



**US Army Corps
of Engineers®**

PUBLIC NOTICE

Applicant:
Griffin Beaudoin
Town of Barnstable, MA

Published: January 7, 2026
Expires: February 6, 2026

**New England District
Permit Application No. NAE-2015-01632**

TO WHOM IT MAY CONCERN: The New England District of the U.S. Army Corps of Engineers (Corps) has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. §1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403). The purpose of this public notice is to solicit comments from the public regarding the work described below:

APPLICANT: Griffin Beaudoin
Town of Barnstable, MA
382 Falmouth Road
Hyannis, Massachusetts 02601

AGENT: James Hill
Foth Infrastructure & Environment, LLC
114 Touro Street
Newport, Rhode Island 02840

WATERWAY AND LOCATION: The project would affect waters of the United States and navigable waters of the United States associated with several waterways and beaches in Barnstable, Barnstable County, Massachusetts.

EXISTING CONDITIONS: The overall project consists of four regions within the Town of Barnstable (see Figure 1 enclosed). Dredging at these locations will yield beach quality (sand) sediments that have been approved for nourishing eroded shoreline areas within the Town of Barnstable. All channel/basin areas have been previously dredged and are considered maintenance dredging activities, except for a section of the North Bay Channel (NB-D2) located north of the Bridge Street bridge in the Three Bays Region.

Barnstable Harbor/Sandy Neck Area: Barnstable Harbor is a natural harbor that is sheltered by Sandy Neck to the north and the Town of Barnstable to the south. The entrance channel provides access to/from the inner harbor which supports recreational, commercial, and transient boating activities as well as private commercial marine operations and services. The inner harbor basin supports the town marina, which consists of an 88-slip facility. A total of 9 commercial fishing boats operate out of the town facility. The entrance channel is subject to the continuous shifting of sand and shoaling due to the currents, wave action and north-northeasterly storm events. The entrance channel requires frequent, periodic maintenance dredging on an approximate ± 5 -year basis. Blish Point creates the south-southeast shoreline of

Barnstable Harbor and includes Millway Beach along with a public boat ramp and parking area that is a state-owned facility managed by the town. This ramp provides recreational and commercial vessel access into Barnstable Harbor and is one of five public launching areas available along the entire north side of Cape Cod from Sandwich to Provincetown. Since about 2010, the existing coastal dune that protects the town parking lot and buildings has experienced significant erosion to the point where emergency nourishment efforts have been conducted by the town to help stabilize the area to protect existing infrastructure.

Centerville Harbor Area: The Centerville Harbor region is located on the south side of Barnstable, approximately 3.5 miles west of the Village of Hyannis. Navigable waters included in this region include East Bay, Centerville River, and Bumps River. The rivers connect with Nantucket Sound via East Bay. The East Bay-Centerville River system is an active waterfront that supports recreational boating activities, two public landings/boat ramps that are located in East Bay and at Hayward Landing on the Centerville River along with several private docks and piers. The town manages a few dozen moorings within the Centerville River. The East Bay entrance channel is flanked by Dowses Point to the west and Long Beach to the east. A stone jetty extends along the western shoreline at Dowses Point and provides stabilization to the East Bay entrance channel. Long Beach consists of a barrier beach that separates the Centerville River from Nantucket Sound/Centerville Harbor. The western end of Long Beach consists of a natural, undeveloped barrier, while the eastern end includes a number of private residences on both the river and sound sides of the barrier beach. The Long Beach barrier is located at the updrift end of a littoral transport cell and receives little sediment input from beach areas located to the west. Erosion along the Long Beach barrier and degradation of the coastal dune system compromises the ability of this fragile landform to protect adjacent wetlands and upland areas. Craigville Beach consists of two separate beaches: the public beach, Craigville Beach and the resident beach, Covell Beach.

Three Bays Area: The Three Bays region consists of a large and complex estuary with multiple ocean inlets and sub-embayments that includes Cotuit Bay, West Bay, North Bay and the Seapuit River. The dredging of the inlet into West Bay in 1890 was the first of on-going efforts to maintain a two-inlet configuration for navigation, with implications for tidal exchange. Ocean waters from Nantucket Sound exchange with the system through the two maintained inlets on the east (West Bay) and west (Cotuit Bay) ends of Dead Neck/Sampson's Island. The open waters of the Three Bays system support a wide variety of water dependent uses that support recreational, transient, and commercial needs. Thousands of vessels reside at public and private moorings, docks and slips and several marinas located throughout the region. Privately-owned boat yards, marinas and other marine service businesses are located throughout the Three Bays and provide a variety of services including maintenance and repair of vessels, launching, fueling, mooring and slip rentals, seasonal winter storage, and various customer amenities. There are also several public access facilities located within the Three Bays including the Cotuit Town Dock, Hoopers, Little River, and Cordwood Landings and the Bay Street and Bridge Street boat ramps.

Cotuit Bay and Seapuit River collectively form the largest waterway of the Three Bays, and they are bounded on the east by Grand Island and on the west by Cotuit Village. The Seapuit River connects Cotuit Bay and West Bay and separates Grand Island from Dead Neck/Sampson's Island. North Bay is the smallest of the Three Bays and the adjacent coves display a more varied estuarine environment with a more extensive presence of salt marsh. West Bay is formed largely by the enclosure of Little Island and Oyster Harbors to the north and west. Due to the relatively natural shallow depths of water throughout much of the Three Bays system, maintenance dredging of established channel/basin areas are necessary for navigation, public use, and access and emergency response within all of the interconnected waterways. Historically, dredge sediments from the Three Bays region have consisted of sand that has been an important nourishment source for the Dead Neck and Sampson's Island barrier beach. Dead Neck has been the site of many nourishment projects over the past ± 30 years. Ropes Beach, Cross Street (Riley's) Beach and Loop Beach are 3 small town-owned and maintained beaches that are located in Cotuit Bay.

Prince Cove Area: The Prince Cove region is connected to North Bay by an established navigation channel. Located at the entrance of the channel is the Prince Cove Marina facility which has been owned and operated by the town since 2002. The marina provides public slips for approximately 36 vessels, and there are just under 100 moorings located within the cove directly seaward and to the south of the docks. A public boat ramp is also located on the north side of the marina. The Prince Cove Marina facility provides the only public access to the cove which is developed with numerous private residences and docks. The navigation channel leading out of the cove and into North Bay is located along a much less developed landside area and includes several areas of saltmarsh along the shoreline. The navigation channel supports waterway access to/from Warren's Cove.

PROJECT PURPOSE: To dredge a total of 19 channels and basin areas under a town-wide 10-year comprehensive permit (CP). Dredging is required to support and maintain navigational access to waterways throughout the Town of Barnstable. The dredged material would be placed on a total of 9 shoreline areas comprised of 5 public and private shoreline locations that have previously utilized dredge sediments for nourishment and 4 new locations.

Basic: The Corps has determined that the basic project purpose is navigation and shoreline protection.

Overall: The Corps has determined that the overall project purpose to maintain safe navigational access for vessels transiting Barnstable waterways, and to use the dredged material to reduce shoreline erosion at Barnstable beaches.

PROPOSED WORK: The applicant requests authorization to hydraulically and mechanically dredge approximately 157,244 cubic yards of sediment over an area of approximately 3,880,563 square feet (89.08 acres). All channel/basin areas have been previously dredged and are considered maintenance dredging activities, except for a section of the North Bay Channel (NB-D2) located north of the Bridge Street bridge in the

Three Bays Region. Dredged material will be placed onto 9 different beaches in the Town of Barnstable. Beach nourishment will involve the placement of approximately 941,928 square feet (~21.62 acres) below the high tide line. These beaches include 7 locations that have previously utilized dredge sediments for nourishment and 4 new locations. The hydraulic dredging and nourishment will be performed by the Barnstable County Dredge Program. The mechanical dredging and beach nourishment will be performed by a private contractor. This work is shown on the plans titled “TOWN OF BARNSTABLE, MA COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT”, on 55 sheets, and dated “11/4/2025”. The dredge and disposal activities above are proposed over a duration of 10 years and are summarized in the following tables.

