

COOK/COLEMAN HOLDINGS

**Environmental Assessment Report
for
Comprehensive Plan Amendment**

January 2020

Prepared for
Matovina & Company
12443 San Jose Boulevard, Suite 504
Jacksonville, FL 32223

Prepared by
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Peacock Consulting Group, LLC has completed a preliminary environmental assessment of three properties located on or adjacent to William Burgess Boulevard in Yulee, Florida. The purpose of this assessment was to determine the presence and approximate extent of wetlands and other surface waters regulated by the St. Johns River Water Management District (SJRWMD) and the presence and potential presence of species protected by the Florida Fish and Wildlife Conservation Commission (FWC) and the U.S. Fish and Wildlife Service (FWS). The results of this assessment are summarized in the following report.

I. Location of Properties

The land subject to the proposed comprehensive plan amendment comprises three clusters of real estate parcels. For the purposes of this assessment report, the three clusters have been designated North Property, Southwest Property and Southeast Property. These properties are located along either side of William Burgess Boulevard in Yulee, Florida (Figures 1, 2 and 3).

The properties are comprised of the following real estate parcels.

North Property, approximately 137.8 acres total

08-2N-27-0000-0003-0060

08-2N-27-0000-0003-0000

08-2N-27-0000-0002-0000 (portion north of William Burgess Boulevard)

Southwest Property, approximately 243.0 acres total

08-2N-27-0000-0003-0070

08-2N-27-0000-0004-0000

45-2N-27-0000-0002-0000

Southeast Property, approximately 63.4 acres total

08-2N-27-0000-0002-0000 (portion south of William Burgess Boulevard)

08-2N-27-0000-0007-0000

17-2N-27-0000-0001-0000

The North Property is bordered to the south and west mostly by William Burgess Boulevard, to the north by an unrecorded subdivision on Dove Road, and to the east by the Cartesian Pointe subdivision and part of the Nassau Station PUD.

The Southwest Property is bordered to the north by William Burgess Boulevard and the Robert M. Foster Justice Center (Nassau County government complex), to the east by the Florida State College at Jacksonville's Betty P. Cook Nassau Center and undeveloped timber land, to the south by tidal marsh wetlands connected to Nassau River, and to the west by undeveloped timber land.

The Southeast Property is bordered to the east by Harvester Road and Clyde Higginbotham Road, to the south by tidal marsh wetlands connected to Nassau River, to the west by undeveloped timber land, and to the north by William Burgess Boulevard.

II. Soils

The *Soil Survey of Nassau County, Florida* (U.S. Department of Agriculture, Soil Conservation Service) indicates that there are 13 soil mapping units on the subject properties as described below and depicted on Figure 4.

A. Upland Soils

Almost all of the uplands on the various properties are poorly drained and typical of pine flatwoods. Approximately 16.3 acres are somewhat poorly drained and occur in slightly higher areas in the flatwoods and in low bluffs along the brackish marshes.

1. Hurricane-Pottsburg fine sands, 0 to 5 percent slopes

Hurricane-Pottsburg fine sand is mapped on the North Property (approximately 21 acres), the Southeast Property (approximately 4 acres) and the Southwest Property (approximately 1 acre). This mapping unit comprises a combination of Hurricane fine sand and Pottsburg fine sand. Hurricane fine sand is a nearly level to gently sloping, somewhat poorly drained with a seasonal high water table ranging from 24 to 42 inches below the ground surface for 2 to 6 months during most years. Pottsburg fine sand is a nearly level, poorly drained with a seasonal high water table ranging from 12 to 24 inches below the ground surface for 1 to 4 months during most years, although it may recede to a depth of 24 to 42 inches for 4 months. Both soils have a spodic horizon (sometimes known as a hardpan layer) starting from 51 to 80 inches below the ground surface. Based on field observations the Hurricane fine sand component of this mapping unit appears to comprise approximately 6.5 acres on the North Property.

2. Albany fine sand, 0 to 5 percent slopes

The far southwest corner of the Southeast Property (approximately 0.36 acre) contains a very small area mapped as Albany fine sand. This is a nearly level to gently sloping, somewhat poorly drained soil with a seasonal high water table at a depth of 12 to 30 inches below the ground surface and receding to a depth of 30 to 48 inches below the ground surface for 4 to 8 months or more. This soil has an argillic layer of fine sandy loam or sandy clay loam starting from 40 to 78 inches below the ground surface.

3. Ocilla fine sand, 0 to 5 percent slopes

Approximately 0.44 acre along the western edge of the Southeast Property is mapped with Ocilla fine sand. This is a nearly level to gently sloping, somewhat poorly drained soil with a seasonal high water table at a depth of 12 to 30 inches for 2 to 6 months and at a depth of 30 to 50 inches for 3 to 6 months during most years. This soil has an argillic horizon starting around 37 inches below the ground surface.

4. Ridgewood fine sand, 0 to 5 percent slopes

The southern end of the Southeast Property is mapped as containing approximately 9.8 acres of Ridgewood fine sand. This is a nearly level to gently sloping, somewhat poorly drained soil with a seasonal high water table at a depth of 18 to 42 inches below the ground surface. This soil has no spodic or argillic horizon.

5. Mandarin fine sand

Mandarin fine sand is mapped in two relatively small areas on the North Property (approximately 5.4 acres) and the Southeast Property (approximately 5 acres). Field observations indicate that the actual extent of this soil is significantly smaller or may be mapped incorrectly. Mandarin fine sand is a nearly level, somewhat poorly drained soil with a seasonal high water table ranging from 18 to 42 inches below the ground surface for 4 to 6 months during most years. This soil has a spodic horizon starting within 30 inches of the ground surface.

6. Goldhead fine sand

Approximately 28 acres of the Southwest Property is mapped as Goldhead fine sand. This is a nearly level and gently sloping, poorly drained soil that has a seasonal high water table at a depth of less than 12 inches for 3 to 6 months and receding to a depth of 12 to 30 inches for 6 to 9 months of the year. This soil has an argillic horizon starting at a depth of 20 to 40 inches. The actual extent of this soil type based on the wetland survey of the property is approximately 9 acres.

7. Leon fine sand

Leon fine sand is mapped on almost all of the uplands on the North Property, approximately 17.8 acres on the Southwest Property and approximately 9 acres on the Southeast Property. This is a nearly level, poorly drained soil with a seasonal high water table at a depth of 6 to 18 inches below the ground surface for 1 to 4 months during most years. Leon fine sand has a spodic horizon starting within 30 inches of the ground surface.

8. Sapelo-Leon fine sand

Most of the uplands on the Southwest Property are mapped as Sapelo-Leon fine sand which is a mosaic of both soil types. Both of these soil types are nearly level and poorly drained with the seasonal high water table ranging from 6 to 18 inches below the ground surface. Leon fine sand has a spodic horizon starting within 30 inches of the ground surface. Sapelo fine sand has a spodic layer starting at a depth of 15 to 30 inches below the ground surface and an argillic horizon starting at a depth of 40 to 70 inches below the ground surface.

B. Wetland Soils

1. Goldhead-Meadowbrook fine sands, depressional

Goldhead-Meadowbrook fine sands, depressional is mapped on approximately 29 acres in the Southwest Property and approximately 37 acres in the Southeast Property. This mapping unit comprises a mosaic of Goldhead fine sand, depressional and Meadowbrook fine sand, depressional. Both of these soils are nearly level and very poorly drained. In an undrained condition, the seasonal high water table is at or near the ground surface for extended periods of time. Goldhead fine sand has an argillic horizon starting at a depth of 20 to 40 inches. Meadowbrook fine sand has an argillic horizon is generally between 40 and 80 inches below the ground surface.

2. Evergreen-Leon mucks, depressional

Most of the wetlands on the North Property and approximately 5.6 acres of wetlands on the Southwest Property are mapped as Evergreen-Leon mucks, depressional. This mapping unit comprises a mosaic of Evergreen depressional soil and Leon depressional soil. Both of these soils are nearly level and very poorly drained. In an undrained condition, the seasonal high water table is at or above the ground surface for extended periods of time. Evergreen fine sand tends to occur in lower areas and has a surface layer of muck between 6 and 14 inches deep and has a spodic horizon that starts around 26 inches below the ground surface. Wesconnett fine sand may have a surface layer of muck up to 7 inches deep and has a spodic horizon starting around 12 inches below the ground surface.

3. Ellabelle mucky fine sand, frequently flooded

Portions of the wetlands on all of the properties are mapped as Ellabelle mucky fine sand. This is a nearly level, very poorly drained soil that naturally occurs along drainageways. In an undrained condition, the water table is at or above the ground surface for 6 to 9 months during most years. This soil has an argillic horizon starting between 20 and 40 inches below the ground surface. The Southwest Property has two areas mapped with this soil type that are natural uplands and have been mapped incorrectly.

