RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESSMENT (WWA)

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1.00 INTRODUCTION

The following Wetland and Wildlife Assessment Report (WWA) of the Ravello Development LLC. project site has been prepared by Hobe Sound Environmental Consultants, Inc. (HSE). The purpose of this report is to provide the methodologies and results of a scientific wetland and wildlife assessment for the site. This report addresses the following environmental issues: protected species, wildlife, vegetative communities, wetlands, soils, and topography. The report is based on field data collected on 04 July 2024. The project site consists of approximately 7.1 acres of land located north of SE Morningside Blvd., south of SE Port St. Lucie Blvd., east of SE Treasure Island Rd., and west of SE Westmoreland Blvd. The site is situated in Section 14, Township 37S, Range 40E in St. Lucie County, Florida. The center of the project site is located at coordinates Longitude: 27°15'35.536 ", and Latitude: -80°18'41.234"(**Appendix A: Figures 1-3 of 17**).

2.00 METHODOLOGY

2.01 Protected Species/Wildlife Survey

2.01.1 Objective

Conduct a systematic survey for flora and fauna that may occur within the project site and note the presence of any protected species listed in *Florida's Official Endangered and Threatened Species List,* updated December 2022, Florida Fish and Wildlife Conservation Commission (FFWCC).

The state lists of animals are maintained by the FFWCC and categorized as threatened in accordance with rule 68A-27.003 of the Florida Administrative Code (F.A.C.). The state lists of plants are categorized into endangered, threatened, and commercially exploited, and are maintained by the Florida Department of

Agriculture and Consumer Services (DOACS) via Chapter 5B-40, F.A.C.

The federal agencies that share the authority to list species as Endangered and Threatened are the National Oceanic and Atmospheric Administration-National Marine Fisheries Service (NOAA-NMFS) and the U.S. Fish and Wildlife Service (USFWS). The NOAA-NMFS is responsible for listing most marine species. The federal list of animals and plants is administered by the USFWS, and is published in 50 CFR 17 (animals) and 50 CFR 23 (plants).

2.01.2 Methodology

Following are the methodologies biologists used to conduct the wildlife/protected species survey.

- Biologists conducted pedestrian transects throughout the project site.
- The transects meandered through areas of suitable habitat within the entire project area.
- Biologists recorded sightings, tracks, scat, tree markings, nests, cavities, and burrows.

2.02 Gopher Tortoise and Other Burrow Commensals

2.02.1 Objective

Conduct a 100% systematic survey within and around the boundaries of the project site to locate any gopher tortoise (*Gopherus polyphemus*) burrows and the eastern indigo snake (*Drymarchon corais couperi*).

2.02.2 Methodology

Biologists followed the survey protocol as recommended in *Ecology and Habitat Protection Needs of Gopher Tortoise (Gopherus polyphemus) Populations Found on Lands Slated for Large-scale Development in Florida* Non-game Wildlife Program, Technical Report #4, Florida Game and Fresh Water Fish Commission

(FGFWFC), now known as FFWCC, Tallahassee, Florida, December 1987, and *Gopher Tortoise Permitting Guidelines*, FFWCC, Tallahassee, Florida April 2008 (Updated April 2023).

- Biologists conducted pedestrian transects on 3 July 2024 **(Appendix A: Figure 4 of 17)**;
- All gopher tortoise burrows located were flagged as either abandoned or potentially occupied, if appropriate;
- All gopher tortoise burrows located were assigned an identification number and recorded, if appropriate;
- Biologists field located all gopher tortoise burrows on an aerial photograph, if appropriate (**Appendix A: Figure 5 of 17**);
- Additional data and notes were collected by biologists for the occurrence of the eastern indigo snake.

2.03 FWC Florida Cooperative Land Cover Classification System (CLC)

2.03.1 Objective

To map vegetation within the boundaries of the project site according to the *Florida Cooperative Land Cover Classification System* (CLC) and comparing it to the *Cooperative Land Cover Classification System* (CLC) map.

2.03.2 Methodology

Biologists used the following methodology to map vegetation found on the project site:

- Biologists used the *Cooperative Land Cover Classification System* (CLC).
- Biologists based vegetative community descriptions on field surveys, United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) soil maps, and aerial photograph interpretations.
- Numerical community designations were carried to Levels III or IV, as determined to be appropriate, according to CLC.

2.04 Jurisdictional Wetlands

2.04.1 Objective

To identify and locate State of Florida (South Florida Water Management District; SFWMD) and Federal (U. S. Army Corps of Engineers; COE) jurisdictional wetlands that may occur within the boundaries of the project site.

2.04.2 Methodology

Biologists used the following methodologies to locate State of Florida and Federal jurisdictional wetlands on-site.

- Biologists delineated wetlands according to Florida Administrative Code (F.A.C.) 62-340, as appropriate.
- Biologists delineated wetlands according to the COE Wetland Delineation Manual, January 1987, Technical Report Y-87-1, as appropriate; Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Version 2.0.
- Biologists flagged the wetlands with consecutively numbered flagging tape marked "Wetland Delineation", as appropriate.
- Biologists marked the approximate wetland locations on a St. Lucie County aerial photograph, if appropriate.

2.05 Soils

2.05.1 Objective

To identify project soil types according to the NRCS.

2.05.2 Methodology

Biologists used the following methodology to identify soil types found on the project sites.

- The project site soils were mapped according to the *Natural Resources Conservation Service (NRCS), United States Department of Agriculture (USDA), Survey,* http://websoilsurvey.sc.egov.usda.gov

2.06 Topography

2.06.1 Objective

To identify the topography of the project sites.

2.06.2 Methodology

Biologists used the following methodologies to identify the topography of the project site.

- Biologists used the *U.S. Geological Survey* (USGS) *Topographic Map, Ankona Quadrangle, Florida 7.5-Minute Series* to determine on-site topography.

3.00 RESULTS

3.01 Protected Species/Wildlife Survey

3.01.1 Gopher Tortoise and Other Burrow Commensals

The gopher tortoise is designated as threatened (T) by the State of Florida. The eastern indigo snake is designated as threatened (T) by the State of Florida and the USFWS. These species are protected under regulations set forth in the Florida Administrative Code (F.A.C.) of the State of Florida, Chapter 68 Fish and Wildlife Conservation Commission., Rule 68A-3.001 and 68A-25.002, as well as Chapter 68A-27. No (0) potentially occupied gopher tortoise burrows were located by biologists during the gopher tortoise and commensal species survey **(Appendix A: Figure 5 of 17).** The estimated gopher tortoise population is zero (0). Commensal species such as the eastern indigo snake were not observed on-site, although suitable habitat does exist on site. HSE biologists applied an Eastern Indigo Snake Determination key as follows, as per USFWS memo dated 25 January 2010, updated 13 August 2013 and revised 01 August 2017.

3.01.2 *Eastern Indigo Snake Determination Key*

A. Project is not located in open water or salt marsh.....go to B
Project is located solely in open water or salt marsh....."no effect"

B. Permit will be conditioned for use of the Service's *Standard Protection Measures for the Eastern Indigo Snake* during site preparation and project construction..... go to C

Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested[2]....."may effect"

C. The project will impact less than 25 acres of eastern indigo snake habitat (eg., sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive or abandoned citrus groves], and coastal dunes).....go to D

The project will impact more than 25 acres of xeric habitat (eg., sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive or abandoned citrus groves], and coastal dunes)....."may affect"

D. The project has no known holes, cavities, active or inactive gopher tortoise burrows, or other underground refugia where a snake could be buried, trapped and/or injured..... .NLAA

The project has holes, cavities, active or inactive gopher tortoise burrows, or other underground refugia where a snake could be buried, trapped and/or injured.....go to E

E. Any permit will be conditioned such that all gopher tortoise burrows, active and inactive, will be evacuated prior to site manipulation in the vicinity of the burrow[1]. If an eastern indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an eastern

indigo snake, no work will commence until the snake has vacated the vicinity of proposed work.....NLAA[2]

Permit will not be conditioned as outlined above.....may affect

End Key

[1] If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via Florida Fish and Wildlife Conservation Commission Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the most current Gopher Tortoise Permitting Guidelines found at http://myfwc.com/gophertortoise

[2]Please note, if the proposed project will impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, NLAA is not the appropriate conclusion. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range.

No eastern indigo snakes were observed on-site by HSE biologists and the key has determined that the proposed project is *not likely to adversely affect* "NLAA" this species. Contractors will follow USFWS *Standard Protection Measures for the Eastern Indigo Snake* at all times during construction activities. Educational posters will be placed at the truck entry points to the site and pamphlets will be handed out to all on-site personnel during a pre-construction educational meeting explaining that all possible refugia shall be checked daily prior to initiation of construction activities. Additionally, if an indigo snake is spotted, all activities shall cease and it shall be allowed to vacate the site of its own accord.

3.01.3 Other Protected Fauna

Various species of fauna were observed on-site during the pedestrian transect survey and are listed in **Table 1**. Protected species that potentially occur in St. Lucie County are listed in **Table 2**. Likelihood of these species occurrence within the project site according to the Florida Natural Areas Inventory (FNAI) Biodiversity Matrix is also listed in **Table 2**.

Table 1: Wildlife Observed on the Ravello Development LLC Project Site

A. Fish & Aquatic Macro-invertebrates

Common Name	Scientific Name	Protected Species	
		State	Federal
Eastern mosquito fish	*Gambusia holbrooki*	---	---

B. Reptiles & Amphibians

Common Name	Scientific Name	Protected Species	
		State	Federal
Corn snake	*Pantherophis guttatus*	---	---
Brown anole	*Anolis sagrei*	---	---

C. Birds

Common Name	Scientific Name	Protected Species	
		State	Federal
American white ibis	*Eudocimus albus*	---	---
Mottled duck	*Anas fulvigula*	---	---
Fish crow	*Corvus ossifragus*	---	---
Blue jay	*Cyanocitta cristata*	---	---
Northen cardinal	*Cardinalis cardinalis*	---	---
Northern mockingbird	*Mimus polyglottos*	---	---
Black-bellied whistling duck	*Dendrocygna autumnalis*	---	---

*T = Threatened (State or Federal), C = Candidate for Endangered and/or Threatened, SAT = Threatened due to similarity of appearance

The project site is within the distribution area of the state protected Florida pine snake (*Pituophis melanoleucus mugitus*) **(Appendix A: Figure 6 of 17).** These snakes occupy a variety of upland habitats around the state, but they prefer dry habitats with moderate to open canopy cover and sandy, well-drained soils, mostly pines and scrubby oaks. They prefer a reduced midstory and understory and a healthy groundcover. They are not easy to observe, as they possess excellent camouflage and easily bury themselves under loose soil if they feel threatened. Although southeastern pocket gophers provide their favorite prey as well as refugia, they will also utilize gopher tortoise burrows, nine-banded armadillo holes and stump holes as refugia in the absence of pocket gophers. It is HSE's professional opinion that some suitable habitat exists on-site for the Florida pine snake.

The site is within the core foraging area (CFA) of three (3) wood stork (*Mycteria americana*) colonies **(Appendix A: Figure 7 of 17)**. The CFA consists of an 18.6-mile radius around all known wood stork colonies. Wood storks nest in colonies in mixed hardwood swamps, sloughs, mangroves, and cypress domes/strands in Florida. They forage in a variety of wetlands including both freshwater and estuarine marshes, although limited to depths less than 10-12 inches. No wood storks were observed flying over or on the project site. Although there is a wetland on site, it is HSE's professional opinion that the wetland canopy is too thick for wood storks to fly in to the wetland and the wetland vegetation is to thick to allow foraging. The wood stork key was utilized below on page 8 to determine if the project would affect the species.

3.01.4 ***Wood Stork Key for South Florida***

A. Project within 0.76 km (0.47 mile)[2] of an active colony site[3]..... may affect[4]

Project impacts Suitable Foraging Habitat (SFH) at a location greater than 0.76 km (0.47 mile) from a colony site....."go to B"

Project does not affect SFH [5] ..... "no effect.[1]"

B. Project impact to SFH is less than 0.20 hectare (0.5 acre)[6] ....."NLAA[1]"

Project impact to SFH is greater in scope that 0.20 hectare (one-half acre)....."go to C"

C. Project impacts to SFH not within the CFA (29.9 km, 18.6 miles) of a colony site ..... "go to D"

Project impacts to SFH within the CFA of a colony site....."go to E"

D. Project impacts to SFH have been avoided and minimized to the extent practicable, and compensation (Service approved mitigation bank or as provided in accordance with Mitigation Rule 33 CFR Part6 332) for unavoidable impacts is proposed in accordance with the CWA section 404(b)(1) guidelines and habitat compensation replaces the foraging value matching the hydroperiod[7] of the wetlands affected and provides foraging value similar to, or higher than, that of impacted wetlands. See Appendix 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8]....."NLAA"

Project not as above..... "may affect[4]"

E. Project provides SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the HMG; habitat compensation is within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration matching the hydroperiod[6] of the wetlands affected, and provides foraging value similar to, or higher than, that of impacted wetlands. See Appendix 3 for a detailed discussion of the hydroperiod foraging values, as example, and further guidance[8]..... "NLAA"

Project does not satisfy these elements..... "may affect"

End Key

* This Wood Stork Key does not apply to Comprehensive Everglades Restoration Plan projects, as they will require project-specific consultations with the Service.

[1] With an outcome of "no effect" or "NLAA" as outlined in this key, and the project has less than 20.2 hectares (50 acres) of wetland impacts, the requirements of section 7 of the Act are fulfilled for the wood stork and no further action is required. For projects with greater than 20.2 hectares (50 acres) of wetland impacts, written concurrence of NLAA from the Service is necessary.

[2] Within the secondary zone (the average distance from the border of a colony to the limits of the secondary zone is 0.76 km (2,500 feet, or 0.47 mi).

[3] An active colony is defined as a colony that is currently being used for nesting by wood storks or has historically over the last 10 years been used for nesting by wood storks.

[4] Consultation may be concluded informally or formally depending on project impacts.

[5] Suitable foraging habitat (SFH) are wetland that typically have shallow-open water areas that are relatively calm and having a permanent or seasonal water depth between 5 to 38 cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and

other aquatic prey. Examples of SFH include, but are not limited to freshwater marshes, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creek or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.

[6] On an individual basis, SFH impacts to wetlands less than 0.20 hectares (one-half acre) generally will not have a measurable effect on wood storks, although we request that the Corps require mitigation for these losses when appropriate. Weed storks are a wide ranging species, and individually, habitat change form impacts to SFH less than one-half acre are not likely to adversely affect wood storks. However, collectively they may have an effect and therefore regular monitoring and reporting of these effects are important.

[7] Several researchers (Fleming et al. 1994; Ceilley and Bortone 2000) believe that the short hydroperiod wetlands provide a more important pre-nesting foraging food source and a greater early nestling survivor value for wood storks than the foraging base (grams of fish per square meter) that short hydroperiod wetlands provide. Although the short hydroperiod wetlands may provide less fish, these prey bases historically were more extensive and met the foraging needs of the pre-nesting storks and the early-age nestlings. Nest productivity may suffer as a result of the loss of short hydroperiod wetlands. We believe that most wetland fill and excavation impacts permitted in south Florida are in short hydroperiod wetlands. Therefore, we believe that it is especially important that impacts to these shore hydroperiod wetlands within CFAs are avoided, minimized, and compensated fro by enhancement/restoration of short hydroperiod wetlands.

[8] For this Key, the Service requires an analysis of foraging prey base losses and enhancements from the proposed action as shown in the examples in Appendix 3 for projects with greater that 2.02 hectares (5 acres) of wetland impacts. For projects with less that 2.02 hectares (5 acres) of wetland impacts, an individual foraging prey base analysis is not necessary although type for type wetland compensation is still a requirement of the Key.

Table 2: Ravello Development LLC: 2022 Federal/State Listed Fauna and Flora Potentially Found in St. Lucie County, FL

A. Fish/ Aquatic Macroinvertebrates

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS+	STATE STATUS++ (FLORIDA)	EXISTING HABITAT ON-SITE	LIKELIHOOD OF OCCURRENCE	NOTES
Opossum pipefish	*Oostethus brachyurus*	SC	N	No	not likely	not observed during preliminary pedestrian transects

B. Reptiles & Amphibians

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS+	STATE STATUS++ (FLORIDA)	EXISTING HABITAT ON-SITE	LIKELIHOOD OF OCCURRENCE	NOTES
American alligator	*Alligator mississipiensis*	SAT	FT(S/A)	No	not likely	not observed during preliminary pedestrian transects
Loggerhead sea turtle	*Caretta caretta*	T	FT	No	not likely	not observed during preliminary pedestrian transects
Green sea turtle	*Chelonia mydas*	T	FT	No	not likely	not observed during preliminary pedestrian transects
Leatherback turtle	*Dermochelys coriacea*	E	FE	No	not likely	not observed during preliminary pedestrian transects
Eastern indigo snake	*Drymarchon corais couperi*	T	FT	Yes	not likely	not observed during preliminary pedestrian transects
Hawksbill sea turtle	*Eretmochelys imbricata*	E	FE	No	not likely	not observed during preliminary pedestrian transects
Gopher tortoise	*Gopherus polyphemus*	C	ST	No	not likely	not observed during preliminary pedestrian transects
Kemp's Ridley sea turtle	*Lepidochelys kempii*	E	FE	No	not likely	not observed during preliminary pedestrian transects
Pine snake	*Pituophis melanoleucus*	---	ST	Yes	not likely	not observed during preliminary pedestrian transects

C. Birds

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS+	STATE STATUS++ (FLORIDA)	EXISTING HABITAT ON-SITE	LIKELIHOOD OF OCCURRENCE	NOTES
Florida scrub-jay	*Aphelocoma coerulescens*	T	FT	No	not likely	not observed during preliminary pedestrian transects
Florida burrowing owl	*Athene cunicularia floridana*	---	ST	No	not likely	not observed during preliminary pedestrian transects
Crested caracara	*Caracara cheriway*	T	FT	No	not likely	not observed during preliminary pedestrian transects
Little blue heron	*Egretta caerulea*	---	ST	No	not likely	not observed during preliminary pedestrian transects
Bald eagle*	*Haliaeetus leucocephalus*	--	N	No	not likely	not observed during preliminary pedestrian transects
Tri-colored heron	*Egretta tricolor*	---	ST	No	not likely	not observed during preliminary pedestrian transects
American oystercatcher	*Haematopus palliatus*	---	ST	No	not likely	not observed during preliminary pedestrian transects
Wood stork	*Mycteria americana*	T	FT	No	likely	not observed during preliminary pedestrian transects
Snail kite	*Rostrhamus sociabilis plumbeus*	E	FE	No	not likely	not observed during preliminary pedestrian transects
Black skimmer	*Rynchops niger*	--	ST	No	not likely	not observed during preliminary pedestrian transects
Roseate spoonbill	*Ajaia ajaja*	--	ST	No	not likely	not observed during preliminary pedestrian transects
Least tern	*Sterna antillarum*	N	ST	Yes	likely	not observed during preliminary pedestrian transects

