

# *Surfers Beach Pilot Restoration Project & Eelgrass Mitigation Update*

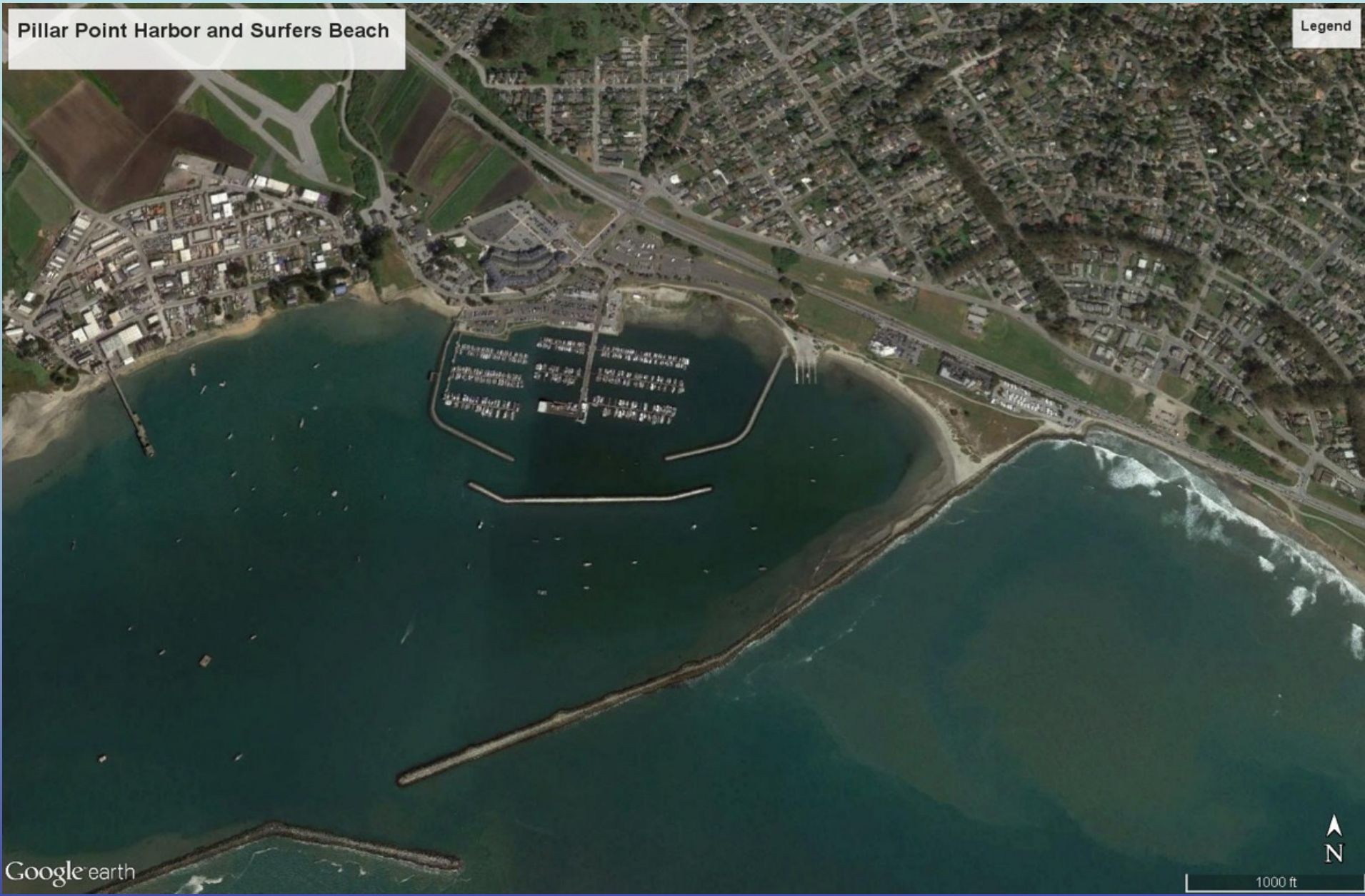


**Brad Damitz, Consultant to San Mateo County Harbor District  
July 20, 2022, SMCHD Board of Harbor Commissioners Meeting**