4. Croatan muck, frequently flooded

Approximately 24 areas near the southern end of the Southwest Property is mapped as Croatan muck. This is a nearly level, very poorly drained soil that has a seasonal high water table at or near the ground surface during most of the year. This soil has a surface layer of muck ranging from 16 to 51 inches in thickness.

5. Tisonia mucky peat, frequently flooded

The tidal marshes abutting the southern boundaries of the Southwest Property and Southeast Property are mapped as Tisonia mucky peat. This is a nearly level, very poorly drained soil that

is inundated twice each day during high tides. This soil has a surface layer of muck ranging in thickness from 20 to 40 inches.

III. Vegetation

The existing vegetative communities and land uses have been characterized pursuant to the Florida Department of Transportation publication *Florida Land Use, Cover and Forms Classification System* (FLUCFCS) as depicted on Figure 5 and described below. The extent of wetlands regulated by the St. Johns River Water Management District (SJRWMD) had previously been established for all of the Southwest Property and most of the North Property pursuant to formal jurisdictional determination # 107488-4 which was issued by SJRWMD on April 4, 2018. The approximate extent of wetlands on the balance of the North Property and all of the Southeast Property was mapped by Peacock Consulting Group, LLC and depicted on Figure 5.

A. Uplands	302.60 acres
1. Pine Flatwoods (FLUCFCS 411)	192.52 acres

Most of the uplands comprise pine flatwoods that were managed for many years as commercial pine plantation. The majority of the trees have been harvested within the recent past, leaving widely scattered “seed trees”. Currently these areas are being characterized as pine flatwoods. Relatively small areas of pine plantation in the northeast corner of the North Property have not been timbered but are included in the pine flatwoods description.

The canopy comprises widely scattered slash pine (*Pinus elliottii*). The understory and ground cover vegetation is open and dominated by such species as saw palmetto (*Serenoa repens*), bitter gallberry (*Ilex glabra*) and bracken fern (*Pteridium aquilinum*).

2. Improved Pasture (FLUCFCS 211)	27.58 acres
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The Southwest Property contains areas of open field that have been characterized as pasture. These areas are vegetated with various grasses, such as broomsedge (*Andropogon* sp.), and early successional species.

3. Improved Pasture/Pine Flatwoods (FLUCFCS 211/411)	33.33 acres
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The Southwest Property contains areas of open field with widely scattered pines in the canopy.

4. Improved Pasture/Temperate Hardwoods (FLUCFCS 211/425)	10.76 acres
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The southern end of the Southeast Property contains an area of open field with scattered mature live oaks (*Quercus virginiana*).

5. Hardwood – Conifer Mixed (FLUCFCS 434) 12.40 acres

The Southwest Property contains areas with a canopy dominated by various hardwoods such as live oak, water oak (*Quercus nigra*), southern magnolia (*Magnolia grandiflora*), and pignut hickory (*Carya glabra*) along with scattered slash pine and loblolly pine (*Pinus taeda*).

6. Temperate Hardwoods (FLUCFCS 425) 15.75 acres

All three properties contain areas of temperate hardwood forest. These areas have a canopy dominated mostly by live oak.

7. Trail Roads (FLUCFCS 814) 10.26 acres

The North Property and Southwest Property contain a network of dirt timber roads.

- B. Wetlands and Other Surface Waters 136.40 acres

1. Inland Ponds and Sloughs (FLUCFCS 616) 117.89 acres

Most of the wetlands have been characterized as inland ponds and sloughs. These wetlands include a combination of deeper pockets of swamps that regularly hold standing water, linear drainageways that have meandering channels of flowing water, and transitional areas along the upper edges of hydric pine flatwoods that are regularly saturated at or near the ground surface. For the purposes of this assessment report, the various subtypes of forested wetland have not been split out separately.

The canopy of the deeper wetlands includes such species as blackgum (*Nyssa sylvatica* var. *biflora*), pond cypress (*Taxodium ascendens*), and red maple (*Acer rubrum*). The canopy in other areas includes such species as laurel oak (*Quercus laurifolia*), sweetgum (*Liquidambar styraciflua*), sweet bay (*Magnolia virginiana*), loblolly bay (*Gordonia lasianthus*), and slash pine. Some of the wetlands have a canopy dominated mostly by slash pine. The ground cover vegetation in the lower areas includes such species as sphagnum moss (*Sphagnum* sp.), royal fern (*Osmunda regalis*), Virginia chain fern (*Woodwardia virginica*), buttonbush (*Cephalanthus occidentalis*), and dwarf bluestem (*Sabal minor*). The ground cover vegetation in other areas includes such species as fetterbush (*Lyonia lucida*), waxmyrtle (*Morella cerifera*), sweet gallberry (*Ilex coriacea*), cinnamon fern (*Osmunda cinnamomea*), and netted chain fern (*Woodwardia areolata*). The pine dominated wetlands also have a ground cover of such species as red root (*Lachnanthes caroliniana*), beak rush (*Rhynchospora* spp.), yellow-eyed grass (*Xyris* spp.), and various wet grasses.

2. Wet Pine Plantation (FLUCFCS 441W) 11.41 acres

The North Property and Southwest Property contain areas of wet pine flatwoods that have been managed for many years as pine plantation. These areas still have a canopy of planted rows of slash pine mixed with naturally occurring hardwoods such as loblolly bay. The understory and

ground cover vegetation include such species as red root, beak rush, yellow-eyed grass, and various wet grasses.

3. Brackish Marsh (FLUCFCS 642) 2.14 acres

Relatively small areas of brackish marsh are located along the southern boundaries of the Southeast Property and Southwest Property. The vegetation in these areas is dominated by such species as black needle rush (*Juncus roemarianus*), sand cord grass (*Spartina bakeri*) and saw grass (*Cladium jamaicense*).

4. Ditches (FLUCFCS 510) 4.96 acres

The North Property and Southwest Property contain a series of ditches bordering the timber roads.

IV. Protected Species

The various properties were inspected for the presence and potential presence of species listed as protected by the Florida Fish and Wildlife Conservation Commission (FWC) and the U.S. Fish and Wildlife Service (FWS) as listed in the FWC publication *Florida's Endangered and Threatened Species, Updated December 2018*. A list of candidate species was first selected based on the types of habitat onsite and the geographic location of the project. Pedestrian transects were walked through representative areas of wildlife habitat on each property. Field work was performed at various times of the day during the months of November and December 2019 and January 2020.

A. Gopher Tortoise

The gopher tortoise (*Gopherus polyphemus*) is listed as a threatened species by FWC. It occupies certain types of upland with better drained soils ranging from somewhat poorly drained to excessively well drained. Areas with somewhat poorly drained soils typically provide only marginal tortoise habitat due to the relatively shallow depth to the seasonal high water table. Approximately 47 acres of the property are mapped with somewhat poorly drained soils: Hurricane – Pottsburg fine sands, Albany fine sand, Ocilla fine sand, Ridgewood fine sand, and Mandarin fine sand. These areas were inspected to confirm if they provide suitable habitat for gopher tortoises. In certain areas the true extent of somewhat poorly drained soils is smaller than what is mapped in the published soil survey. In other areas the vegetation is too dense to provide suitable gopher tortoise habitat. For example, many areas mapped with somewhat poorly drained soil have a dense ground cover of saw palmetto and bitter gallberry and do not have adequate forage for tortoises.

Based on field observations suitable gopher tortoise habitat occurs in one area near the southeast corner of the North Property (approximately 8.5 acres) and in two areas of the Southeast Property (approximately 6 acres at the southern end and approximately 3.5 acres at the northern end). Pedestrian transects were walked throughout each of these areas. Two tortoise burrows

were identified on the North Property, and two tortoise burrows were identified at the southern end of the Southeast Property.

Prior to any land development activities occurring, all areas of suitable habitat will be inspected by an authorized gopher tortoise agent (100% survey). If any tortoise burrows will be impacted by proposed development, a tortoise relocation permit will be obtained. All active and inactive tortoise burrows will be excavated, and all captured tortoises will be relocated to an approved offsite recipient property.

B. Gopher Tortoise Commensal Species

A number of protected species use gopher tortoise burrows as shelter, including the eastern indigo snake (*Drymarchon corais couperi*) and the Florida pine snake (*Pituophis melanoleucus mugitus*).

The eastern indigo snake is listed by FWC and FWS as a threatened species. It requires very large tracts of undeveloped land, typically containing large areas of occupied gopher tortoise habitat. No indigo snakes or evidence of indigo snakes were observed on the project site or are known to occur in the immediate vicinity of the project. It is unlikely that indigo snakes occur onsite due to the very limited amount of occupied gopher tortoise habitat. The U.S. Army Corps of Engineers will likely add a special condition to any permit for future development of the property requiring the developer to follow the *Standard Protection Measures for the Eastern Indigo Snake*, published by the U.S. Fish and Wildlife Service on August 12, 2013.