D. Mammals

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS+	STATE STATUS++ (FLORIDA)	EXISTING HABITAT ON-SITE	LIKELIHOOD OF OCCURRENCE	NOTES
Southeastern beach mouse	*Peromyscus polionotus niveiventris*	T	FT	No	not likely	not observed during preliminary pedestrian transects
West Indian manatee	*Trichechus manatus*	T	FT	No	not likely	not observed during preliminary pedestrian transects
Southeastern fox squirrel	*Sciurus niger shermani*	--	N	No	not likely	not observed during preliminary pedestrian transects

E. Plants and Lichens

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS+	STATE STATUS++ (FLORIDA)	EXISTING HABITAT ON-SITE	LIKELIHOOD OF OCCURRENCE	NOTES
Sand-dune spurge	*Chamaesyce cumulicola*	--	E	No	not likely	not observed during preliminary pedestrian transects
Piedmont jointgrass	*Coelorachis tuberculosa*	--	T	No	not likely	not observed during preliminary pedestrian transects
Many-flowered grass-pink	*Calopogon multiflorus*	--	T	No	not likely	not observed during preliminary pedestrian transects
Perforated reindeer lichen	*Cladonia perforata*	E	E	No	not likely	not observed during preliminary pedestrian transects
Large-flowered rosemary	*Conradina grandiflora*	--	T	No	not likely	not observed during preliminary pedestrian transects
Lakela's mint	*Dicerandra immaculata*	E	E	No	not likely	not observed during preliminary pedestrian transects
Coastal vervain	*Glandularia maritima*	--	E	No	not likely	not observed during preliminary pedestrian transects
Johnson's seagrass	*Halophila johnsonii*	DL	E	No	not likely	not observed during preliminary pedestrian transects

Sea rosemary	*Heliotropium gnaphalodes*	--	E	No	not likely	not observed during preliminary pedestrian transects
Burrowing four-o'clock	*Okenia hypogaea*	--	E	No	not likely	not observed during preliminary pedestrian transects
Hand fern	*Ophioglossum palmatum*	--	E	No	not likely	not observed during preliminary pedestrian transects
Terrestrial peperomia	*Peperomia humilis*	--	E	No	not likely	not observed during preliminary pedestrian transects
Blunt-leaved peperomia	*Peperomia obtusifolia*	--	E	No	not likely	not observed during preliminary pedestrian transects
Tiny polygala	*Polygala smallii*	E	E	No	not likely	not observed during preliminary pedestrian transects
Giant orchid	*Pteroglossaspis ecristata*	--	T	No	not likely	not observed during preliminary pedestrian transects
Coastal hoary-pea	*Tephrosia angustissima var. curtissii*	--	T	No	not likely	not observed during preliminary pedestrian transects
Savanna balm	*Dicerandra immaculata var. savannarum*	E	E	No	not likely	not observed during preliminary pedestrian transects
Fragrant prickly apple	*Harrisia fragrans*	E	E	No	not likely	not observed during preliminary pedestrian transects
Scrub bluestem	*Schizachyrium niveum*	--	E	No	not likely	not observed during preliminary pedestrian transects

+Federal Status: U.S. Fish and Wildlife Service (FWS)

E - Endangered
PE - Proposed for Endangered
T - Threatened
PT - Proposed for Threatened
C - Candidate for Endangered and/or Threatened
E (S/A) - Endangered due to similarity of appearance
T (S/A) - Threatened due to similarity of appearance

++State of Florida Status: Florida Fish and Wildlife Conservation Commission (FFWCC)

Animals:
E - Endangered
T - Threatened
SSC - Species of Special Concern
N - Not currently listed
FT - Federally threatened
ET - Federally endangered

Plants:
E- Endangered
T- Threatened
N- Not currently listed

* Protected under the Bald and Golden Eagle Protection Act.

There are zero (0) known bald eagle (*Haliaeetus leucocephalus*) nests within one (1) mile of the project site (**Appendix A: Figure 8 of 17**). The bald eagle was removed from the USFWS endangered species list and the FWC imperiled species list in 2007 and 2008, respectively. The bald eagle continues to be federally protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act, along with the state bald eagle rule (68A-16.002, F.A.C.). Bald eagles were not observed flying over the site, and there is no suitable forging habitat on-site for this species, even though there is a wetland the vegetation in around the wetland does not allow the eagle to forage. It is HSE's opinion that the proposed project will not adversely impact this species.

The site is not within any nesting areas or critical habitat for the Everglade snail kite (*Rostrhamus sociabilis*). The Everglade snail kite is a bird of prey with a very particular appetite: it feeds almost exclusively on apple snails, a freshwater mollusk that occurs in Central and South Florida wetlands, including the Everglades. It is listed as Endangered under the ESA. The wetland on site is too deep to provide habitat for apple snails and the wetland canopy is closed, leaving little habitat to roosting for the snail kite. No snail kites were observed on-site, there is no suitable habitat, and it is HSE's opinion that the proposed project is not likely to adversely affect the Everglade snail kite **(Appendix A: Figures 9 of 17)**.

The site is not within any known locations of the red-cockaded woodpecker (*Dryobates borealis*) (**Appendix A: Figure 10 of 17**). The red-cockaded woodpecker is listed as endangered under the ESA. It prefers open pine woodlands. Ideal habitat is mature pine woods (trees 80-100 or more years old), with very open understory maintained by frequent fires. It is most common in longleaf pine, but inhabits other pines as well. No red-cockaded woodpeckers were observed on site, no suitable habitat exists on site, and there is no suitable

feeding, breeding, or nursery habitat within the limits of the project boundaries. It is HSE's opinion that the proposed project is not likely to adversely affect the red-cockaded woodpecker.

The site is not within any known locations of the Florida scrub-jay (*Aphelocoma coerulescens*) and does not contain suitable habitat (**Appendix A: Figure 11 of 17**). Florida scrub-jays are listed as threatened under the ESA. They are associated with scrub communities, but will also utilize adjacent non-scrub communities. However, they need more than one species of scrub oak to maintain their family populations, as well as open, white sandy areas in which to bury their acorn cache to be retrieved during the winter months. Historically, they thrived in fire-maintained scrub habitat. No scrub-jays were observed on-site, and since there is no habitat on-site, a Florida scrub-jay survey will not be necessary.

The site is not within 1,500 meters of any crested caracara (*Caracara cheriway*) nests (**Appendix A: Figure 12 of 17**). Audubon's crested caracara prefers dry or wet prairie areas that have scattered cabbage palms, as well as lightly wooded areas. This species also utilizes improved or semi-improved pasture land, possibly due to the presence of seasonal wetlands in these areas. They prefer to nest in cabbage palms that are surrounded by open areas of low vegetation, such as improved pasture, with little shrubby or tall vegetation. These birds are listed as threatened under the ESA. No crested caracara have been observed and the site does not contain suitable nesting habitat.

The project site is not within the vicinity of a known burrowing owl (*Athene cunicularia*) location (**Appendix A: Figure 13 of 17**). Burrowing owls are some of the smallest owls reaching a maximum height of nine inches. These birds tend to live in treeless areas such as open prairies, agriculture fields, and airports where they feed primarily on insects and small lizards. Based on the

habitat and observations made during the site visit, it is HSE's opinion that the proposed project will not impact the burrowing owl.

3.02 FWC Florida Cooperative Land Classification System (CLC)

Vegetation associations present on-site were mapped using the *Florida Cooperative Land Classification System* and comparing it to the *Cooperative Land Cover* (CLC) map. The classifications are used to represent the closest facsimile possible to the natural community present. The vegetation map is depicted in **Appendix A: Figure 14 of 17.**

1310 - Dry Flatwoods (±0.70 acres)

The southeast corner of the project site appeared to be the only area where slash pine (*Pinus elliottii*), and saw palmetto (*Serenoa repens*) were the most dominant vegetation. However a small amount of Brazilian pepper (*Schinus terebinthifolia*)was also observed.

1810 - Mowed Grass (±0.84 acres)

The property has a section of mowed grass that touches the existing construction (off site) and SE Morningside Blvd.

1811 - Vegetative Berm (±0.56 acres)

A grassed berm exists on site along the southwest boundary and continues around the off-site existing construction.

2120 - Freshwater Marsh (±0.29)

There is an existing wetland on site towards the western boundary. Vegetation observed in the wetland includes but is not limited to Carolina willow (*Salix caroliniana*), cattail (*Typha*), melaleuca (*Melaleuca quinquenervia*), earleaf acacia (*Acacia auriculiformis*), and Brazilian pepper (*Schinus*

terebinthifolia) which made up a majority of the vegetation that surrounded the wetland.

7000 - Exotic Plants (±4.68)

A majority of the property was made up of primarily exotics plants including Brazilian pepper (~~*Schinus terebinthifolia*~~), earleaf acacia (~~*Acacia auriculiformis*~~), melaleuca (~~*Melaleuca quinquenervia*~~), and some Japanese climbing fern (*Lygodium japonicum*).

3.02.1 Tree Protection City of Port St. Lucie

The City of Port St. Lucie Landscape and Land Clearing Code, Chapter 154, Article II, states that no person shall remove or alter protected vegetation from or on any lot or parcel of land within the City of Port St. Lucie without first obtaining a Tree Removal Permit. No permit is required to remove non-native invasive or undesirable species Section154.03(L). All native trees are protected. The term "protected tree" shall apply to any tree having a D.B.H. of 12 inches or greater, any replacement tree, and any tree that is represented in a landscape plan, street tree planting plan, or other planning document for the purposes of securing an approved building permit, clearing permit, or certificate of occupancy. Section 154.16.states that any tree removal permit shall require a mitigation plan. It is HSE's opinion that protected trees, including laurel oak, live oak, slash pine and cabbage palm with a clear trunk height of 12' or greater exist on site. Any tree which is the subject of a mitigation plan shall be replaced at a ratio of one inch D.B.H. for each inch of D.B.H. removed. A tree survey has already been completed for this site.

3.03 Jurisdictional Wetlands

It is HSE's professional opinion that there is one (1) jurisdictional wetland that is ±0.29 acres on the project site **(Appendix A: Figure 15 of 18)**. Permits are required if this wetland is to be impacted. All construction shall be conducted utilizing Best Management Practices (BMP) and avoid all jurisdictional wetlands with a 50' buffer so as to prevent any and all potential impacts and eliminate the necessity of mitigation. Since the wetland is under ½ acre, no mitigation is required for City of Port St. Lucie or SFWMD. Additionally the wetland appears to be isolated, there should be no mitigation for the Corps. The site has not yet been reviewed by state or federal agencies.

3.04 Soils

NRCS soil types are mapped in **Appendix A: Figure 16 of 17** and **Table 3** below. The USDA, NRCS, has mapped the surficial soil types within the project site. The resulting soil delineations were published in the *Soil Survey of St. Lucie County Area, Florida*, 25 August 2021. Detailed and complete descriptions of each of these soil communities are presented in the St. Lucie County Soil Survey, and therefore are not included herein. However, a general description of the soils is included in **Table 3**. This table also lists associated plants as excerpted from the NRCS published data. Soil types mapped by the NRCS are generally limited to the upper 60 to 72 inches of the soil profile and are distinguished by several factors. These factors include soil drainage, topography, presence or absence of restrictive or clayey hardpan type soils, and the depth and range in fluctuation of the groundwater table associated with each soil type.

Table 3. Soil Descriptions

Map Unit #	Map Unit Name	Order	Suborder	Drainage	Hydric Rating	Hydric Group	Associated Plants	
							Scientific Name	Common Name
50	Waveland and Immokalee Fine Sands	Spodosols	Aquods	Poorly drained	No	C/D	*Pinus elliottii*	slash pine
							Serenoa repens	saw palmetto
							Ilex glabra	gallberry
							Myrica cerifera	wax myrtle
							Aristida stricta	pineland threeawn

*Source: U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of St. Lucie County Area, Florida; August 2021.

3.05 Topography

According to the *United States Geographical Survey (USGS)* website (https://ngmdb.usgs.gov/topoview/) site elevations range from 10'-13' NGVD. **Appendix A: Figure 17 of 17** depicts the USGS Topographic Map for the project site.

4.00 CONCLUSIONS

- There were zero (0) potentially occupied gopher tortoise burrows located during the pedestrian transects. The estimated gopher tortoise population is zero (0). Construction can begin with no further coordination with FWC.
- No eastern indigo snakes were observed on-site by HSE biologists, and the key has determined that the proposed project is *not likely to adversely affect* this species. Coordination with federal agencies will not be needed.
- The project site is within the core foraging area of three (3) wood stork colonies. However, there is no suitable foraging habitat on the project site. It is therefore HSE's professional opinion that this project will have "*no effect*" on this species.
- There are zero (0) known bald eagle nests within a one (1) mile radius of the project site. It is HSE's opinion that the proposed project will not have any affect on any eagle nests or activities during project construction.
- It is HSE's opinion that the proposed project is *not likely to adversely affect* the Florida pine snake, Everglade snail kite, crested caracara, nor the red-cockaded woodpecker. There is no suitable habitat on-site for any of these species except for the Florida pine snake, and none of the species were observed on-site.
- No Florida scrub-jays were observed on-site and suitable habitat does not exist, so a scrub-jay survey is not recommended.
- Vegetation associations present on-site were mapped using the *Cooperative Land Cover Classification System.*
- The project site may contain protected trees per City of Port St. Lucie LDC. A tree survey will be needed prior to issuance of a vegetation removal permit.
- One (1) jurisdictional wetland occurs within the project. This site has not yet been verified by State or Federal agencies.

- The surficial soils within the project site were mapped according to the NRCS. One (1) soil type was located on the project site.

- Site elevations range from 10'-13' NGVD according to the USGS.

APPENDIX A

PROJECT FIGURES

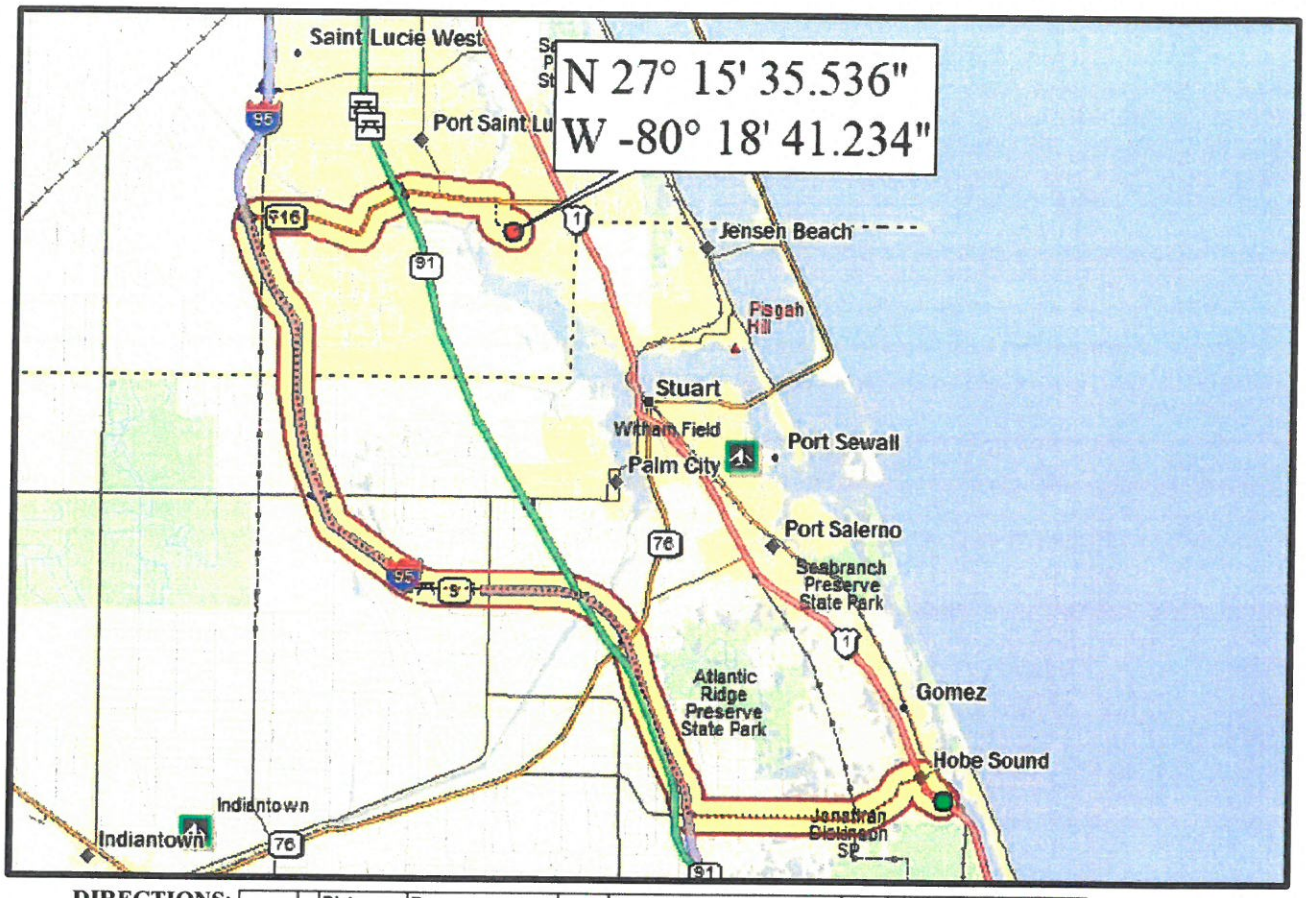
THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC.

