

**NASSAU CROSSING  
Environmental Assessment**

October 2017

Prepared by  
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Peacock Consulting Group, LLC has completed an environmental assessment of approximately 196.78 acres on William Burgess Boulevard in Yulee, Florida. The purpose of this assessment was to evaluate the property for the presence of wetlands, existing vegetative communities, and protected species. The results of this assessment are summarized in the following report.

## **I. Location of Property**

The property is located in Section 42, Township 2 North, and Range 27 East in the town of Yulee, Nassau County, Florida (Figure 1). The site is divided into two parcels by William Burgess Boulevard. The overall property is bordered to the west by North Harts Road, to the north and south by single family residences, and to the east by a CSX rail line (Figure 2). The property comprises real estate parcel 42-2N-27-0000-0003-0060.

## **II. Wetlands**

Peacock Consulting Group, LLC had previously delineated the wetland boundaries on the subject property. The St. Johns River Water Management District (SJRWMD) reviewed and approved these lines pursuant to formal jurisdictional determination # 16-089-132387-1 which was issued on July 1, 2013. The jurisdictional determination will remain valid until July 1, 2018. The approved, surveyed wetland lines are depicted on an aerial photograph of the property (Figure 3). Historically the wetlands north of William Burgess Boulevard appear to have been hydrologically isolated and not directly connected to any contiguous wetland systems. The large wetland south of William Burgess Boulevard forms part of the headwater of an unnamed tributary of the Nassau River.

## **III. Vegetative Communities/Existing Site Conditions**

The wetlands and uplands have been characterized pursuant to the Florida Department of Transportation publication *Florida Land Use, Cover and Forms Classification System* (FLUCFCS), as described below and depicted on Figure 4.

A. Uplands	119.61 acres total
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Uplands comprise approximately 119.61 acres of the project site.

1. Pine Flatwoods (FLUCFCS 411)	106.26 acres
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Most of the uplands comprise pine flatwoods. The canopy is dominated by slash pine (*Pinus elliotii*) along with lesser amounts of hardwoods such as water oak (*Quercus nigra*), laurel oak (*Q. laurifolia*), live oak (*Q. virginiana*), and southern magnolia (*Magnolia grandiflora*). The understory and ground cover are dominated by such species as saw palmetto (*Serenoa repens*), bitter gallberry (*Ilex glabra*), tar flower (*Befaria recemosa*), and bracken fern (*Pteridium aquilinum*).

2. Longleaf Pine/Turkey Oak (FLUCFCS 412) 10.27 acres

The western half of the northern parcel contains an area of longleaf pine/turkey oak that is bisected by an east/west power line easement. The canopy in this area is dominated by longleaf pine (*Pinus palustris*) and turkey oak (*Quercus laevis*) along with blue jack oak (*Q. incana*). The ground cover is relatively open and is dominated by scattered saw palmetto and various grasses such as lop sided Indian grass (*Sorghastrum secundum*) and wire grass (*Aristida* sp.).

3. Power Line Easement (FLUCFCS 832) 3.08 acres

The vegetation under the east/west power line easement is periodically mown and comprises similar species as the adjacent upland communities as well as various weeds such as sandspur (*Cenchrus* sp.).

B. Wetlands 77.17 acres total

Wetlands comprise approximately 77.17 acres of the project site. The power line crosses a wetland along the eastern boundary on the northern parcel. The area within the cleared easement is an herbaceous/shrubby wetland comprising approximately 0.35-acre. The rest of the wetlands, 76.82 acres, comprise a mixture of deeper inland ponds and sloughs and fringing, more transitional areas of hydric pine flatwoods. The existing site conditions graphic does not differentiate between these latter two wetland types due to the difficulty of accurately mapping them from aerial photography.

1. Inland Ponds and Sloughs (FLUCFCS 616)

The deeper wetlands onsite have a canopy dominated by such species as pond cypress (*Taxodium ascendens*), blackgum (*Nyssa sylvatica* var. *biflora*), red maple (*Acer rubrum*), loblolly bay (*Gordonia lasianthus*), sweet bay (*Magnolia virginiana*), and scattered slash pine. The understory and ground cover vegetation tends to be relatively open and is dominated by such species as Virginia chain fern (*Woodwardia virginiana*), Virginia willow (*Itea virginica*) and buttonbush (*Cephalanthus occidentalis*). These areas will hold shallow standing water during the rainy season.

