



Morgan & Eklund, Inc.

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**Survey Report
Monitoring Survey
Ponce Inlet and Flood Shoal
Volusia County
5/16/24**

Location of Work: This submittal is for Volusia County, Florida.

Date of Work: The physical monitoring survey was performed April 17-19 and 22-25, 2024.

Scope of Work: Bathymetric and topographic survey data was collected along previously established transect lines.

Horizontal Datum: Coordinate values are referenced to the Florida State Plane Coordinate System, East Zone, North American Datum of 1983/2011 adjustment (NAD 83/11).

Vertical Datum: Elevation values are referenced to the North American Vertical Datum of 1988 (NAVD 88).

Bathymetric Survey: Channel-Flood Shoal Survey

On April 17-19 and 23-25, 2024 a bathymetric survey was performed offshore along previously established transect lines.

Equipment: 26' Parker Survey Boat and G3 boat, Odom E-20 Single Beam Fathometer (200 kHz), Applanix POS MV Surfmaster, Hypack® 2021 Navigation Software and Trimble R780 Base RTK/GPS

Personnel: Boat: H. Lawson, D. Titus
Field: R. Ambrose, P. Voute, A. Aparicio

Field Procedures: The positioning and water surface elevations for the single beam survey relied on Real-time Kinematic GPS, with the RTK/GPS base station receiver set on points shown in the survey control table.

Elevations were verified with a tide staff set from points shown in the Survey Control table. Data collection was performed to FDEP and USACE specifications for hydrographic surveying.

The fathometer was calibrated at the beginning and end of each survey day using a "bar check" to compensate for variations of the speed of sound in water.

Data Processing: Hydrographic data was processed using Hypack® 2021 software.

Topographic/Wading Survey: Uplands-Flood Shoal

On March 17-19, and 22-25, 2024 a topographic survey was performed along previously established survey transects Elev. $8\pm$ to $-7\pm$ (NAVD88).

Equipment: Trimble R780 Rover Receiver, Trimble TSC5 Data Collector, Trimble RTK R780 Base Receiver, and differential level.

Personnel: Field: P. Voute, R. Ambrose, A. Aparicio

Field Procedures: The base station was setup and checked into points shown in the survey control table. Elevation data was collected using RTK/GPS, differential leveling and laser.

Survey Control:

	83/90 SPCS 0901		NAVD 88	US Survey Feet
Point	Northing	Easting	Elevation	Description
110	1719824.69	675930.60	7.84	M&E PK nail and disk LB 4298
111	1719986.58	675848.91	8.43	M&E PK nail and disk LB 4298

Certification:

I hereby certify that the information shown hereon is in accordance with a recent field survey made under my direction, and that it is true and correct to the best of my knowledge and belief, and meets the standards of practice as set forth by the Florida Board of Professional Land Surveyors in Chapter 5J-17, F.A.C.

David W. Coggin
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PLS #6359