

Estero Island Shore Protection Project Update

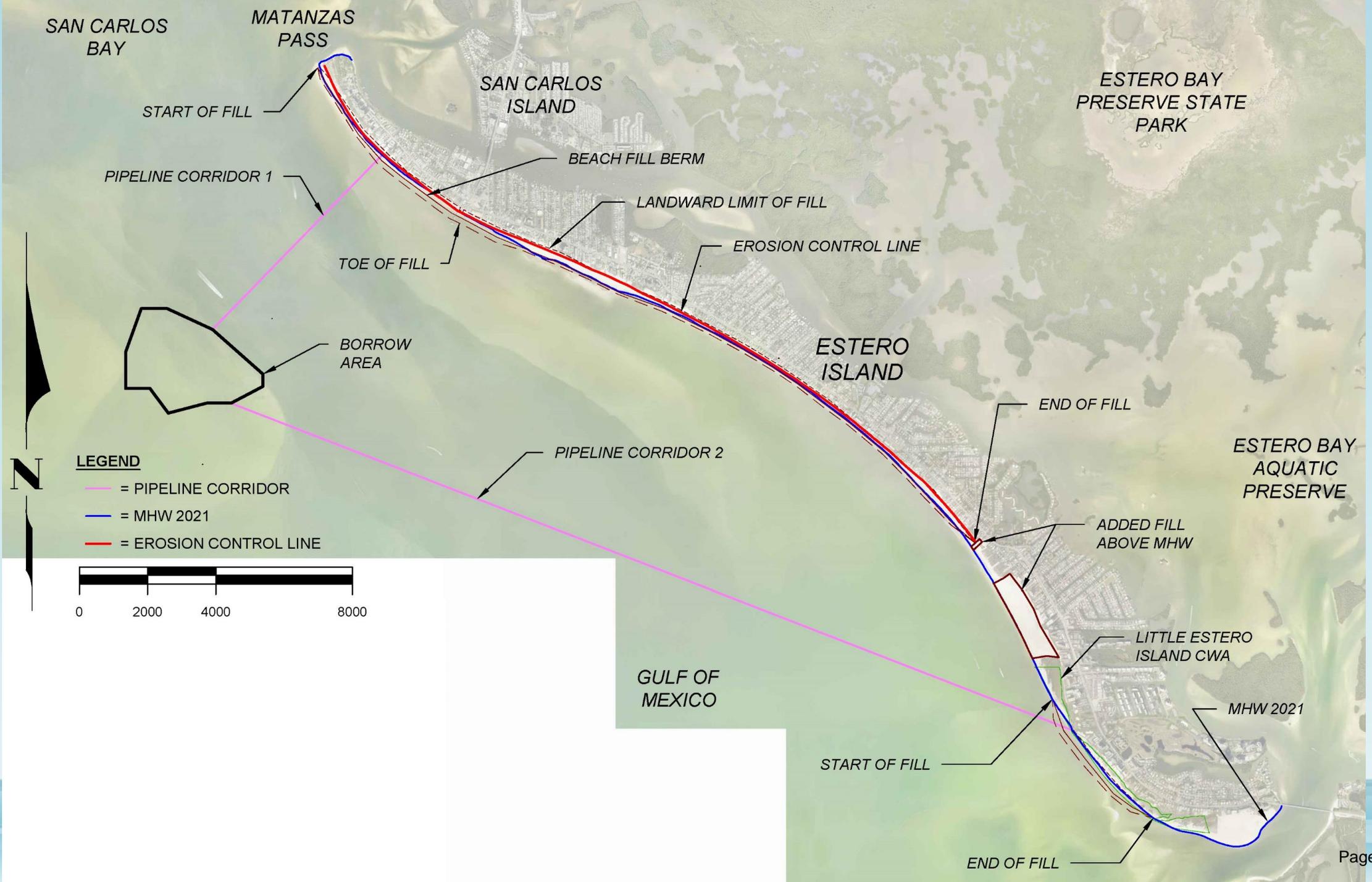
MARCH 21, 2022



OUTLINE

- Project Design
- Permit Status
- Funding
- Public Access
- Contracting
- ECL
- Easements
- Construction
- Post-Construction Requirements

