

# DO YOU BELIEVE IN MIRACLES PART DEUX?

**FSBPA  
FEBRUARY 8, 2024**



# OUTLINE

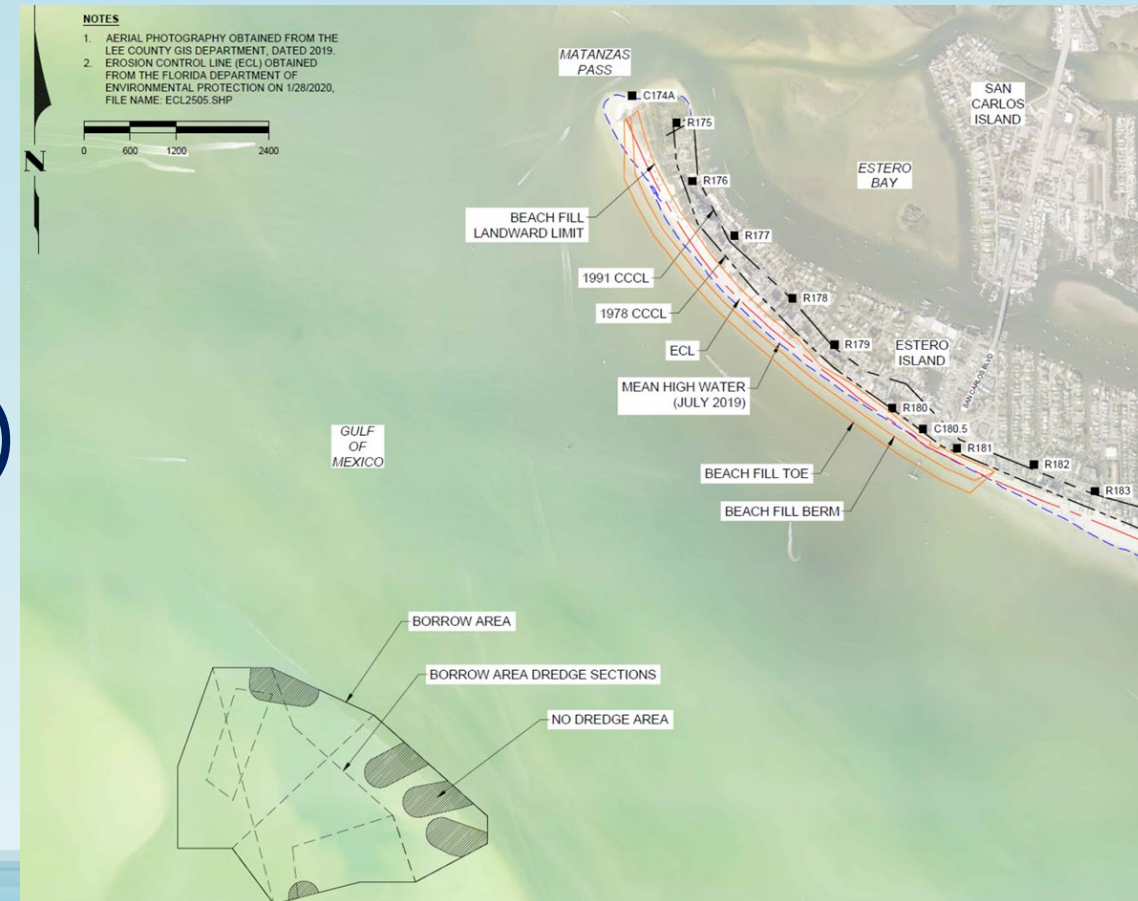
- BEACH PROJECT SUMMARY
- THE MIRACLES – PART 1 *RECAP*
- THE MIRACLES – “PART DEUX”

Oct 7, 2022



# BEACH PROJECT SUMMARY

- Estero-North Segment: Lee County (2003-2018)
  - Constructed April–Dec 2011
  - 403,000 CY
  - New Terminal Groin
  - Borrow Area: Ebb Shoal
- Island Wide: Town (2019-2021)
  - Nourish North Segment
  - Added Central & South Segments
  - 930,000 CY
  - Borrow Area: Ebb Shoal



# SHORELINE CHANGE ANALYSIS

Monument	Segment	Fill Placed Mar 2010- Jan 2012 (feet)	MHW Change Rate (Equilibration) Jan 2012-Apr 2013 (feet per year)	MHW Change Rate ** Background Erosion (feet per year)	MHW Change Rate *** Background Erosion (feet per year)	Average Fill Placed Mar 2010- Jan 2012 (feet)	Avg Change Rate (Equilibration) Jan 2012-Apr 2013 (feet per year)	Avg Change Rate Background Erosion (feet per year)
R-175 (248)*	North	320.1	6.0	-0.5	Terminal Groin Influence	232.7	-61.1	-9.8
R-176 (245)		325.2	-65.6	-6.6				
R-177 (220)*		284.0	-74.1	-11.5				
R-178 (227)*		184.0	-35.6	-10.4				
R-179 (230)*		211.0	-38.3	-10.8				
R-180 (210)*		214.8	-59.3	-13.1				
C-180.5 (205)		191.1	-66.1	-11.5				
R-181 (205)		218.8	-88.8	-4.9				
R-182 (204)*	Central				7.6			7.8
R-183 (205)					12.2			
R-184 (205)					11.7			
R-185 (200)*					16.3			
R-186 (205)					16.6			
R-187					5.2			
R-188					6.9			
R-189					5.0			
R-190					3.8			
R-191					3.7			
R-192					6.1			
R-193					4.4			
R-194					4.2			
R-195					7.1			
R-196					9.8			
R-197					7.1			
R-198					5.5			
R-199					5.2			
R-200				2.2				
R-201				-1.1				
R-202				-6.4				
R-203	South				-8.2			-10.7
R-204					-12.6			
R-205					2.1			
R-206					-18.1			
R-207					-16.9			
R-208				-7.0				
R-209				19.5				
R-210				62.0				