NOT A LAND BOUNDARY SURVEY

NORTH

0' 12,500' 25,000' 50,000' 100,000'

SCALE: 1" = 25,000'



DIRECTIONS:

		Dist	Turn		Road	Exit	Total Time	Total Dist
			Start	at	US 1		00:00:00	0.00 mi
			Go straight (NW)	on	US 1 (SR 5)SE Federal Hwy)		00:00:00	0.00 mi
	in	0.89 mi	Turn left (W)	on to	CR 708 (SE Bridge Rd)		00:01:57	0.89 mi
	in	6.20 mi	Go straight (WNW)	on to	I-95 N (SR 9) ramp		00:12:57	7.09 mi
	in	0.14 mi	Keep left (NW)	on	I-95 N (SR 9) ramp		00:13:08	7.23 mi
	in	21.28 mi	Keep right (N)	on to	SR 716 (SE Port Saint Lucie Blvd) ramp	118	00:31:02	28.50 mi
	in	0.29 mi	Keep right (NE)	on	SR 716 (SE Port Saint Lucie Blvd) ramp		00:31:27	28.79 mi
	in	0.12 mi	Keep right (E)	on to	SR 716 (SE Port Saint Lucie Blvd)		00:31:45	28.91 mi
	in	6.80 mi	Turn right (S)	on to	<unnamed>		00:47:43	35.71 mi
	in	0.04 mi	Go straight (SSE)	on to	SE Westmoreland Blvd		00:47:48	35.74 mi
	in	1.18 mi	Turn right (WSW)	on to	SE Morningside Blvd		00:50:59	36.92 mi
	in	0.05 mi	Finish	at	SE Morningside Blvd		00:51:11	36.98 mi

Total Time: 00:51:11 Total Distance: 36.98 mi

SOURCE: DELORME STREET ATLAS USA, 2015

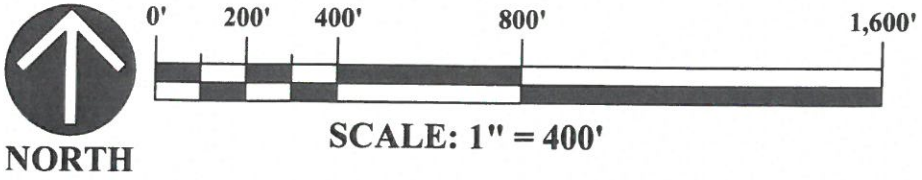
PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 01 - VIC MAP.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 1 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP	

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
PROJECT VICINITY MAP AND DIRECTIONS

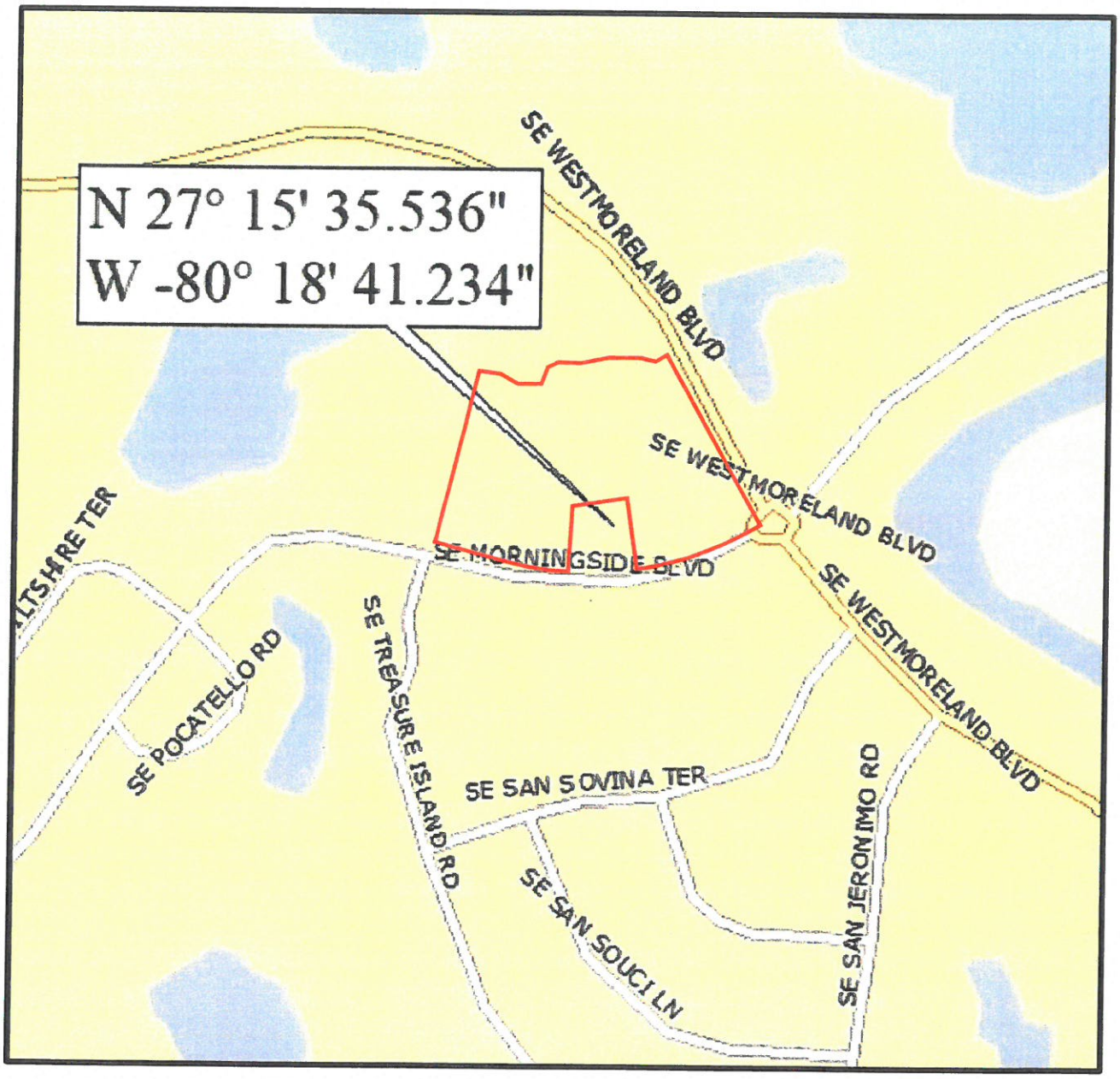
H S E
Hobe Sound Environmental Consultants Inc.
9512 SE Duncan Street
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

NOT A LAND BOUNDARY SURVEY



NORTH

SCALE: 1" = 400'



SOURCE: DELORME STREET ATLAS USA, 2015

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 02 - LOC MAP.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 2 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP	

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
PROJECT LOCATION MAP

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NOT A LAND BOUNDARY SURVEY

NORTH

0' 75' 150' 300' 600'

SCALE: 1" = 150'

SOURCE: FDOT 2023 AERIAL PHOTOGRAPH

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 03 - 2023 AERIAL.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 3 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
2023 FDOT AERIAL PHOTOGRAPH

H S E
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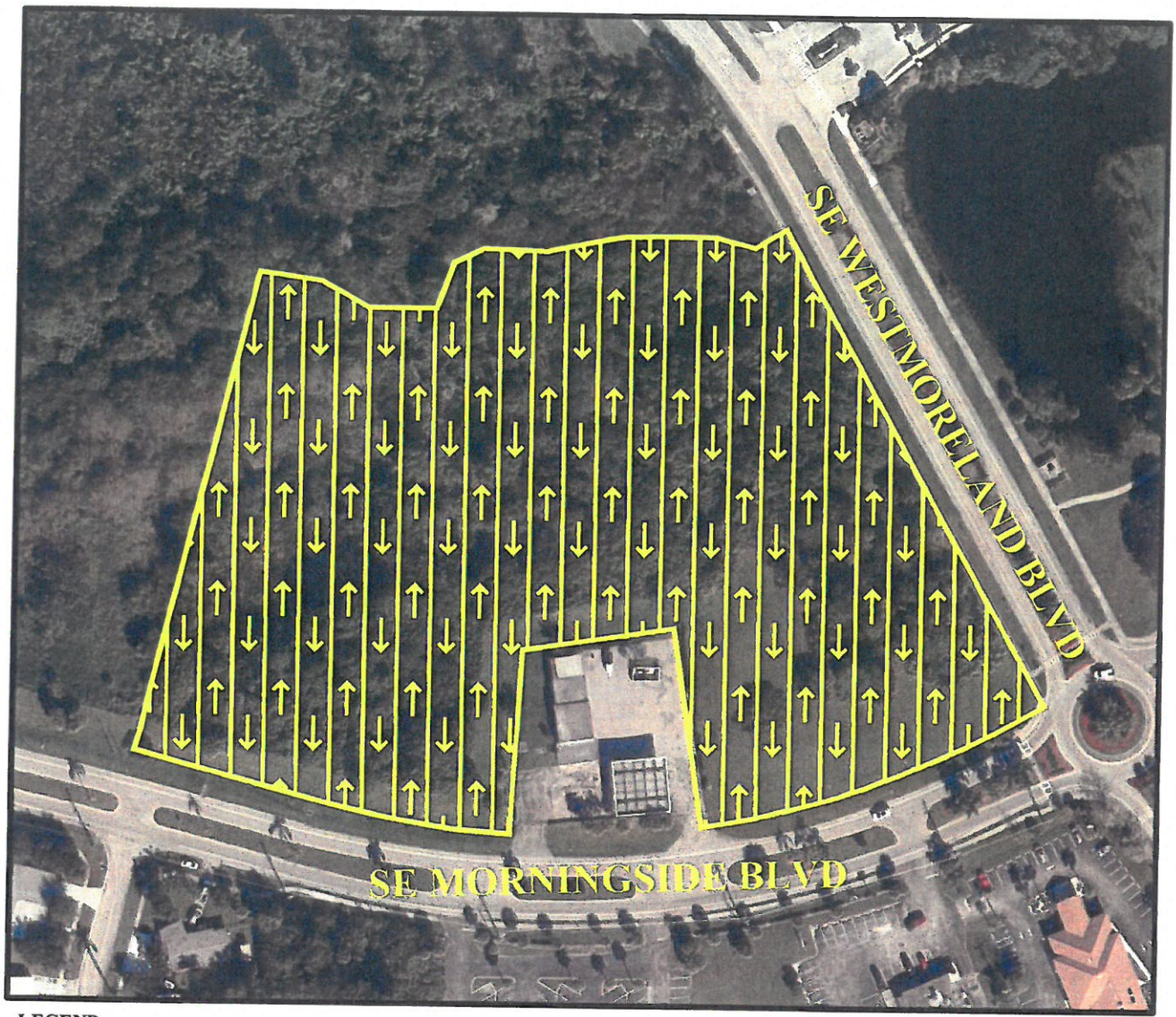
9512 SE Duncan Street
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

NOT A LAND BOUNDARY SURVEY

NORTH

0' 75' 150' 300' 600'

SCALE: 1" = 150'



LEGEND:

- PEDESTRIAN BELT TRANSECTS

SOURCE: HSE SITE VISIT DAY MONTH 2024

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 04 - PED TRANS.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 4 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
PEDESTRIAN BELT TRANSECT

H S E
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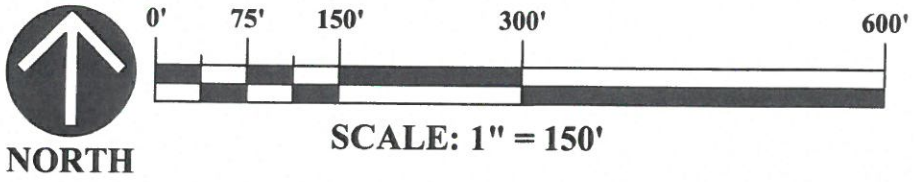
NOT A LAND BOUNDARY SURVEY



LEGEND:

- ACTIVE (NONE) POTENTIALLY OCCUPIED
- INACTIVE (NONE) POTENTIALLY OCCUPIED
- ABANDONED (NONE)

I HERE BY CERTIFY THAT:

A 100% SURVEY FOR GOPHER TORTOISES WAS CONDUCTED ON 03 JULY 2024, ACCORDING TO FWC GUIDELINES. ZERO (0) POTENTIALLY OCCUPIED GOPHER TORTOISE BURROWS WERE LOCATED DURING THE SURVEY. THE ESTIMATED GOPHER TORTOISE POPULATION IS 0.

DYLAN BARBER, GTA-21-00011B

SOURCE: HSE GOPHER TORTOISE SURVEY DATE: 03 JULY 2024.

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 05 - GT BURROW.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 5 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
GOPHER TORTOISE (Gopherus polyphemus)
BURROW LOCATION MAP

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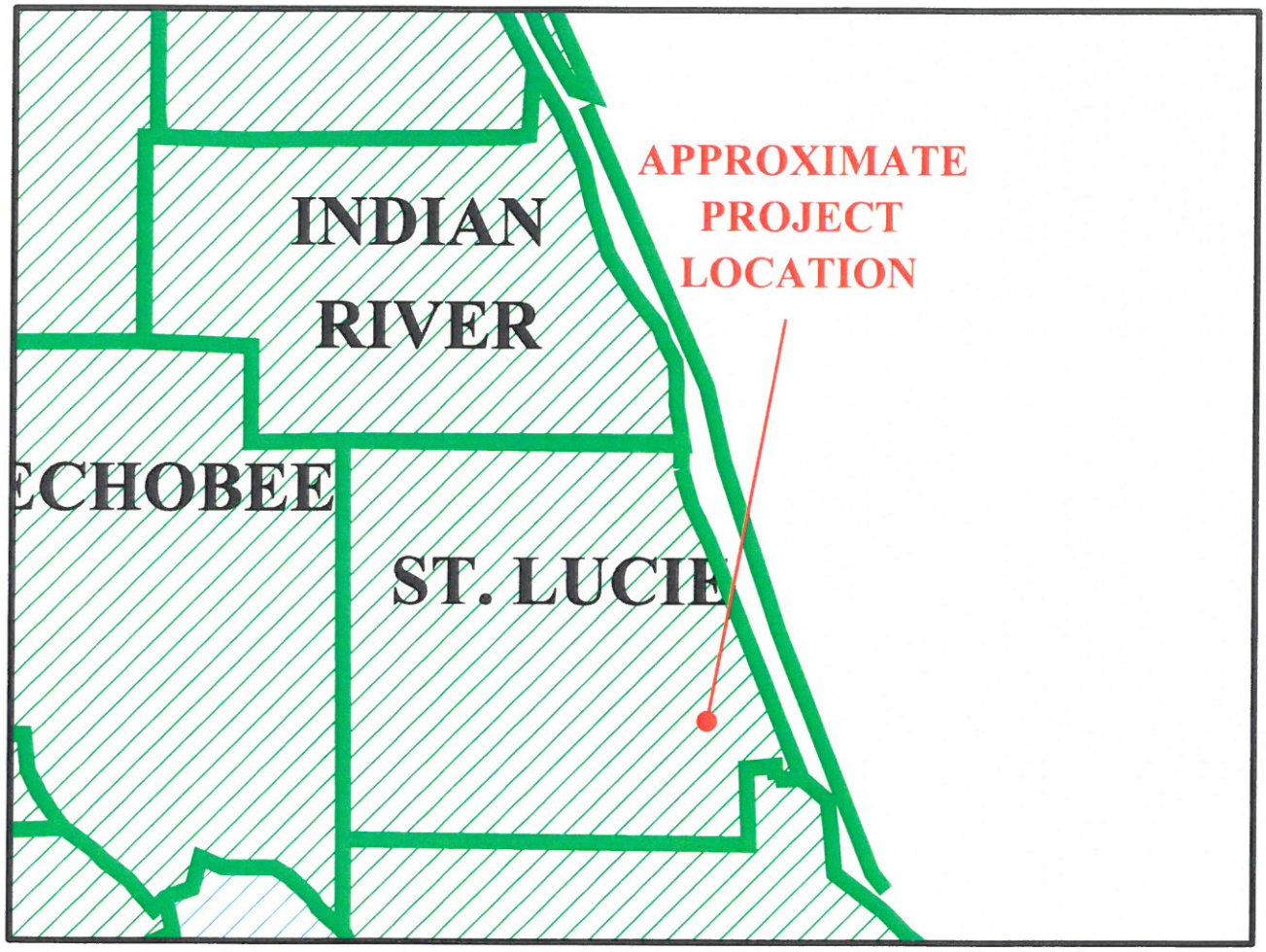
NOT A LAND BOUNDARY SURVEY

NORTH

0' 30,000' 60,000' 120,000' 240,000'

SCALE: 1" = 60,000'



FLORIDA PINE SNAKE
Pituophis melanoleucus mugitus

- DISTRIBUTION

PRINCIPLE GEOGRAPHIC RANGE OF THE FLORIDA PINE SNAKE, INCLUDING INTERVENING AREAS OF UNOCCUPIED HABITAT. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY AND NOT FOR REGULATORY USE.
COUNTIES: ALL EXCEPT FOR MONROE. COLLIER AND HENDRY.

FLORIDA FISH AND WILDLIFE
CONSERVATION SERVICE
DATE: 28 JUNE 2014
SOURCE: FWC

SOURCE: USFWS 2014

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.:	DRAWING NAME:	DATE:	APPENDIX A FIGURE:
	14	37S	40E	24 - 025.01	06 - FL PINE SNAKE.DWG	8 JULY 2024	6 OF 17
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
FLORIDA PINE SNAKE (Pituophis melanoleucus mugitus)
DISTRIBUTION MAP

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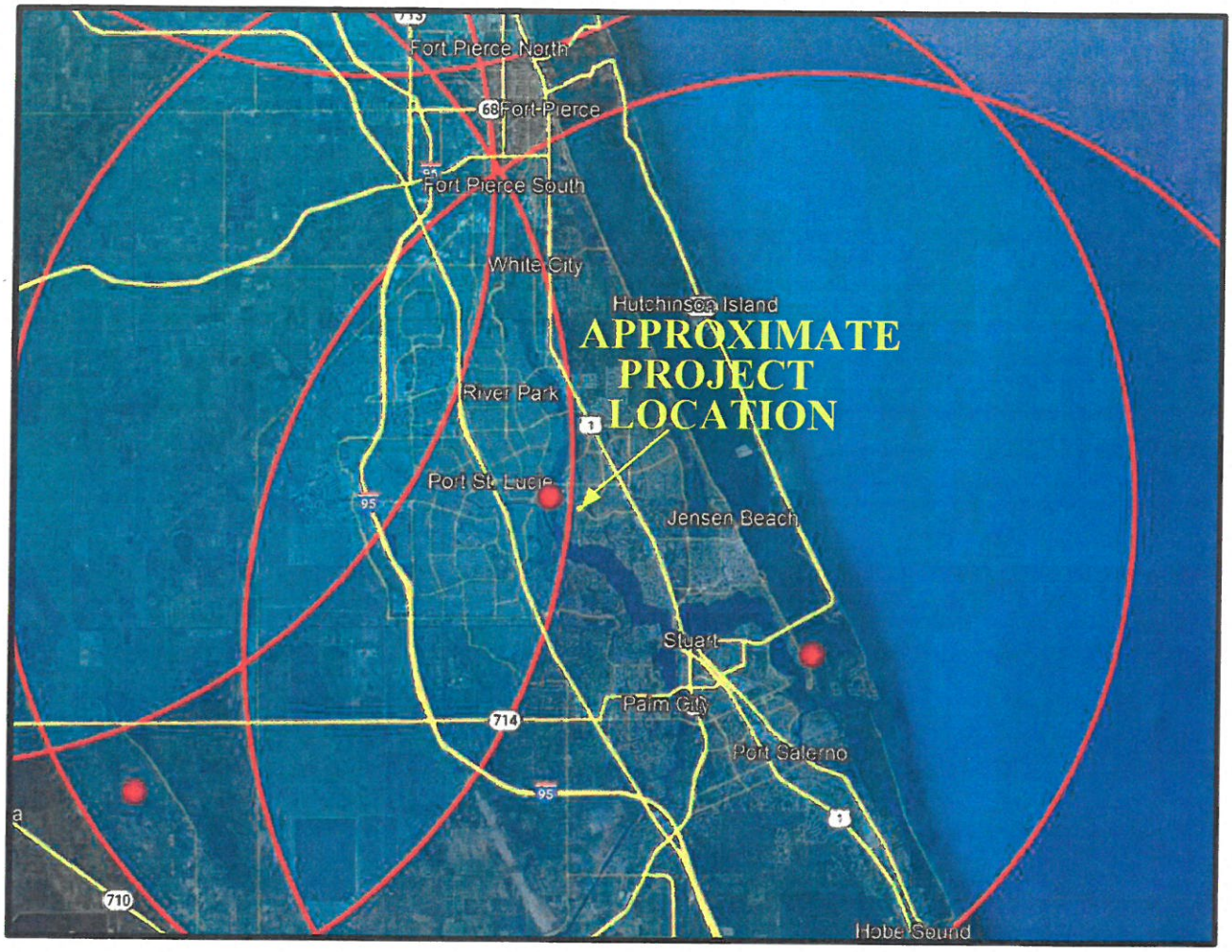
NOT A LAND BOUNDARY SURVEY

NORTH

0' 15,000' 30,000' 60,000' 120,000'

SCALE: 1" = 30,000'



LEGEND:

- WOOD STORK COLONIES

- WOOD STORK CORE FORAGING AREA

WOOD STORK (Mycteria americana) NESTING COLONIES

NOTES:
COUNTY INFORMATION ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

WOOD STORK NESTING COLONIES WERE ACQUIRED FROM USFWS NOVEMBER 2018 AND ARE CURRENT TO 2017.

