

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS, JACKSONVILLE DISTRICT 4400 PGA BOULEVARD, SUITE 500 PALM BEACH GARDENS, FLORIDA 33410

March 9, 2023

Regulatory Division South Branch Palm beach Gardens Permits Section SAJ-2022-03657(NW-JKA)

Brian F. King City of Lake Worth Beach 1900 2nd Avenue North Lake Worth Beach, Florida 33461

Sent via email: bking@lakeworthbeachfl.gov

Dear Mr. King:

The U.S. Army Corps of Engineers (Corps) has completed the review of your application for a Department of the Army permit received on December 16, 2022. Your application was assigned file number SAJ-2022-03657. A review of the information and drawings provided indicates that the proposed work would result in the implementation of three geotechnical survey investigations for future utility line to be installed by horizontal directional drill. Each boring location will have a 6-inch diameter (including casing) and extend to a depth of 100 feet. The activities subject to this permit are authorized pursuant to authorities under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403). The project is located in the Intracoastal Waterway and Lake Worth Lagoon immediately south of the Lake Avenue Bridge where it crossing the Intracoastal Waterway, Section 27, Township 44 South, Range 43 East, Lake Worth, Palm Beach County, Florida.

Your project, as depicted on the enclosed drawings, is authorized by Nationwide Permit (NWP) 6 (Survey Activities). **This verification is valid until March 14, 2026.** In order for this NWP authorization to be valid, you must ensure that the work is performed in accordance with the Nationwide Permit General Conditions, the Jacksonville District Regional Conditions, and the General and Project-Specific Special Conditions listed below. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP. You can access the U.S. Army Corps of Engineers' (Corps) Jacksonville District's Regulatory Source Book webpage for links to view NWP information at:

https://www.saj.usace.army.mil/Missions/Regulatory/Source-Book/. Please be aware this Internet address is case sensitive and should be entered as it appears above. Once

there, you will need to select "Nationwide Permits." Among other things, this part of the Source Book contains links to the federal register containing the text of the pertinent NWP authorization and the associated NWP general conditions, as well as separate links to the regional conditions applicable to the pertinent NWP verification.

You must comply with all of the special and general conditions for NWP-6, including any project-specific conditions included in this letter and all conditions incorporated by reference as described above.

General Conditions (33 CFR PART 320-330):

- 1. The time limit for completing the work authorized ends on March 14, 2026.
- 2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
- 3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort of if the site is eligible for listing in the National Register of Historic Places.
- 4. If you sell the property associated with this permit you must obtain the signature of the new owner on the transfer form attached to this letter and forward a copy to this office to validate the transfer of this authorization.
- 5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.
- 6. You must allow a representative from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Project Specific Special Conditions:

The following project specific special conditions are included with this verification:

- 1. **Reporting Address:** The Permittee shall submit all reports, notifications, documentation and correspondence required by the general and special conditions of this permit to either (not both) of the following addresses:
 - a. For electronic mail (preferred): SAJ-RD-Enforcement@usace.army.mil (not to exceed 15 MB).
 - b. For standard mail: U.S. Army Corps of Engineers, Regulatory Division, Enforcement Section, P.O. Box 4970, Jacksonville, Florida 32232-0019.

The Permittee shall reference this permit number, SAJ-2022-03657 (NW-JKA), on all submittals.

- Commencement Notification: Within 10 days from the date of initiating the work authorized by this permit the Permittee shall submit a completed "Commencement Notification" Form (Attachment 2).
- 3. **Self-Certification:** Within 60 days of completion of the work authorized by this permit, the Permittee shall complete the attached "Self-Certification Statement of Compliance" form (Attachment 3) and submit it to the Corps. In the event that the completed work deviates in any manner from the authorized work, the Permittee shall describe the deviations between the work authorized by this permit and the work as constructed on the "Self-Certification Statement of Compliance" form. The description of any deviations on the "Self-Certification Statement of Compliance" form does not constitute approval of any deviations by the Corps.
- 4. Assurance of Navigation and Maintenance: The Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the U.S. Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
- 5. **Consent to Easement:** A portion of the authorized work may be located within the Federal right-of-way and therefore, may require a Department of the Army

Consent to Easement. The Permittee shall complete the "Application for Consent to Cross U.S. Government Easement" (Attachment 4) and submit to the Corps Real Estate Division SAJ-RE-Consent@usace.army.mil or Post Office Box 4970, Jacksonville, Florida 32232-0019 or by telephone at 904-570-4514. The application should include a boundary survey map along with the authorized construction plans and specifications for the project. Prior to commencement of construction, the Permittee shall provide a copy of the Corps approved Consent to Easement, or correspondence from the Real Estate Division indicating that a Consent to Easement is not required, to the address identified in the **Reporting Address Special Condition**.