2. Hydric Pine Flatwoods (FLUCFCS 625)

The shallower, more transitional wetlands have a canopy dominated by slash pine along with lesser amounts of loblolly bay. The understory and ground cover vegetation are dominated by such species as fetterbush (*Lyonia lucida*), sweet gallberry (*Ilex coriacea*) and cinnamon fern (*Osmunda cinnamomea*). These areas are typically saturated at or very close to the ground surface during the rainy season.

3. Herbaceous/Shrubby Wetland (FLUCFCS 640) 0.35 acre

The east/west power line easement crosses the tip of a forested wetland at the eastern property boundary. The vegetation in this section of the power line easement comprises such species as

broomsedge (*Andropogon virginicus*), warty panic grass (*Panicum verrucosum*), and red root (*Lachnanthes caroliniana*).

#### **IV. Protected Species**

A biologist with Peacock Consulting Group, LLC has surveyed the property for the presence of species listed as protected by the Florida Fish and Wildlife Conservation Commission (FFWCC) and the U.S. Fish and Wildlife Service (FWS) in the FFWCC publication *Florida's Endangered and Threatened Species, Updated May 2017*.

##### **A. Gopher Tortoise**

The only listed species known to occur onsite is the gopher tortoise (*Gopherus polyphemus*), which is listed as a threatened species by FFWCC. Gopher tortoise habitat contains soils that range from excessively well drained to somewhat poorly drained. The ground cover vegetation needs to be relatively open and contain enough herbaceous species for adequate forage. The *Soil Survey of Nassau County, Florida* published by the U.S. Department of Agriculture, Soil Conservation Service in 1991 indicates that the property contains four soil types as depicted on Figure 5.

The main wetlands are mapped as containing Evergreen-Leon mucks, depressional. The seasonal high water table in this soil mapping unit is at or above the ground surface. The majority of the uplands are mapped as containing Leon fine sand. This soil has a seasonal high water table ranging from 6 to 18 inches below the ground surface for one to four months during most years. Both Evergreen-Leon mucks, depressional and Leon fine sand are too poorly drained to provide suitable gopher tortoise habitat.

The property contains areas of Mandarin fine sand on either side of William Burgess Boulevard. Mandarin fine sand is somewhat poorly drained with a seasonal high water table 18 to 42 inches below the ground surface. Although this soil type potentially can provide habitat for gopher tortoises, the existing vegetation is too dense.

The western half of the northern parcel contains approximately 12 acres mapped as Hurricane-Pottsburg fine sands, 0 to 5% slopes. This mapping unit coincides with the area of longleaf pine/turkey oak as well as fringing areas of scrubby pine flatwoods. The soils in this mapping unit are somewhat poorly drained. The seasonal high water table ranges anywhere from 12 to 42 inches below the ground surface from one to six months. The more open portion of this area comprises gopher tortoise habitat that is approximately 10 acres in size. Gopher tortoise burrows have been observed scattered throughout this portion of the property. An authorized gopher tortoise agent will conduct a 100% survey of the area of occupied habitat. All active and inactive tortoise burrows will be plotted. Prior to commencement of construction, a permit will be obtained from FFWCC to excavate all of the tortoise burrows and to move all captured tortoises to an approved offsite recipient site.

## B. Other Listed Species

No other listed species have been observed onsite or are known to utilize the property. Species that potentially may occur onsite are briefly discussed below.

### 1. Florida Pine Snake

The Florida pine snake (*Pituophis melanoleucus mugitis*) potentially could occur onsite in the area of occupied gopher tortoise habitat. Any pine snakes encountered during the tortoise relocation will be captured and relocated to the approved recipient site.

### 2. Eastern Indigo Snake

The eastern indigo snake (*Drymarchon corais couperi*) will occasionally occupy areas of gopher tortoise habitat. However, this species requires large expanses of undeveloped land. It is unlikely that the property supports a population of eastern indigo snakes due to the amount of surrounding development and relatively small amount of gopher tortoise habitat. The developer will follow the *Standard Protection Measures for the Eastern Indigo Snake* that was developed by FWS in 2013 to ensure that any indigo snakes that occur onsite are not harmed.