\* 2012 line was shifted from adjacent azimuth

\*\* Apr 2013-May 2021

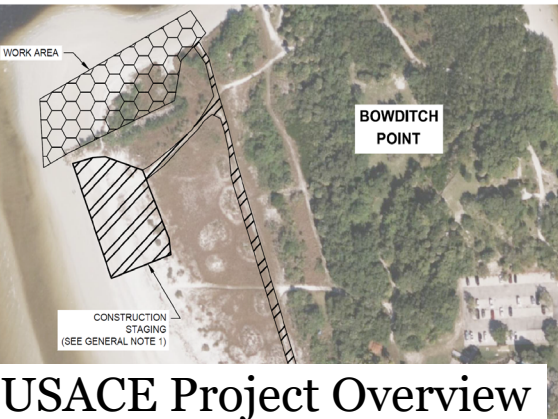
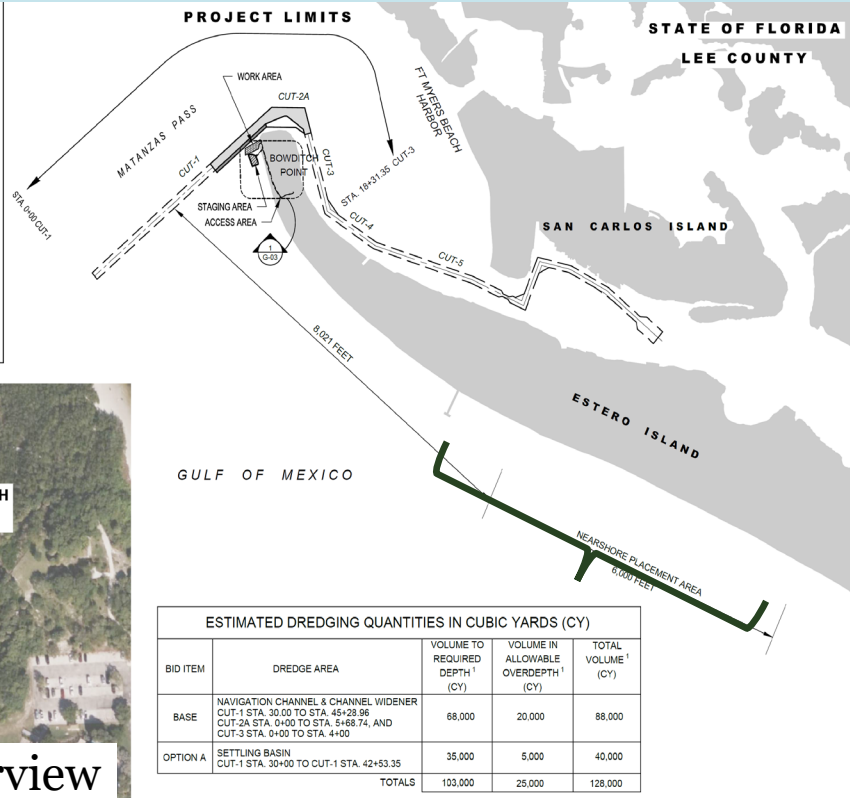
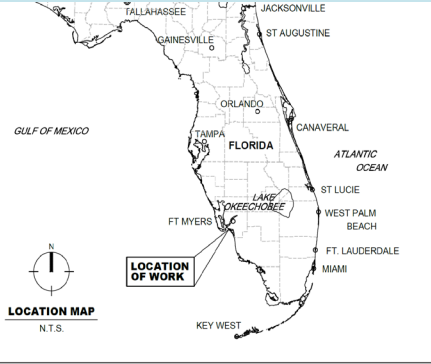
\*\*\* Mar 2010-May 2021

