

BEACH NOURISHMENT: Ponte Vedra Beach, FL

Project Information Meeting
October 2, 2023
sjcfl.us



DISCUSSION TOPICS

Introductions

Vision & Progress

Beach Conditions

Project Design

Construction & Schedule

Erosion Control Line &

Easements

Project Funding

Q & A



INTRODUCTIONS



PROJECT VISION & PROGRESS



VISION

A full beach nourishment of the entire length of Ponte Vedra Beach in the form of an engineered beach with a vegetated dune system, which would be maintained to provide increased protection from storm damage to private property, improved recreation opportunities, and enhanced environmental habitat.

BACKGROUND

Ponte Vedra Beach has experienced long-term beach erosion, and will continue to experience beach erosion

- Olsen Associates, Inc., estimated a 2.4M cubic yard loss of sand since 1986
- The same work cited a loss of 620,000 cubic yards from Hurricanes Matthew and Irma
- Matthew and Irma Dune Enhancement placed 380,000 cubic yards, which was subsequently damaged in Ian and Nicole

The current beach conditions leave upland infrastructure vulnerable to future storm damage and continuing erosion.





PROJECT LOCATION

Ponte Vedra Beach

- 8.9 miles
- County line to GTM
- FDEP survey monument R-1 to R-46.2
- 2.0 million cubic yard placement volume

PROGRESS (1 of 2)

Following extensive community engagement, including surveys and public meetings, the County has completed numerous project requirements.

The ‘engineered beach’ (per FEMA) nourishment project has been designed by OAI for the County and has been permitted by the Florida DEP, the Army Corps of Engineers, and the Bureau of Ocean Energy Management (BOEM)

PROGRESS (2 of 2)

The County has secured over \$30M from the State toward the construction of the project, which is opined to cost approximately \$40M. Likewise, the County has committed over \$8M to the project cost

Once constructed, and a maintenance/monitoring plan is in place, the project will be eligible for post-disaster funding assistance from FEMA and the FL DEM in the event the project is damaged in a declared disaster

BEACH CONDITIONS



BEACH CHANGES

Observations since 2011 comprehensive survey

- Northern 1/3rd clearly benefits from the Duval project
- Eroded dunes, lowered and narrowed dry beaches
- South central area typically experiences increased erosion
- A 0.9-mile segment is designated as Critically Eroded by FDEP
- Loss of approximately 1.5 million cubic yards