### 3. Wood Stork and Other Listed Wading Birds

The wood stork (*Mycteria americana*) and other state listed wading birds will forage in open areas of shallow water. These birds typically will not forage in areas with a dense canopy. The deeper wetlands on the subject property have a relatively dense canopy that discourages foraging by these listed species. Potentially there may be foraging in the small area of cleared wetland under the power lines on the northern parcel near the eastern property boundary. However, such use would be incidental. This power line easement will remain after the property is developed.

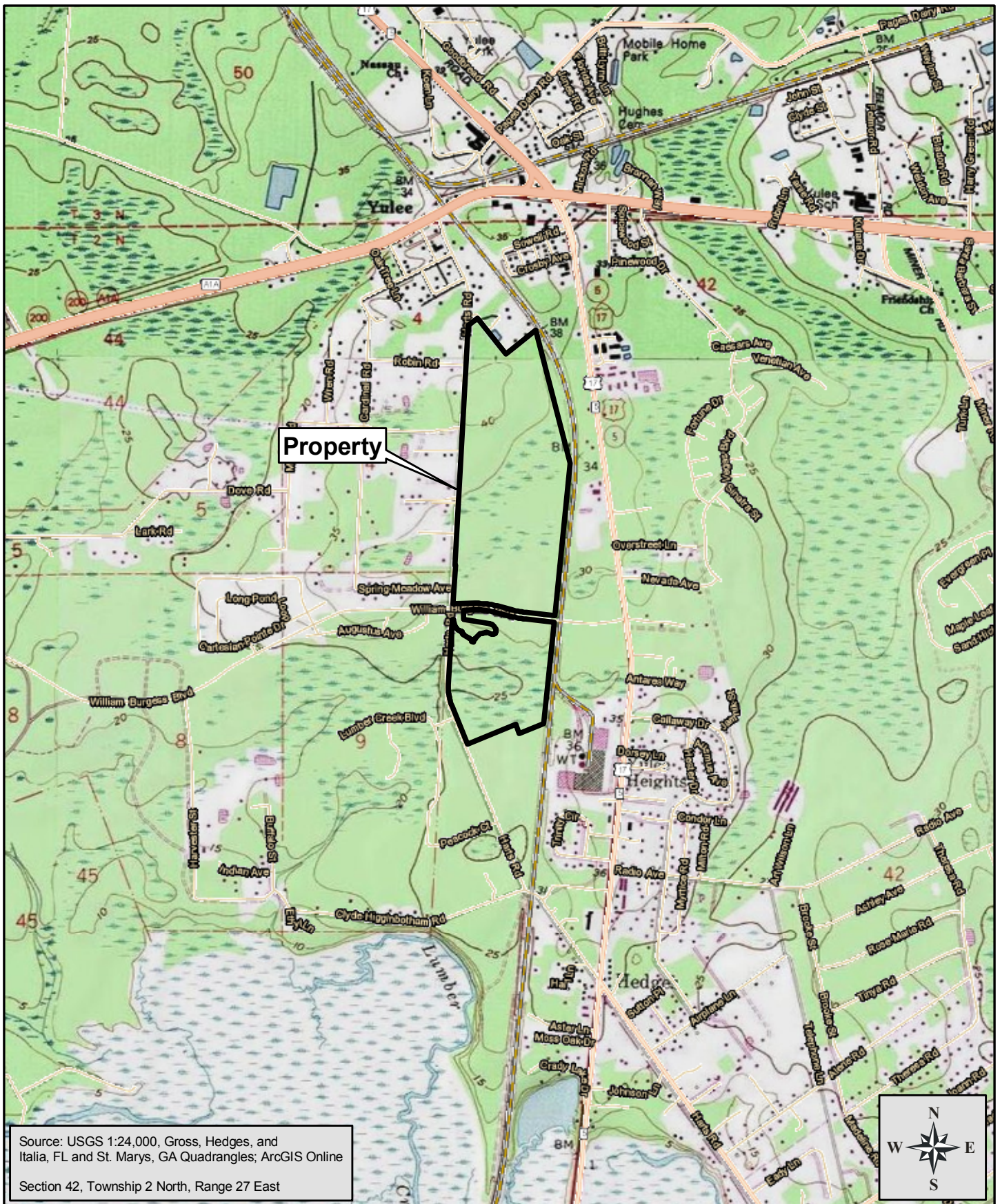
### 4. Red-Cockaded Woodpecker

The red-cockaded woodpecker (*Picoides borealis*) requires open areas of mature pines that are typically fire maintained. This habitat does not exist onsite.