Table 1: Anticipated 2026-2036 Dredge Schedule

Dredge ID	Dredge Site	Dredge Footprint (SF)	Dredge Depth (MLLW)	Frequency	Volume per Event	Total Volume (CY)
BH-D4	Barnstable Harbor Outer Entrance Channel	67,521	-6.0 MLLW with 1 ft. overdredge to -7.0 MLLW	3	5,000	15,000
EB-D1	East Bay Entrance Channel	138,600	-6.0 MLLW with 1 ft. over dredge to -7.0 MLLW	1	5,000	5,000
CR-D1	Centerville River Channel – Lower Reach	207,000	-6.0 MLLW with 1 ft. over dredge to -7.0 MLLW	1	3,756	3,756
CR-D2	Centerville River Channel – Upper Reach	96,260	-6.0 MLLW with 1 ft. over dredge to -7.0 MLLW	1	2,502	2,502
CR-D3	Centerville River Spur Channel	46,500	-4.0 MLLW with 1 ft. over dredge to -5.0 MLLW	1	2,518	2,518
BR-D1	Bumps River Channel	11,407	-4.0 MLLW with 1 ft. over dredge to -5.0 MLLW	1	1,000	1,000
CB-D1	Cotuit Bay Entrance Channel	305,134	-8.0 MLLW with 1 ft. over dredge to -9.0 MLLW	2	12,678	12,678
CB-D2	Cotuit Bay Embayment Channel (10 feet)	126,236	-10.0 MLLW with 1 ft. over dredge to -11.0 MLLW	1	5,471	5,741
CB-D3	Cotuit Bay Embayment Channel (11 feet)	516,845	-11.0 MLLW with 1 ft. over dredge to -12.0 MLLW	1	7,386	7,386
CB-D4	Cotuit Bay Embayment Channel (9 feet)	71,179	-9.0 MLLW with 1 ft. over dredge to -10.0 MLLW	1	6,582	6,582
CB-D5	Cotuit Bay Embayment Channel (7 feet)	104,492	-7.0 MLLW with 1 ft. over dredge to -8.0 MLLW	1	2,234	2,234

WB-D1	West Bay Outer Entrance (8 feet)	363,157	-8.0 MLLW with 1 ft. over dredge to -9.0 MLLW	2	800	1,600
WB-D2	West Bay Inner Entrance (11 feet)	224,102	-11.0 MLLW with 1 ft. over dredge to -12.0 MLLW	1	42,254	42,254
WB-D3	West Bay Spur Channel (8 feet)	60,000	-8.0 MLLW with 1 ft. over dredge to -9.0 MLLW	2	775	1,550
SR-D1	Seapuit River Channel (7 feet)	324,412	-7.0 and -8.0 MLLW with 1 ft. over dredge to -8.0 and -9.0 MLLW	1	8,042	8,042
NB-D2	Bay Street Bridge Channel (8 feet) – Maintenance & Improvement	235,542	<u>Improvement:</u> Deepening from -6.0 MLLW to -8.0 MLLW with 1 ft. over dredge to -9.0 MLLW	1	16,446	16,446
NB-D2	Bay Street Bridge Channel (8 feet) – Improvement	192,531	-8.0 MLLW with 1 ft. over dredge to -9.0 MLLW	1	1,978	1,978
NB-D1	North Bay Channel (8 feet)	378,088	-8.0 MLLW with 1 ft. over dredge to -9.0 MLLW	1	8,714	8,714
PC-D1	Prince Cove Entrance Channel	264,878	-6.0 MLLW with 1 ft. over dredge to -7.0 MLLW	1	9,014	9,014
PC-D2	Prince Cove Marina Basin & Channel	146,679	-6.0 MLLW with 1 ft. over dredge to -7.0 MLLW	1	3,249	3,249
Total:		3,880,563			145,399	157,244

Table 2: Anticipated 2026-2036 Disposal Schedule			
Disposal Site	Total Disposal Footprint/ Disposal Footprint Below HTL¹ Only (SF)	Total Volume/Volume Below HTL Only (CY)	Nourishment Material Source
Millway Beach/ Blish Point	53,800/48,562	3,706/2,310	BH-D4
Sandy Neck Public Beach	81,737/0	9,841/0	BH-D4
Craigville Beach	300,172/2,646	6,555/9	EB-D1, CR-D1, CR-D2, CR-D3, BR-D1
Covell's Beach	116,547/14,430	4,903/124	EB-D1, CR-D1, CR-D2, CR-D3, BR-D1
Town Beach	62,652/36,622	5,841/1,870	EB-D1, CR-D1, CR-D2, CR-D3, BR-D1
Privately Owned Properties	154,634/88,585	9,828/2,660	EB-D1, CR-D1, CR-D2, CR-D3, BR-D1
Dead Neck Beach	741,919/624,422	75,647/64,570	CB-D1, CB-D2, CB-D3, CB-D4, CB-D5, SR-D1, WB-D1, WB-D2, NB-D1, NB-D2
Dead Neck Beach Extension	281,157/105,715	24,499/7,390	CB-D1, CB-D2, CB-D3, CB-D4, CB-D5, SR-D1, WB-D1, WB-D2, NB-D1, NB-D2
Ropes Beach	11,460/9,410	358/346	CB-D1, CB-D2, CB-D3, CB-D4, CB-D5, SR-D1, WB-D1, WB-D2, NB-D1, NB-D2
Cross Street (Riley's) Beach	5,378/4,704	382/345	CB-D1, CB-D2, CB-D3, CB-D4, CB-D5, SR-D1, WB-D1, WB-D2, NB-D1, NB-D2
Loop Beach	22,642/6,832	773/114	CB-D1, CB-D2, CB-D3, CB-D4, CB-D5, SR-D1, WB-D1, WB-D2, NB-D1, NB-D2
Total:	1,832,098/941,928	142,333/79,738	

¹ HTL: High Tide Line

AVOIDANCE AND MINIMIZATION: The applicant has provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment:

1. Adherence to time-of-year (TOY) work restrictions for both dredging and nourishment activities as required for the protection of fisheries, wildlife, and shorebird habitats.
2. Since eelgrass beds are ephemeral, changes to eelgrass distribution that have occurred since previous dredging events will be identified prior to the commencement of dredging activities. Accordingly, for areas located within close proximity to Massachusetts Department of Environmental Protection mapped eelgrass beds as determined from Massachusetts Geographic Information System a pre-dredge eelgrass survey will be conducted prior to the start of work. This action will ensure that dredging will not occur within 75 feet from the top of the proposed dredge slope and that associated nourishment activities will not occur within 100 feet of eelgrass beds. All pre-dredge eelgrass surveys will be conducted within the growing season prior to dredging to accurately delineate current eelgrass extent for the purposes of avoiding direct impacts and also maintaining a minimum 75-foot and 100-foot buffers for dredging and nourishment, respectively, to reduce the likelihood of indirect impacts (e.g., turbidity, slumping, burial).
3. Disposal sites that have been identified/mapped to support protected shorebird habitat will utilize beach nourishment slopes that do not exceed 10H:1V.
4. Coordination of all dredge routing decisions will occur with the Town Shellfish Constable to avoid loss of significant shellfish habitat.
5. If required by permits, perform post-construction annual monitoring of protected shorebird habitat at nourishment sites, including the implementation of specific management protocols in the event an area of beach is found to be used for territorial, courting, or nesting activities by listed shorebirds.

