	yes	no	previously recommended ineligible for district
Brevard	Courtenay	272095K	CR 503 - Dixon Blvd.	yes	no	yes	PA: mostly 1960s commercial
Brevard	Cocoa	272866L	W. Highland Dr.	yes	no	no	PA: mostly 1980s, few 1960s
Brevard	Cocoa	272096S	Peachtree St.	yes	yes	no	previously recommended ineligible for district
Brevard	Cocoa	272097Y	SR 520 - King St.	yes	yes	no	previously recommended ineligible for district
Brevard	Cocoa	272098F	Stone St.	yes	yes	no	previously recommended ineligible for district
Brevard	Cocoa	272099M	CR 5024 - Poinsetta Dr.	yes	yes	no	previously recommended ineligible for district
Brevard	Cocoa	272100E	CR 5024 - Poinsetta Dr.	yes	yes	no	previously recommended ineligible for district
Brevard	Cocoa	272101L	CR 5026 - Barton Ave.	yes	yes	no	previously recommended ineligible for district
Brevard	Cocoa	272102T	US 1 / SR 5	no	no	no	
Brevard	Cocoa	272908V	Eyster Blvd.	no	no	no	
Brevard	Cocoa	272108J	SR 502 - Barnes Blvd.	yes	yes	no	previously recommended ineligible for district

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Brevard	Cocoa	272109R	Carver Rd.	yes	no	yes	PA: small early 1960s neighborhood one block away, 1995 commercial adjacent
Brevard	Cocoa	272110K	Ansin Rd.	yes	no	yes	PA: mix of mid 1960s and 1980s-2000s
Brevard	Cocoa	272112Y	Korbin Ave.	yes	no	no	PA: all modern
Brevard	Cocoa	272976W	Viera Blvd.	no	no	no	
Brevard	Eau Gallie	272115U	Pineda Ave.	no	no	no	
Brevard	Eau Gallie	272863R	SR 404 - Pineda Causeway	no	no	no	
Brevard	Eau Gallie	272117H	CR 5042 - Post Rd.	no	no	no	
Brevard	Eau Gallie	272118P	CR 5046 - Park Ave.	no	no	no	
Brevard	Eau Gallie	272120R	CR 5052 - Lake Washington Rd.	no	no	no	
Brevard	Eau Gallie	272121X	Masterson St.	yes	no	no	PA: all modern
Brevard	Eau Gallie	272122E	CR 511 - Aurora Rd.	yes	no	yes	PA: most early 1960s
Brevard	Eau Gallie	272123L	Creel St.	yes	no	yes	PA: wide mix, some 1950s
Brevard	Eau Gallie	272124T	Eau Gallie Blvd.	no	no	no	
Brevard	Melbourne West	272125A	SR 518-5 - Sarno Rd.	no	no	no	
Brevard	Melbourne East	272128V	CR 507 - Babcock St.	no	no	no	
Brevard	Melbourne East	272129C	CR 5056 - Nasa Blvd.	no	no	no	
Brevard	Melbourne East	272132K	CR 5060 - Hibiscus Ave.	yes	no	yes	PA: some 1940s
Brevard	Melbourne East	272133S	Silver Palm Ave.	yes	no	yes	PA: mostly 1980s, some earlier
Brevard	Melbourne East	272134Y	Seminole Ave.	yes	no	yes	PA: wide mix, much modern, 1919 ice plant to southeast
Brevard	Melbourne East	272135F	CR 5062 - Fee Ave.	yes	yes	no	previously recommended ineligible for district
Brevard	Melbourne East	272136M	Lincoln Ave.	yes	yes	no	previously recommended ineligible for district
Brevard	Melbourne East	272137U	Palmetto Ave.	yes	yes	no	previously recommended ineligible for district
Brevard	Melbourne East	272138B	US 192 - Strawbridge Ave.	yes	yes	yes	previously recommended potentially eligible for district
Brevard	Melbourne East	272139H	SR 192 - E New Haven Ave.	yes	yes	yes	previously recommended potentially eligible for district

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Brevard	Melbourne East	272141J	CR 5077 - Prospect Ave.	yes	yes	no	previously recommended ineligible for district
Brevard	Melbourne East	272142R	Line St.	yes	yes	yes	district (8BR2173), not evaluated by SHPO
Brevard	Melbourne East	272143X	Jernigan Ave.	yes	yes	yes	district (8BR2173), not evaluated by SHPO
Brevard	Melbourne East	272144E	CR 5066 - University Blvd. E	yes	yes	yes	district (8BR2173), not evaluated by SHPO
Brevard	Melbourne East	272146T	NE Hessey Ave.	yes	no	yes	PA: most 1950s-1965, some 1980s, one 1923
Brevard	Melbourne East	272147A	CR 5070 - NE Palm Bay Rd.	yes	no	yes	PA: most 1950s-1965, some 1980s
Brevard	Melbourne East	272148G	CR 5074 - S.E. Port Blvd.	no	no	no	
Brevard	Melbourne East	272149N	SR 514 - Malabar Rd.	yes	no	yes	PA: 1900-1920s with some 1960s infill and large 2007 structure
Brevard	Grant	272151P	CR 5076 - Valkaria Rd.	no	no	no	
Brevard	Grant	272924E	Old Dixie Hwy.	no	no	no	
Brevard	Grant	272152W	CR 5078 - 1st St.	yes	yes	yes	NR-listed structure (8BR1710)
Brevard	Grant	272153D	Shell Pit Rd.	no	no	no	
Brevard	Grant	272154K	Senne Rd.	no	no	no	
Brevard	Grant	272155S	Barefoot Blvd.	no	no	no	
Brevard	Grant	272156Y	CR 5082 - Micco Rd.	yes	no	yes	possible historic structures on topo map; PA: 1980s to 2000s
Brevard	Fellsmere	272157F	Holly St.	no	no	no	
Indian River	Sebastian	272158M	Sebastian St.	yes	yes	no	previously recommended ineligible for district
Indian River	Sebastian	272159U	SR 505 - Roseland Rd.	yes	yes	yes	some previously recommended ineligible for district, some not evaluated for district
Indian River	Sebastian	272161V	Main St.	yes	yes	yes	NR districts (8IR1048A and 8IR1048B)
Indian River	Sebastian	272162C	SR 512 - Fellsmere Rd.	yes	yes	yes	structures not evaluated for district
Indian River	Sebastian	272163J	Old Dixie Hwy.	yes	yes	no	previously recommended ineligible for district
Indian River	Sebastian	272164R	Schumann Dr.	no	no	no	

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Indian River	Sebastian	272165X	Vickers Rd. - 99th St.	no	no	no	
Indian River	Sebastian	272167L	Bridge Blvd. - 87th St.	yes	yes	no	previously recommended ineligible for district
Indian River	Vero Beach	272168T	SR 510 - Wabasso Rd.	yes	yes	no	previously recommended ineligible for district
Indian River	Vero Beach	272170U	Hobart Rd - 77th St.	yes	yes	no	previously recommended ineligible for district
Indian River	Vero Beach	272171B	Cemetery Rd.	yes	yes	no	previously recommended ineligible for district
Indian River	Vero Beach	272172H	N. Winter Beach - 66th St.	yes	yes	no	previously recommended ineligible for district
Indian River	Vero Beach	272173P	S. Winter Beach - 65th St.	yes	yes	no	previously recommended ineligible for district
Indian River	Vero Beach	272175D	(graded)	no	no	no	
Indian River	Vero Beach	272177S	49th St.	no	no	no	
Indian River	Vero Beach	272178Y	45th St.	yes	yes	no	previously recommended ineligible for district
Indian River	Vero Beach	272179F	43rd Pl.	no	no	no	
Indian River	Vero Beach	272180A	CR 630 - S. Gifford Rd. - 41st St.	yes	no	yes	PA: some 1940s left, new 2000s supermarket there also
Indian River	Vero Beach	272184C	Beacon Rd.	yes	yes	no	previously recommended ineligible for district
Indian River	Vero Beach	273047Y	32nd St.	yes	yes	no	previously recommended ineligible for district
Indian River	Vero Beach	272190F	14th Ave.	yes	yes	yes	previously recommended potentially eligible for district
Indian River	Vero Beach	272191M	23rd. St.	yes	yes	yes	previously recommended potentially eligible for district
Indian River	Vero Beach	272192U	21st St.	no	no	no	
Indian River	Vero Beach	272201R	20th Pl. SW	no	no	no	
Indian River	Vero Beach	272193B	20th St.	no	no	no	

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Indian River	Vero Beach	272958Y	20th St.	yes	yes	yes	NR-listed power plant (8IR975)
Indian River	Vero Beach	272194H	18th Pl.	yes	no	yes	PA: 2000s commercial, 1950s-1990s mix of residential and commercial
Indian River	Vero Beach	272195P	16th St.	no	no	no	
Indian River	Oslo	272196W	12th St.	no	no	no	
Indian River	Oslo	272197D	CR 612 - Glendale Rd.	no	no	no	
Indian River	Oslo	273049M	4th St.	no	no	yes	NR-listed McKee Jungle Gardens (8IR859) nearby but across US 1
Indian River	Oslo	272199S	First St. SW	no	no	no	
Indian River	Oslo	272200J	SR 606 - Oslo Rd.	yes	yes	no	previously recommended ineligible for district
St. Lucie	Indrio	272207G	Wilcox Rd.	no	no	no	
St. Lucie	Indrio	272206A	Indian River Rd.	no	no	no	
St. Lucie	Indrio	272208N	Michigan St.	no	no	no	
St. Lucie	Indrio	272209V	Rouse Rd.	no	no	no	
St. Lucie	Indrio	272210P	Torpey Rd.	no	no	no	
St. Lucie	Fort Pierce	272211W	Milton Rd.	no	no	no	
St. Lucie	Fort Pierce	272213K	Chamberlin Blvd.	yes	yes	no	previously recommended ineligible for district
St. Lucie	Fort Pierce	272214S	St. Lucie Ln.	no	no	no	
St. Lucie	Fort Pierce	272217M	Trail Rd.	no	no	no	
St. Lucie	Fort Pierce	272218U	SR A1A - City Causeway	no	no	no	
St. Lucie	Fort Pierce	272219B	Lykes	yes	yes	no	previously recommended ineligible for district
St. Lucie	Fort Pierce	272867T	Seaway Dr.	yes	yes	no	previously recommended ineligible for district
St. Lucie	Fort Pierce	272238F	Ave. A	yes	yes	yes	previously recommended potentially eligible for district; NR-listed structure (8SL289)
St. Lucie	Fort Pierce	272239M	SR 68 - Orange Ave.	yes	yes	yes	previously recommended potentially eligible for district
St. Lucie	Fort Pierce	272331M	CR 712 - E Midway Rd.	yes	no	yes	NR-eligible structure (8SL235)
St. Lucie	Ankona	272332U	Walton Rd.	no	no	no	
St. Lucie	Ankona	272334H	Riverview Dr.	yes	yes	no	previously recommended ineligible for district
Martin	Eden	272336W	NE Countyline Rd.	yes	yes	yes	ineligible district (8MT1410); other structures previously recommended ineligible for district
Martin	Eden	272337D	Skyline Dr.	no	no	no	

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Martin	St. Lucie Inlet	272340L	SR 707A - NE Jensen Beach Blvd.	yes	yes	no	previously recommended ineligible for district
Martin	St. Lucie Inlet	272342A	Palmetto Ave.	yes	yes	no	previously recommended ineligible for district
Martin	St. Lucie Inlet	272343G	SR 707A - SR A1A	no	no	no	
Martin	Palm City	272344N	Alice St.	no	no	no	
Martin	Palm City	272345V	Fern St.	yes	yes	no	previously recommended ineligible for district
Martin	Palm City	272953P	Second St.	yes	yes	no	previously recommended ineligible for district
Martin	Palm City	272347J	SR 76 - Colorado Ave.	yes	yes	yes	previously recommended potentially eligible for district
Martin	St. Lucie Inlet	272348R	E 7th St. - SE Martin Luther King Blvd.	yes	no	yes	PA: mix of 1945-1990s
Martin	St. Lucie Inlet	272350S	SR A1A	no	no	no	
Martin	St. Lucie Inlet	272351Y	Venetian Ave.	no	no	no	
Martin	St. Lucie Inlet	272353M	Monterey Rd.	no	no	no	
Martin	St. Lucie Inlet	272354U	SR A1A - Indian Ave.	no	no	no	
Martin	St. Lucie Inlet	272356H	SE Seaward St.	yes	yes	no	previously recommended ineligible for district
Martin	St. Lucie Inlet	272357P	SR 722 - Salerno Rd.	yes	yes	no	previously recommended ineligible for district
Martin	St. Lucie Inlet	272358W	SE Broward St.	yes	yes	yes	one previously recommended potentially eligible for district
Martin	St. Lucie Inlet	272359D	Cove Rd.	yes	yes	no	previously recommended ineligible for district
Martin	St. Lucie Inlet	272360X	SR A1A	no	no	no	
Martin	Gomez	272361E	Miller Rd.	no	no	no	
Martin	Gomez	272934K	Osptey	no	no	no	
Martin	Gomez	272365G	Pettway Ave.	yes	yes	no	previously recommended ineligible for district
Martin	Gomez	272366N	SR 707 - Bridge Rd.	yes	yes	no	previously recommended ineligible for district
Martin	Gomez	272367V	Gleason St.	yes	yes	no	previously recommended ineligible for district
Martin	Hobe Sound	272370D	Park Rd.	no	no	no	
Martin	Jupiter	272372S	County Line Rd.	no	no	no	
Palm Beach	Jupiter	272373Y	Tequesta Dr.	no	no	no	
Palm Beach	Jupiter	272375M	Riverside Dr.	no	no	no	
Palm Beach	Jupiter	272376U	Center St.	no	no	no	
Palm Beach	Jupiter	272377B	SR 706 - Indiantown Rd.	no	no	no	
Palm Beach	Jupiter	272378H	Toney Penna Dr.	no	no	no	

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Palm Beach	Jupiter	273020P	Fredericksmall Rd.	no	no	no	
Palm Beach	Jupiter	272379P	Donald Ross Rd.	no	no	no	
Palm Beach	Riviera Beach	272380J	Hood Rd.	no	no	no	
Palm Beach	Riviera Beach	272381R	SR 786 - PGA Blvd.	no	no	no	
Palm Beach	Riviera Beach	272382X	RCA Blvd.	no	no	no	
Palm Beach	Riviera Beach	272383E	Burns Rd.	no	no	no	
Palm Beach	Riviera Beach	272384L	Lighthouse Dr.	no	no	no	
Palm Beach	Riviera Beach	272385T	Richard Rd.	no	no	no	
Palm Beach	Riviera Beach	272386A	CR 809 - Lake Park Rd.	no	no	no	
Palm Beach	Riviera Beach	272387G	Park Ave.	no	no	no	
Palm Beach	Riviera Beach	272388N	Old Dixie Hwy.	no	no	no	
Palm Beach	Riviera Beach	272389V	Silver Beach Rd.	yes	no	yes	PA: 1960s-1980s commercial to NE,NW,SE; modern residential to SW
Palm Beach	Riviera Beach	272390P	W Blue Heron Blvd.	yes	no	yes	PA: 1950s-2000s mix with a lot of 1960s and 1970s
Palm Beach	Riviera Beach	272391W	SR 811 - Old Dixie Hwy.	no	no	no	
Palm Beach	Riviera Beach	272399B	Flagler St.	no	no	no	
Palm Beach	Riviera Beach	272400T	SR 710 - Inlet Blvd.	yes	yes	no	previously recommended ineligible for district
Palm Beach	Riviera Beach	272401A	54th St.	yes	yes	no	previously recommended ineligible for district
Palm Beach	Riviera Beach	272879M	53rd St.	yes	yes	no	previously recommended ineligible for district
Palm Beach	Riviera Beach	272402G	49th St.	yes	yes	no	previously recommended ineligible for district

County	Quad	Crossing	Road	Structures on Topo	Recorded Structures	Field Visit	Notes
Palm Beach	Riviera Beach	272403N	SR 702 - 45th St.	yes	yes	no	previously recommended ineligible for district
Palm Beach	Palm Beach	272405C	36th St.	yes	yes	no	previously recommended ineligible for district
Palm Beach	Palm Beach	272406J	30th St.	yes	yes	no	previously recommended ineligible for district
Palm Beach	Palm Beach	272407R	25th St.	yes	yes	no	previously recommended ineligible for district
Palm Beach	Palm Beach	272414B	23rd St.	yes	yes	no	previously recommended ineligible for district

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RESULTS OF GRADE CROSSING SURVEY

The GIS analysis of the grade crossings along the FEC Amtrak Passenger Rail project mainline identified 78 that required additional assessments by way of field visits. The field visits of crossings in Duval, St. Johns, and Flagler counties were made by Ramie Gougeon on June 7, 2010. The field visits of crossings in Volusia, Brevard, Indian River, St. Lucie, Martin, and Palm Beach counties were made by Jorge Provenzali and Brad Mueller between May 25 and 27, 2010. Below are brief discussions of each of the visited grade crossings organized from north to south along the mainline and grouped by county.

DUVAL COUNTY CROSSINGS

621193R – McQuade / Broadway

The property appraiser database indicated that there were 1940s to 1950s commercial and residential structures near this crossing, none of which were previously recorded. No indications of a potential historic district were noted in the field. Moreover, structures were largely hidden from view of the crossing by tree cover (Figures 13 and 14).

Figure 13. View from 621193R towards industrial area, facing northwest.

Figure 14. View from 621193R towards residential area, facing east-northeast.

271801P – San Marco Ave.

This crossing was visited because there are two destroyed prehistoric mound sites (8DU35 and 8DU36) within this general vicinity. No potential mounds were visible from the crossing, and the area is an urban setting.

271809U – SR 13 / Hendricks Ave.

Figure 15. Old Jacksonville City Hall near 271809U.

Although structures nearby this crossing have been previously recommended as ineligible for a historic district, Old Jacksonville City Hall (8DU6573) is an NRHP-

eligible structure that is located nearby (Figure 15). The view of train traffic from this structure is partially obscured (Figure 16). The view from this structure is a mix of modern and historic industrial buildings and features. Increased rail traffic should not have any adverse effect on this structure.

Figure 16. View from Old Jacksonville City Hall to 271809U, facing northeast.

271815X – Landon Ave.

This crossing was visited because there were previously recorded structures to the east that have not been evaluated concerning potential contribution to a district. Upon the field visit, it was noted that this crossing no longer exists and is blocked by tall, planted vegetation. A review of aerial photographs showed this crossing to exist in 2005 but was blocked by 2007.

271816E – Atlantic Blvd.

This crossing was visited because there were previously recorded structures nearby that have not been evaluated concerning potential contribution to a district. The field visit noted two possible issues at this crossing. A potential residential historic district may lie adjacent to the southwest of this crossing (Figure 17). Also, at this location is Fletcher Park that, although one block away, may pose a potential Section 4(f) issue concerning increases in the frequency of noise (Figure 18). These potential issues should be considered when conducting the noise and vibration study for the mainline.

Figure 17. View down Belote Pl. at potential historic district adjacent to 271816E.

Figure 18. View from Fletcher Park towards 271816E, facing east-northeast.

271817L – River Oaks Rd.

Some previously recorded structures recommended potentially eligible for a district were located near this crossing. Tall trees largely obscure this neighborhood from the crossing (Figure 19). FEC Park is located adjacent to this crossing to the northwest (Figure 20), and increases in the frequency of noise may pose a potential Section 4(f) issue. This potential issue should be considered when conducting the noise and vibration study for the mainline.

Figure 19. View of 271817L and adjacent neighborhood, facing west.

Figure 20. View towards 271817L from FEC Park, facing east.

271818T – St. Augustine Rd.

The property appraiser search noted a 1950s neighborhood south of this crossing. The structures appear set back significantly from the crossing, and large trees obscure the view (Figure 21).

Figure 21. View of 271818T towards nearby neighborhood, facing south-southwest.

271820U – Reba Ave.

Houses constructed between the 1940s and 1960s are located to the west of this crossing. This area does not appear to represent a potential historic district, and in any case is largely obscured from the crossing by vegetation (Figure 22).

Figure 22. View of 271820U and adjacent residential neighborhood, facing west.

271830A – Old St. Augustine Rd.

Several structures within the community of Bayard were previously recorded near this crossing that had been recommended as ineligible for a historic district. However,

the SHPO did evaluate some of these as being individually eligible. Structures are clearly visible from the crossing (Figure 23), but the community is focused on the railroad since Bayard was founded as a depot town (Thoburn et al. 2007). Increased traffic is not considered to have an adverse effect to the adjacent community given that the railroad is an integral part to it.

Figure 23. View from 271830A towards adjacent community, facing east.

ST. JOHNS COUNTY CROSSINGS

271836R – Nine Mile Rd.

Figure 24. View of 271836R and Nine Mile Rd., facing west.

Although the topographic map indicated no structures within the area of this crossing, the crossing road has been recorded with insufficient information for evaluation. Nine Mile Rd. resembles a typical modern highway (Figure 24). The aspect that could potentially be historically significant is the route rather than the materials. It will clearly not be affected by the current project.

271848K – Palmer St.

Several structures that have not been evaluated for the NRHP are recorded within the vicinity of this crossing. The early twentieth-century neighborhood represented by these structures is largely shielded from the railroad by mature vegetation (Figure 25). In any case, the neighborhood grew beside the railroad, so the use for Amtrak traffic is consistent.

Figure 25. View of 271848K and neighborhood to northeast.

271887B – CR 214 / King St.

Leo C. Chase Park (8SJ5395), a resource group that has been recommended as potentially eligible for NRHP listing, is adjacent to this crossing. Also, the crossing road has been previously recorded and recommended as potentially eligible for the NRHP. The historic structures are situated well away from the crossing (Figure 26). A modern Boys and Girls Club building sits on the southeast corner within the adjacent corner of Leo C. Chase Park (Figure 27). Although unlikely, the potential issue of increased noise

should be considered when conducting the noise and vibration study for the mainline at this location.

Figure 26. View towards historic structures beside 271887B, facing east.

Figure 27. View towards 8SJ5395 from 271887B, facing southeast.

FLAGLER COUNTY CROSSINGS

271907K – Lambert St.

Previously recorded structures that were recommended as potentially eligible for a district were located near this crossing. Beside this crossing within the City of Bunnell was a mix of historic residences and more modern commercial buildings (Figures 28 and

29). Bunnell developed in large part as a railroad town (City of Bunnell 2010), so Amtrak traffic will be consistent with its history.

Figure 28. View of 271907K and nearby historic residences, facing north.

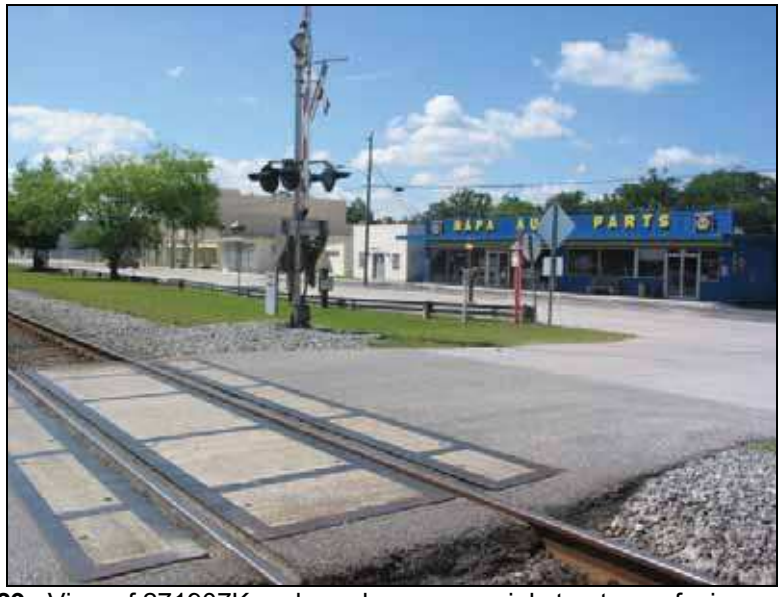

Figure 29. View of 271907K and nearby commercial structures, facing southeast.

271908S – SR 11 / Moody Blvd.

Previously recorded structures that were recommended as potentially eligible for a district were located near this crossing. Moody Blvd. is only one block south of Lambert St. in Bunnell. Commercial structures of various ages are located near this crossing (Figure 30 and 31). The FEC Amtrak Passenger Rail project is not expected to have an adverse effect at this crossing due to Bunnell's history as a railroad town.

Figure 30. View from 271908S towards southwest.

Figure 31. View from 271908S facing east-northeast.

271910T – Elm Ave.

Previously recorded structures that were recommended as potentially eligible for a district were located near this crossing. These structures were largely shielded from the crossing by large tree cover (Figure 32). This vegetation should also dampen the sound of the trains somewhat.

Figure 32. View from 271910T towards historic neighborhood, facing west.

VOLUSIA COUNTY CROSSINGS

271920Y – Lincoln Ave.

Several structures that have not been evaluated for the NRHP are recorded within the vicinity of this crossing. The closest structures appeared modern (Figure 33). Also, heavy tree cover shields nearby structures from the crossing (Figure 34).

Figure 33. View from 271920Y towards northeast.

Figure 34. View of 271920Y and adjacent neighborhood, facing west.

272865E – SR 40 / W. Granada Ave.

Several structures that have not been evaluated for the NRHP are recorded within the vicinity of this crossing. The nearby structures appeared modern, and no potential historic districts were visible from this crossing (Figure 35). Also, tall trees served to shield the view of structures to the northeast and northwest.

Figure 35. View of 272865E facing west.

271922M – Division Ave.

Several structures that have not been evaluated for the NRHP are recorded within the vicinity of this crossing. The closest buildings were modern commercial structures (Figure 36). The previously recorded structures were not visible from the crossing due to tall tree cover.

Figure 36. View of 271922M and adjacent neighborhood, facing west.

271927W – SR 4019 / 11th St.

Figure 37. View from 271927W to the northwest.

A park (8VO8305) that was recommended as ineligible for the NRHP has been recorded adjacent to this crossing to the southeast. The closest structures are modern

commercial buildings (Figure 37). The nearby park is set back roughly 100 m from the crossing, and in any case is ineligible for the NRHP (Figure 38).

Figure 38. View from 271927W toward Hollyland Park (8VO8305), facing southeast.

273056X – 10th St.

Figure 39. View from 273056X towards the Quonset huts (8VO8128), facing southeast.

A park (8VO8305) that was recommended as ineligible for the NRHP has been recorded adjacent to this crossing to the southeast. A line of Quonset huts (8VO8128) lies immediately southeast of the crossing (Figure 39). These structures date to World War II and were relocated from NAS Daytona Beach in the mid-1950s. They have been recommended as ineligible both individually and as a contributor to a historic district

(Johnston et al. 2006). In any case, railroad traffic is not considered to have an adverse effect on such industrial structures.

Hollyland Park is visible from the crossing, but it is considered ineligible for the NRHP (Figure 40). Increased noise associated with Amtrak traffic may pose a potential Section 4(f) issue. This potential issue should be considered when conducting the noise and vibration study for the mainline.

Figure 40. View from 273056X towards Hollyland Park (8VO8305), facing northeast.

271932T – SR 430 / Mason Ave.

Figure 41. View of 271932T facing west.

The property appraiser search indicated several 1950s to 1960s structures nearby this crossing. The vicinity of the crossing is a light industrial area that does not appear to have the potential for a historic district (Figures 41 and 42). Also, railroad traffic is consistent with the setting.

Figure 42. View from 271932T towards southeast.

271937C – SR 4052 / Second Ave.

Figure 43. View of 271937C and adjacent neighborhood, facing west.

Although structures previously recorded east of this crossing were recommended as ineligible for a district, a few recorded west of the crossing were recommended as potentially eligible for contribution to a district. The potential district to the west is set

back from the crossing somewhat with all structures located across parallel-running N. Charles St. and all but one structure more than one block away (Figures 43 and 44). Also, this small commercial area grew in proximity to the previously existing railroad, so railroad traffic is consistent with its historical setting.

Figure 44. View from 271937C towards New Mount Zion Baptist Church (8VO5988), facing southwest.

271939R – SR 4050 / Orange Ave.

Figure 45. View of 271939R facing west towards 8VO7188.

A National Register historic district (Southwest Daytona Beach Black Heritage District - 8VO7188) is recorded within one block west of this crossing. The visible structures west of the crossing are not considered within the boundaries of the historic

district. Structures within the district are shielded from the crossing by mature trees (Figure 45).

271940K – Live Oak Ave.

A National Register historic district (Southwest Daytona Beach Black Heritage District - 8VO7188) is recorded within one block west of this crossing. Like the previous crossing, the visible structures west of this crossing are not considered within the boundaries of the historic district. Structures within the district are shielded from the crossing by mature trees (Figure 46).

Figure 46. View of 271940K facing west towards 8VO7188.

271941S – Loomis Ave.

A National Register historic district (Southwest Daytona Beach Black Heritage District - 8VO7188) is recorded within one block west of this crossing. The only visible structure west of this crossing is not considered within the boundaries of the historic district and, according to the property appraiser, was constructed in 1966. Structures within the district are shielded from the crossing by mature trees (Figure 47).

Figure 47. View of 271941S facing west towards 8VO7188.

271942Y – Cedar St.

Figure 48. View of 271942Y facing west towards 8VO7188.

A National Register historic district (Southwest Daytona Beach Black Heritage District - 8VO7188) is recorded adjacent to the west of this crossing. Mature trees shield all but one structure within the historic district to the west as well as all structures to the east (Figures 48 and 49). The visible structure (8VO5730) was constructed circa 1924, so the railroad is part of its historical setting. Also, the railroad forms an important boundary defining characteristic within the southern part of the 8VO7188 historic district, since it is recognized as an informal demarcation between white settlement to the east and the black Waycross neighborhood to the west (Olausen et al. 1997).

Figure 49. View of 271942Y facing east.

271943F – South St.

Figure 50. View of 271943F facing west towards the south end of 8VO7188.

A National Register historic district (Southwest Daytona Beach Black Heritage District - 8VO7188) is recorded adjacent to the northwest of this crossing. Mature trees largely shield the historic district from the crossing (Figure 50). One of the structures partially visible from the crossing is the oldest structure within the district, Fraternal Hall constructed in 1884 (Figure 51). This particular structure at 512 South St. is significant as being constructed as being constructed for use as a social meeting place and serving several fraternal organizations important to the local black community over the years (Olausen et al. 1997). Railroad traffic is not considered to have an adverse impact on the adjacent historic district, since the railroad was historically important as an informal

demarcation between white settlement to the east and the black Waycross neighborhood to the west (Olausen et al. 1997).

Figure 51. View of 1884 Fraternal Hall from immediately west of 271943F, facing northwest.

271958V – SR 421 / Dunlawton Ave.

Figure 52. View from 271958V towards Port Orange Elementary School, facing southeast.

A National Register historic district (Dunlawton Avenue Historic District - 8VO7125) is recorded adjacent to the southeast of this crossing. Port Orange Elementary School, constructed in 1925 with 1941 and 1954 additions and a contributing structure to the district, is visible but set back from the crossing (Figure 52). The original FEC railroad depot for Port Orange once stood between the school and the tracks prior to being moved in 1966 (Johnston and Jones 1997). The FEC is important for bringing

tourists to this part of Port Orange. The proposed Amtrak traffic would be consistent with the historical setting at this location.

A line of circa 1920s houses were noted adjacent to the southwest of this crossing (Figure 53). These structures fronted Lemon St. and the railroad immediately beyond it. Two have been previously recorded and were recommended as ineligible as contributors to a district. They were constructed in close proximity to and facing the former FEC railroad depot, so railroad traffic is not considered to have any adverse effects in any case.

Figure 53. View of 271958V and nearby 1920s houses, facing southwest.

271966M – Eleanore Ave.

Figure 54. View of 271966M facing east with 8VO8817 to the left.

Previously recorded structures that were recommended as potentially eligible for a district were located near this crossing to the northeast. One of these structures, a 1940s residence (8VO8817), is visible from the crossing (Figure 54). The area also contains some more recent infilling within this area (Figure 55). Also, tall trees shield most of the neighborhood to the east.

Figure 55. View from 271966M towards the northwest showing 1960s-1970s commercial structures.

271967U – CR 4122 / Wayne Ave.

Figure 56, View of 271967U facing east.

Previously recorded structures that were recommended as potentially eligible for a district were located near this crossing. The neighborhoods to the east and west both

were largely shielded from the crossing by mature trees (Figures 56 and 57). Visible structures to the east were modern in date. Although the visible structures to the west dated to 1948 according the property appraiser, the neighborhood as a whole was mostly modern.

Figure 57. View of 271967U facing west.

271968B – Ronnoc Ln.

Figure 58. View of 271968B facing west towards the northern edge of 8VO8538.

An historic district (Westside Community - 8VO8538) that has not been evaluated by the SHPO but has been recommended eligible for the NRHP is recorded adjacent to the southwest of this crossing. Also, a National Register historic district (New Smyrna Beach Historic District - 8VO3132) begins one block to the east. Structures within

8VO8538 to the west are largely shielded from the crossing by mature trees (Figure 58). The western boundary of 8VO3132 is well away from the crossing and also obscured by trees (Figure 59).

Figure 59. View of 271968B facing east towards 8VO3132.

271969H – Mary Ave.

Figure 60. View of 271969H facing west towards 8VO8538.