### 5. Other Listed Species

Other listed species that are known to occur in Nassau County require habitat not found on the subject property, such as coastal beaches for nesting sea turtles and open water ways for the West Indian manatee (*Trichechus manatus*).





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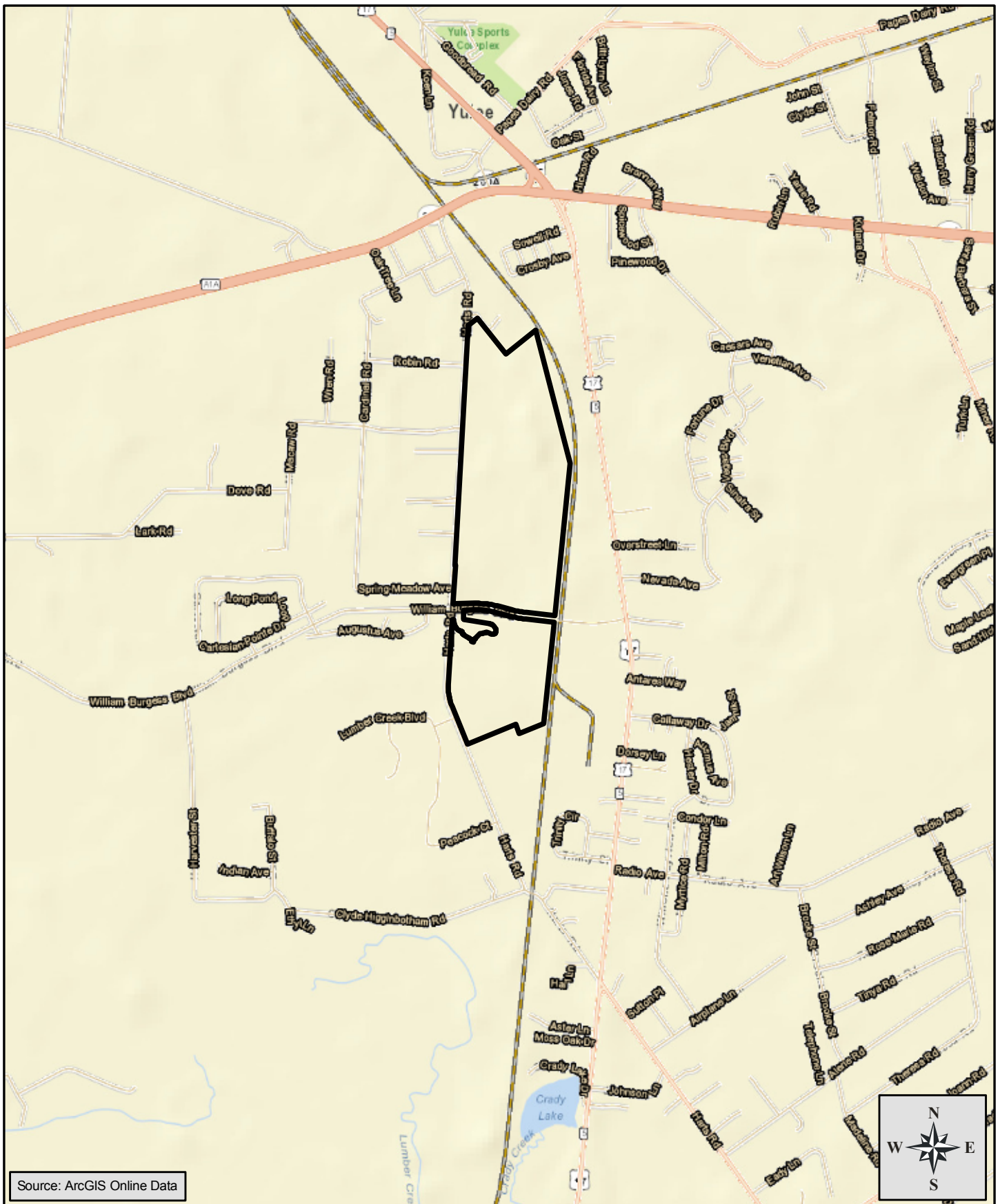
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# **Nassau Crossing** Nassau County, Florida *Location/Topographic Map*