N/A = profile below MHW

# SHORELINE CHANGE ANALYSIS

- Central Segment:  
USACE Beneficial Use

- South Segment:  
Little Estero Island

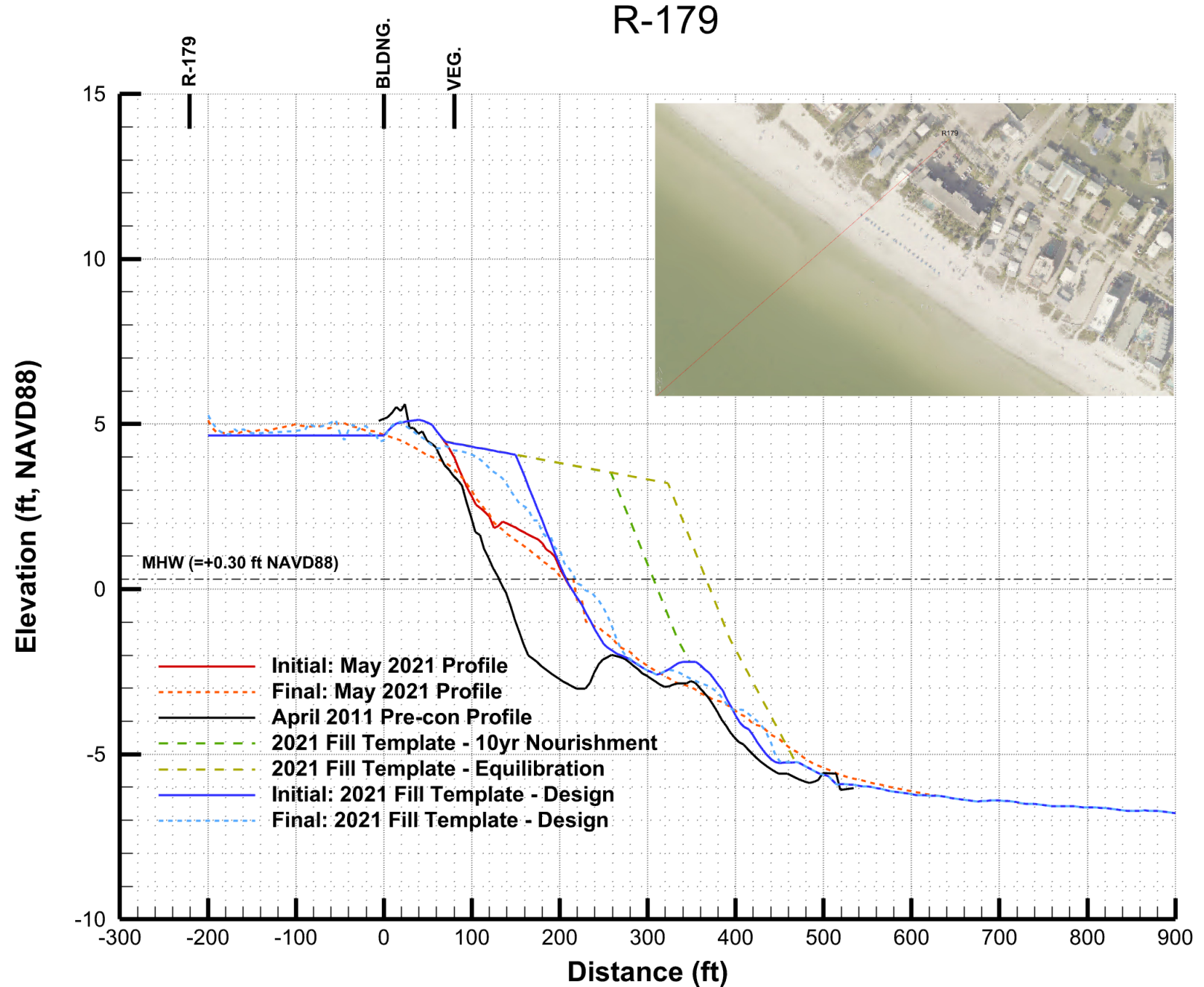


ESTIMATED DREDGING QUANTITIES IN CUBIC YARDS (CY)				
BID ITEM	DREDGE AREA	VOLUME TO REQUIRED DEPTH <sup>1</sup> (CY)	VOLUME IN ALLOWABLE OVERDEPTH <sup>1</sup> (CY)	TOTAL VOLUME <sup>1</sup> (CY)
BASE	NAVIGATION CHANNEL & CHANNEL WIDENER CUT-1 STA. 30+00 TO STA. 45+28.96 CUT-2A STA. 0+00 TO STA. 5+48.74, AND CUT-3 STA. 0+00 TO STA. 4+00	68,000	20,000	88,000
OPTION A	SETTLING BASIN CUT-1 STA. 30+00 TO CUT-1 STA. 42+53.35	35,000	5,000	40,000
TOTALS		103,000	25,000	128,000