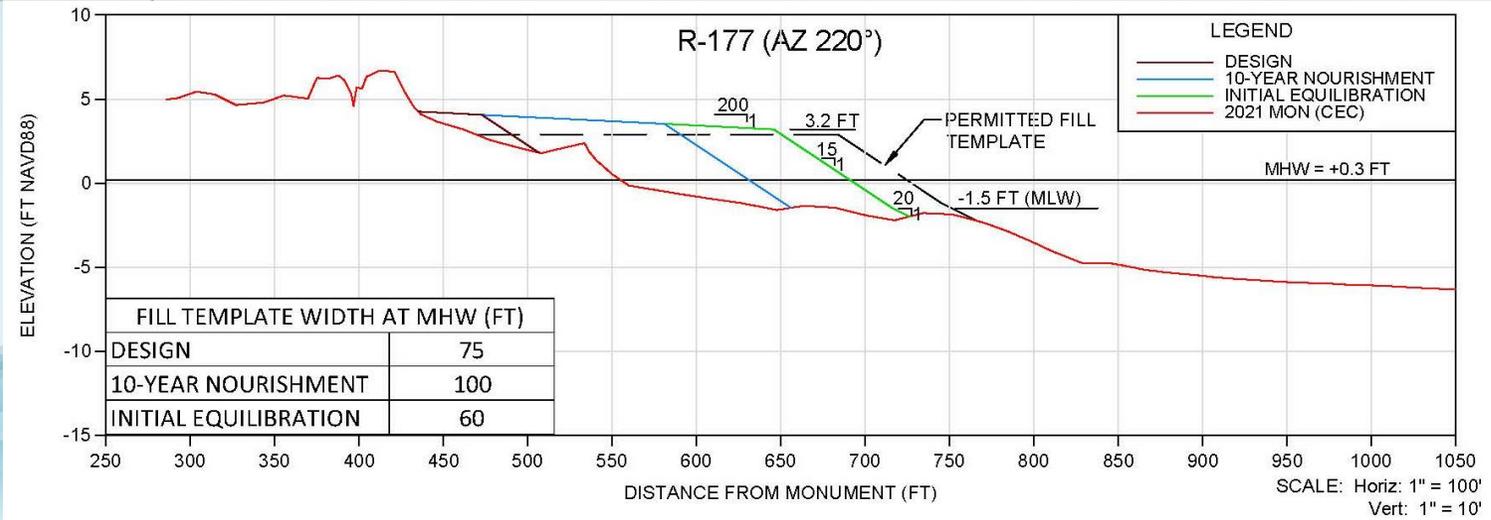




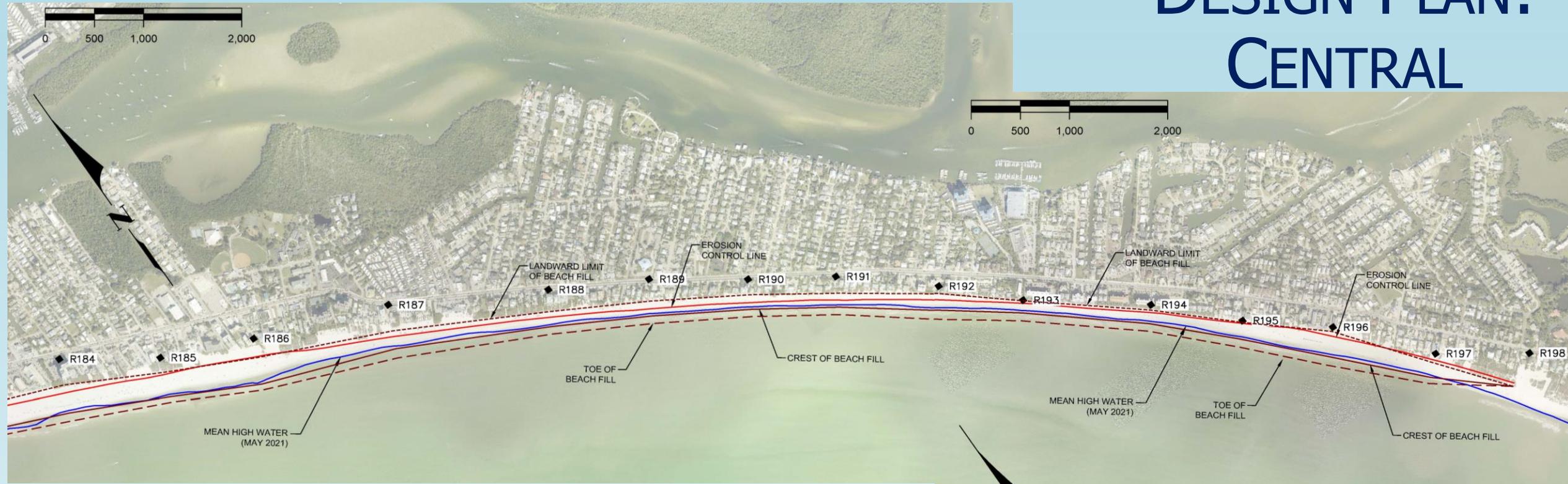
BEACH FILL DESIGN

- Beach Fill Segments
 - North: C-174.5 (Terminal Groin) to R-182
 - Central: R-182 to R-200
 - Non-Critical Erosion Segment: R-200 to R-203
 - South: R-203 to R-207
 - Non-Critical Erosion Segment: R-207 to R-210
- 25-Year Design Storm Event
- Beach Fill Template
 - Design Width
 - Background Erosion (Advanced Nourishment)
 - Equilibrium Profile Adjustment (Initial Adjustments)