An historic district (Westside Community - 8VO8538) that has not been evaluated by the SHPO but has been recommended eligible for the NRHP is recorded adjacent to the west of this crossing. Also, a National Register historic district (8VO3132) begins one block to the east. One structure associated with 8VO8538 is clearly visible to the southwest of this crossing (Figure 60). Since it was the railroad at this location,

originally constructed as the Blue Spring, Orange City and Atlantic Railroad but later acquired by Flagler and becoming the FEC, that originally drew African American settlers to Westside (Nash et al. 2008), the railroad is understood to be an integral part to the community. Thus railroad traffic will not have an adverse effect on this historic district. The field visit also demonstrated that the western boundary of 8VO3132 is well away from the crossing and also obscured by trees (Figure 61).

Figure 61. View of 271969H facing east towards 8VO3132.

271970C – Washington St.

Figure 62. View of 271970C facing west towards 8VO8538.

An historic district (Westside Community - 8VO8538) that has not been evaluated by the SHPO but has been recommended eligible for the NRHP is recorded adjacent to

the west of this crossing. Also, a National Register historic district (8VO3132) begins one block to the east. Structures associated with 8VO8538 are visible from this crossing (Figure 62). One of the partially visible structures is the Crown of Life Church which is unrecorded and not listed as a part of the historic district. The property appraiser lists this church as having been constructed in 1960, but it appears much older (Figure 63). In any case, since it was the railroad that originally drew African American settlers to Westside (Nash et al. 2008), the railroad is understood to be an integral part to the community. Thus railroad traffic will not have an adverse effect on this historic district. The field visit also demonstrated that the western boundary of 8VO3132 is well away from the crossing and obscured by trees (Figure 64).

Figure 63. Crown of Life Church located northwest of 271970C.

Figure 64. View of 271970C facing east towards 8VO3132.

271971J – Julia St.

An historic district (Westside Community - 8VO8538) that has not been evaluated by the SHPO but has been recommended eligible for the NRHP is recorded adjacent to the west of this crossing. Also, a National Register historic district (8VO3132) begins one block to the east. One structure associated with 8VO8538 is clearly visible to the northwest of this crossing (Figure 65). Since it was the railroad that originally drew African American settlers to Westside (Nash et al. 2008), the railroad is understood to be an integral part to the community. Thus railroad traffic will not have an adverse effect on this historic district. The field visit also demonstrated that the western boundary of 8VO3132 is well away from the crossing and obscured by trees (Figure 66).

Figure 65. View of 271971J facing west towards 8VO8538.

Figure 66. View of 271971J facing east towards 8VO3132.

271972R – SR 44 / Canal St.

An historic district (Westside Community - 8VO8538) that has not been evaluated by the SHPO but has been recommended eligible for the NRHP is recorded adjacent to the northwest of this crossing. Also, a National Register historic district (8VO3132) begins one block to the east, and a National Register-listed canal (8VO7056) runs east-west at this location. No structures associated with 8VO8538 are visible from this crossing due to modern infill and tree cover (Figure 67). Some commercial/retail structures associated with 8VO3132 are visible from the crossing, but these lie a full block away on the opposite side of US 1 (Figure 68). Amtrak traffic should have no effect on these structures or their associated historic district. An unrecorded retail structure that the property appraiser lists as being constructed in 1947 lies immediately to the northeast of the crossing (Figure 69). This structure is not listed as being either contributing or not contributing to 8VO3132, and is thus considered outside of its boundaries. Finally, the North Canal associated with 8VO7056 is not visible from the crossing, because it exists archaeologically as a drainage remnant running beneath the north sidewalk along Canal St. at this location (Austin et al. 2007).

Figure 67. View of 271972R facing west towards 8VO8538.

Figure 68. View of 271972R facing east towards 8VO3132.

Figure 69. Unrecorded 1947 retail building northeast of 271972R.

272907N – 10th St.

Although no structures are located nearby this crossing, a National Register-listed canal (8VO7056) is situated at this location. The South Canal of the Turnbull Canal System runs generally east-west immediately south of this crossing. It appears as a narrow, water-filled drainage with an FEC bridge running over it (Figures 70 and 71). Since no alterations are planned to the bridge, the FEC Amtrak Passenger Rail project will have no effect on this canal.

Figure 70. South Canal of 8VO7056 from railroad bridge south of 272907N, facing east.

Figure 71. View of South Canal of 8VO7056 and railroad bridge from street immediately west of 272907N, facing southeast.

271977A – CR 4136 / Park Ave.

The property appraiser search indicated that some 1940s structures remained nearby this crossing. Three such structures were noted to the east of the crossing, but

they were fairly well shielded from the crossing by mature tree cover (Figure 72). Also, this small collection of residences does not appear to represent a potential historic district.

Figure 72. View from 271977A towards adjacent structure, facing southeast.

271986Y – CR 4146 / Halifax Ave.

The property appraiser search indicated structures built in 1915, 1933, and 2006 adjacent to this crossing. Although the 1915 structure lies adjacent to and is clearly visible from the crossing (Figure 73), no potential historic district was noted within this area due to modern infilling.

Figure 73. View of 271986Y facing east towards 1915 structure.

271988M – Putnam Grove Rd.

The property appraiser search indicated a small collection of 1960s and 1970s structures nearby this crossing. This crossing was characterized by a rural setting (Figure 74). The area seemed to include mostly 1970s mobile homes and does not represent a potential historic district (Figure 75).

Figure 74. View of 271988M facing west.

Figure 75. View from 271988M facing northwest.

BREVARD COUNTY CROSSINGS

271998T – CR 4464 / Main St.

Several structures that have not been evaluated for the NRHP are recorded within the vicinity of this crossing. The buildings to the east are commercial/industrial structures, including bother modern and historic (Figure 76). Predominantly residential structures are located west of the crossing, some of which are clearly visible (Figure 77). The neighborhood appears to be early to mid-twentieth century in date, and thus grew up around the railroad. Amtrak traffic would be consistent with the historic setting of the neighborhood.

Figure 76. View of 271998T facing east towards commercial/industrial structures.

Figure 77. View of 271998T facing west towards residential neighborhood.

272067G – Tropic St.

Several structures that have not been evaluated for the NRHP are recorded within the vicinity of this crossing. Upon the field visit it was noted that this crossing no longer exists. A review of historic aerial photographs showed a crossing to exist at this location in 1951. The 2004 aerial photograph shows it to have be removed and blocked by that time.

272068N – CR 405 / South St.

Some structures that have not been evaluated for the NRHP are recorded within the vicinity of this crossing. Also, the National Register-listed St. Gabriel's Episcopal Church (8BR177), constructed in 1887, is shown on the FMSF GIS immediately west of this crossing. The field visit demonstrated that 8BR177 is misplaced within the GIS; this church is actually about two blocks east and two blocks north of this location at the northwest corner of Palm Ave. and Pine St. There is a church located immediately west of and visible from this crossing, but it is St. James A.M.E. Church, the main church building of which was constructed in 1963 according to the property appraiser (Figure 78). To the northeast of the crossing is the Brevard County Property Appriaser's building, a small modern high-rise (Figure 79). A large parking lot exists to the immediate southeast of the crossing, and a municipal park with community center lies one block away to the southwest. The church to the northwest is associated with a residential neighborhood with several early to mid-twentieth-century homes, but this neighborhood grew in proximity to the railroad. Thus, Amtrak traffic would be consistent with the neighborhood's historic setting.

Figure 78. View from 272068N towards St. James A.M.E. Church, facing northwest.

Figure 79. View of 272068N and Brevard County Property Appraiser's building, facing northeast.

272095K – CR 503 / Dixon Blvd.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated mostly 1960s commercial structures. The area contains a mix of modern and recent historic commercial/industrial structures (Figures 80 and 81). It does not appear to represent a potential historic district.

Figure 80. View of 272095K facing east.

Figure 81. View of 272095K facing west.

272109R – Carver Rd.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated a small early 1960s neighborhood about one block away to the northwest. Only one of these structures was visible from the crossing, and it was located a considerable distance away (Figure 82). Amtrak traffic will have little to no effect on this neighborhood.

Figure 82. View from 272109R towards 1960s neighborhood, facing northwest.

272110K – Ansin Rd.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated some 1960s structures with modern infill. The vicinity of this crossing was characterized by an open industrial area with several of the buildings appearing modern (Figures 83 and 84). No potential historic district exists at this location.

Figure 83. View of 272110K facing east.

Figure 84. View of 272110K facing west.

272122E – CR 511 / Aurora Rd.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated several early 1960s structures. This was a typical light commercial area with a mix of modern and recent historic structures (Figures 85 and 86). No potential historic district exists at this location.

Figure 85. View of 272122E facing east.

Figure 86. View of 272122E facing west.

272123L – Creel St.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated some structures constructed in the 1950s. This area included a couple industrial structures and an apparent junk yard adjacent to the corner (Figures 87 and 88). No potential historic district exists at this location.

Figure 87. View of 272123L facing east.

Figure 88. View of 272123L facing west.

272132K – CR 5060 / Hibiscus Ave.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated some 1940s structures. The vicinity of the crossing is a light commercial area that seemed to contain predominantly modern structures (Figures 89 and 90). No potential historic district exists at this location.

Figure 89. View of 272132K facing east.

Figure 90. View of 272132K facing west.

272133S – Silver Palm Ave.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated mostly 1980s structures with some constructed in the 1960s or earlier. This was a sparse industrial area with mostly modern structures in close proximity to the crossing (Figures 91 and 92). No potential historic district exists at this location.

Figure 91. View of 272133S facing east.

Figure 92. View of 272133S facing west.

272134Y – Seminole Ave.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated an ice plant built in 1919 adjacent to the southeast. This structure, although partially visible from the crossing, was a considerable distance from it (Figure 93). Also, the vicinity was characterized by a light industrial area with several modern structures that grew near the railroad (Figure 94). No potential historic district exists at this location.

Figure 93. View from 272134Y towards 1919 ice plant, facing southeast.

Figure 94. View of 272134Y facing west.

272138B – US 192 / Strawbridge Ave.

Previously recorded structures that were recommended as potentially eligible for a district were located near this crossing. Several unrecorded historic structures are visible from the crossing, but two of the most prominent are a modern high-rise to the east and a modern parking garage adjacent to the northwest (Figures 95-97). The area is a typical urban setting with main highway and railroad crossing. Amtrak traffic is considered consistent with the historical setting of the area.

Figure 95. View of 272138B facing east.

Figure 96. View of 272138B facing west towards unrecorded historic structure.

Figure 97. View from 272138B towards adjacent parking garage, facing northwest.

272139H – SR 192 / New Haven Ave.

Previously recorded structures that were recommended as potentially eligible for a district were located near this crossing. This location is a commercial area with several early twentieth century Boom Time structures evident (Figures 98 and 99). While this area would seem to have good potential for being a historic district, it is also notable that a 1920 Sanborn Insurance map shows the former FEC railroad depot for Melbourne to have once stood immediately to the northeast of this crossing (Figure 100). It is clear that this commercial district grew up around the railroad, and the railroad is integral to it. The proposed Amtrak traffic would be consistent with the historical setting of this area.

Figure 98. View of 272139H and commercial area facing west.

Figure 99. View from 272139H towards commercial structures to the northeast.

Figure 100. Detail of 1920 Sanborn Insurance map showing former location of FEC railroad depot immediately north of New Haven Ave.

272142R – Line St.

A historic district (Union Cypress Saw Mill – 8BR2173), that has not been evaluated by the SHPO, is recorded within one block southwest of this crossing. The area of this crossing includes a mix of modern and 1950s structures (Figure 101). Buildings associated with the defined district (8BR2173) are not visible from the crossing (Figure 102).

Figure 101. View of 272142R facing east.

Figure 102. View from 272142R towards nearby historic saw mill district (8BR2173) with only modern building visible, facing southwest.

272143X – Jernigan Ave.

A historic district (Union Cypress Saw Mill – 8BR2173), that has not been evaluated by the SHPO, is recorded adjacent to this crossing to the west. Visible from the crossing is a structure identified as a boarding house for single white male workers of the saw mill (Vosatka 2007) (Figure 103). FEC freight and passenger depots used to located immediately southwest of this crossing but are no longer present. In fact, the freight depot existed until very recently, as it appears on 2004 aerial photos. The FEC, along with a company owned railway running towards the west, was an integral part of the saw mill district, as it was used to ship lumber to areas outside of the immediate

vicinity (Vosatka 2007). Thus, rail traffic is consistent with the historical setting of this district.

Figure 103. View from 272143X towards boarding house associated with 8BR2173, facing west.

272144E – CR 5066 / University Blvd.

A historic district (Union Cypress Saw Mill – 8BR2173), that has not been evaluated by the SHPO, is recorded adjacent to this crossing to the northwest. The vicinity of this crossing is characterized by an industrial area with a mix of modern and mid-twentieth-century structures (Figures 104 and 105). Buildings associated with 8BR2173 are not visible from the crossing.

Figure 104. View of 272144E facing east.

Figure 105. View of 272144E facing west.

272146T – NE Palm Bay Rd. (Hessey Ave.)

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated mostly structures constructed between 1950 and 1965. A structure built in 1923 is also nearby. The vicinity of the crossing is somewhat rural in appearance. A modern structure is visible to the east (Figure 106). Although a 1950s residence is visible to the west, the rest of the neighborhood to the west, including the 1923 structure, is obscured by trees (Figure 107).

Figure 106. View of 272146T facing east.

Figure 107. View of 272146T facing west.

272147A – CR 5070 / SE Palm Bay Rd.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated mostly structures constructed between 1950 and 1965. This area is characterized by a few industrial structures that are mostly modern in appearance with a residential neighbor also to the west (Figures 108 and 109). The residential neighborhood is mostly obscured by trees.

Figure 108. View of 272147A facing east.

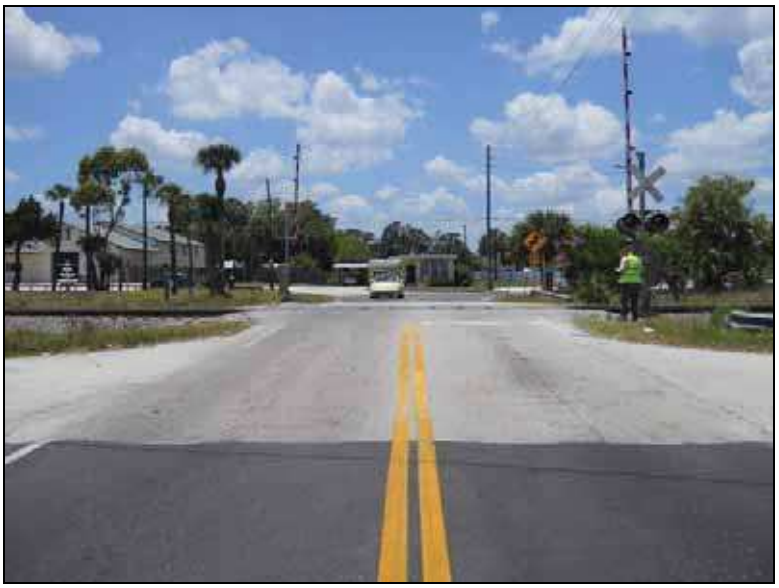

Figure 109. View of 272147A facing west.

272149N – SR 514 / Malabar Rd.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated some structures built between 1900 and the 1920s with some 1960s infill. The majority of the structures visible from the crossing represent mid to late 1960s infill (Figures 110 and 111). Older structures nearby are largely obscured from view by trees.

Figure 110. View of 272149N facing east.

Figure 111. View of 272149N facing west.

272152W – CR 5078 / 1st St.

A structure listed on the NRHP (8BR1710) is located adjacent to this crossing to the northeast. This structure, which is clearly visible from the crossing, is Jorgensen's General Store and was constructed in 1894 (Figure 112). It is the only remaining historic commercial building within the small fishing village of Grant. It served as a trading post, post office, telegraph office, and railroad express office for the community. The main entrance originally faced west towards the FEC railroad, but this was later altered to the east side following construction of Dixie Highway (US 1) (Knoblauch and Goodwin 1999). The railroad at this location is integral to the history of 8BR1710, and resumption of passenger service along it may only serve to restore part of the local historical setting.

Figure 112. View from 272152W towards 8RB1710, facing northeast.

272156Y – CR 5082 / Micco Rd.

No structures have been previously recorded in the vicinity of this crossing, but the topographic map shows some potentially historic structures. The property appraiser search indicated structures mostly built between the 1980s and 2000s. The field visit confirmed that only modern structures were visible from the crossing (Figures 113 and 114).

Figure 113. View from 272156Y towards southeast.

Figure 114. View from 272156Y towards southwest.

INDIAN RIVER COUNTY CROSSINGS

272159U – SR 505 / Roseland Rd.

Some structures that have not been evaluated for the NRHP are recorded within the vicinity of this crossing, although others have been recommended as ineligible for a historic district. All nearby structures are obscured from this crossing by mature trees (Figures 115 and 116).

Figure 115. View of 272159U facing east.

Figure 116. View of 272159U facing west.

272161V –Main St.

Two National Register historic districts are located one block away from this crossing including 8IR1048A (Old Town Sebastian Historic District West) to the southwest and 8IR1048B (Old Town Sebastian Historic District East) to the southeast. No structures associated within either historic district were visible from the crossing (Figures 117 and 118). In any case, both historic districts grew up in response to the arrival of the Jacksonville, St. Augustine & Indian River Railroad (later acquired by the FEC) in 1893 and changed the earlier focus of settlement in Sebastian on the river to the railway (Jackson-Brady and Goodwin 2003a, 2003b). Thus, the proposed railroad traffic would be consistent with the historical settings of historic districts 8BR1048A and 8BR1048B.

Figure 117. View of 272161V facing east towards 8BR1048B.

Figure 118. View of 272161V facing west towards 8BR1048A.

272162C – SR 512 / Fellsmere Rd.

Several structures that have not been evaluated for the NRHP are recorded within the vicinity of this crossing. Only modern structures were visible from this crossing, including a car dealership to the northeast, a gas station to the southeast, and an industrial building to the southwest.

272180A – CR 630 / S. Gifford Rd. / 41st St.

Figure 119. View from 272180A towards modern commercial structures, facing northeast.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated some date to the 1940s. The vicinity of this crossing included a mix of modern and historic commercial structures (Figures 119 and 120). The area does not appear to have a potential for a historic district.

Figure 120. View from 272180A towards historic commercial structures, facing southeast.

272190F – 14th Ave.

Figure 121. View from 272190F facing west.

Previously recorded structures that were recommended as potentially eligible for a district were located about a block away from this crossing to the west. Only modern structures were visible from this crossing (Figure 121). The previously recorded structures to the west were hidden from view by tall trees. Located to the south of this

crossing is the Indian River County Historical Society which is housed in the relocated FEC railroad station for Vero (Vero Railroad Station – 8IR68). Constructed in 1903 and relocated to its present location in 1984, it was originally located on the east side of the tracks near 18th Place, about 2,500 ft. south of its current location (Stanbridge 1986). Although visible from the tracks south of this crossing, the railroad station is not visible from this crossing due to trees surrounding it (Figure 122).

Figure 122. View of 272190F facing south towards relocated Vero Railroad Station (8IR68).

272191M – 23rd St.

Previously recorded structures that were recommended as potentially eligible for a district were located one to two blocks away from this crossing to the west. These structures are not visible from the crossing (Figure 123). Rather, the area was dominated by modern commercial structures along US 1 adjacent to the railroad to the east (Figure 124). The relocated Vero Railroad Station (8IR68) is located on the property to the immediate northwest of this crossing, but the building is not visible due to tree cover.

Located to the immediate southwest of this crossing is Pocahontas Park, within which lie the Vero Beach Community Center and the Heritage Center. The current project may pose a potential Section 4(f) issue concerning increases in the frequency of noise on this public park. This potential issue should be considered when conducting the noise and vibration study for the mainline.

Figure 123. View of 272191M facing west.

Figure 124. View from 272191M facing north. 8IR68 is behind trees on left.

272958Y – 20th St.

A National Register-listed power plant (8IR975) is located adjacent to this crossing to the southwest. This structure, constructed in 1926, is clearly visible from the crossing (Figure 125). The remainder of the area is characterized by modern structures. The power plant was situated beside the FEC so that machinery and diesel supplies could be shipped to the plant via the railroad. Thus, the railroad and rail traffic is an integral feature to the historical setting of 8IR975.

Figure 125. Google Maps street view from 272958Y facing southwest towards 8IR975.

272194H – 18th Pl.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated predominantly a mix of 1950s to 1990s residential and commercial structures are located nearby. During the field visit, it was noted that this crossing no longer exists. This is the approximate original location of the FEC railroad station for Vero (8IR68), however.

273049M – 4th St.

Figure 126. View from 273049M towards McKee Jungle Gardens (8IR859), facing southeast.

The National Register-listed McKee Jungle Gardens (8IR859) is located nearby this crossing to the east, but on the opposite side of US 1. This area is somewhat rural with some modern commercial structures located nearby. Tall trees shield McKee Jungle Gardens from the crossing and US 1 (Figure 126). Increased rail traffic should have no effect on 8IR859.

ST. LUCIE COUNTY CROSSINGS

272238F – Ave. A

Previously recorded structures that were recommended as potentially eligible for a district were located near this crossing to the east. Also, within one block west of the crossing is Old Fort Pierce City Hall (8SL289), which is listed on the National Register. A commercial district with several mid-twentieth-century buildings is clearly visible to the east of the crossing (Figure 127). The view of Old Fort Pierce City Hall is mostly blocked by a recently constructed parking garage (Figure 128). Immediately south of this crossing on the east side of the tracks was where the FEC freight depot and platforms used to be, running for most of the block between Ave. A and Orange Ave. (Figure 129). Thus, the railroad and rail traffic are integral parts to the historical setting of this section of Ft. Pierce.

Figure 127. Google Maps street view from 272238F facing east.

Figure 128. Google Maps street view of 272238F facing west towards 8LS289.

Figure 129. Detail of 1918 Sanborn Fire Insurance Map showing location of FEC freight depot and platforms between Ave. A (previously called Palmetto Ave.) and Orange Ave.

272239M – SR A1A / Orange Ave.

Previously recorded structures that were recommended as potentially eligible for a district were located near this crossing. These are mid-twentieth-century commercial structures that are clearly visible from the crossing (Figures 130 and 131). The view towards the west, however, is now dominated by a recently constructed parking garage. The FEC freight depot and platforms were historically situated immediately north of this crossing (see Figure 129). Also, the FEC passenger depot was located about two blocks south of this crossing on the east side of the tracks. Although both of these depots are now gone, the railroad and rail traffic are integral parts to the historical setting of this section of Ft. Pierce.

Figure 130. Google Maps street view from 272239M facing east.

Figure 131. Google Maps street view of 272239M facing west.

272331M – CR 712 / Midway Ave.

A previously recorded structure that was evaluated by the SHPO as eligible for the NRHP (William Robinson House – 8SL235) is located to the northeast of this crossing. Mostly modern residences are located near this crossing, all of which are screened by trees (Figure 132). The structure visible from the crossing is a detached garage associated with 8SL235 that the property appraiser lists as constructed in 1940 (Figure 133). The William Robinson House northeast of the garage was constructed in 1901 (Figure 134). The railroad at this location is a part of the historical setting of this structure.

Figure 132. View of 272331M facing west.

Figure 133. View from 272331M towards 8SL235, facing northeast.

Figure 134. View of 8SL235 northeast of 272331M from Indian River Blvd., facing west.

MARTIN COUNTY CROSSINGS

272336W – County Line Rd.

Figure 135. View from 272336W towards 8MT1410, facing southeast.

A historic district (Blue Heron Cottage Mobile Home Park – 8MT1410) is recorded adjacent to this crossing to the southeast, although it has been evaluated as ineligible for the NRHP by the SHPO. This district is only partially visible from the crossing due to tree cover (Figure 135). Some historic residences are also located immediately southwest of the crossing, some of which have been previously recorded and

recommended as ineligible concerning potential contribution to a historic district. These include an unrecorded 1962 house beside the railroad and a circa 1910 house (8MT978) immediately west of that (Figure 136).

Figure 136. View from 272336W facing southwest.

272347J – SR 10 / Colorado Ave.

Figure 137. View from 272347J towards previously recorded structures, facing west-southwest.

Previously recorded structures that were recommended as potentially eligible for a district were located within two blocks south and southwest of this crossing. Two of these structures, a frame vernacular residence (8MT167) and a Mediterranean Revival apartment building (8MT166), are visible from the crossing but appear to be a considerable distance away to be affected by the proposed rail traffic (Figure 137).

Between it and the crossing is a previously recorded commercial structure (8MT180) that has not been recommended potentially eligible for a district (Figure 138). Some mid-twentieth-century commercial buildings are located north of the crossing, but these do not appear to represent a potential historic district (Figure 139). Finally, adjacent to the southeast of this crossing is Kiwanis Youth Park. Increases in the frequency of noise near this crossing may pose a potential Section 4(f) issue. This potential issue should be considered at this location when conducting the noise and vibration study for the mainline.

Figure 138. View from 272347J facing southwest.

Figure 139. View from 272347J facing north.

272348R – E. 7th St. / SE Martin Luther King Jr. Blvd.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated a mix of 1945 to 1990s structures nearby. Two 1945 structures are clearly visible from the crossing to the southeast (Figure 140), but the rest of the area is somewhat open with only modern structures in the distance (Figure 141). There appears to be no potential for a historic district near this crossing.

Figure 140. View from 272348R towards 1945 structures, facing southeast.

Figure 141. View from 272348R facing southwest.

272358W – Broward St.

Several historic structures were previously recorded south and southwest of this crossing. Although most were recommended ineligible for a historic district, one was recommended as potentially eligible for a district. Some of these structures are visible from the crossing (Figures 142 and 143). The larger area around them contains more recent structures, which would limit the potential for a historic district being defined at this location.

Figure 142. View from 272358W facing southwest.

Figure 143. View from 272358W facing south.

PALM BEACH COUNTY CROSSINGS

272389V – Silver Beach Rd.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated 1960s to 1980s commercial structures nearby. The vicinity of this crossing is characterized by modern and recent historic industrial and commercial structures (Figures 144 and 145). This area does not appear to have the potential for a historic district.

Figure 144. View from 272389V facing northwest.

Figure 145. View from 272389V facing southeast.

272390P – Blue Heron Blvd.

No structures have been previously recorded in the vicinity of this crossing, but the property appraiser search indicated several 1960s and some 1950s structures nearby to the northwest. Visible from this crossing were modern industrial and commercial buildings including the City of Riviera Beach Water Treatment Plant to the northeast (Figure 146). The 1950s to 1960s residences northwest of the crossing were barely visible behind these commercial structures and are a considerable distance from the crossing (Figure 147).

Figure 146. View from 272390P towards modern water treatment plant, facing northeast.

Figure 147. View from 272390P towards nearby 1950s-1960s structures, facing northwest.

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RESULTS OF BRIDGE SURVEY

In May 2010, Janus Research conducted a cultural resource survey of historic railroad bridges located along the FEC Railway mainline from Jacksonville to West Palm Beach for the FEC Amtrak Passenger Rail project. Based upon the methodology established during the April 2010 conference call with SHPO/FDHR and FDOT, the primary objective of the bridge survey was to obtain preliminary information on the FEC Railway bridges, as most of the structures have not been previously documented. For this study, potential National Register eligibility was not determined; however, the bridges considered contributing elements to a potential FEC Railway linear historic district were noted. The majority of the bridges identified during this study are fixed structures that do not span great distances. Further analysis would be needed to ascertain if these structures maintain sufficient significance to be considered individually eligible for inclusion in the National Register.

In total, 22 bridges were documented during the bridge survey (Table 8). This includes 12 bridges which were constructed during or before 1962 according to FEC records; two bridges which were constructed prior to 1962 as documented in the FMSF; and eight bridges for which dates of construction were unavailable.

Five bridges appear to be significant due to their more unusual bridge types or because they are outstanding examples of their type. Two bridges have been determined eligible for individual listing in the National Register by SHPO: the Myrtle Avenue Subway Bridge (8DU13284) and St. Lucie River Bascule Bridge (8MT1382). Three bridges are considered potentially eligible for individual listing in the National Register: St. John's River Bascule Bridge, Sebastian River Bridge, and Loxahatchee River Bascule Bridge.

The Myrtle Avenue Subway Bridge (8DU13284) was determined by SHPO to be eligible for listing in the National Register. Constructed circa 1908, it is a very early extant bridge along the route and is significant for its associations with the Jacksonville Terminal Company, its original owner, and the patterns of development within the community (SEARCH 2006). The St. Lucie River Bascule Bridge, constructed circa 1938, has been determined by SHPO to be eligible for listing in the National Register for its engineering significance, and as the Loxahatchee River Bridge is of a similar type, it too may be considered eligible for listing, although further research is necessary to determine its date of construction. The St. John's River Bascule Bridge was constructed in 1924 according to the FEC records, and although the bascule type is unspecified, it retains significance as an early movable bridge along the route. It is also the longest historic bridge identified during this survey. The Sebastian River Bridge appears to be an outstanding example of desk plate girder bridge construction. Constructed in 1926, it is a deck plate girder bridge on towers and is 1,625 feet in length, the second-longest bridge surveyed in this study.

Two bridges, crossing Cracker Branch and Goat Creek, were inaccessible from the ROW and could not be evaluated for potential eligibility as part of a historic district. One bridge, the first bridge crossing the Tributary to Manatee Creek in Salerno, is either substantially altered or non-historic, and is not considered a potential contributing resource to a linear historic district.

Table 8 lists each bridge surveyed and pertinent physical information as well as a preliminary contributing status to a potential FEC Railway linear historic district. Aerial photographs depicting the bridge locations and photographs of each visible bridge are also provided (Figures 148-194).

Table 8. Bridges Identified During FEC Amtrak Passenger Rail Bridge Survey.