Pillar Point Harbor and Surfers Beach

Legend



# Project Details

- Project will create 4.1 acres of beach habitat and 3.90 acres of eelgrass habitat.
- Pilot Project will include physical and biological monitoring programs (reference beach in HMB)
- Project cost estimate at \$2.9 to \$3.6 million (plus ~ \$1.8 million for eelgrass restoration)



# Existing Conditions at Surfers Beach



Low Tide, January 2021



# Existing Conditions at Surfers Beach



**Recent coastal erosion damage to Caltrans revetement at Surfers Beach, May 2022**



# Projected Erosion with No-Action





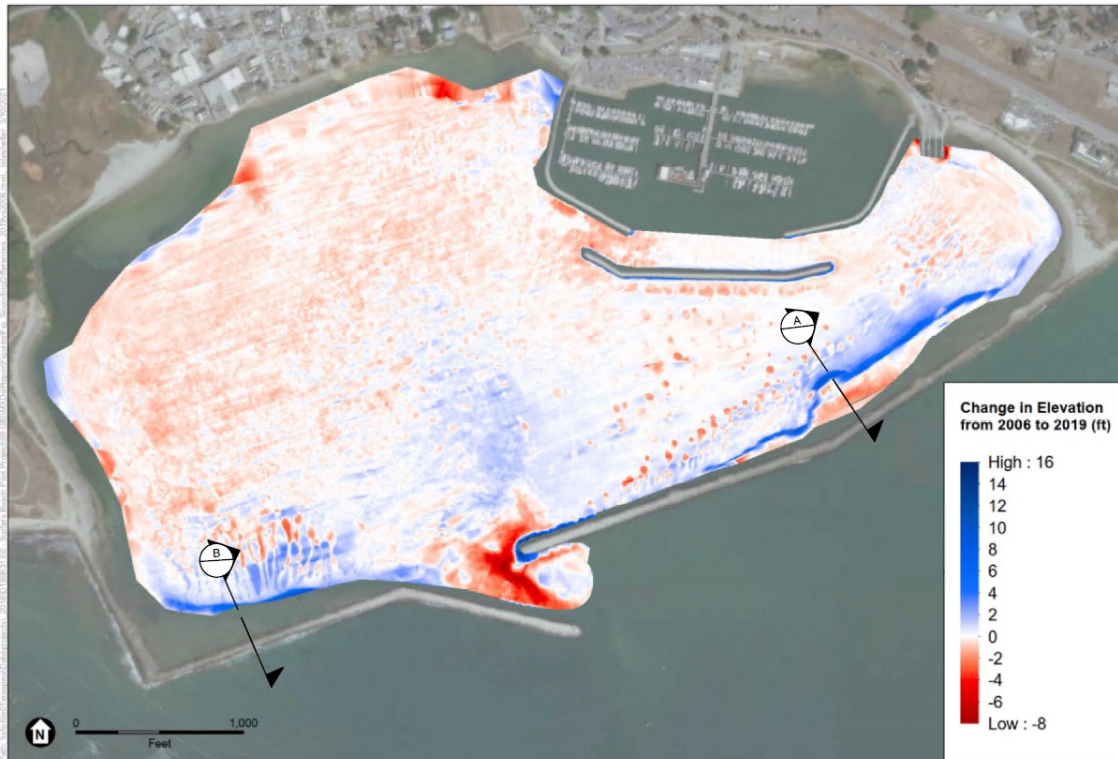
# Existing Conditions Pillar Point Harbor