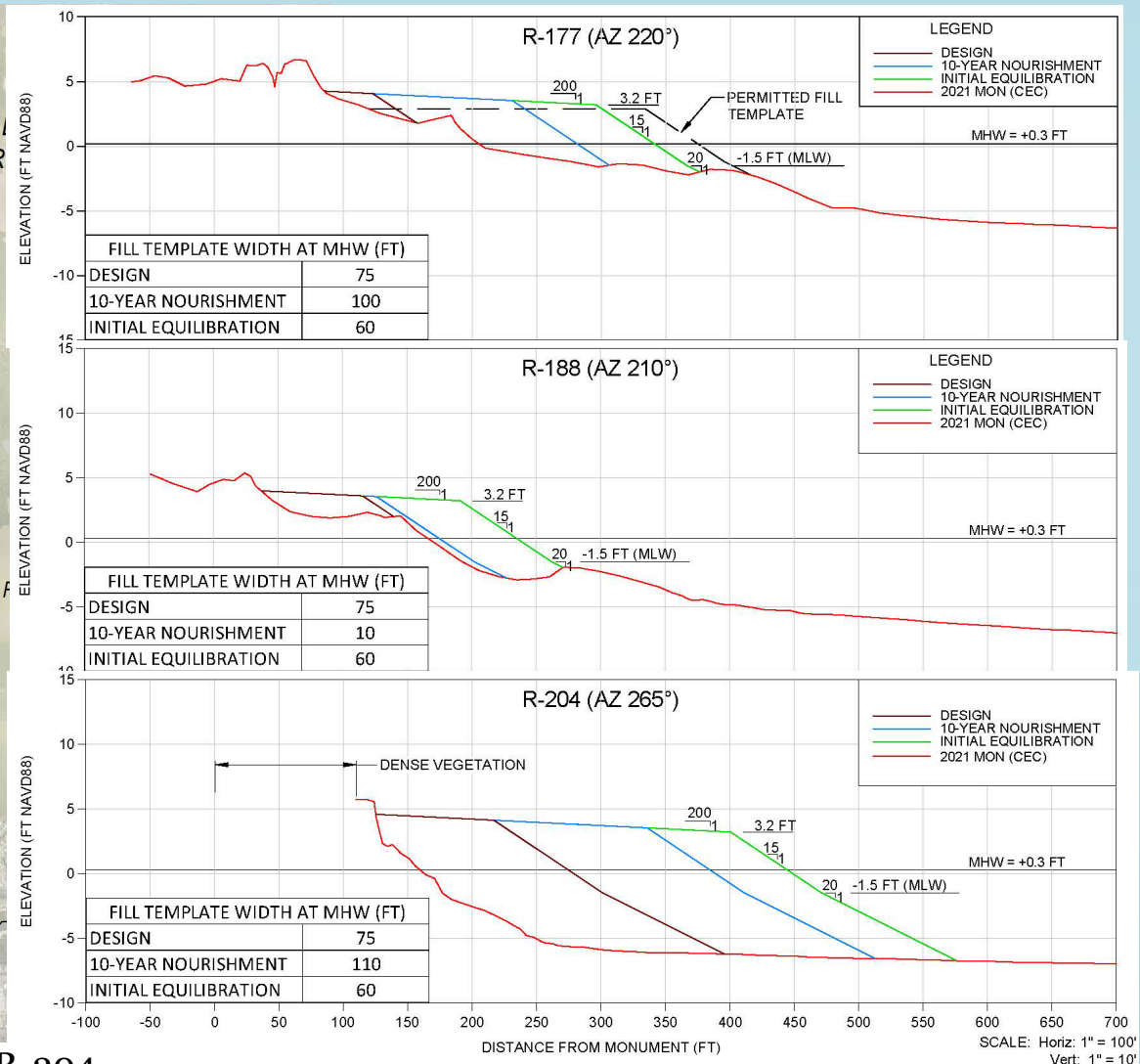
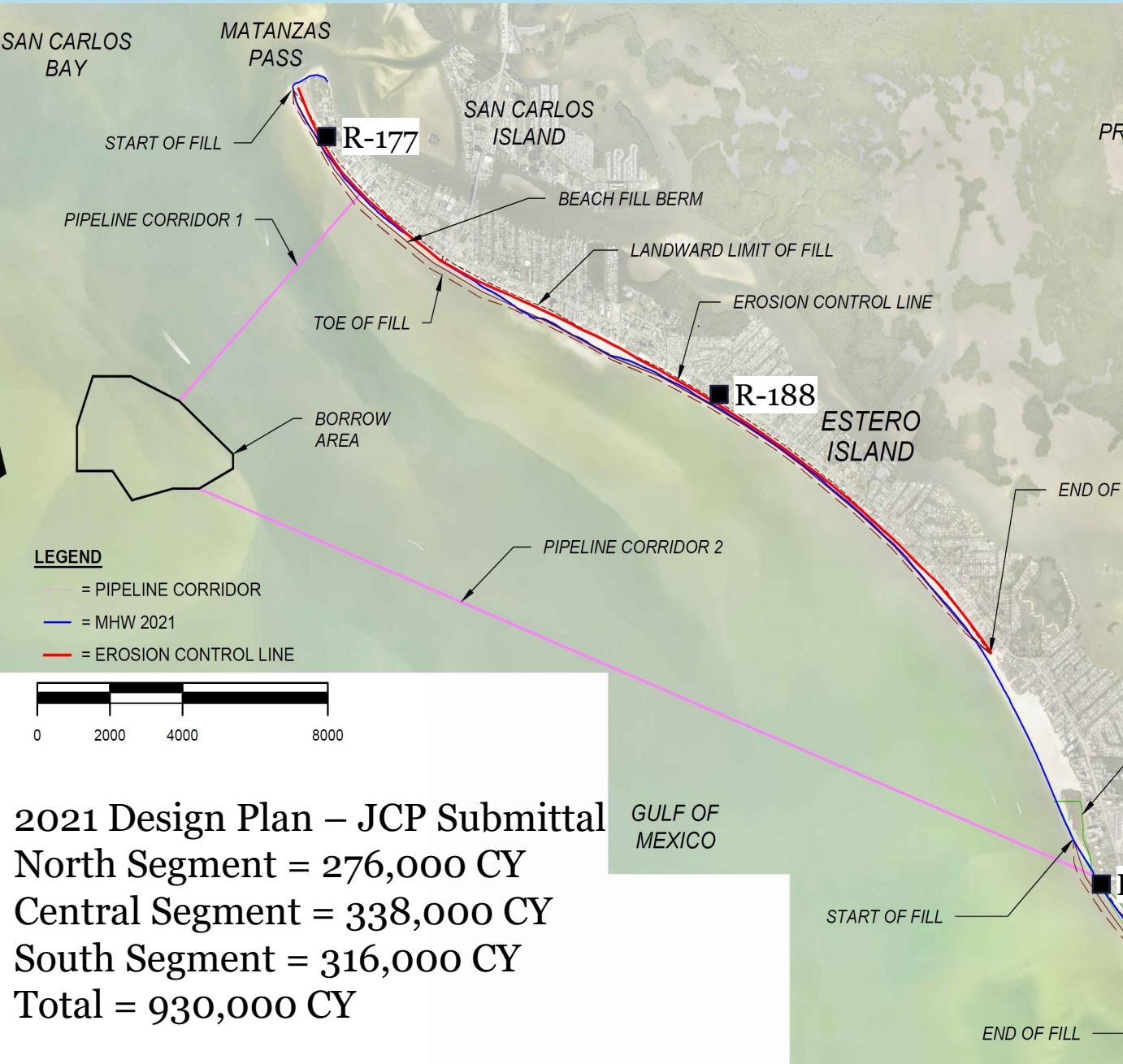