Map Number	Mile Post	Year Built	Nearest Station	Facility Crossed	Description	Bridge Length (feet)	Construction material	Construction Type	FMSF #	Notes	National Register Status
1	0.69	c. 1908	Jacksonville North	Myrtle Avenue	Concrete Trestle	60.33	Concrete	Reinforced	8DU13284		Determined eligible for individual listing in the National Register by SHPO; Contributing to potential FEC Railway linear district
2	0.03	1924	Jacksonville	St. John's River	Bascule	2451	Steel	Deck Plate Girder	Not assigned		Considered potentially eligible for individual listing in the National Register; Contributing to potential FEC Railway linear district
3	19.5	1924	Woodland	Durbin Creek	Deck Plate Girder	226	Steel	Deck Plate Girder	Not assigned	Limited visibility due to construction	Contributing to potential FEC Railway linear district
4	42.29	1925	Moultrie	Moultrie Creek	Deck Plate Girder	181	Steel	Deck Plate Girder	Not assigned	Limited visibility due to private property and foliage	Contributing to potential FEC Railway linear district
5	50.43	1948	Colfax	Cracker Branch	Trestle; Concrete box beam	91.67	Concrete	Reinforced	Not assigned	No access	Insufficient information to determine contributing status within the potential FEC Railway linear district
6	107.04	Unknown	Holly Hill	Unknown	Trestle	47	Steel	Stringer	Not assigned		Contributing to potential FEC Railway linear district
7	113.55	Unknown	Port Orange	Reed Canal	Beam Span	55.5	Steel	Stringer	Not assigned		Contributing to potential FEC Railway linear district
8	119.05	Unknown	Spruce Creek	Spruce Creek	Beam Span	300.17	Steel	Beam Span	Not assigned		Contributing to potential FEC Railway linear district
9	126.06	1948	Edgewater	South Canal	Trestle	48	Steel	Stringer	Not assigned		Contributing to potential FEC Railway linear district
10	190.47	1925	Hall	Eau Gallie River	Viaduct	575	Steel	Deck Plate Girder	Not assigned		Contributing to potential FEC Railway linear district
11	194.36	1925	Melbourne	Crane Creek/Melbourne Street	Viaduct	650	Steel	Deck Plate Girder	Not assigned		Contributing to potential FEC Railway linear district
12	197.7	1925	Palm Bay	Turkey Creek	Deck Plate Girder	180	Steel	Deck Plate Girder	Not assigned		Contributing to potential FEC Railway linear district
13	202.59	1959	Palm Bay	Goat Creek	Trestle	106	Steel	Stringer	Not assigned	No access	Insufficient information to determine contributing status within the potential FEC Railway linear district
14	212.07	1926	Micco	Sebastian River	Deck Plate Girder on towers	1625	Steel	Deck Plate Girder	Not assigned		Considered potentially eligible for individual listing in the National Register; Contributing to potential FEC Railway linear district
15	240.1	1961	Fort Pierce	Taylor Creek	Concrete Trestle & Beam Span	209.5	Concrete with steel beam spam	Reinforced; stringer	Not assigned		Contributing to potential FEC Railway linear district
16	259.95	Unknown	Stuart	Warner Creek	Trestle	94	Steel	Stringer	Not assigned		Contributing to potential FEC Railway linear district
17	260.93	c. 1938	Stuart	St. Lucie River	Beam Span & Thru Plate Girder Trunnion Lift	1270	Steel	Beam Span; Deck Truss Thru Plate Girder	8MT1382		Determined eligible for individual listing in the National Register by SHPO; Contributing to potential FEC Railway linear district

Map Number	Mile Post	Year Built	Nearest Station	Facility Crossed	Description	Bridge Length (feet)	Construction material	Construction Type	FMSF #	Notes	National Register Status
18	266.58	Unknown	Salerno	Tributary to Manatee Creek	Concrete Box Beam	40	Concrete	Reinforced	Not assigned	This bridge is either substantially altered or non-historic	Non-contributing to potential FEC Railway linear district
19	266.86	Unknown	Salerno	Tributary to Manatee Creek	Trestle	106	Steel	Stringer	Not assigned		Contributing to potential FEC Railway linear district
20	267.34	1935	Salerno	Tributary to Manatee Creek	Trestle	34	Steel	Stringer	Not assigned		Contributing to potential FEC Railway linear district
21	282.58	Unknown	Jupiter	Loxahatchee River	Deck Plate Girder, WFB & Thru Plate Girder Trunnion Lift	588	Steel	Deck Plate Girder	Not assigned		Considered potentially eligible for individual listing in the National Register; Contributing to potential FEC Railway linear district
22	291.86	Unknown	Monet	Earman River	Beam Span	175	Steel	Stringer	Not assigned		Contributing to potential FEC Railway linear district

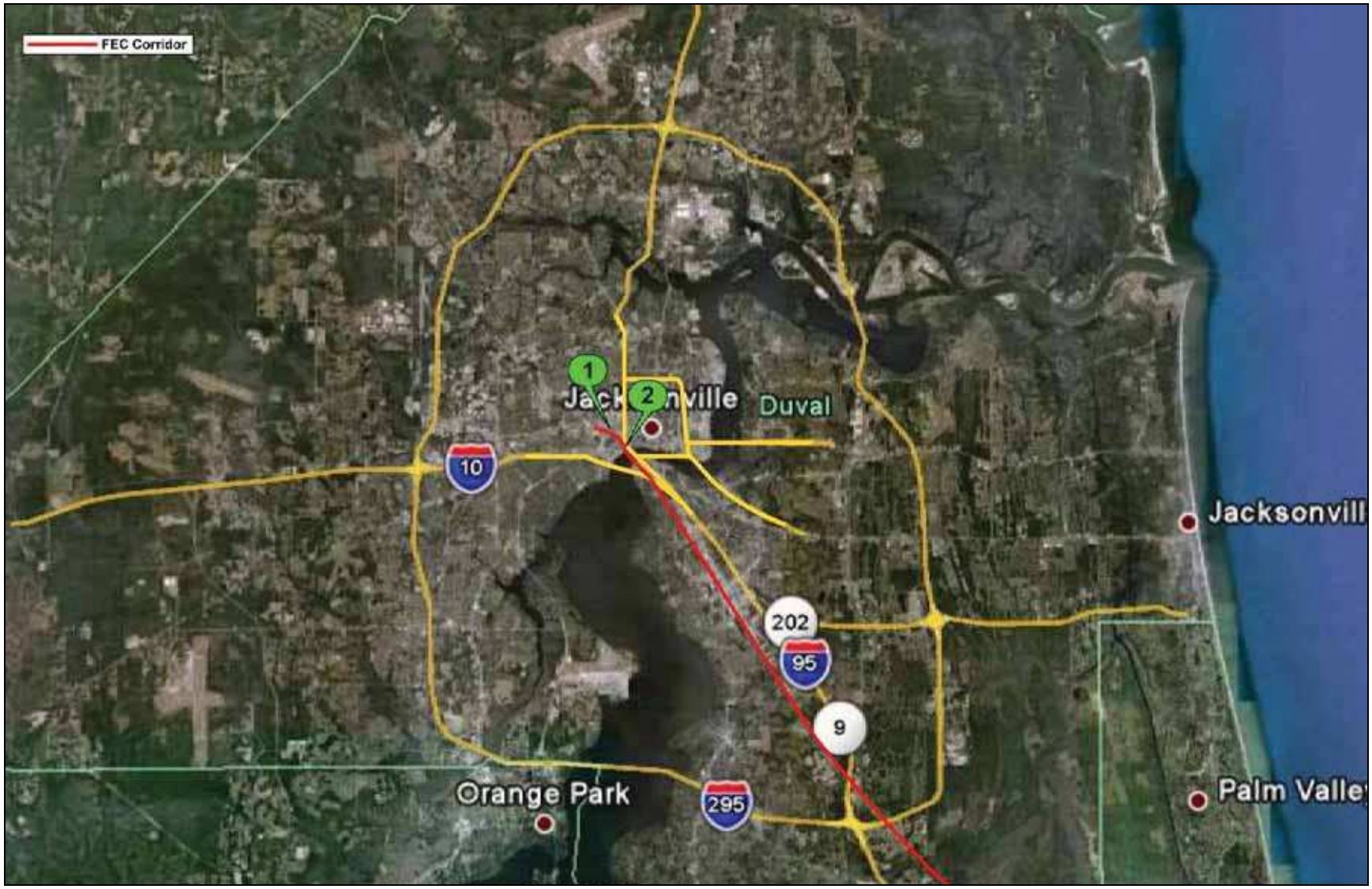

Figure 148. Bridges surveyed in Duval County.

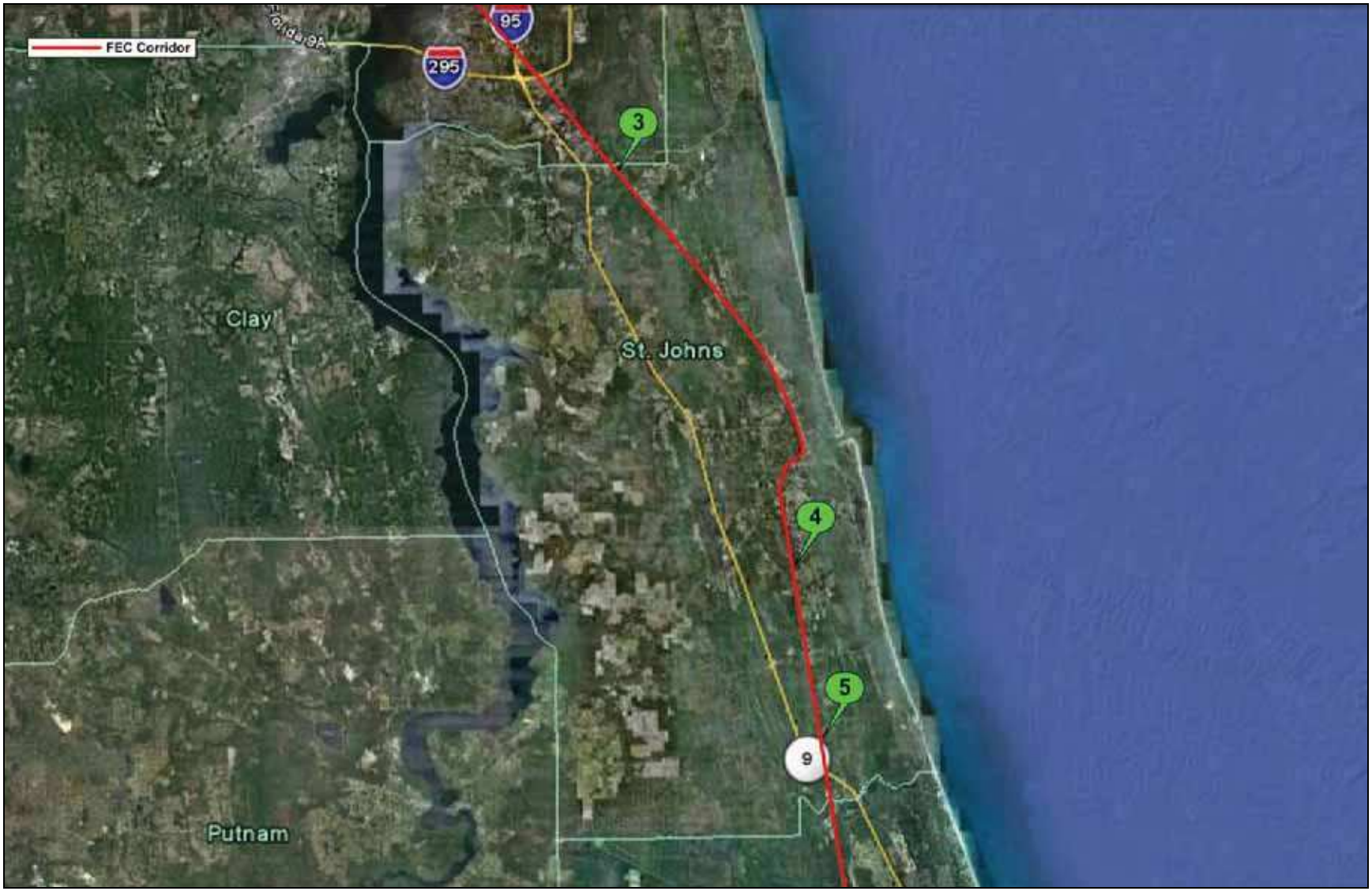

Figure 149. Bridges surveyed in St. Johns County.

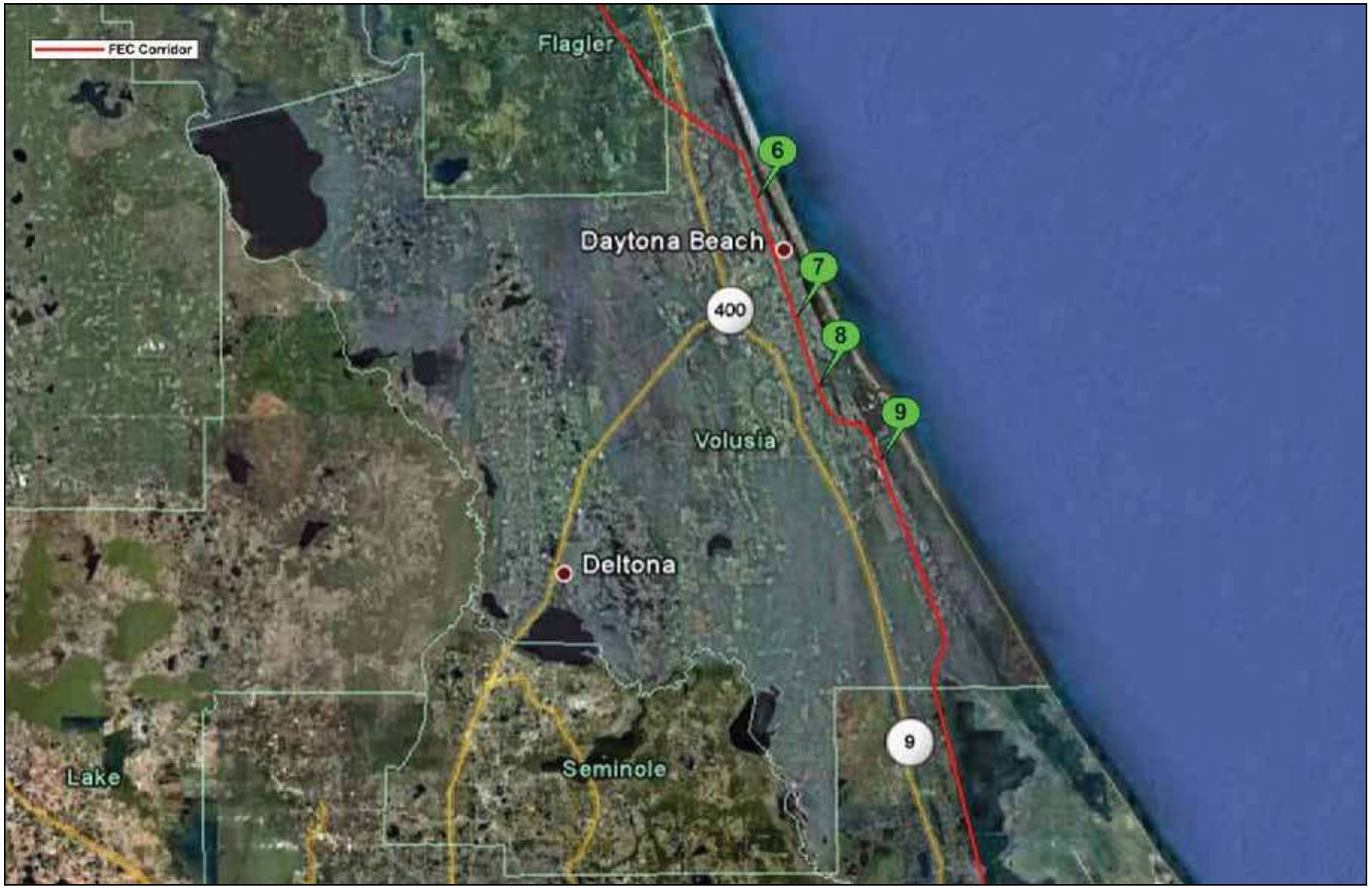

Figure 150. Bridges surveyed in Volusia County.

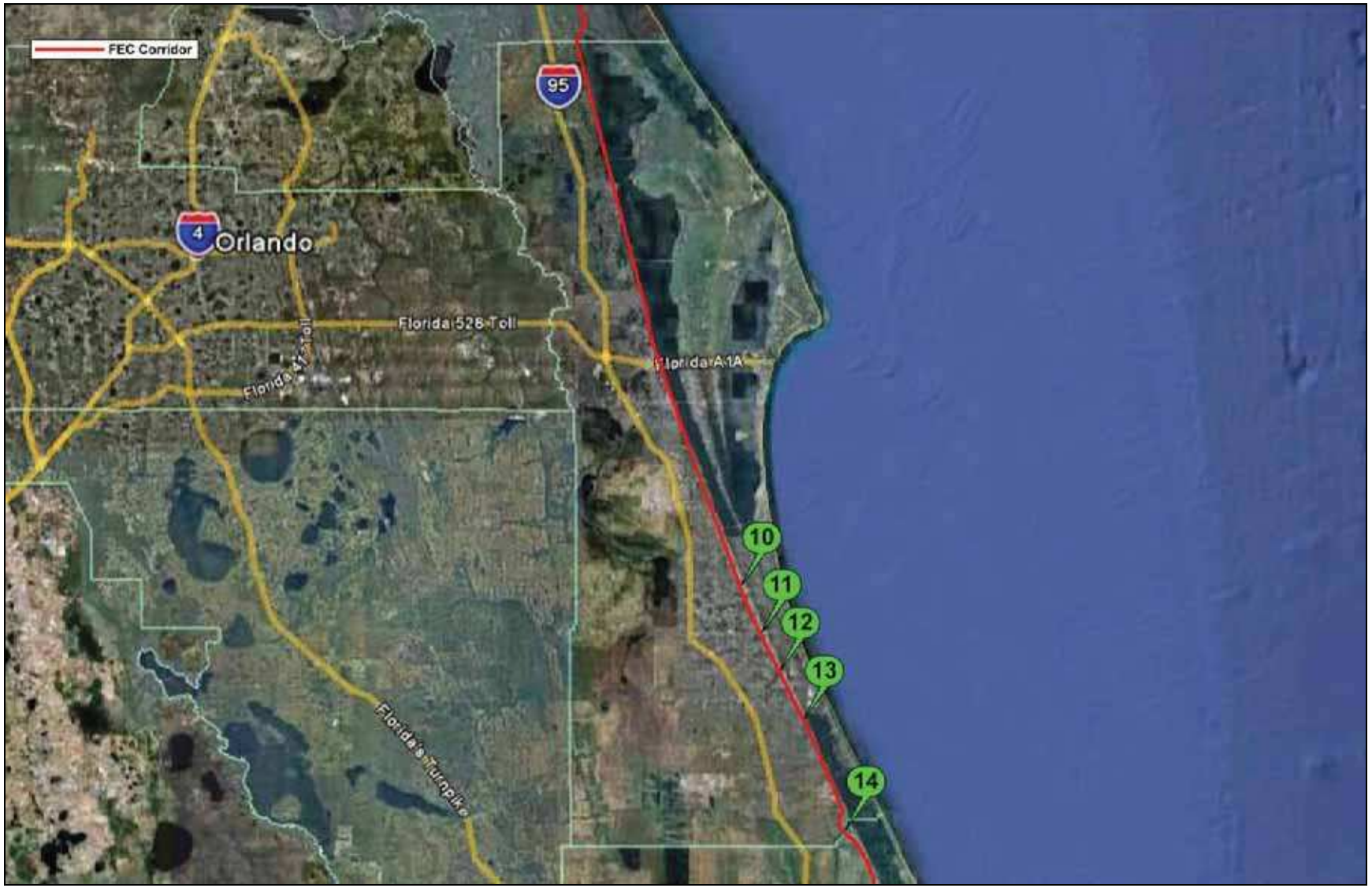

Figure 151. Bridges surveyed in Brevard and Indian River counties.

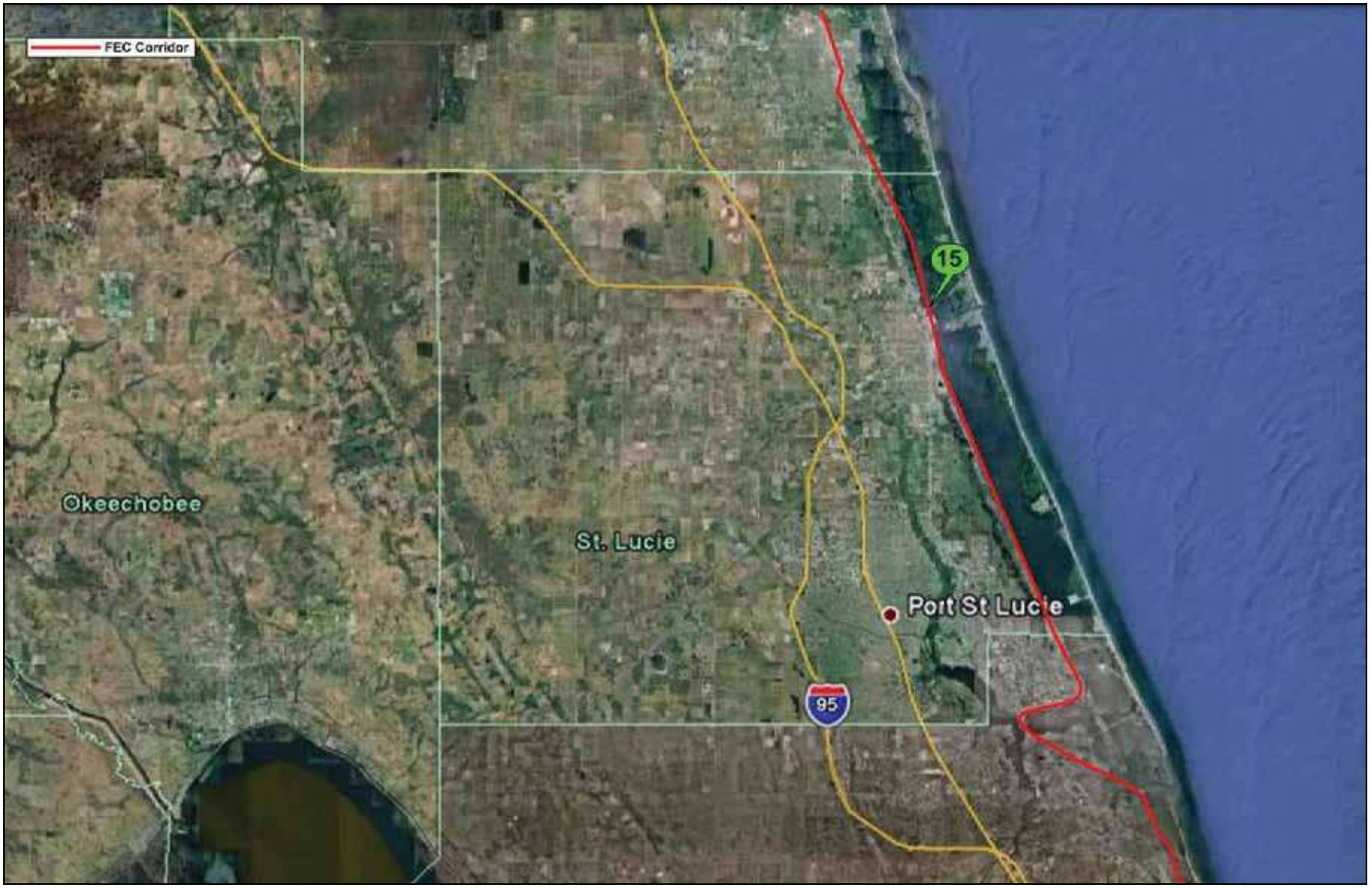

Figure 152. Bridges surveyed in St. Lucie County.

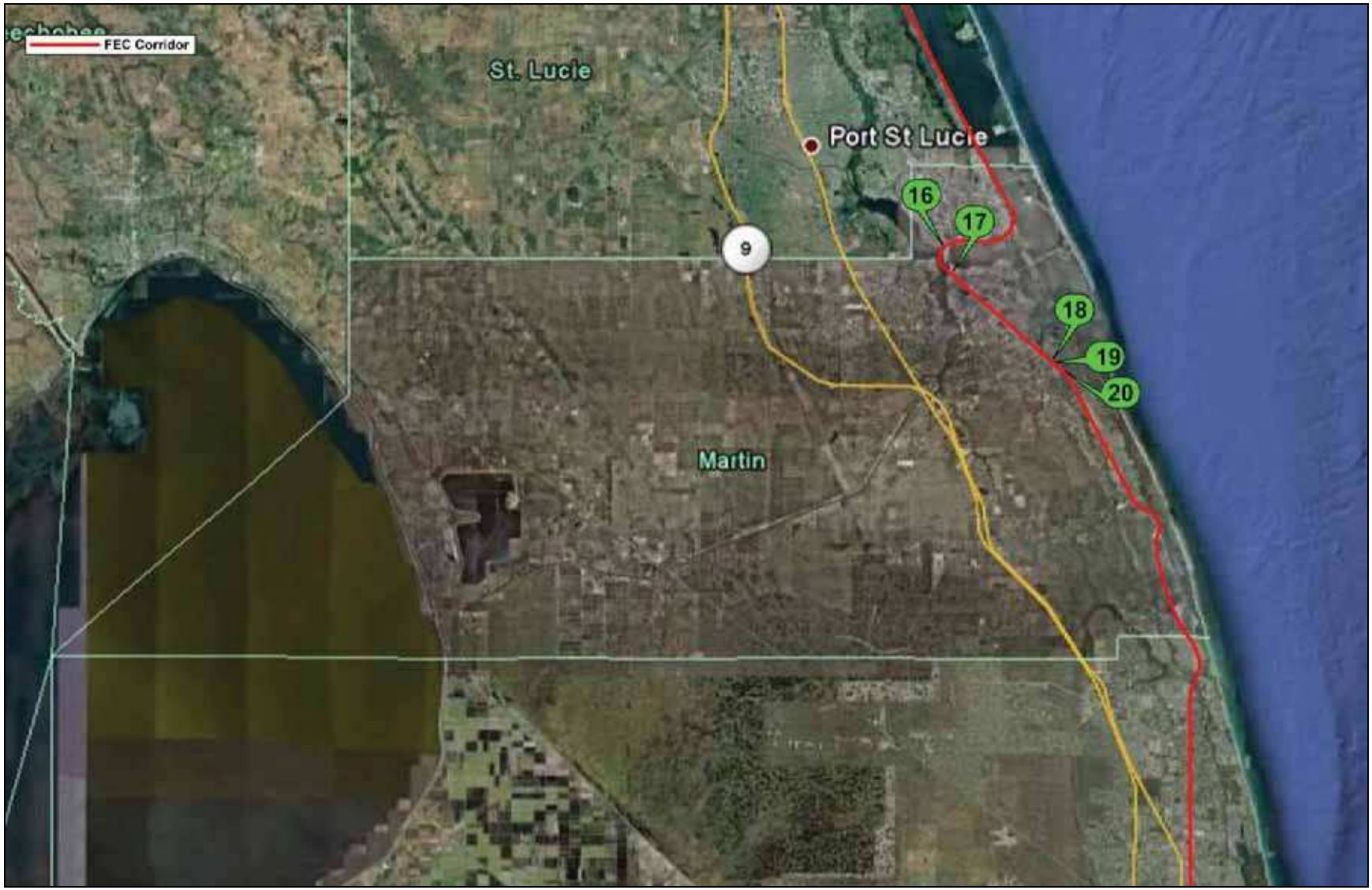

Figure 153. Bridges surveyed in Martin County.

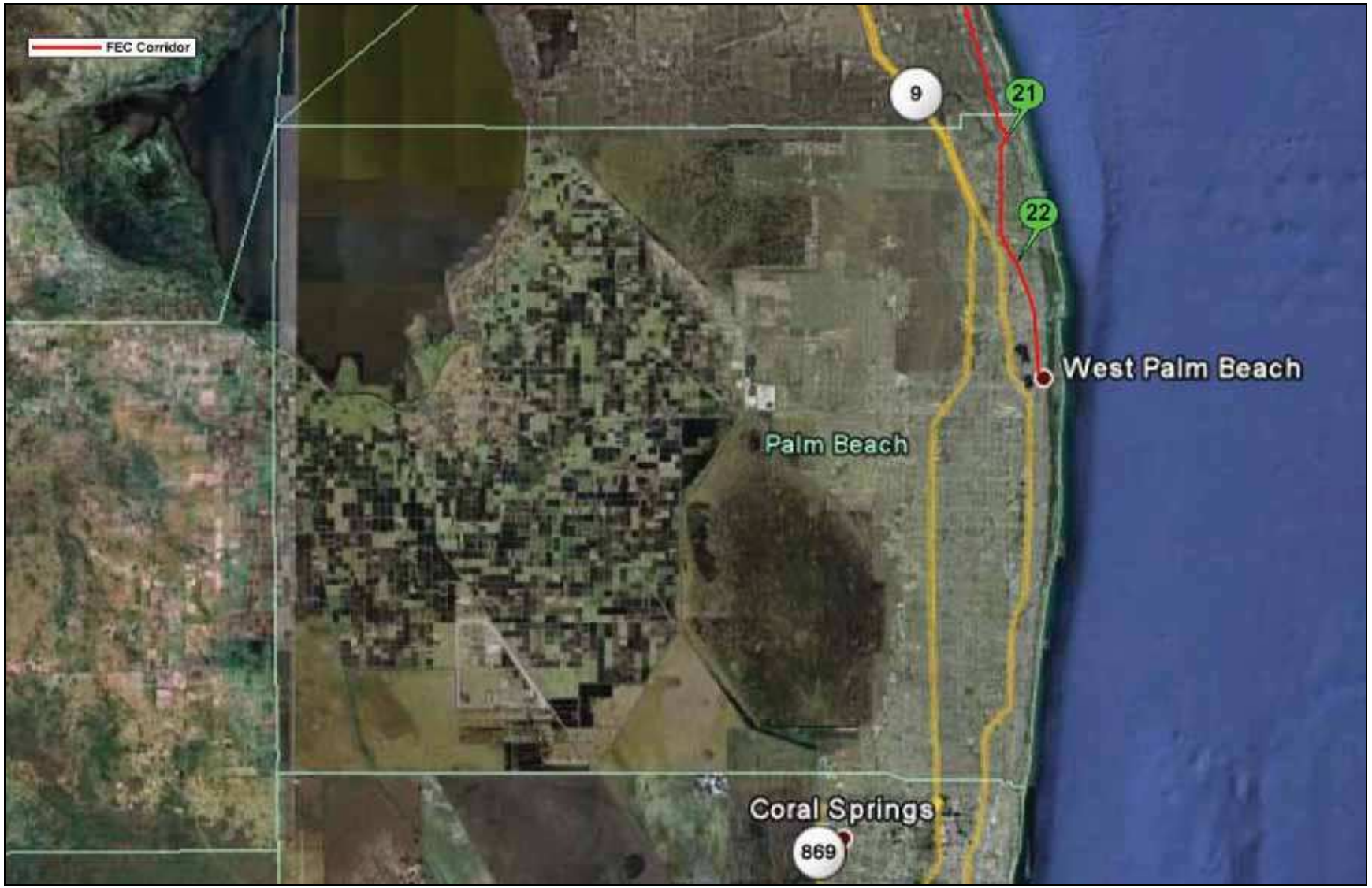

Figure 154. Bridges surveyed in Palm Beach County.

Figure 155. FEC bridges over Myrtle Avenue and St. John's River.

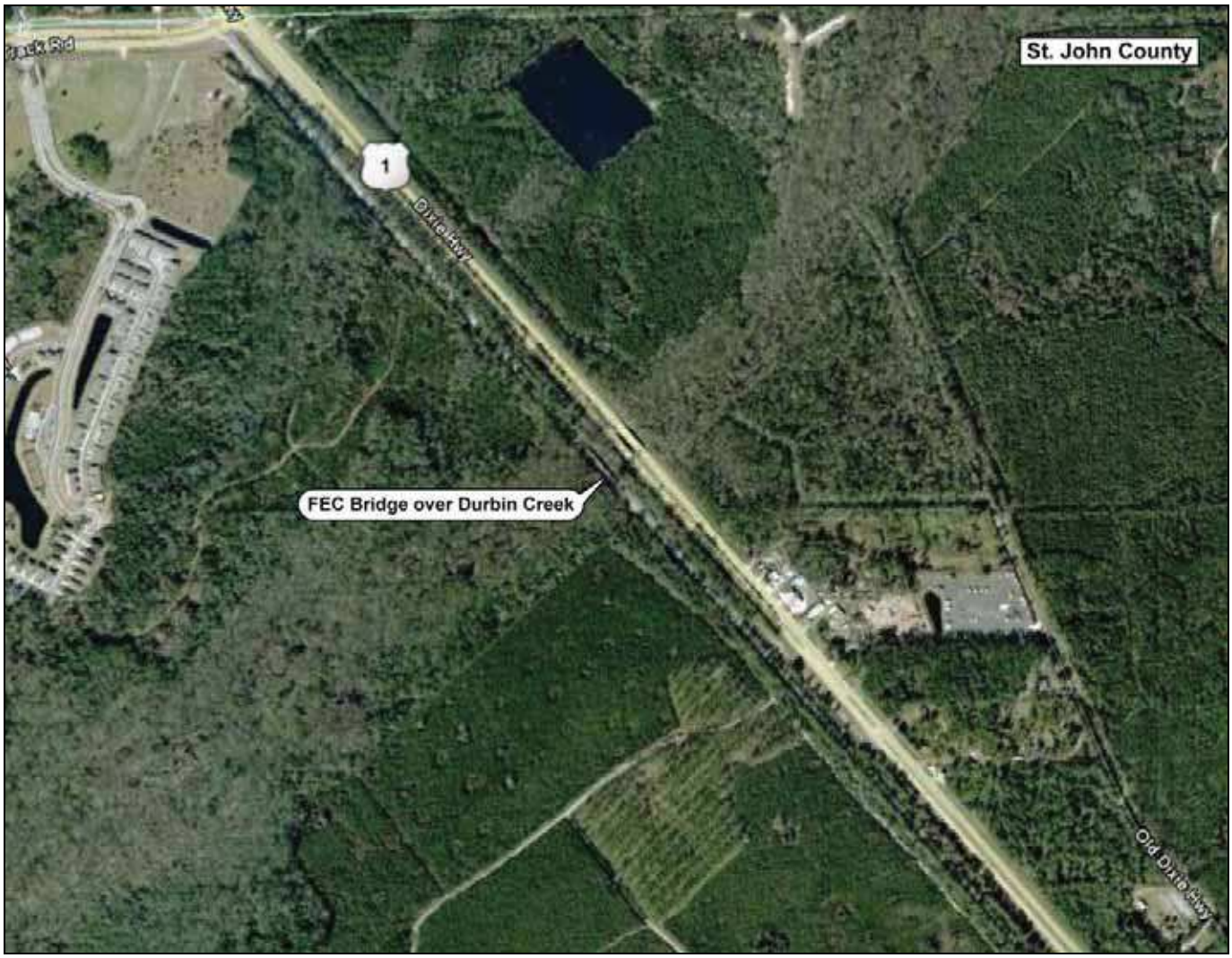

Figure 156. FEC bridge over Durbin Creek.

Figure 157. FEC bridge over Moultrie Creek.

Figure 158. FEC bridge over Cracker Branch.

Figure 159. FEC bridge over unknown waterway in Holly Hill.

Figure 160. FEC bridge over Reed Canal.

Figure 161. FEC bridge over Spruce Creek.

Figure 162. FEC bridge over South Canal.

Figure 163. FEC bridge over Eau Gallie River.