DESIGN PLAN: NORTH



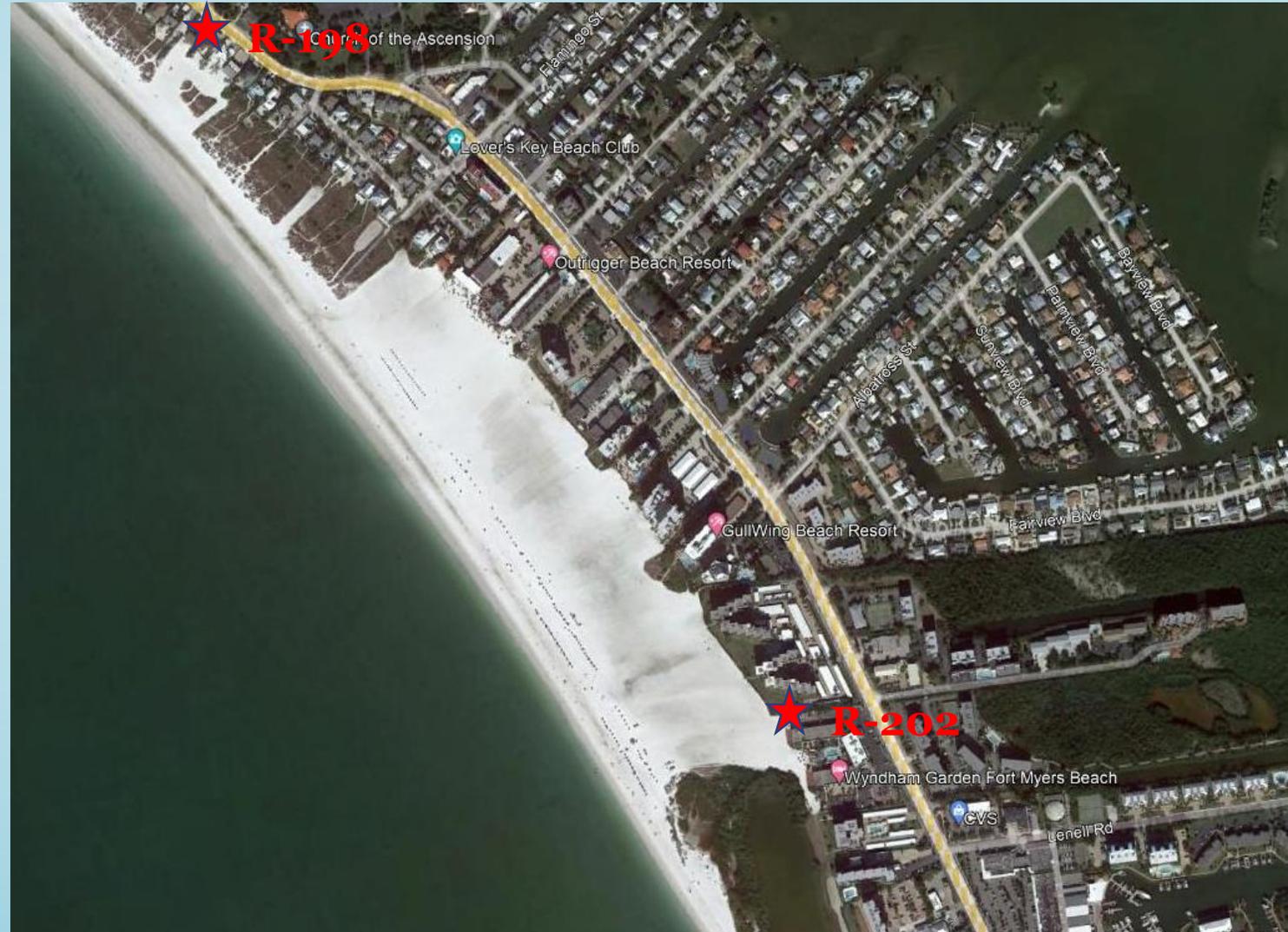
DESIGN PLAN: CENTRAL



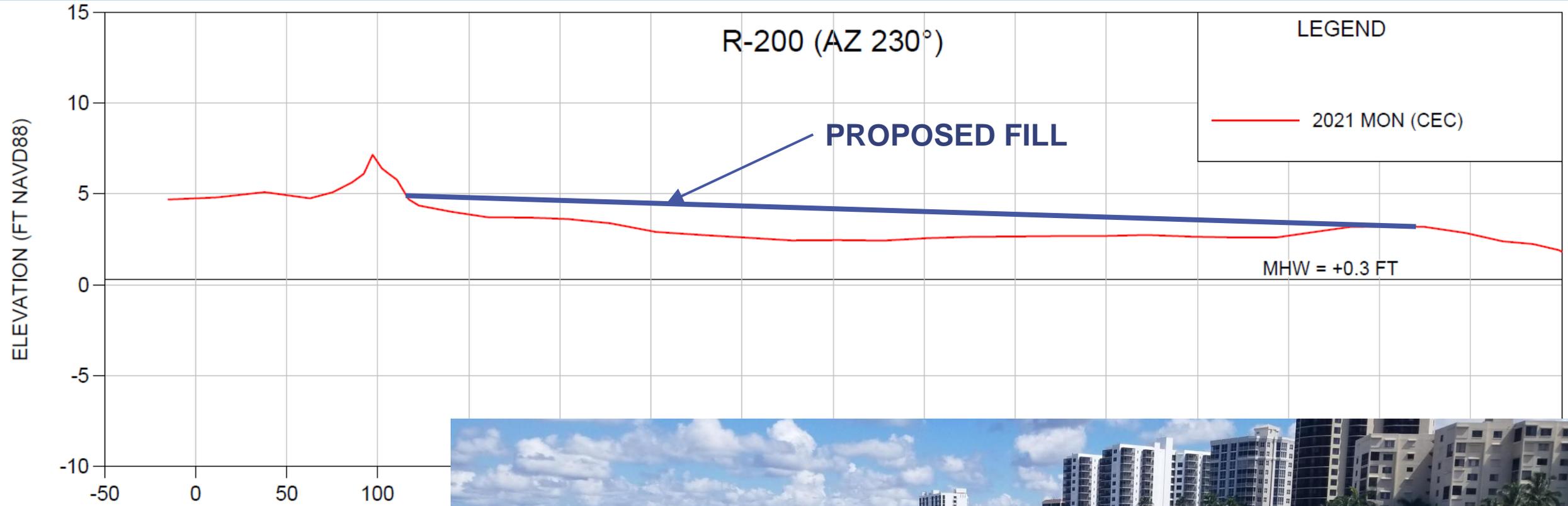
- NOTES:**
1. ELEVATIONS ARE REFERENCED TO NAVD88.
 2. PROFILE DATA IS FROM SURVEYS BY CEC.