The Florida pine snake is listed by FWC as a threatened species. It typically occurs in areas occupied by the pocket gopher (*Geomys pinetis*) as that is the preferred prey species. No pocket gophers occur onsite as the soils are too poorly drained. It is very unlikely that the Florida pine snake occupies the project site.

C. Wood Stork

The wood stork (*Mycteria americana*) is listed as a threatened species by both FWC and FWS. The primary diet of the wood stork is small fish that range from 1 to 6 inches in length, particularly top minnows and sunfish, although other prey such as crayfish and tadpoles may be eaten as well. The wood stork forages in water that ranges from 6 to 10 inches deep. They feed in freshwater marshes, narrow tidal creeks, and flooded tidal pools. Favored foraging areas are depressions in marshes and swamps where prey becomes concentrated during periods of falling water levels. The wood stork will not forage in areas with dense undergrowth vegetation and will typically not forage in areas with a closed canopy.

A wood stork was observed roosting in a tree along the southern edge of the Southeast Property. This species will forage along the edges of tidal creeks immediately south of the Southwest and Southeast Property. A small tidal creek is also located in the far southeast corner of the Southwest Property and appears to be located onsite. Most of the interior wetlands do not provide good foraging habitat for the wood stork due to the relatively dense canopy and/or dense undergrowth. Wood storks potentially could forage in the most open areas of wetland onsite that

have sufficient hydrology. However, use of these areas is expected to be sporadic. Proposed development of the property will not impact the deeper wetlands onsite that provide suitable foraging habitat for wood storks.

D. Other Listed Species

Other listed species which may utilize the property on occasion include the following wading birds: little blue heron (*Egretta caerulea*), tricolored heron (*Egretta tricolor*), and roseate spoonbill (*Platalea ajaja*), which are all listed as threatened by FWC. These listed wading birds forage in many of the same areas as the wood stork. None of these species were observed on any of the subject property but likely forage along the adjacent tidal creeks and may also intermittently forage in some of the deeper wetlands onsite. Development of the property is not anticipated to adversely impact any of these species.

Worthington's marsh wren (*Cistothorus palustris griseus*), which is listed by FWC as a threatened species, is known to nest along the edges of tidal creeks in this area of Nassau County during the months of March and April. No Worthington's marsh wrens have been observed onsite although they likely nest in the adjacent marsh to the south along the edges of tidal creeks. Development of the subject property is not anticipated to adversely impact this species.

The Southeastern American kestrel (*Falco sparverius paulus*) is listed as a threatened species by FWC. It is a non-migratory subspecies of the American kestrel that breeds in Florida. Southeastern American kestrels can only be positively identified during the months of May through August when the migratory population of American kestrel is absent. Southeastern American kestrels are cavity nesters and use abandoned woodpecker holes in large standing dead trees. This species feed on insects, lizards and small mammals and forages in large open areas such as sandhills, pine savannahs and fields. No Southeastern American kestrels are known to nest on the project site. No suitable nest trees have been identified to date. A follow up survey will be conducted between May and August prior to any site development occurring. No identified active nest trees will be disturbed. Development of the subject property is not anticipated to adversely impact this species.

The red-cockaded woodpecker (*Picoides borealis*) is listed by both FWC and FWS as an endangered species. It nests in colonies in open stands of mature pines. The woodpecker excavates the nest cavity in mature live pines, often longleaf pine (*Pinus palustris*). Although there are areas of open pine woods on the subject property, none of the pines are mature enough for cavity trees. Until recently these same areas had been actively managed as commercial slash pine plantation. No red-cockaded woodpeckers have been observed onsite or are known to utilize the property or the immediate vicinity of the property. Development of the subject property will not adversely impact this species.

The American bald eagle (*Haliaeetus leucocephalus*) is no longer listed by FWC or FWS as either a threatened or endangered species. However, the eagle is still protected by the Gold and Bald Eagle Protection Act and the Migratory Bird Treaty Act. The closest documented bald eagle nest (nest # NA001) is located approximately 5.4 miles to the east of the property near the

Amelia National Golf and Country Club. Development of the property will not adversely affect the American bald eagle.

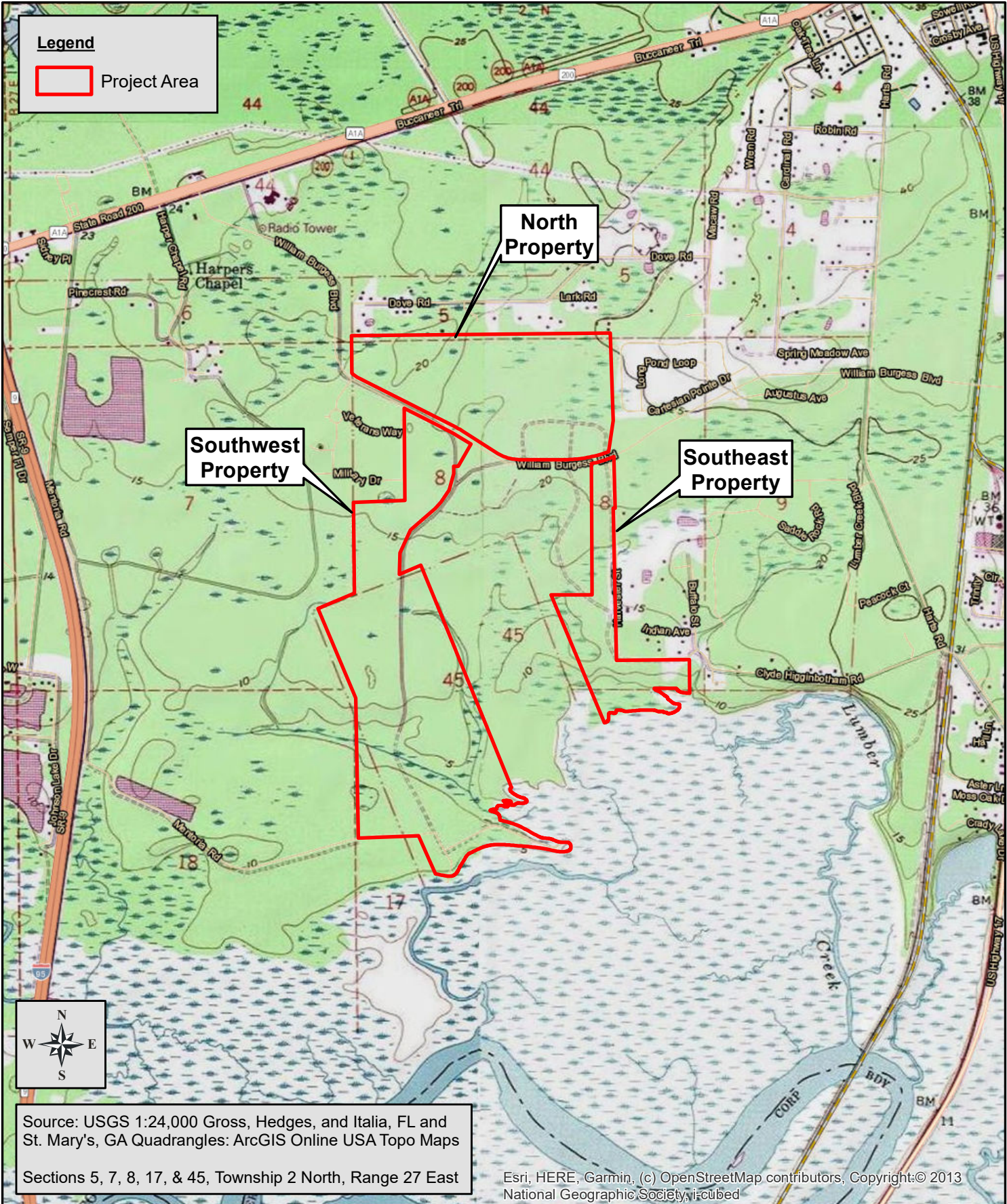
V. Conclusions

The only protected species observed during the protected species assessment are the gopher tortoise and the wood stork.

Approximately 18 acres of the property provide marginal habitat for the gopher tortoise. Based on a preliminary survey, only four tortoise burrows have been identified in these areas. Prior to any land development activities occurring, all areas of suitable habitat will be inspected by an authorized gopher tortoise agent (100% survey). If any tortoise burrows will be impacted by proposed development, a tortoise relocation permit will be obtained. All active and inactive tortoise burrows will be excavated, and all captured tortoises will be relocated to an approved offsite recipient property.

One wood stork was observed roosting on the edge of the salt marsh. Wood storks and other listed wading bird will forage in the adjacent salt marsh and along the edges of tidal creeks and may also forage, on occasion, in the deeper interior wetlands. Proposed development of the property will not impact the deeper wetlands onsite that provide suitable foraging habitat for these species.

Prior to any land development activities, additional wildlife surveys will occur in the more open areas of the property between May and August to confirm the absence of nesting Southeastern American kestrels.