Low Tide, January 2021



# Harbor Morphology Change Between 2005 and 2019

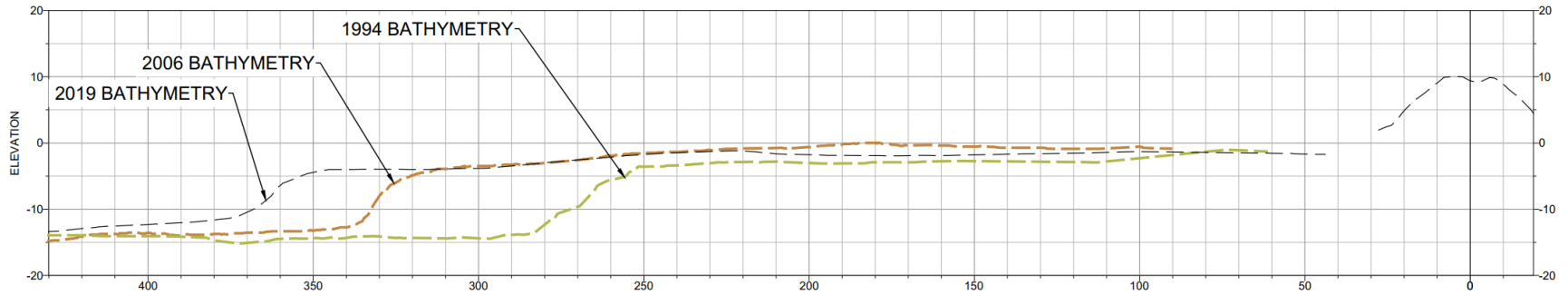


## Trends:

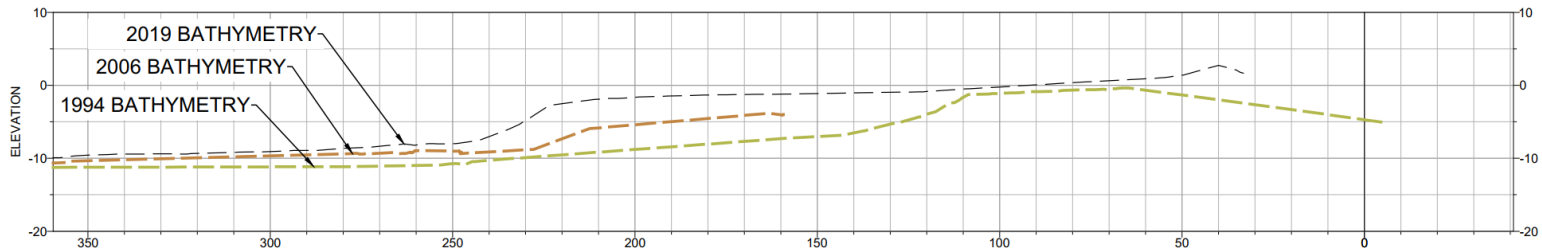
- Significant shoaling along both Breakwaters, ~ ten feet vertically, and shifting laterally into the harbor
- Erosion and deepening of the entrance channel on the order of eight to ten feet
- East Breakwater shoal has grown by 6,000 – 9,000 cubic yards per year between 1994 and 2019.



# Harbor Morphology Change Between 1994 and 2019



**SECTION A – Sand Shoal at East Breakwater PPH**



**SECTION B – Sand Shoal at West Breakwater PPH**



PPH East Basin



PPH West Basin

# Eelgrass Survey



Completed in November 2019



# PPH Harbor-Wide Eelgrass Management and Mitigation Plan

MARINE TAXONOMIC SERVICES, LTD.

## Pillar Point Harbor-Wide Eelgrass Management and Mitigation Plan

July 27, 2020

**Prepared for:**

Brad Damitz  
Consultant to the Harbor District  
San Mateo County Harbor District,  
P.O. Box 1449, El Granada, CA 94018

**Prepared By:**

Marine Taxonomic Services, Ltd.

**SOUTHERN CALIFORNIA OFFICE**

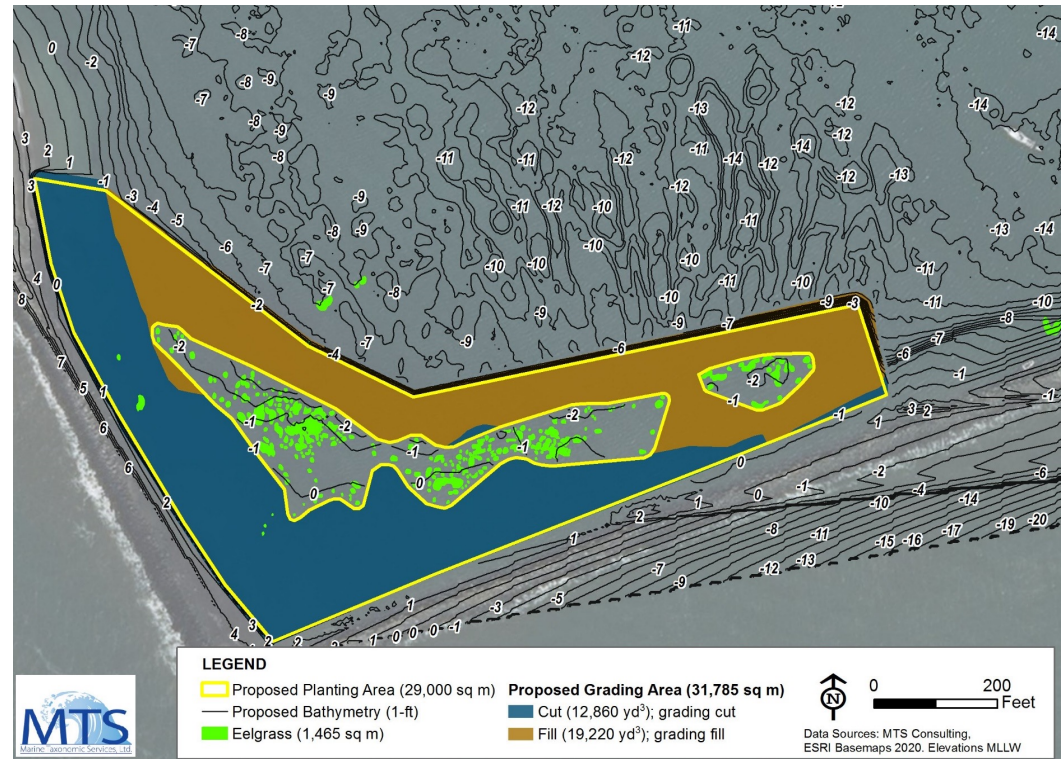
920 RANCHEROS DRIVE, STE F-1  
SAN MARCOS, CA 92069