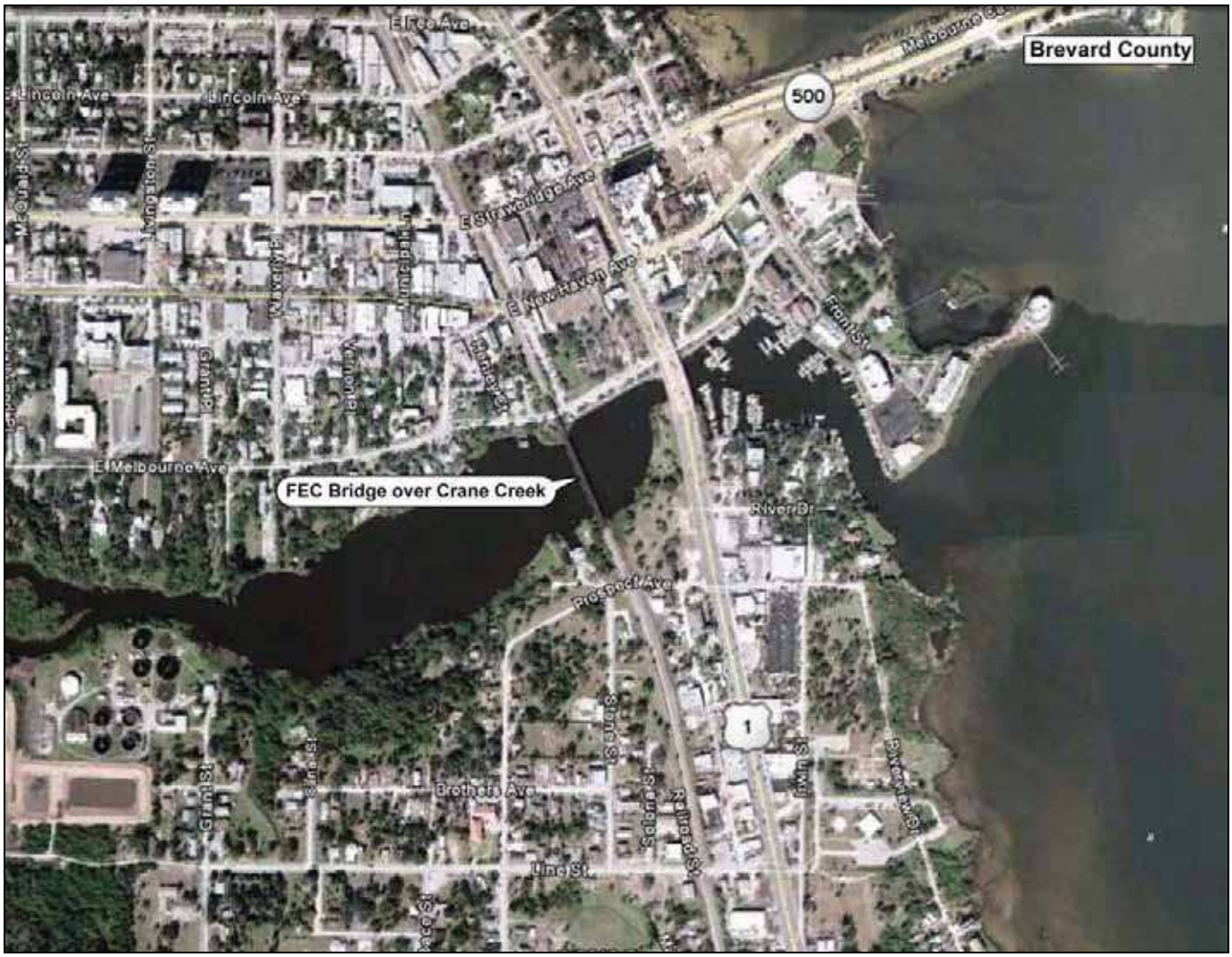

Figure 164. FEC bridge over Crane Creek.

Figure 165. FEC bridge over Turkey Creek.

Figure 166. FEC bridge over Goat Creek.

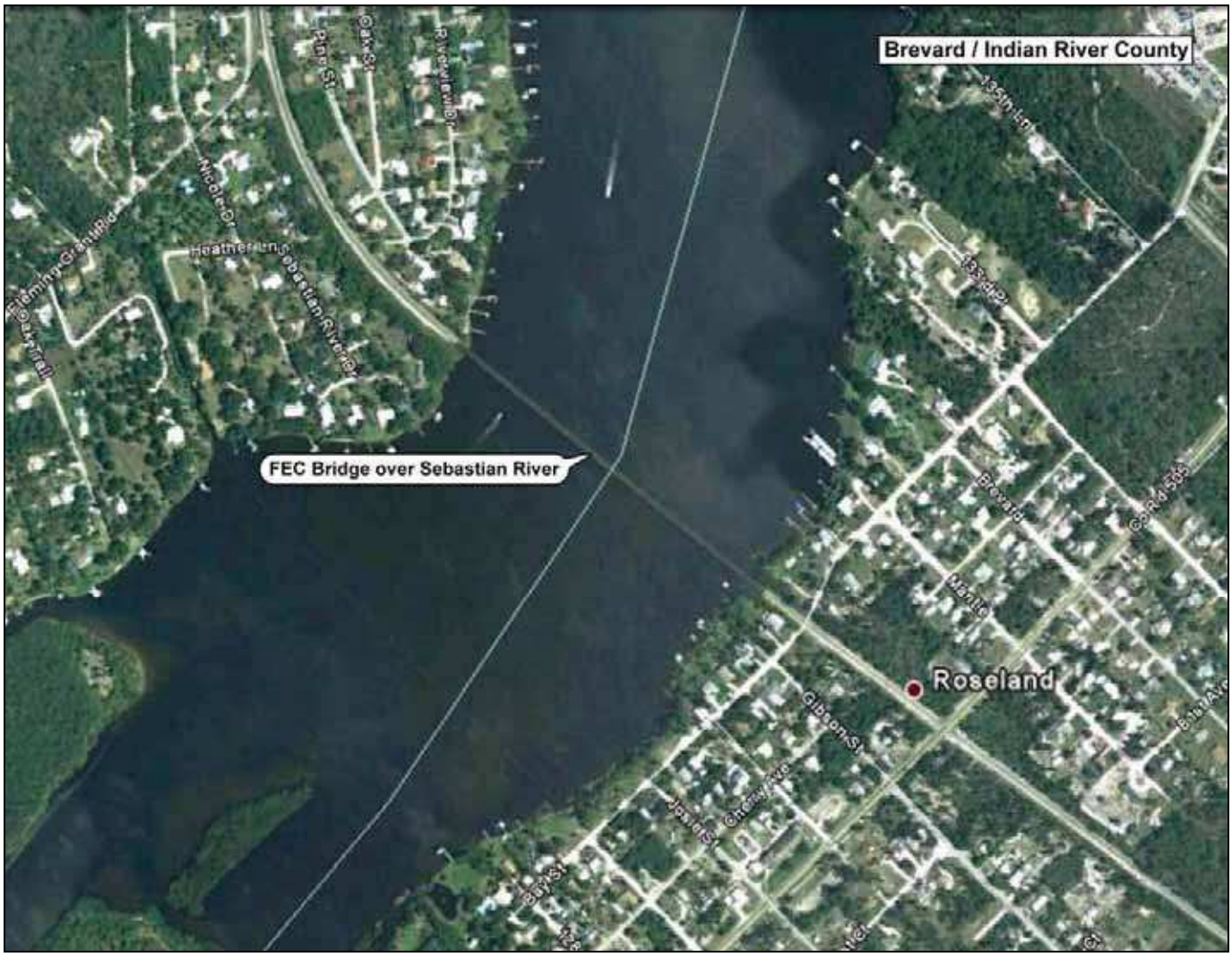

Figure 167. FEC bridge over the Sebastian River.

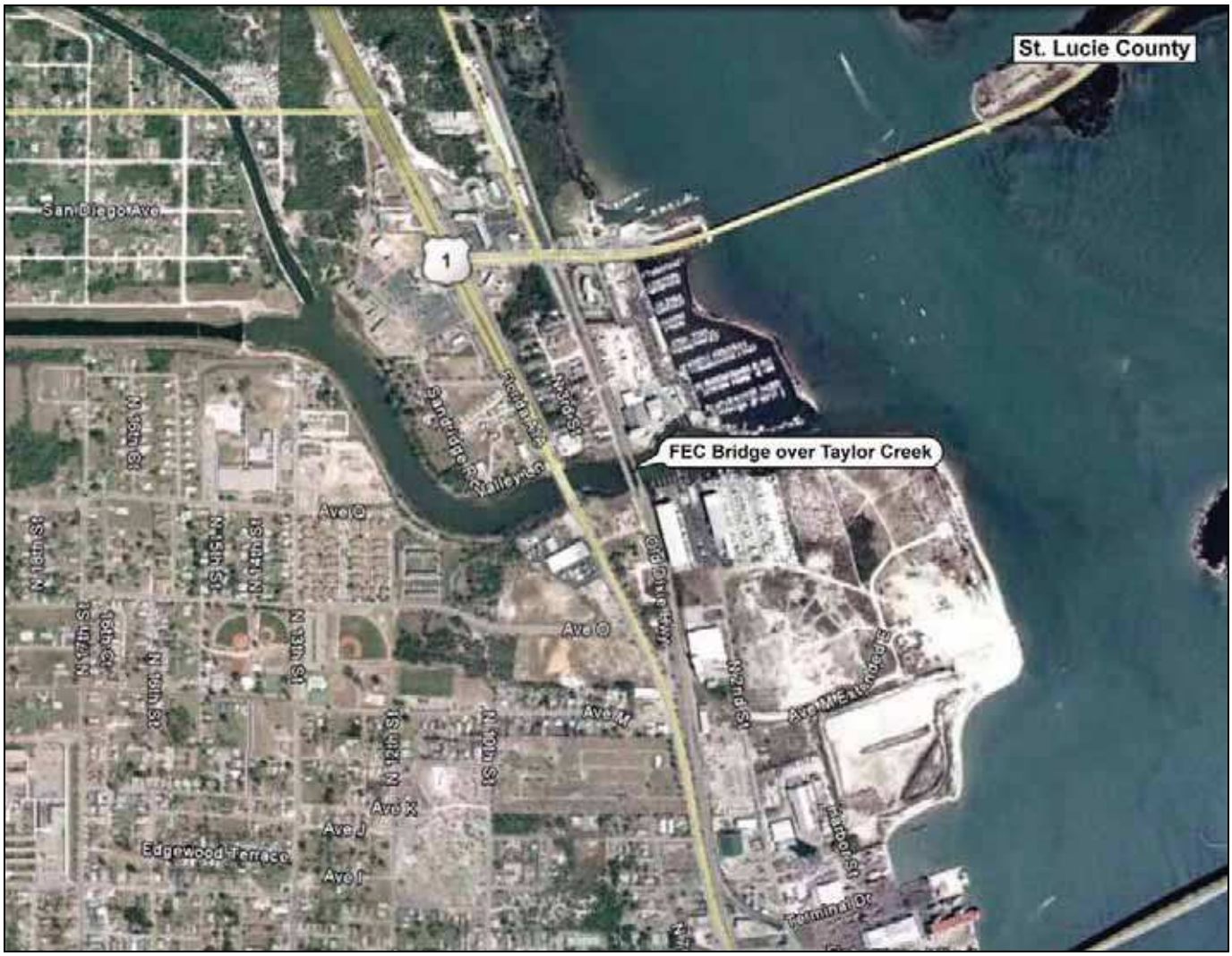

Figure 168. FEC bridge over Taylor Creek.

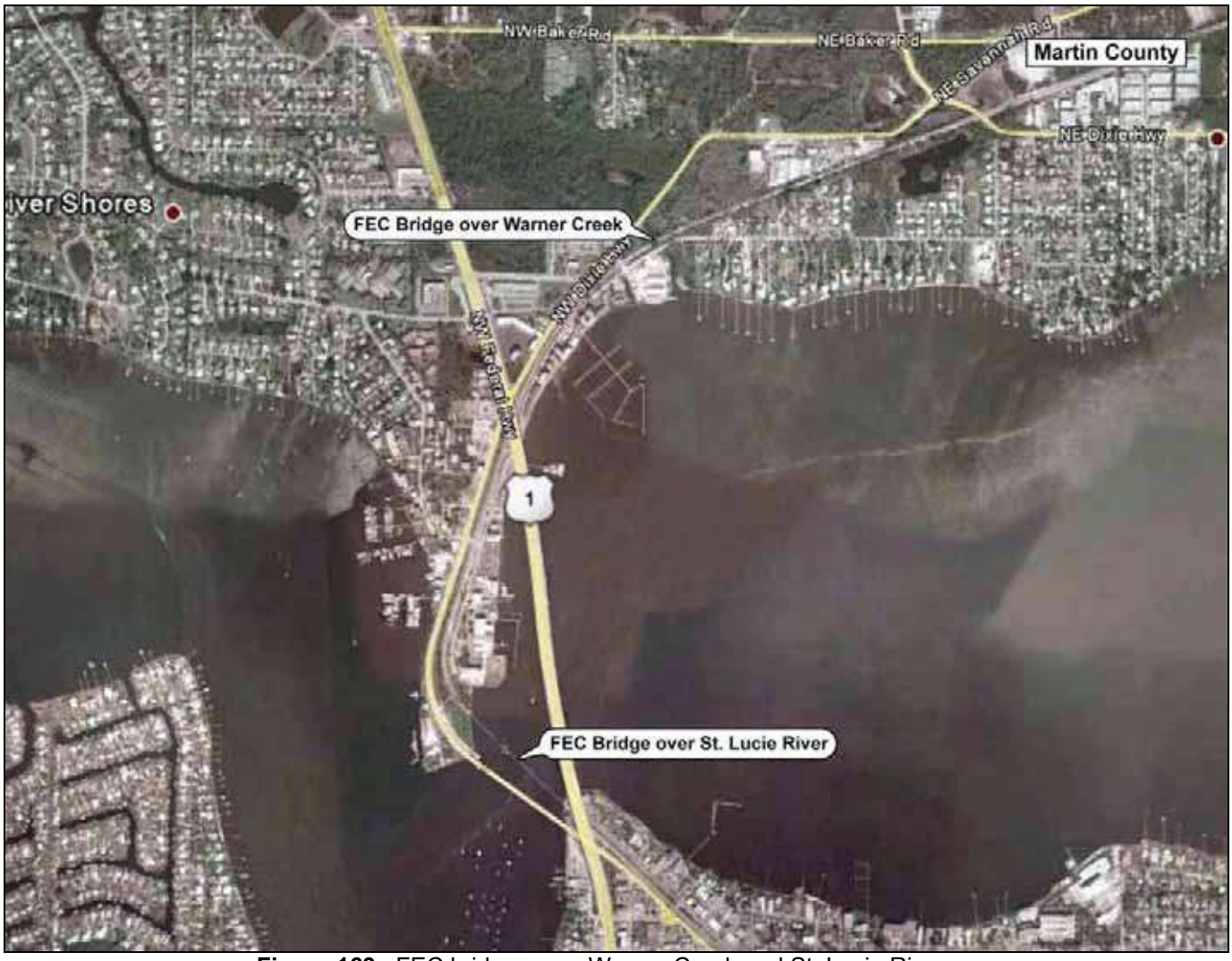

Figure 169. FEC bridges over Warner Creek and St. Lucie River.

Figure 170. Three FEC bridges over tributaries to Manatee Creek in Salerno.

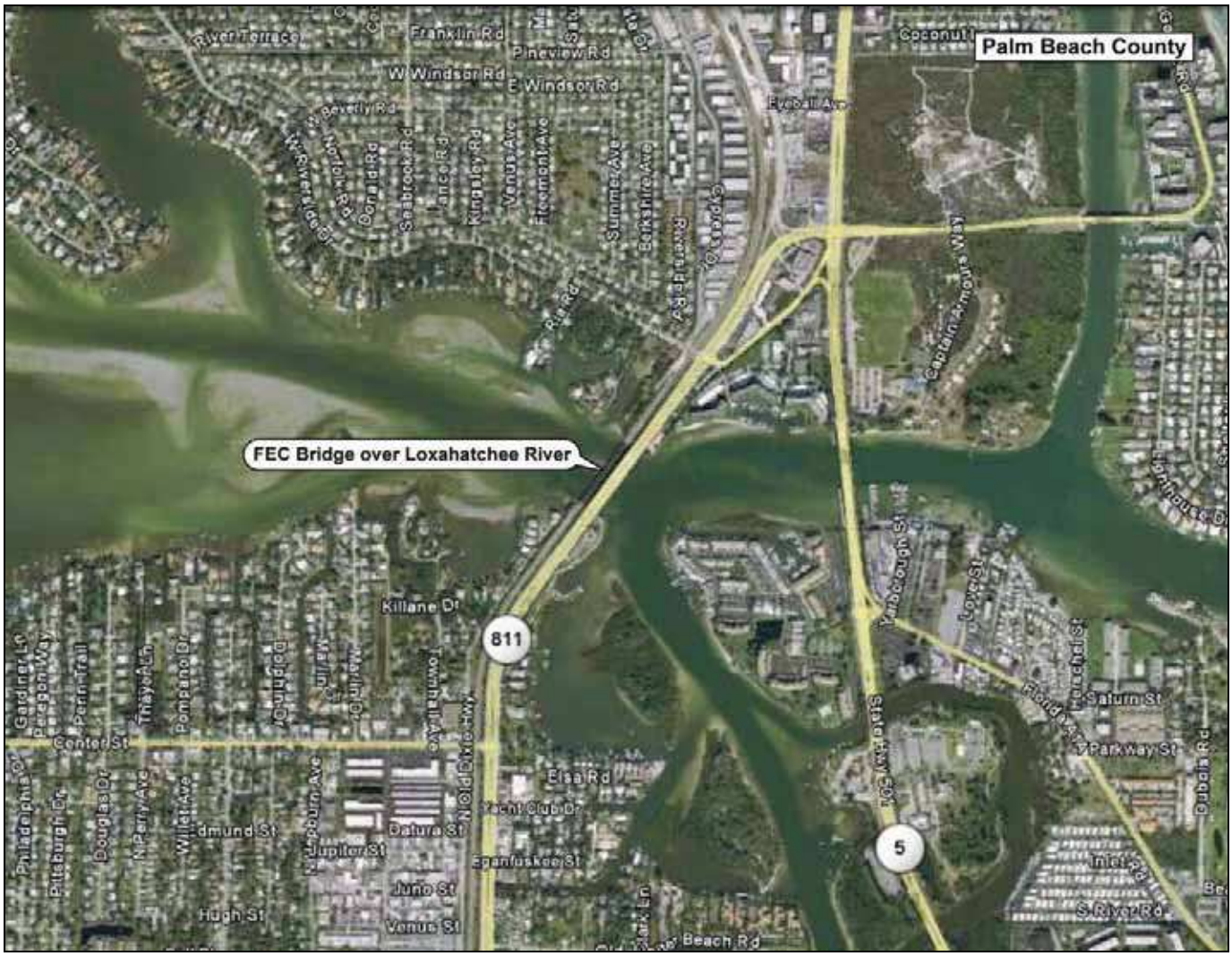

Figure 171. FEC bridge over Loxahatchee River.

Figure 172. FEC bridge over the Earman River.

Figure 173. FEC bridge over Myrtle Avenue, facing north.

Figure 174. FEC Bridge over the St. John's River, facing northwest.

Figure 175. FEC Bridge over Durbin Creek, facing west.

Figure 176. FEC Bridge over Moultrie Creek, facing northwest.

Figure 177. Inaccessible roadway leading to the FEC Bridge over Cracker Branch, facing west.

Figure 178. FEC Bridge over unknown waterway in Holly Hill, facing southwest.

Figure 179. FEC Bridge over the Reed Canal, facing southwest.

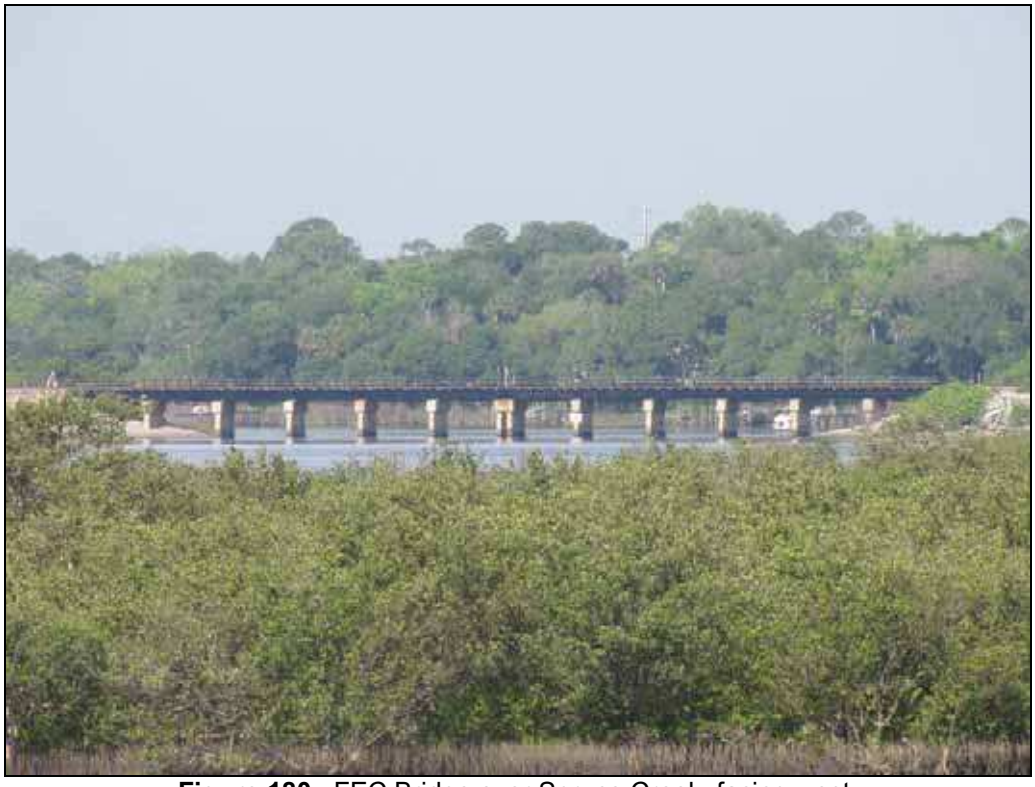

Figure 180. FEC Bridge over Spruce Creek, facing west.

Figure 181. FEC Bridge over the South Canal, facing southwest.

Figure 182. FEC Bridge over the Eau Gallie River, facing west.

Figure 183. FEC Bridge over Crane Creek, facing south.

Figure 184. FEC Bridge over Turkey Creek, facing southwest.

Figure 185. View of Goat Creek from US 1 (the FEC Bridge is not visible from any Public ROW), facing northwest.

Figure 186. FEC Bridge over the Sebastian River, facing west.

Figure 187. FEC Bridge over Taylor Creek, facing north.

Figure 188. FEC Bridge over Warner Creek, facing north.

Figure 189. FEC Bridge over the St. Lucie River, facing east.

Figure 190. FEC Northernmost Salerno Bridge over the Tributary to Manatee Creek, facing south.

Figure 191. FEC Southernmost Salerno Bridge over the Tributary to Manatee Creek, facing southeast.

Figure 192. FEC Bridge over a Tributary to Manatee Creek, facing northeast.

Figure 193. FEC Bridge over the Loxahatchee River, facing southwest.

Figure 194. FEC Bridge over the Earman River, facing south.

CONCLUSIONS

The FRA and Amtrak are proposing to restore intercity passenger rail service along nearly 350 miles of Florida's east coast. This will be done using the existing FEC Railway and by expanding Amtrak's long-distance passenger rail service from Jacksonville to West Palm Beach, with continuation to Miami through existing Tri-Rail services. This report presents the results of the cultural resource assessment survey along the FEC mainline corridor between Jacksonville and West Palm Beach. Cultural resource surveys of additional proposed passenger stations associated with the FEC Amtrak Passenger Rail project as well as the Northwood Connection corridor in West Palm Beach at the southern end of the project corridor are discussed in separate volumes.

The FEC Amtrak Passenger Rail project mainline survey focused on grade crossings and bridges. Located along the project corridor are 288 grade crossings. Following a GIS background study, 78 of these crossings were determined to require field visits for visual assessments to be made. The results of the field survey demonstrated that in no cases was the proposed Amtrak traffic expected to cause any adverse effects to previously recorded historic districts, potential historic districts, or other nearby historic properties. In such cases where historic districts or other National Register-listed properties were in close proximity to and clearly visible from grade crossings, it is apparent that the FEC railroad, and in particular its former passenger service, represents an integral part of the historical setting and will present no adverse effects.

Public parks were noted adjacent to six of the grade crossings including 271816E and 271817L in Duval County, 271887B in St. Johns County, 273056X in Volusia County, 272191M in Indian River County, and 272347 in Martin County. While there were no cultural resource concerns noted at these particular crossings, the current project may pose potential Section 4(f) issues concerning increases in the frequency of noise at these public parks. It is recommended that these potential issues be considered when conducting the noise and vibration study for the FEC Mainline.

In total, 22 bridges were documented during the FEC Amtrak Passenger Rail project mainline survey. Two bridges surveyed, the Myrtle Avenue Subway Bridge (8DU13284) and the St. Lucie River Bascule Bridge (8MT1382) are eligible for inclusion in the National Register according to the SHPO. Three additional bridges, the St. John's River Bridge, the Loxahatchee River Bridge, and the Sebastian River Bridge, are considered potentially eligible for individual listing in the National Register.

Fourteen surveyed bridges appear to be considered contributing elements to a linear historic district (see Table 8). One bridge, the northernmost bridge in Salerno crossing the Tributary to Manatee Creek, appears to be either substantially altered or non-historic, and would not be considered a contributing element within a linear historic district. Two bridges were not accessible from the ROW and there is insufficient information to determine whether they would be considered contributing elements to a

potential historic district. Since the historic bridges along the FEC mainline do not need to be altered to accommodate the proposed passenger rail service and there is no work being planned for any of the bridges, the FEC Amtrak Passenger Rail project will not have any adverse impacts to these resources.

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APPENDIX A:

SHPO/FDOT Meeting Minutes

SFECC Phase 2

Meeting Summary Memorandum
Cultural Resources Meeting

Date: December 14, 2009

Place: Burns Building
605 Suwannee Street
Tallahassee, Florida

Attending:

Roy Jackson	Florida Department of Transportation (FDOT)-Environmental Management Office
George Ballo	FDOT-Environmental Management Office
Xavier Pagan	FDOT-Environmental Management Office
Rusty Ennemoser	FDOT-Environmental Management Office
Josh Boan	FDOT-Environmental Management Office
Vicki Sharpe	FDOT-Environmental Management Office
Brian Yates	State Historic Preservation Officer (SHPO)/Florida Division of Historical Resources (FDHR)
Laura Kammerer	SHPO/FDHR
Jennifer Ross	SHPO/FDHR
Alyssa McManus	SHPO/FDHR
Carlos Cejas	Gannett Fleming, Inc.
Rob McMullen	Gannett Fleming, Inc.
Ken Hardin	Janus Research
Amy Streelman	Janus Research
Ann Broadwell	FDOT, District 4-via video conference
Scott Seeburger	FDOT, District 4-via video conference
Sharon Cino	FDOT, District 4-via video conference
Lynn Kelley	FDOT, District 4-via video conference

Background and Purpose

The intent of this meeting was to conduct coordination as part of the transit planning/Alternatives Analysis and early scoping per the National Environmental Policy Act (NEPA), as well as Section 106 processes. Major items on the agenda included presentation of the project, cultural resources reconnaissance study, and local public involvement. Another central focus of this meeting was to discuss the historic linear resource, the Florida East Coast (FEC) Railway, and suggested approaches to identifying and evaluating this resource.

Meeting Summary

Following introductions, Rob McMullen showed the Flagler Memorial Bridge video presentation. This video presentation was developed for mitigation for the upcoming replacement of the Flagler

Memorial Bridge in Palm Beach County. This video provided relevant background related to Henry Morrison Flagler and his FEC Railway, as well as FDOT, District 4's experience with challenging projects and significant cultural resources.

Following the video presentation, a PowerPoint presentation was provided by Rob McMullen. This presentation covered the proposed overall transit project and the studies that are being undertaken as part of this project.

During the course of the PowerPoint presentation, Ken Hardin provided a general overview of the cultural resources work, the project objectives, and the types of potential cultural resources issues associated the project.

Ken Hardin noted that District 4 made a commitment to early Section 106 consultation with affected parties, which provided information for the reconnaissance report and this meeting. Mr. Hardin discussed the public involvement that occurred during this phase of work, with the historic preservation entities in Miami-Dade, Broward, and Palm Beach counties. The meetings provided an opportunity for the parties to express their concerns regarding cultural resources; but overall each county was generally positive about the project and voiced their ongoing cooperation with the identification of significant resources and assistance with minimizing adverse effects. Laura Kammerer approved of the Section 106 consultation that had taken place, but noted that SHPO is concerned about the cemeteries in the West Palm Beach/Northwood area.

Mr. Hardin was followed by Amy Streelman, who provided a more detailed overview of the cultural resources efforts to date, and the types of identified cultural resources, which were shown as part of the PowerPoint presentation. The draft cultural resources reconnaissance study was discussed at this time, and it was noted that this document is currently under review by FDOT. The reconnaissance report focuses on the significant (National Register of Historic Places-listed, eligible, or locally-listed) cultural resources. These significant resources are listed in tables by county, shown on maps, and photographs were also provided.

Once the general discussion of the project and cultural resources was concluded, the discussion focused on the historic railroad and the treatment of this historic linear resource.

Discussion Points

The following comments and discussion occurred during the course of the meeting:

- The group acknowledged that the active FEC Railway, including the rail ties, ballast, etc., is constantly undergoing maintenance and replacement of its elements, and therefore, we must look at it as a dynamic and changing resource.
- This project will be restoring passenger rail service—providing improved and additional service on this line.
- Downtown Fort Lauderdale is an area of concern. There is an existing bridge, but an appropriate method to cross the river downtown is being explored. A bascule bridge or a fixed 55-60 foot high bridge may be options. During this discussion, Laura Kammerer noted that a fixed high level bridge could result in tremendous impacts to the adjacent historic resources, as this is a sensitive area.
- Laura Kammerer felt that the work to date was moving in the right direction, as the reconnaissance already identified "hot spots", areas with concentrations of historic resources or resources of a sensitive nature.

- Ken Hardin noted important issues involved areas where the improvements will be on structure and areas where there will be grade separation.
- There will be various station types along the rail line; the surrounding environment, existing historic resources, and community input will assist with the selection of appropriate stations. There is also the opportunity to utilize historic stations in a sensitive manner.
- Laura Kammerer stated that the period of significance for the FEC Railway must be established and supported in future documentation. She felt that the period of significance may extend through the present day.
- Further evaluation of the historic resources still must take place as part of the upcoming phase of work, as well as the analysis of effects.
- Identification and analysis of the bridges along the rail line must also be undertaken in the next phase of work. Laura Kammerer noted the bridges may not all be of the rail line's earliest period but may still be significant to the line.
- Laura Kammerer also noted that the changes that have occurred to the railway over time are part of its history, and these should be considered in the evaluation. It is possible these changes contribute to its importance and do not necessarily compromise the integrity.
- The project team noted that the improvements may include the addition of a new line or sidings.
- Laura Kammerer pointed out that due to the proposed improvements, there may be archeological resources associated with the rail line, such as areas where there were turntables, section houses etc. Therefore, it will be important to develop a strong history of the rail line in the project area, and what resources were formerly associated with this portion of the rail line.
- Laura Kammerer said that at this time it appears that placing new sidings where there were sidings would not be a significant impact to the resource. However, if the rail line is elevated she is unsure of the effects determination at this time.
- Roy Jackson pointed out the methodology that was employed with the Interstate Highway System's evaluation of significance could be helpful during the evaluation process for the rail line—looking at significant features or components of the overall system.
- Ken Hardin noted during the discussion that everyone was in agreement that the use of this historic rail line and restoration of historic passenger rail on the line would not constitute a Section 106 adverse effect or a Section 4(f) taking.
- We can work under the assumption that the rail line is eligible and then we will continue looking at the components associated with the rail line that may be individually significant, such as historic bridges or stations.
- As part of the project, bridges may need to be replaced or parallel bridges may need to be constructed.
- Scott Seeburger stated that it is a possibility to reuse historic stations but it must be done in a sensitive manner, and Laura Kammerer responded by saying that station rehabilitations could be viewed as a mitigation measure.
- Roy Jackson said that the Area of Potential Effect (APE) will need to be formally determined and it will evolve so that it may be wider or narrower in different areas, depending upon the proposed improvements.
- Ann Broadwell added that this rail methodology would be useful for the upcoming Amtrak project. It was noted that as part of the Amtrak project there may be a spur connection in the Northwood area in West Palm Beach and possibly the Lemon City area in Miami. A quick discussion covered how the team would work to minimize or avoid harm to historic cemeteries as well as the Quonset huts in the Northwood area.

- Laura Kammerer voiced their willingness to further assist the team in working on effects in the upcoming phase. The next step will involve a comprehensive Cultural Resource Assessment Survey (CRAS) within the APE. Ken Hardin noted that archaeology within the rail corridor is problematic because of the limited access. It will be necessary to infer presence or absence of archaeological resources through known adjacent resources. Architectural history survey work is also limited because of the inability to survey on the actual rail line.
- At the conclusion of the meeting, Ann Broadwell asked how the meeting should be memorialized, and Laura Kammerer responded that meeting minutes would be the best method to capture the main points of the meeting.
- For future meetings, it was suggested that the lead agencies are included, which may be Federal Transit Administration (FTA) and/or Federal Railroad Administration (FRA).

FDOT District Four – FEC Amtrak Passenger Rail Study (04/29/10)

SUBJECT:	FEC Amtrak Passenger Rail Study Federal Aid Project Number: FR-HSR-09-003 SHPO conference call to develop approach for cultural resources study
MEETING DATE:	Thursday; 04/29/10
MEETING TIME:	2:00 pm
PURPOSE:	Develop project background and agreement on project methods and schedule
PARTICIPANTS:	Laura Kammerer, Brian Yates, Jennifer Ross-State Historic Preservation Officer (SHPO)/Florida Division of Historical Resources Ann Broadwell, Lynn Kelley, Gregor Senger, Scott Seeburger-Florida Department of Transportation, District 4 (FDOT) George Ballo, Roy Jackson-Central Office, Florida Department of Transportation Tawny Olore-CH2M Hill Colin Henderson-TY Lin, International Ken Hardin, Amy Streelman-Janus Research Ramie Gougeon-Panamerican Consultants (PCI)

1. Project Background

Tawny Olore provided a summary of the project activities. At this time, heavy freight is on the Florida East Coast Railway (FEC) line, and the proposed project will restore passenger service on the FEC. Freight service will be continued on the line as well. The intent of the project is to place passenger trains on the line, and these trains will be traveling at 90 mph. At this time, the freight trains travel at 60 mph. There will be four additional passenger trains that are 7-10 cars in length. Freight trains often have 100 or more cars. Eight new stations will be added as well. FRA has expressed that this project does not seem to have significant impacts, particularly along the mainline.