R-004

R-029.5

PROJECT DESIGN





BEACH SAND PLACEMENT

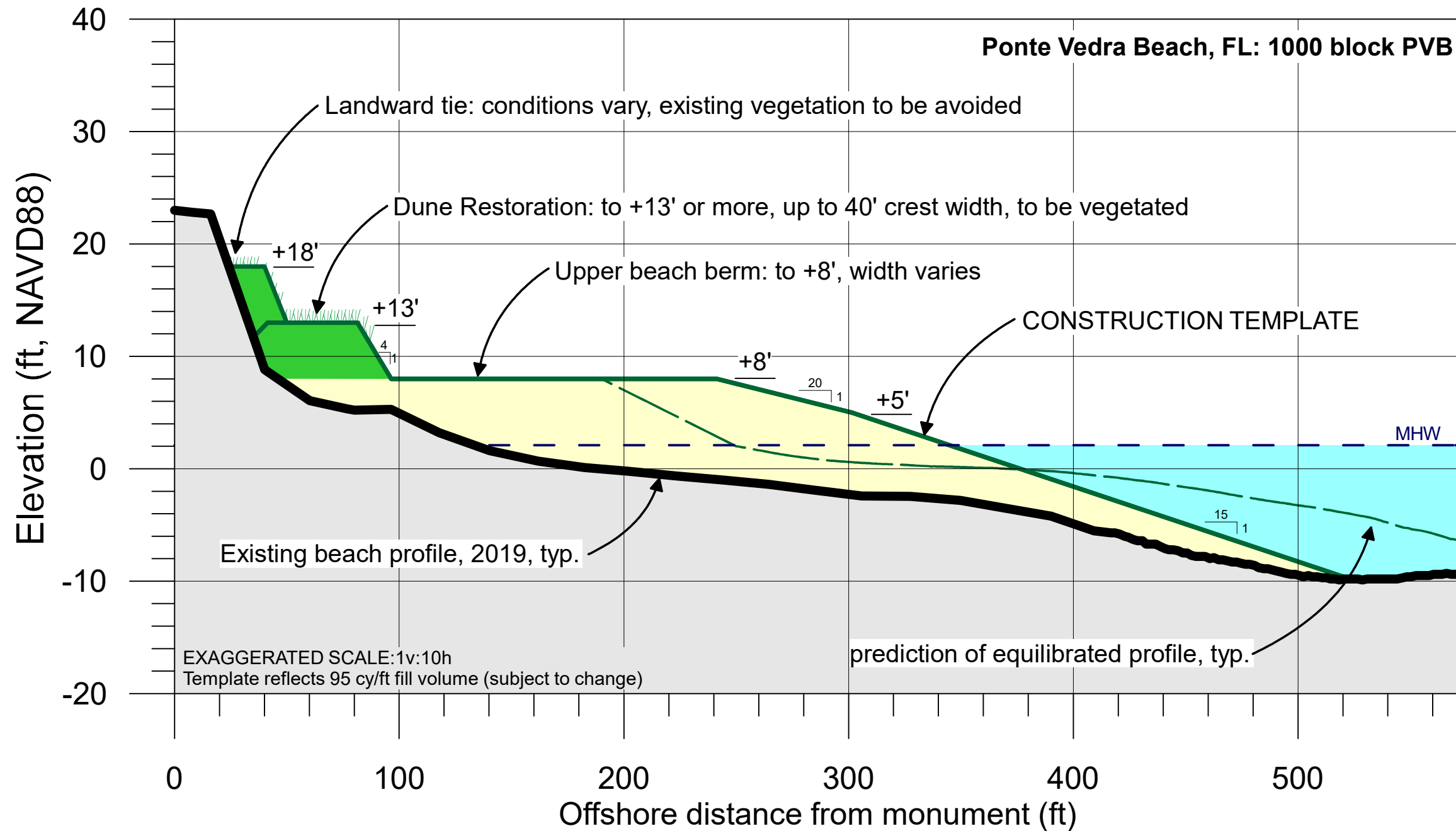
Placement Design

- Restore dunes and bring uniformity
- Provide resiliency for future erosion
- Proposed 2 million cubic yard placement volume

Placement Objectives

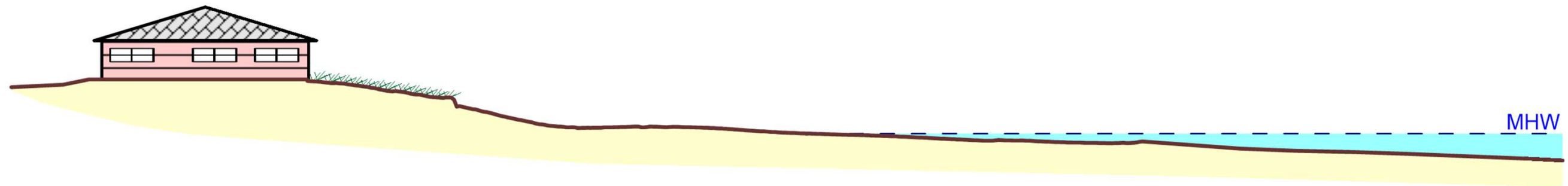
- Restore storm-damaged dunes
- Provide storm protection to upland infrastructure
- Create additional environmental habitat
- Enhance recreational amenity value of the beach