USACE Project Overview

# SBEACH MODEL STUDY



# 2021 PROJECT FEATURES

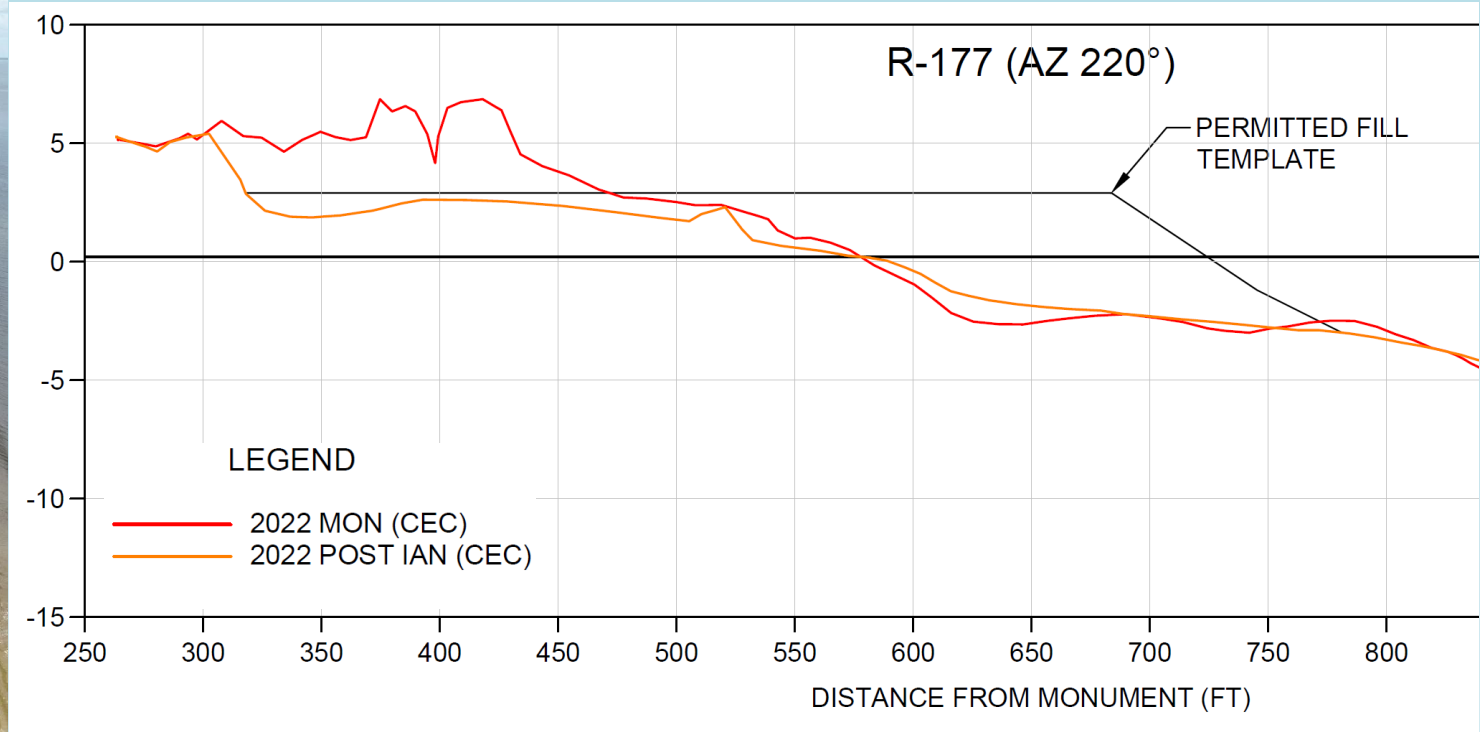


2021 Design Plan – JCP Submittal  
 North Segment = 276,000 CY  
 Central Segment = 338,000 CY  
 South Segment = 316,000 CY  
 Total = 930,000 CY

SCALE: Horiz: 1" = 100'  
 Vert: 1" = 10'

# HURRICANE IAN IMPACTS

**North**



SEGMENT	DESCRIPTION *	EROSION (CY)	DENSITY (CY/LF)
North	Managed-Cat G	56,845	-7.8
Central-South	Natural	163,576	-5.5
Central-South	Cat B Emer Berm	86,969	-3.0

\* Cat G calculation to depth of closure (with background erosion)  
 Natural beach calculation to intersection of pre-/post-storm (no background erosion)  
 Emergency Berm computed for erosion losses above 5-Yr SWL (up to 6.0 CY/LF) plus scour



# HURRICANE RECOVERY PLAN

HURRICANE IAN DAMAGES: **220,400 CY** Erosion Losses\*

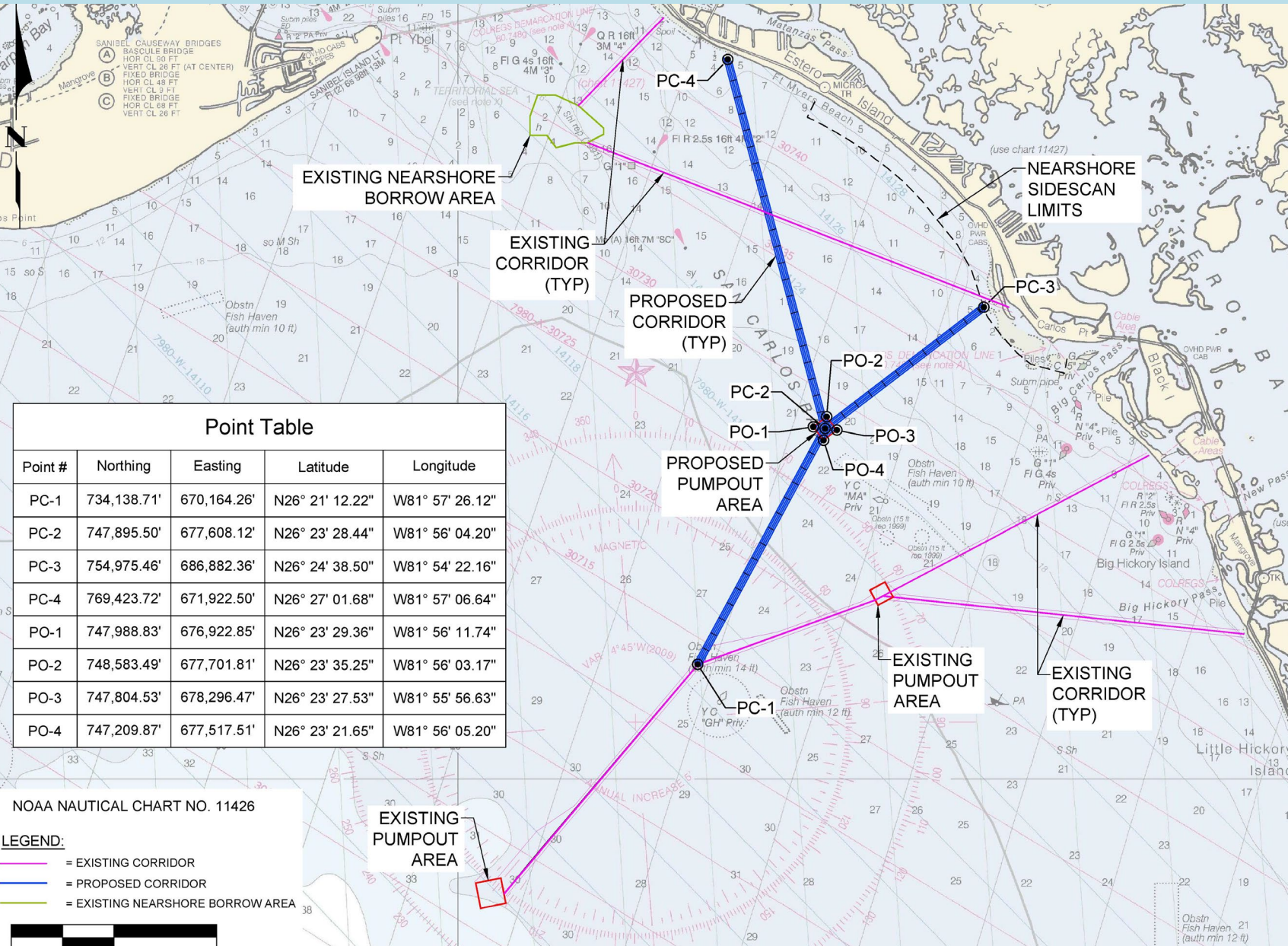
- **FEMA Category B**
  - Emergency Berm for Natural Beach (CENTRAL & SOUTH SEGMENTS)
  - 86,969 CY
- **FEMA Category G**
  - Engineered Beach (NORTH SEGMENT)
  - 56,845 CY
- **FDEP Hurricane Recovery Plan**
  - Supplement Dredge Project (NORTH AND CENTRAL SEGMENTS)
  - 40,000 CY
- **FDEM Hurricane Recovery**
  - Berms, Scour Holes, Public Accesses (CENTRAL AND SOUTH SEGMENTS)
  - 80,000 CY