DESIGN PLAN: R-198 TO R-202

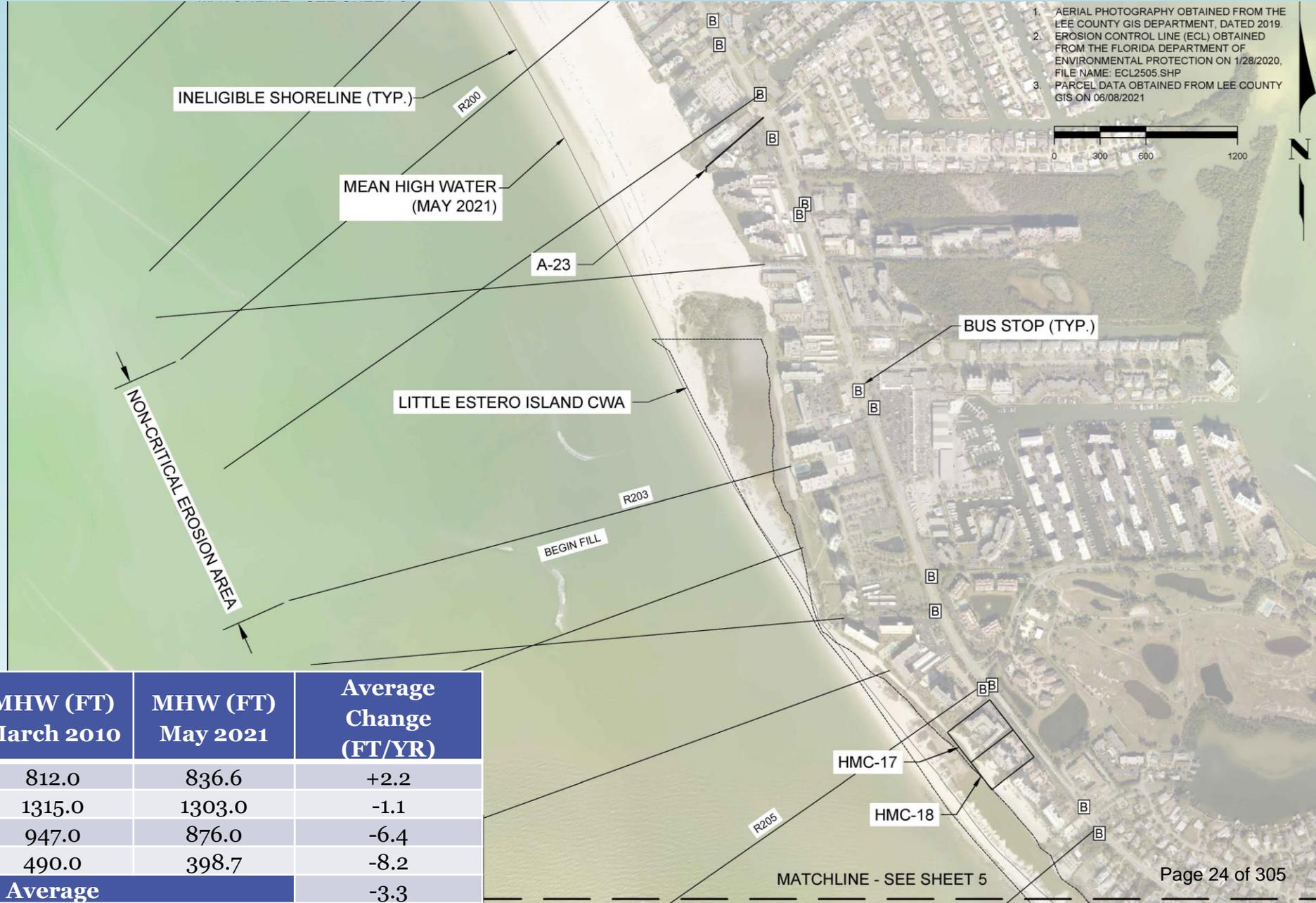
- ECL Ends ~ R-198
- Little Estero Island CWA Begins ~ R-202
- Upland Development set back from Gulf Shoreline; Wide Open Sandy Beach Area
- Address Ponding Issues: Import Fill & Maintenance Grading



TYPICAL DESIGN SECTION

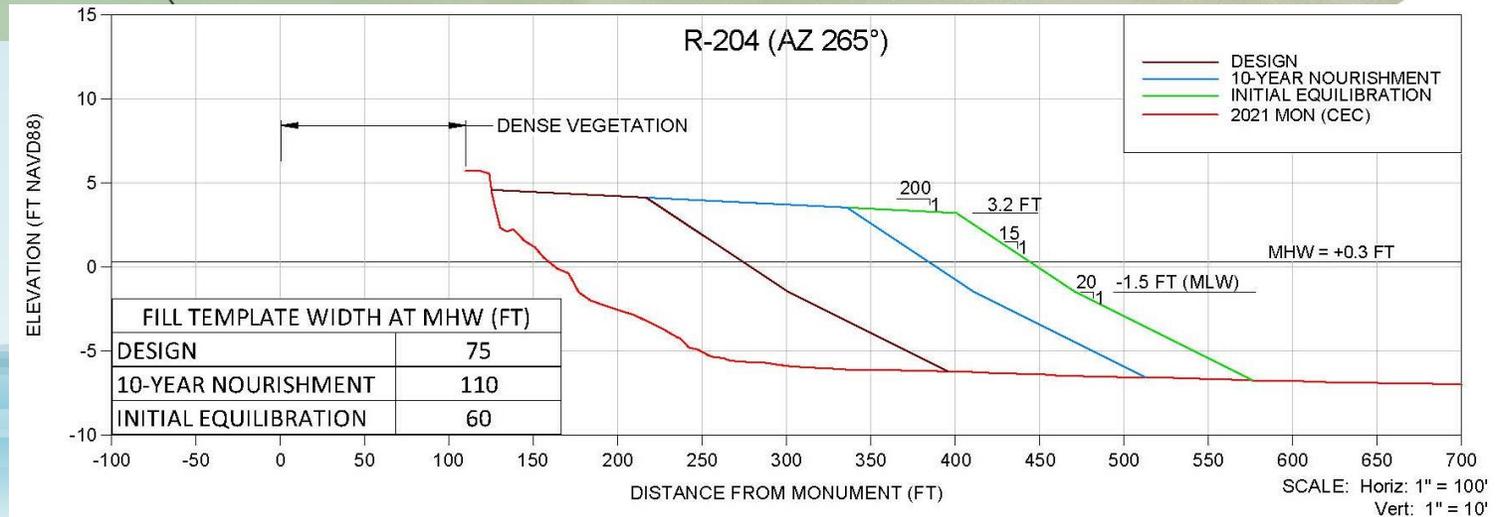
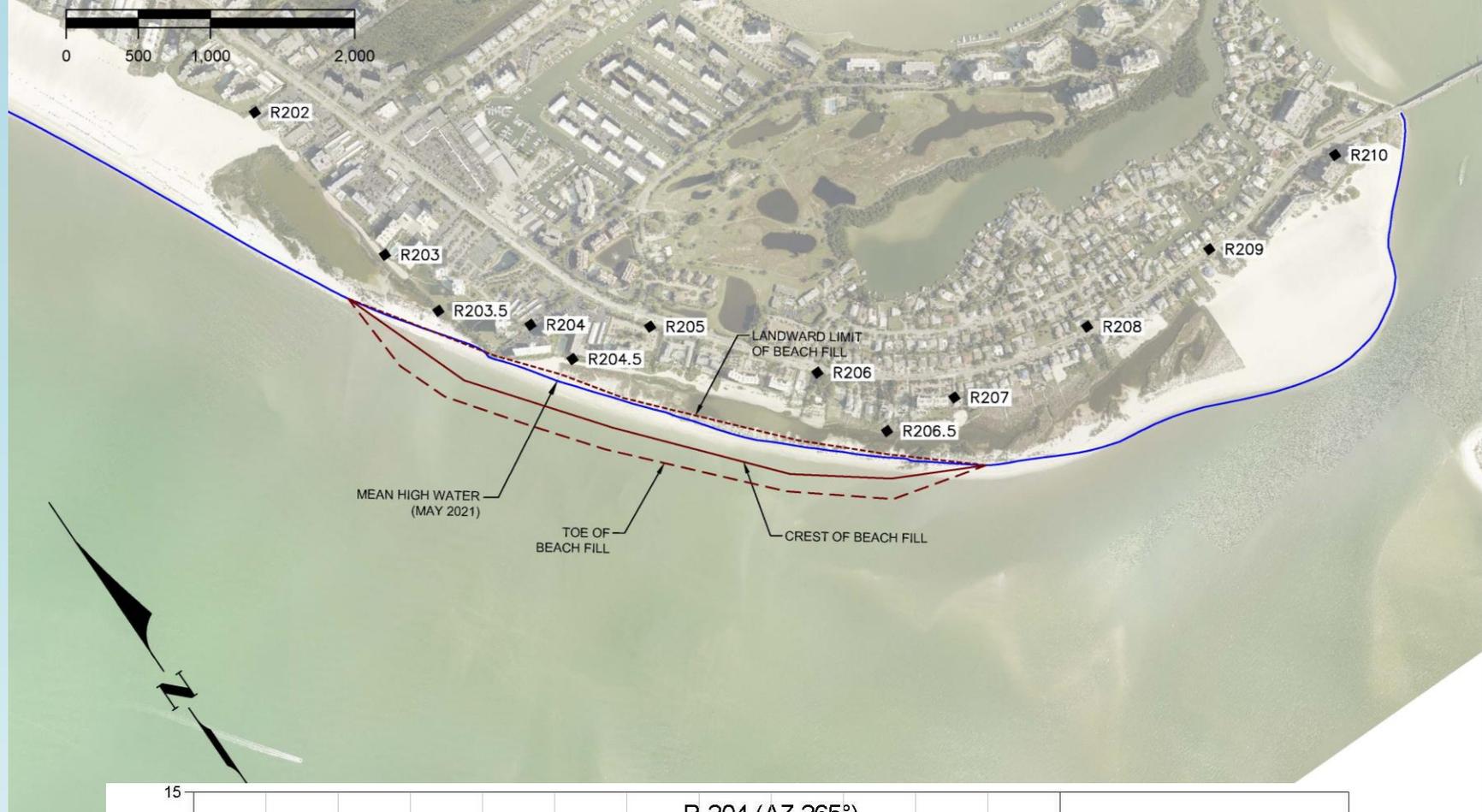