SHPO wanted to know why we were discussing prior to ETDM review. Ken Hardin stated the schedule demands that we have a tentative agreement on the Area of Potential Effects (APE) so that fieldwork can occur. Brian Yates stated that the entire ETDM review is incomplete and the SHPO would like their comments accommodated. As the

SHPO comments come in, they will be reviewed and addressed as the team is moving forward with the cultural resources analysis.

FDOT would like to be prepared for the federal funding available, so a NEPA document is being prepared; this is not a programmatic so more specialized analysis will be necessary. The timeline for this project is very tight, as it falls under High Speed Rail funding. FRA has indicated that this project is a lead contender and should be further along in the process in order to be highly competitive. FRA has not provided a date for completion of the NEPA documents but the team believes it is in the July timeframe.

2. Previous meeting with SHPO

Amy Streelman provided a summary of the previous meeting for the SFECCTA project in December of 2009, which focused on key issues. This meeting resulted in the approach for dealing with the following properties:
-it was agreed that returning passenger rail back on the mainline would not constitute an adverse effect to the NRHP-eligible FEC Railway;
-the focus should be on new stations and effects to adjacent resources;
-SHPO encouraged possible reuse of historic stations; and
-SHPO was aware of the cluster of significant historic resources at the Northwood Connector area including: Hurricane Memorial/Mass Burial, Evergreen Cemetery, and Quonset Huts.

3. The approach to develop APE and Methodology

Preliminary bullet points on the APE were provided in the conference call agenda by Janus Research. These preliminary bullet points were meant to spur discussion, and were amended and refined during the conference call.

<u>FEC Mainline</u>

Discussion took place among all participants on the conference call regarding the APE for the FEC Mainline. The following highlights the main points of the discussion.
-Laura Kammerer asked if the improvements will be taking place within the existing rail line itself.
-Tawny Olore provided more specific information regarding the proposed improvements. The super-elevation curves will take place within existing ROW; super-elevation curves involve adding 6 inches of grade to the rail bed, so the trains can go faster.
-There will be 1000 ft. sidings added at station locations, and 1000 ft. platforms. These are shown in the ETDM screening for each station.
-Tawny Olore wanted to confirm that the NRHP eligibility of the FEC Railway would not affect the ability to continue current rail operations. Ken Hardin noted that the improvement of ties and tracks (normal maintenance activities) do not typically cause an adverse effect. Laura Kammerer noted that as long as these activities are not connected to this Amtrak project, FEC can still conduct normal maintenance, and these activities do not usually come through SHPO office for review.

-As part of Amtrak, there will be four more trains a day; these will be the passenger trains with less cars than the current freight trains.
-There was discussion regarding possible vibration impacts, and there will be further studies on the vibration.
-At the grade crossings, there will be additional noise from the train horns that are required.
-Ken Hardin stated that due to the nature of this project, we will be able to document in the report the minimal types of improvements.
-Following further input from various call participants regarding the specifics of the APE along the mainline, Brian Yates suggested that the APE for the mainline should be the existing ROW, and parcels adjacent to the mainline will not fall within the APE. However, previously recorded NRHP–listed properties adjacent to the mainline will need to be identified.
-Ann Broadwell requested that the cultural resources team develop a strong discussion of the APE including rationale based on the noise and vibration. Brian Yates agreed that APE should be justified based on science and previous studies.
-Ken Hardin noted that there are issues related to the access to the mainline. This affects the recordation of historic resources along the mainline and also historic and prehistoric archaeological sites. Even in some instances where it would be possible to gain access with flagmen, subsurface testing is not possible, and this type of information will not be in the CRAS report.

Grade Crossings

There was discussion that grade crossings would have a potentially greater effect than normal main line operations because of the requirement to blow the horn. Tawny Olore added that federal law requires trains to blow the horn 150 feet prior to grade crossing and then 150 feet after; there will be no quiet zones in project. Because there is more potential for noise impacts at grade crossings, the recommended APE at grade crossings will be based upon noise contours. It was suggested that close coordination take place with the noise study to develop the noise contours to guide Panamerican and their fieldwork.
(Subsequent to the conference call, there was further discussion between Tawny, Ken, Ramie, and Amy in which efforts at the grade crossings should focus on the identification of historic districts. This approach was developed so that the field efforts will not be delayed waiting for noise studies.)

Maintenance and Staging Areas

There will not be any new maintenance areas proposed as part of this project. Construction staging areas will need to be identified and surveyed.

Station Locations

-The APE will include all properties within the station locations and immediately adjacent parcels to the station locations.

- In the case of historic districts, it will be necessary to understand historic districts and boundaries, but it is unnecessary to record all resources within the entire historic district that may fall outside of the APE. Ken suggested an approach would include mapping the boundaries and photographing representative resources. This approach has been used as part of previous projects, and Laura agreed this would be appropriate.
-Typical stations will be small and medium stations. Small stations are platforms with kiosks, and medium will have a building.
-Eight station locations are being screened right now. Four historic stations are located in the immediate vicinity of these station locations, and two historic stations are in the preferred sites that locals have selected (Titusville and Vero). Brian Yates stated that the SHPO would encourage the use of the historic stations. This would need to be done without compromising the NRHP-eligibility of the resources.

Historic Bridges

-Laura Kammerer noted that the bridges are located on the mainline, but according to Tawny Olore there will not be any improvements to bridges. There will be faster but lighter trains going over these bridges.
-In St. Augustine there may be the need to build a new bridge in a location that does not have a bridge at this time.
- Jennifer Ross observed that the bridges should be recorded because they are directly in the mainline, to which the team acknowledged the FEC does not readily provide the information. Ken Hardin agreed that the bridges are located within the mainline, but there is a huge issue about remaining outside of the actual rail corridor and viewing these bridges, and the limited information provided by FEC regarding the historic bridges.
-The cultural resources team will work with FEC to obtain information on the bridges, but this may be limited to a list of bridges (not specifically historic bridges). From this list, Janus Research will attempt to photograph the bridges from outside the railroad corridor and document the bridges with as much information as possible.

Northwood Spur

-Ramie Gougeon provided an overview of this area and the resources located in this area. Preliminary background and field studies strongly suggests that the area immediately adjacent to NW corridor is not historically/culturally significant. The proposed route running north of and parallel to 25th Street appears to be outside the burial areas. Further, the construction of the railroad should be above ground for the most part, and therefore above any stray burials.
-Brian Yates inquired as to whether there would be monitoring during construction, which lead to a discussion of the unanticipated finds plan. The unanticipated finds plan will include the use of archaeological monitoring. A question was asked by FDOT COE asking if the unanticipated finds plan (UFP) was being used to replace testing, to which Ramie Gougeon responded that it was not.
-Roy Jackson emphasized that once the eligibility issue is resolved, only then should any effects be investigated.

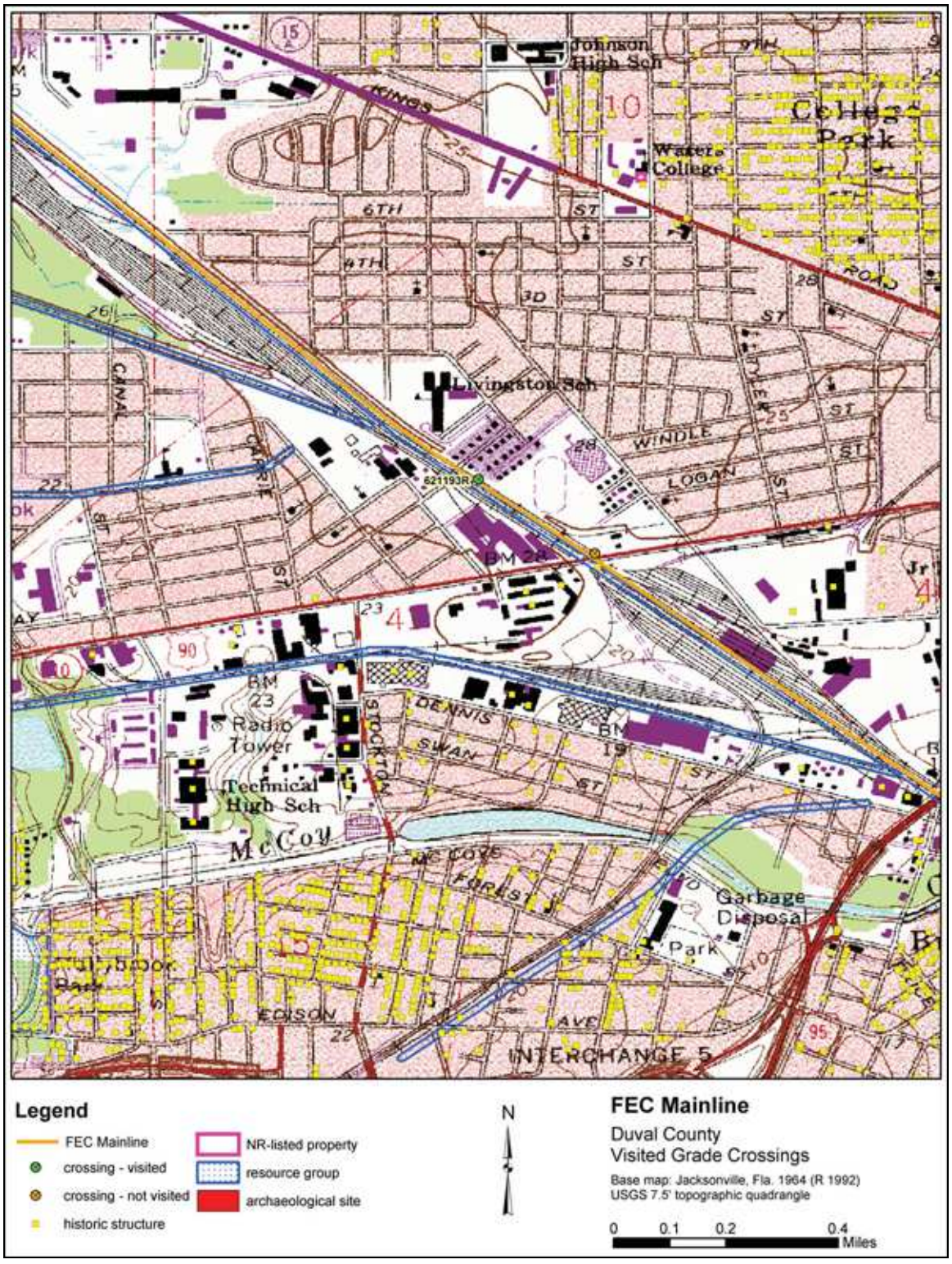
-PCI will thoroughly document rationale behind assertions that proposed route is outside burial areas.
- More ground penetrating radar (GPR) is being conducted at the intersection of 25th Street and 25th Court this week.
-George Ballo states that there are substantial social issues to be worked through for this spur, and that the District is working with the public and interest groups.

Schedule

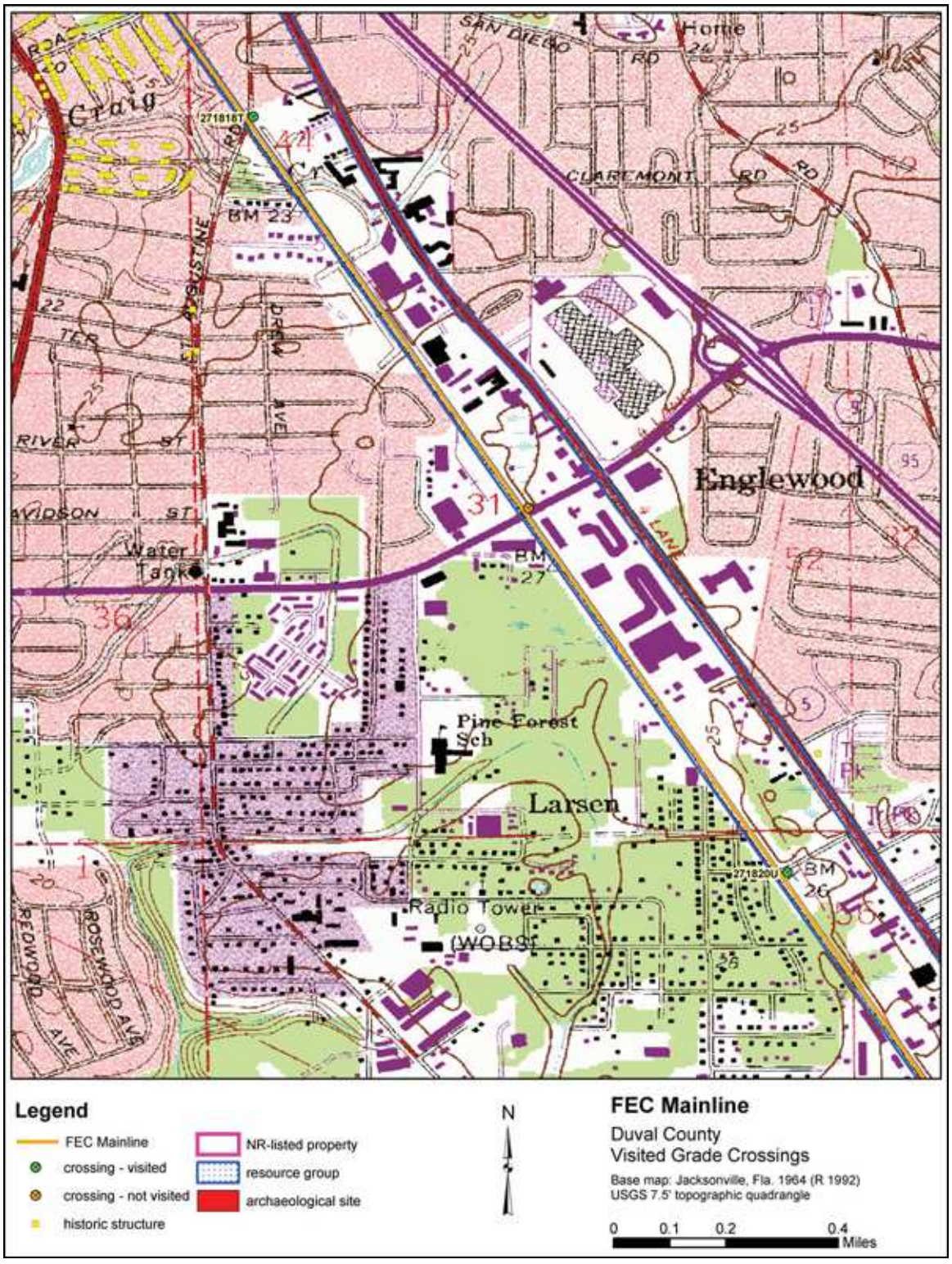
-A CRAS will be prepared, which will be submitted to SHPO by June 1st, so the SHPO can review. FMSF forms will be prepared for all resources within the APE.
-Ann Broadwell suggested another conference call and Ken and Ramie will walk through document to get SHPO oriented.
-Jennifer Ross and Brian Yates will be in the field on June 8th, which should assist with their review of the CRAS document.
-Laura Kammerer said FRA needs to act as the lead federal agency; she was not comfortable with SunRail, in which FRA did not exert their role as the lead agency.
-Ann Broadwell asked that Janus Research prepare a PowerPoint presentation, with highlights of findings for SHPO and FRA.

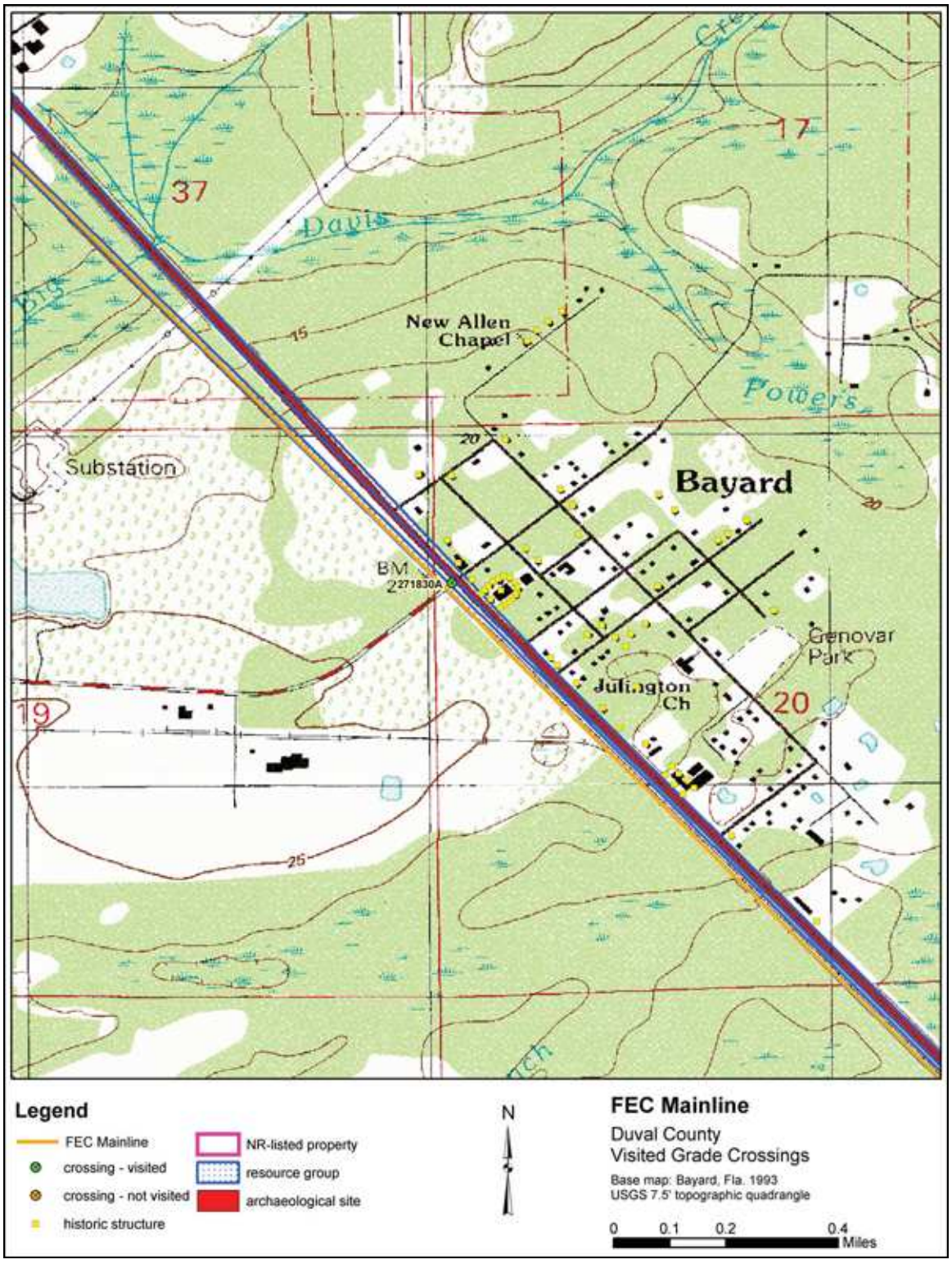
APPENDIX B:

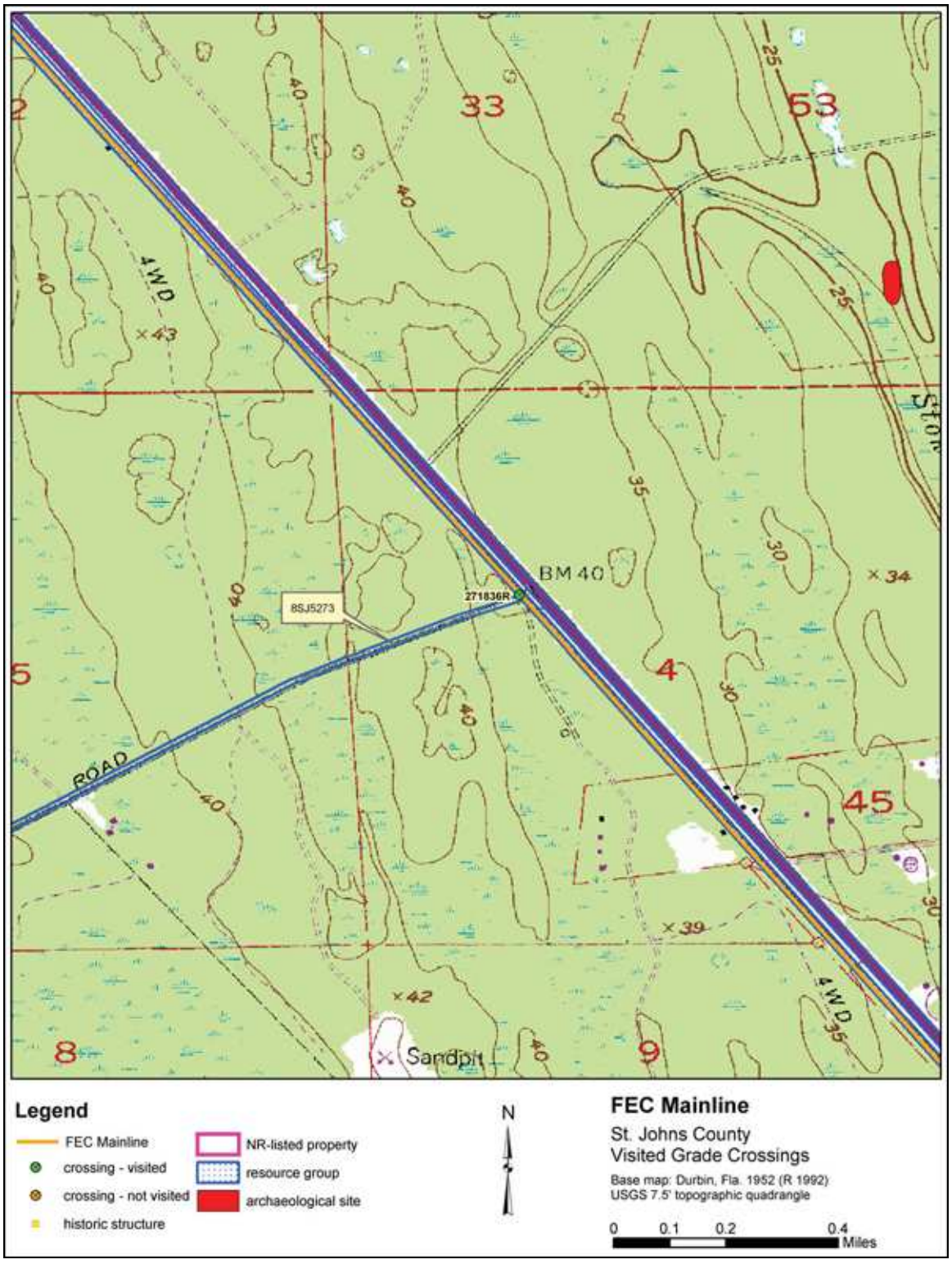
GIS Maps of Grade Crossings

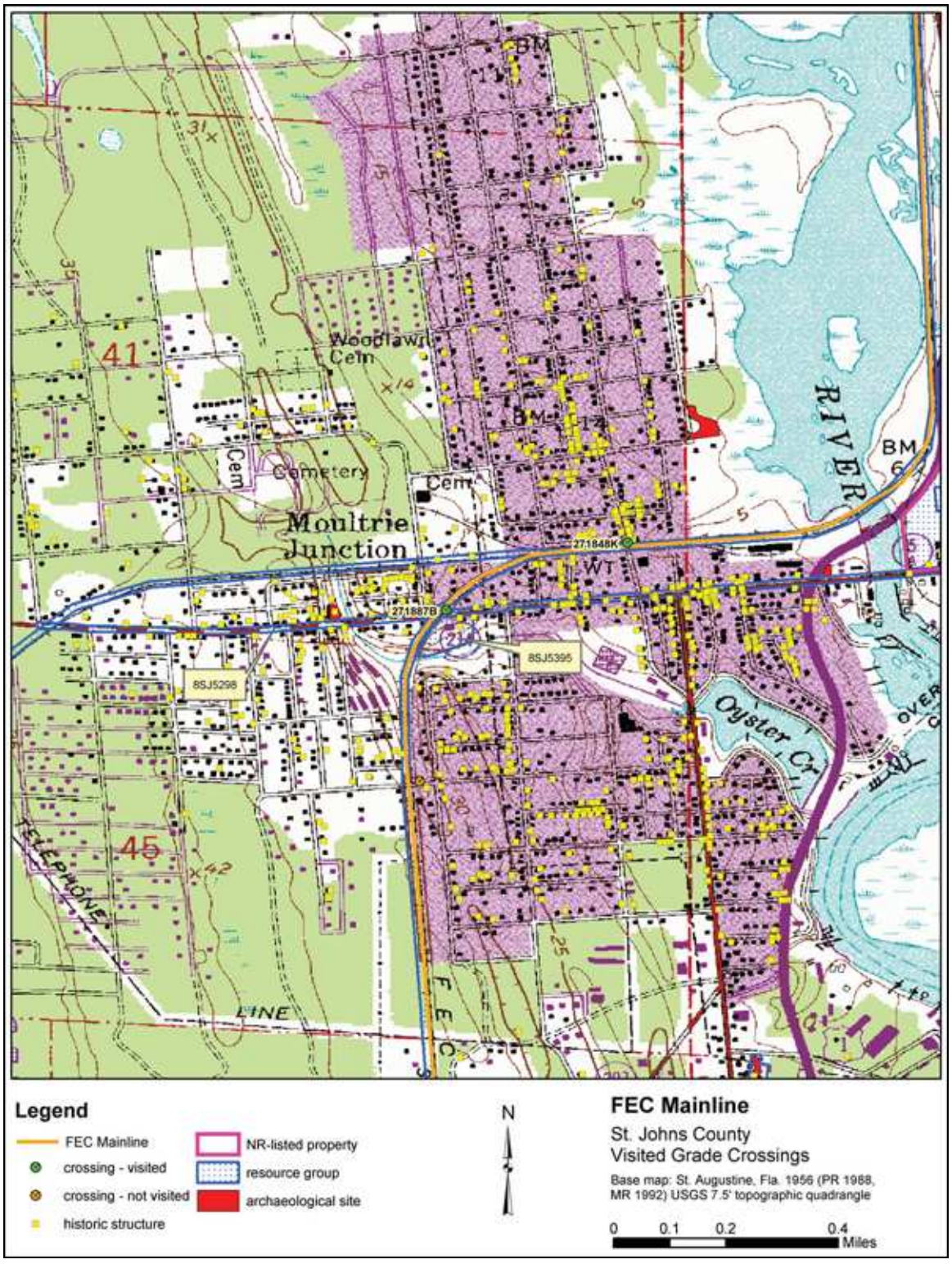

Johnson High Sch
College Park
Waters College
KINGS
6TH
4TH
ST
ROAD
CANAL
Livingston Sch
WINDLE
LOGAN
621193R
BM 24
BM 23
Radio Tower
Technical High Sch
McCoy
DENNIS
SWAN
BM 19
Forest
Garbage Disposal
Park
EDISON
AVE
INTERCHANGE 5
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Duval County
Visited Grade Crossings
Base map: Jacksonville, Fla. 1964 (R 1992)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

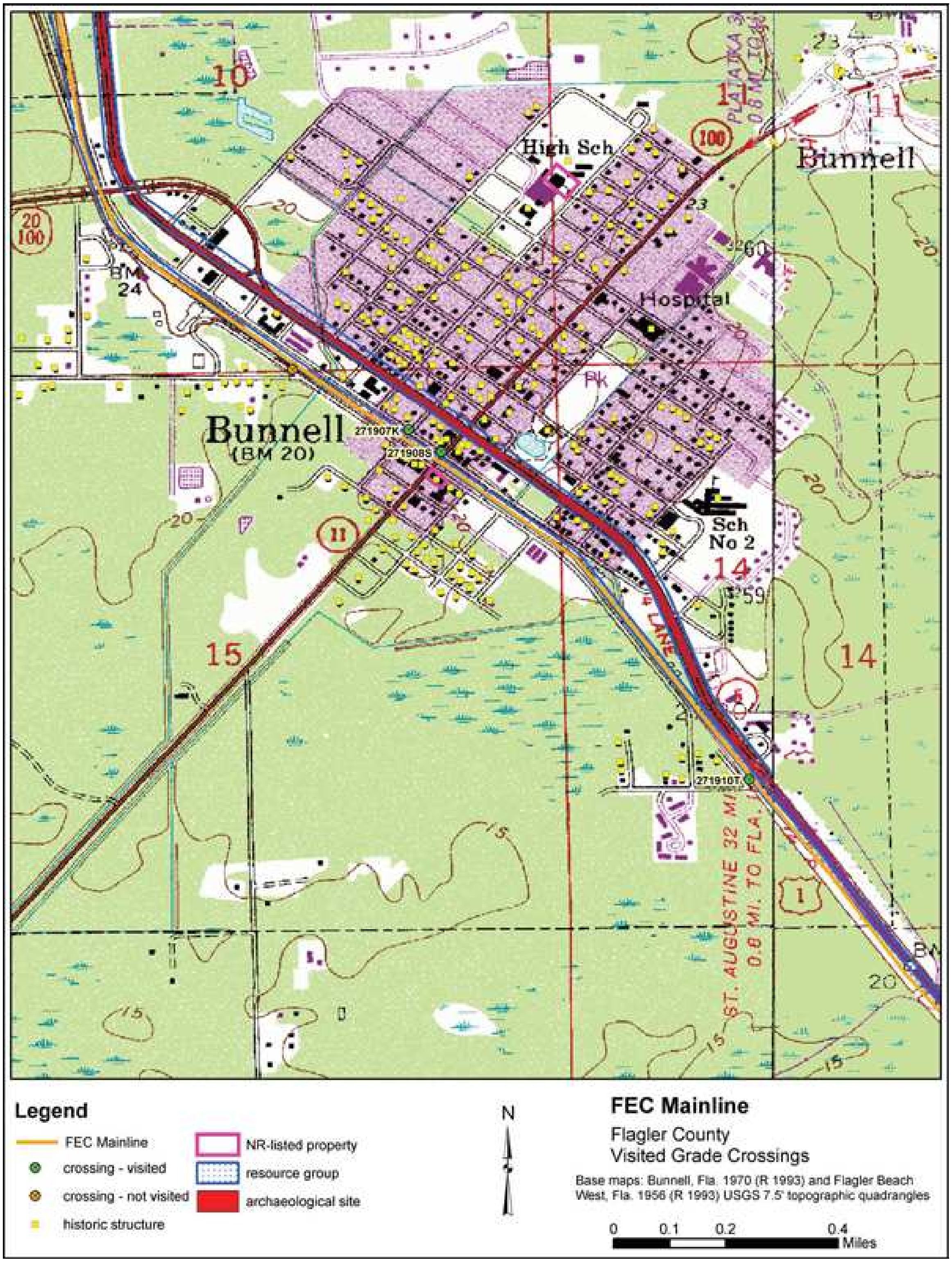

Hendricks Point
City Park
Treaty Oak Park
JOHNS
Drydocks
8DU35, 8DU36
271801P
Hospital
INTERCHANGE
Radio Tower (WJXT)
San Marco
South Jacksonville
271809U
8DU6573
Library
271815X
271816E
LANDON AVE
BELOTE
Marco L.
HENDRICKS
FEC Park
271817L
MAPLE
River Oaks Park
Craig
271818T
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Duval County
Visited Grade Crossings
Base map: Jacksonville, Fla. 1964 (R 1992)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

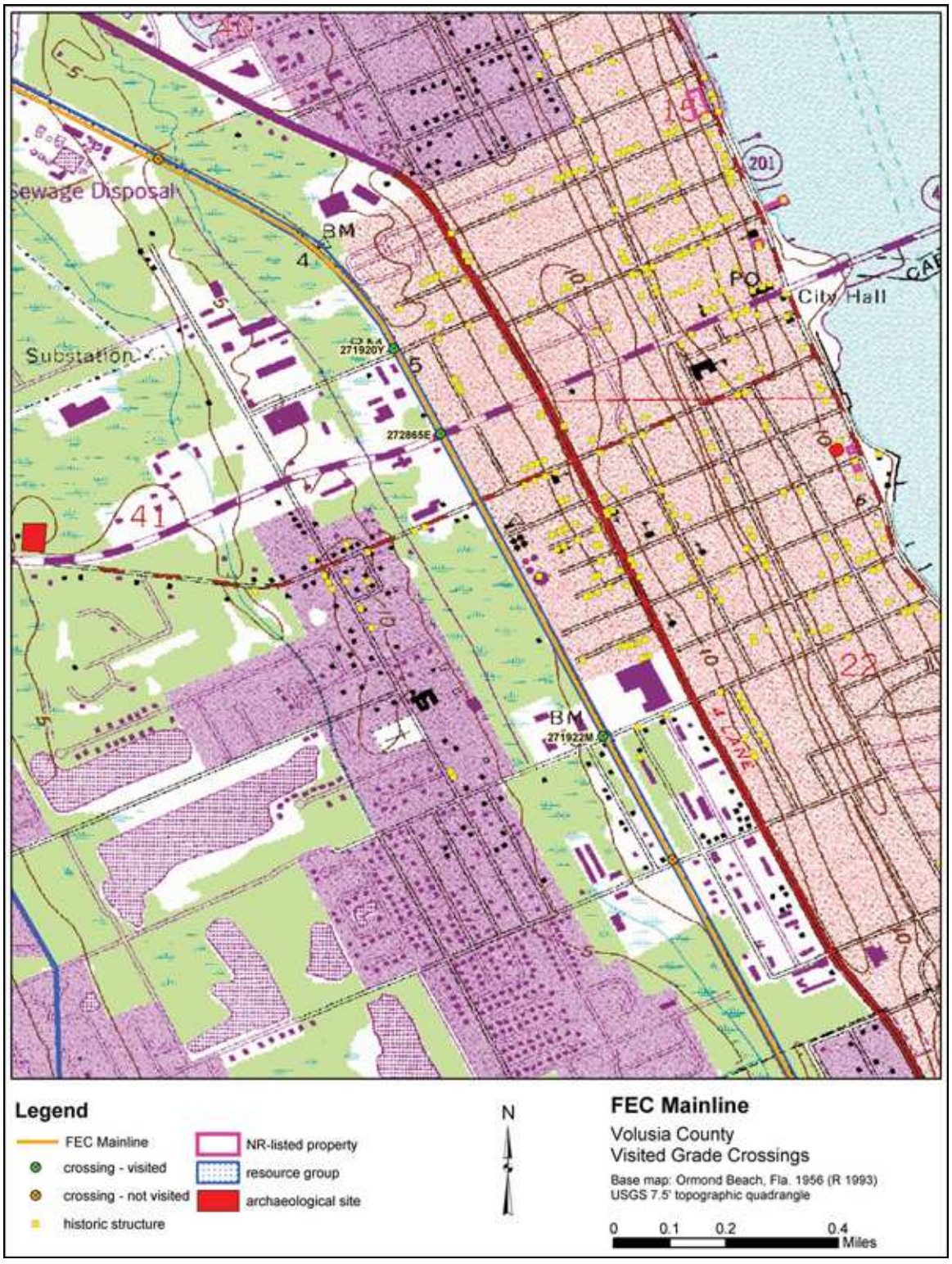

Craig
2718187
SAN DIEGO RD
Horne
CLAREMONT RD
BM 23
RIVER ST
DRAW
AVE
Englewood
Water Tank
BM 27
Pine Forest Sch
Larsen
2718200
BM 26
Radio Tower
(WOBS)
ROSEWOOD AVE
REDWOOD AVE
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Duval County
Visited Grade Crossings
Base map: Jacksonville, Fla. 1964 (R 1992)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