COMPENSATORY MITIGATION: The applicant has provided the following explanation why compensatory mitigation should not be required: The proposed dredging consists of primarily maintenance dredging. Improvement dredging is proposed for one waterway, but the improvement dredging will deepen an existing channel and not consist of dredging new areas. Compatible material (sand) will be placed on beaches. All impacts associated with beach nourishment are anticipated to be temporary.

CULTURAL RESOURCES: The Corps evaluated the undertaking pursuant to Section 106 of the National Historic Preservation Act (NHPA) utilizing its existing program-specific regulations and procedures along with 36 CFR Part 800. The Corps' program-specific procedures include 33 CFR 325, Appendix C, and revised interim guidance issued in 2005 and 2007, respectively. The District Engineer consulted district files and records and the latest published version of the National Register of Historic Places and initially determines that:

No historic properties (i.e., properties listed in or eligible for inclusion in the National Register of Historic Places) are present within the Corps' permit area; therefore, there will be no historic properties affected. The Corps subsequently requests

concurrence from the SHPO and/or THPO. This effect finding applies to the following dredge and disposal sites:

- Barnstable Harbor Outer Entrance Channel (BH-D4)
- East Bay Entrance Channel (EB-D1)
- Centerville River Channel – Lower Reach (CR-D1)
- Centerville River Channel – Upper Reach (CR-D2)
- Centerville River Spur Channel (CR-D3)
- Bumps River Channel (BR-D1)
- Cotuit Bay Entrance Channel (CB-D1)
- Cotuit Bay Embayment Channel (10 feet) (CB-D2)
- Cotuit Bay Embayment Channel (11 feet) (CB-D3)
- Cotuit Bay Embayment Channel (9 feet) (CB-D4)
- Cotuit Bay Embayment Channel (7 feet) (CB-D5)
- West Bay Spur Channel (8 feet) (WB-D3)
- Seapuit River Channel (7 feet) (SR-D1)
- Bay Street Bridge Channel (8 feet) – Maintenance & Improvement (NB-D2)
- Bay Street Bridge Channel (8 feet) – Improvement (NB-D2)
- North Bay Channel (8 feet) (NB-D1)
- Prince Cove Entrance Channel (PC-D1)
- Prince Cove Marina Basin & Channel (PC-D2)
- Sandy Neck Public Beach
- Craigville Beach
- Covell's Beach
- Dead Neck Beach
- Dead Neck Beach Extension

Historic properties (i.e., properties listed in or eligible for inclusion in the National Register of Historic Places), are present within the Corps' permit area; however, the undertaking will have no adverse effect on these historic properties. The Corps subsequently requests concurrence from the SHPO and/or THPO. This effect finding applies to the following dredge and disposal sites:

- Millway Beach/Blish Point: Harbor Area Historic District (BRN.V)
- Loop Beach: Loop Beach (BRN.985), Cotuit Highground Historic District (BRN.Y)
- Rope's Beach: Hooper's Landing (BRN.983), Little River Area Historic District (BRN.AX), Crocker, Ebenezer Jr. House (BRN.AY), Cotuit Highground Historic District (BRN.Y)
- West Bay Outer Entrance (8 feet): Osterville North and West Bays Historic District (BRN.AM)
- West Bay Inner Entrance (11 feet): Osterville North and West Bays Historic District (BRN.AM)

The District Engineer's final eligibility and effect determination will be based upon coordination with the SHPO and/or THPO, as appropriate and required, and with full

consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps-identified permit area.

ENDANGERED SPECIES: The Corps has performed an initial review of the application, the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), National Marine Fisheries Service (NMFS) GARFO Section 7 Mapper, and the NMFS Critical Habitat Mapper to determine if any threatened, endangered, proposed, or candidate species, as well as the proposed and final designated critical habitat may occur within the boundary of the proposed project. Based on this initial review, the Corps has made a preliminary determination that the proposed project may affect species and critical habitat listed in Table 3. No other ESA-listed species or critical habitat will be affected by the proposed action.

Table 3: ESA-listed species and/or critical habitat potentially present in the action area.

Species Common Name and/or Critical Habitat Name	Scientific Name	Federal Status
Northern Long-Eared Bat	<i>Myotis septentrionalis</i>	Endangered
Tricolored Bat	<i>Perimyotis subflavus</i>	Proposed Endangered
Piping Plover	<i>Charadrius melodus</i>	Threatened
Roseate Tern	<i>Sterna dougallii dougallii</i>	Endangered
Rufa Red Knot	<i>Calidris canutus rufa</i>	Threatened
Monarch Butterfly	<i>Danaus plexippus</i>	Proposed Threatened
American Chaffseed	<i>Schwalbea americana</i>	Endangered
Sandplain Gerardia	<i>Agalinis acuta</i>	Endangered
Atlantic Sturgeon	<i>Acipenser oxyrinchus oxyrinchus</i>	Threatened/Endangered
Shortnose Sturgeon	<i>Acipenser brevirostrum</i>	Endangered
Green Sea Turtle	<i>Chelonia mydas</i>	Threatened
Kemp's Ridley Sea Turtle	<i>Lepidochelys kempii</i>	Endangered
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	Endangered

Loggerhead Sea Turtle	<i>Caretta caretta</i>	Threatened
North Atlantic Right Whale	<i>Eubalaena glacialis</i>	Endangered
North Atlantic Right Whale Critical Habitat	<i>Eubalaena glacialis</i>	Critical Habitat
Fin Whale	<i>Balaenoptera physalus</i>	Endangered

This notice serves as request to the U.S. Fish and Wildlife Service and National Marine Fisheries Service for any additional information on whether any listed or proposed to be listed endangered or threatened species or critical habitat may be present in the area which would be affected by the proposed activity.

ESSENTIAL FISH HABITAT: Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act 1996, the Corps reviewed the project area, examined information provided by the applicant, and consulted available species information.

The Corps intends to initiate Essential Fish Habitat (EFH) consultation separately from this public notice. A separate EFH consultation package will be sent to the NMFS. The Corps will not make a permit decision until the consultation process is complete.

Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

NAVIGATION: The proposed structure or activity is not located in the vicinity of a federal navigation channel.

SECTION 408: The applicant will not require permission under Section 14 of the Rivers and Harbors Act (33 USC 408) because the activity, in whole or in part, would not alter, occupy, or use a Corps Civil Works project.

WATER QUALITY CERTIFICATION: Water Quality Certification may be required from the Massachusetts Department of Environmental Protection.

NOTE: This public notice is being issued based on information furnished by the applicant. This information has not been verified or evaluated to ensure compliance with laws and regulation governing the regulatory program. The geographic extent of aquatic resources within the proposed project area that either are, or are presumed to be, within the Corps jurisdiction has not been verified by Corps personnel.

