



REPLY TO  
ATTENTION OF

Regulatory Division  
North Permits Branch  
Cocoa Permits Section

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
COCOA REGULATORY OFFICE  
400 HIGH POINT DRIVE, SUITE 600  
COCOA, FLORIDA 32926

**April 23, 2019**

## ***PUBLIC NOTICE***

Permit Application Number SAJ-2018-03540 (SP-JSC)

TO WHOM IT MAY CONCERN: The Jacksonville District of the U.S. Army Corps of Engineers (Corps) has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. § 1344) as described below:

APPLICANT: Blue Origin Florida, LLC  
Scott Henderson, Program Manager  
8082 Space Commerce Way  
Cape Canaveral, FL 32953

WATERWAY AND LOCATION: The 89.5 acre *Blue Origin South Campus Expansion Phase 1* project would affect wetlands and surface waters located within the Indian River Lagoon Watershed (12-digit Hydrologic Unit Code 030802020302); site drains west ~2.8 miles to the Indian River Lagoon. The project is located within National Aeronautics and Space Administration's (NASA) John F. Kennedy Space Center (KSC); west of Space Commerce Way, in Section 12, Township 23 South, Range 36 East, Brevard County, Florida.

Directions to the site are as follows: From I-95, take Exit 215 and proceed east on SR 50 toward Titusville; turn right onto SR 405 East (Columbia Blvd.), and continue east on NASA Causeway, which becomes NASA Parkway W.; turn right onto Space Commerce Way and proceed approximately two miles – the project site is on the right just south of Ransom Rd. ditch.

APPROXIMATE CENTRAL COORDINATES: Latitude: 28.50355°  
Longitude: -80.67924°

### **PROJECT PURPOSE:**

Basic: Commercial space manufacturing.

Overall: The overall project purpose is the construction of additional Commercial Space Launch Vehicle Manufacturing Facilities that support both the existing rocket manufacturing facilities on the North Campus (SAJ-2015-02725), and use of existing launch facilities (SAJ-2016-00426) constructed at Cape Canaveral Air Force Station, at KSC.

EXISTING CONDITIONS: The site topography varies from approximately -2.0 to 7 feet North American Vertical Datum (NAVD) 88. Based on current site conditions and land cover classifications (Florida Land Use, Cover, and Forms Classification System (FLUCCS), Florida Department of Transportation, January 1999) the project area is composed of one upland community, one surface water community, and two wetland communities.

Of the 89.5-acre site, uplands characterized as Abandoned Citrus Groves (FLUCCS Code 2210) comprise 82.2 acres. The Abandoned Citrus Grove community consists of previously cleared areas that were planted with citrus. This low-quality community is dominated by varying densities of Brazilian pepper (*Schinus terebinthifolius*) and guinea grass (*Panicum maximum*). Scattered native species include sabal palm (*Sabal palmetto*), beautyberry (*Callicarpa Americana*), wild coffee (*Psychotria nervosa*), shortleaf wild coffee (*Psychotria sulzneri*), marlberry (*Ardisia escallonioides*), crownbeard (*Verbesina virginica*), and caesarweed (*Urena lobata*). The upland communities exhibit no indication of hydrology near the surface and soils lack hydric indicators within 6 inches of the soil surface.

The Surface Water community (FLUCCS Code 5000) comprises 4.6 acres and consists of upland cut surface water canals and ditches with vegetation limited to the upper edge of the banks. However, only 0.59 acre of these surface waters are considered US Army Corps of Engineers (USACE) jurisdictional. The vegetation consists of herbaceous species such as bluestem (*Andropogon glomeratus and virginicus*), arrowhead (*Sagittaria latifolia*), marsh pennywort (*Hydrocotyl umbelata*), and cattail (*Typha sp.*). These areas were historically inundated.

The two wetland communities found on site are Exotic Wetland Hardwoods (FLUCCS Code 6190) and Willow and Elderberry (FLUCCS Code 6180). The Exotic Wetland Hardwoods community comprises 2.45 acres and is dominated by Brazilian pepper. Native species observed in these wetlands include scattered saltbush (*Baccharis halimifolia*), Carolina willow (*Salix caroliniana*), wax myrtle (*Myrica cerifera*), bluestem, arrowhead, marsh pennywort, cattail, and sawgrass (*Cladium mariscoides*). Surface water is present within the lower elevations, with hydric soils that support inundation at or above the surface for extended periods. Hydric soil indicators consisted of Umbric surface and/or Polyvalue. These wetlands are low quality due to the high densities of Brazilian pepper.

The second wetland community, Willow and Elderberry (FLUCCS Code 6180), comprises 0.26 acre. The dominant vegetation within these wetlands are saltbush (*Baccharis halimifolia*), Carolina willow, wax myrtle, bluestem, arrowhead, marsh pennywort, cattail, and sawgrass. These wetlands lack the significant Brazilian pepper density. This wetland may be a historic borrow area as limestone is near the soil surface. The area is low quality and connected to an upland cut surface water ditch that flows west and south.