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 07 - WOOD STORK.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 7 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
WOOD STORK (Mycteria americana)
NESTING COLONIES & CORE FORAGING AREAS

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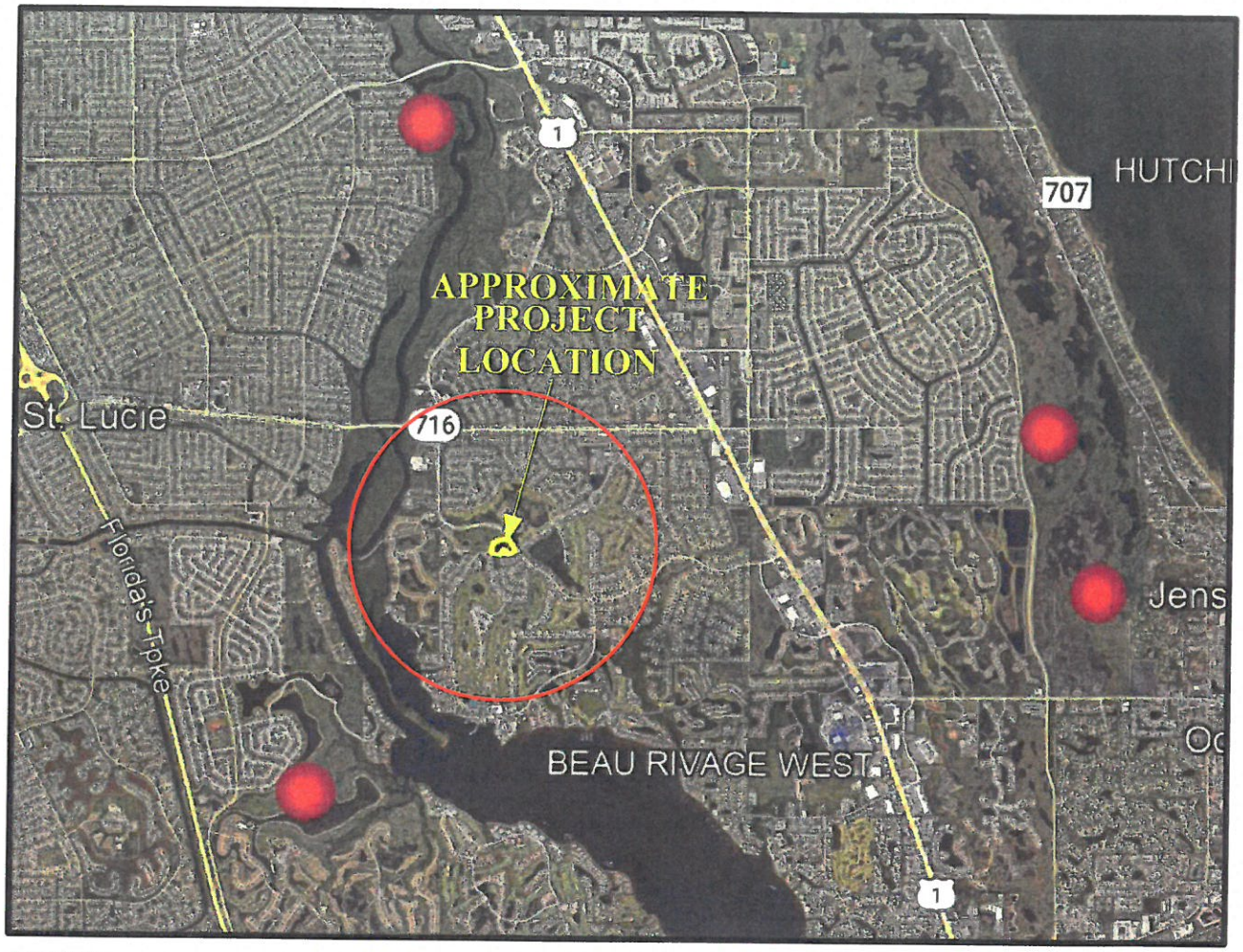
NOT A LAND BOUNDARY SURVEY

NORTH

0' 3,000' 6,000' 12,000' 24,000'

SCALE: 1" = 6,000'



LEGEND:

- EAGLE NEST LOCATIONS

- 1 MILE RADIUS

AMERICAN BALD EAGLE (Haliaeetus leucocephalus) NESTS

NOTE:
COUNTY INFORMATION WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

EAGLE NEST LOCATIONS WERE ACQUIRED FROM THE USFWS 2022

SOURCE:https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 08 - EAGLE NEST.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 8 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
AMERICAN BALD EAGLE (Haliaeetus leucocephalus)
EAGLE NEST LOCATIONS

H S E
Hobe Sound Environmental Consultants Inc.
9512 SE Duncan Street
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC.

NOT A LAND BOUNDARY SURVEY

NORTH

0' 5,000' 10,000' 20,000' 40,000'

SCALE: 1" = 10,000'

LEGEND:

- SNAIL KITE NEST LOCATIONS

EVERGLADE SNAIL KITE (Rostrhamus sociabilis plumbeus) CRITICAL HABITAT AND NESTS LOCATIONS

NOTE:
COUNTY INFORMATION WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA

SNAIL KITE HABITAT LOCATIONS WERE ACQUIRED FROM THE USFWS 2007

SOURCE: U.S. FISH & WILDLIFE SERVICE HTTP://VEROBEACH.FWS.GOV

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 09 - SNAIL KITE.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 9 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
EVERGLADE SNAIL KITE (Rostrhamus sociabilis plumbeus)
SNAIL KITE NESTS LOCATIONS

HSE
Hobe Sound Environmental Consultants Inc.
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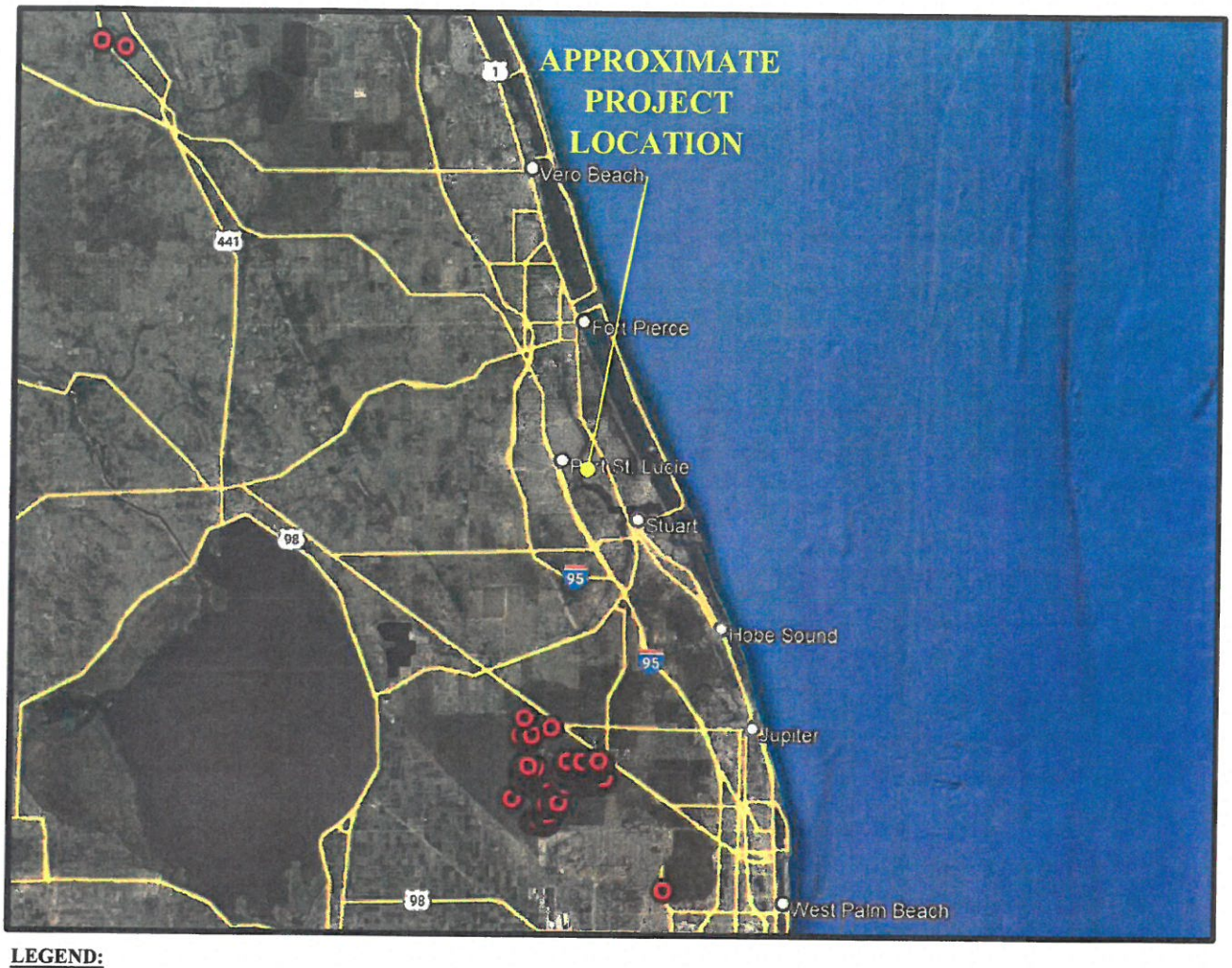
NOT A LAND BOUNDARY SURVEY

NORTH

0' 40,000' 80,000' 160,000' 320,000'

SCALE: 1" = 80,000'



LEGEND:

RED-COCKADED WOODPECKER

RED-COCKADED WOODPECKER (Dryobates borealis) LOCATIONS

NOTES:
COUNTY INFORMATION ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

RED-COCKADED WOODPECKER LOCATIONS WERE ACQUIRED FROM THE USFWS 2005

SOURCE: U.S. FISH & WILDLIFE SERVICE HTTP://VEROBEACH.FWS.GOV

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 10 - RED COCK WP.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 10 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
RED-COCKADED WOODPECKER (Dryobates borealis)
RED-COCKADED WOODPECKER NESTS LOCATIONS

H S E
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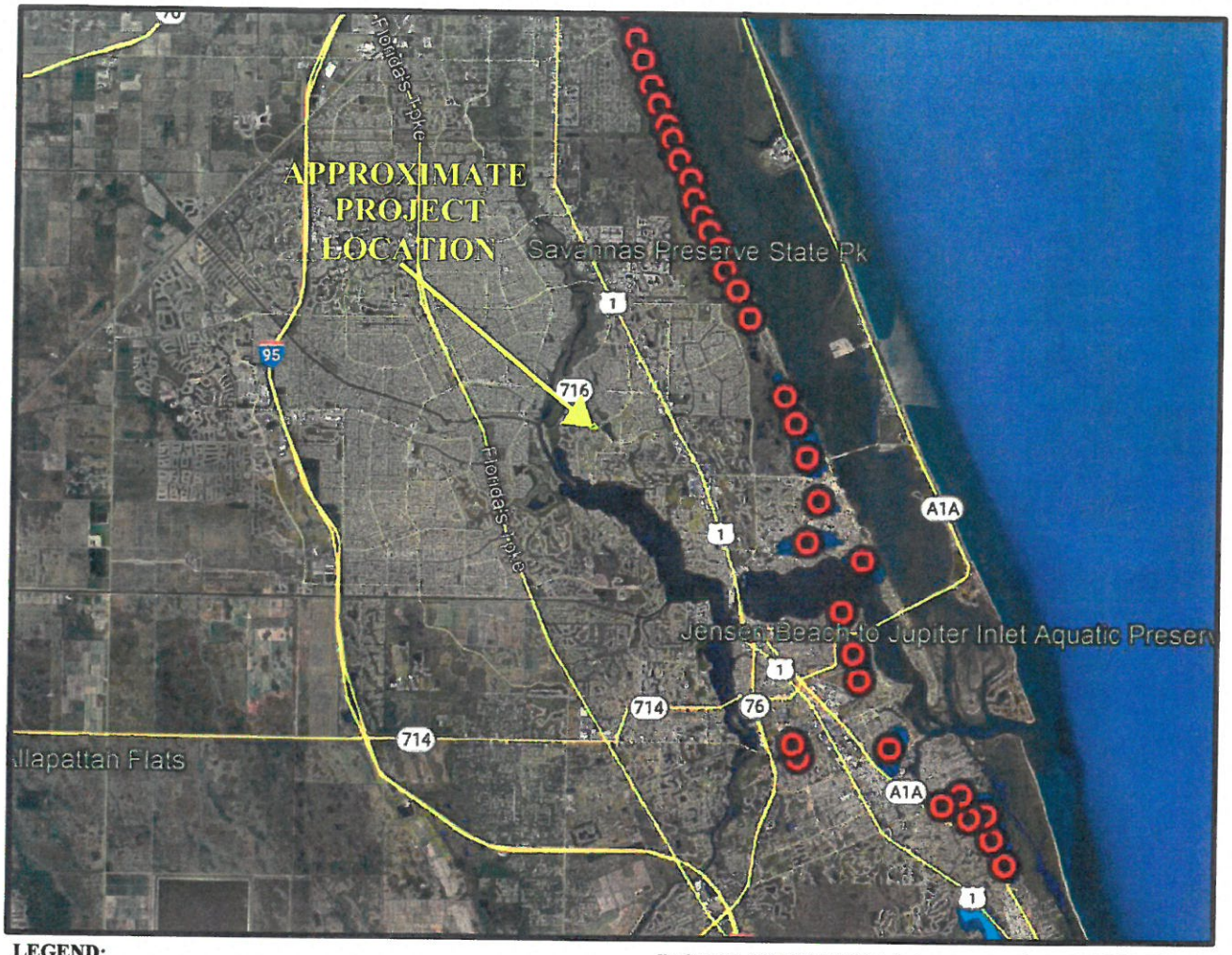
9512 SE Duncan Street
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

NOT A LAND BOUNDARY SURVEY

NORTH

0' 10,000' 20,000' 40,000' 80,000'

SCALE: 1" = 20,000'



LEGEND:

- SCRUB JAY OBSERVATION

- SCRUB JAY HABITAT

FLORIDA SCRUB-JAY (Aphelocoma coerulescens) LOCATIONS

NOTES:
COUNTY INFORMATION ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

FLORIDA SCRUB-JAY LOCATIONS WERE ACQUIRED FROM THE USFWS AUGUST 2017

SOURCE: USFWS

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 11-SCRUBJ.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 11 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: MAR	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
FLORIDA SCRUB-JAY (Aphelocoma coerulescens)
SCRUB-JAY LOCATIONS AND HABITAT

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(772) 545-3676, E-mail: bobhsenv@gmail.com

THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC.

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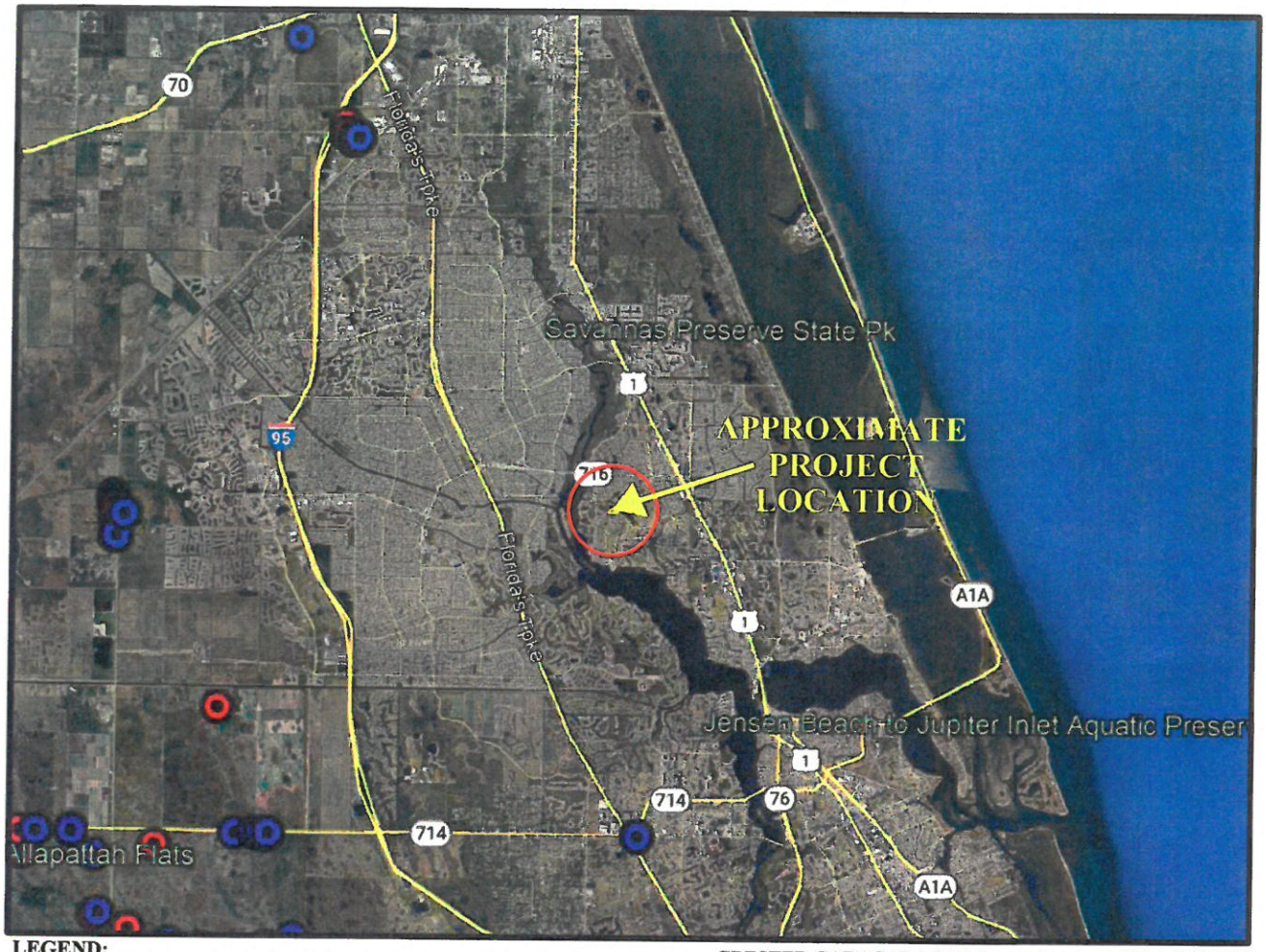
NOT A LAND BOUNDARY SURVEY