- 6. **Manatee Conditions:** The Permittee shall comply with the "Standard Manatee Conditions for In-Water Work 2011" (Attachment 5). The most recent version of the Manatee Conditions must be utilized.
- 7. Jacksonville District Programmatic Biological Opinion (JAXBO): Jacksonville District Programmatic Biological Opinion (JAXBO): Structures and activities authorized under this permit will be constructed and operated in accordance with all applicable PDCs contained in the JAXBO, based on the permitted activity. Johnson's seagrass and its critical habitat were delisted from the Endangered Species Act on May 16, 2022. Therefore, JAXBO PDCs required to minimize adverse effects to Johnson's seagrass and its critical habitat are no longer applicable to any project. Failure to comply with applicable PDCs will constitute noncompliance with this permit. In addition, failure to comply with the applicable PDCs, where a take of listed species occurs, would constitute an unauthorized take. The NMFS is the appropriate authority to determine compliance with the Endangered Species Act. The most current version of JAXBO can be accessed at the Jacksonville District Regulatory Division website in the Endangered Species section of the Sourcebook located at: http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx

JAXBO may be subject to revision at any time. The most recent version of the JAXBO must be utilized during the design and construction of the permitted work.

8. Cultural Resources/Historic Properties:

- a. No structure or work shall adversely affect impact or disturb properties listed in the National Register of Historic Places (NRHP) or those eligible for inclusion in the NRHP.
- b. If, during permitted activities, items that may have historic or archaeological origin are observed the Permittee shall immediately cease

all activities adjacent to the discovery that may result in the destruction of these resources and shall prevent his/her employees from further removing, or otherwise damaging, such resources. The applicant shall notify both the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333 and the Corps, of the observations within the same business day (8 hours). Examples of submerged historical, archaeological or cultural resources include shipwrecks, shipwreck debris fields (such as steam engine parts, or wood planks and beams), anchors, ballast rock, concreted iron objects, concentrations of coal, prehistoric watercraft (such as log "dugouts"), and other evidence of human activity. The materials may be deeply buried in sediment, resting in shallow sediments or above them, or protruding into water. The Corps shall coordinate with the Florida State Historic Preservation Officer (SHPO) to assess the significance of the discovery and devise appropriate actions. Project activities shall not resume without verbal and/or written authorization from the Corps.

- c. Additional cultural resources assessments may be required of the permit area in the case of unanticipated discoveries as referenced in accordance with the above Special Condition and, if deemed necessary by the SHPO or Corps, in accordance with 36 CFR 800 or 33 CFR 325, Appendix C (5). Based on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend, or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume on non-federal lands without written authorization from the SHPO for finds under his or her jurisdiction, and from the Corps.
- d. In the unlikely event that unmarked human remains are identified on non-federal lands; they will be treated in accordance with Section 872.05 Florida Statutes. All work and ground disturbing activities within a 100-meter diameter of the unmarked human remains shall immediately cease and the Permittee shall immediately notify the medical examiner, Corps, and State Archaeologist within the same business day (8-hours). The Corps shall then notify the appropriate SHPO. Based on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend, or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume without written authorization from the SHPO and from the Corps.

- 9. Turbidity Barriers: Prior to the initiation of any of the work authorized by this permit, the Permittee shall install floating turbidity barriers with weighted skirts that extend within 1 foot of the bottom around all work areas that are in, or adjacent to, surface waters. The turbidity barriers shall remain in place and be maintained daily until the authorized work has been completed and turbidity within the construction area has returned to ambient levels. Turbidity barriers shall be removed upon stabilization of the work area.
- 10. In the Event of a Frac-Out: Should a frac-out and release of drilling fluids occur within navigable waters of the U.S., and in-water work is required to remediate the action, the Permittee shall comply with the frac-out contingency plan (Attachment 6).

Jurisdictional Determination:

A jurisdiction determination was not completed with this request. Therefore, this is not an appealable action. However, you may request an approved JD, which is an appealable action, by contacting the Corps for further instruction.