**PROPOSED WORK:** The applicant seeks authorization to fill 3.3 acres of waters of the United States (2.71 acres of wetlands and 0.59 acre of surface waters) for construction of the Blue Origin South Campus Expansion Phase 1, which includes an access road from the existing North Campus, a driveway connection to Space commerce way, a large warehouse and supporting infrastructure, several stormwater management ponds, and clearing for future facilities.

**AVOIDANCE AND MINIMIZATION INFORMATION:** The applicant has provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment:

“The Applicant has executed a 50-year lease with NASA KSC for the project site. During lease negotiations with KSC, the Applicant worked closely with KSC in association with the 2004 International Space Research Park Environmental Assessment and other data sources to draft a lease boundary that was situated completely within abandoned citrus groves and avoided any impacts to a vast wetland mosaic west of the project site. In addition, the lease boundary also avoided and/or minimized impacts to the large low-quality wetlands within the former citrus grove along the west boundary of the project site.

The development design proposes a large contiguous stormwater pond that occupies the majority of the west boundary of the site. A 50- to 75-foot maintained vegetated buffer will be established on the west side of the lease boundary. The pond and vegetated buffer serve to site facilities as far away as possible from the undisturbed wetlands and uplands to the west of the lease boundary.”

**COMPENSATORY MITIGATION:** The applicant has offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment:

A total of 1.44 federal compensatory mitigation credits would be purchased from Neoverde Mitigation Bank to offset the proposed direct (1.33 functional capacity units) and secondary (0.11 functional capacity units) wetland impacts.

**CULTURAL RESOURCES:** The US Army Corps of Engineers (Corps) is not aware of any known historic properties within the permit area. By copy of this public notice, the Corps is providing information for review. Our final determination relative to historic resource impacts is subject to review by and coordination with the State Historic Preservation Officer and those federally recognized tribes with concerns in Florida and the Permit Area.

**ENDANGERED SPECIES:** The Corps has determined the proposed project may affect, but is not likely to adversely affect (NLAA), wood stork (*Mycteria americana*) and Eastern indigo snake (*Drymarchon corais couperi*). The proposed activity is within the Core Foraging Area (CFA) of a wood stork rookery; the project supports marginally Suitable Foraging Habitat (SFH) for wood stork. Based on the *Effect Determination Key for the Wood Stork in Central and North Peninsular Florida* (dated September 2008), the

Corps determination sequence was A>B>C>D>E = NLAA. The project provides suitable foraging habitat SFH compensation in accordance with the Clean Water Act section 404(b)(1) guidelines and is not contrary to the habitat management guidelines. SFH compensation within the Core Foraging Area consists of purchasing mitigation credits; is not contrary to the Service's *Habitat Management Guidelines For The Wood Stork In The Southeast Region* and in accordance with the CWA section 404(b)(1) guidelines.

Based on the *Eastern Indigo Snake Effect Determination Key* (dated January 25, 2010; August 13, 2013 Addendum), the Corps determination sequence resulted in A>B>C>D>E = NLAA". This determination results from there being less than 25 acres of xeric habitat, and fewer than 25 active/inactive gopher tortoise burrows, on the project site. All gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the burrow vicinity. If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a 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. 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 indigo snake, no work will commence until the snake has vacated the vicinity of proposed work; the permittee agrees to use the Standard Protection Measures for the Eastern Indigo Snake (dated August 12, 2013). The Corps has U.S. Fish and Wildlife Service (USFWS) concurrence for the proposed activities through use of the aforementioned determination keys.

The site is located within the consultation area for Atlantic salt marsh snake (*Nerodia clarkii taeniata*), Florida scrub-jay (*Aphelocoma coerulescens*) and piping plover (*Charadrius melodus*). Suitable habitat for these species does not occur on, or adjacent to, the subject property. The Corps determined there would be no effect on these species. The Corps has determined the proposal would have no effect on any other federally listed threatened or endangered species or designated critical habitat.

**ESSENTIAL FISH HABITAT (EFH):** This notice initiates consultation with the National Marine Fisheries Service on EFH as required by the Magnuson-Stevens Fishery Conservation and Management Act 1996. The proposal would impact approximately 3.3 acres of freshwater wetlands and surface waters which ultimately discharge to the Indian River Lagoon. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or Federally managed fisheries in the Banana River. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service (NMFS).

**NOTE:** This public notice is being issued based on information furnished by the applicant. This information has not been verified or evaluated to ensure compliance with laws and regulation governing the regulatory program. The jurisdictional line has been verified by Corps personnel.

**AUTHORIZATION FROM OTHER AGENCIES:** Water Quality Certification may be required from the Florida Department of Environmental Protection and/or one of the state Water Management Districts.