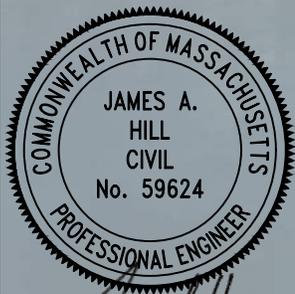
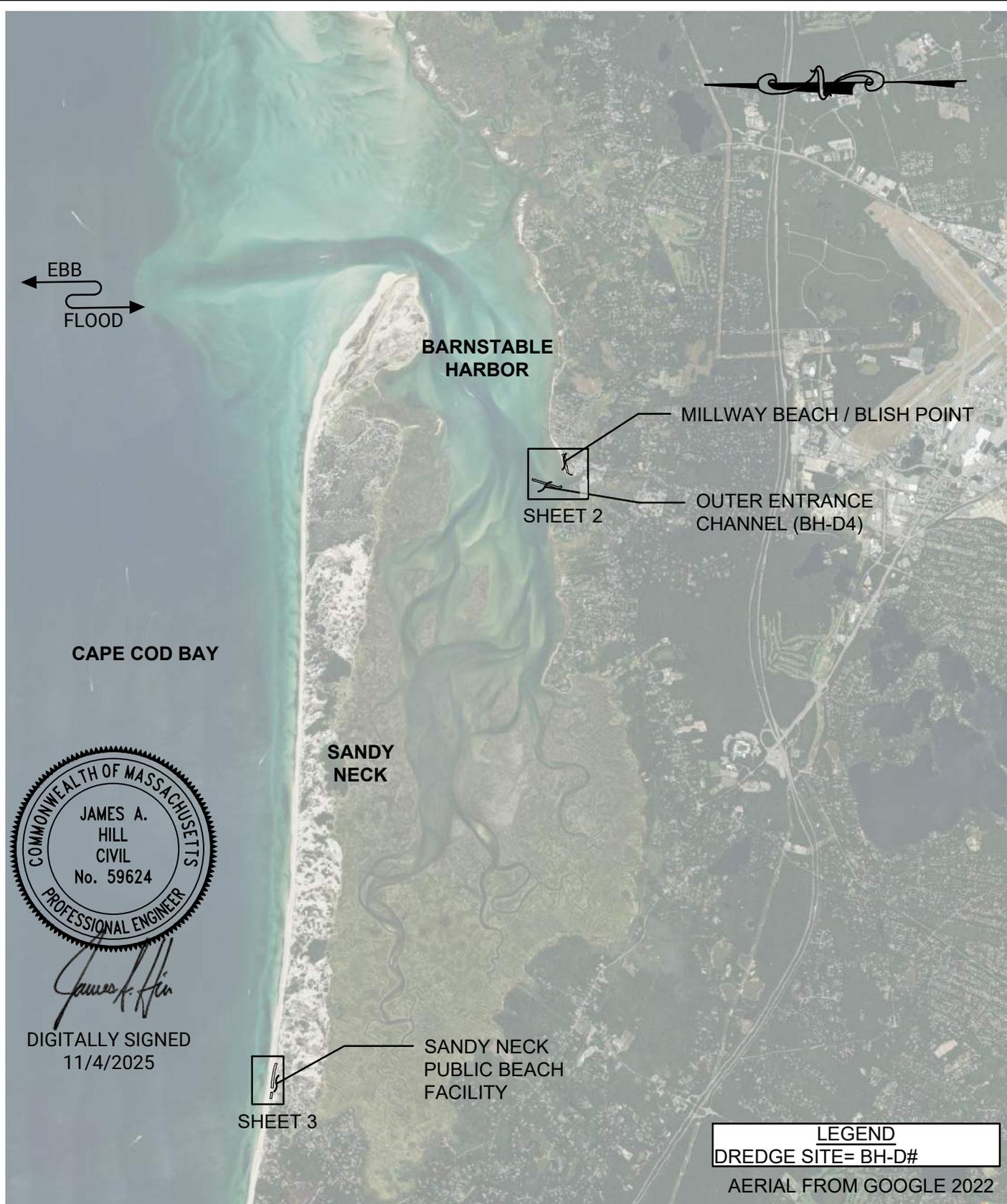
EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable

detriments. All factors which may be relevant to the proposal will be considered including cumulative impacts thereof; among these are conservation, economics, esthetics, general environmental concerns, wetlands, historical properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food, and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people. Evaluation of the impact of the activity on the public interest will also include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act or the criteria established under authority of Section 102(a) of the Marine Protection Research and Sanctuaries Act of 1972. A permit will be granted unless its issuance is found to be contrary to the public interest.

COMMENTS: The Corps is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other Interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this determination, comments are used to assess impacts to endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The New England District will receive written comments on the proposed work, as outlined above, until February 6, 2026. Comments should be submitted electronically via the Regulatory Request System (RRS) at <https://rrs.usace.army.mil/rrs> or to cenae-r-pn-ma@usace.army.mil. Alternatively, you may submit comments in writing to the Commander, U.S. Army Corps of Engineers, New England District, Attention: cenae-r-pn-ma@usace.army.mil. Please refer to the permit application number NAE-2015-01632 in your comments.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing will be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.



James A. Hill

DIGITALLY SIGNED
11/4/2025

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840



DATUM:
MLLW = 0.00'
MLW = +0.28'
NAVD88 = +5.66'
MHW = +9.94'
AHTL = +12.78'