\* Scour Hole Volumes Unquantified

# 2024 BEACH NOURISHMENT PROJECT FEATURES

- Lee County & Town
  - Share Borrow Area
- BOEM & Town
  - OCS Lease / NNA
- Town Mapped Nearshore Corridors



# THE MIRACLES – PART 1 *RECAP*

- 1 FEMA Emergency Berm
- 2 State Funding
- 3 Turtle Nesting
- 4 Agency Coordination
- 5 Shorebird Nesting
- 6 Joint NMFS BO

**STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Standard Grant Agreement**

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This Agreement is entered into between the Parties named below, pursuant to Section 215.971, Florida Statutes:

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1. Project Title (Project): **Estero Island Shore Protection Project** Agreement Number: **23LE1**

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2. Parties **State of Florida Department of Environmental Protection,  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000** (Department)

Grantee Name: **Town of Fort Myers Beach** Entity Type: **Local Government**

Grantee Address: **2525 Estero Boulevard, Ft. Myers Beach, FL 33931** FEID: **59-0632342** (Grantee)

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3. Agreement Begin Date: **7/1/2022** Date of Expiration: **12/31/2025**

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4. Project Number: \_\_\_\_\_ Project Location(s): **Lee County**  
(If different from Agreement Number)

Project Description: **The project consists of design, construction, and monitoring.**

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5. Total Amount of Funding:	Funding Source? <input checked="" type="checkbox"/> State <input type="checkbox"/> Federal	Award #s or Line Item Appropriations: <b>FY 22/23 GAA Line # 1778</b>	Amount per Source(s): <b>\$ 14,013,346.00</b>
<b>\$ 14,013,346.00</b>	<input type="checkbox"/> State <input type="checkbox"/> Federal		

Estimated Eligible Project Cost

Task #	Eligible Project Tasks	State Cost Share (%)	Federal Estimated Project Costs	DEP	Local	Total
1	<b>Construction - Estero Island Beach Restoration and Nourishment Projects</b>	100.00%	\$0.00	\$1,891,335.00	\$0.00	<b>\$1,891,335.00</b>
	<b>TOTAL PROJECT COSTS</b>		<b>\$0.00</b>	<b>\$1,891,335.00</b>	<b>\$0.00</b>	<b>\$1,891,335.00</b>

**PROJECT TIMELINE & BUDGET DETAIL:** The tasks must be completed by, and all deliverables received by, the corresponding deliverable due date.

Task No.	Task Title	Budget Category	Budget Amount	Task Start Date	Deliverable Due Date
1	Construction	Contractual Services	\$1,891,335.00	9/28/2022	9/30/2025
Total:			\$1,891,335.00		

# MIRACLE # 1: EMERGENCY BERM



# MIRACLE # 3: TURTLE NESTING



# MIRACLE # 6: JOINT NMFS B.O.



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Southeast Regional Office  
263 13<sup>th</sup> Avenue South  
St. Petersburg, Florida 33701-5505  
<https://www.fisheries.noaa.gov/region/southeast>

08/25/2023

F/SER31:SG  
SERO-2023-00206  
SERO-2023-00268

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New Orleans, Louisiana 70123

Jeffrey Miller  
Public Assistance I Program Delivery Manager  
Office of Response and Recovery  
Federal Emergency Management Agency  
Department of Homeland Security  
500 C Street SW  
Washington, D.C. 20024

Ref.: SAJ-2012-00198, Lee County Natural Resources Division, Beach Nourishment at Lovers  
Key and Bonita Beach, Bonita Springs, Lee County, Florida

Ref.: SAJ-2000-03017, Town of Ft. Myers Beach, Beach Nourishment at Estero Island, Fort  
Myers Beach, Lee County, Florida

# THE MIRACLES – “PART DEUX”

Show Me Da Money!

Agreement Number: D1502

Show Me Da Permit!

## STATE-FUNDED LAP GRANT AGREEMENT

THIS AGREEMENT is entered into by the State of Florida, Division of with headquarters in Tallahassee, Florida (hereinafter referred to as the "Divis **Myers Beach**, Florida (hereinafter referred to as the "Recipient").