TYPICAL DESIGN CROSS-SECTION

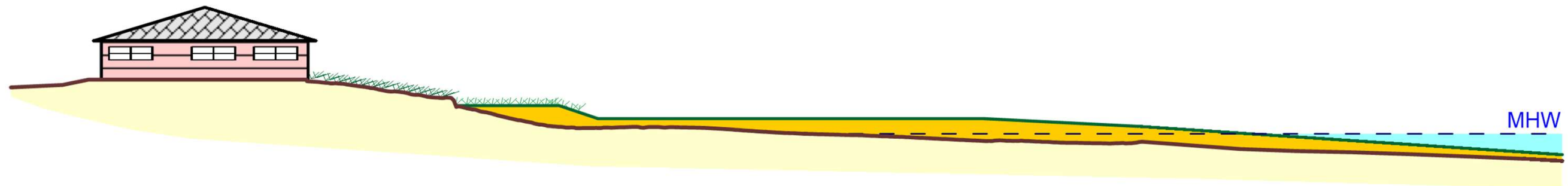


SIMPLIFIED CROSS-SECTION

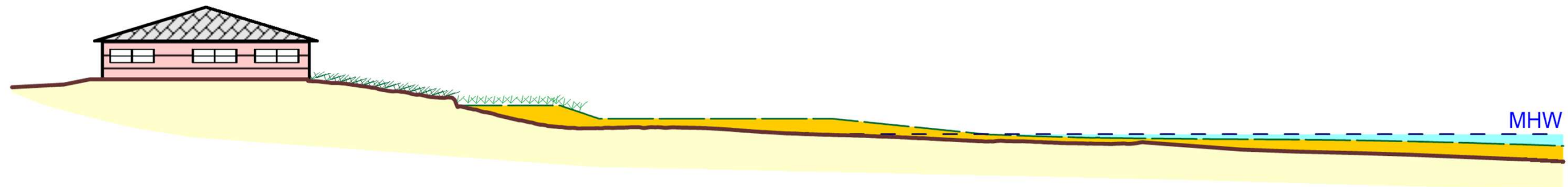
Pre-construction

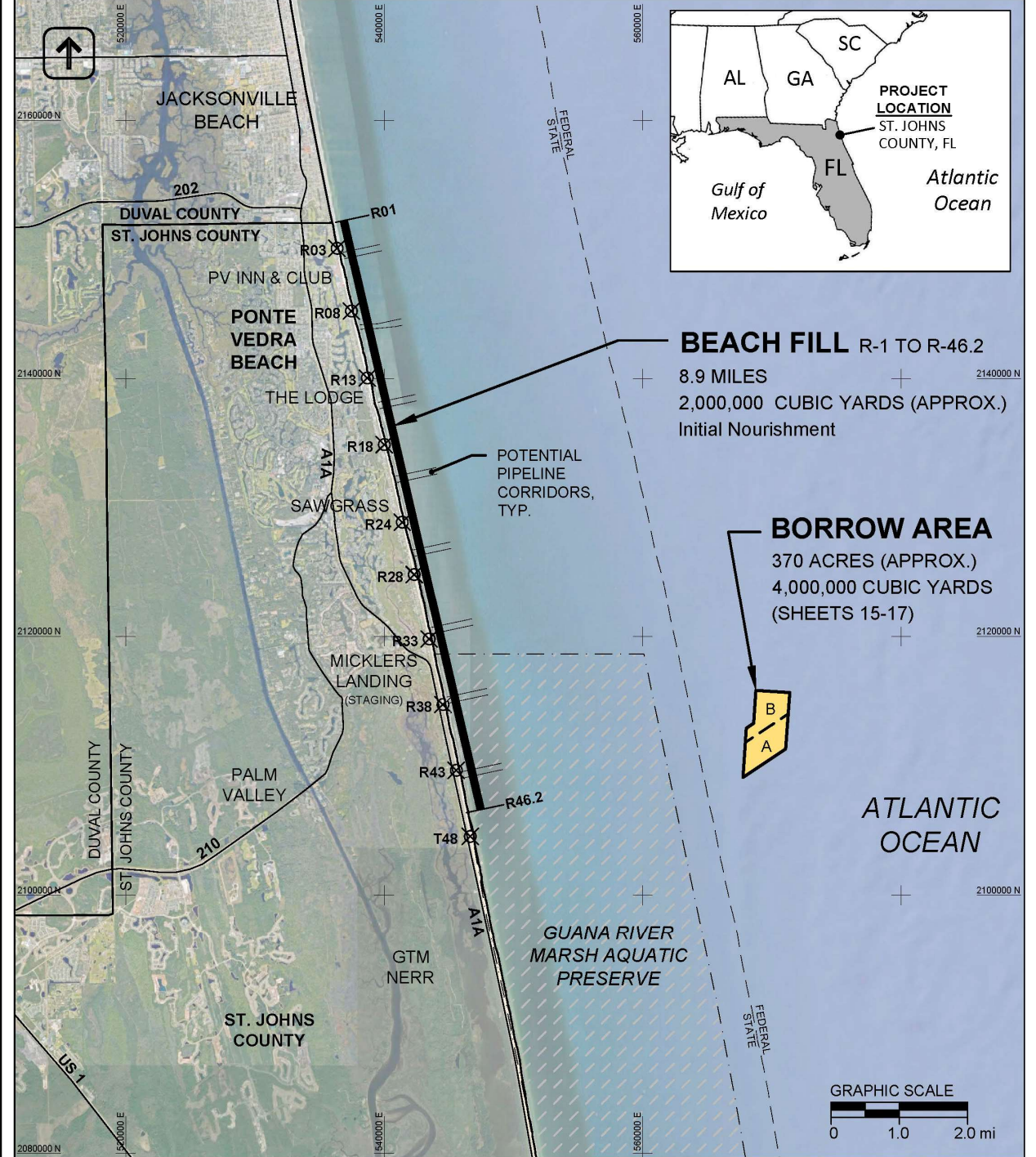


Post-construction



Post-equilibration





- NOTES:
1. H. DATUM - NAD83 SPC FL EAST
 2. IMAGE (GOOGLE, 12/2018)
 3. BORROW AREA 'A': INITIAL DREDGE AREA
 4. BORROW AREA 'B': FUTURE WORK

Township: 3S, 4S
 Range: 29 E
 Section: (3S)15,22,27,45,35
 (4S) 2,11,45,14,23,24,25

 <p>olsen associates, inc. 2618 Herschel St. Jacksonville, FL 32204 (904) 387-6114 (FAX) 384-7368 COA 00003491</p>	<p>PONTE VEDRA BEACH, FL BEACH NOURISHMENT PROJECT</p> <p>PROJECT SITE LOCATION</p>	<p>FOR INFORMATION ONLY</p>	<p>REV DATE</p> <p>1)RAI #1 12/01/2020</p> <p>2)RAI #1 01/04/2021</p> <p>3)Rev. Corridor 2 02/10/2021</p>	<p>09/10/2020</p> <p>DRAWN BY:</p> <p>ML</p> <p>SHEET</p> <p>1 of 17</p>

BEACH SAND BORROW AREA

Offshore Site in Federal Waters

- Roughly 4 miles offshore
- 196-acre site
- 10- to 15-ft excavation below existing seabed
- Over 2 million cubic yards to be excavated