NON-CRITICALLY ERODING SEGMENT: R-200 TO R-203



Monument	MHW (FT) March 2010	MHW (FT) May 2021	Average Change (FT/YR)
R-200	812.0	836.6	+2.2
R-201	1315.0	1303.0	-1.1
R-202	947.0	876.0	-6.4
R-203	490.0	398.7	-8.2
Average			-3.3

DESIGN PLAN: SOUTH



PERMIT STATUS

- Joint Coastal Permit Application in RAI Phase
 - FDEP – Issued Request for Additional Information
 - USACE
- 15-Year Permit
 - Initial Event ~ Up to 900,000 CY
 - Hot Spot Maint / Post-Storm Recovery ~ Inland Mines
 - Maintenance Grading (Ponding Areas)

FUNDING

- Preliminary Opinion of Probable Project Cost

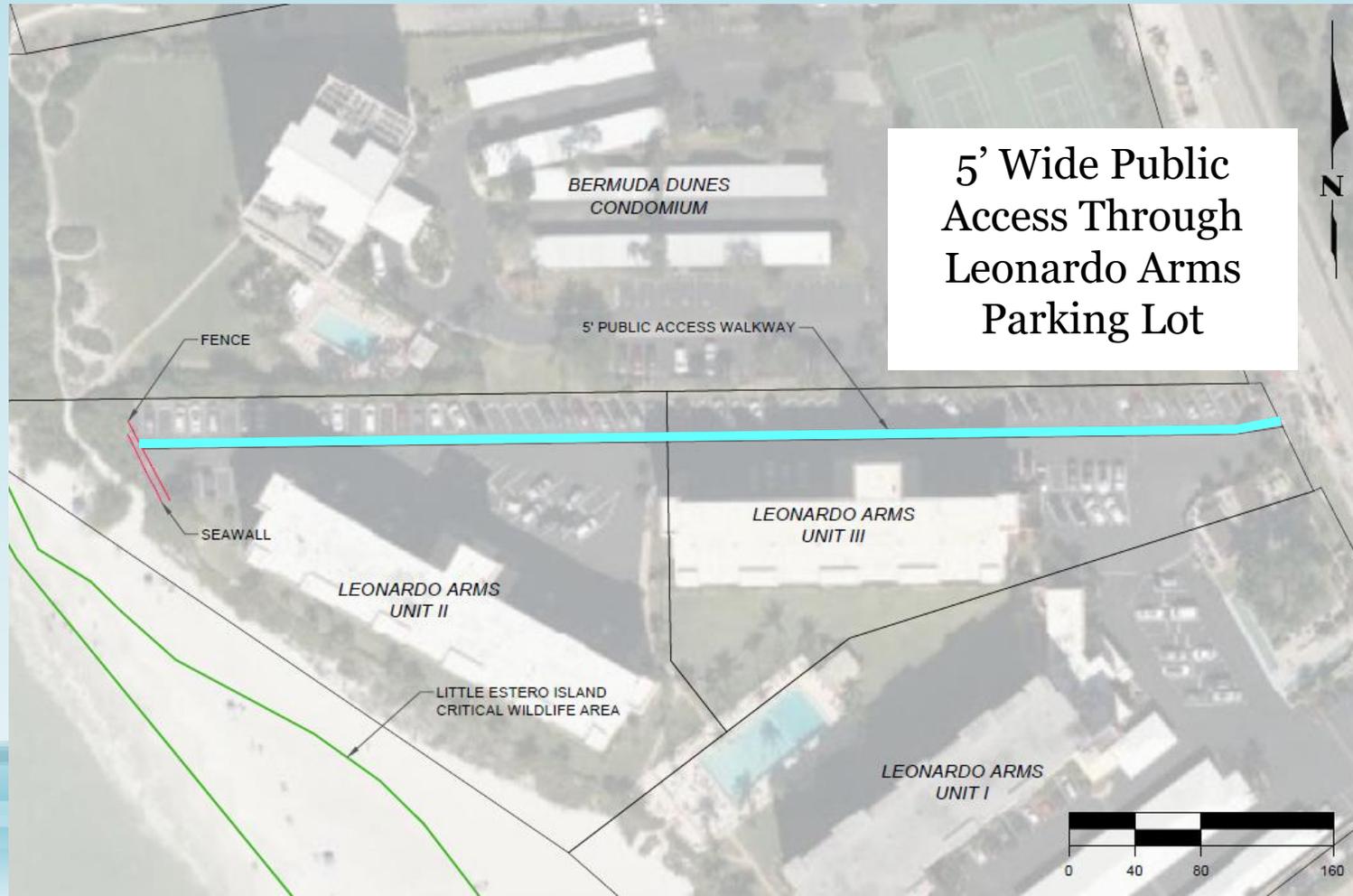
ESTERO ISLAND BEACH RENOURISHMENT						
PRELIMINARY OPINION OF PROBABLE PROJECT COSTS						
ANTICIPATED YEAR OF CONSTRUCTION: 2023						
Item	Description	Unit	Quantity	Unit Price	Extended Price ¹	Subtotals
DP-1	Design and Permitting	LS	1	\$382,000	\$382,000	\$382,000
C-1	Mobilization/Demobilization	LS	1	\$7,065,000	\$7,065,000	
C-2	Beach Fill	CY				
C-2A	North-Central		614,000	\$13.70	\$8,412,000	
C-2B	South		316,000	\$14.10	\$4,456,000	
C-3	Environmental Protection	LS	1	\$36,000	\$36,000	
C-4	Turbidity Monitoring	Days	120	\$500	\$60,000	
C-5	Shorebird Abatement	Days	106	\$450	\$48,000	\$20,077,000
CM-1	Construction Monitoring	LS	1	\$45,000	\$45,000	\$45,000
CP-1	Construction Phase Services	LS	1	\$354,000	\$354,000	\$354,000
M-1	Biological Monitoring	Years	1	\$50,000	\$50,000	
M-2	Physical Monitoring	Years	1	\$47,000	\$47,000	
M-3	Beach Tilling	Years	1	\$50,000	\$50,000	\$147,000
¹ Values rounded to the nearest \$1,000					Subtotal	\$21,005,000
					10% Contingency	\$2,048,000
					Grand Total	\$23,053,000