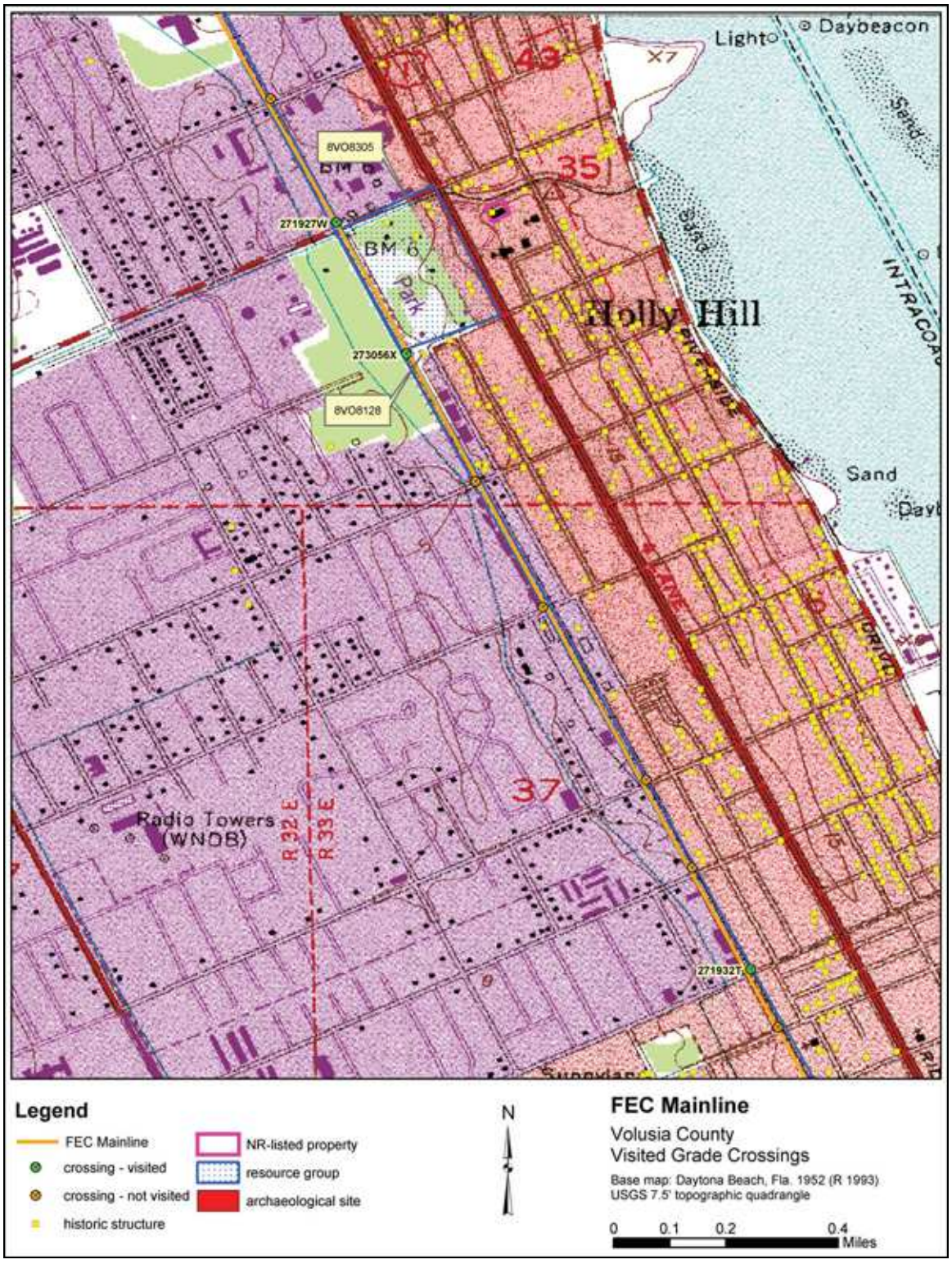

37
17
Davis
New Allen
Chapel
Powers
Substation
Bayard
BM
2271830A
Genovar
Park
Julington
Ch
19
20
25
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Duval County
Visited Grade Crossings
Base map: Bayard, Fla. 1993
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

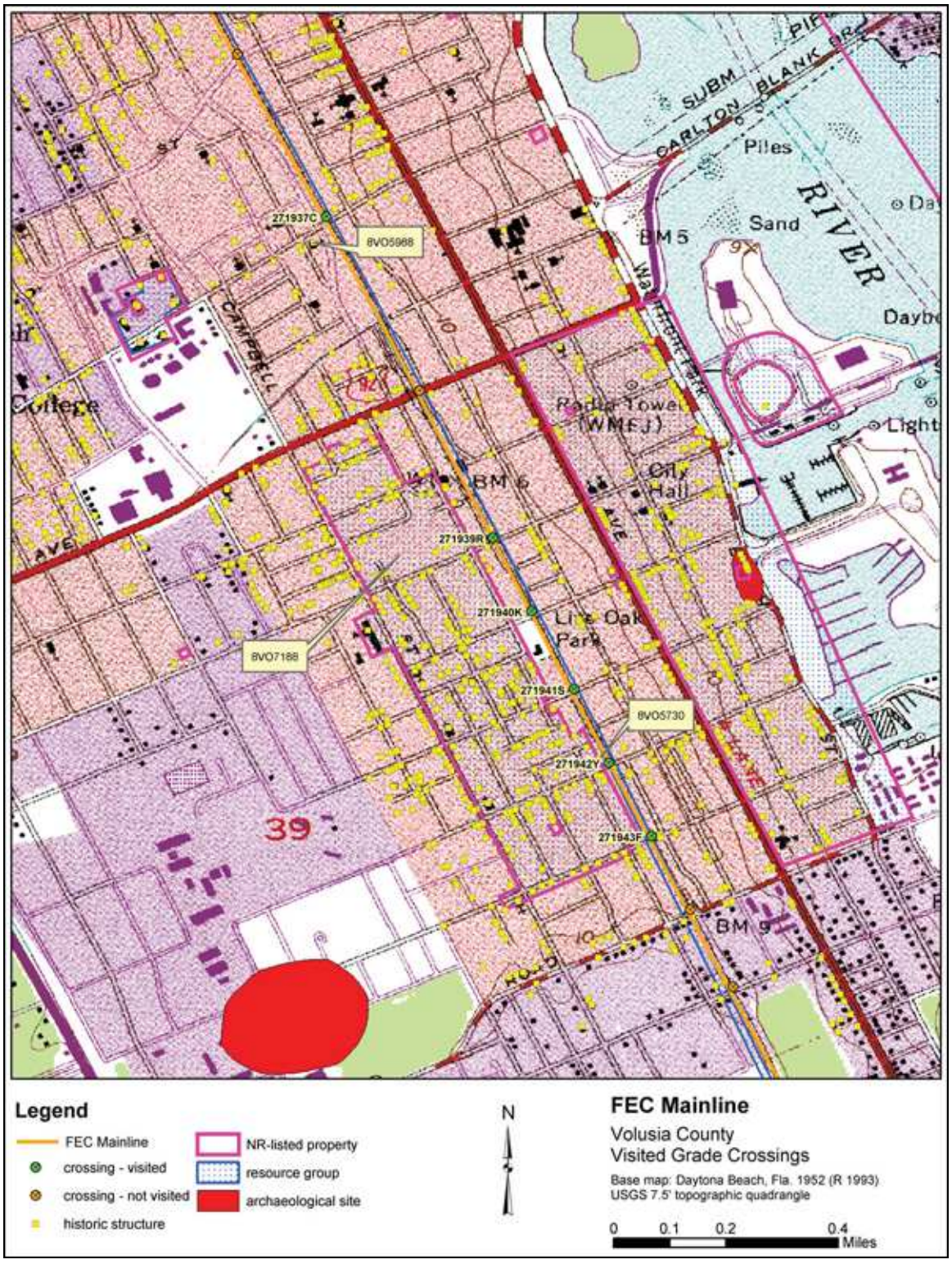

33
53
4WD
43
BM 40
271836R
8SJ5273
5
4
ROAD
45
39
42
Sandpit
8
9
35
30
34
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
St. Johns County
Visited Grade Crossings
Base map: Durbin, Fla. 1952 (R 1992)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

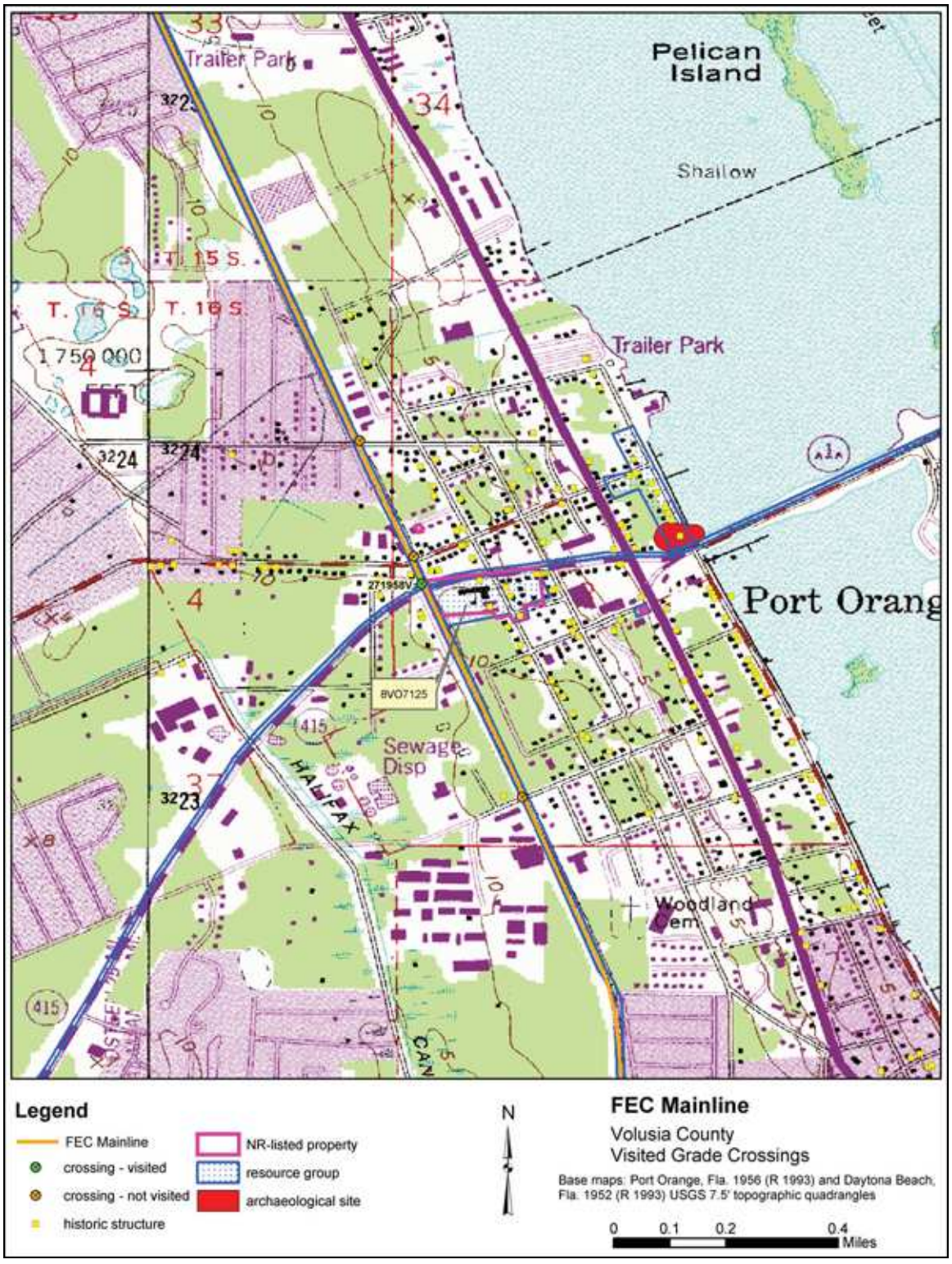

Woodlawn Cem
Cemetery
Cem
Moultrie Junction
271848K
271887B
8SJ5298
8SJ5395
RIVER
Oyster Cr
TELEPHONE LINE
F E C
41
45
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
St. Johns County
Visited Grade Crossings
Base map: St. Augustine, Fla. 1956 (PR 1988, MR 1992) USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

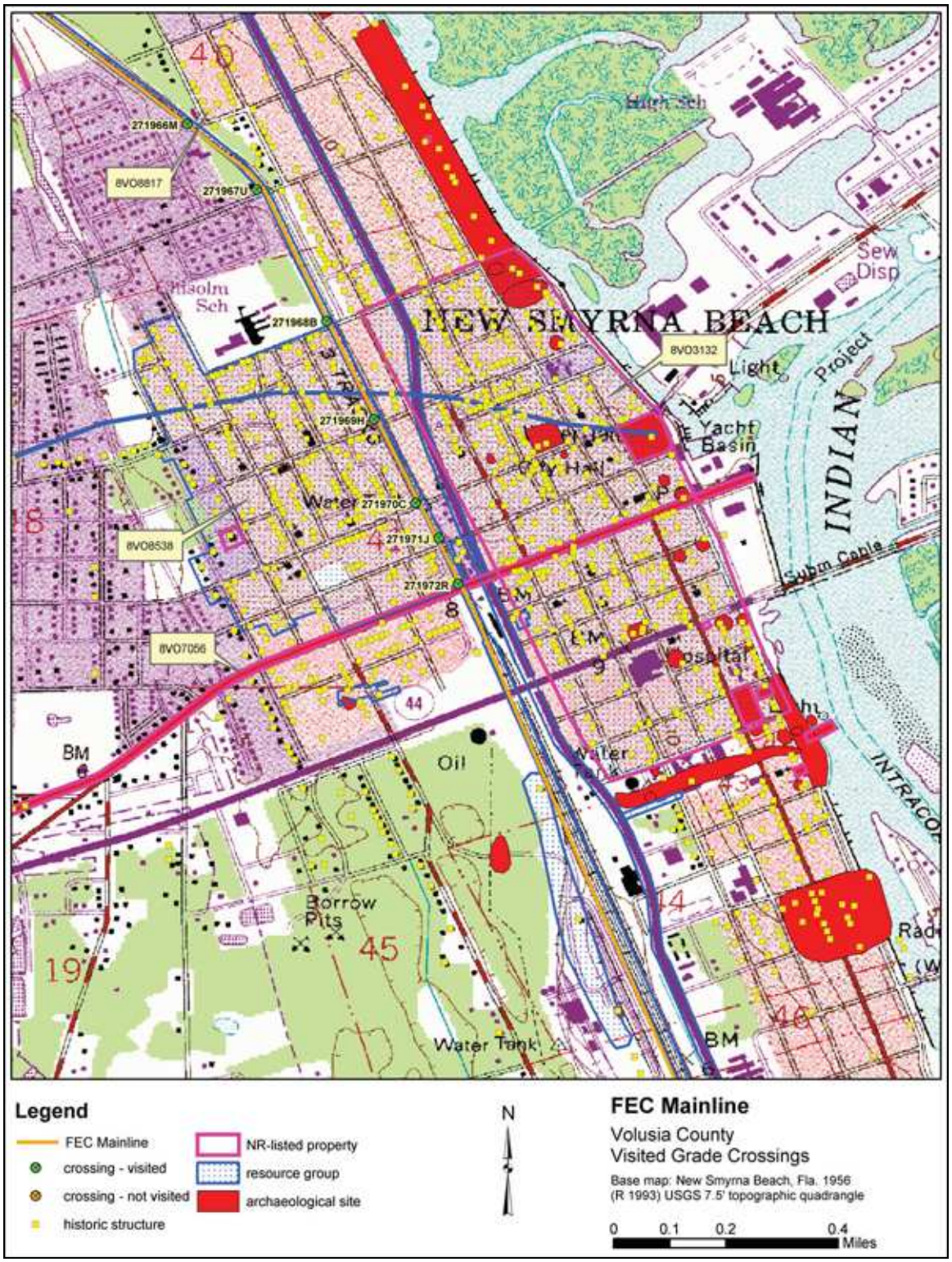

Bunnell
(BM 20)
High Sch
Hospital
Sch No 2
271907K
271908S
271910T
ST. AUGUSTINE 32 MI.
0.8 MI. TO FLA.
4 LANE
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Flagler County
Visited Grade Crossings
Base maps: Bunnell, Fla. 1970 (R 1993) and Flagler Beach West, Fla. 1956 (R 1993) USGS 7.5' topographic quadrangles
0 0.1 0.2 0.4
Miles

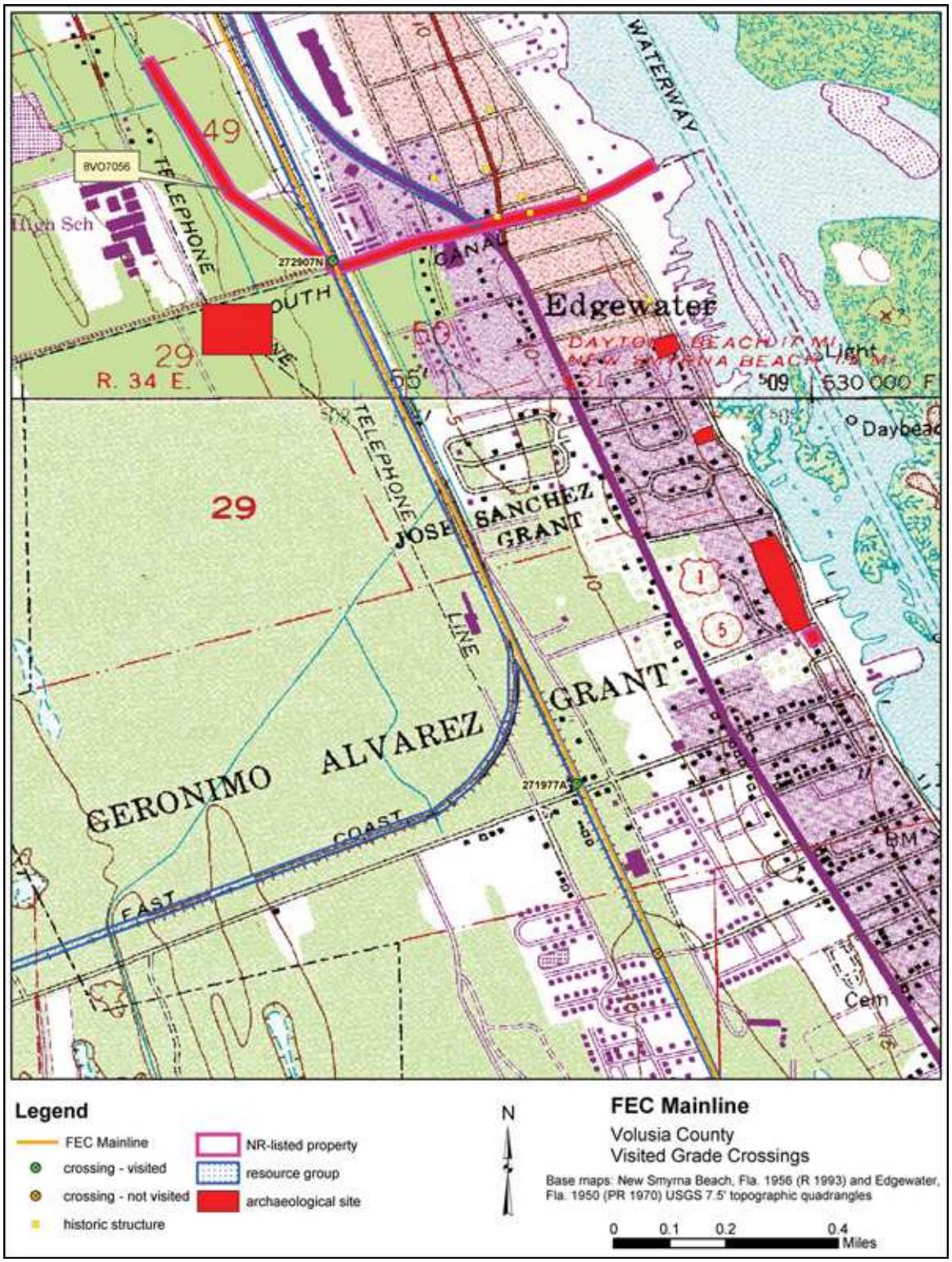

Sewage Disposal
Substation
BM
271920Y
272865E
BM
271922M
City Hall
PO
41
22
201
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Volusia County
Visited Grade Crossings
Base map: Ormond Beach, Fla. 1956 (R 1993)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

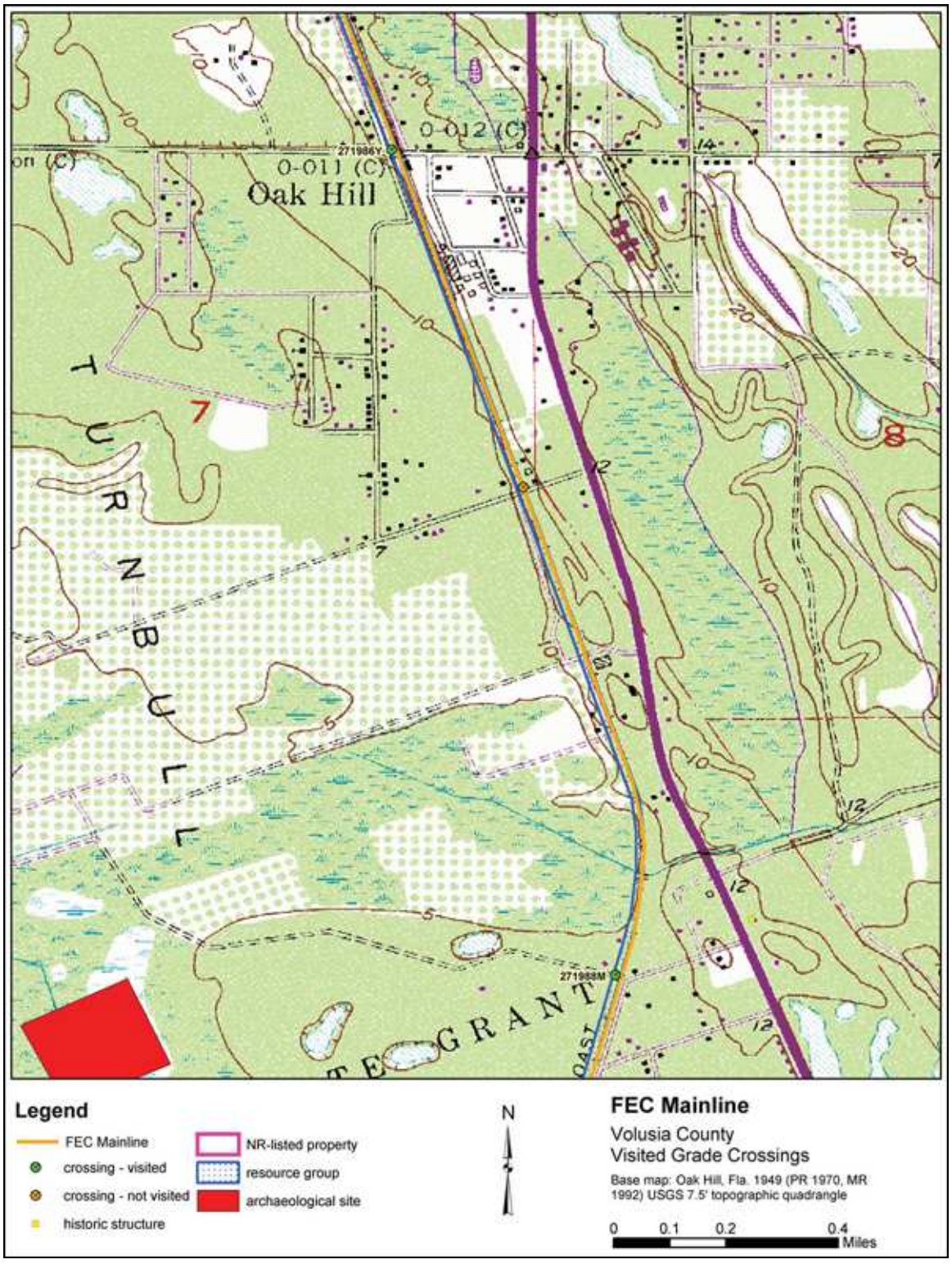

Daybeacon
Holly Hill
Sand
INTRACOA
8VO8305
271927W
BM 6
Park
273056X
8VO8128
35
43
37
Radio Towers
(WNOB)
R32E
R33E
271932T
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Volusia County
Visited Grade Crossings
Base map: Daytona Beach, Fla. 1952 (R 1993)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

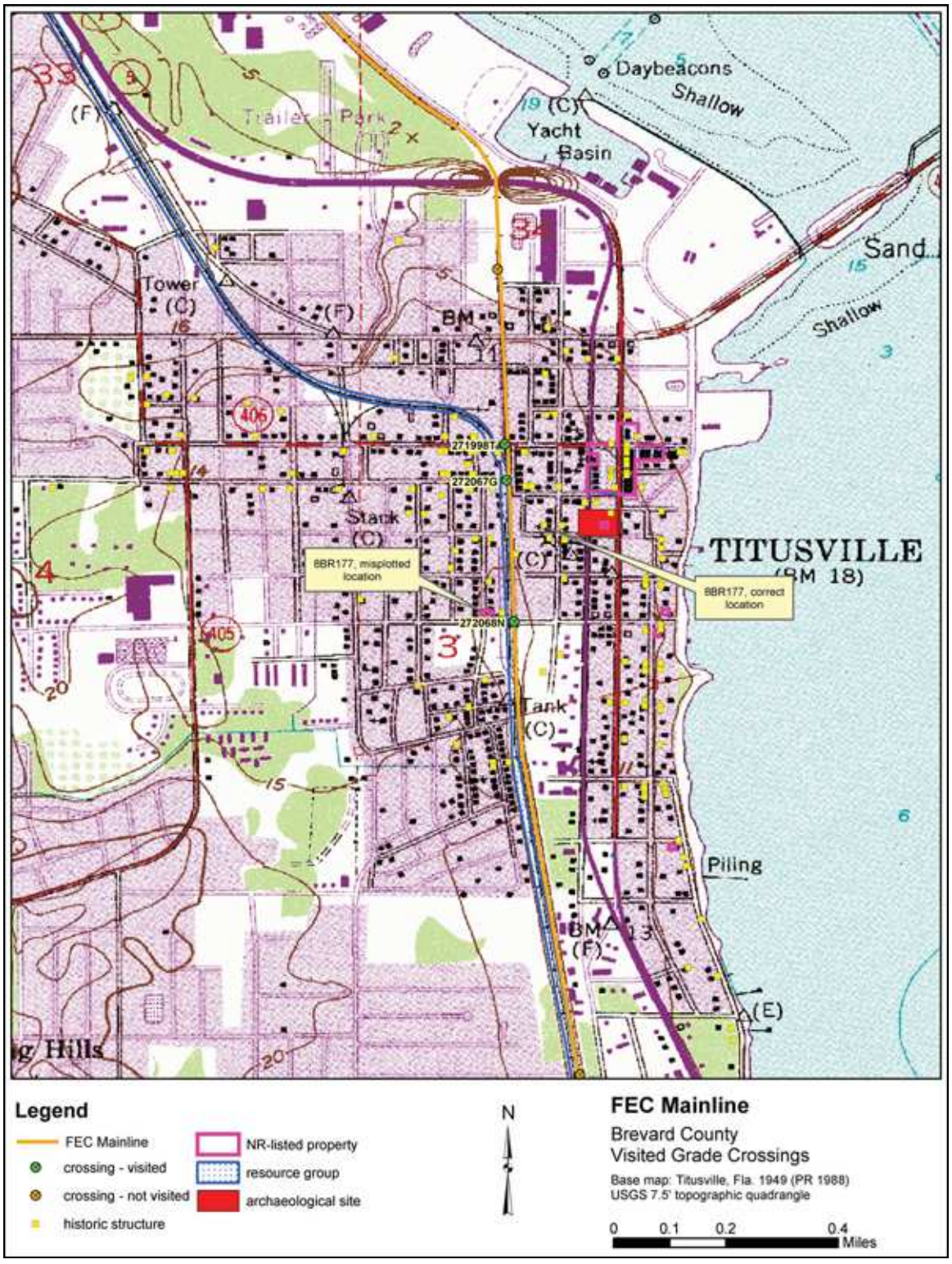

271937C
8VO5988
271939R
271940K
8VO7188
271941S
8VO5730
271942Y
271943F
BM 5
BM 6
BM 9
Sand
Piles
RIVER
Radio Tower
(WMFJ)
City Hall
Live Oak Park
College
CAMPBELL
AVE
39
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Volusia County
Visited Grade Crossings
Base map: Daytona Beach, Fla. 1952 (R 1993)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

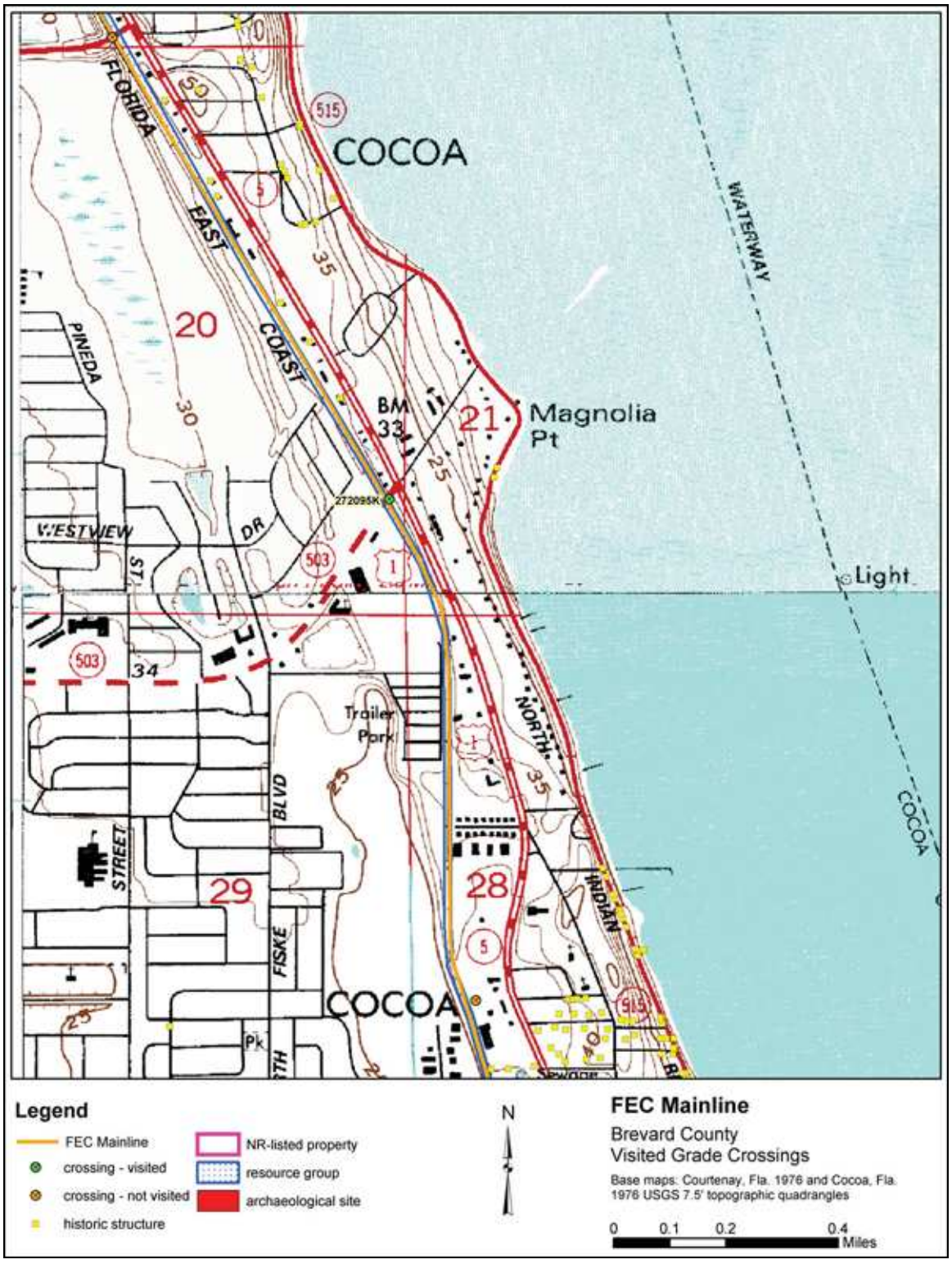

Pelican Island
Shallow
Trailer Park
Trailer Park
T. 15 S.
T. 16 S.
T. 16 S.
1 756 000
Port Orang
271958V
8VO7125
Sewage Disp
HALIFAX
Woodland Cem
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Volusia County
Visited Grade Crossings
Base maps: Port Orange, Fla. 1956 (R 1993) and Daytona Beach, Fla. 1952 (R 1993) USGS 7.5' topographic quadrangles
0 0.1 0.2 0.4
Miles