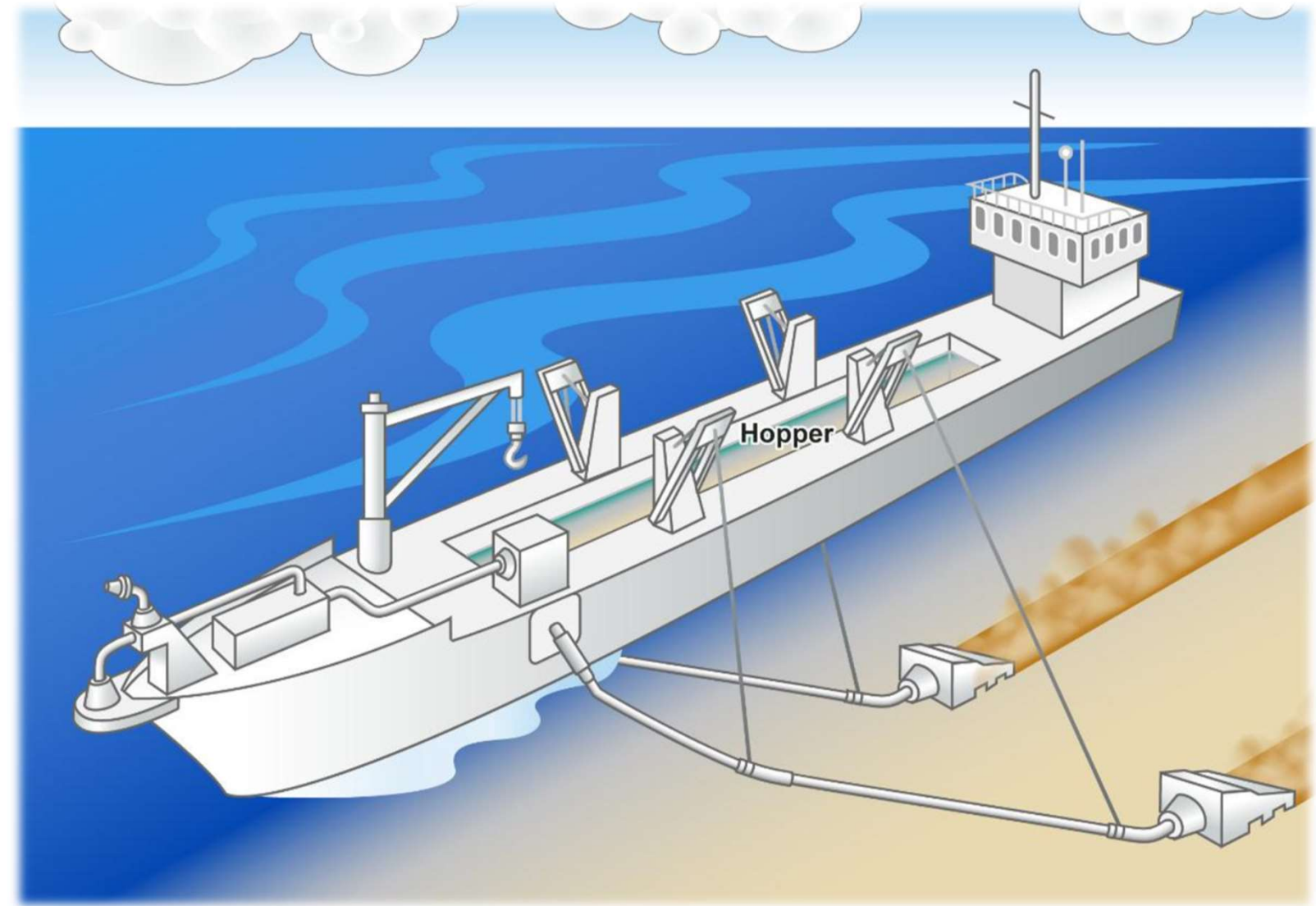
BEACH CONSTRUCTION & PRELIMINARY SCHEDULE



Beach Construction - Dredging

Trailing-suction hopper dredge

- > 2,500 cubic yards per load (dependent upon dredge used)
~166 truck loads of sand
- Approximately 800 round trips required at that rate
- Pump-out through 8 different pipeline locations along shore
- Protection of Endangered Species (inc. marine turtles, whales)



U.S. General Accounting Office

Beach Construction – Beach Fill

Bulldozers, loaders, and pipe

- Dune reconstruction permitted to +13 ft mean sea level (MSL)
- Beach berm elevation permitted to +8 ft MSL, up to 6 ft increase above current elevation
- 40 to 180 ft of increased beach width
- 200 to 600 ft per day, typ., of shoreline advance
- 2-4 days of construction activity in one area
- 1-4 weeks of shore pipe presence in one area
- Temporary beach access ramps over shore pipe



TYPICAL COMPLETED BEACH FILL





PRELIMINARY SCHEDULE

Survey and Easements

- 2 - 4 months

Bid/Contracting Period

- 3 – 4 months (after project initiation)