THIS AGREEMENT IS ENTERED INTO BASED ON THE FOLLOWING REF

A. The Recipient represents that it is fully qualified and eligible to rec provide the services identified herein; and

B. The Division has received these grant funds from the State of Flor subgrant these funds to the Recipient upon the terms and conditions below; a

### ATTACHMENT A

### Proposed Budget and Scope of Work

## I. PROPOSED BUDGET

Project	Anticipated Expenditu
Beach Renourishment	\$8,000,000.00
Legislative Appropriation Funds	\$8,000,000.00
<b>Total Expenditures</b>	<b>\$8,000,000.00</b>

### **Beach Renourishment:**

The Town of Fort Myers Beach seeks to contract with a qualified contrac place, and grade beach compatible sand along segments of Estero Islan The Town of Fort Myers Beach will contract professional services for monitoring, environmental and willing costs associated with the beach r be used to dredge sand to place on beach for beach restoration for ( Hurricane Ian. Additionally, a dune will be built along the central and Island where the FEMA Cat-B project Emergency Berm was created fir also experienced additional sand loss due to major Hurricane Ian mitigation work consists of filling in scour holes and filling in beach p eroded out. Cat-G project areas will not be funded under this agreement

## DEPARTMENT OF THE ARMY PERMIT

**Permittee:** TOWN OF FORT MYERS BEACH  
c/o Chadd Chustz  
2525 Estero Boulevard  
Fort Myers Beach, FL 33931

**Permit No:** SAJ-2000-03017 (SP-SJF)

**Issuing Office:** U.S. Army Engineer District, Jacksonville

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the U.S. Army Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Description:** The applicant seeks authorization for periodic beach renourishment of Estero Island for a 15-year period including: 1) The placement of 1,092,000 cubic yards of beach compatible sand between beach monuments C-174A to R-198 and R-203 to R-207; 2) One-time placement of 15,000 cubic yards of beach compatible sand above the mean high water line between beach monuments R-207 to R-210; 3) Implement nourishment projects and sand placement activities, anticipated to be 700,000 cubic yards per event, every 8 to 10 years for a 15-year period; 4) Utilize nearshore and offshore borrow areas; and 5) Utilize inland mines to provide beach compatible sand for future hot-spot maintenance and post-storm recovery. Two construction methods for excavation of the offshore borrow area are proposed including: 1) the hydraulic cutterhead dredge and scow barge method; and 2) the hopper dredge method. One construction method, specifically the hydraulic cutterhead dredge direct discharge method, is proposed for excavation of the nearshore borrow area.

### omeland Security Management Agency

Project Type	Specialized
Applicant	Lee County (071-99071-00)
Event	4673DR-FL (4673DR)
Declaration Date	9/29/2022
Incident Start Date	9/23/2022
Incident End Date	11/4/2022

Total Cost	Section
\$1,507,190.00	Uncompleted

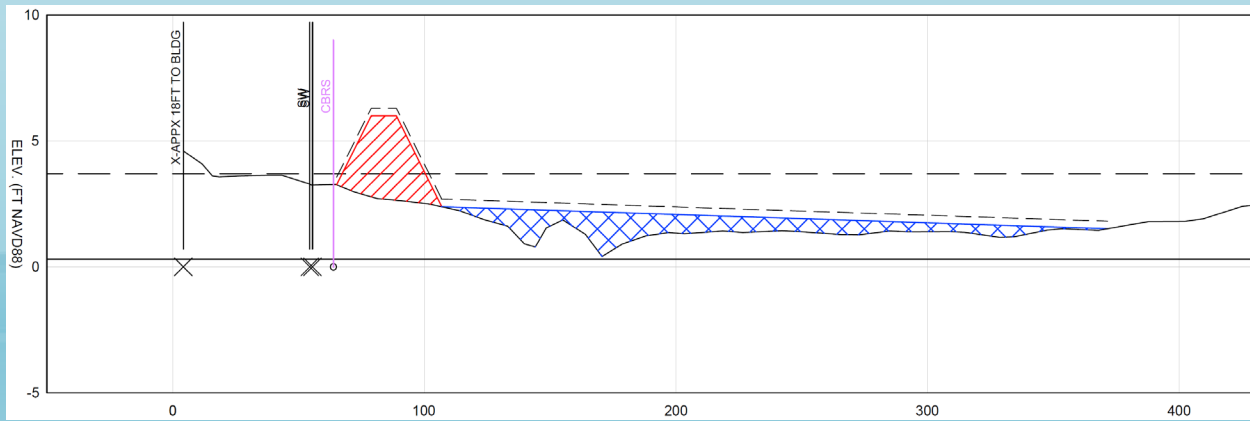
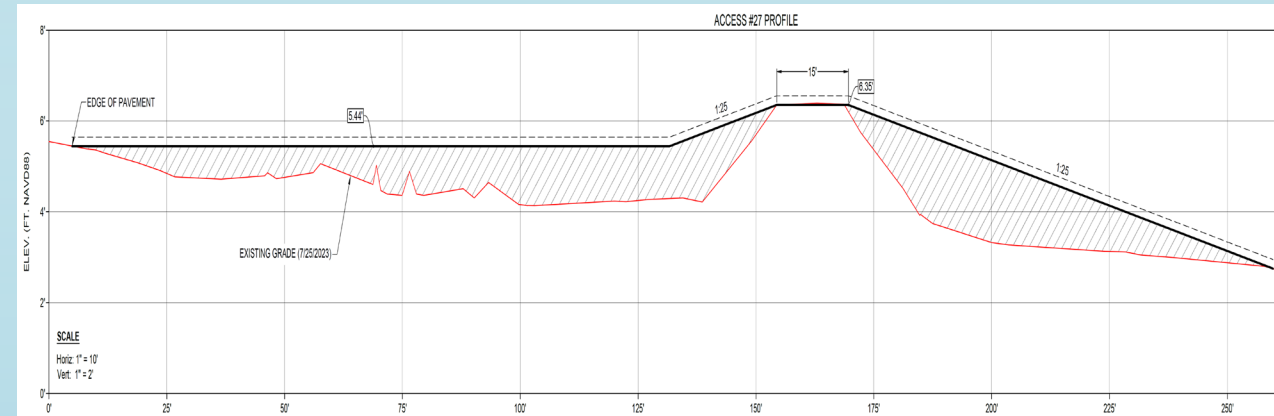
CRC Gross Cost	\$1,507,190.00
Total 406 HMP Cost	\$348,610.00
Total Insurance Reductions	\$0.00
CRC Net Cost	\$1,855,800.00
Federal Share (90.00%)	\$1,670,220.00
Non-Federal Share (10.00%)	\$185,580.00