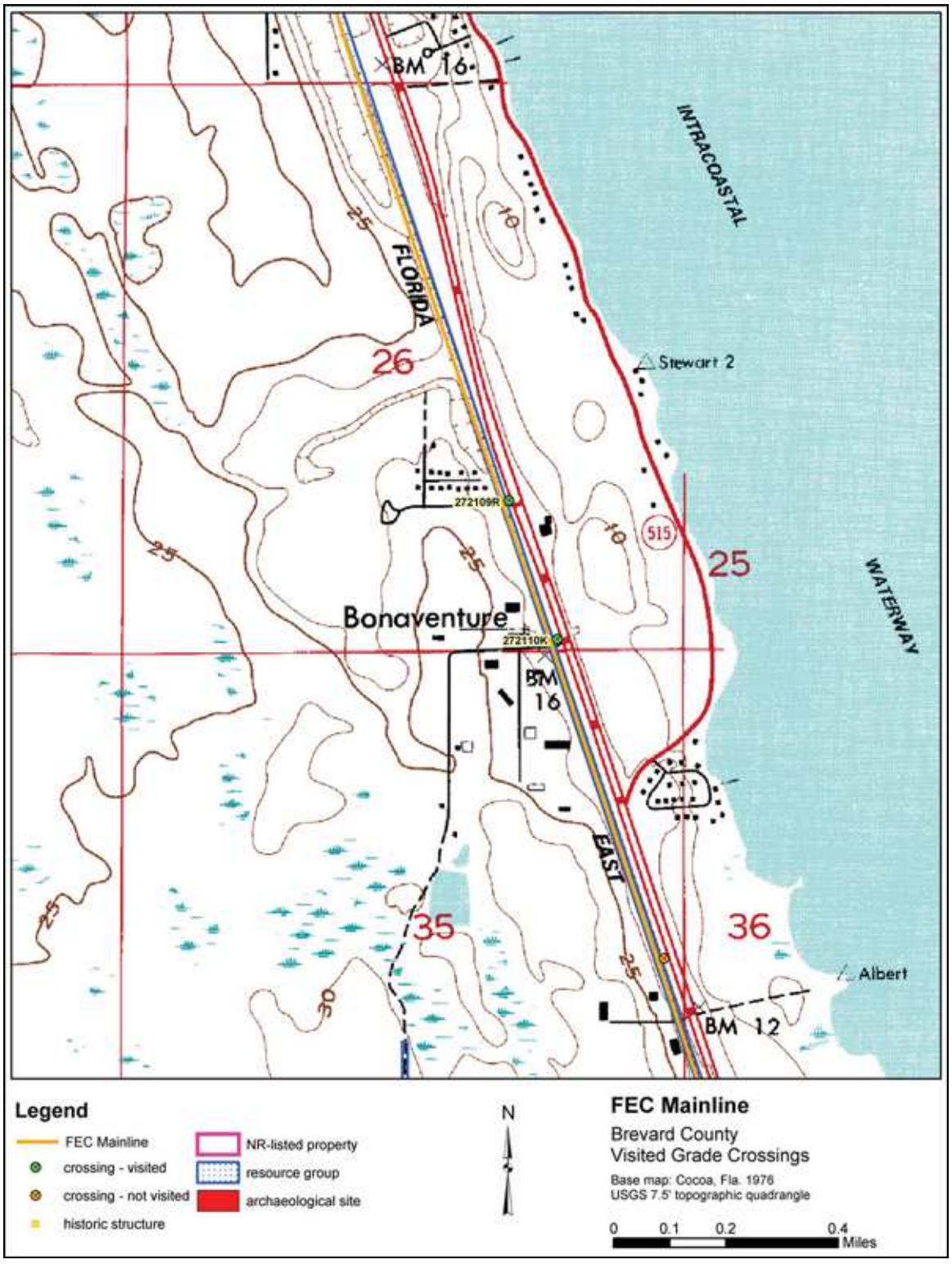

NEW SMYRNA BEACH
INDIAN
High Sch
Sew Disp
Project
Light
Yacht Basin
City Hall
Water
Oil
Borrow Pits
Water Tank
Subm Cable
INTRACOA
Hospital
BM
271966M
271967U
271968B
271969H
271970C
271971J
271972R
8VO8817
8VO8538
8VO7056
8VO3132
44
45
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Volusia County
Visited Grade Crossings
Base map: New Smyrna Beach, Fla. 1956
(R 1993) USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

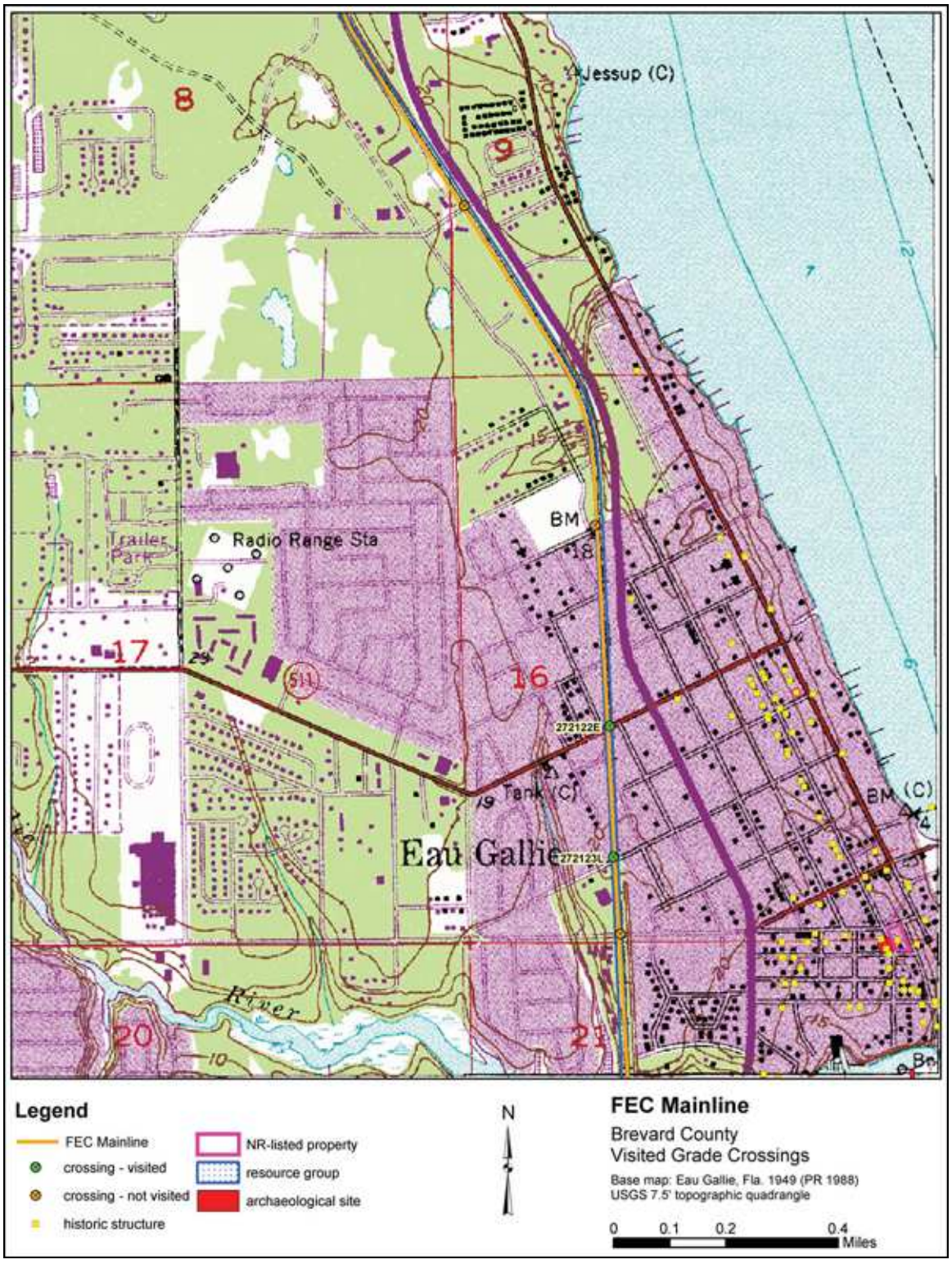

WATERWAY
49
8VO7056
TELEPHONE
High Sch
272907N
CANAL
Edgewater
29
R. 34 E.
Light
530 000 F
Daybeac
29
TELEPHONE
JOSE SANCHEZ GRANT
LINE
GRANT
GERONIMO ALVAREZ
271977A
COAST
EAST
BM
Cem
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Volusia County
Visited Grade Crossings
Base maps: New Smyrna Beach, Fla. 1956 (R 1993) and Edgewater, Fla. 1950 (PR 1970) USGS 7.5' topographic quadrangles
0 0.1 0.2 0.4
Miles


Oak Hill
0-011 (C)
0-012 (C)
271986Y
271988M
TURNBULL
7
8
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Volusia County
Visited Grade Crossings
Base map: Oak Hill, Fla. 1949 (PR 1970, MR 1992) USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

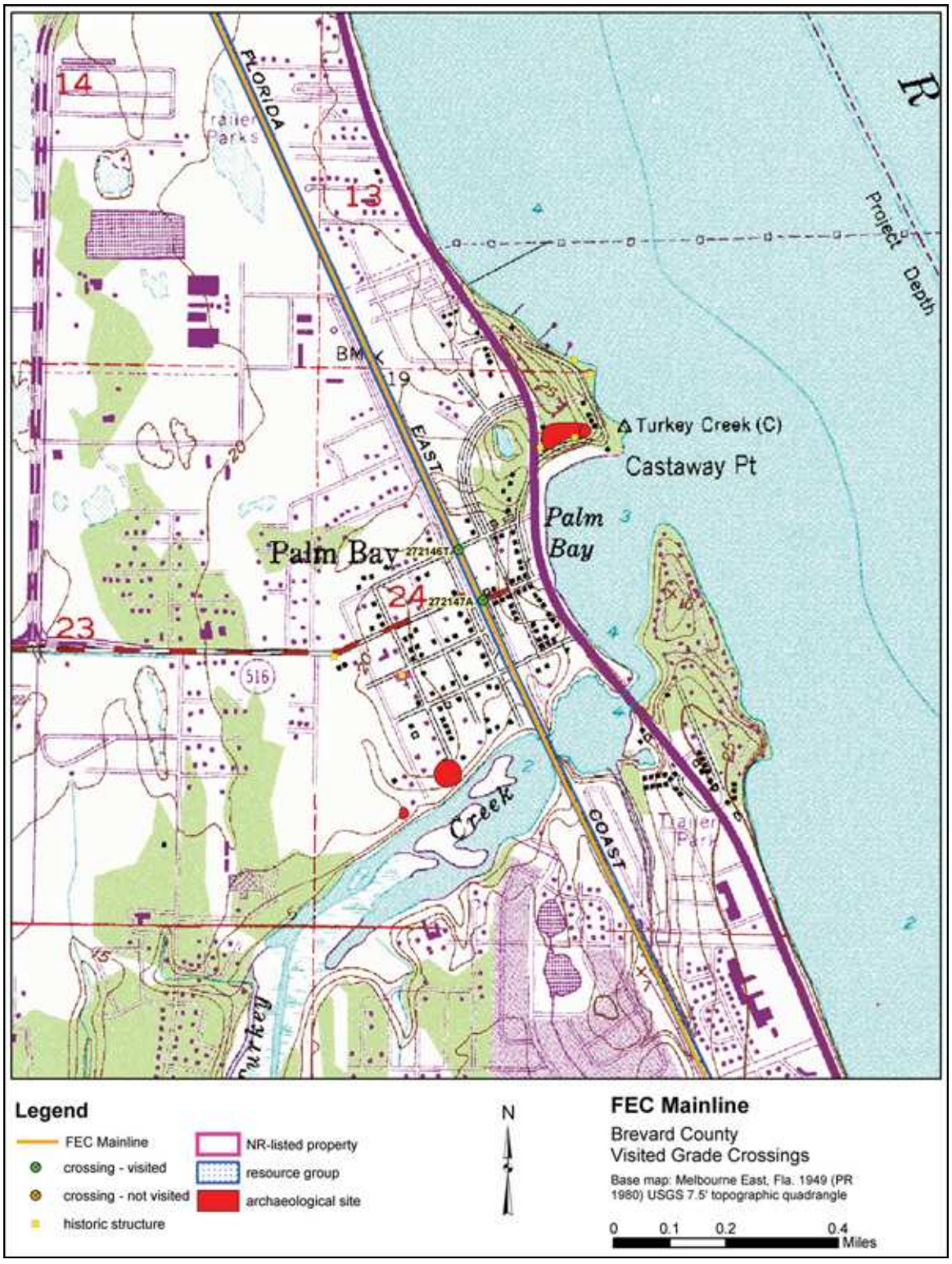

Daybeacons
Shallow
Yacht Basin
Trailer Park
Tower (C)
BM
Sand
Shallow
TITUSVILLE
(BM 18)
8BR177, misplotted location
8BR177, correct location
2719987
272067G
272068N
Stack (C)
Tank (C)
Piling
BM (F)
(E)
406
405
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Brevard County
Visited Grade Crossings
Base map: Titusville, Fla. 1949 (PR 1988)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

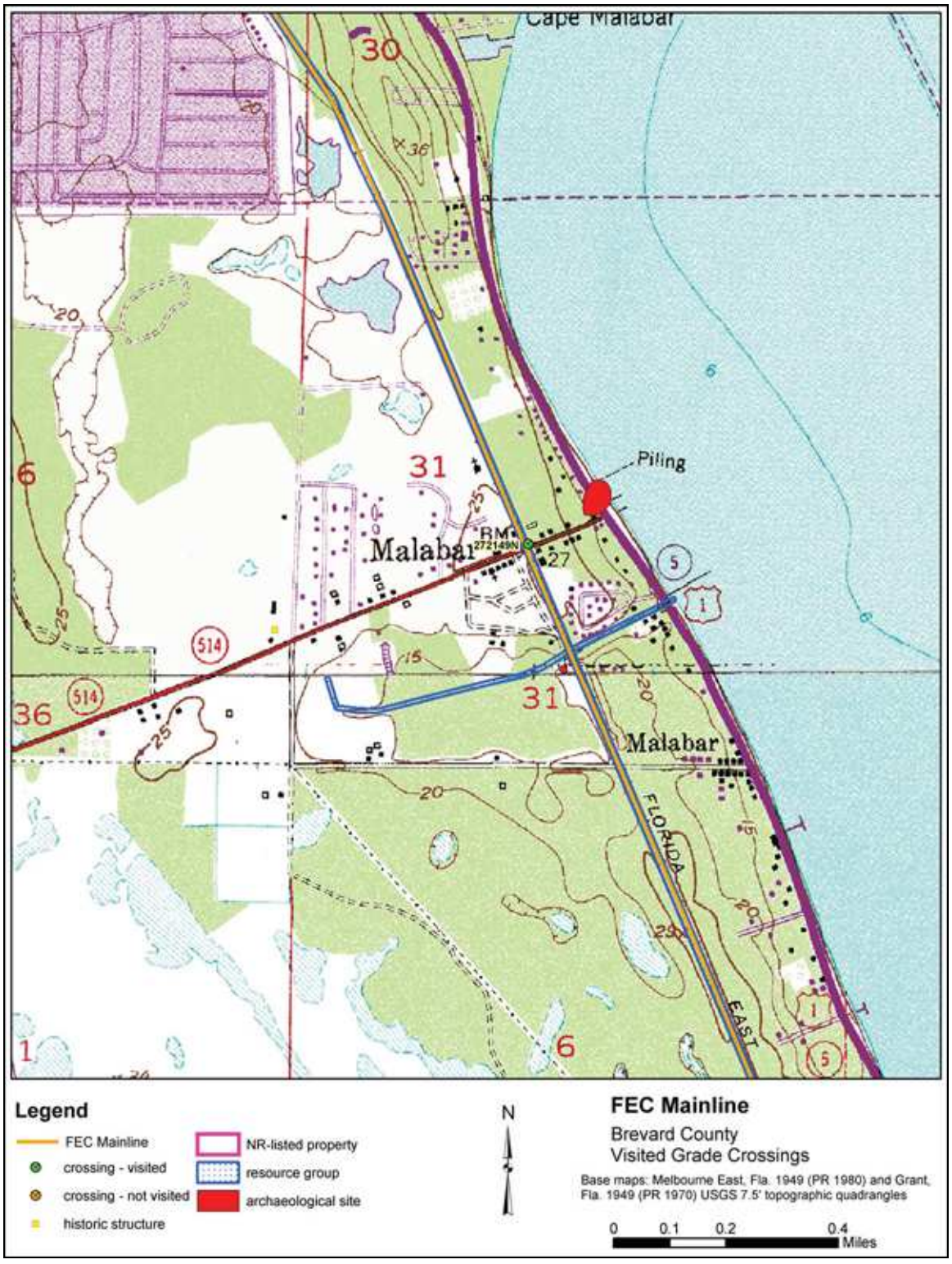

COCOA
FLORIDA
EAST
COAST
WATERWAY
Magnolia
Pt
Light
PINEDA
WESTVIEW
DR
ST
BM
33
20
21
28
29
34
Trailer
Park
NORTH
BLVD
STREET
FISKE
INDIAN
COCOA
COCOA
515
503
1
5
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Brevard County
Visited Grade Crossings
Base maps: Courtenay, Fla. 1976 and Cocoa, Fla. 1976 USGS 7.5' topographic quadrangles
0 0.1 0.2 0.4
Miles


BM 16
INTRACOASTAL
WATERWAY
FLORIDA
EAST
Stewart 2
Albert
Bonaventure
272109R
272110K
515
25
26
35
36
30
BM 16
BM 12
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Brevard County
Visited Grade Crossings
Base map: Cocoa, Fla. 1976
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

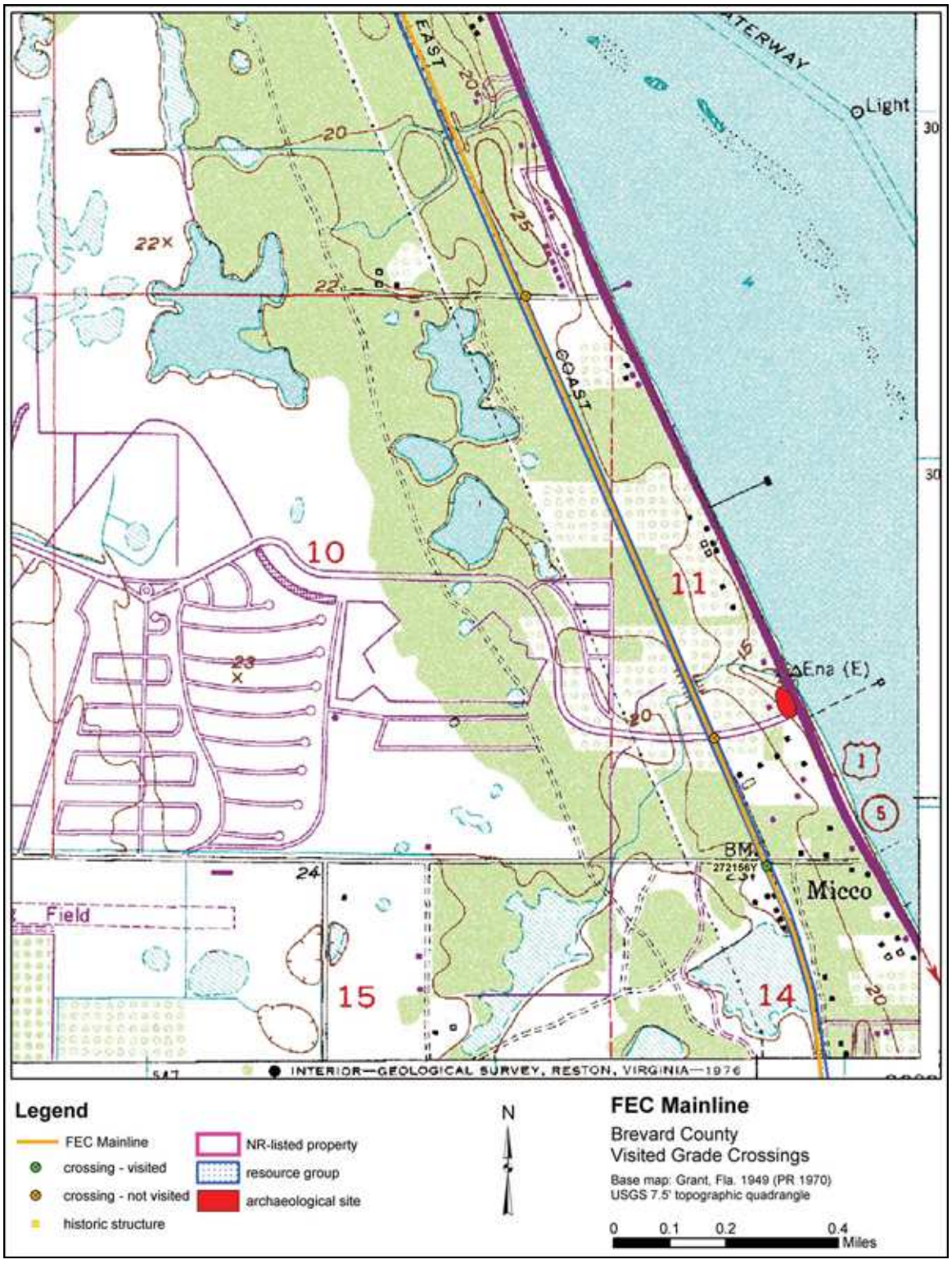

Jessup (C)
8
9
Trailer Park
Radio Range Sta
BM
18
17
16
511
272122E
Tank (C)
BM (C)
Eau Gallie
272123L
River
20
21
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Brevard County
Visited Grade Crossings
Base map: Eau Gallie, Fla. 1949 (PR 1988)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

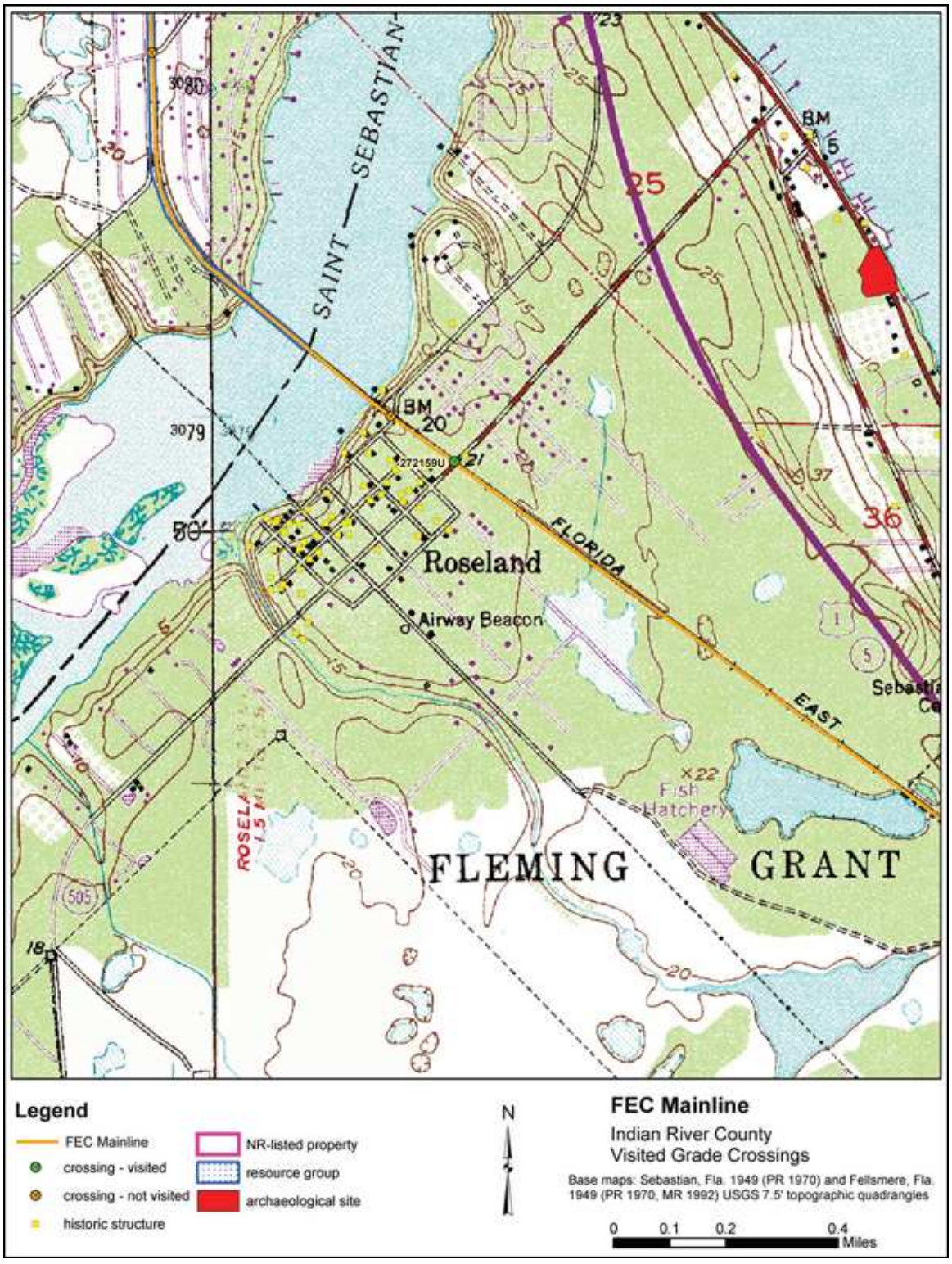

Melbourne
MELBOURNE
Wright
(C)
516
Radio Tower
(WMMB)
(C)
Daybeacons
Piling
Creek
Cem
Tank
(C)
Wells
Park
(F)
BM
272132K
272133S
272134Y
272138B
272139H
272142R
272143X
272144E
8BR2173
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Brevard County
Visited Grade Crossings
Base map: Melbourne East, Fla. 1949 (PR 1980) USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

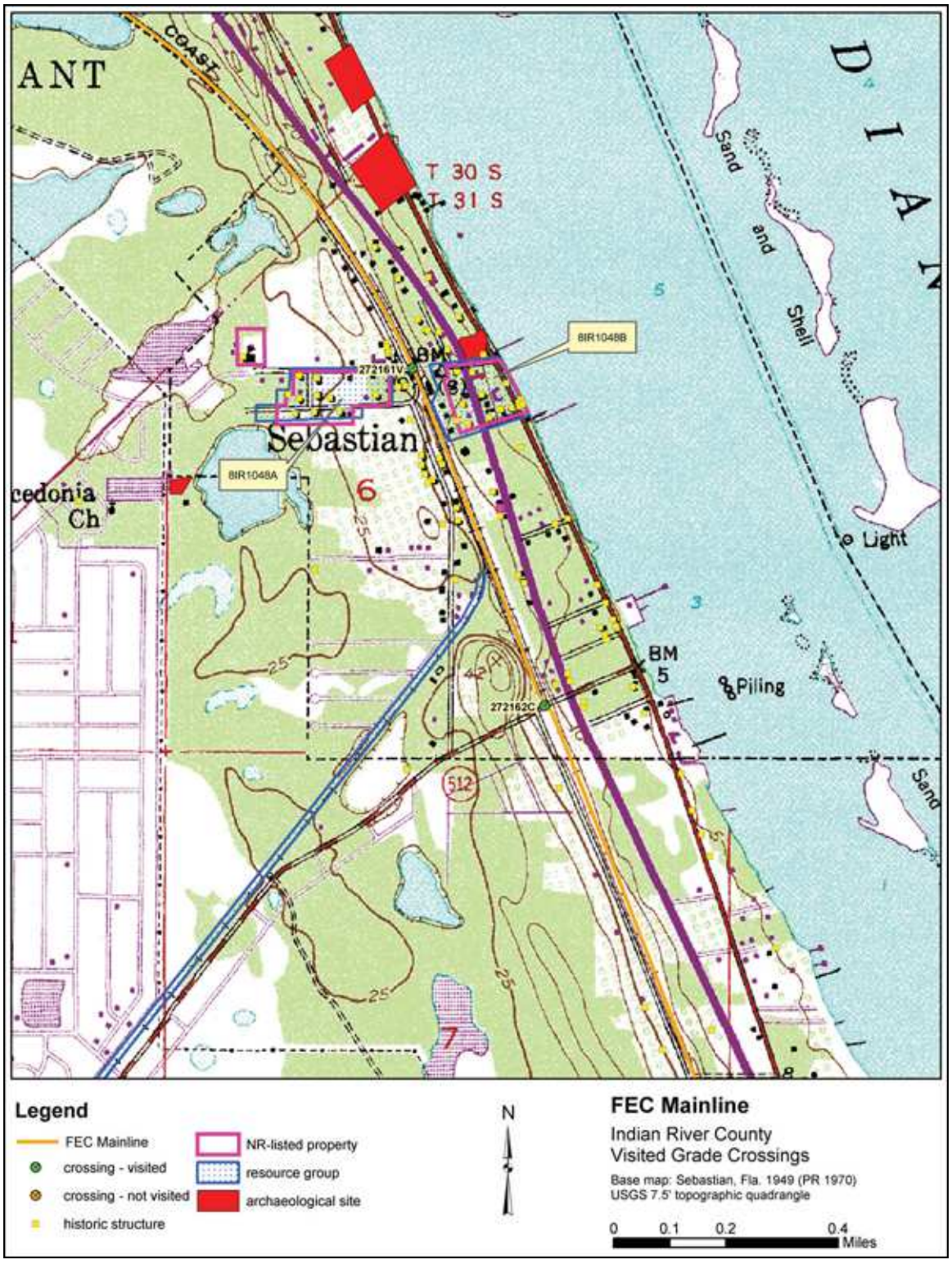

FLORIDA
EAST COAST
Project Depth
Turkey Creek (C)
Castaway Pt
Palm Bay
Palm Bay
Creek
Trailer Parks
14
13
24
23
19
516
272146T
272147A
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Brevard County
Visited Grade Crossings
Base map: Melbourne East, Fla. 1949 (PR 1980) USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