Figure: 1  
Scale: 1" = 2,000'  
Date: October 2017

2017/Nassau\_Crossing/topo/10-9-17





Source: ArcGIS Online Data

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## Nassau Crossing

Nassau County, Florida

*Vicinity Map*

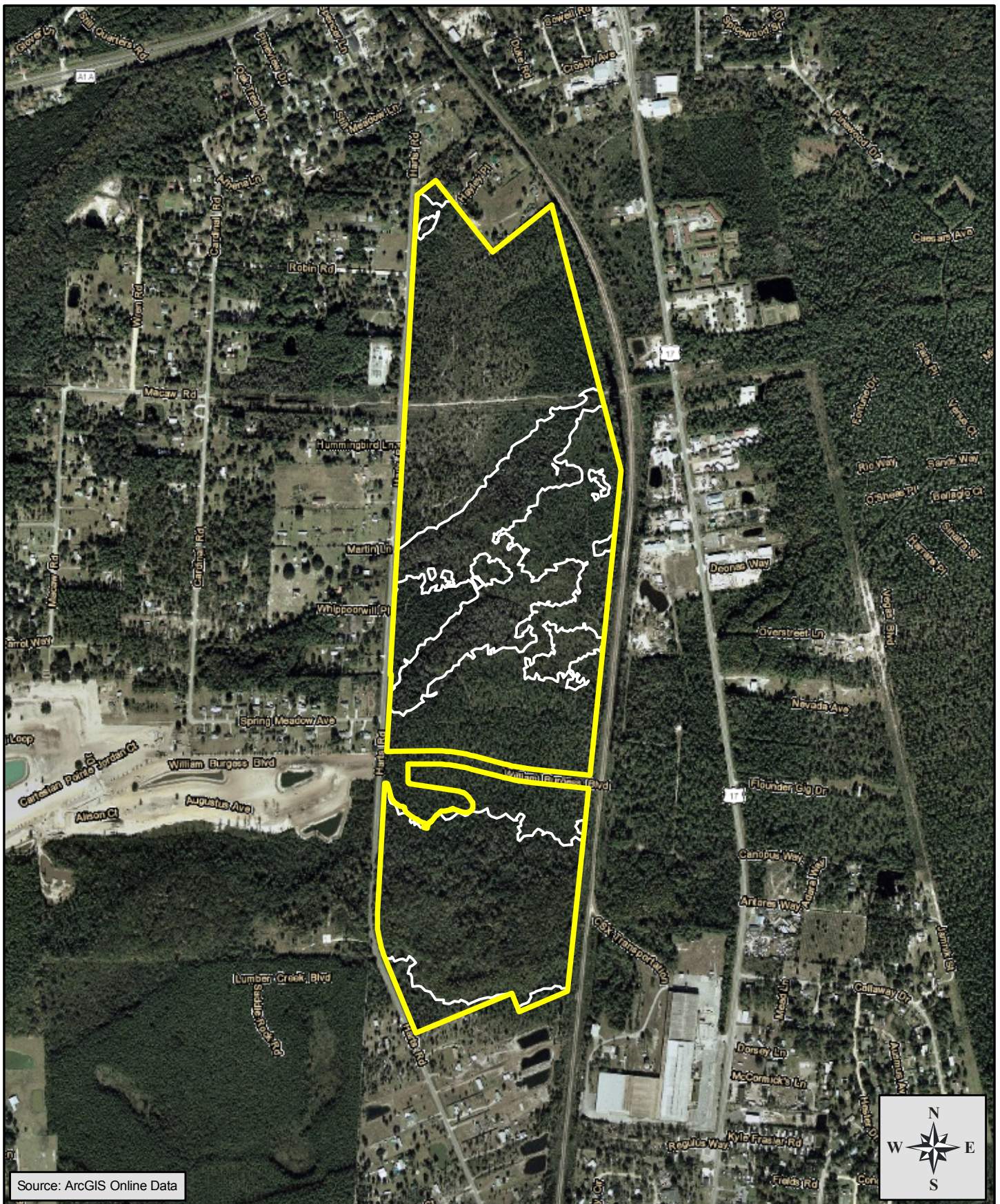
Figure: 2

Scale: 1" = 2,000'

Date: October 2017

2017/Nassau\_Crossing/vicinity/10-9-17





Source: ArcGIS Online Data

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## Nassau Crossing

Nassau County, Florida

*Current Aerial Photograph with Surveyed Wetlands*

Figure: 3

Scale: 1" = 1,000'