NORTH

0' 10,000' 20,000' 40,000' 80,000'

SCALE: 1" = 20,000'



LEGEND:

- CARACARA NEST
- CARACARA OBSERVATION
- 1,500 METER RADIUS

CRESTED CARACARA (Polyborus plancus audubonii) NEST AND OBSERVATION LOCATIONS

NOTE:
COUNTY INFORMATION WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

CRESTED CARACARA LOCATIONS WERE ACQUIRED FROM THE USFWS 2007

SOURCE: USFWS

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 12-CARACARA.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 12 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: MAR	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
CRESTED CARACARA (Polyborus plancus audubonii)
NESTS AND OBSERVATION LOCATIONS

H S E
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(772) 545-3676, E-mail: bobhsenv@gmail.com

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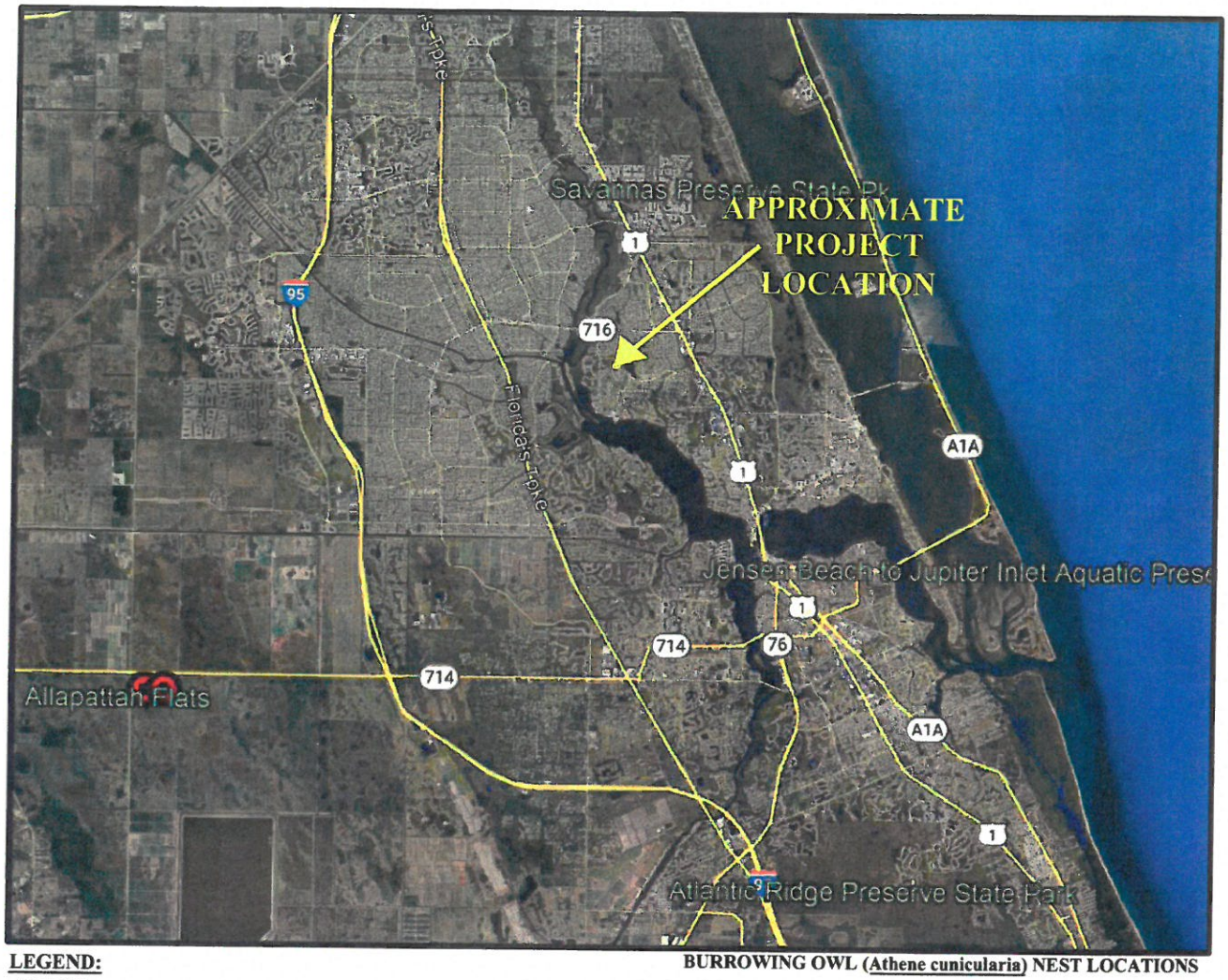
NOT A LAND BOUNDARY SURVEY

NORTH

0' 10,000' 20,000' 40,000' 80,000'

SCALE: 1" = 20,000'



LEGEND:

- BURROWING OWL LOCATION

BURROWING OWL (Athene cunicularia) NEST LOCATIONS

NOTE:
COUNTY INFORMATION WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

BURROWING OWL LOCATIONS WERE ACQUIRED FROM THE USFWS 2006

SOURCE: USFWS

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 13-FLBUROWL.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 13 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: MAR	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
BURROWING OWL (Athene cunicularia)
FL BURROWING OWL MAP

H S E
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(772) 545-3676, E-mail: bobhsenv@gmail.com

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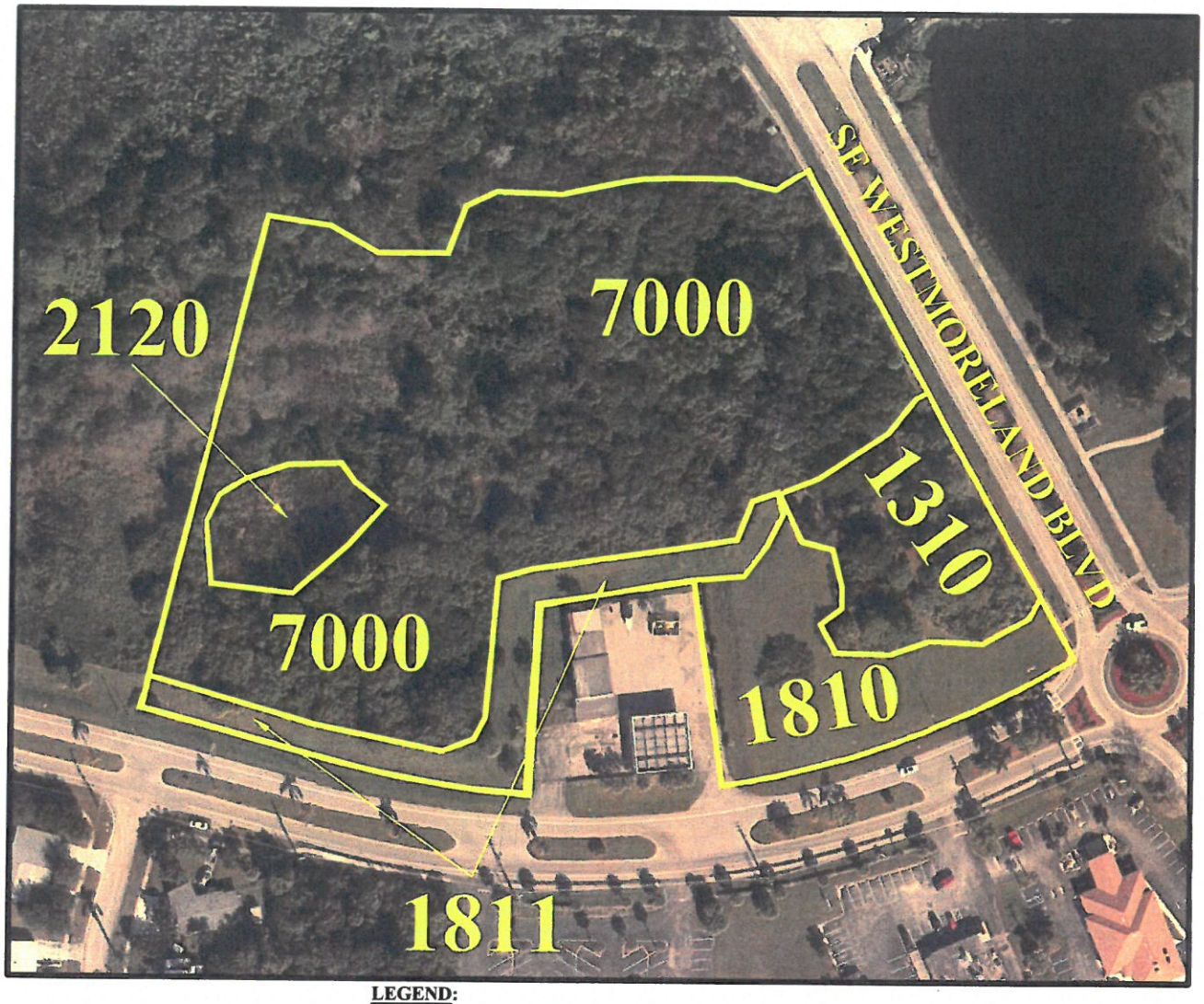
NOT A LAND BOUNDARY SURVEY

NORTH

0' 75' 150' 300' 600'

SCALE: 1" = 150'



LEGEND:

1310 - DRY FLATWOODS	(±0.70 ACRES)
1810 - MOWED GRASS	(±0.84 ACRES)
1811 - VEGITATIVE BERM	(±0.56 ACRES)
2120 - FRESH WATER MARSH	(±0.29 ACRES)
7000 - EXOTIC PLANTS	(±4.68 ACRES)
TOTAL=	±7.1 ACRES

SOURCE: FLORIDA COOPERATIVE LAND COVER, VERSION 3.7 AND HSE SITE VISIT

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.:	DRAWING NAME:	DATE:	APPENDIX A FIGURE:
	14	37S	40E	24 - 025.01	14-CLC.DWG	8 JULY 2024	14 OF 17
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"		DESIGNED BY: RLW	DRAWN BY: DMB		CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
CLC (VEGETATION) MAP

H S E
Hobe Sound Environmental Consultants Inc.
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Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

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NOT A LAND BOUNDARY SURVEY

NORTH

0' 75' 150' 300' 600'

SCALE: 1" = 150'

LEGEND:

- WETLAND A - (±0.29 ACRES)

SOURCE: 2023 FDOT AERIAL; HSE

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 15-WETLAND.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 15 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
WETLAND MAP

HSE
Hobe Sound Environmental Consultants Inc.
9512 SE Duncan Street
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

NOT A LAND BOUNDARY SURVEY

LEGEND

50: WAVELAND AND IMMOKALEE FINE SANDS (±7.1 AC)

TOTAL= (±7.1 AC)

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 16-SOIL.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 16 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: MAR	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
NRCS SOIL MAP

H S E
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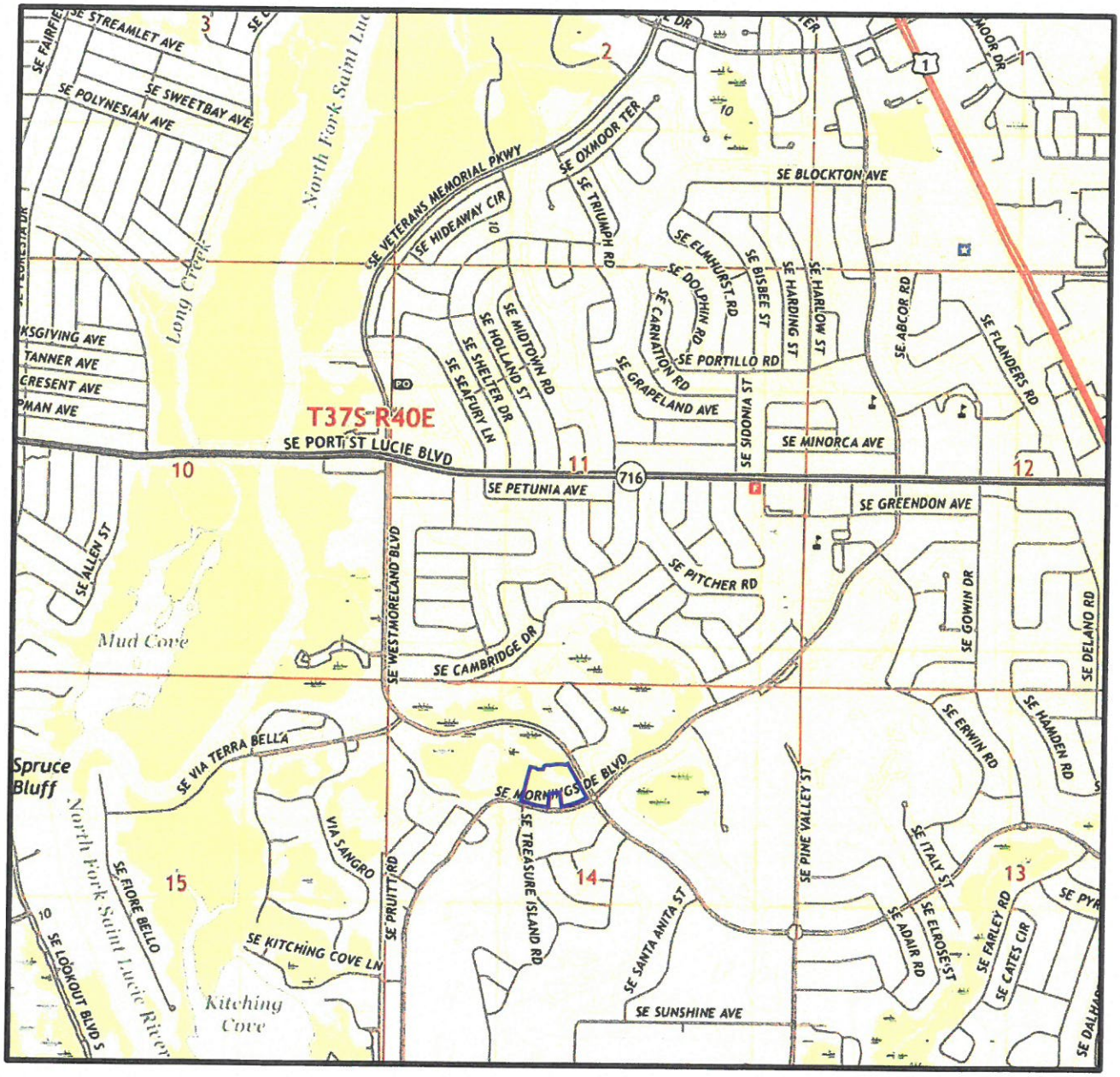
NOT A LAND BOUNDARY SURVEY

NORTH

0' 1,000' 2,000' 4,000' 8,000'

SCALE: 1" = 2,000'



SOURCE: ANKONA QUADRANGLE, FL. 7.5 MINUTE SERIES

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 17-TOPO.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 17 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP	

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
USGS TOPOGRAPHIC MAP

H S E
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9512 SE Duncan Street
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

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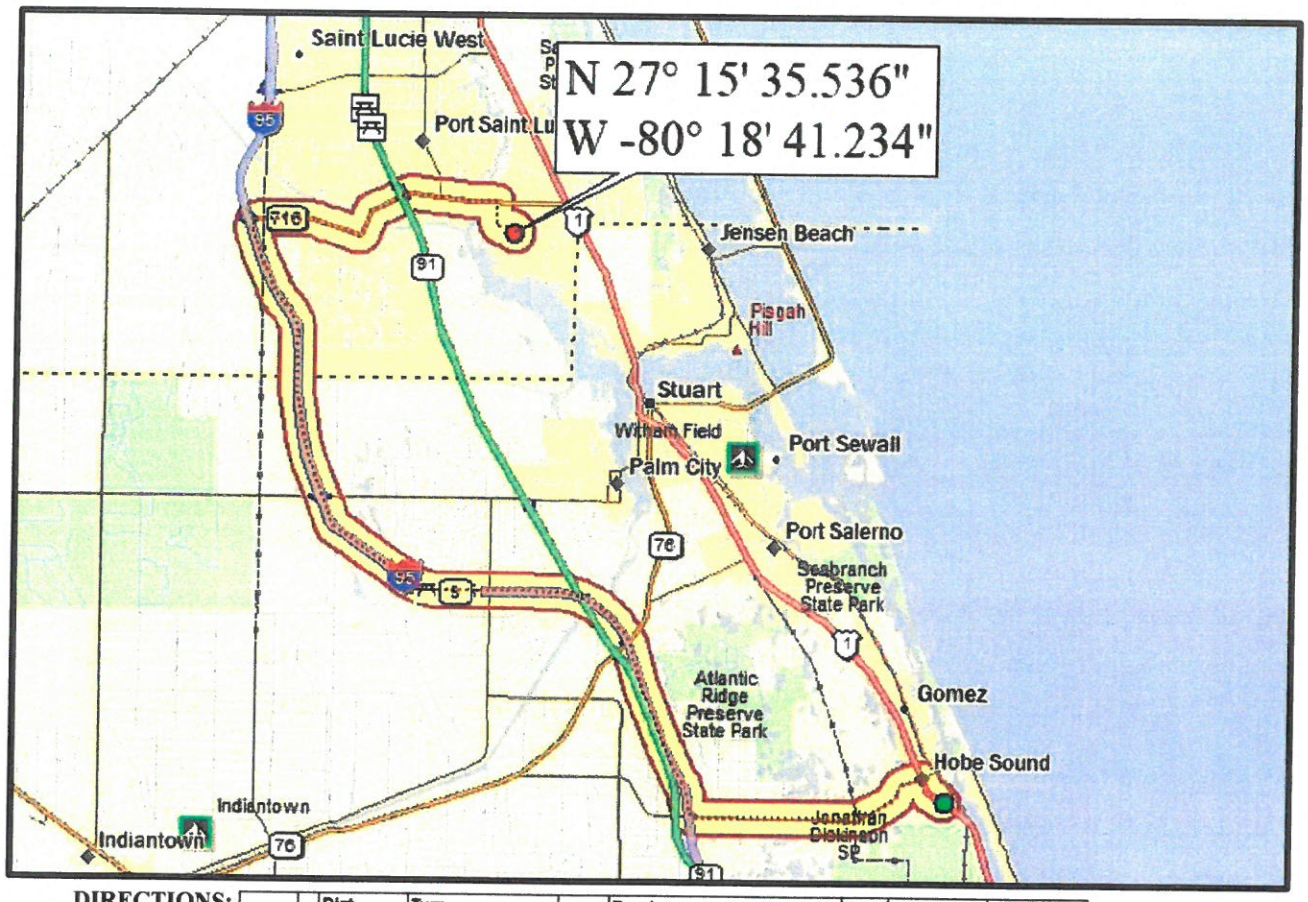
NOT A LAND BOUNDARY SURVEY