Legend
 Project Area

North Property

Southwest Property

Southeast Property



Source: USGS 1:24,000 Gross, Hedges, and Italia, FL and St. Mary's, GA Quadrangles: ArcGIS Online USA Topo Maps
 Sections 5, 7, 8, 17, & 45, Township 2 North, Range 27 East

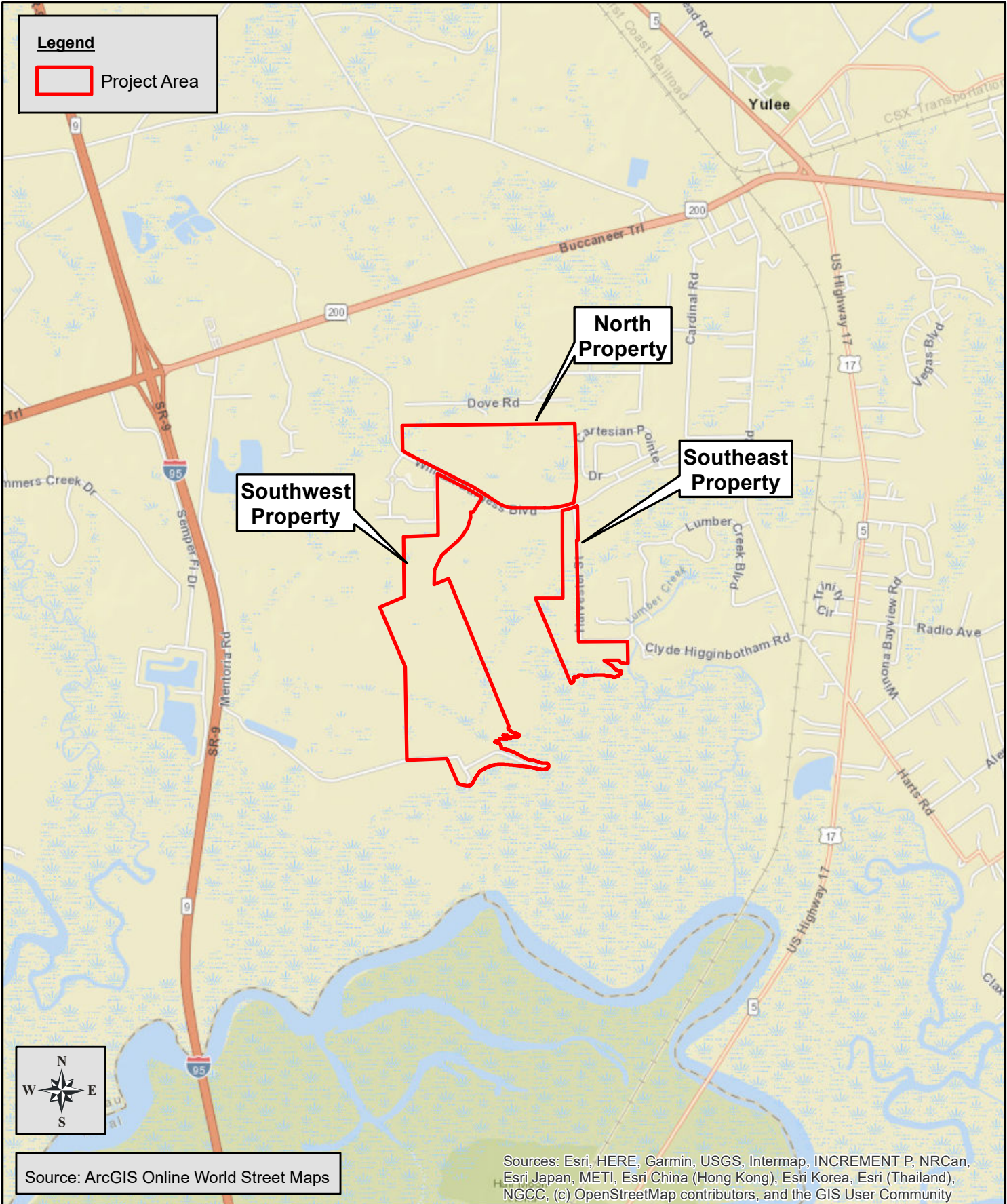
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Cook/Coleman Holdings
 Nassau County, Florida
 Location/Topographic Map

Figure: 1
 Date: 1-16-20



Legend

Project Area

North Property

Southwest Property

Southeast Property



Source: ArcGIS Online World Street Maps

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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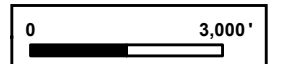
Cook/Coleman Holdings