This letter of authorization does not include conditions that would prevent the 'take' of a state-listed fish or wildlife species. These species are protected under sec. 379.411, Florida Statutes, and listed under Rule 68A-27, Florida Administrative Code. With regard to fish and wildlife species designated as species of special concern or threatened by the State of Florida, you are responsible for coordinating directly with the Florida Fish and Wildlife Conservation Commission (FWC). You can visit the FWC license and permitting webpage (http://www.myfwc.com/license/wildlife/) for more information, including a list of those fish and wildlife species designated as species of special concern or threatened. The Florida Natural Areas Inventory (http://www.fnai.org/) also maintains updated lists, by county, of documented occurrences of those species.

This letter of authorization does not give absolute Federal authority to perform the work as specified on your application. The proposed work may be subject to local building restrictions mandated by the National Flood Insurance Program. You should contact your local office that issues building permits to determine if your site is located in a flood-prone area, and if you must comply with the local building requirements mandated by the National Flood Insurance Program.

This letter of authorization does not preclude the necessity to obtain any other Federal, State, or local permits, which may be required.

Thank you for your cooperation with our permit program. The Corps' Jacksonville District Regulatory Division is committed to improving service to our customers. We strive to perform our duty in a friendly and timely manner while working to preserve our environment. We invite you to complete our automated Customer Service Survey at https://regulatory.ops.usace.army.mil/customer-service-survey/. Please be aware this Internet address is case sensitive and you will need to enter it exactly as it appears above. Your input is appreciated – favorable or otherwise.

Should you have any questions related to this NWP verification or have issues accessing the documents reference in this letter, please contact Jerilyn Ashworth at the letterhead address above, via telephone at 561-545-3171, or via e-mail at Jerilyn.Ashworth@usace.army.mil.

Sincerely,

Jerilyn Ashworth Project Manager

Enclosures

Cc:

Amanda Montgomery, Amanda.Montgomery@wginc.com CESAJ-RD-E

DEPARTMENT OF THE ARMY PERMIT TRANSFER REQUEST

DA PERMIT NUMBER: <u>SAJ-2022-03675(NW-JKA)</u>

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. Although the construction period for works authorized by Department of the Army permits is finite, the permit itself, with its limitations, does not expire.

To validate the transfer of this permit and the associated responsibilities associated with compliance with its terms and conditions, have the transferee sign and date below and mail to the U.S. Army Corps of Engineers, Enforcement Section, Post Office Box 4970, Jacksonville, FL 32232-0019 or submit via electronic mail to: SAJ-RD-Enforcement@usace.army.mil (not to exceed 15 MB).

(TRANSFEREE-SIGNATURE)	(SUBDIVISION)	(SUBDIVISION)	
(DATE)	(LOT) (BLOCK)		
(NAME-PRINTED)	(STREET ADDRESS)	(STREET ADDRESS)	
(MAILING ADDRESS)			
(CITY, STATE, ZIP CODE)			

U.S. Army Corps of Engineers SAJ-2022-03657 (NW-JKA) ATTACHMENT 1 Sheet 1 of 4 03/09/2023