**COMMENTS** regarding the potential authorization of the work proposed should be submitted in writing to the attention of the District Engineer through the Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, Florida 32926 within 21 days from the date of this notice.

The decision whether to issue or deny this permit application will be based on the information received from this public notice and the evaluation of the probable impact to the associated wetlands. This is based on an analysis of the applicant's avoidance and minimization efforts for the project, as well as the compensatory mitigation proposed. **QUESTIONS** concerning this application should be directed to the project manager, Jeffrey Collins, in writing at the Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, Florida, 32926, by electronic mail at Jeffrey.S.Collins@usace.army.mil, by fax at (321) 504-3803, or by telephone at (321) 504-3771 extension 13.

**IMPACT ON NATURAL RESOURCES:** Coordination with USFWS, Environmental Protection Agency (EPA), the NMFS, and other Federal, State, and local agencies, environmental groups, and concerned citizens generally yields pertinent environmental information that is instrumental in determining the impact the proposed action will have on the natural resources of the area.

**EVALUATION:** The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including cumulative impacts thereof; among these are conservation, economics, esthetics, general environmental concerns, wetlands, historical properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food, and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people. Evaluation of the impact of the activity on the public interest will also include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act or the criteria established under authority of Section 102(a) of the Marine Protection Research and Sanctuaries Act of 1972. A permit will be granted unless its issuance is found to be contrary to the public interest.

The Corps is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other Interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be

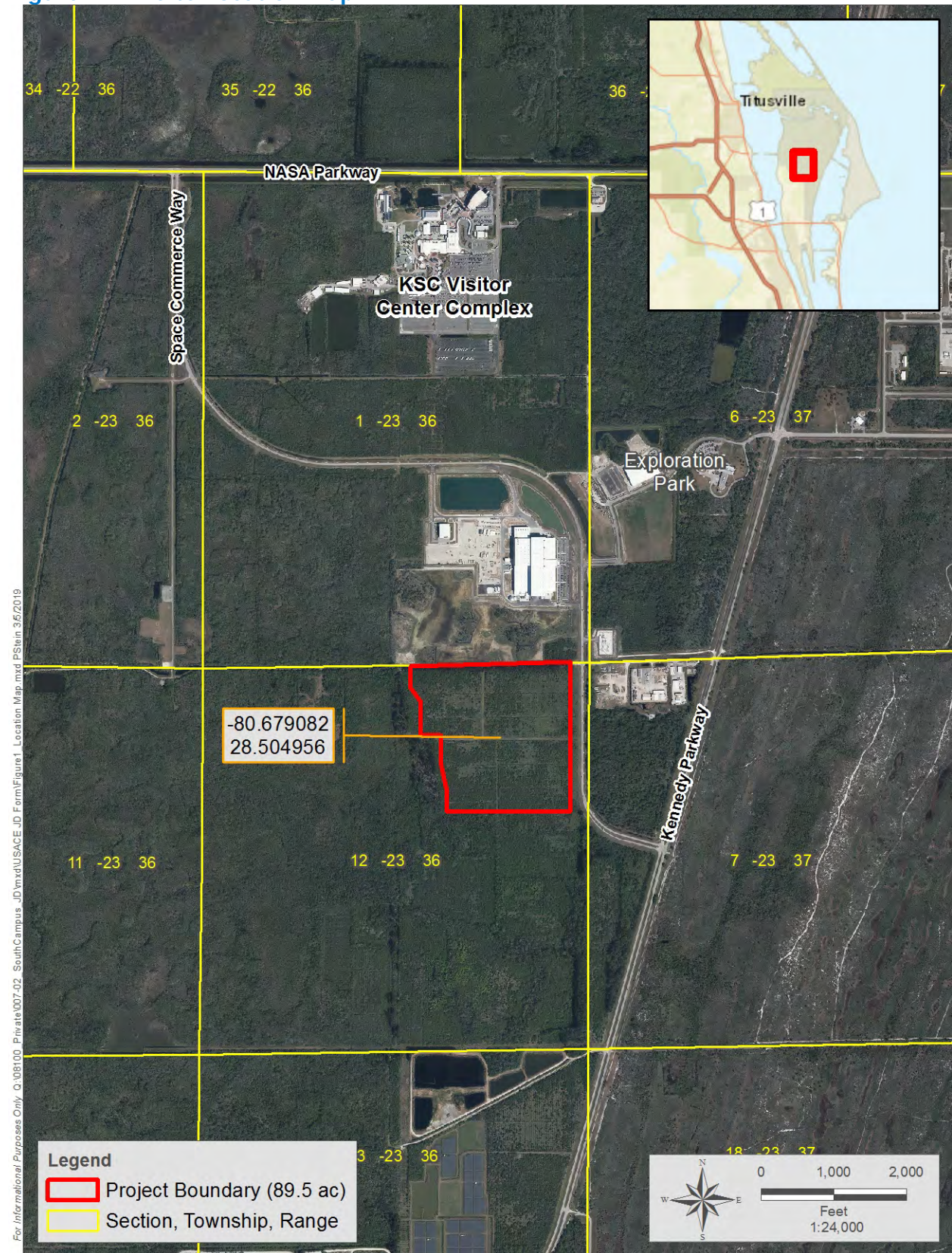
considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this determination, comments are used to assess impacts to endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

**COASTAL ZONE MANAGEMENT CONSISTENCY:** In Florida, the State approval constitutes compliance with the approved Coastal Zone Management Plan.