Mobilization Period

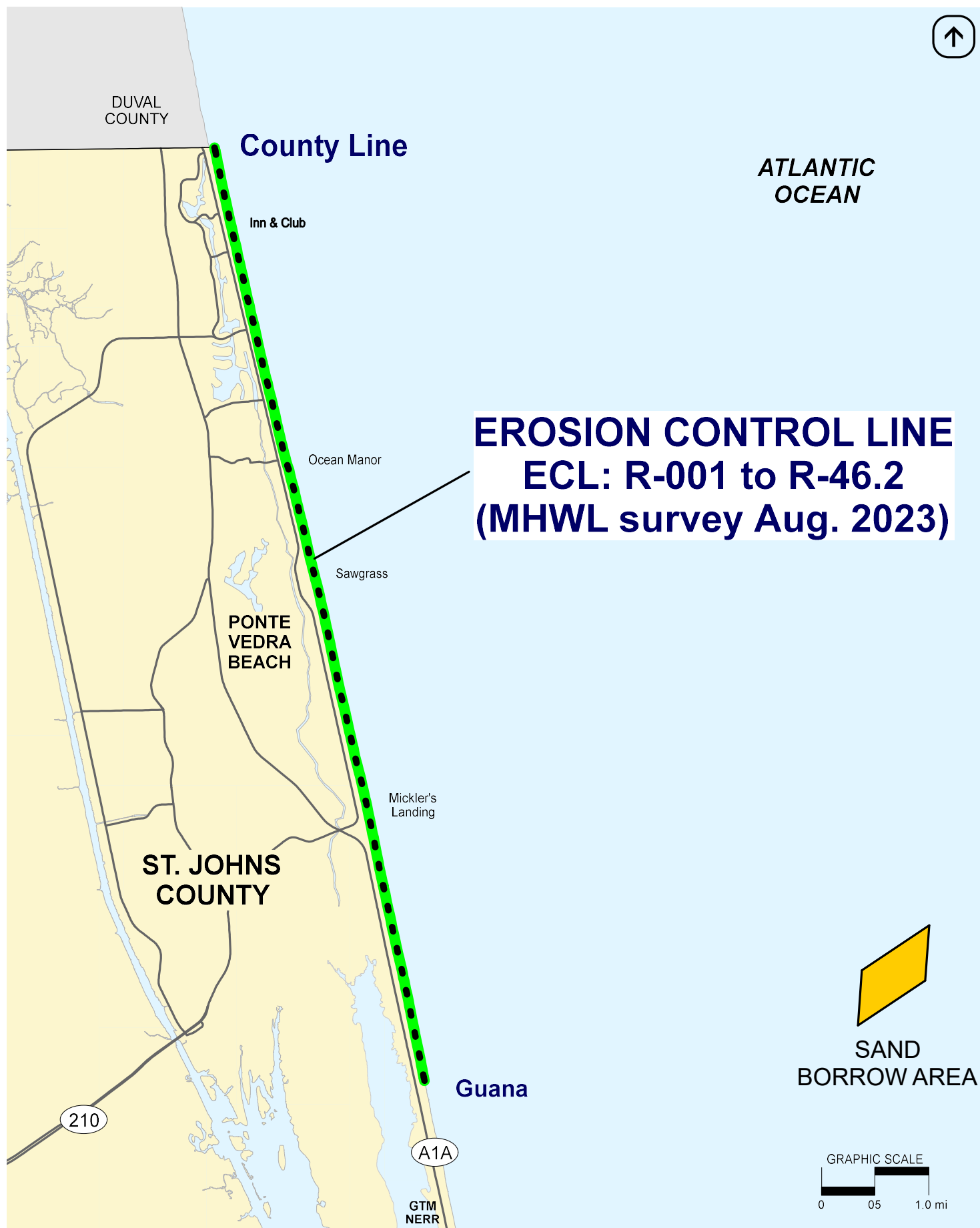
- 2 months

Construction Period

- 5-6 months

EROSION CONTROL LINE





EROSION CONTROL LINE

Florida Statute 161.161

- Establishes the line of Mean High Water prior to beach nourishment project construction
- Is the boundary between State and upland lands