NORTH

0' 12,500' 25,000' 50,000' 100,000'

SCALE: 1" = 25,000'



DIRECTIONS:

		Dist	Turn		Road	Exit	Total Time	Total Dist
			Start	at	US 1		00:00:00	0.00 mi
			Go straight (NW)	on	US 1 (SR 5|SE Federal Hwy)		00:00:00	0.00 mi
	in	0.89 mi	Turn left (W)	on to	CR 708 (SE Bridge Rd)		00:01:57	0.89 mi
	in	6.20 mi	Go straight (WNW)	on to	I-95 N (SR 9) ramp		00:12:57	7.09 mi
	in	0.14 mi	Keep left (NW)	on	I-95 N (SR 9) ramp		00:13:08	7.23 mi
	in	21.28 mi	Keep right (N)	on to	SR 716 (SE Port Saint Lucie Blvd) ramp	118	00:31:02	28.50 mi
	in	0.29 mi	Keep right (NE)	on	SR 716 (SE Port Saint Lucie Blvd) ramp		00:31:27	28.79 mi
	in	0.12 mi	Keep right (E)	on to	SR 716 (SE Port Saint Lucie Blvd)		00:31:45	28.91 mi
	in	6.80 mi	Turn right (S)	on to	<unnamed>		00:47:43	35.71 mi
	in	0.04 mi	Go straight (SSE)	on to	SE Westmoreland Blvd		00:47:48	35.74 mi
	in	1.18 mi	Turn right (WSW)	on to	SE Morningside Blvd		00:50:59	36.92 mi
	in	0.05 mi	Finish	at	SE Morningside Blvd		00:51:11	36.98 mi

Total Time: 00:51:11 Total Distance: 36.98 mi

SOURCE: DELORME STREET ATLAS USA, 2015

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 01 - VIC MAP.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 1 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"		DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP	

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
PROJECT VICINITY MAP AND DIRECTIONS

H S E
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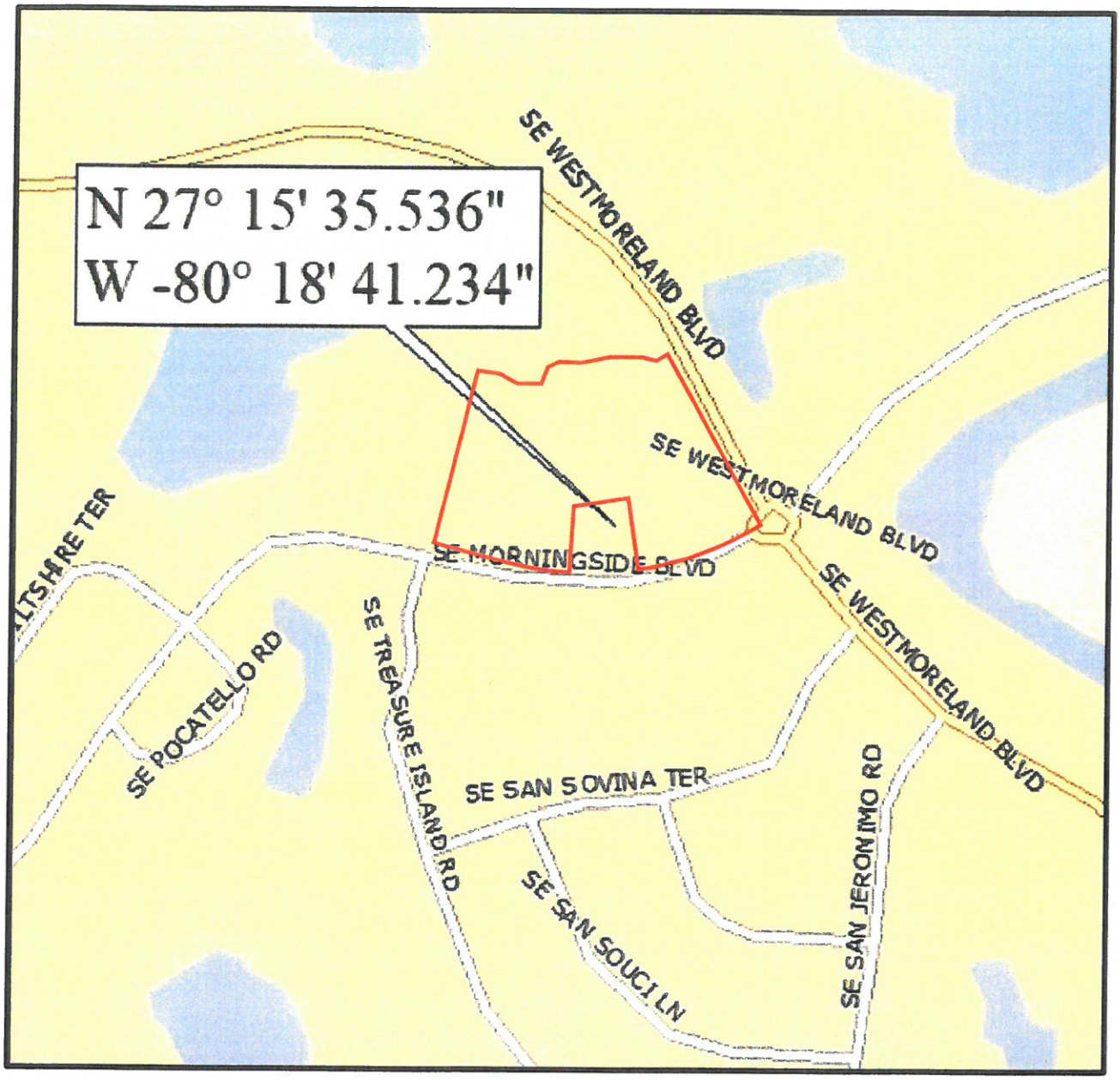
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

NOT A LAND BOUNDARY SURVEY

NORTH

0' 200' 400' 800' 1,600'

SCALE: 1" = 400'



SOURCE: DELORME STREET ATLAS USA, 2015

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 02 - LOC MAP.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 2 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
PROJECT LOCATION MAP

H S E
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Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

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NOT A LAND BOUNDARY SURVEY

NORTH

0' 75' 150' 300' 600'

SCALE: 1" = 150'

SOURCE: FDOT 2023 AERIAL PHOTOGRAPH

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 03 - 2023 AERIAL.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 3 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
2023 FDOT AERIAL PHOTOGRAPH

H S E
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9512 SE Duncan Street
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

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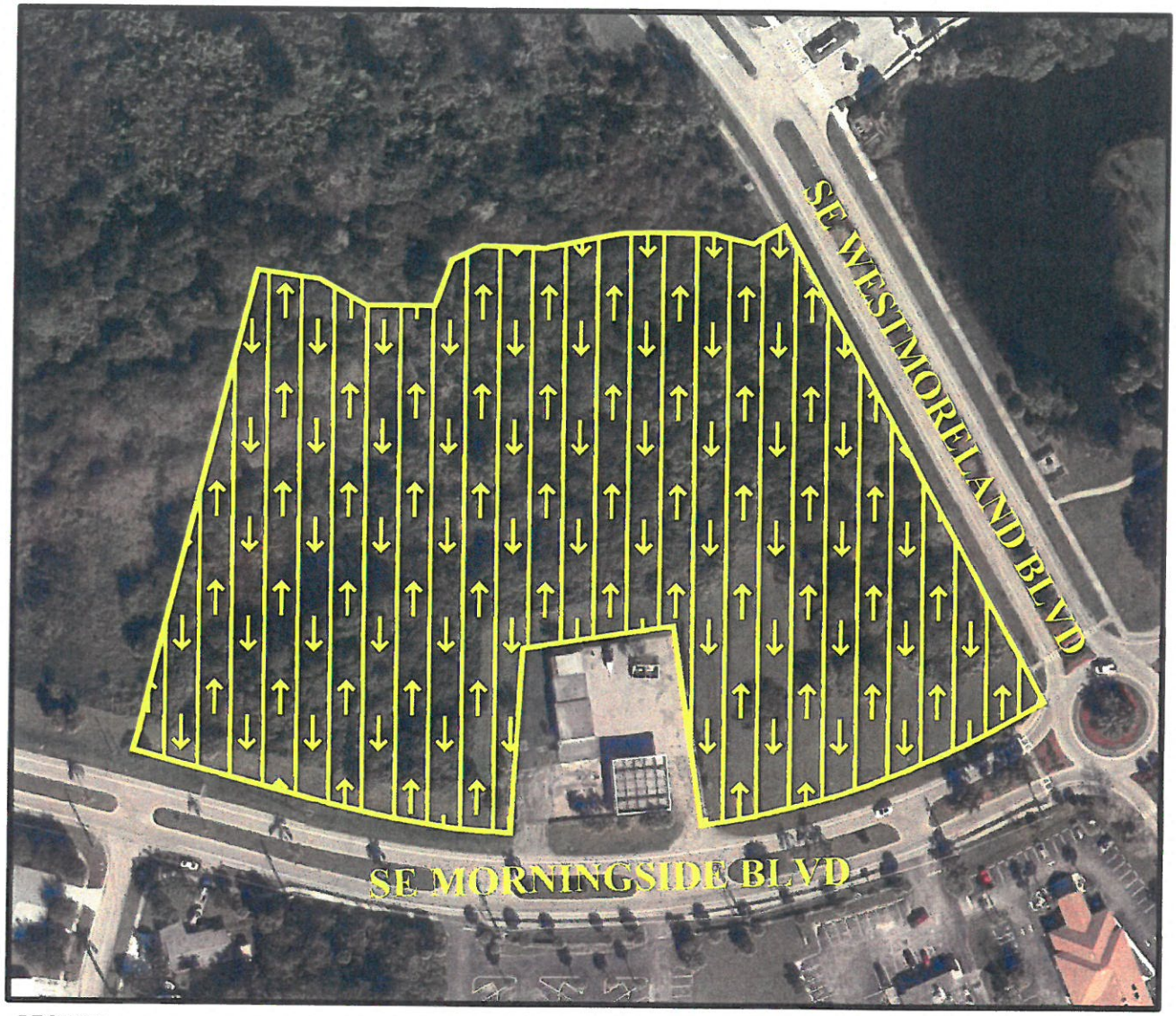
NOT A LAND BOUNDARY SURVEY

NORTH

0' 75' 150' 300' 600'

SCALE: 1" = 150'



LEGEND:

- PEDESTRIAN BELT TRANSECTS

SOURCE: HSE SITE VISIT DAY MONTH 2024

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC. 14	TWP. 37S	R. 40E	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 04 - PED TRANS.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 4 OF 17
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
PEDESTRIAN BELT TRANSECT

H S E
Hobe Sound Environmental Consultants Inc.
9512 SE Duncan Street
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC.

NOT A LAND BOUNDARY SURVEY

NORTH

0' 75' 150' 300' 600'

SCALE: 1" = 150'

LEGEND:

- ACTIVE (NONE) POTENTIALLY OCCUPIED
- INACTIVE (NONE) POTENTIALLY OCCUPIED
- ABANDONED (NONE)

I HERE BY CERTIFY THAT:

A 100% SURVEY FOR GOPHER TORTOISES WAS CONDUCTED ON 03 JULY 2024, ACCORDING TO FWC GUIDELINES. ZERO (0) POTENTIALLY OCCUPIED GOPHER TORTOISE BURROWS WERE LOCATED DURING THE SURVEY. THE ESTIMATED GOPHER TORTOISE POPULATION IS 0.

DYLAN BARBER, GTA-21-00011B

SOURCE: HSE GOPHER TORTOISE SURVEY DATE: 03 JULY 2024.

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.:	DRAWING NAME:	DATE:	APPENDIX A FIGURE:
	14	37S	40E	24 - 025.01	05 - GT BURROW.DWG	8 JULY 2024	5 OF 17
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
GOPHER TORTOISE (Gopherus polyphemus)
BURROW LOCATION MAP

Hobe Sound Environmental Consultants Inc.
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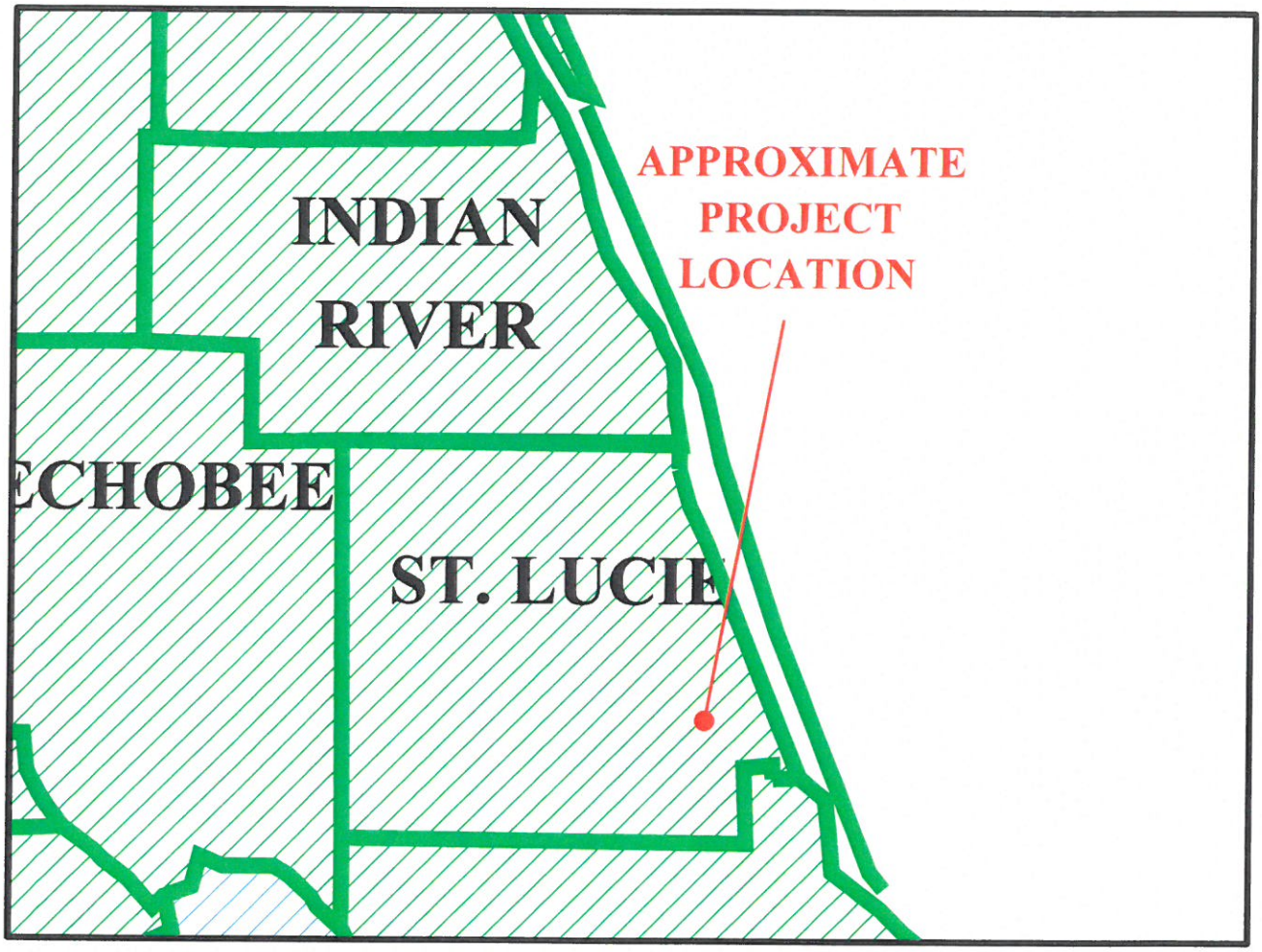
NOT A LAND BOUNDARY SURVEY

NORTH

0' 30,000' 60,000' 120,000' 240,000'

SCALE: 1" = 60,000'



FLORIDA PINE SNAKE
Pituophis melanoleucus mugitus

- DISTRIBUTION

PRINCIPLE GEOGRAPHIC RANGE OF THE FLORIDA PINE SNAKE, INCLUDING INTERVENING AREAS OF UNOCCUPIED HABITAT. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY AND NOT FOR REGULATORY USE.
COUNTIES: ALL EXCEPT FOR MONROE. COLLIER AND HENDRY.

FLORIDA FISH AND WILDLIFE
CONSERVATION SERVICE
DATE: 28 JUNE 2014
SOURCE: FWC

SOURCE: USFWS 2014

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.:	DRAWING NAME:	DATE:	APPENDIX A FIGURE:
	14	37S	40E	24 - 025.01	06 - FL PINE SNAKE.DWG	8 JULY 2024	6 OF 17
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"		DESIGNED BY: RLW	DRAWN BY: DMB		CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
FLORIDA PINE SNAKE (Pituophis melanoleucus mugitus)
DISTRIBUTION MAP

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NOT A LAND BOUNDARY SURVEY

NORTH

0' 15,000' 30,000' 60,000' 120,000'

SCALE: 1" = 30,000'

LEGEND:

- WOOD STORK COLONIES

- WOOD STORK CORE FORAGING AREA

WOOD STORK (Mycteria americana) NESTING COLONIES

NOTES:
COUNTY INFORMATION ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

WOOD STORK NESTING COLONIES WERE ACQUIRED FROM USFWS NOVEMBER 2018 AND ARE CURRENT TO 2017.