COST SHARING / GRANT OPPORTUNITIES

- Cost Sharing To Date – Design & Permitting
 - County: \$340,000 (Tourist Development Council)
 - FDEP: \$150,000 (Beach Management Funding Assistance)
- Cost Sharing – Grants Requested for Construction
 - County: ~ \$6.8 Million to \$9.9 Million
 - FDEP: ~ \$9.1 Million to \$13.9 Million (State Ownership / Critical Wildlife Area along Southern Segment TBD)
[Town Share: ~ \$2.3 Million to \$3.6 Million]

PUBLIC ACCESS

- Town working with Property Owners, Residents, and Developers to Acquire / Create new Public Accesses to Increase State and TDC Cost Sharing Opportunities



CONTRACTING

#1: Town Contract

- Current Project path forward
- Town contracts directly with dredge company
- Reimbursement from TDC (2 to 3 year pay back)
- Reimbursement from FDEP (Monthly)

#2: Town “Piggy-back” on Lee County Contract

- County contracting with dredge company to build Lovers Key & Bonita
- Town “piggy-back” to hire mobilized contractor
- Requires adding County’s offshore borrow area into Permit Process
- Requires mapping new pipeline corridor to deliver sand to Estero Island
- Uncertainties on timing and FDEP reimbursement process

CONTRACTING

#3: Town Sole Source to Construct North Segment

- USACE to dredge Matanzas Pass in 2023
- Town contracts directly with USACE dredge company (“Sole Source”)
- Uncertainties on contractor availability and appropriate and adequate dredge plant and equipment
- Central Segment would be renourished via USACE beneficial use of sand from channel dredging
- Does not afford same level of storm damage reduction benefits
- South Segment – Construct via 1st or 2nd Approach

PAY DOWN SCHEDULE

	PAY DOWN SCHEDULE	9 MONTH CONSTRUCTION WINDOW	
MONTH	DESCRIPTION	AMOUNT	CUMULATIVE
1	MOBILIZATION	\$3,929,017	\$3,929,017
2	BEACH FILL	\$2,386,267	\$6,315,283
3	BEACH FILL	\$2,386,267	\$8,701,550
4	BEACH FILL	\$2,386,267	\$11,087,817
5	BEACH FILL	\$2,386,267	\$13,474,083
6	BEACH FILL	\$1,706,833	\$15,180,917
7	BEACH FILL	\$1,706,833	\$16,887,750
8	BEACH FILL	\$1,706,833	\$18,594,583
9	DEMOBILIZATION	\$3,929,017	\$22,523,600

EROSION CONTROL LINE

- Must we establish an Erosion Control Line (ECL)?
 - Yes, for the South Segment. Prior to beach erosion control projects in the State of Florida, an ECL must be established along the shoreline to define the property boundary between sovereign submerged land and upland ownership.
- What is the ECL?
 - Record of the Mean High Water Line (MHW) at the time established to legally document and fix the boundary between upland riparian property ownership and submerged lands of the State. MHW survey to be performed within 6 months of construction.

STATE POLICY

- ECL State Policy (FS 161.141)
 - The Legislature declares that it is the public policy of the state to cause to be fixed and determined, pursuant to beach restoration, beach nourishment, and erosion control projects, the boundary line between sovereignty lands of the state bordering on the Atlantic Ocean, the Gulf of Mexico, or the Straits of Florida, and the bays, lagoons, and other tidal reaches thereof, and the upland properties adjacent thereto...