**REQUEST FOR PUBLIC HEARING:** Any person may request a public hearing. The request must be submitted in writing to the District Engineer within the designated comment period of the notice and must state the specific reasons for requesting the public hearing.



**Figure 1-1 Site Location Map**





Indian River

Banana River

Canals Flowing to  
Indian River (4.0 miles)

Flow to Sykes  
Creek (6.0 miles)

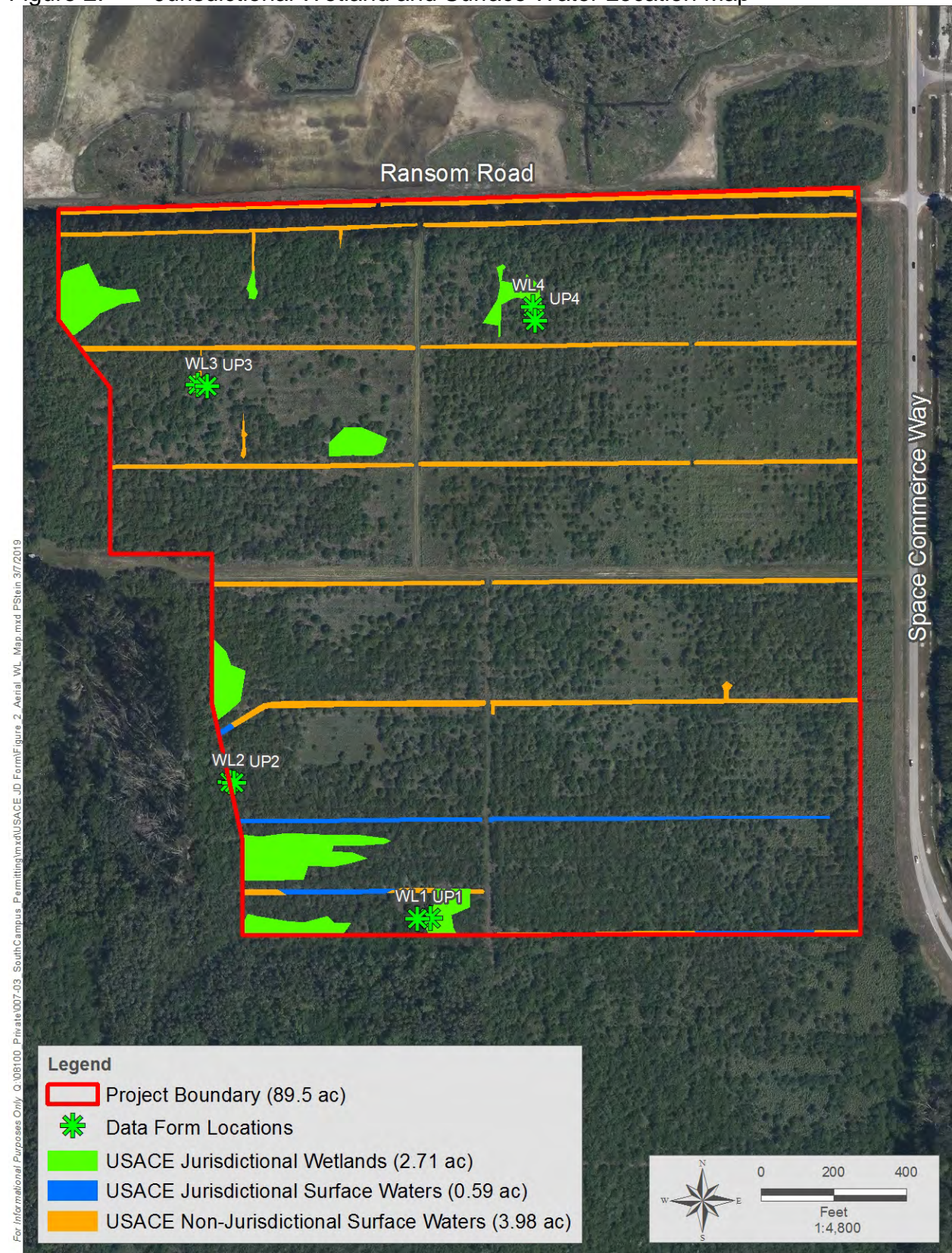
Legend

-  Project Boundary
-  Upland
-  Wetland
-  Hydrologic Flow Path





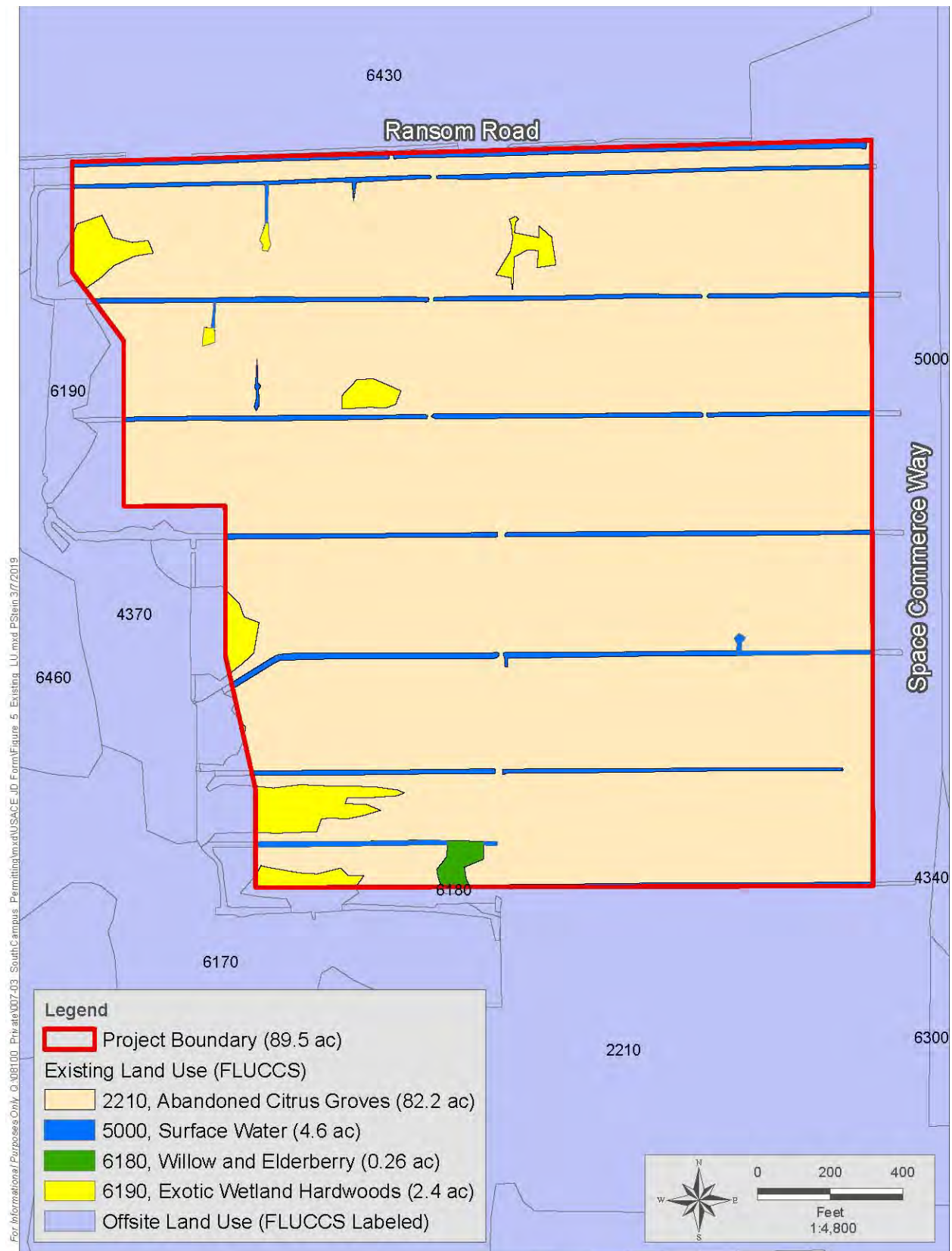
Figure 2. Jurisdictional Wetland and Surface Water Location Map