**OREGON OFFICE**

2834 NW PINEVIEW DRIVE  
ALBANY, OR 97321

**LAKE TAHOE OFFICE**

1155 GOLDEN BEAR TRAIL  
SOUTH LAKE TAHOE, CA 96150

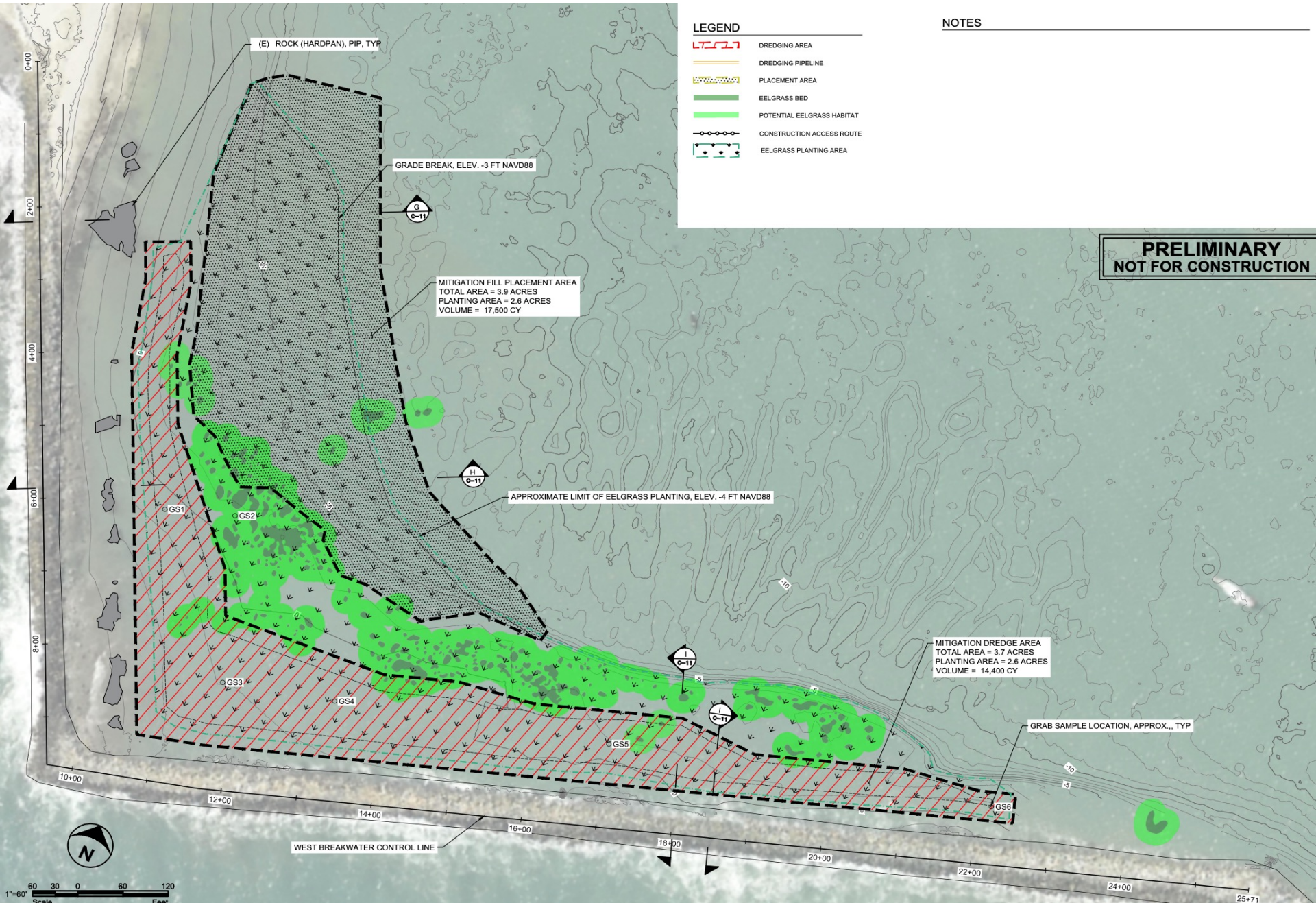


Plan provides a long-term strategy for the District to establish and expand eelgrass beds in the harbor's west basin, in an area with fewer impacts from vessels and human use, and where future maintenance dredging is not required.



# Eelgrass Mitigation Area Plan

From 30% Plans by ESA



**LEGEND**

	DREDGING AREA
	DREDGING PIPELINE
	PLACEMENT AREA
	EELGRASS BED
	POTENTIAL EELGRASS HABITAT
	CONSTRUCTION ACCESS ROUTE
	EELGRASS PLANTING AREA