# Miracle #7: FDEM Hurricane Recovery

- Town Received \$ 8 Million Grant
- Public Beach Accesses
  - Priority Accesses For ADA Access ~ Sand Ramps

- Additional Berm Segments

- Scour Fills: 5000-6000 Blocks and Carlos Point Beach





# Miracle #8: FEMA Category G Obligation

- CEC Report: 56,845 CY
  - \$6.2 M Truck Haul
  - \$1.4 M Concurrent with Dredge Project
  - No Work in CBRA Zone
- SME Report ~ Concurred with CEC, Assumed Concurrent Construction ~ \$1.4 M
- PRJ Report Issued, Public Assistance approved (1/19/24)
- Hazard Mitigation ~ Mature Dune Vegetation
- CRC Net Cost = \$1.86 M; Federal Share Obligated = \$1.67 M

# Miracle #9: USFWS Issued B.O.

- March 17, 2023 Consultation Initiated
- April 12, 2023 RAI Response
- Issued BO September 29, 2023  
(evening of Fall FSBPA Friday Session)

Biological Opinion  
Estero Island Beach Nourishment

FWS Log #: 2023-0057472



Prepared by:

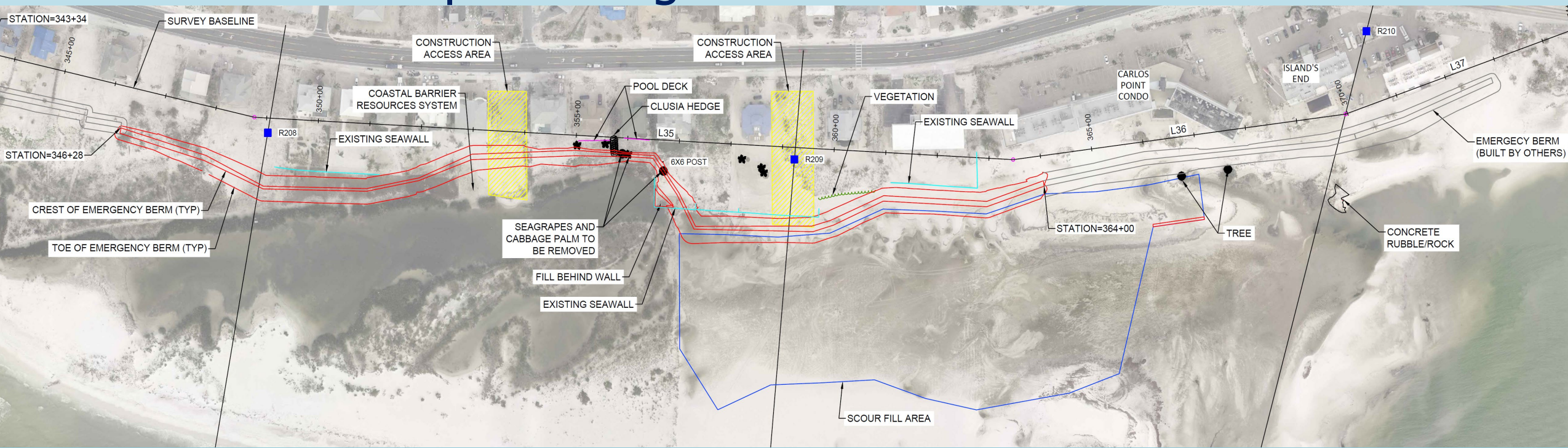
U.S. Fish and Wildlife Service  
Florida Ecological Services Office  
Gainesville, FL

# Miracle #10: USACE Issued Permit (Nov 2023)

- 15-Year Beach Nourishment and Renourishment
- Post-Storm Recovery & Hot-Spot Maintenance
- Nearshore and Offshore Borrow Areas

# Miracle #11: Estero Island Beach Sand Truck Haul

- Town Opened Bids for 112,000 Tons (January 2024)
- Engineer's Opinion of Probable Cost = \$6.5 M
- 5 Truck Haul Bids ~ Ranged from \$2.7 to \$4.5 M
- Project Cost Including Sand, Truck, Place & Soft = \$4.3 M
- Earth Tech Enterprises begins work this week!



# MIRACLES: FORTHCOMING

- Rebid Project ~ Dredgers Submit Competitive Bids
  - Cutterhead Direct ~ Nearshore Borrow Area
    - Option to Pump to North End & Truck Haul to South End
  - Cutterhead – Scow Barges ~ Offshore Borrow Area
  - Hopper Dredge ~ Offshore Borrow Area
- FEMA Approve Change in Scope to Allow for Category G Repair via Truck Haul to North Segment prior to 2024 Hurricane Season

# ACKNOWLEDGEMENTS

- Greg, Sean, Rachel, Anthony, Michael, Madison, Alex & Lainie ~ FDEP
- Stephen Fleming & Krista Sabin ~ USACE
- Jessica Mallindine, Jennifer Steele & Brian Cameron ~ BOEM
- Bob Glassen & Dillon Irwin ~ FEMA Subject Matter Experts
- Jeffrey, Kristen, Amandie, Elijah, Kelley, Jorge, Augustine, Aaron, Rose, Bryon, Kenneth, Karl & Amanda ~ FEMA EHP and PDM
- Sarah Garvin ~ NMFS
- Brendan Myers ~ USFWS
- Alexis Cardas, Becky Schneider, & Robin Serne ~ FWC
- Steve Boutelle & Mike Campbell ~ Lee County
- Matt Feeney ~ City of Bonita Springs
- Corrine, Scott, Erica, Monica & Edwin ~ Shorebird Monitors
- Eve & Cindy ~ Sea Turtle Monitors
- Cast and Crew of Town of Ft. Myers Beach
- Cast and Crew of CEC