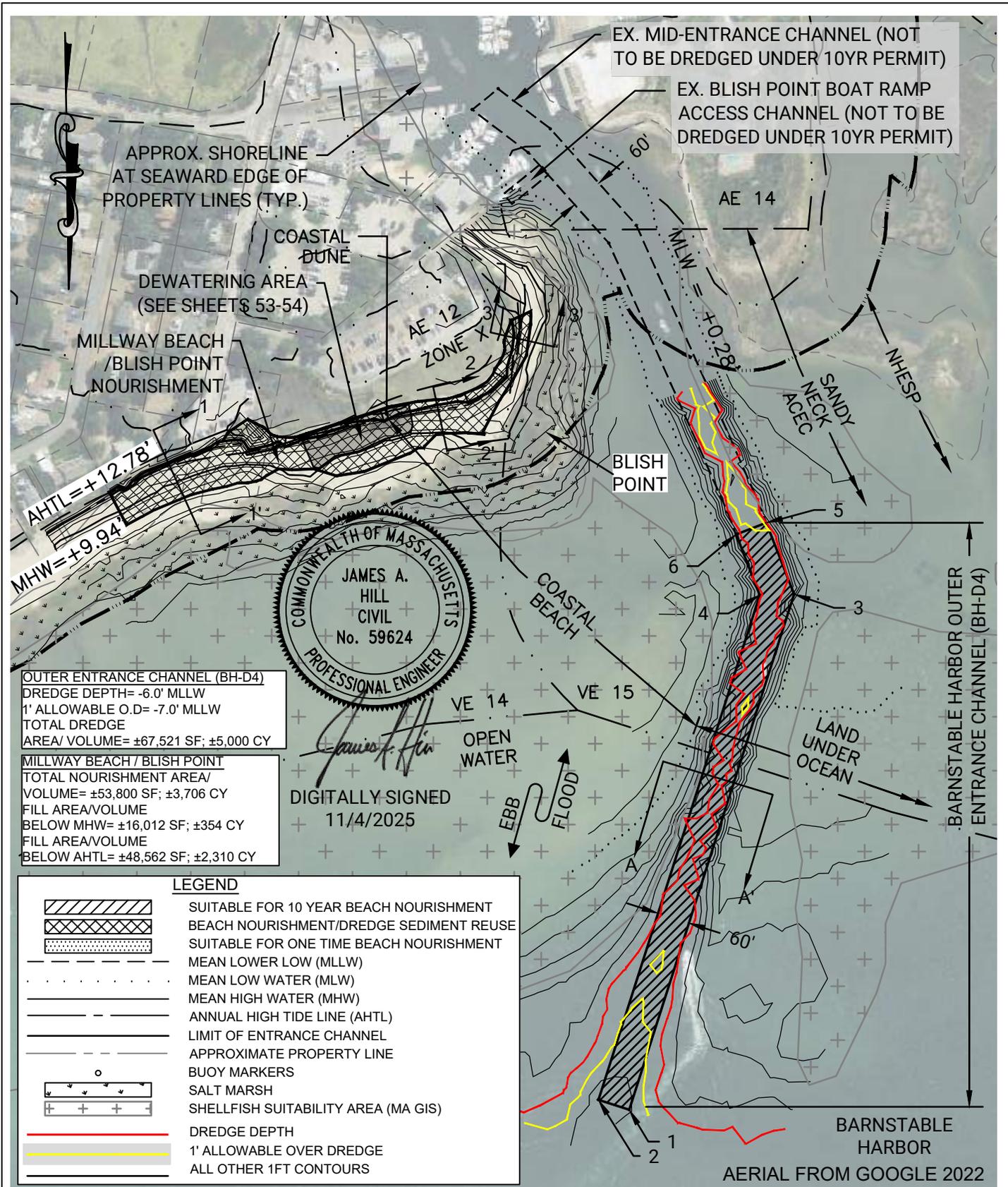


SITE LOCATION PLAN
BARNSTABLE HARBOR/
SANDY NECK REGION

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 1 OF 55



OUTER ENTRANCE CHANNEL (BH-D4)
 DREDGE DEPTH = -6.0' MLLW
 1' ALLOWABLE O.D. = -7.0' MLLW
 TOTAL DREDGE
 AREA/VOLUME = ±67,521 SF; ±5,000 CY

MILLWAY BEACH / BLISH POINT
 TOTAL NOURISHMENT AREA/
 VOLUME = ±53,800 SF; ±3,706 CY
 FILL AREA/VOLUME
 BELOW MHW = ±16,012 SF; ±354 CY
 FILL AREA/VOLUME
 BELOW AHTL = ±48,562 SF; ±2,310 CY

LEGEND

	SUITABLE FOR 10 YEAR BEACH NOURISHMENT
	BEACH NOURISHMENT/DREDGE SEDIMENT REUSE
	SUITABLE FOR ONE TIME BEACH NOURISHMENT
	MEAN LOWER LOW (MLLW)
	MEAN LOW WATER (MLW)
	MEAN HIGH WATER (MHW)
	ANNUAL HIGH TIDE LINE (AHTL)
	LIMIT OF ENTRANCE CHANNEL
	APPROXIMATE PROPERTY LINE
	BUOY MARKERS
	SALT MARSH
	SHELLFISH SUITABILITY AREA (MA GIS)
	DREDGE DEPTH
	1' ALLOWABLE OVER DREDGE
	ALL OTHER 1FT CONTOURS

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

0 250 500
 GRAPHIC SCALE IN FEET

DATUM:
 MLLW = 0.00'
 MLW = +0.28'
 NAVD88 = +5.66'
 MHW = +9.94'
 AHTL = +12.78'

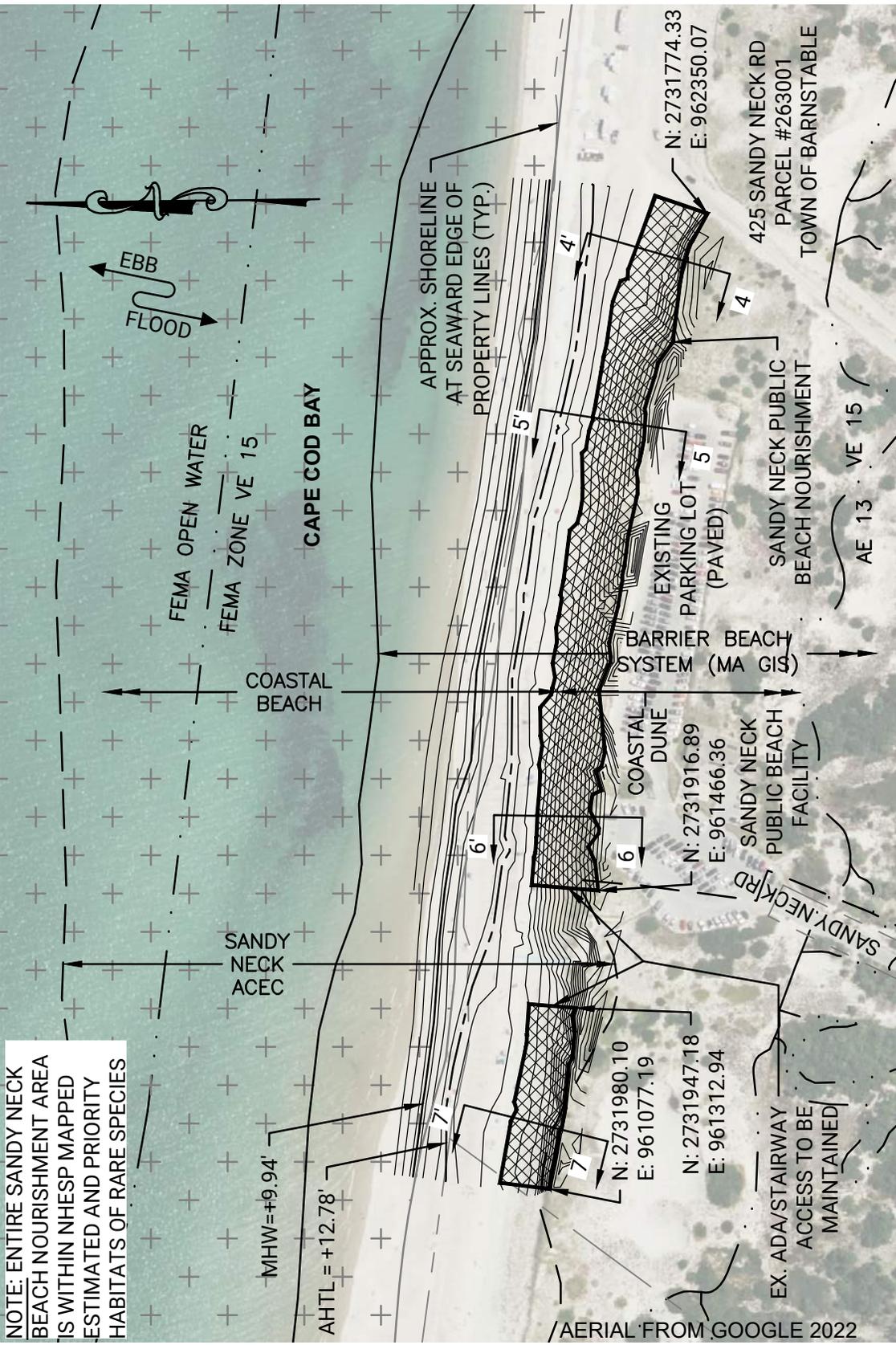
Foth

PROPOSED DREDGE & NOURISHMENT PLAN
 BARNSTABLE HARBOR
 ENTRANCE CHANNEL (BH-D4)
 & MILLWAY BEACH/
 BLISH POINT

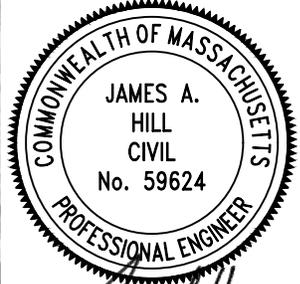
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025 SHEET 2 OF 55

NOTE: ENTIRE SANDY NECK BEACH NOURISHMENT AREA IS WITHIN NHESP MAPPED ESTIMATED AND PRIORITY HABITATS OF RARE SPECIES



NOTE: SEE LEGEND, SHEET 2



James A. Hill

DIGITALLY SIGNED
11/4/2025

SANDY NECK PUBLIC BEACH
TOTAL NOURISHMENT
AREA VOLUME = ±81,737 SF; ±9,841 CY
ALL FILL TO BE PLACED ABOVE AHTL

NOTE: EX. ACCESS WAYS TO/FROM BEACH AND PARKING LOT TO BE MAINTAINED.