**NOTES**

**PRELIMINARY  
NOT FOR CONSTRUCTION**

(E) ROCK (HARDPAN), PIP, TYP

GRADE BREAK, ELEV. -3 FT NAVD88

MITIGATION FILL PLACEMENT AREA  
TOTAL AREA = 3.9 ACRES  
PLANTING AREA = 2.6 ACRES  
VOLUME = 17,500 CY

APPROXIMATE LIMIT OF EELGRASS PLANTING, ELEV. -4 FT NAVD88

MITIGATION DREDGE AREA  
TOTAL AREA = 3.7 ACRES  
PLANTING AREA = 2.6 ACRES  
VOLUME = 14,400 CY

GRAB SAMPLE LOCATION, APPROX., TYP

WEST BREAKWATER CONTROL LINE

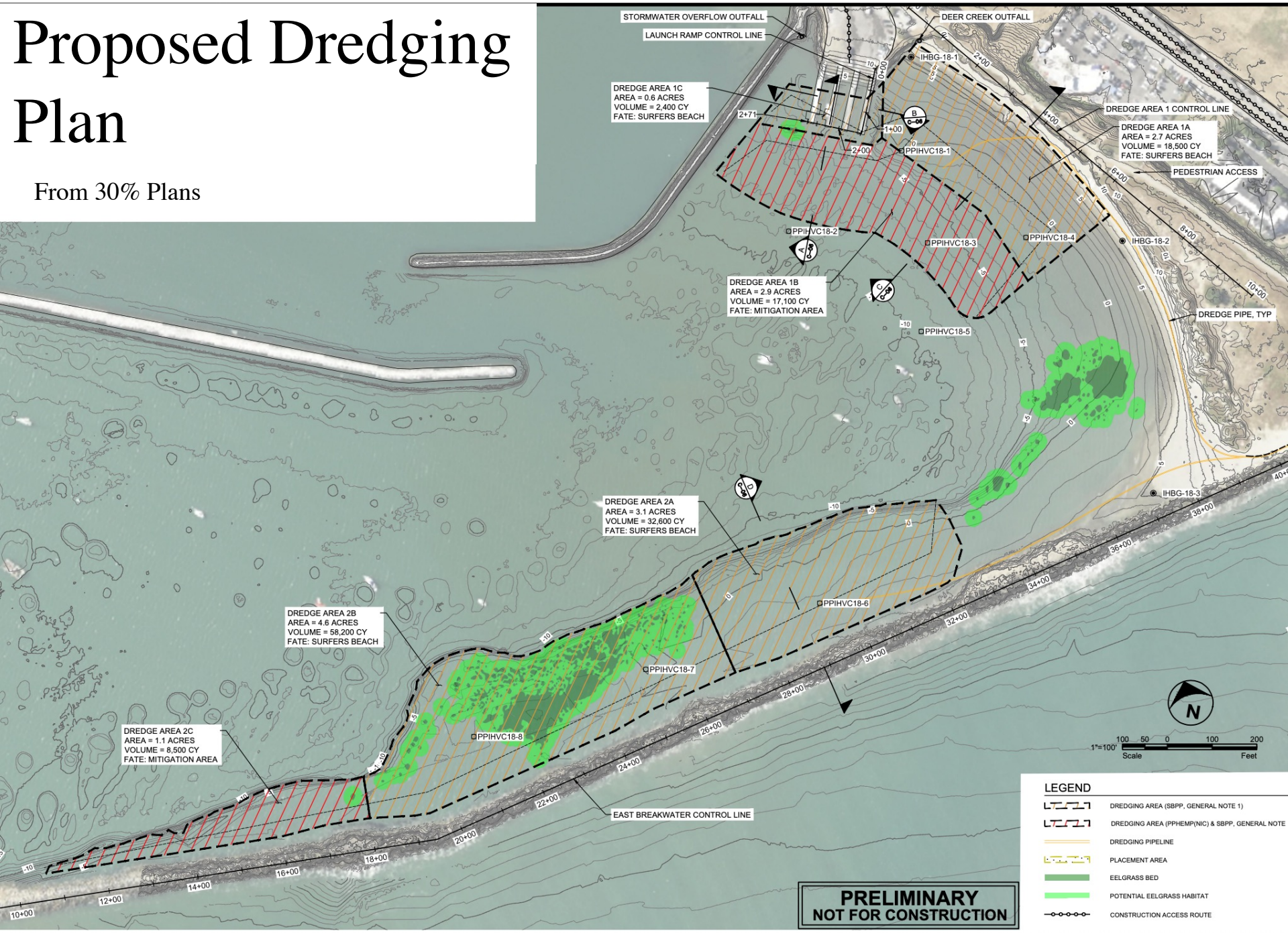


1"=60'  
Scale Feet



# Proposed Dredging Plan

From 30% Plans



DREDGE AREA 1C  
AREA = 0.8 ACRES  
VOLUME = 2,400 CY  
FATE: SURFERS BEACH