Mean High Water Line Surveyed

- August 29, 2023

Workshop and Public Hearing

- October 26, 2023, 6:00 PM
- GTM Research Reserve Visitor Center

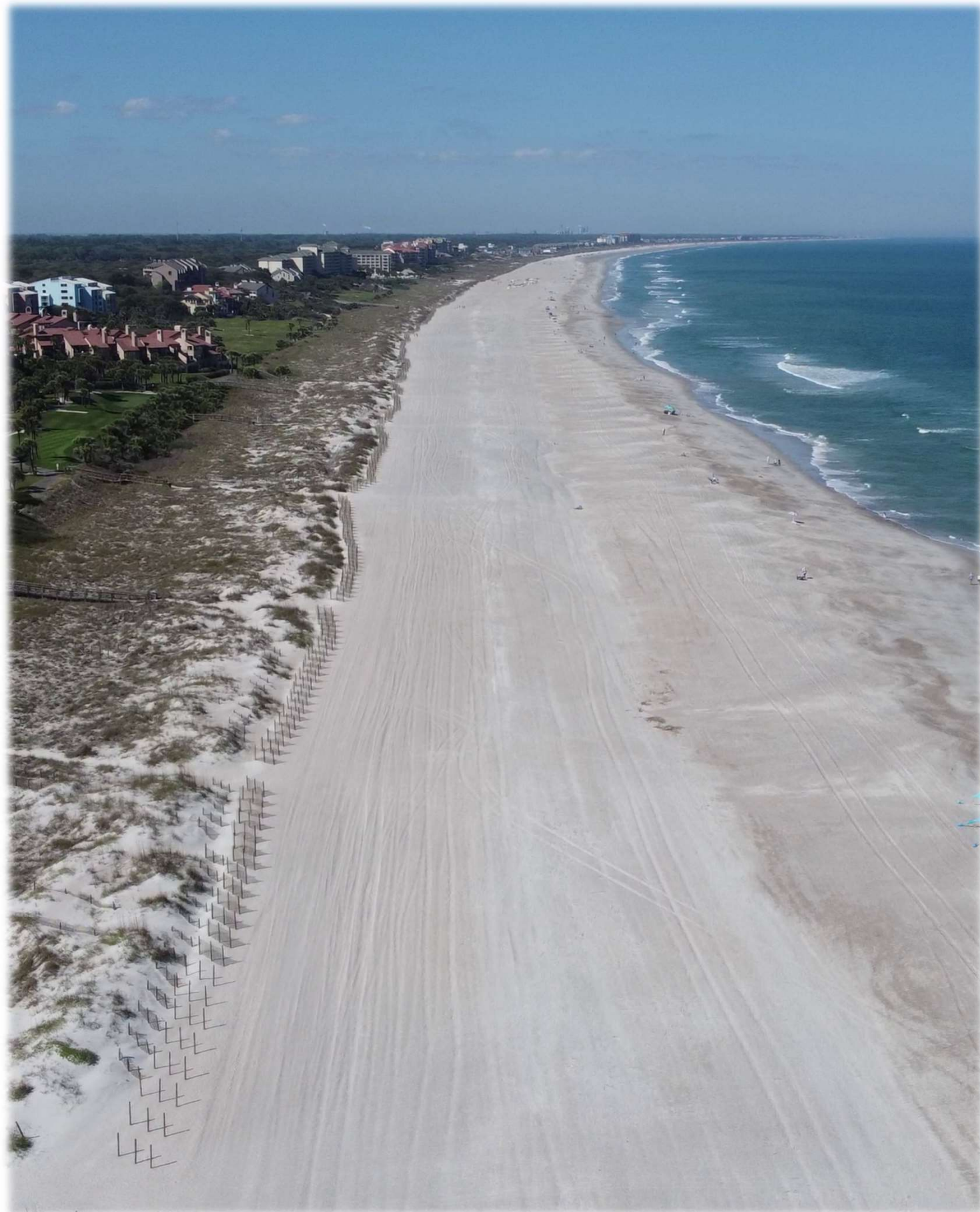


Easements

- Easements required to perform work on the seaward side of the dunes and on the beach.
- Coastal Management Easements apply to the initial restoration and subsequent nourishments, and emergency (FEMA) repair projects and other future projects.
- County has collected 218 of 272 easements in the Ponte Vedra project area, the vast majority perpetual in duration.
- Project will not function properly with too many holdouts.
- It is not the intent for these easements to function as a substitute for future public input for projects that require funding from property owners.
- Coastal Management staff can answer questions and assist with easements.
- Easements can be executed tonight.