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 07 - WOOD STORK.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 7 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
WOOD STORK (Mycteria americana)
NESTING COLONIES & CORE FORAGING AREAS

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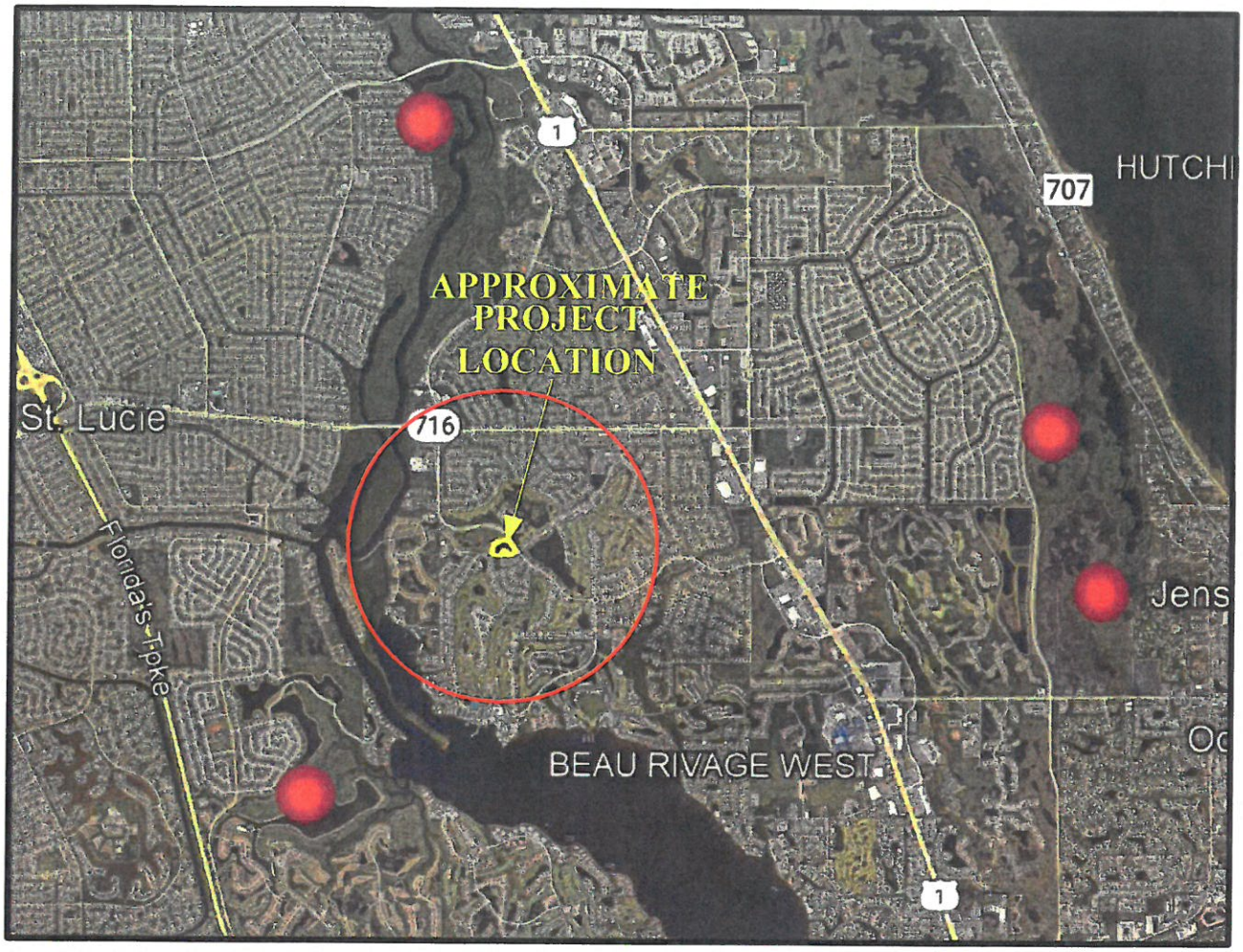
NOT A LAND BOUNDARY SURVEY

NORTH

0' 3,000' 6,000' 12,000' 24,000'

SCALE: 1" = 6,000'



LEGEND:

- EAGLE NEST LOCATIONS

- 1 MILE RADIUS

AMERICAN BALD EAGLE (Haliaeetus leucocephalus) NESTS

NOTE:
COUNTY INFORMATION WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

EAGLE NEST LOCATIONS WERE ACQUIRED FROM THE USFWS 2022

SOURCE:https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.:	DRAWING NAME:	DATE:	APPENDIX A FIGURE:
	14	37S	40E	24 - 025.01	08 - EAGLE NEST.DWG	8 JULY 2024	8 OF 17
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
AMERICAN BALD EAGLE (Haliaeetus leucocephalus)
EAGLE NEST LOCATIONS

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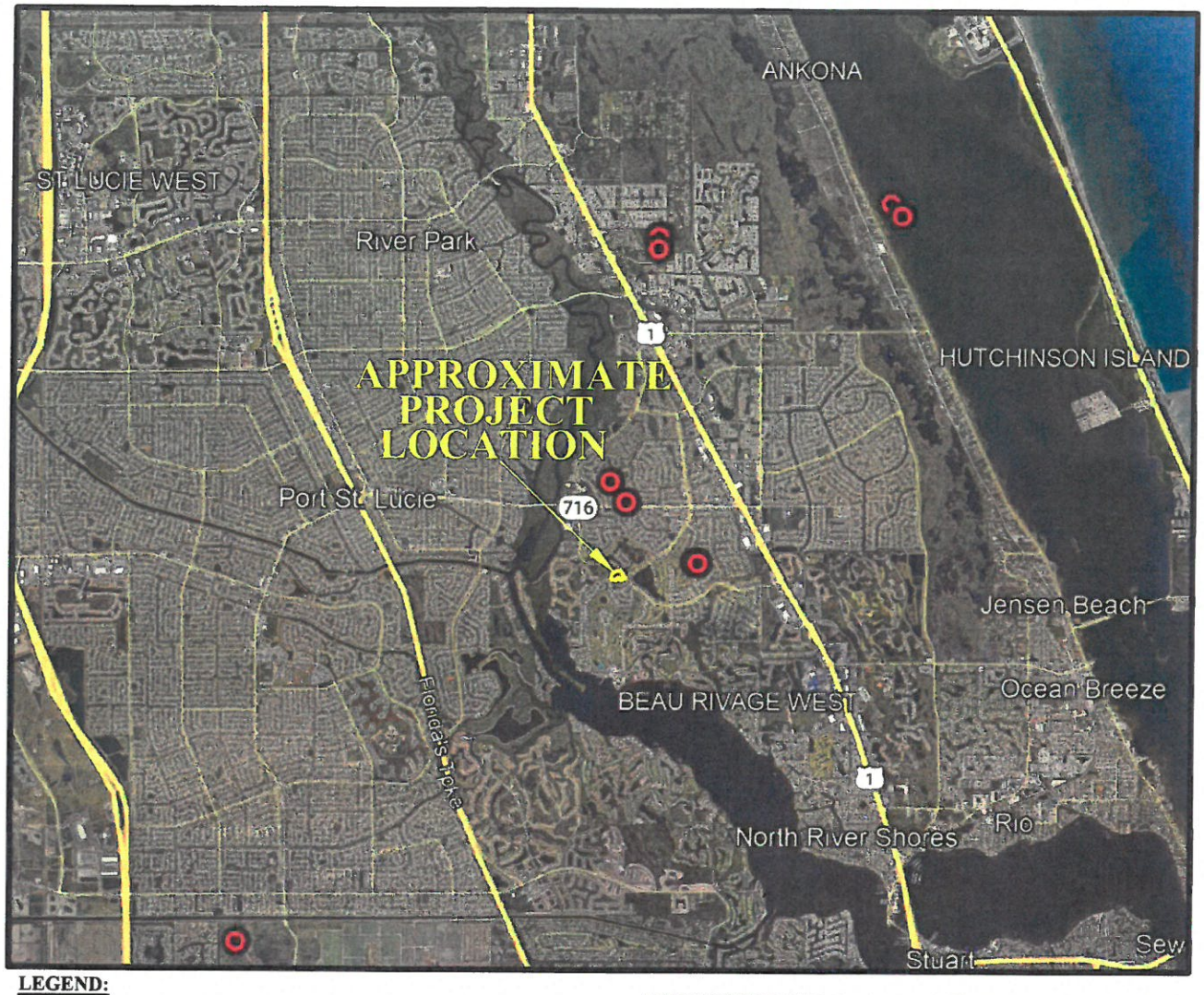
NOT A LAND BOUNDARY SURVEY

NORTH

0' 5,000' 10,000' 20,000' 40,000'

SCALE: 1" = 10,000'



LEGEND:

- SNAIL KITE NEST LOCATIONS

EVERGLADE SNAIL KITE (Rostrhamus sociabilis plumbeus) CRITICAL HABITAT AND NESTS LOCATIONS

NOTE:
COUNTY INFORMATION WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA

SNAIL KITE HABITAT LOCATIONS WERE ACQUIRED FROM THE USFWS 2007

SOURCE: U.S. FISH & WILDLIFE SERVICE HTTP://VEROBEACH.FWS.GOV

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 09 - SNAIL KITE.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 9 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
EVERGLADE SNAIL KITE (Rostrhamus sociabilis plumbeus)
SNAIL KITE NESTS LOCATIONS

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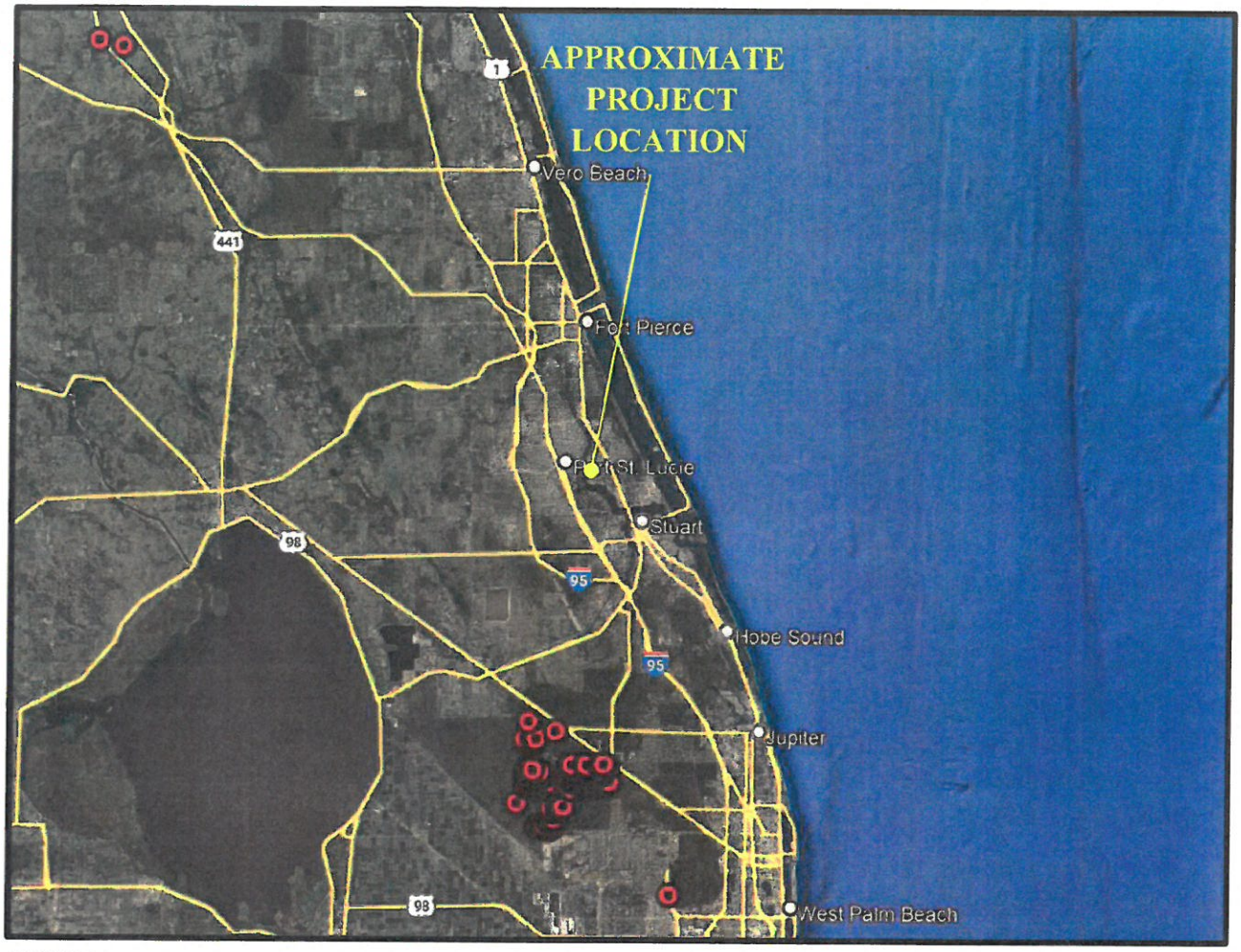
NOT A LAND BOUNDARY SURVEY

NORTH

0' 40,000' 80,000' 160,000' 320,000'

SCALE: 1" = 80,000'



LEGEND:

- RED-COCKADED WOODPECKER

RED-COCKADED WOODPECKER (Dryobates borealis) LOCATIONS

NOTES:
COUNTY INFORMATION ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

RED-COCKADED WOODPECKER LOCATIONS WERE ACQUIRED FROM THE USFWS 2005

SOURCE: U.S. FISH & WILDLIFE SERVICE HTTP://VEROBEACH.FWS.GOV

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.:	DRAWING NAME:	DATE:	APPENDIX A FIGURE:
	14	37S	40E	24 - 025.01	10 - RED COCK WP.DWG	8 JULY 2024	10 OF 17
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
RED-COCKADED WOODPECKER (Dryobates borealis)
RED-COCKADED WOODPECKER NESTS LOCATIONS

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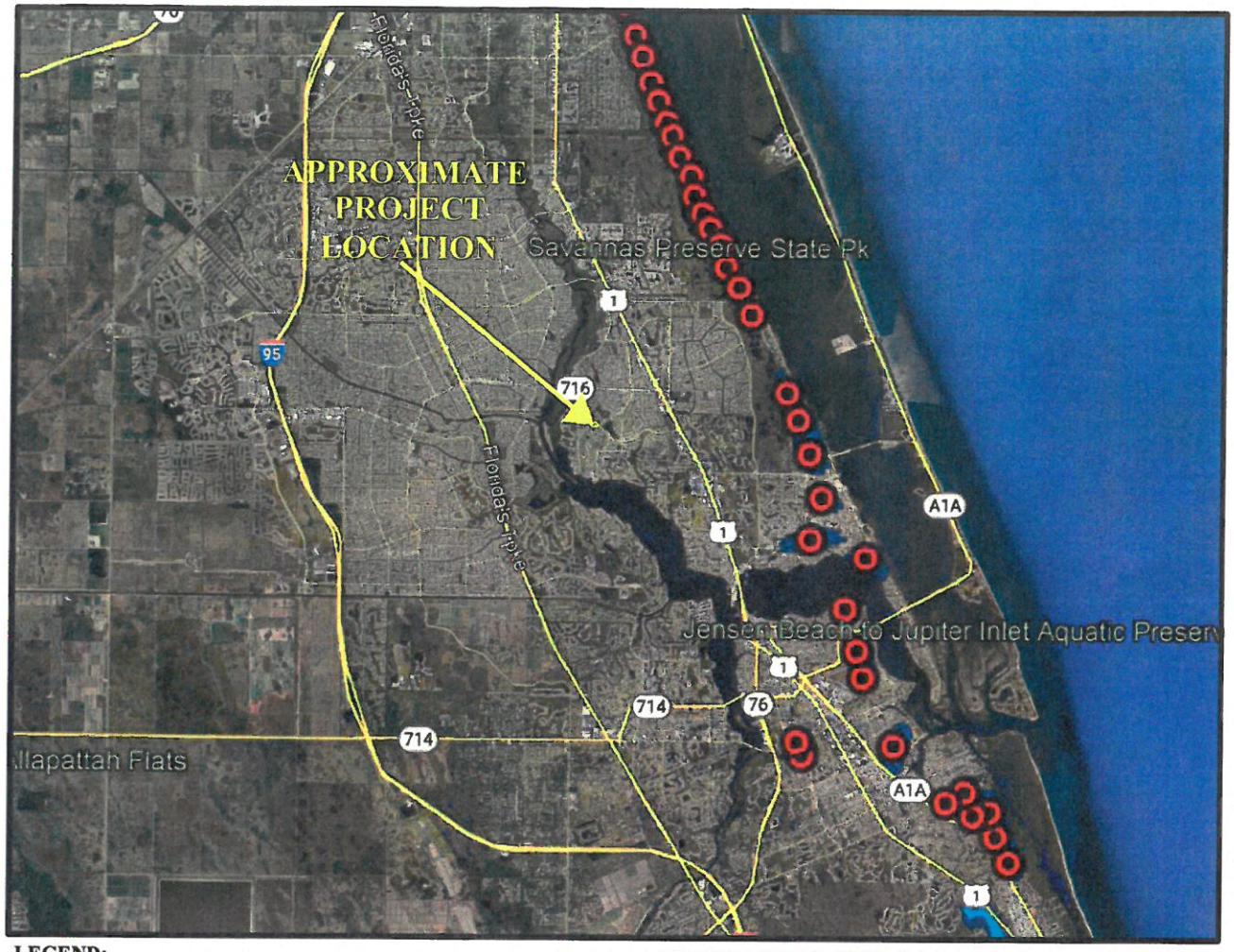
NOT A LAND BOUNDARY SURVEY

NORTH

0' 10,000' 20,000' 40,000' 80,000'

SCALE: 1" = 20,000'



LEGEND:

- SCRUB JAY OBSERVATION

- SCRUB JAY HABITAT

FLORIDA SCRUB-JAY (Aphelocoma coerulescens) LOCATIONS

NOTES:
COUNTY INFORMATION ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

FLORIDA SCRUB-JAY LOCATIONS WERE ACQUIRED FROM THE USFWS AUGUST 2017

SOURCE: USFWS

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 11-SCRUBJ.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 11 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: MAR	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
FLORIDA SCRUB-JAY (Aphelocoma coerulescens)
SCRUB-JAY LOCATIONS AND HABITAT