LOCATION MAP

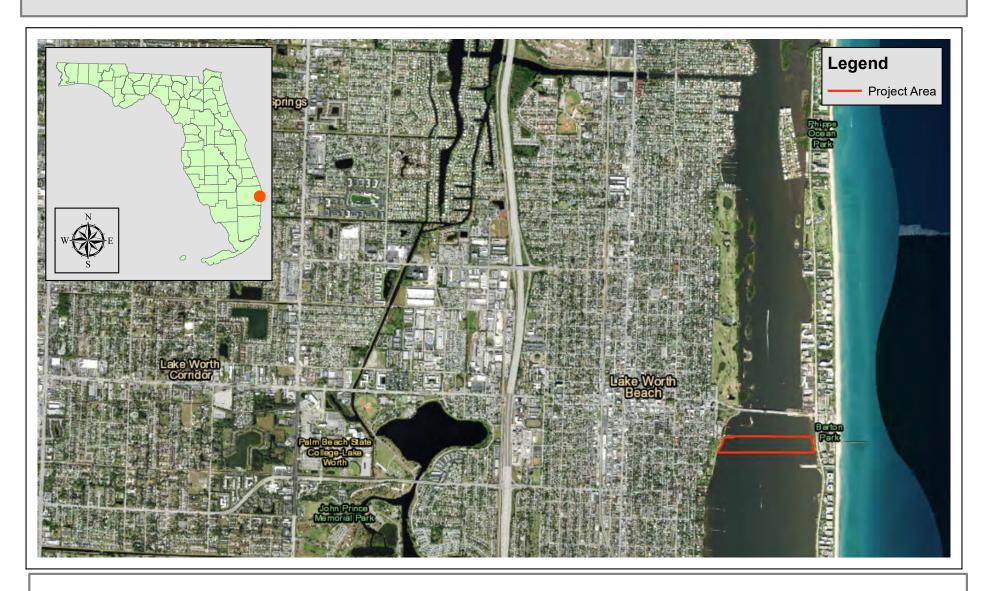


FIGURE 1.0

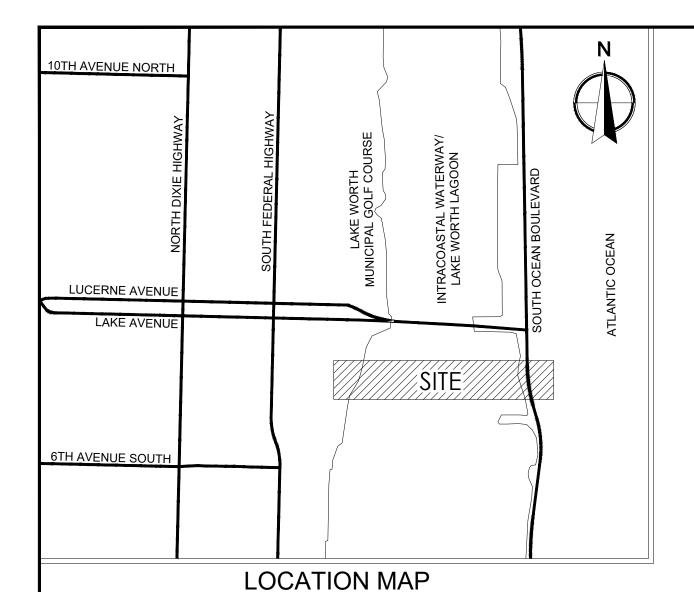
Date: 09/08/2022

0.45 0.225 0 0.45 Miles

CITY OF LAKE WORTH BEACH LAKE WORTH LAGOON/INTRACOASTAL WATERWAY PALM BEACH COUNTY, FL

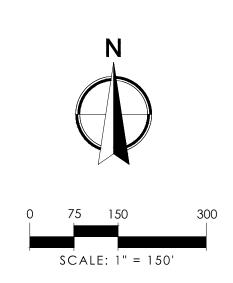


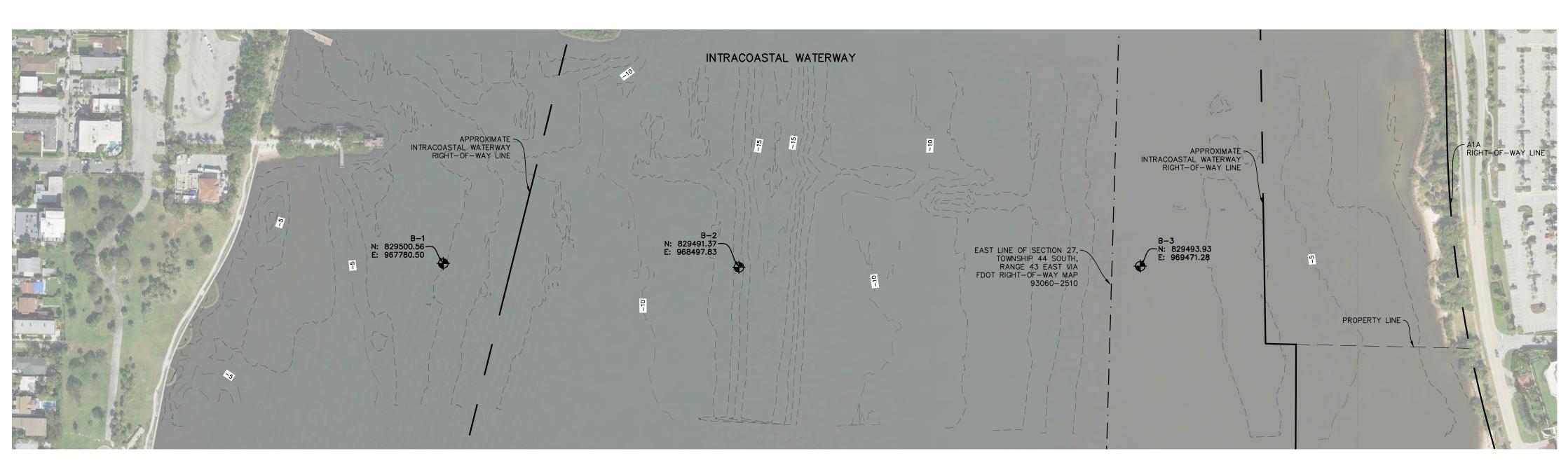
Source: WorldInagery(WGS84)/ArcGIS Online