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840



DATUM:
MLLW = 0.00'
MLW = +0.28'
NAVD88 = +5.66'
MHW = +9.94'
AHTL = +12.78'

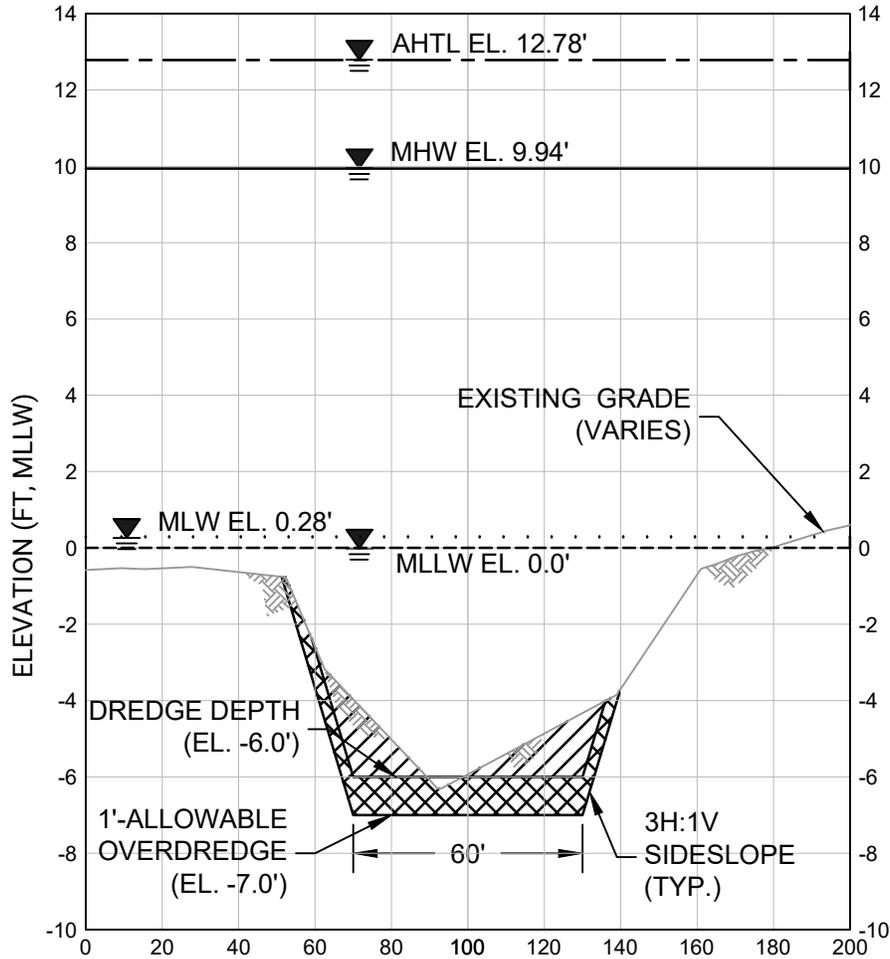


PROPOSED NOURISHMENT PLAN
SANDY NECK PUBLIC BEACH

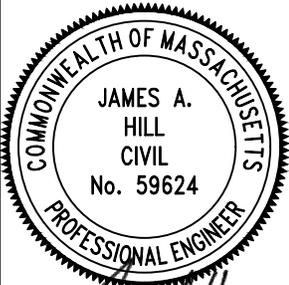
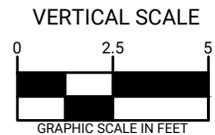
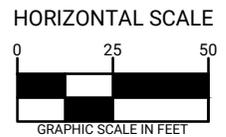
TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 3 OF 55



TYPICAL SECTION A-A'
OUTER ENTRANCE CHANNEL (BH-D4)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill

DIGITALLY SIGNED
 11/4/2025

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.28'
 NAVD88 = +5.66'
 MHW = +9.94'
 AHTL = +12.78'

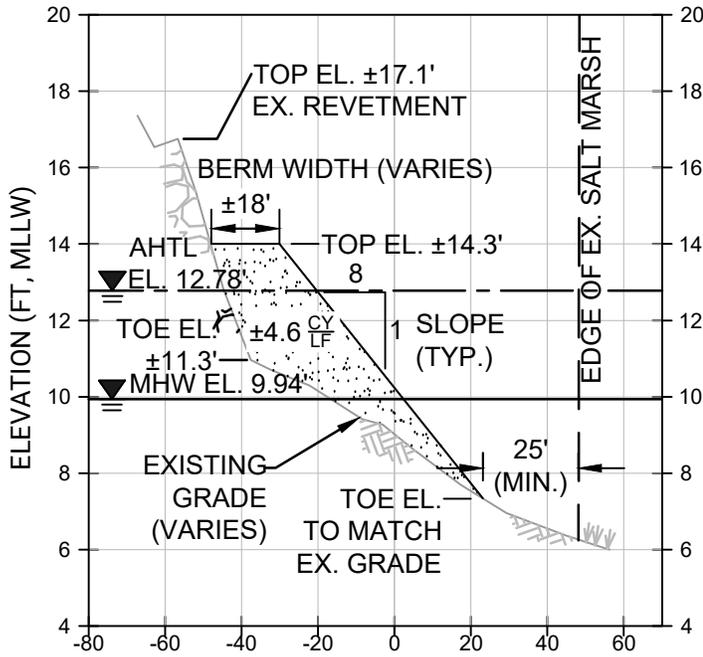


TYPICAL DREDGE SECTION
 BARNSTABLE HARBOR
 ENTRANCE CHANNEL
 (BH-D4)

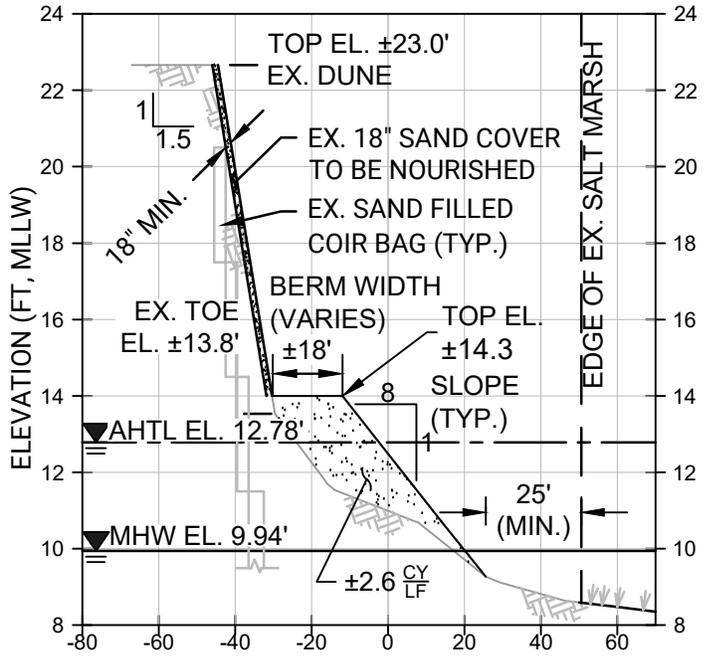
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING &
 BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