Date: October 2017

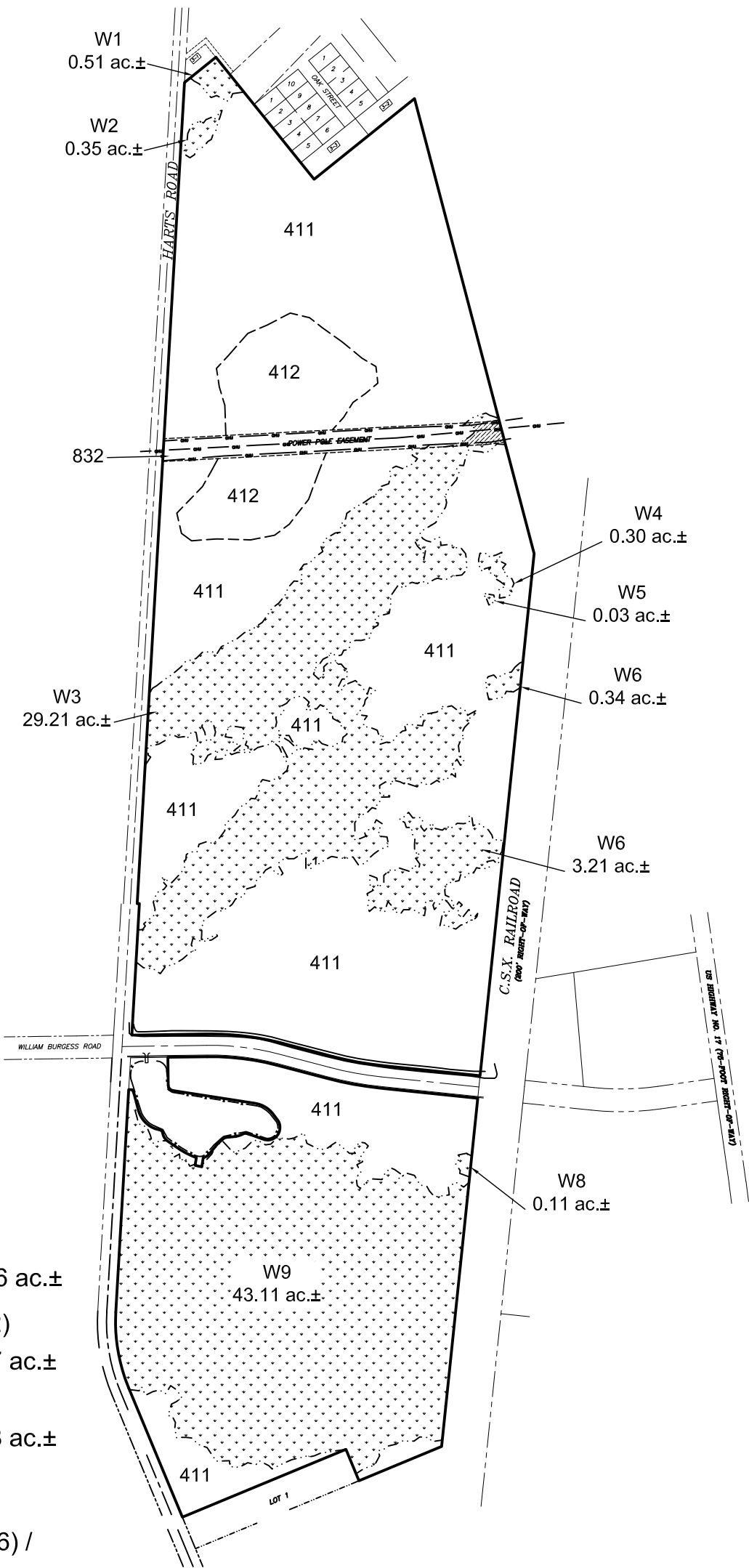
2017/Nassau\_Crossing/aerial/10-9-17



Legend:

- Project Boundary
- Wetland Line
- Vegetative Community Break

Uplands:	119.61 ac.±
411 - Pine Flatwoods (FLUCFCS 411)	106.26 ac.±
412 - Longleaf Pine - Xeric Oak (FLUCFCS 412)	10.27 ac.±
832 - Electrical Power Transmission Lines (FLUCFCS 832)	3.08 ac.±
Wetlands:	77.17 ac.±
 - Inland Ponds and Sloughs (FLUCFCS 616) / Hydric Pine Flatwoods (FLUCFCS 625)	76.82 ac.±
 - Vegetated Non-Forested Wetlands (FLUCFCS 640)	0.35 ac.±
Total: 196.78 ac.±	