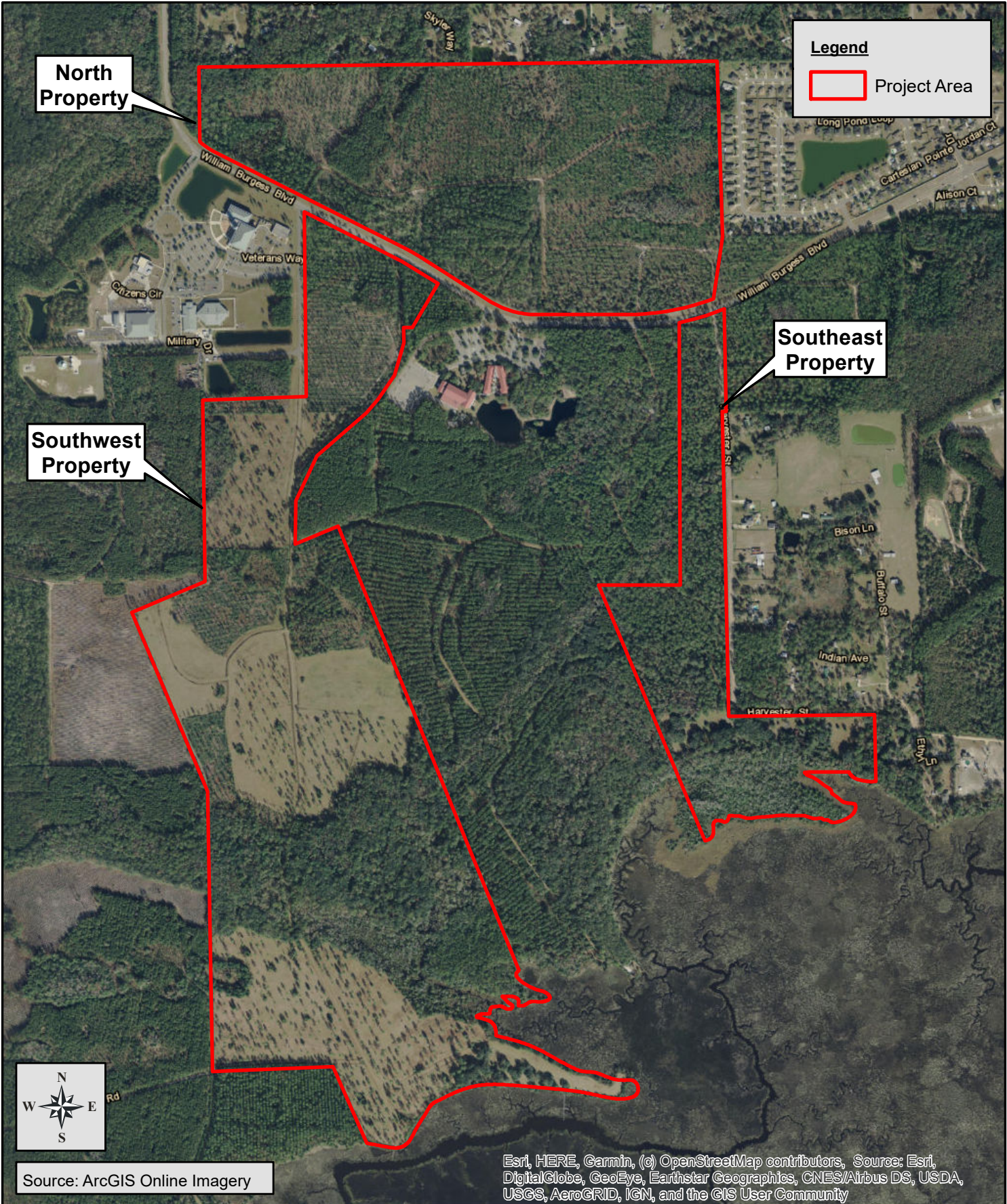
Nassau County, Florida

Vicinity Map

Figure: 2

Date: 1-16-20





North Property

Southwest Property

Southeast Property

Legend

Project Area



Source: ArcGIS Online Imagery

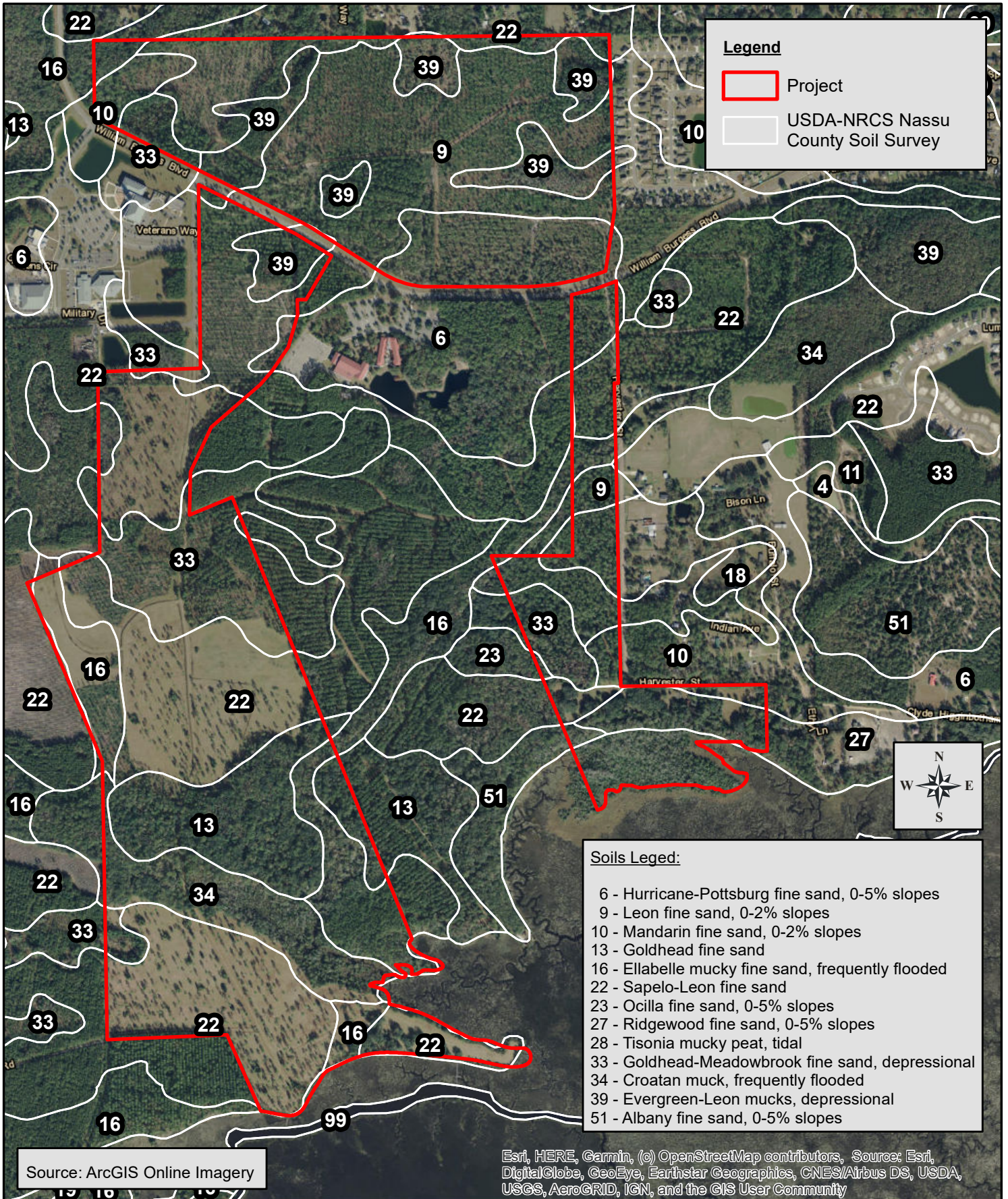
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Cook/Coleman Holdings
 Nassau County, Florida
Current Aerial Photograph

Figure:	3
Date:	1-16-20



Legend

- Project
- USDA-NRCS Nassau County Soil Survey

Soils Leged:

- 6 - Hurricane-Pottsburg fine sand, 0-5% slopes
- 9 - Leon fine sand, 0-2% slopes
- 10 - Mandarin fine sand, 0-2% slopes
- 13 - Goldhead fine sand
- 16 - Ellabelle mucky fine sand, frequently flooded
- 22 - Sapelo-Leon fine sand
- 23 - Ocala fine sand, 0-5% slopes
- 27 - Ridgewood fine sand, 0-5% slopes
- 28 - Tisonia mucky peat, tidal
- 33 - Goldhead-Meadowbrook fine sand, depressional
- 34 - Croatan muck, frequently flooded
- 39 - Evergreen-Leon mucks, depressional
- 51 - Albany fine sand, 0-5% slopes

Source: ArcGIS Online Imagery

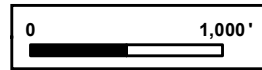
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Cook/Coleman Holdings
 Nassau County, Florida
Soils Map

Figure: 4
 Date: 1-16-20



Legend

- Project Area - 439.00 ac.±
- Detail Sheets
- Approximate Uplands
- Approximate Wetlands
- Approximate Surface Waters

Uplands - 302.60 ac.±

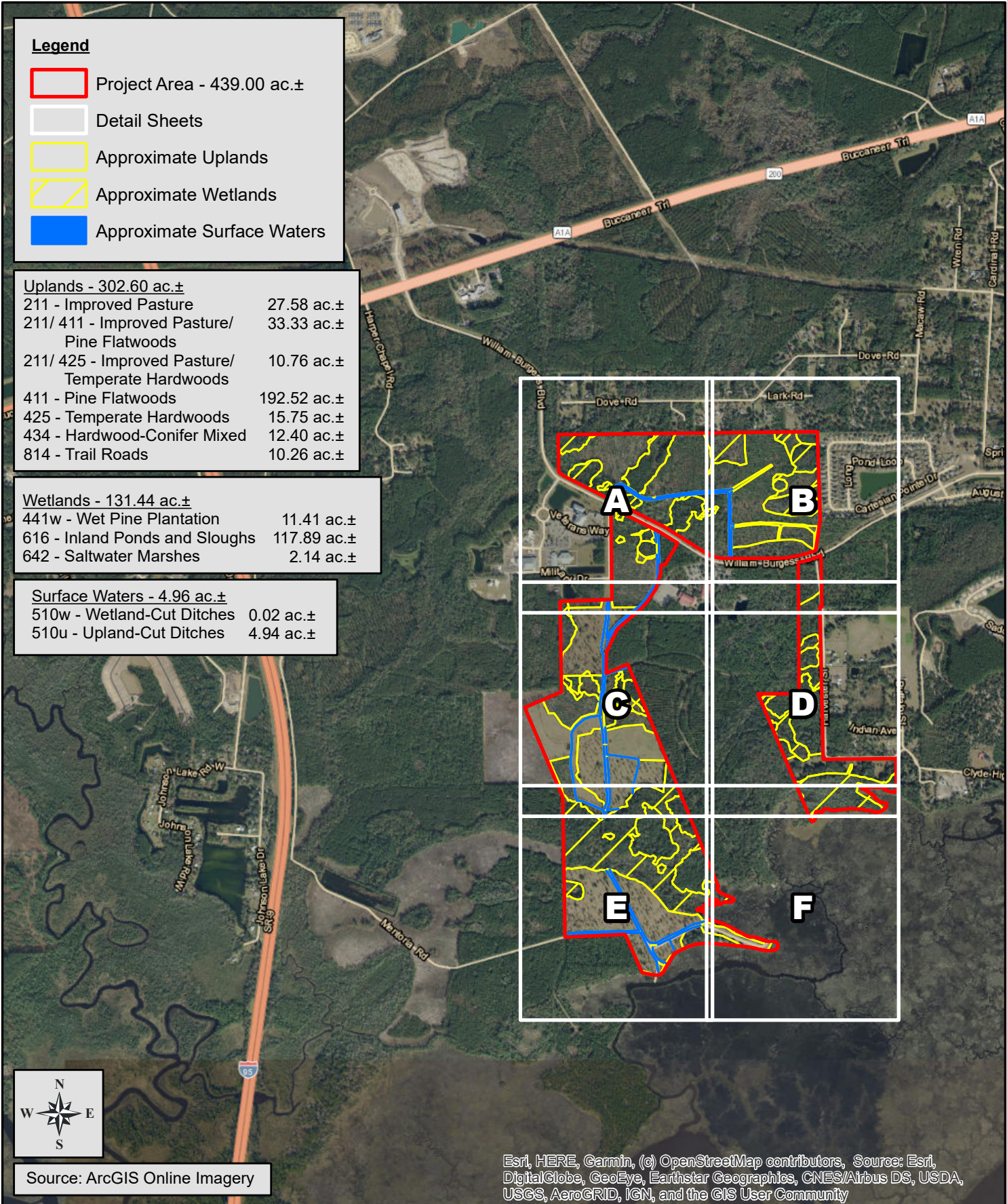
211 - Improved Pasture	27.58 ac.±
211/ 411 - Improved Pasture/ Pine Flatwoods	33.33 ac.±
211/ 425 - Improved Pasture/ Temperate Hardwoods	10.76 ac.±
411 - Pine Flatwoods	192.52 ac.±
425 - Temperate Hardwoods	15.75 ac.±
434 - Hardwood-Conifer Mixed	12.40 ac.±
814 - Trail Roads	10.26 ac.±