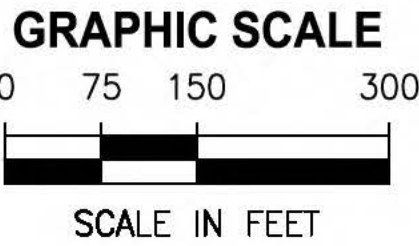
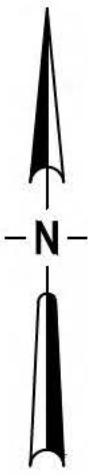
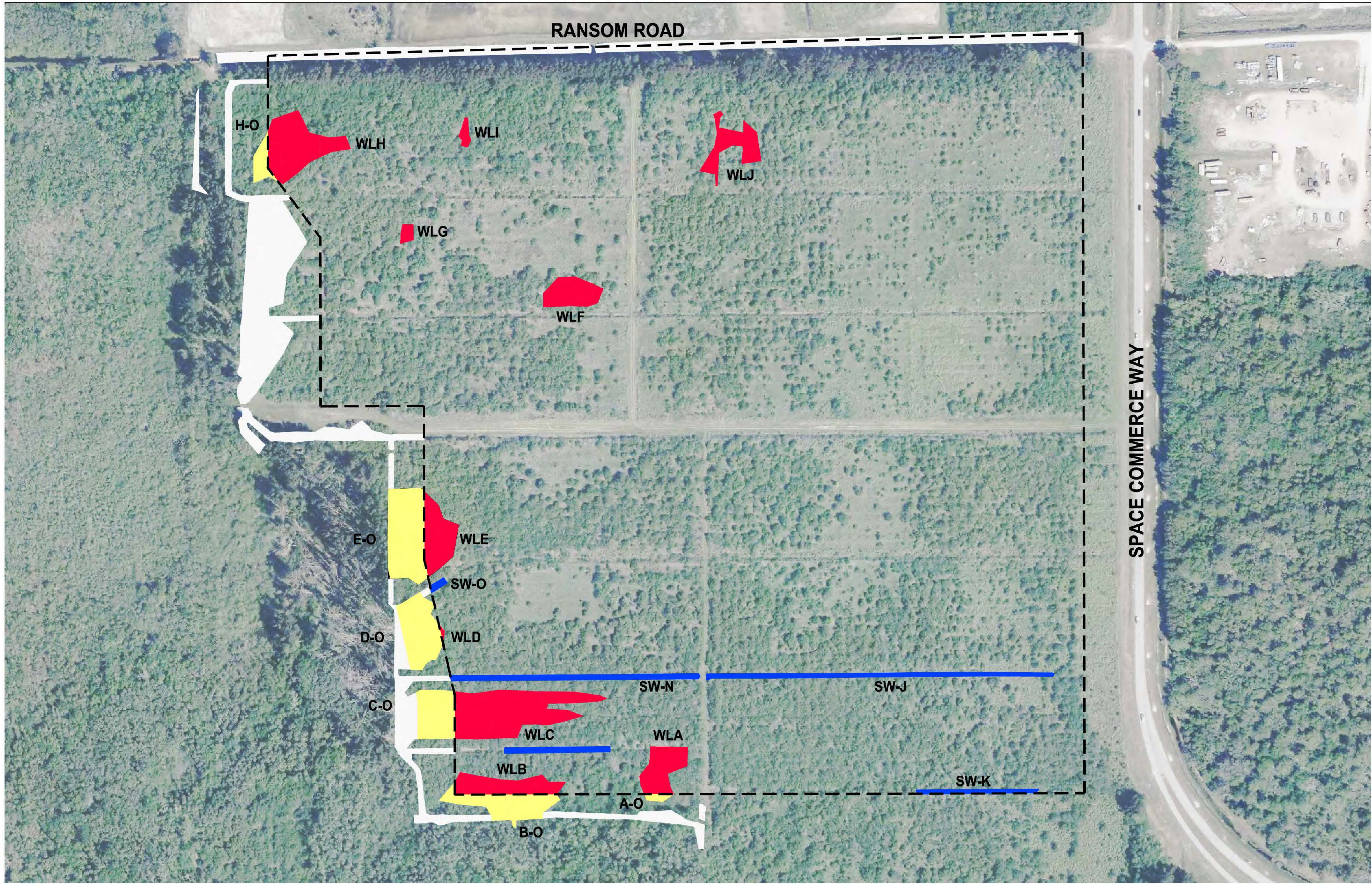
For Informational Purposes Only Q:\06100 Private\007-03 South Campus Permitting\mxd\USACE ID Form\Figure 2 Aerial WL Map.mxd P:\Stem 3/7/2019



**Figure 3-5 Existing Land Use Map**







**LEGEND**

- LEASE BOUNDARY
- OFFSITE WETLANDS AND SURFACE WATER

**JURISDICTIONAL WETLAND AND SURFACE WATER IMPACTS**

- PRIMARY (2.71 ac)
- SECONDARY (1.70 ac)
- SURFACE WATER (0.59 ac)

WETLAND AREA/ SURFACE WATER	PRIMARY IMPACT (AC)	SECONDARY IMPACT (AC)	WETLAND FILL (CY)
WL A	0.26		503
WL B	0.29		515
WL C	0.81		1307
WL D	0.01		13
WL E	0.30		774
WL F	0.23		519
WL G	0.03		88
WL H	0.51		169
WL I	0.03		73
WL J	0.24		465
TOTAL=	2.71		4426
A-O		0.03	
H-O		0.09	
B-O		0.35	
C-O		0.30	
D-O		0.38	
E-O		0.55	
TOTAL=		1.70	
SW-J	0.21		338
SW-K	0.07		113
SW-N	0.19		97
SW-M	0.10		97
SW-O	0.02		32
TOTAL=	0.59		581