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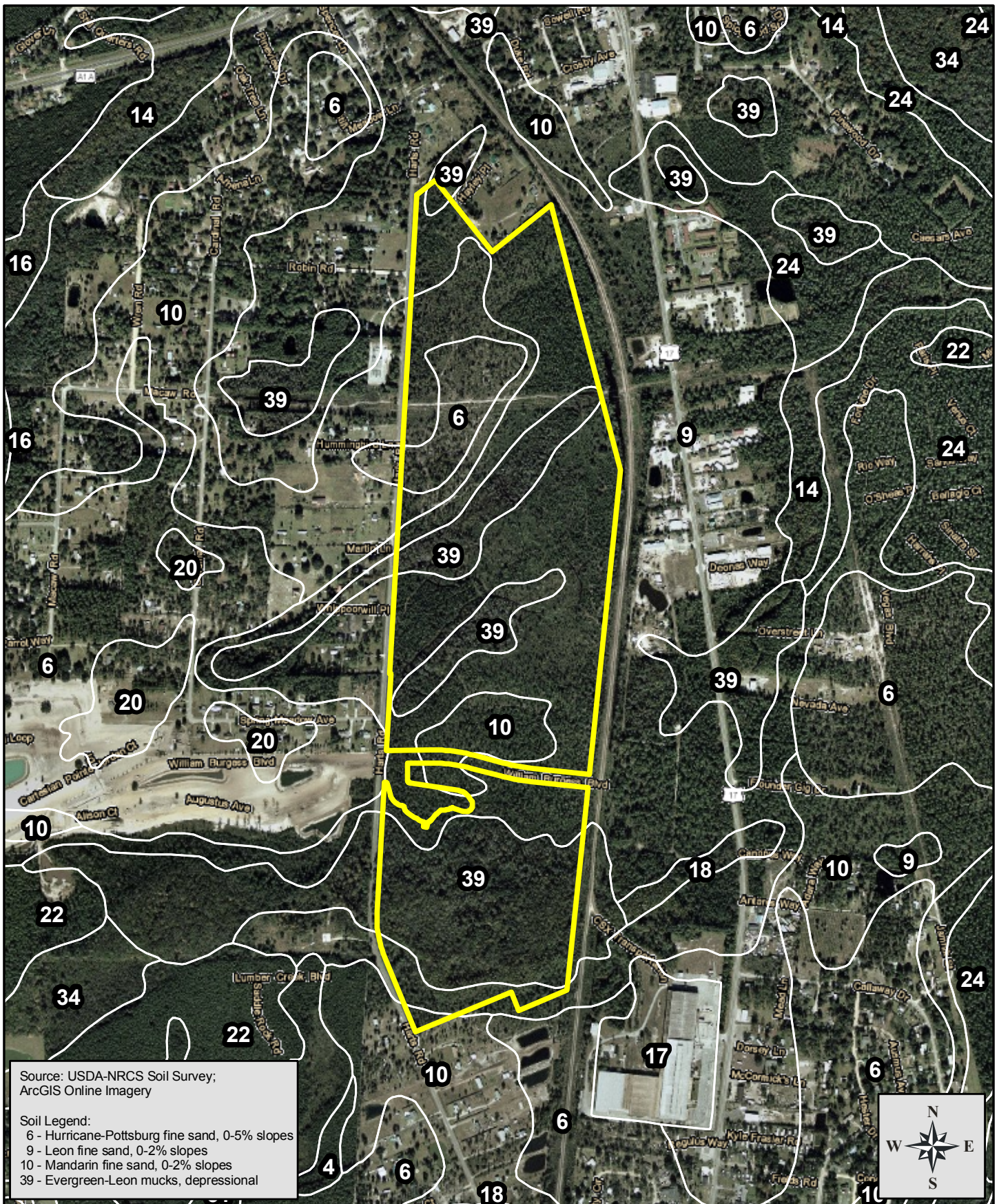
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## Nassau Crossing

Nassau County, Florida  
*Existing Site Conditions*

Figure:	4
Scale:	1"=600'
Date:	October 2017





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## Nassau Crossing

Nassau County, Florida

*Soils Map*

Figure: 5

Scale: 1" = 1,000'

Date: October 2017

2017/Nassau\_Crossing/soils/10-9-17