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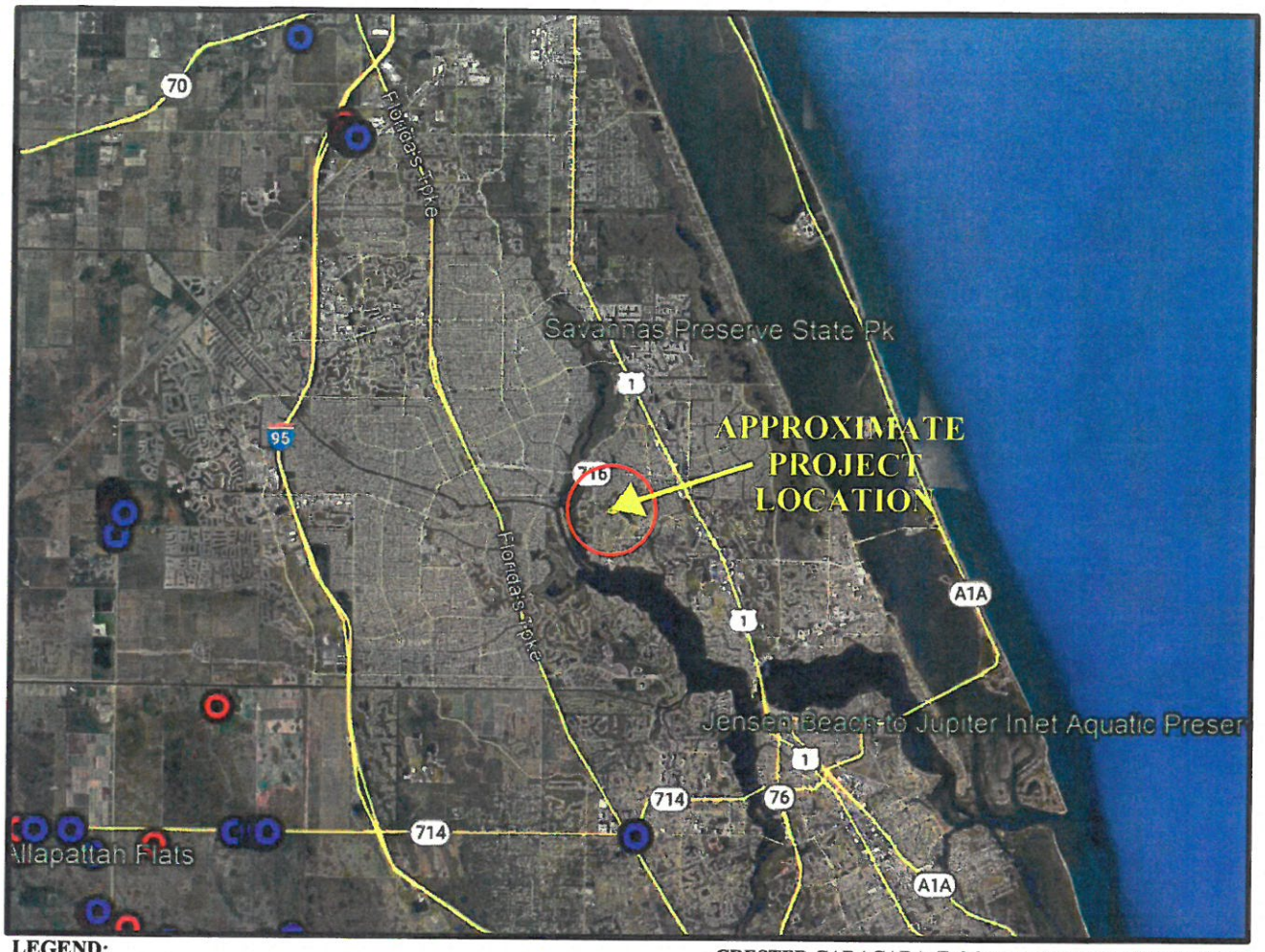
9512 SE Duncan Street
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

NOT A LAND BOUNDARY SURVEY

NORTH

0' 10,000' 20,000' 40,000' 80,000'

SCALE: 1" = 20,000'



LEGEND:

- CARACARA NEST
- CARACARA OBSERVATION
- 1,500 METER RADIUS

CRESTED CARACARA (Polyborus plancus audubonii) NEST AND OBSERVATION LOCATIONS

NOTE:
COUNTY INFORMATION WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

CRESTED CARACARA LOCATIONS WERE ACQUIRED FROM THE USFWS 2007

SOURCE: USFWS

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 12-CARACARA.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 12 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: MAR	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
CRESTED CARACARA (Polyborus plancus audubonii)
NESTS AND OBSERVATION LOCATIONS

HSE
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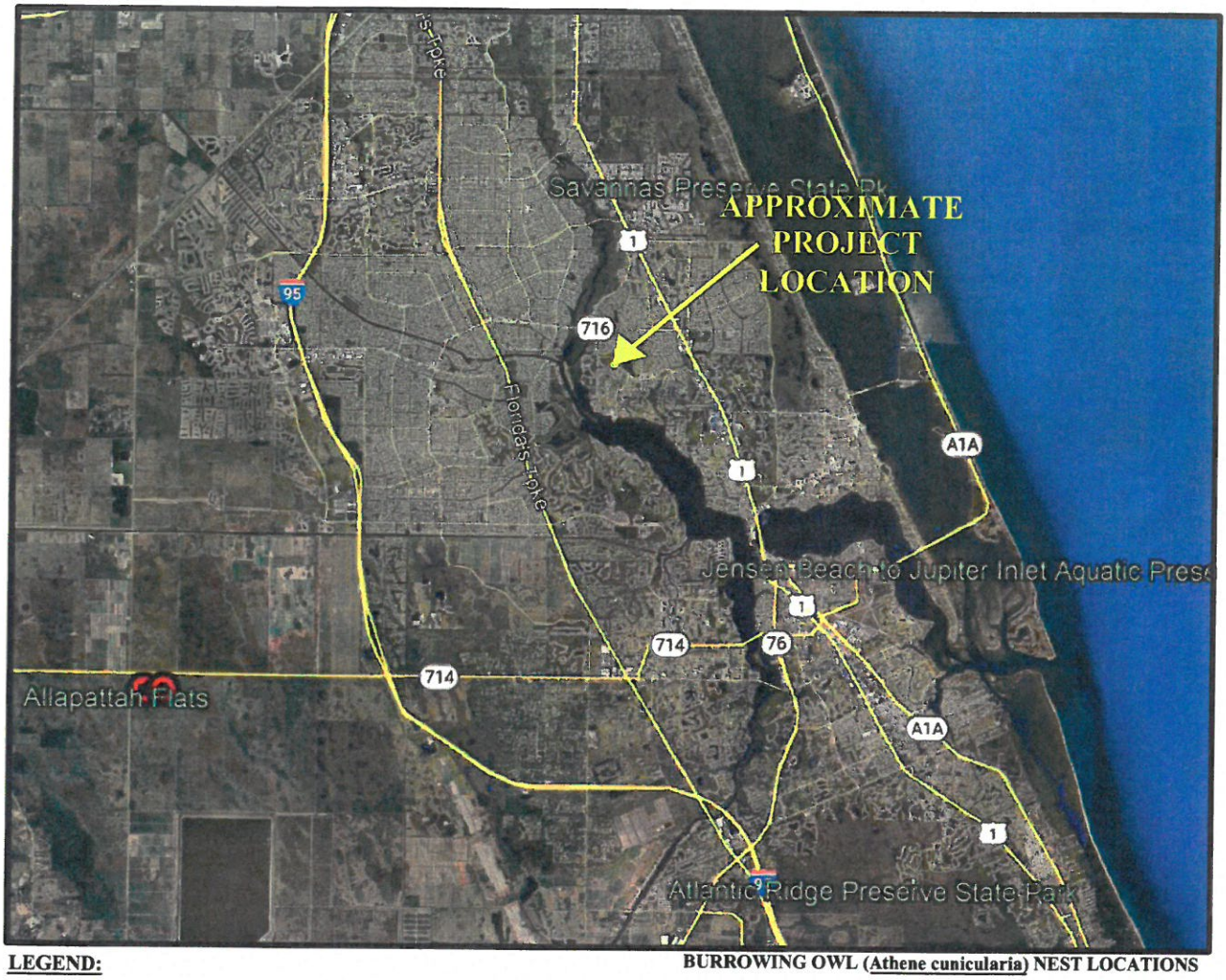
NOT A LAND BOUNDARY SURVEY

NORTH

0' 10,000' 20,000' 40,000' 80,000'

SCALE: 1" = 20,000'



LEGEND:

- BURROWING OWL LOCATION

BURROWING OWL (Athene cunicularia) NEST LOCATIONS

NOTE:
COUNTY INFORMATION WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

BURROWING OWL LOCATIONS WERE ACQUIRED FROM THE USFWS 2006

SOURCE: USFWS

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 13-FLBUROWL.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 13 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: MAR	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
BURROWING OWL (Athene cunicularia)
FL BURROWING OWL MAP

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(772) 545-3676, E-mail: bobhsenv@gmail.com

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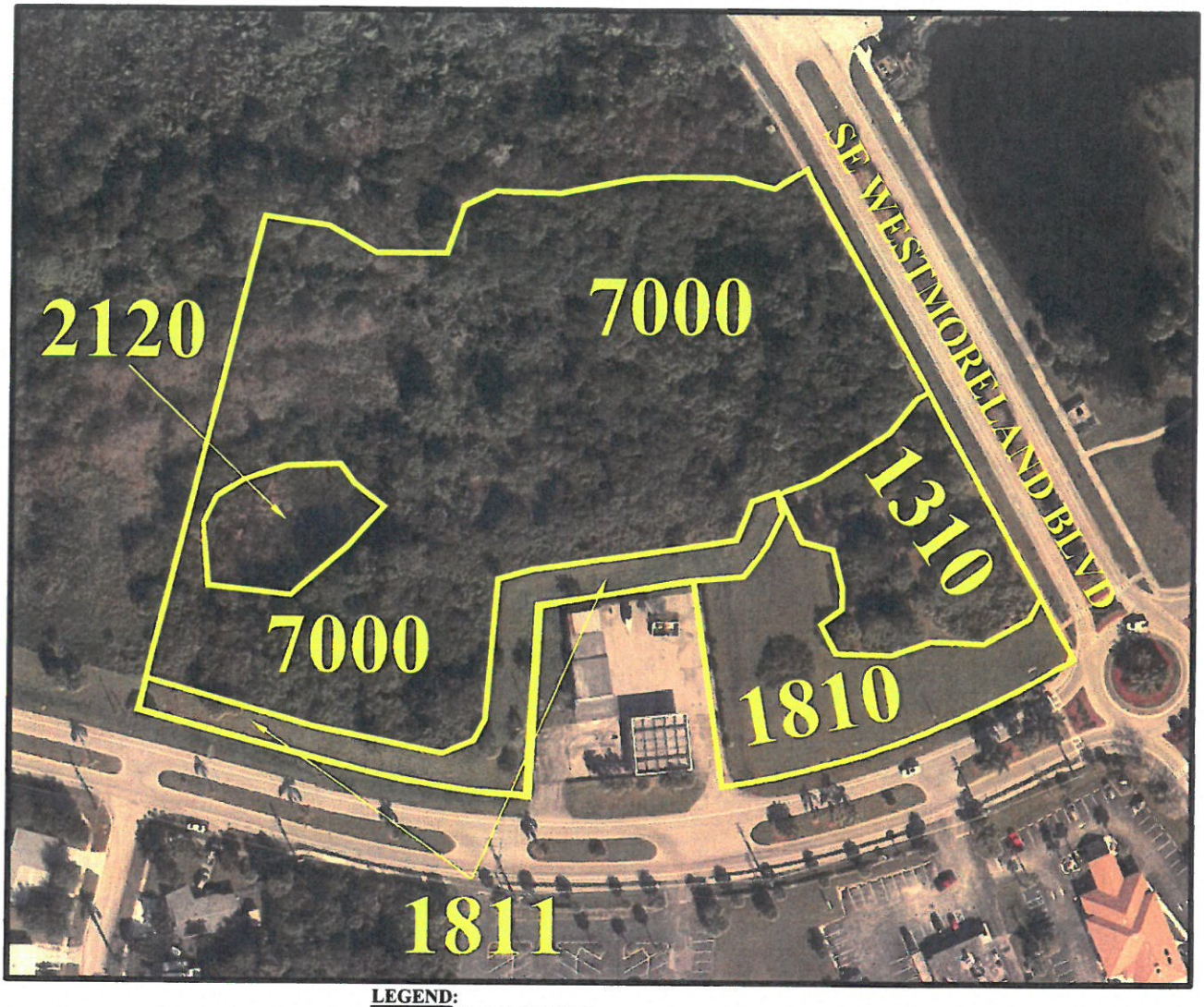
NOT A LAND BOUNDARY SURVEY

NORTH

0' 75' 150' 300' 600'

SCALE: 1" = 150'



LEGEND:

1310 - DRY FLATWOODS	(±0.70 ACRES)
1810 - MOWED GRASS	(±0.84 ACRES)
1811 - VEGETATIVE BERM	(±0.56 ACRES)
2120 - FRESHWATER MARSH	(±0.29 ACRES)
7000 - EXOTIC PLANTS	(±4.68 ACRES)
TOTAL=	±7.10 ACRES

SOURCE: FLORIDA COOPERATIVE LAND COVER, VERSION 3.7 AND HSE SITE VISIT

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 14-CLC.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 14 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"	LONGITUDE: -80°18'41.234"				DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
CLC (VEGETATION) MAP

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Hobe Sound Environmental Consultants Inc.
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Hobe Sound, FL. 33455
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NOT A LAND BOUNDARY SURVEY

NORTH

0' 75' 150' 300' 600'

SCALE: 1" = 150'

LEGEND:

- WETLAND A - (±0.29 ACRES)

SOURCE: 2023 FDOT AERIAL; HSE

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 15-WETLAND.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 15 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
WETLAND MAP

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Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

NOT A LAND BOUNDARY SURVEY

NORTH

0' 75' 150' 300' 600'

SCALE: 1" = 150'

LEGEND

50: WAVELAND AND IMMOKALEE FINE SANDS (±7.10 AC)

TOTAL= (±7.10 AC)

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 16-SOIL.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 16 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: MAR	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
NRCS SOIL MAP

H S E
Hobe Sound Environmental Consultants Inc.
9512 SE Duncan Street
Hobe Sound, FL. 33455
(772) 545-3676, E-mail: bobhsenv@gmail.com

THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC.

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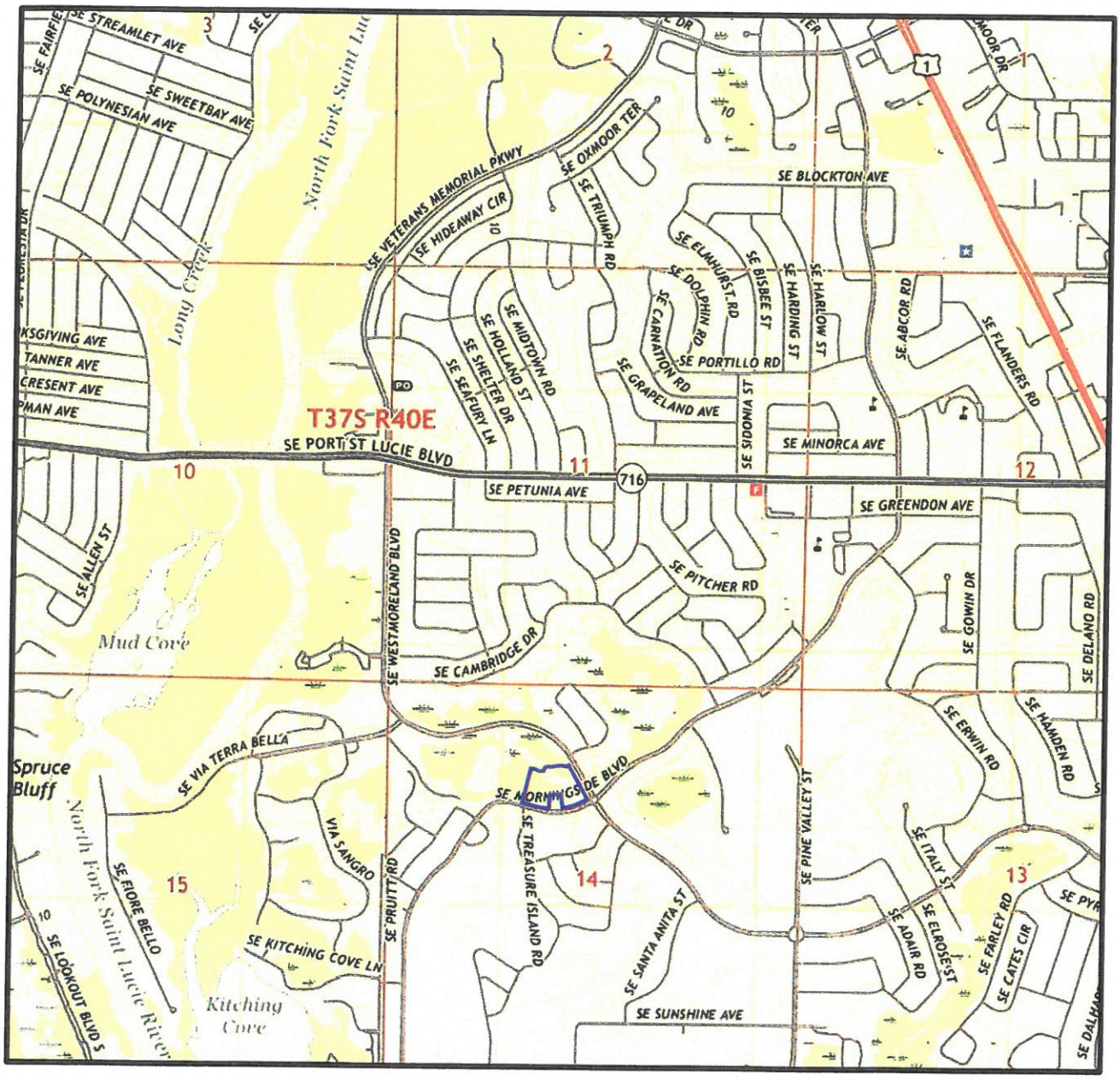
NOT A LAND BOUNDARY SURVEY

NORTH

0' 1,000' 2,000' 4,000' 8,000'

SCALE: 1" = 2,000'



SOURCE: ANKONA QUADRANGLE, FL. 7.5 MINUTE SERIES

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: 17-TOPO.DWG	DATE: 8 JULY 2024	APPENDIX A FIGURE: 17 OF 17
	14	37S	40E				
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"		DESIGNED BY: RLW	DRAWN BY: DMB	CHECKED BY: FRP	

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
USGS TOPOGRAPHIC MAP

H S E
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APPENDIX B

SITE PHOTOGRAPHS

THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC.

NOT A LAND BOUNDARY SURVEY

SCALE = NTS

PHOTOGRAPH #01: WATER LEVEL MEASUREMENT IN WETLAND A

PHOTOGRAPH #02: CORN SNAKE (*Pantherophis guttatus*) ROAMING ON-SITE

PHOTOGRAPH #03: TYPICAL EXOTIC VEGETATION IN THE CENTER OF THE SITE

PHOTOGRAPH #04: SOUTHERN BOUNDARY OF THE PROJECT SITE, FACING WEST

PHOTOGRAPH #05: CLEARED SECTIONS IN THE DRY FLATWOODS DESIGNATION

PHOTOGRAPH #06: TYPICAL VEGETATION IN WETLAND A

SOURCE: HSE

PARCEL ID # 4414-601-0021-000-1

ST. LUCIE COUNTY FLORIDA	SEC.	TWP.	R.	HSE JOB NO.: 24 - 025.01	DRAWING NAME: APP B - PHOTOS.DWG	DATE: 8 JULY 2024	APPENDIX B FIGURE: 1 OF 1
	14	37S	40E				
LATITUDE: 27°15'35.536"		LONGITUDE: -80°18'41.234"			DESIGNED BY: RLW	DRAWN BY: MAR	CHECKED BY: FRP

RAVELLO DEVELOPMENT LLC
SE MORNINGSIDE BLVD. PORT ST. LUCIE, FLORIDA
WETLAND AND WILDLIFE ASSESMENT (WWA)
PROJECT SITE PHOTOGRAPHS 1-6

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