SAVED: 3/5/2019 2:15 PM JALLEN Y:\08100-HASKELL\PROJECTS\007-03 SOUTH CAMPUS EXPANSION\CAD\DWGS\USACE\CIVIL\08100007-C03.DWG

LTR.	DATE	REVISIONS	BY	APPRD.	CHECKED

DESIGNED P STEIN  
DRAWN JALLEN  
CHECKED B BUKATA

**JonesEdmunds**  
CERTIFICATE OF AUTHORIZATION #1841  
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

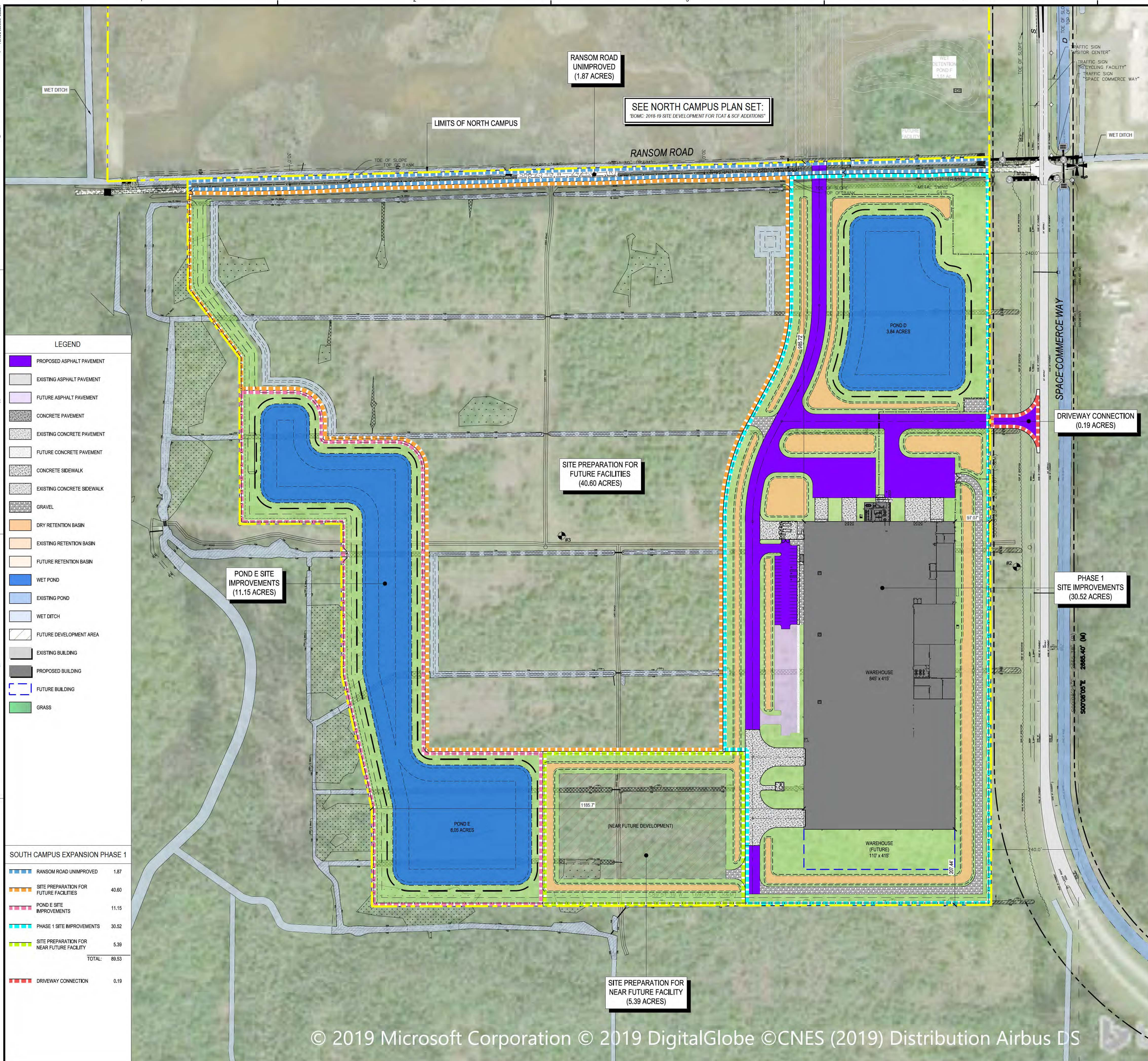
**USACE WETLAND IMPACT**  
**BLUE ORIGIN OLS MANUFACTURING COMPLEX**  
**SOUTH CAMPUS EXPANSION - PHASE 1**