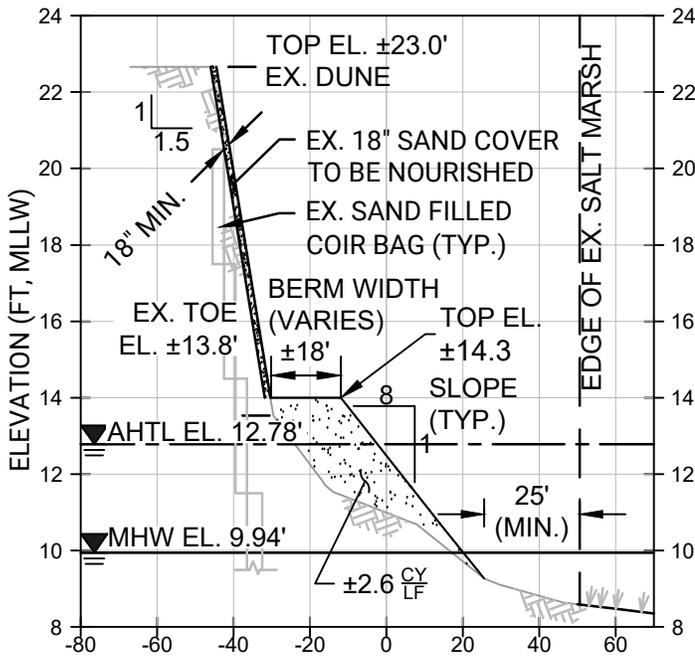
SHEET 4 OF 55



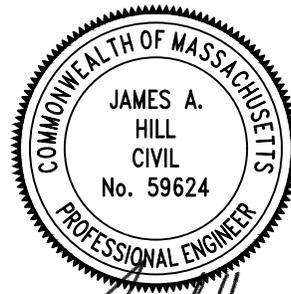
TYPICAL SECTION 1-1'
MILLWAY BEACH/BLISH POINT NOURISHMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



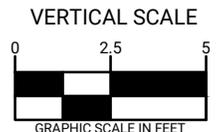
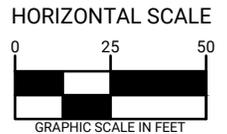
TYPICAL SECTION 2-2'
MILLWAY BEACH/BLISH POINT NOURISHMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



TYPICAL SECTION 3-3'
MILLWAY BEACH/BLISH POINT NOURISHMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill
 DIGITALLY SIGNED
 11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.28'
 NAVD88 = +5.66'
 MHW = +9.94'
 AHTL = +12.78'

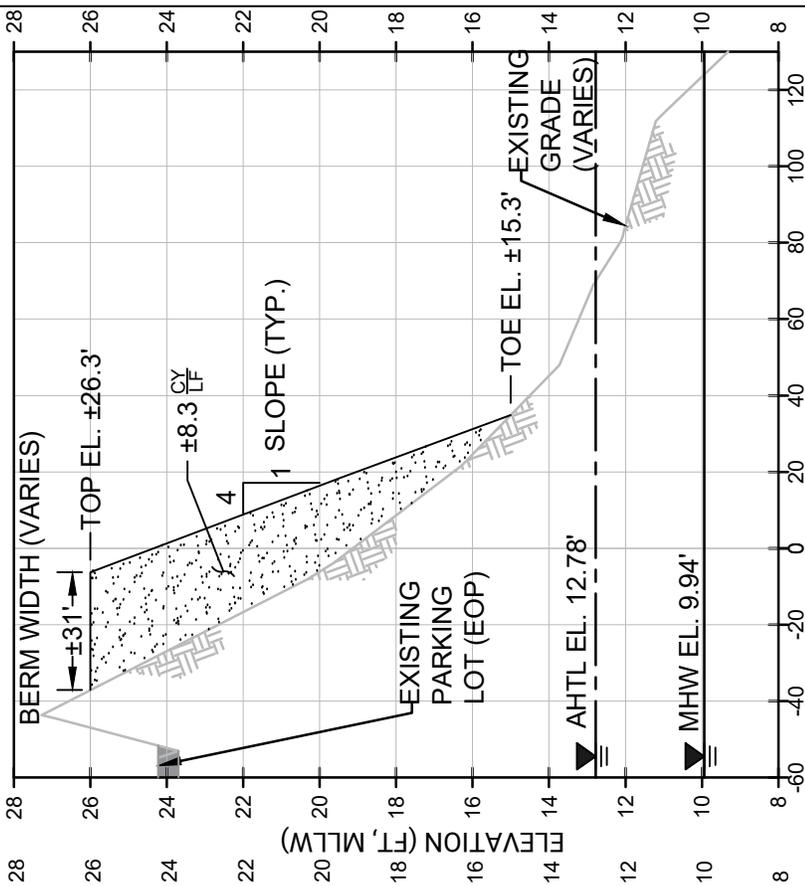


TYPICAL NOURISHMENT SECTIONS
 MILLWAY BEACH / BLISH POINT

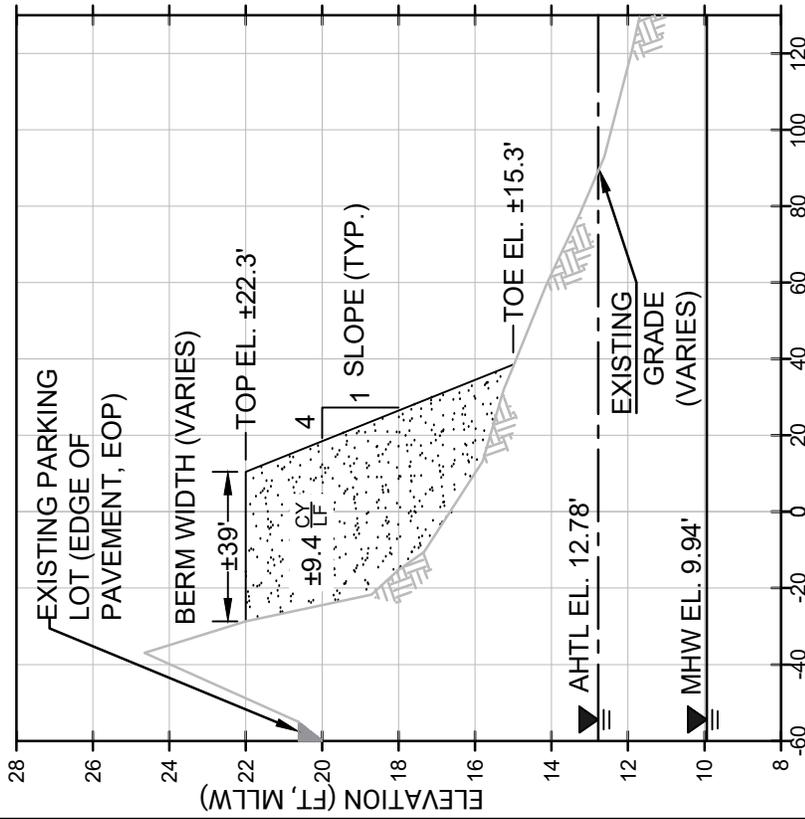
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 5 OF 55



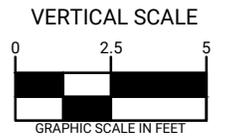
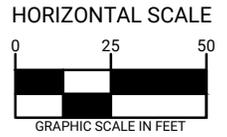
TYPICAL SECTION 4-4
 SANDY NECK PUBLIC BEACH NOURISHMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



TYPICAL SECTION 5-5
 SANDY NECK PUBLIC BEACH NOURISHMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill
 DIGITALLY SIGNED
 11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.28'
 MHW = +9.94'
 AHTL = +12.78'

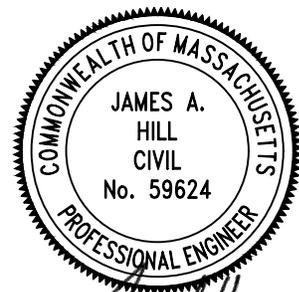
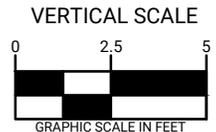
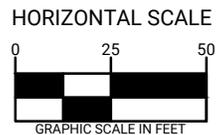