PROJECT FUNDING





PROJECT FUNDING

Project Opinion of Probable Cost

- \$40M

Pledged Funding

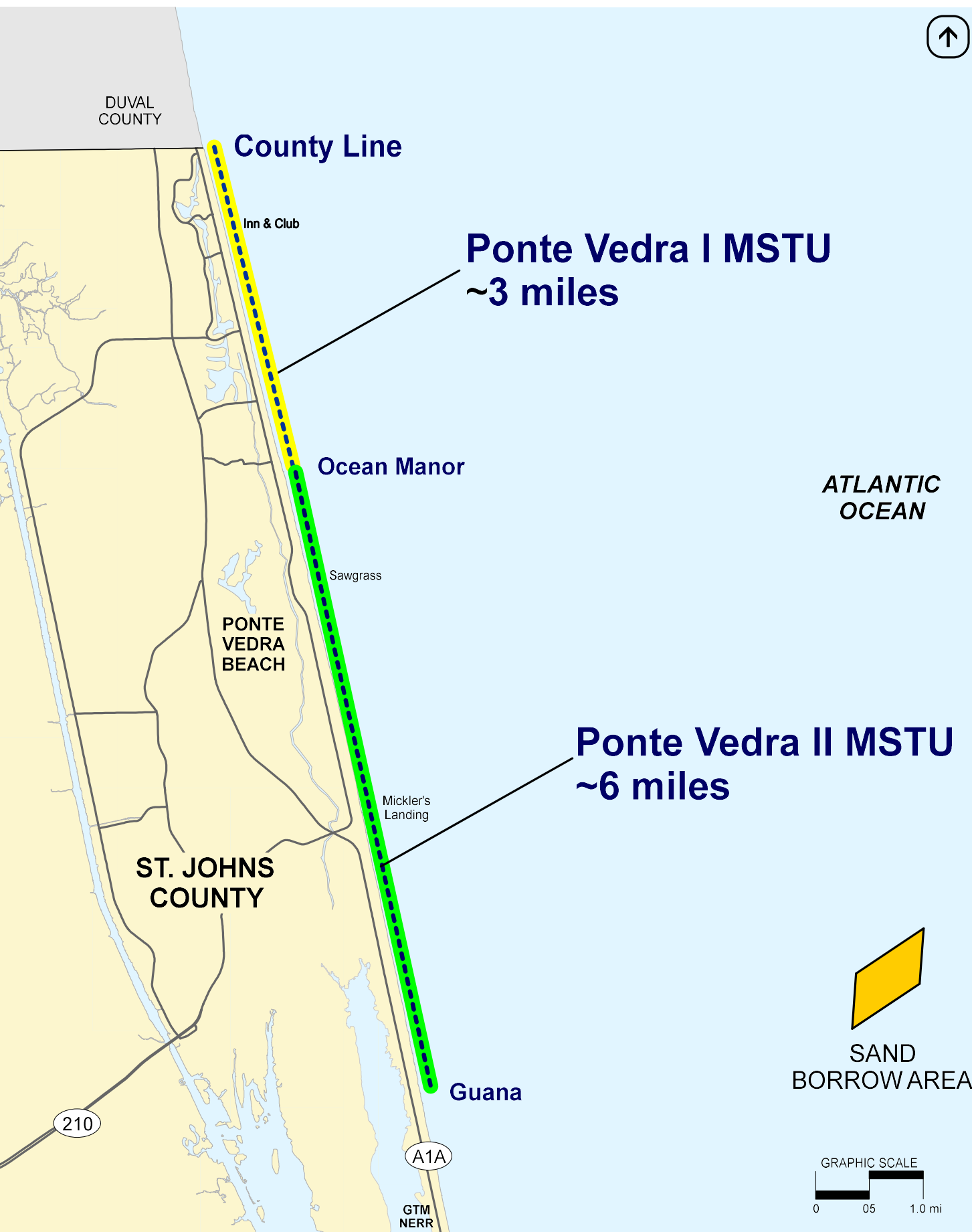
- \$30.2M State + \$8.2M County

Potential Construction Shortfall

- \$1.6M

Estimated Out-year Costs

- ~\$700k / yr Monitoring and Planning
- Required to qualify for potential FEMA assistance



EXISTING MSTUs

Community Action

- Community approached the County to set up a taxing district and permit an offshore sand source in the Summer 2018
- Municipal Service Taxing Unit (MSTU) created December 2019
- Amended MSTU ordinance to create separate North and South MSTUs in November 2021
 - Community input and engineering analysis
- No millage has been levied to MSTUs





PROPOSED MSTU LEVY

Ponte Vedra I MSTU (North 3 Miles)

- Up to 0.39 mils (Multiply taxable value by 0.00039)
- 20% of Potential Construction Shortfall
- 1/3 of Monitoring and Planning expenses

Ponte Vedra II MSTU (South 6 Miles)

- Up to 0.75 mils (Multiply taxable value by 0.00075)
- 80% of Potential Construction Shortfall
- 2/3 of Monitoring and Planning expenses

EXAMPLE MILLAGE VALUE FOR 1 YEAR

Taxable	Tax if 0.39 Mils PV MSTU I (North)	If 0.75 Mils South PV MSTU II (South)
\$500,000	\$195	\$375
\$1,000,000	\$390	\$750
\$5,000,000	\$1,950	\$3,750
Sample Below - \$1,883,578	\$735	\$1,413

▣ Valuation Information

SAMPLE

	2023
Building Value	\$1,176,574
Extra Features Value	\$44,880
Total Land Value	\$3,937,500
Agricultural (Assessed) Value	\$0
Agricultural (Market) Value	\$0
Just (Market) Value	\$5,158,954
Total Deferred	\$3,225,376
Assessed Value	\$1,933,578
Total Exemptions	\$50,000
Taxable Value	\$1,883,578

Values listed are from our working tax roll and are subject to change.

SURVEY LANGUAGE: Ponte Vedra I MSTU

PROPOSED ACTIVITY: Restoration of Ponte Vedra Beach ocean shoreline using sand dredged from a permitted offshore sand source, along with required permit compliance and planning.

- If agreement is indicated below by signing this survey and circling 'agree' to the PROPOSED ACTIVITY, we/I request the St. Johns County Board of County Commissioners to take the necessary actions to implement the PROPOSED ACTIVITY, and, levy up to 0.39 mils on the properties of the Ponte Vedra I Municipal Service Taxing District.
- We/I also understand that easements are necessary to allow sand placement and other tasks related to the PROPOSED ACTIVITY on the beach portion of our property. It is understood that agreement with the survey indicates a Coastal Management Easement has already been granted or that we/I intend to grant a Coastal Management Easement in the future, but agreement with the survey does not convey any easement rights at this time. (Note: Please contact Coastal Management Staff at 904.209.0260 or coastalprojects@sjcfl.us if you would like to discuss your easement or require assistance.)

Surveys must be received by December 1, 2023



SURVEY LANGUAGE: Ponte Vedra II MSTU

PROPOSED ACTIVITY: Restoration of Ponte Vedra Beach ocean shoreline using sand dredged from a permitted offshore sand source, along with required permit compliance and planning.

- If agreement is indicated below by signing this survey and circling 'agree' to the PROPOSED ACTIVITY, we/I request the St. Johns County Board of County Commissioners to take the necessary actions to implement the PROPOSED ACTIVITY, and, levy up to 0.75 mils on the properties of the Ponte Vedra II Municipal Service Taxing District.
- We/I also understand that easements are necessary to allow sand placement and other tasks related to the PROPOSED ACTIVITY on the beach portion of our property. It is understood that agreement with the survey indicates a Coastal Management Easement has already been granted or that we/I intend to grant a Coastal Management Easement in the future, but agreement with the survey does not convey any easement rights at this time. (Note: Please contact Coastal Management Staff at 904.209.0260 or coastalprojects@sjcfl.us if you would like to discuss your easement or require assistance.)