Wetlands - 131.44 ac.±

441w - Wet Pine Plantation	11.41 ac.±
616 - Inland Ponds and Sloughs	117.89 ac.±
642 - Saltwater Marshes	2.14 ac.±

Surface Waters - 4.96 ac.±

510w - Wetland-Cut Ditches	0.02 ac.±
510u - Upland-Cut Ditches	4.94 ac.±



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Nassau County, Florida
Existing Site Conditions

Figure: 5-Key Sheet





Date: 1-16-20

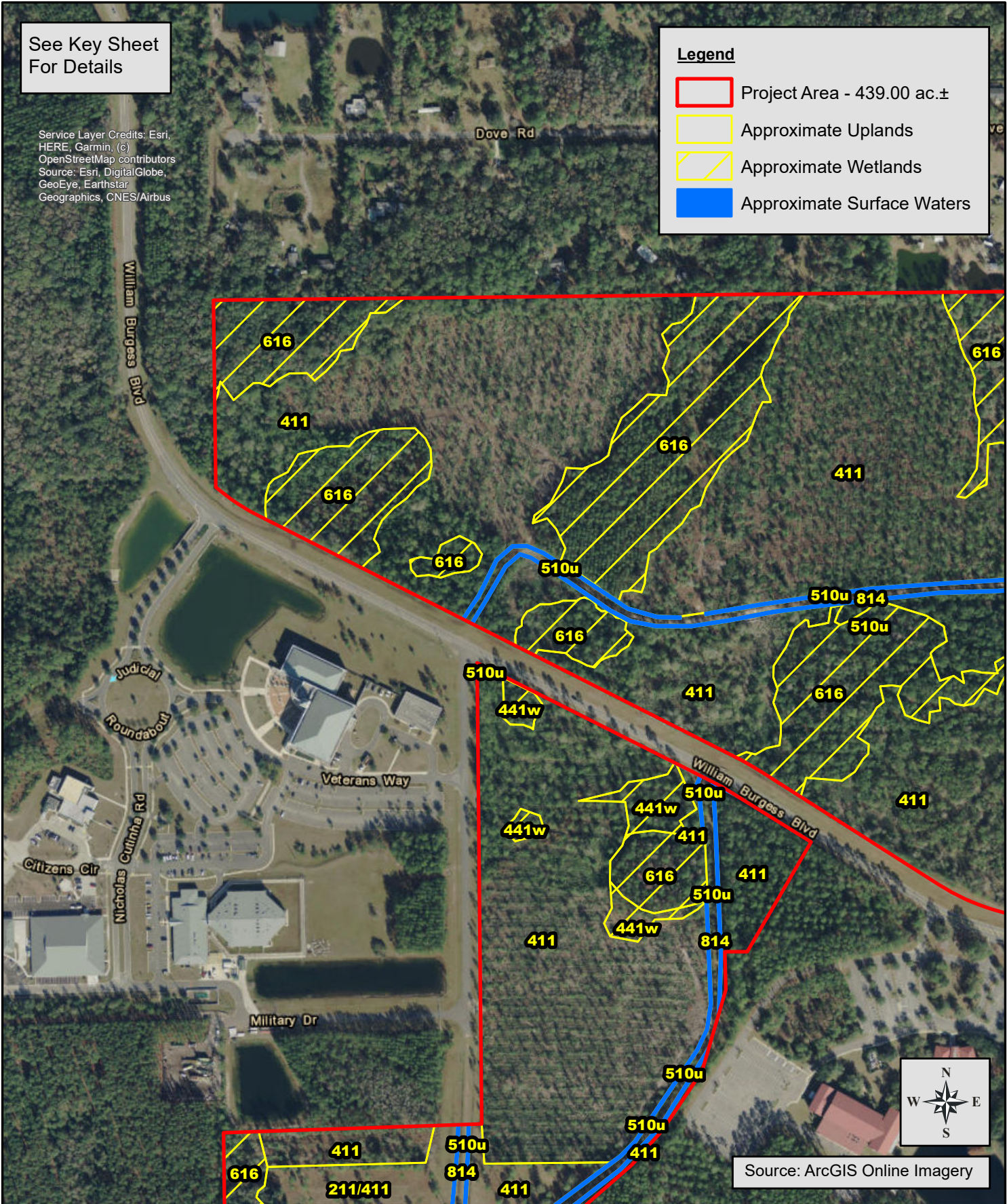


See Key Sheet
For Details

Service Layer Credits: Esri,
HERE, Garmin, (c)
OpenStreetMap contributors
Source: Esri, DigitalGlobe,
GeoEye, Earthstar
Geographics, CNES/Airbus

Legend

-  Project Area - 439.00 ac.±
-  Approximate Uplands
-  Approximate Wetlands
-  Approximate Surface Waters



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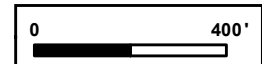


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Existing Site Conditions





Figure: 5-A
Date: 1-16-20

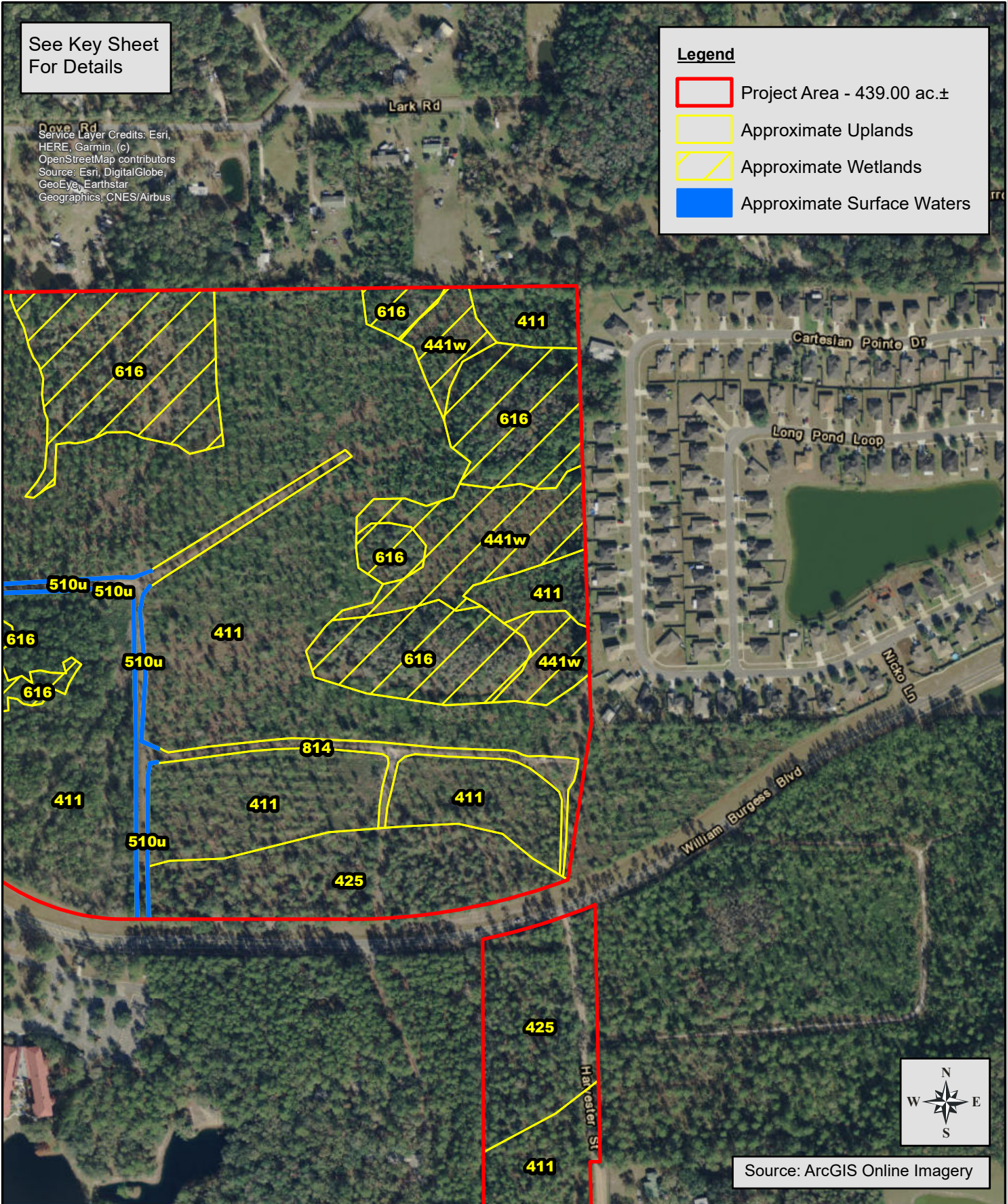


See Key Sheet
For Details

Service Layer Credits: Esri,
HERE, Garmin, (c)
OpenStreetMap contributors
Source: Esri, DigitalGlobe,
GeoEye, Earthstar
Geographics, CNES/Airbus