ECL APPROVAL PROCESS

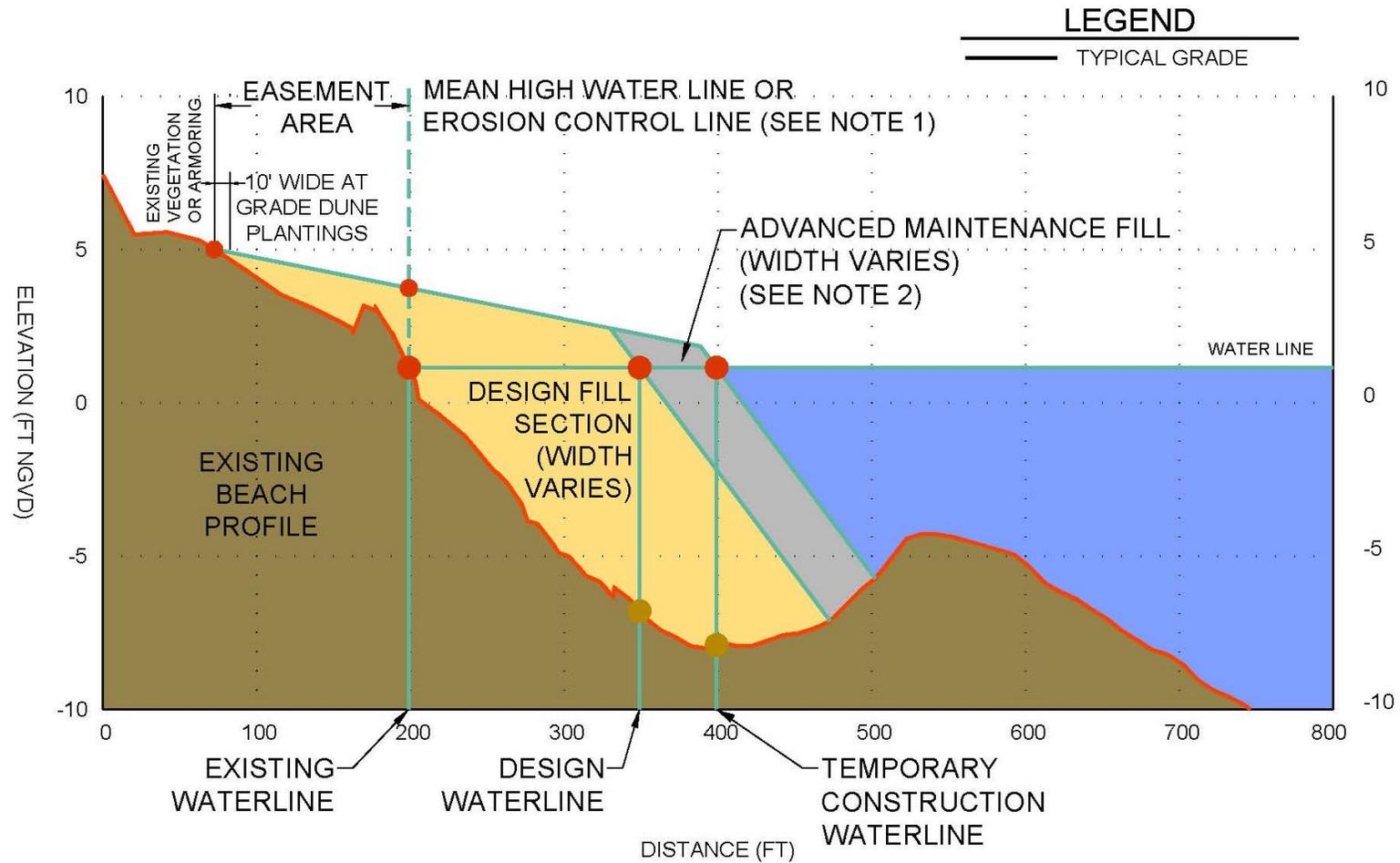
- FDEP Bureau of Surveying and Mapping (BSM) approves elevation of MHW (July)
- CEC conducts MHW Survey, Create Survey Plats presenting MHW overlain on aerial photos (August - September)
- BSM reviews and approves Survey Plats (October - November)
- FDEP conducts Public Workshop and Hearing locally (December - January)
- Upon ECL approval, FDEP issues Town a Resolution formally establishing ECL (February)
- Town records ECL in County records (March)
- Timeline ~ 9 months

EASEMENTS

- What is the Purpose of the CE?
 - To allow for the Town, Contractor, Engineer, and Monitors to conduct work on private property
- Do I need to sign my Construction Easement (CE)?
 - Only if you want sand
- What “area” does the CE cover?
 - Definition Sketch



CONSTRUCTION EASEMENT DEFINITION SKETCH



NOTES:

1. THE SEAWARD LIMIT OF THE EASEMENT AREA IS THE MEAN HIGH WATER LINE OR THE EROSION CONTROL LINE IF ONE IS ESTABLISHED.
2. ADVANCED MAINTENANCE MAY BE PROPOSED SUBJECT TO FISCAL CONSTRAINTS.

CONSTRUCTION DETAILS

- Schedule

- Goal is late summer 2023 start. 9-Month Construction Window.