BORE HOLE EXHIBIT

LAKE WORTH BEACH ICWW UTILITY CROSSING SECTION 26 AND 27, TOWNSHIP 44 SOUTH, RANGE 43 EAST PALM BEACH COUNTY, FLORIDA





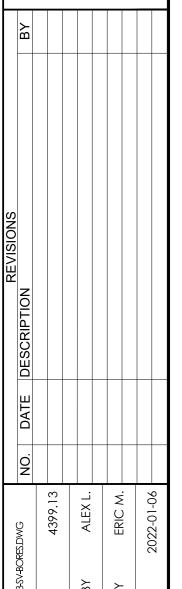
— — 0.00— — = MAJOR CONTOUR & ELEVATION — — — — — = MINOR CONTOUR

SURVEYOR NOTES:

- 1. THE LAST DATE OF FIELD SURVEY WAS NOVEMBER 7, 2022.
- THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN RULE 5J-17.050 THROUGH 5J-17.053, OF THE FLORIDA ADMINISTRATIVE CODE.
- AND THE ORIGINAL RAISED SEAL OR DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND
- PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
- 5. ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, AS
- 6. THE FEATURES SHOWN HEREON ARE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT, AS ESTABLISHED USING THE FDOT
- 7. AERIAL IMAGERY SHOWN HEREON WAS OBTAINED FROM FDOT AND IS SHOWN FOR INFORMATIONAL
- 9. THE FEATURES SHOWN HEREON WERE ACQUIRED USING RTK GPS AND HYDROGRAPHIC SONAR METHODS AND WERE VERIFIED THROUGH A REDUNDANCY OF MEASUREMENTS FOR ACCURACY.
- 10. THE PROPOSED BORE LOCATIONS B-1, B-2, AND B-3 WERE PROVIDED USING THE FOLLOWING LATITUDE/LONGITUDE COORDINATES (IN DECIMAL DEGREES), AND THEN CONVERTED THROUGH THE NATIONAL GEODETIC SURVEY'S COORDINATE CONVERSION AND TRANSFORMATION TOOL:
- 11. COPYRIGHT © 2023 BY WGI, INC.

- 2. THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE "STANDARDS OF PRACTICE", AS SET FORTH BY
- 3. THIS SURVEY MAP AND/OR REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE
- 4. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR
- ESTABLISHED BY NGS BENCHMARK P 317, HAVING A PUBLISHED ELEVATION OF 17.13'. TO CONVERT TO
- FPRN NETWORK OF FIXED BASE STATIONS.
- PURPOSES. THE IMAGERY WAS ACQUIRED IN JANUARY OF 2021.
- 8. UNDERGROUND IMPROVEMENTS WERE NOT LOCATED EXCEPT AS SHOWN.
- B-1: W80.046286, N26.612561
- B-2: W80.044091, N26.612521
- B-3: W80.041112, N26.612508

ERIC R. MATTHEWS PROFESSIONAL SURVEYOR AND MAPPER FLORIDA LICENSE NO. 6717



SURVEYOR OF RECORD ERIC R. MATTHEWS PSM# 6717



U.S. Army Corps of Engineers SAJ-2022-03657 (NW-JKA) ATTACHMENT 1 Sheet 4 of 4 03/09/2023