DREDGE AREA 1A  
AREA = 2.7 ACRES  
VOLUME = 18,500 CY  
FATE: SURFERS BEACH

DREDGE AREA 1B  
AREA = 2.9 ACRES  
VOLUME = 17,100 CY  
FATE: MITIGATION AREA

DREDGE AREA 2A  
AREA = 3.1 ACRES  
VOLUME = 32,600 CY  
FATE: SURFERS BEACH

DREDGE AREA 2B  
AREA = 4.6 ACRES  
VOLUME = 58,200 CY  
FATE: SURFERS BEACH

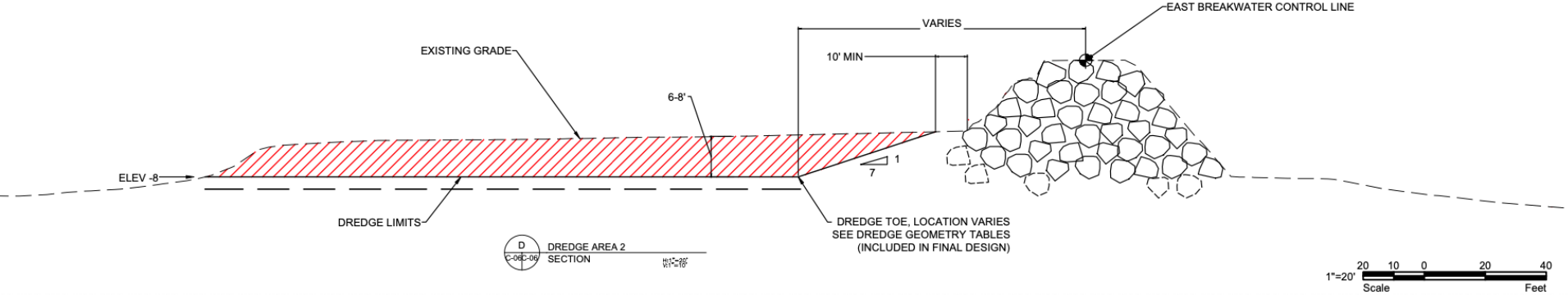
DREDGE AREA 2C  
AREA = 1.1 ACRES  
VOLUME = 8,500 CY  
FATE: MITIGATION AREA

LEGEND	
	DREDGING AREA (SBPP, GENERAL NOTE 1)
	DREDGING AREA (PPHEMP/NC) & SBPP, GENERAL NOTE
	DREDGING PIPELINE
	PLACEMENT AREA
	EELGRASS BED
	POTENTIAL EELGRASS HABITAT
	CONSTRUCTION ACCESS ROUTE