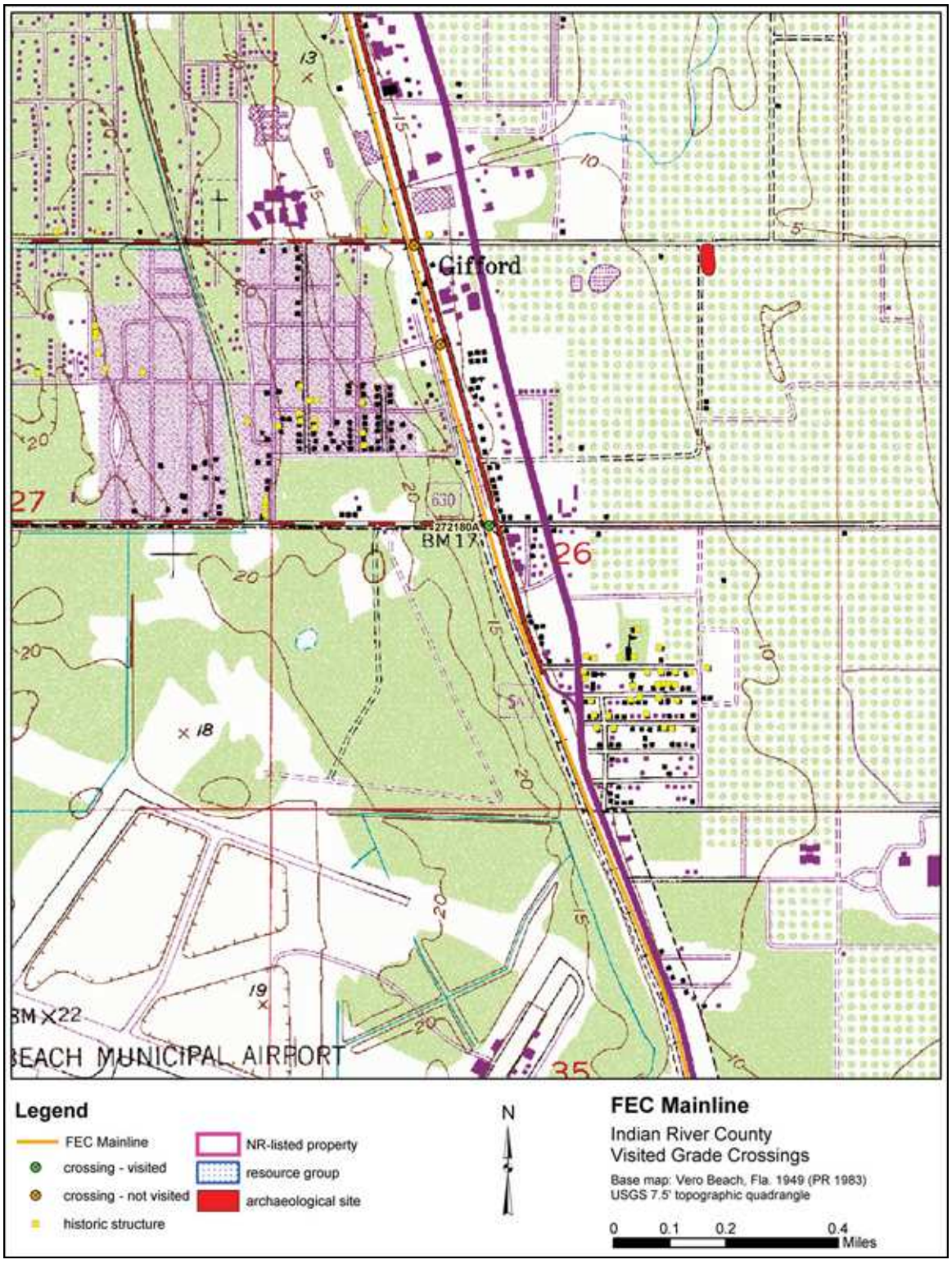

Cape Malabar
30
31
Piling
Malabar
RM 272149N
27
514
36
31
Malabar
FLORIDA
EAST
6
1
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Brevard County
Visited Grade Crossings
Base maps: Melbourne East, Fla. 1949 (PR 1980) and Grant, Fla. 1949 (PR 1970) USGS 7.5' topographic quadrangles
0 0.1 0.2 0.4
Miles

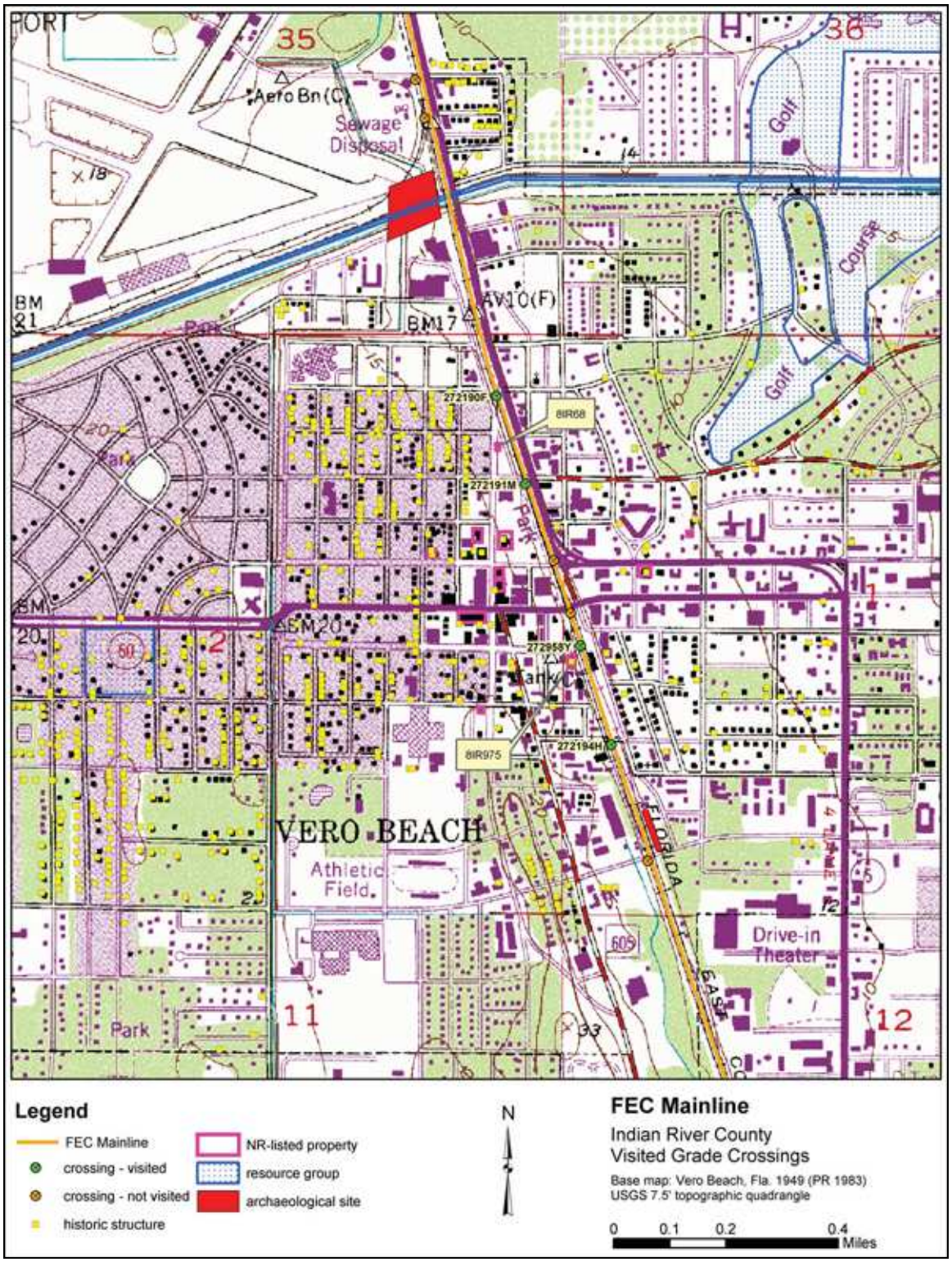

8BR1710
Trout
Creek
Cem
Grant
Light
Grant (C)
28
27
33
34
22
23
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Brevard County
Visited Grade Crossings
Base map: Grant, Fla. 1949 (PR 1970)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

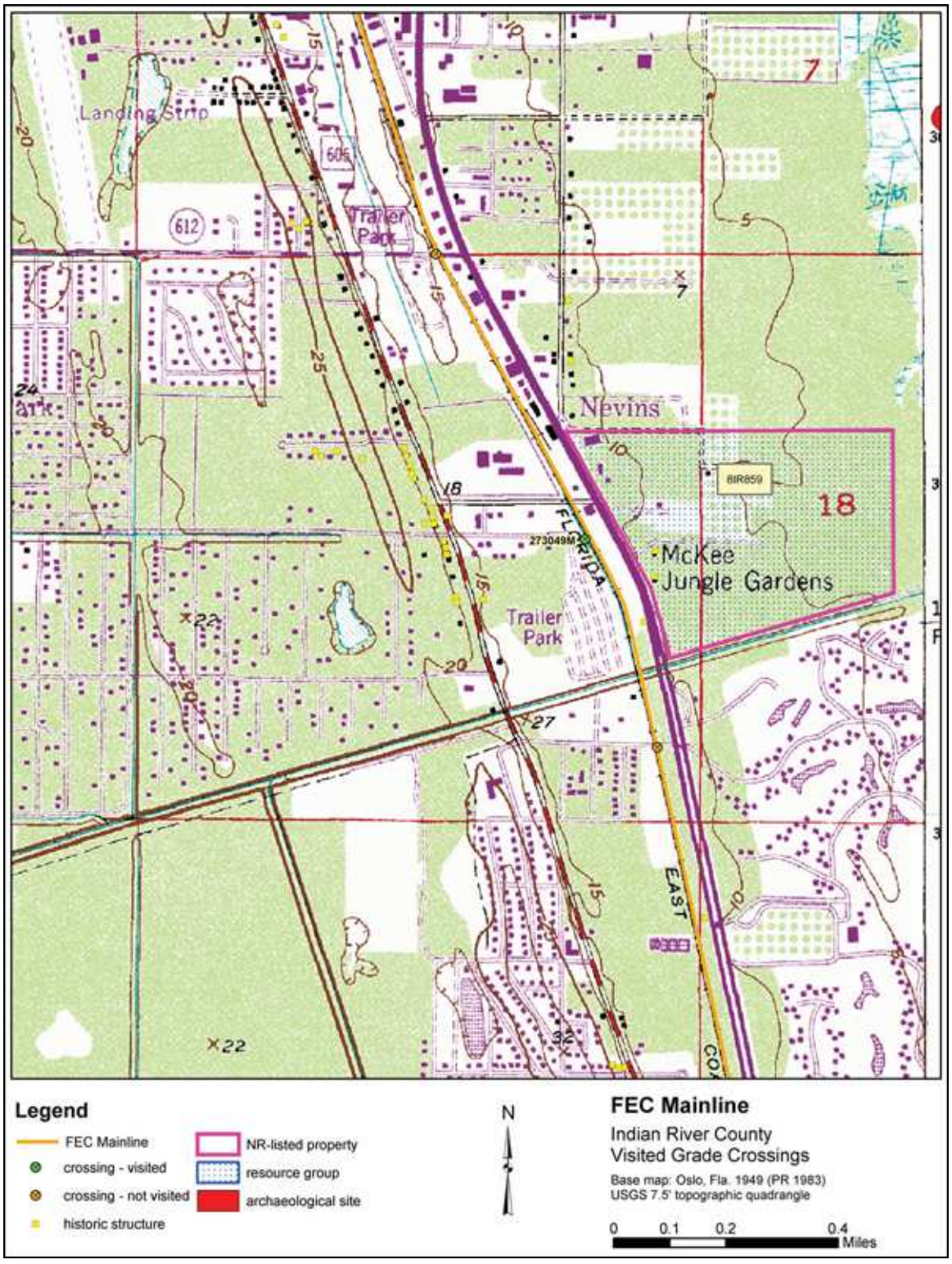

EAST
Light
22x
10
11
23
x
Ena (E)
Micco
Field
24
15
14
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1976
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Brevard County
Visited Grade Crossings
Base map: Grant, Fla. 1949 (PR 1970)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles


SAINT — SEBASTIAN
FLORIDA
EAST
Roseland
Airway Beacon
Fish Hatchery
FLEMING GRANT
BM
20
25
36
37
3079
3080
272159U
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Indian River County
Visited Grade Crossings
Base maps: Sebastian, Fla. 1949 (PR 1970) and Fellsmere, Fla. 1949 (PR 1970, MR 1992) USGS 7.5' topographic quadrangles
0 0.1 0.2 0.4
Miles

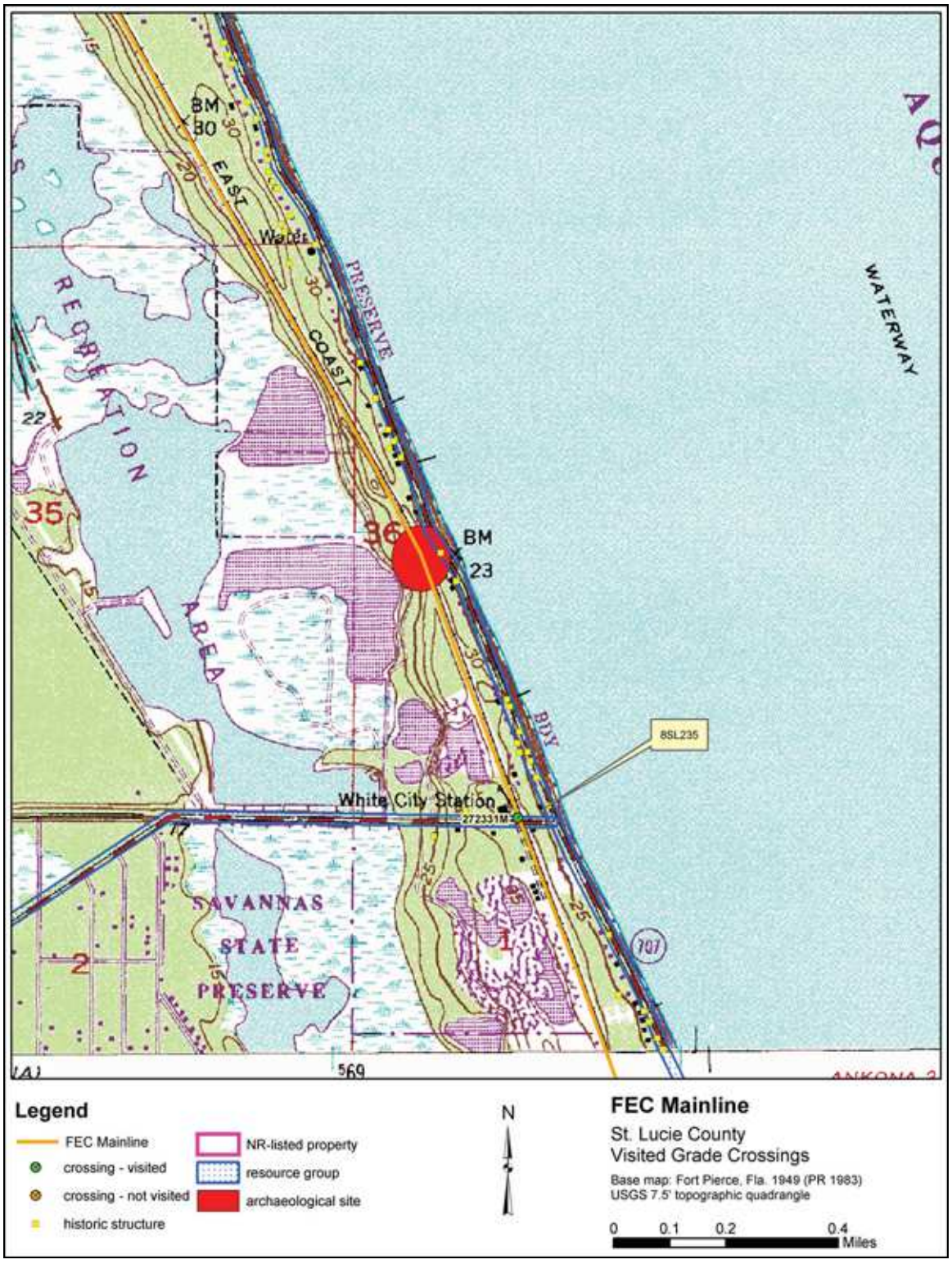

ANT
COAST
T 30 S
T 31 S
Sand
and
Shell
DIAN
8IR1048B
BM
2
272161V
Sebastian
8IR1048A
cedonia
Ch
6
25
Light
3
BM
5
Piling
272162C
512
Sand
7
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Indian River County
Visited Grade Crossings
Base map: Sebastian, Fla. 1949 (PR 1970)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

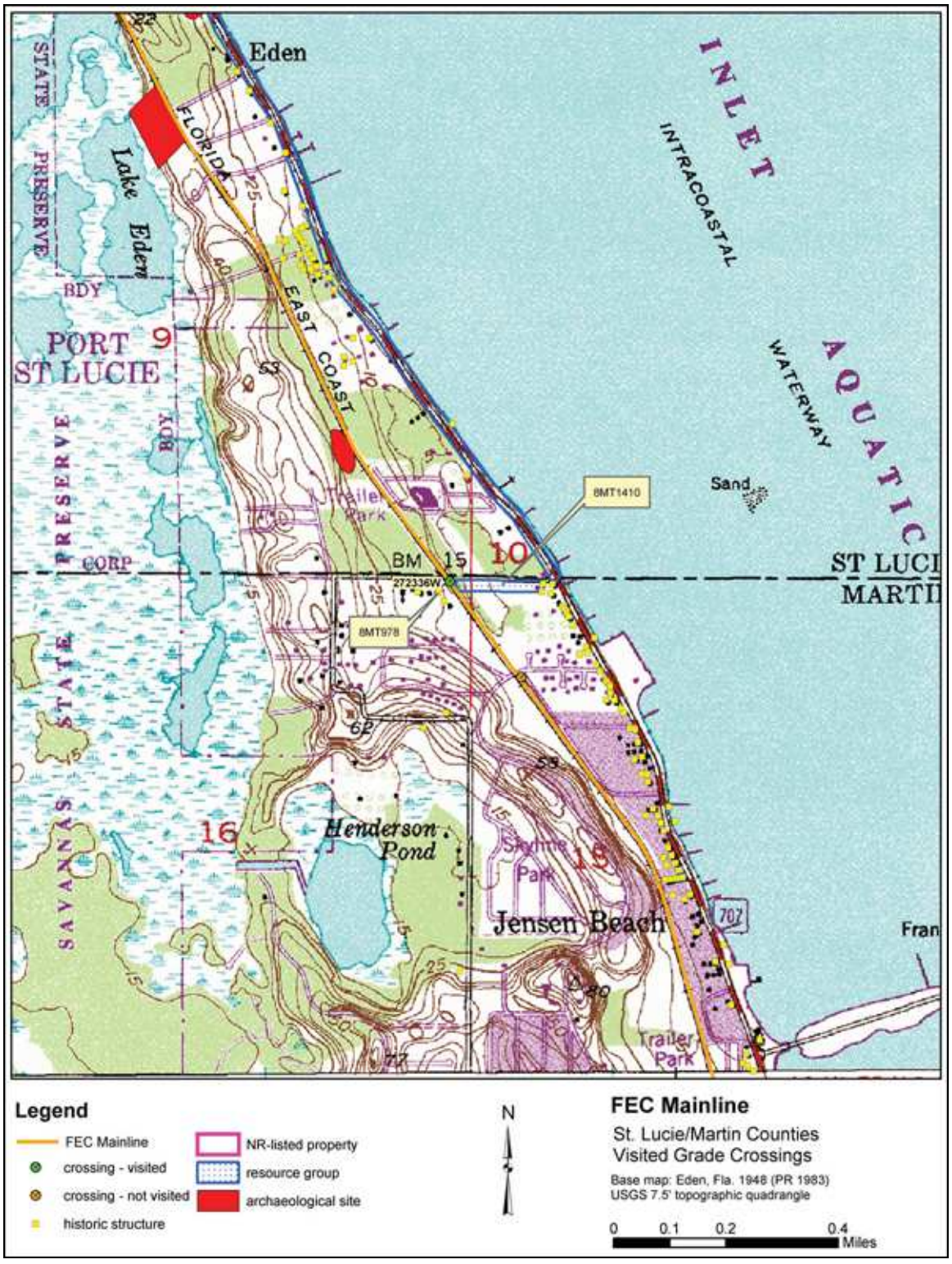

Gifford
BM17
BM X22
BEACH MUNICIPAL AIRPORT
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Indian River County
Visited Grade Crossings
Base map: Vero Beach, Fla. 1949 (PR 1983)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

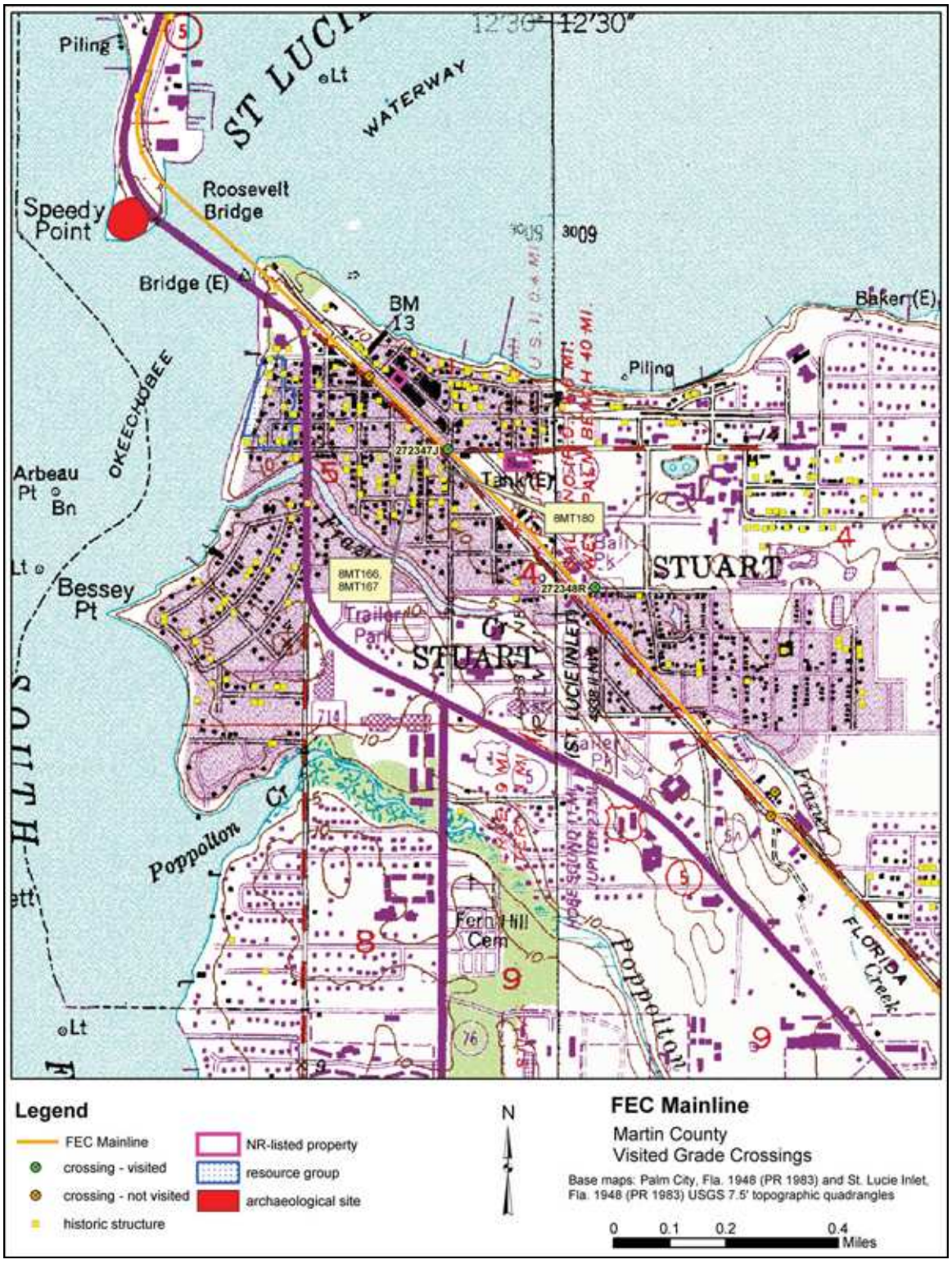

PORT
35
36
Aero Bn (C)
Sewage Disposal
Golf
Course
BM 21
BM17
AV10(F)
Park
272190F
8IR68
272191M
BM
BM20
272195Y
Tank
8IR975
272194H
VERO BEACH
Athletic Field
FLORIDA
EAST
Drive-in Theater
605
Park
11
12
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Indian River County
Visited Grade Crossings
Base map: Vero Beach, Fla. 1949 (PR 1983)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

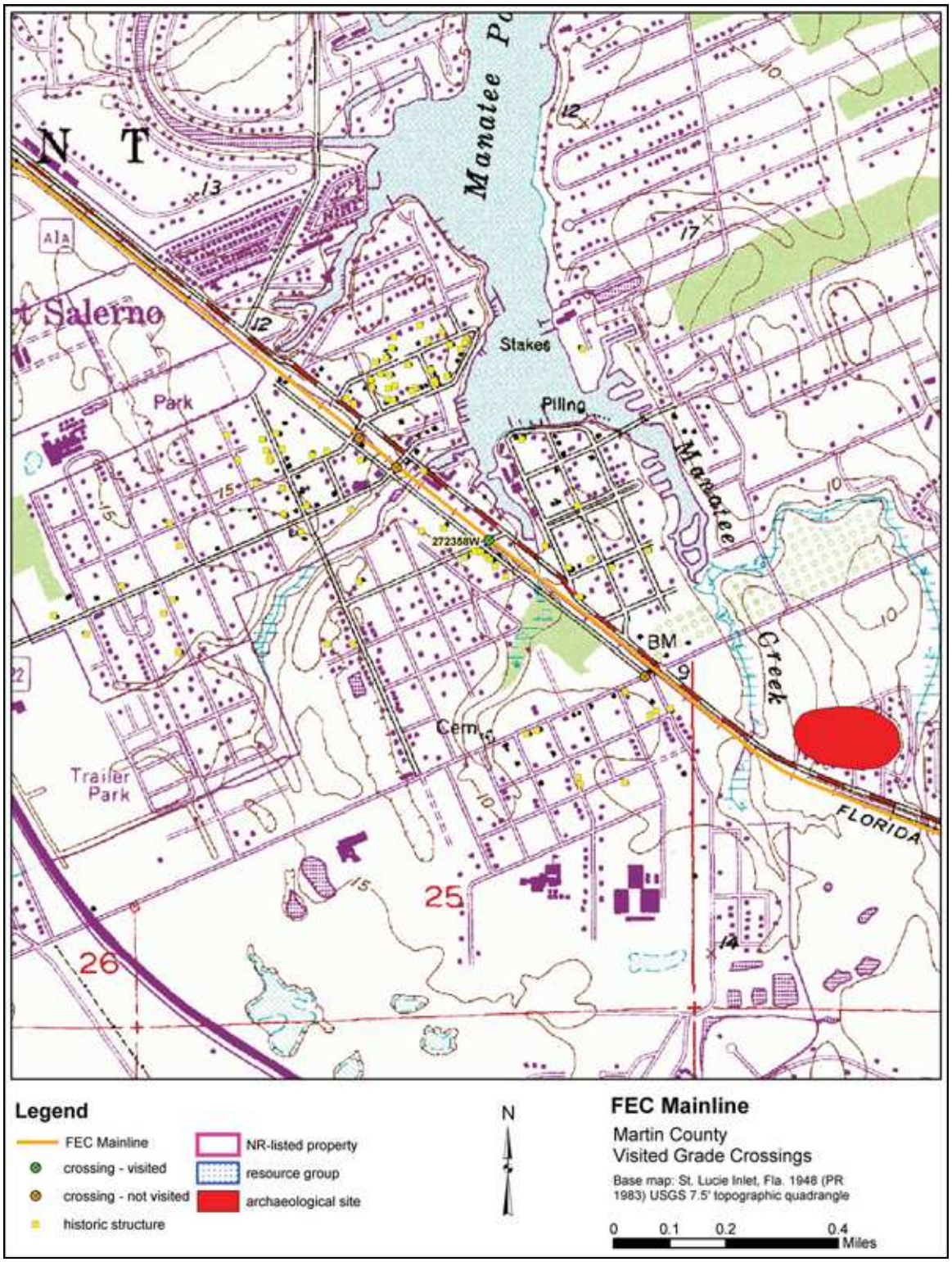

Landing Strip
605
612
Trailer Park
Nevins
8IR859
18
FLORIDA
273049M
McKee
Jungle Gardens
Trailer Park
EAST
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Indian River County
Visited Grade Crossings
Base map: Oslo, Fla. 1949 (PR 1983)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

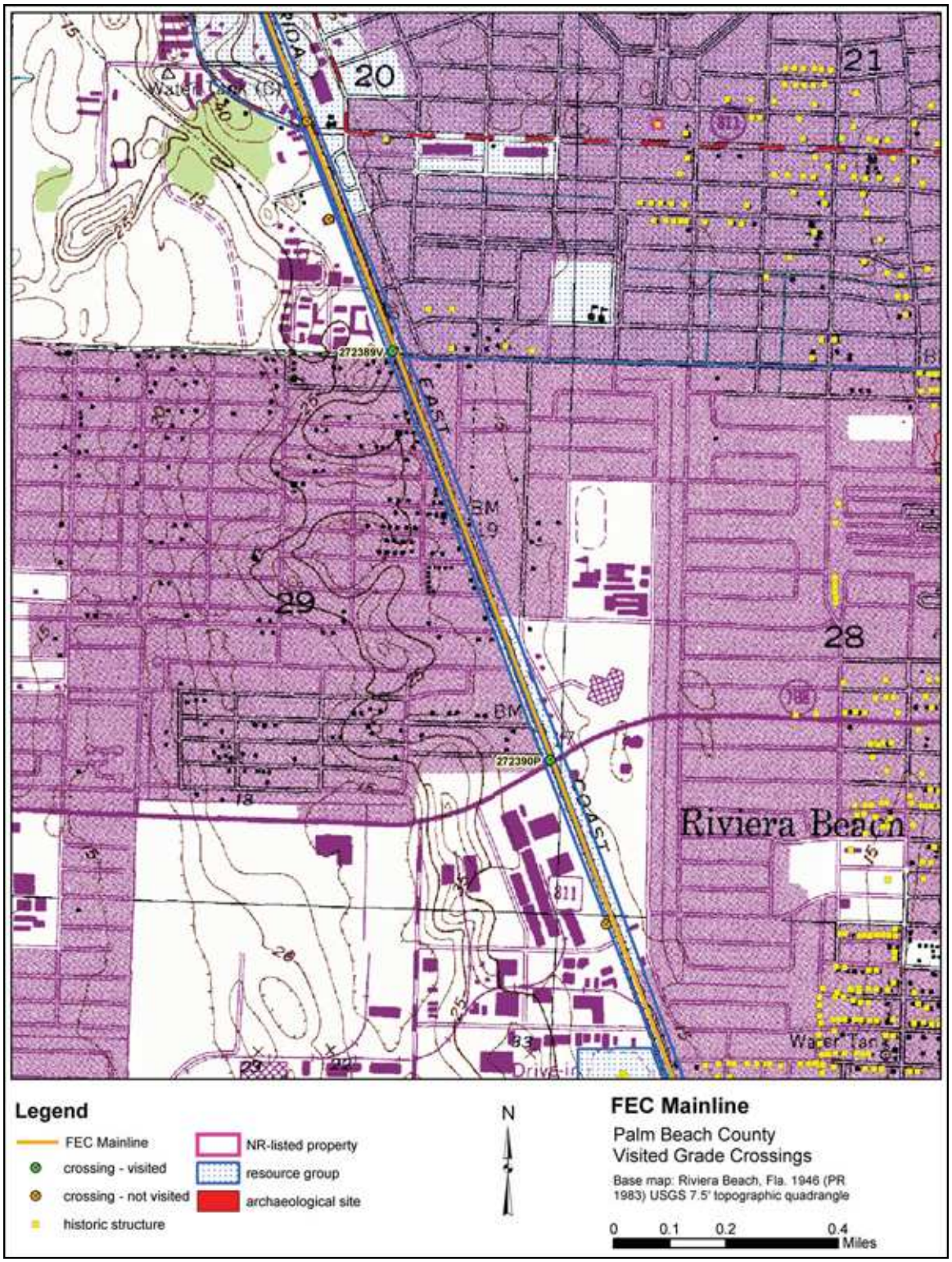

Cem
Cem
Trailer Park
Ruins
Sewage Disposal
Municipal Yacht Basin
8SL2799
8SL289
272238F
272239M
Pog (C)
Radio Mast
St Lucie Co
Botanical Gardens
Ruins
Tank (C)
Glidden Park
Athletic Field
4 LANE
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
St. Lucie County
Visited Grade Crossings
Base map: Fort Pierce, Fla. 1949 (PR 1983)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles


BM 30
EAST COAST
PRESERVE
WATERWAY
RECREATION AREA
35
36
BM 23
8SL235
White City Station
SAVANNAS STATE PRESERVE
707
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
St. Lucie County
Visited Grade Crossings
Base map: Fort Pierce, Fla. 1949 (PR 1983)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles


Eden
STATE PRESERVE
Lake Eden
BDY
PORT ST LUCIE
9
FLORIDA
EAST COAST
INTRACOASTAL
INLET
AQUATIC
WATERWAY
Sand
8MT1410
BM 15
10
ST LUCI
MARTI
CORP
8MT978
16
Henderson Pond
SAVANNAS
Skyline Park
15
Jensen Beach
707
Trailer Park
Fran
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
St. Lucie/Martin Counties
Visited Grade Crossings
Base map: Eden, Fla. 1948 (PR 1983)
USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles


Piling
ST LUCIE
WATERWAY
Lt
Roosevelt Bridge
Speedy Point
Bridge (E)
BM 13
Baker (E)
Piling
OKEECHOBEE
Arbeau Pt
Bn
Bessey Pt
Lt
SOUTH
Tank (E)
8MT180
8MT166, 8MT167
272347J
272348R
STUART
Trailer Park
Poppolton Cr
Fern Hill Cem
Poppolton
FLORIDA
Creek
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Martin County
Visited Grade Crossings
Base maps: Palm City, Fla. 1948 (PR 1983) and St. Lucie Inlet, Fla. 1948 (PR 1983) USGS 7.5' topographic quadrangles
0 0.1 0.2 0.4
Miles


Manatee
Salerno
Stakes
Piling
Park
Manatee Creek
272358W
BM
Cem
Trailer Park
FLORIDA
25
26
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Martin County
Visited Grade Crossings
Base map: St. Lucie Inlet, Fla. 1948 (PR 1983) USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles


20
21
29
28
272389V
272390P
EAST COAST
Riviera Beach
Water Tank
Drive-in
Legend
FEC Mainline
crossing - visited
crossing - not visited
historic structure
NR-listed property
resource group
archaeological site
N
FEC Mainline
Palm Beach County
Visited Grade Crossings
Base map: Riviera Beach, Fla. 1946 (PR 1983) USGS 7.5' topographic quadrangle
0 0.1 0.2 0.4
Miles

APPENDIX C:

Florida Master Site File Forms