SEAGRASS SURVEY MAP

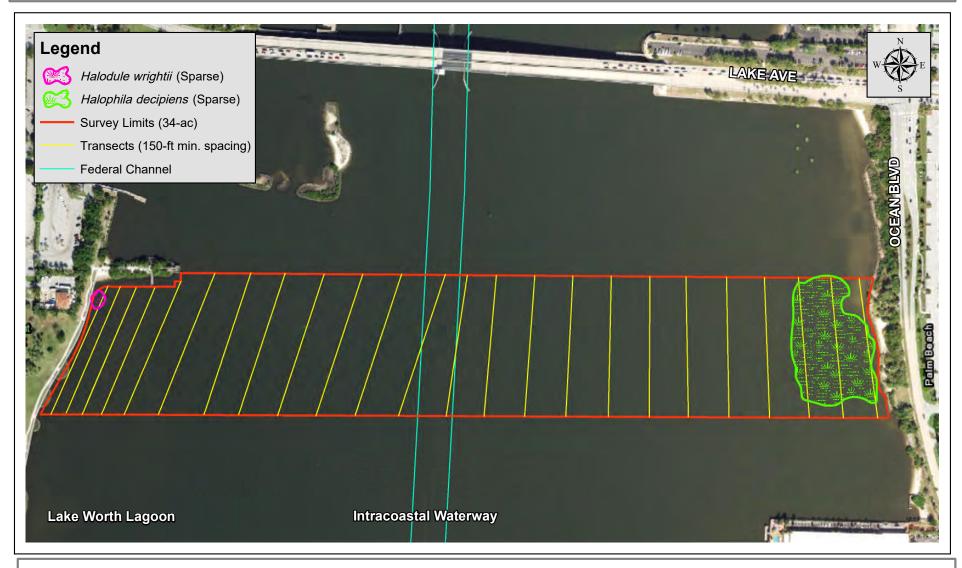


FIGURE 2.0

Survey Date: 09/08/2022

300 150 0 300 Feet

CITY OF LAKE WORTH BEACH LAKE WORTH LAGOON / INTRACOASTAL WATERWAY PALM BEACH COUNTY, FL



Source: WorldInagery(WGS84)/ArcGIS Online

COMMENCEMENT NOTIFICATION

Within ten (10) days of initiating the authorized work, submit this form via electronic mail to saj-rd-enforcement@usace.army.mil (preferred, not to exceed 15 MB) <u>or</u> by standard mail to U.S. Army Corps of Engineers, Enforcement Section, P.O. Box 4970, Jacksonville, FL 32232-0019.

1. Department of the Army Permit Number: SAJ-2022-03657(NW-JKA) 2. Permittee Information: Name: Email: Address: Phone: 3. Construction Start Date: 4. Contact to Schedule Inspection: Name: Email: Phone: Signature of Permittee Printed Name of Permittee

Date

SELF-CERTIFICATION STATEMENT OF COMPLIANCE

Within sixty (60) days of completion of the authorized work, submit this form via electronic mail to <u>saj-rd-enforcement@usace.army.mil</u> (preferred, not to exceed 15MB) <u>or</u> by standard mail to U.S. Army Corps of Engineers, Enforcement Section, P.O. Box 4970, Jacksonville, FL 32232-0019.

1.	Department of the Army	Permit N	Number: SAJ-	-2022-03657(NW-JKA)	
2.	Permittee Information:	Name: _			
		Email: _			
		Phone:			
3.	Date Authorized Work S	Started: _		Completed:	
4. Contact to Schedule Inspection:		Name:			
			Email:		
			(e.g. bank sta	bilization, fill placed within	n wetlands,
	· • • • • • • • • • • • • • • • • • • •				
6	Acreage or Square Feet	of Impac	ets to Waters	of the United States:	
	-	_			
	2000 in a maiganon oon	iipiotoa (i	. appiloabio).		
 8	Describe any Deviation	s from Pe	ermit (attach o	drawing(s) depicting the de	eviations).
Ο.	Describe any Deviations	5 11 6 111 1 C	init (attaon t	arawing(s) dopioting the at	ovidilonoj.

an				is done in accordance with t ations as described above a	
					<u> </u>
			Signatu	re of Permittee	
			Printed	Name of Permittee	<u> </u>
			Timed	rame of remittee	
			Date		