**WETLAND AND SURFACE WATER AREA**  
**IMPACTS**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	MAR 2019	08100-007-03
BENJAMIN J. BUKATA	SCALE	DWG. NO.
P.W.S. #1985	NONE	C3

60% QC





PROJECT INFORMATION		
Project Title	Blue Origin OLS Manufacturing Complex South Campus Expansion Phase 1	
Lessor/Owner:	Blue Origin Florida, LLC 8082 Space Commerce Way Merritt Island, FL 32953	
Representatives:	Brian Winters Sr. Director, OLS Mfg. & Test (253) 437-9300 ext 120 <a href="mailto:BWinters@blueorigin.com">BWinters@blueorigin.com</a>	Jason Allen Program Manager (321) 747-7733 <a href="mailto:JAllen@blueorigin.com">JAllen@blueorigin.com</a>
Development Parcel:	Enhanced Use Lease KCA-4538, Rev Basic (89.53 acres) Latitude 28° 30' 30" 17" N Longitude 80° 40' 42" W Space Commerce Way NASA John F. Kennedy Space Center Merritt Island, Florida	
Land Owner:	National Aeronautics and Space Administration An Agency of the United States John F. Kennedy Space Center	
Representative:	Jeffrey Boyer Customer Liaison Exploration Park NASA Spaceport Integration and Services NASA John F. Kennedy Space Center (321) 867-6215 <a href="mailto:Jeffery.S.Boyer@nasa.gov">Jeffery.S.Boyer@nasa.gov</a>	

### SUMMARY OF OFFSITE IMPROVEMENTS

Road Improvements:	Driveway Connection to Space Commerce Way
Public Utilities:	12-inch Water Main Extension (NASA) Sanitary Lift Station & Force Main (NASA)
Private Utilities:	Electrical Power Service (Florida Power & Light) Natural Gas Service (Florida City Gas) Data Communications Service (Unconfirmed)

**DEVELOPMENT PARCEL CHARACTERISTICS**

Existing Lease Parcel Property Area: 89.53 acres  
(3,900,057 sq. ft.)

A. SITE PREPARATION AREAS		=	87.66 acres
1.	Site Preparation for Near Future Facilities	=	5.39 acres
2.	Site Preparation for Future Facilities	=	40.60 acres
3.	Phase 1 Site Improvements	=	30.52 acres
a)	Warehouse Site Improvements	=	
	a. Warehouse Bldg (354,088 sf)	8.13 acres	
	b. Pavements, Aprons, Drives	5.50 acres	
	c. Previous Surfaces (Lawns, Retention Basins, Berms Etc.)	13.63 acres	
	d. Pond D Water Surface	3.26 acres	
b)	Pond E Improvements	=	11.15 acres
	a. Previous Surfaces (Lawns, Retention Basins, Berms Etc.)	4.53 acres	
	b. Pond E Water Surface	6.62 acres	

B. UNDISTURBED LAND	=	1.87 acres
1. Ransom Road	1.87 acres	
<b>TOTAL</b>	<b>=</b>	<b>89.53 acres</b>

<b>BUILDING AREA SUMMARY</b>				
	No. of Floors	Bldg. Height	Footprint Area	Bldg. Area
A. Proposed Project:				
Warehouse	1 + Mezz	45/75 ft	354,088 sf	354,088 sf
<b>Total Area</b>			<b>354,088 sf</b>	<b>354,088 sf</b>

CALCULATION OF IMPERVIOUS COVERAGE		
	Relative to Upland Area (87.66 ac)	Relative to Parcel Area (89.53 ac)
Site Coverage:	13.63 ac	13.63 ac
% Site Coverage:	15.55%	15.22%

<b><u>BUILDING &amp; PAVEMENT SETBACKS</u></b>		
Building (To Parcel Line):	Front - East	97.07 feet
	Front - North	965.72 feet
	Side - West	1185.70 feet
	Side - South	207.44 feet
Pavement (To Parcel Line):	East	97.07 feet
Pavement (To Right of Way):	East	107.10 feet

VERTICAL DATUM COMPARISONS									
100 YR Flood	NRMAL Water Level	SHALW Water Table	Pond Level	Basin Bottom Invert	PVMT Grade Invert	Datum	Ware- house FFE	PVMT South Campus	Bldg. A FFE
3.38	1.28	2.40	2.40	4.48		NGVD 1929	9.13	6.48	8.25
2.1	0.00	1.12	1.12	3.20		NAVD 83	7.85	5.20	6.97

Notes: NGVD 1929 – National Geodetic Vertical Datum  
NAVD 1988 – North American Vertical Datum

Flood Elevation as established by FEMA and as indicated on the FIRM, Flood Insurance Rate Map, Brevard County, Florida Panel 245 of 825, Map Number 12009C0245G, dated March 17 2014, is defined as follows:

Flood Zone AE (100 YR), Defined Flood Elevation	3.58 (NGVD29)
	2.1 (NAVD 88)

[illegible]