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Next Steps

Collect MSTU Surveys and Easements

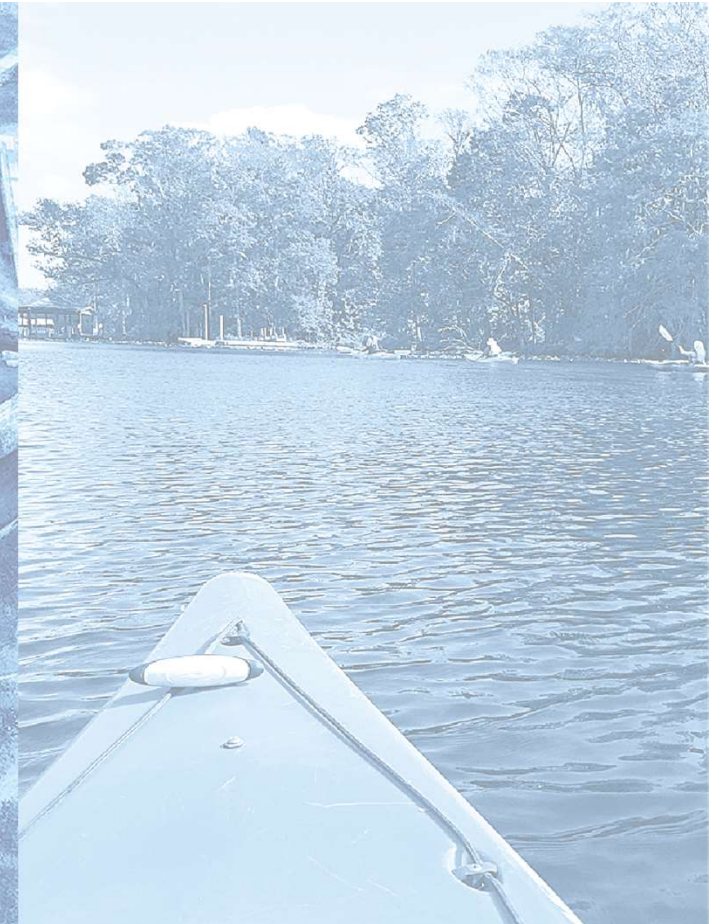
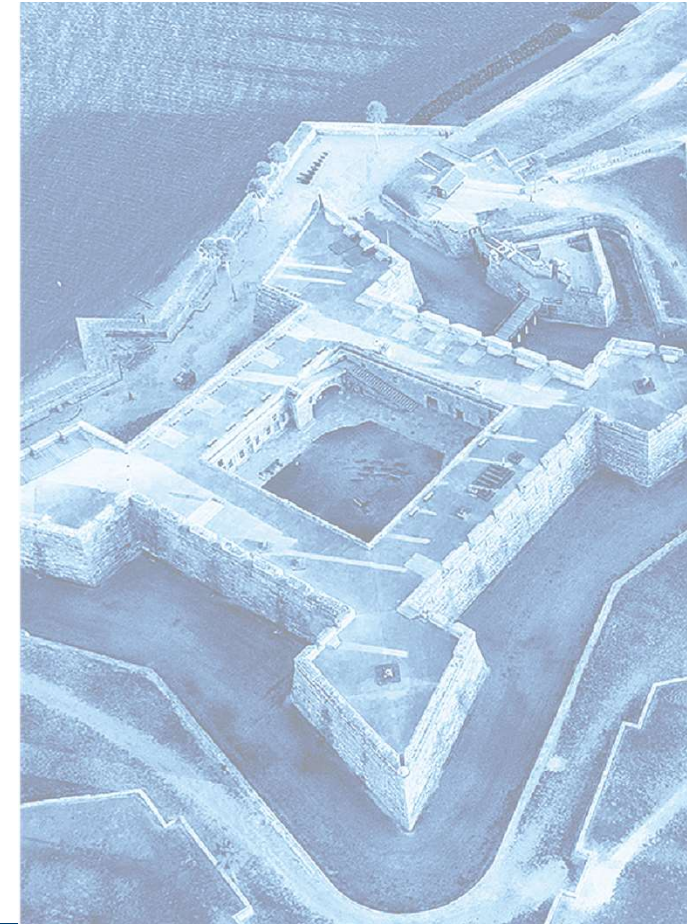
- Printed copies available on site
- Surveys mailed to all property owners
- DocuSign assistance available

Erosion Control Line

- Memorialize pre-construction location of Mean High Water Line before construction
- Erosion Control Line FDEP Workshop and Hearing October 26 at GTM Research Reserve Visitor Center, Guana River Road

Board of County Commissioners

- Commission considers MSTU Survey and Easement responses
- Procure construction contract



St. Johns County Coastal Management
904-209-0260
coastalprojects@sjcfl.us
sjcfl.us/coastalprojects/