APPLICATION FOR CONSENT TO CROSS U.S. GOVERNMENT EASEMENT

•	artment of the Army Consent to Easement to and repair a (state type of structure)
in the United States of America as sl map with legal description/constructi	ver, under, across, in, or upon the Easement vested nown on the attached [include boundary survey on plans and specifications of project], and situated Range East, County of, Florida.
Names and Mailing Addresses of Re	ecord Owners:
Physical Address (location of project	work):
Email Address	
constructed or situated in a manner less to change in status, condition, or place Unauthorized structures include, but buildings, swimming pools, patios, or and gas wells, boat ramps and seaw	nt structures affixed to the land or otherwise asting or meant to last indefinitely and not expected be are not permitted within the U.S. Easement. are not limited to, residential and commercial authorities, fences, gazebos, satellite dishes, oil call enclosures of docking areas or other structures 327.20. Noncompliance may subject the Applicant traction.
application shall not begin until the C herein applied for, shall have been g	action of the facility or structure involved in this consent to Cross U.S. Government Easement, ranted and appropriate rights shall have been I encumbrances of the underlying fee in the land
Property Owner(s) Name (Print)	Property Owner(s) Name (Print)
(Signature)	(Signature)
DATE:	
RETURN TO: US Army Corps of En ATTN: Real Estate Di P.O. Box 4970	

Jacksonville, FL 32232-0019

ATTACHMENT 5: SAJ-2022-03657

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK 2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to the email address listed above.

CAUTION: MANATEE HABITAT

All project vessels

IDLE SPEED / NO WAKE

When a manatee is within 50 feet of work all in-water activities must

SHUT DOWN

Report any collision with or injury to a manatee:



1-888-404-FWCC(3922)

cell *FWC or #FWC



Proposed Methods for Protection of Water Quality for Standard Penetration Test Borings

Best Management Practices

The City of Lake Worth Beach and the selected Contractor (RADISE International) will implement the following Best Management Practices (BMPs) to minimize the potential for adverse environmental impacts during Standard Penetration Testing (SPT) drilling and sampling activities:

- BMPs for erosion control within the barge launching area and SPT boring sites, shall be implemented and maintained at all times to prevent turbid discharges in excess of State Water Quality Standards pursuant to Rule 62-302, F.A.C.
- Methods shall include but are not limited to the placement of borehole casing and turbidity containment devices including mud pans and cleanup pads on the drilling barge to contain the drilling mud.

Frac-Out Plan

To provide an additional level of resource protection, the following measures shall be taken to monitor any potential releases of drilling fluid:

- Measures used to prevent frac-out during the drilling operation include using steel casing during the drilling and sampling processes. Casing use will be sufficient to prevent frac-out when drilling within the waterway since SPT borings are performed in unpressurized boreholes.
- Hydrostatic pressures would have to exceed the effective vertical pressures at the bottom of the borehole for any potential fracking to occur and is not possible particularly with the water levels at this site and so long as drilling slurry is returning to the surface up the borehole casing.
- Should drill slurry return be lost in the borehole drilling, pumping pressures shall be observed and noted to document that excessive pressure in the pumping operation is not developing. Drill slurry losses into the ground formations are a common occurrence in the fractured and solutioned limerock and loose sand formations in the south Florida region.
- At all times, adequate protection will be taken to avoid impacts to the waterway and contiguous wetlands. This shall include but is not limited to temporarily halting of drilling operations and cleanup of any minor drilling slurry spills on the drilling barge.

Release Procedure:

- If a frac-out is confirmed, all construction activity contributing to the frac-out shall cease immediately.
- If a frac-out has occurred during drilling activities, the permittee shall notify the FDEP/USACE within 24 hours of the occurrence. The notification shall include the time of the frac-out and the environmental conditions of the affected area.

Drilling Mud Containment Plan:

- SPT drilling muds will be contained within a drilling mud pan located on the drilling barge. Any escaped drilling slurry will be cleaned up using absorbent pads.
- Drilling pressures and casing return will be closely monitored to prevent the development of any potential frac-out conditions in the waterway.
- Excess drilling slurry from the drilling mud pan will be pumped into containment barrels or containers upon completion of drilling operations.
- Drilling pressures and casing return will be closely monitored to prevent the development of any potential frac-out conditions.
- Should an on-barge spill occur, the spill is immediately remediated, using absorbent pads. Pads shall be properly disposed of in an approved/permitted upland disposal site.
- After containment/recovery of the drilling material/resources, a detailed written report shall be submitted to the regulatory agencies, within 10 business days, indicating the location of the spill and the estimated amount of drilling material discharged, the amount of drilling mud recovered, the process with which the drilling mud was recovered, and the area that was affected by the drilling discharge.