- Construction Sequence

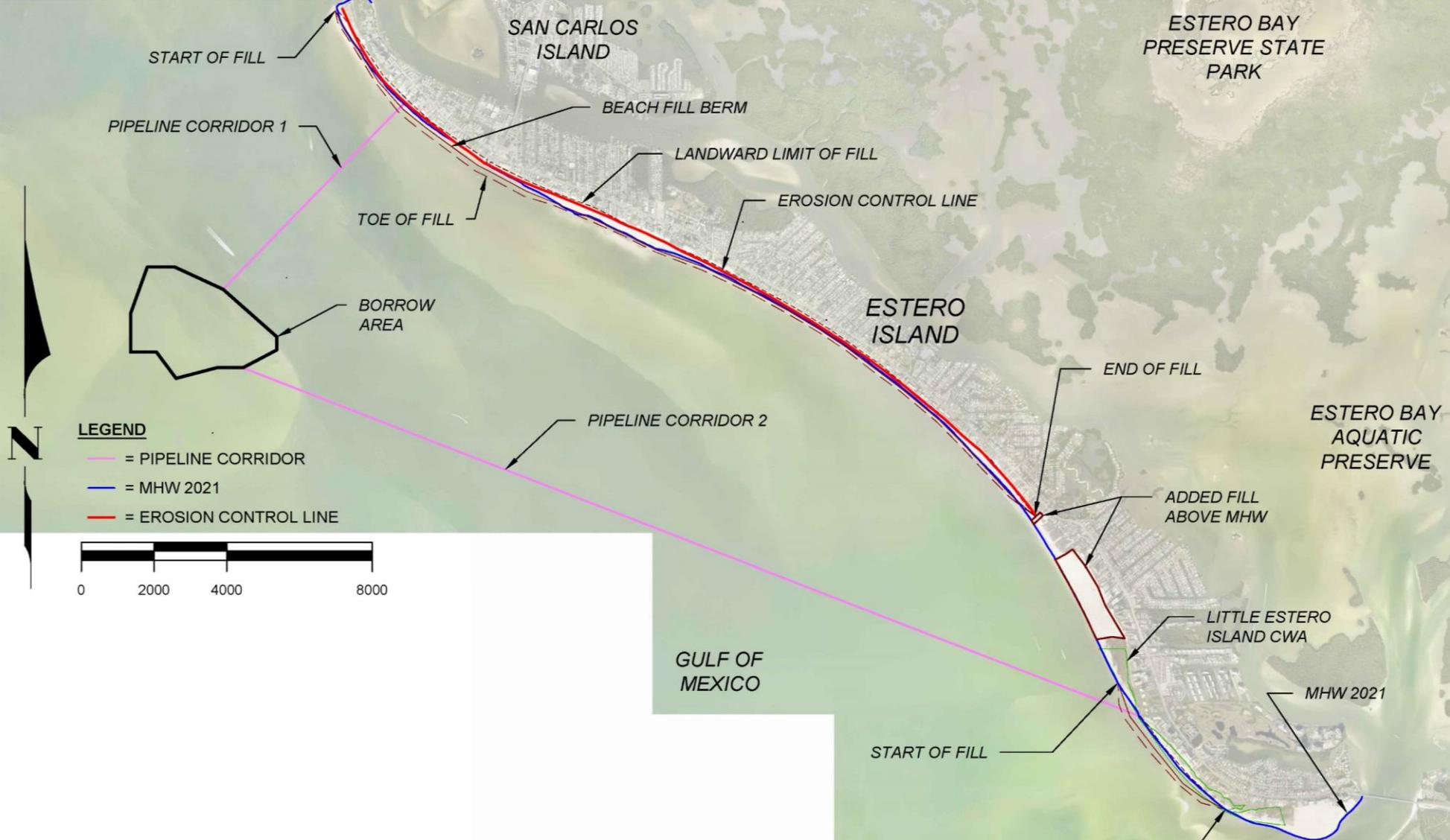
- Contractor will be allowed to sequence their construction. Town will not dictate start north and proceed south or vice-versus.

- Construction Access & Staging

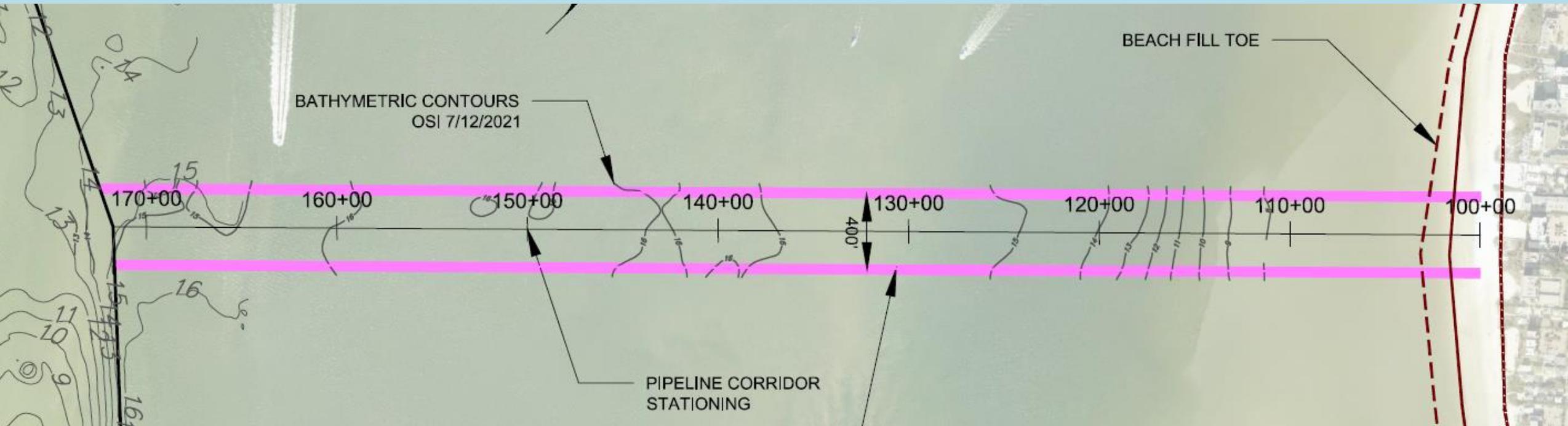
- Contractor will be allowed to utilize a portion of Newton Beach Park. Pipe and equipment will be brought to beach either from uplands or via ramp barge. Means and methods are up to contractor.

PIPELINE CORRIDOR & LANDING

- Town and Engineer identified two corridors: North and South



PIPELINE CORRIDOR NORTH



PIPELINE CORRIDOR SOUTH



WHAT TO EXPECT...

- When the pipeline first makes landing at the beach, the Contractor will pump sand to build a pad of sand. Once the pad is created the contractor will add pipe sections and progress along the beach using the grading equipment to shape the beach. The bulldozers, grading equipment and movable office will move with the beach fill advance. The active construction typically takes a few days to complete sand placement for 200 feet of beach. However, the pipeline remains in place through the end of pumping. Then the contractor has to final grade and till the beach.



POST-CONSTRUCTION REQUIREMENTS

- Beach Tilling

- Till beach for three consecutive seasons to loosen sand and enhance sea turtle nesting (hydraulically placed sand is artificially compacted)

- Sea Turtle Lighting Compliance

- Conduct lighting surveys/reporting

- Annual Monitoring

- Conduct beach profiles, aerial photos, and performance assessment