Legend

-  Project Area - 439.00 ac.±
-  Approximate Uplands
-  Approximate Wetlands
-  Approximate Surface Waters



Source: ArcGIS Online Imagery

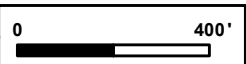
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Figure: 5-B
Date: 1-16-20



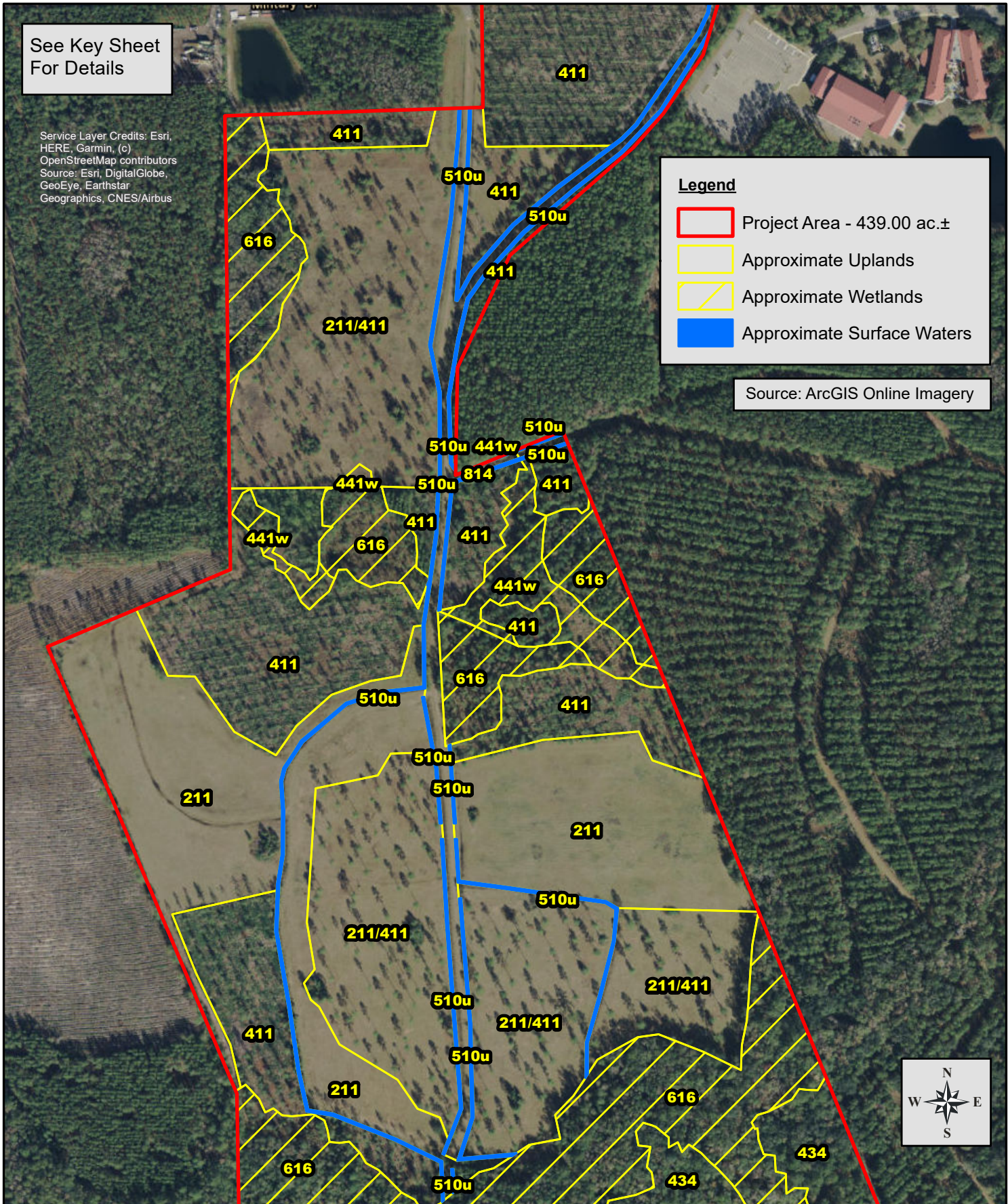
See Key Sheet
For Details

Service Layer Credits: Esri,
HERE, Garmin, (c)
OpenStreetMap contributors
Source: Esri, DigitalGlobe,
GeoEye, Earthstar
Geographics, CNES/Airbus

Legend

-  Project Area - 439.00 ac.±
-  Approximate Uplands
-  Approximate Wetlands
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Source: ArcGIS Online Imagery



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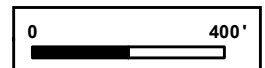
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Figure: 5-C

Date: 1-16-20







See Key Sheet
For Details

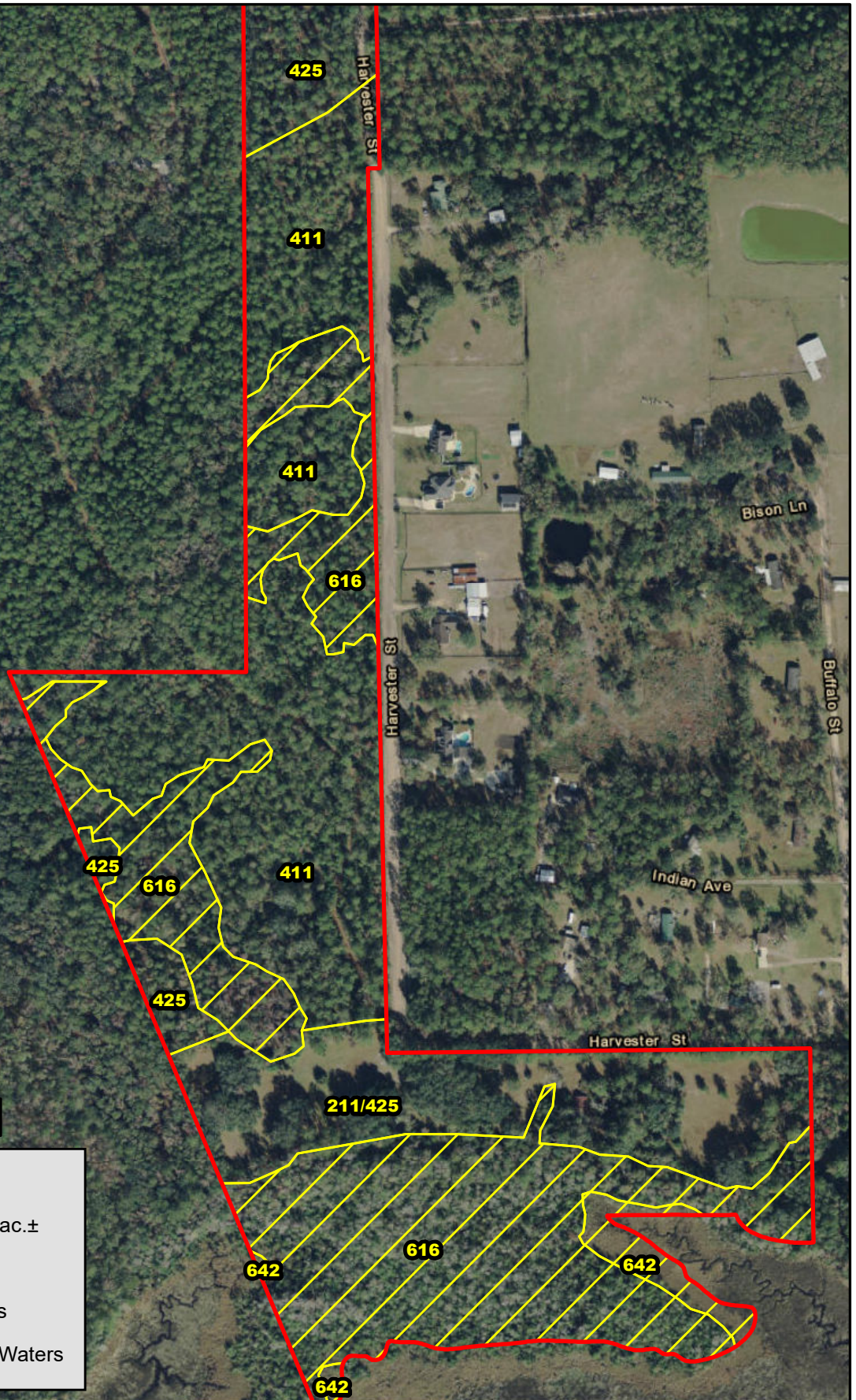
Service Layer Credits: Esri,
HERE, Garmin, (c)
OpenStreetMap contributors
Source: Esri, DigitalGlobe,
GeoEye, Earthstar
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Source: ArcGIS Online Imagery