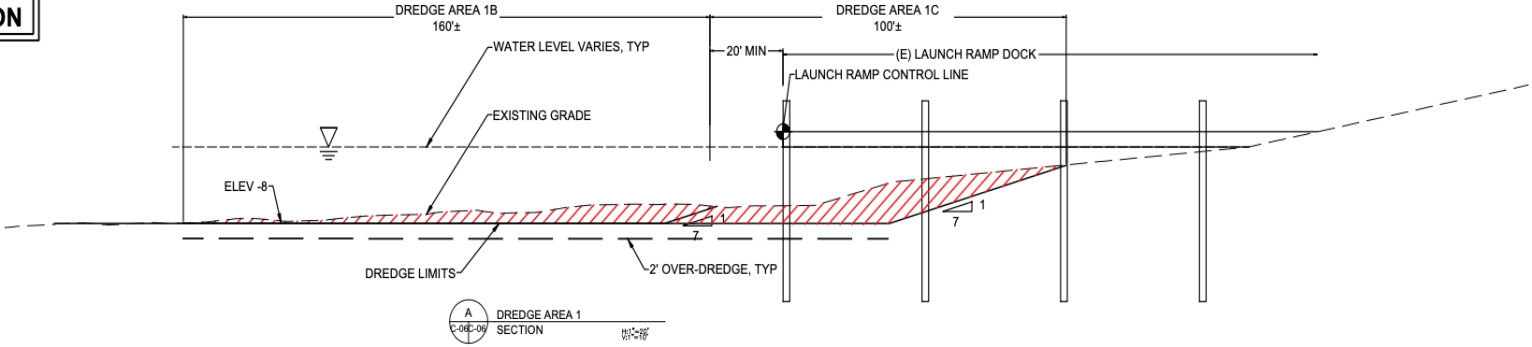
**PRELIMINARY  
NOT FOR CONSTRUCTION**

# Typical Dredging Sections

From 30% Plans



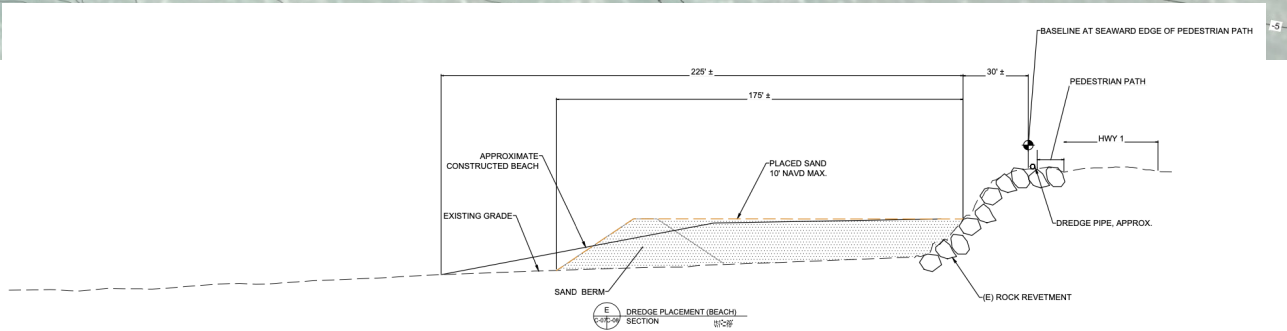
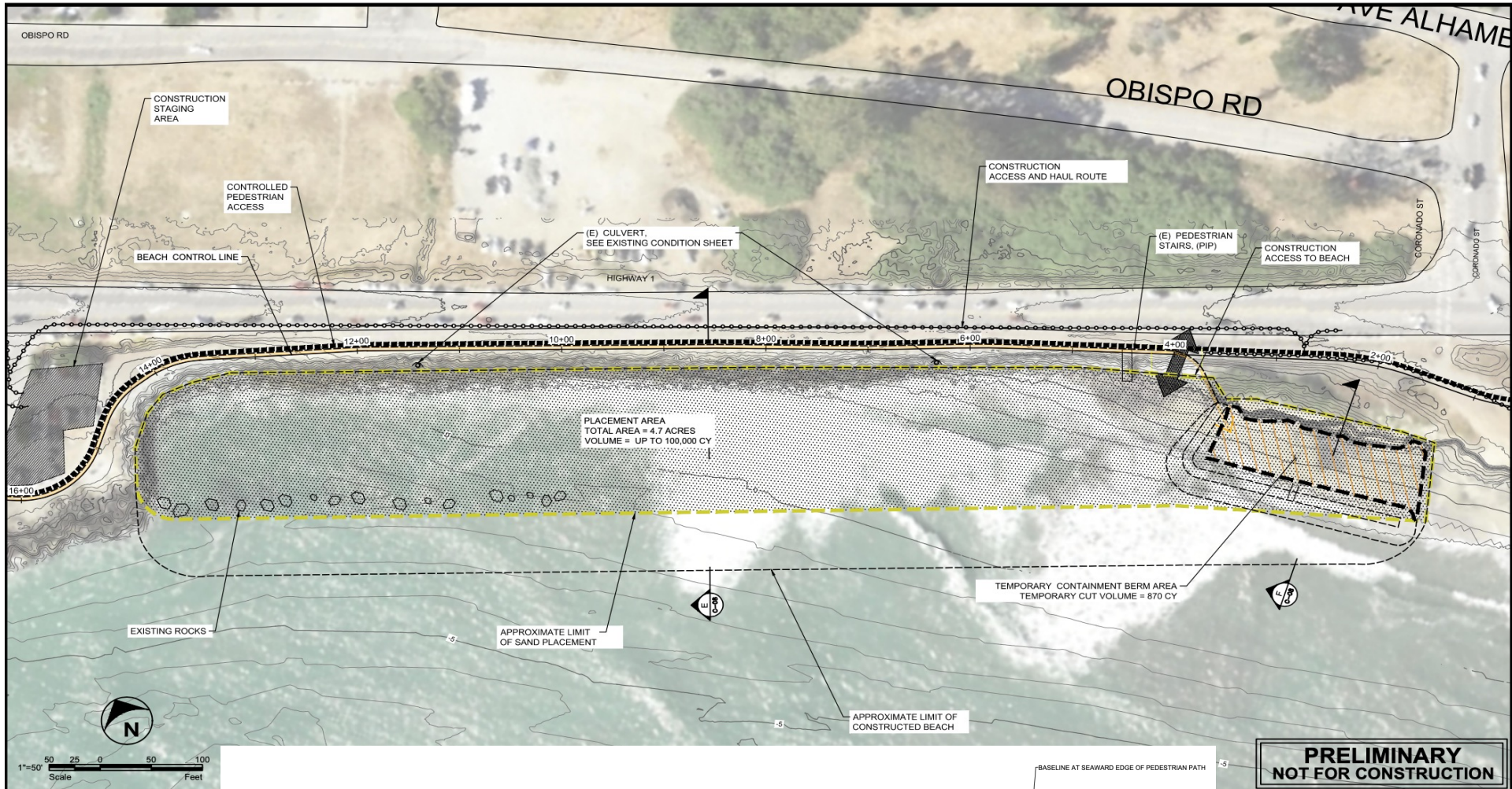
**PRELIMINARY  
NOT FOR CONSTRUCTION**





# Beach Nourishment Design

From 30% Plans



# Beach Nourishment Project Example



Sand Containment Berm



# Project Status

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- 30% Engineering Design Reports & Plans
- Permit Applications Submitted.
- CEQA Draft IS-MND completed.
- Plan to begin phased construction approach in Spring/Summer 2023.
- Actively seeking additional grant funding for Project Construction.



# Project Information Available

<https://www.smharbor.com/surfers-beach-pilot-restoration-project>

- Project Description.
- Preliminary Design Report
- Permitting-level Engineering Plans
- CEQA Draft IS-MND.
- Harbor-wide Eelgrass Mitigation and Management Plan.
- Sediment Sampling and Analysis Report.
- Biological Assessment.

[Brad.Damitz@me.com](mailto:Brad.Damitz@me.com)