Legend

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-  Approximate Surface Waters



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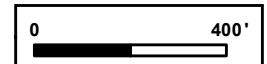
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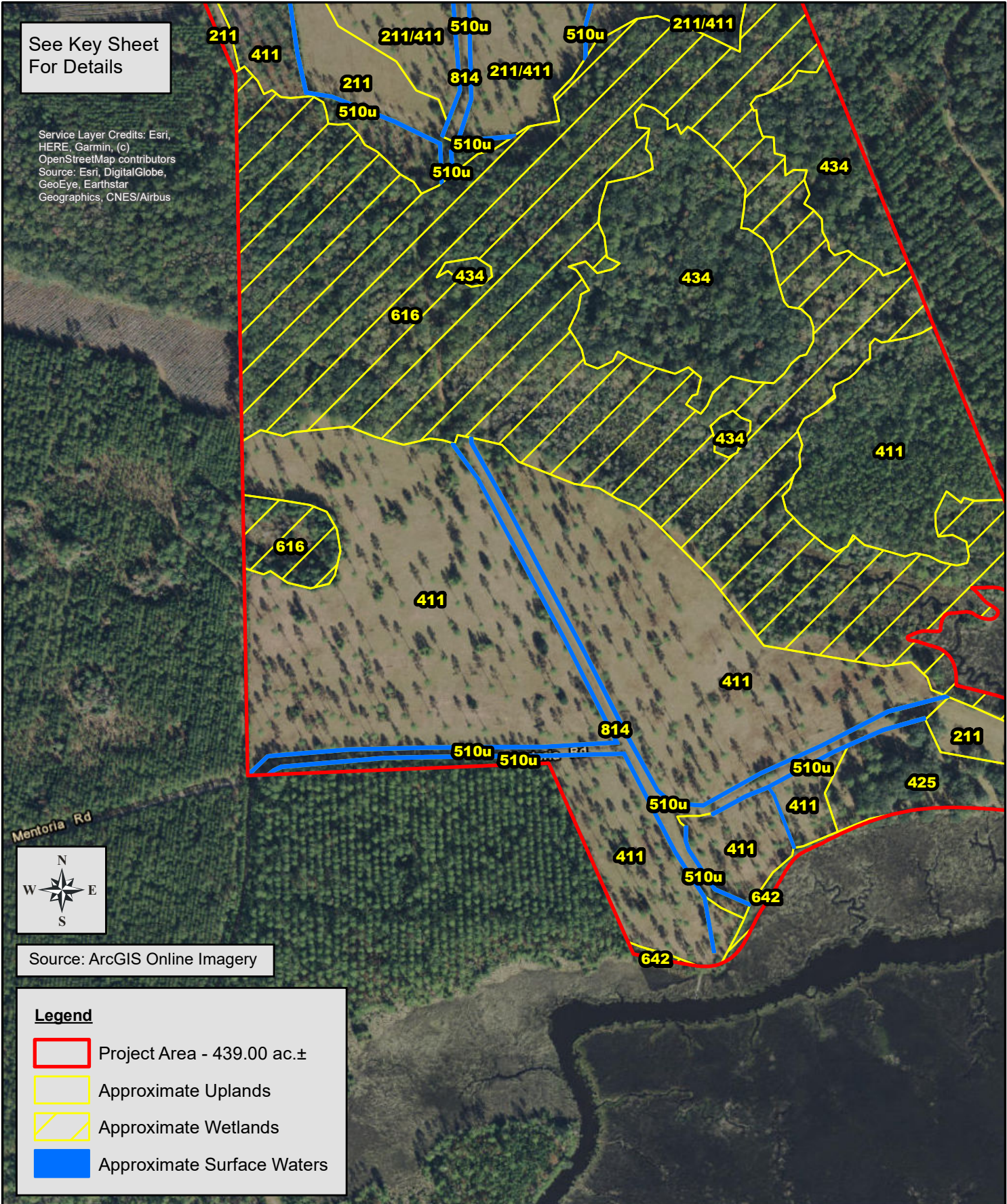
Figure: 5-D

Date: 1-16-20







See Key Sheet
For Details

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Source: Esri, DigitalGlobe,
GeoEye, Earthstar
Geographics, CNES/Airbus



Source: ArcGIS Online Imagery

Legend

-  Project Area - 439.00 ac.±
-  Approximate Uplands
-  Approximate Wetlands
-  Approximate Surface Waters

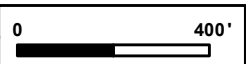
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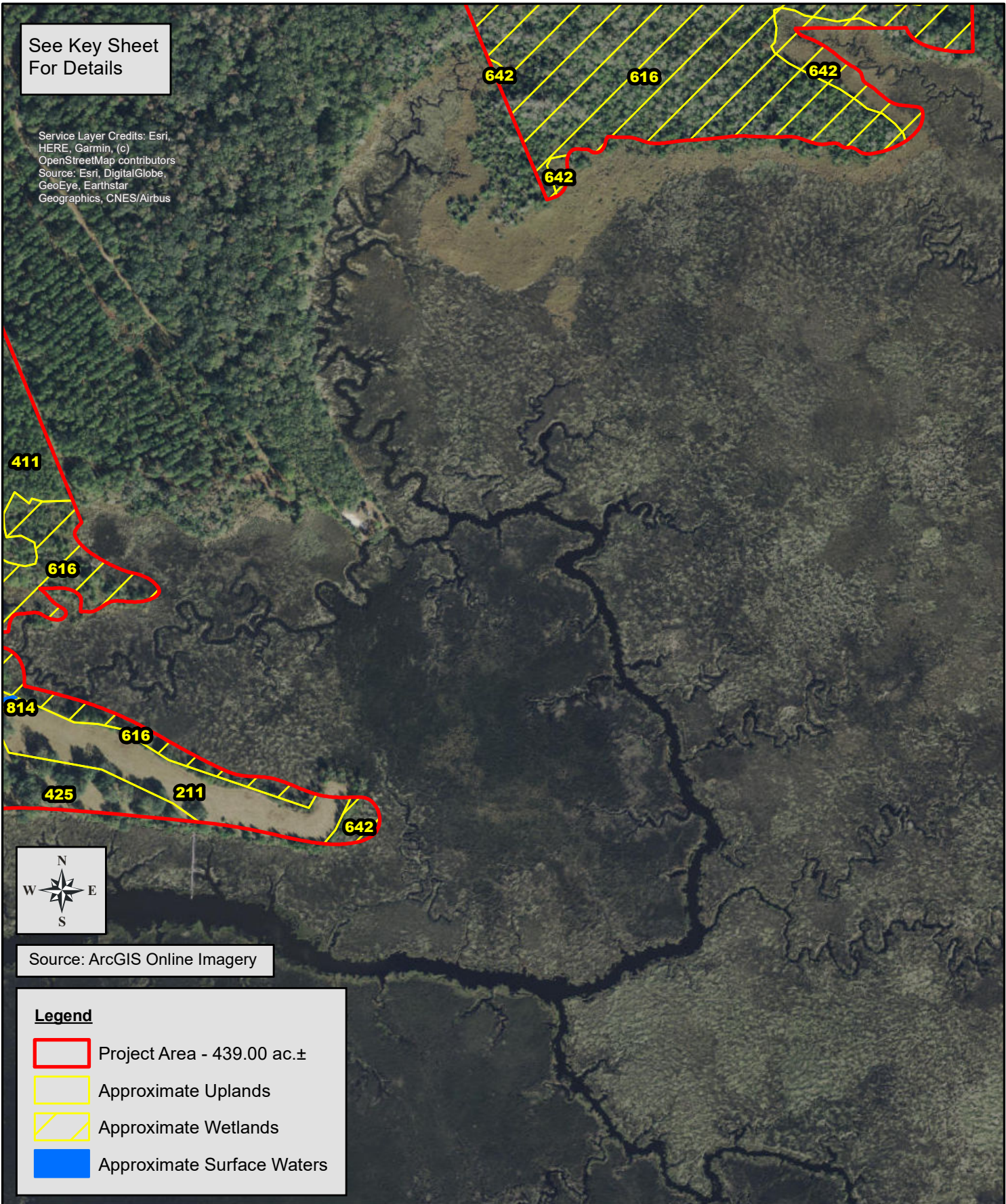
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Figure: 5-E
Date: 1-16-20







See Key Sheet
For Details

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OpenStreetMap contributors
Source: Esri, DigitalGlobe,
GeoEye, Earthstar
Geographics, CNES/Airbus



Source: ArcGIS Online Imagery

Legend

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-  Approximate Wetlands
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Figure: 5-F
Date: 1-16-20