TYPICAL NOURISHMENT SECTIONS
 SANDY NECK PUBLIC BEACH NOURISHMENT AREA

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

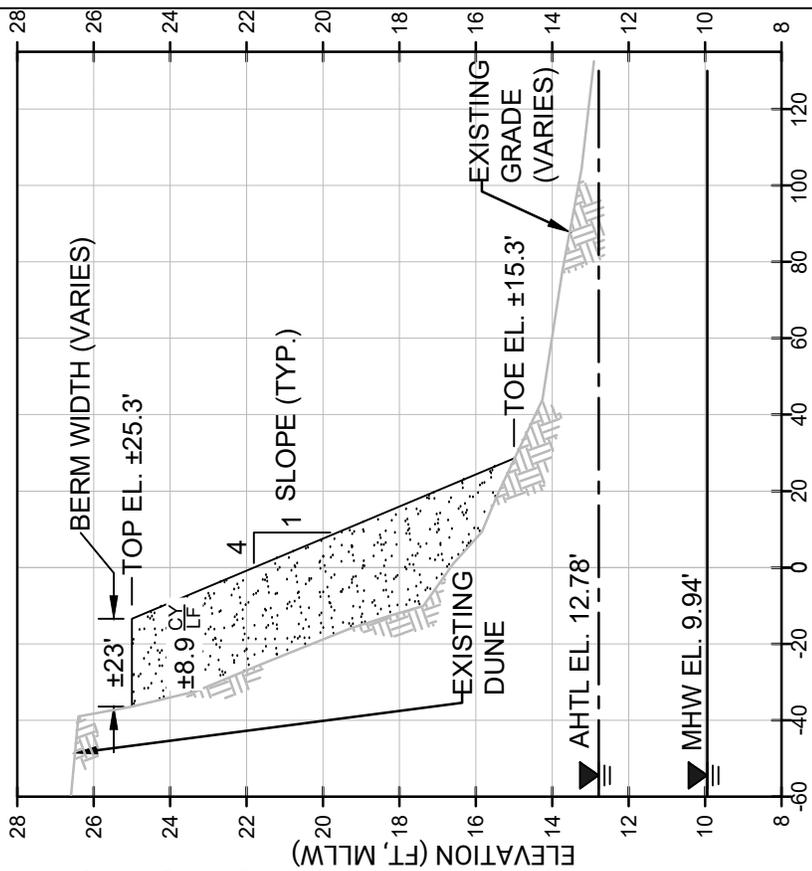
REV. 11/4/2025

SHEET 6 OF 55

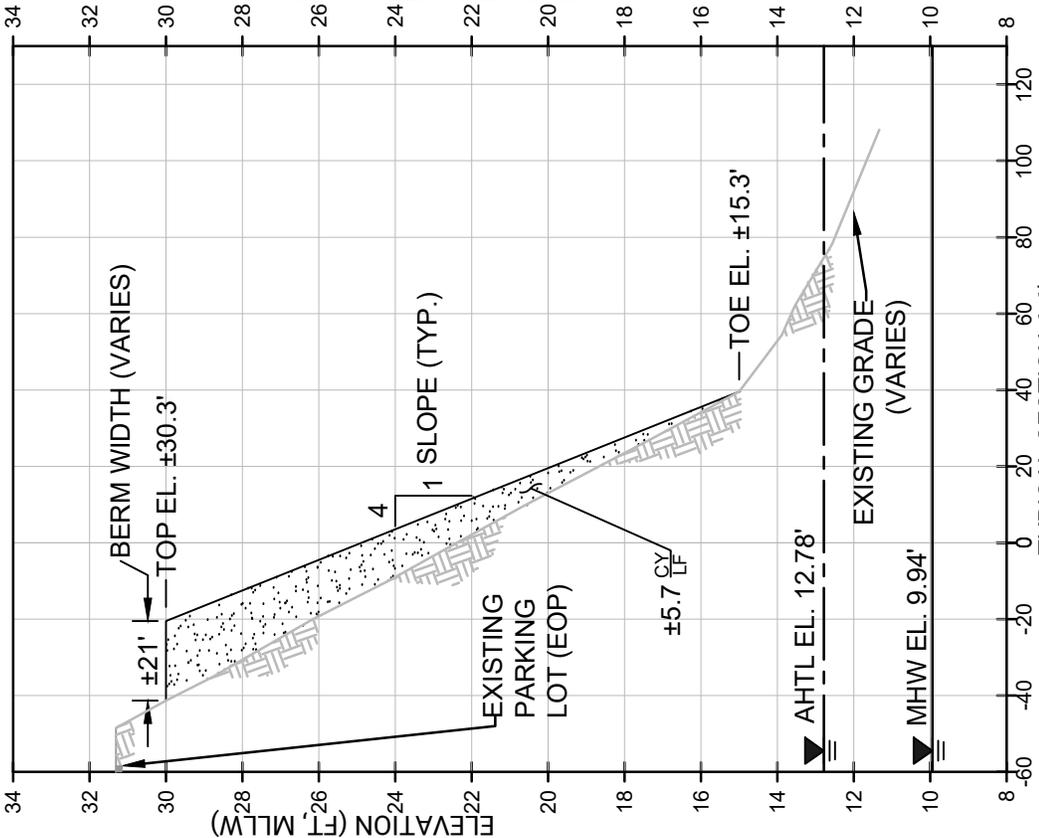


James A. Hill

DIGITALLY SIGNED
11/4/2025



TYPICAL SECTION 7-7
SANDY NECK PUBLIC BEACH NOURISHMENT
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



TYPICAL SECTION 6-6
SANDY NECK PUBLIC BEACH NOURISHMENT
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.28'
MHW = +9.94'
AHTL = +12.78'



TYPICAL NOURISHMENT SECTIONS
SANDY NECK PUBLIC BEACH NOURISHMENT AREA

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

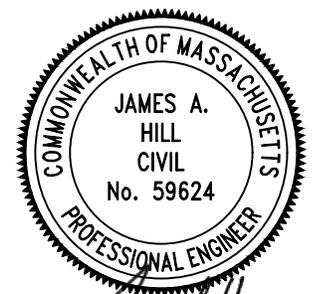
SHEET 7 OF 55

BARNSTABLE HARBOR SANDY NECK REGION
DREDGE AND NOURISHMENT SUMMARY

DREDGE SITE	NOURISHMENT SITE(S)*	OCCURANCE*
BARNSTABLE HARBOR ENTRANCE CHANNEL (BH-D4)	MILLWAY BEACH/BLISH POINT	UNLIMITED OVER DURATION OF 10 YEAR PERMIT
	SANDY NECK PUBLIC BEACH	UNLIMITED OVER DURATION OF 10 YEAR PERMIT

**NOURISHMENT LOCATION/OCCURRENCE AS PER USACE 2015-01632 SUITABILITY DETERMINATION
ADDENDUM ISSUED ON 8/1/2022 FOR THE TOWN OF BARNSTABLE, MA 10-YEAR COMPREHENSIVE DREDGE AND
NOURISHMENT PROGRAM.*

BARNSTABLE HARBOR OUTER ENTRANCE CHANNEL COORDINATES		
NAD83 - MASSACHUSETTS MAINLAND, USFT		
POINT	EASTING (X)	NORTHING (Y)
1	983649.30	2722479.30
2	983706.40	2722461.00
3	983343.70	2721522.50
4	983407.30	2721524.40
5	983395.02	2721390.15
6	983450.97	2721411.85



James A. Hill

DIGITALLY SIGNED
11/4/2025

FOTH INFRASTRUCTURE AND
ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.28'
MHW = +9.94'
AHTL = +12.78'

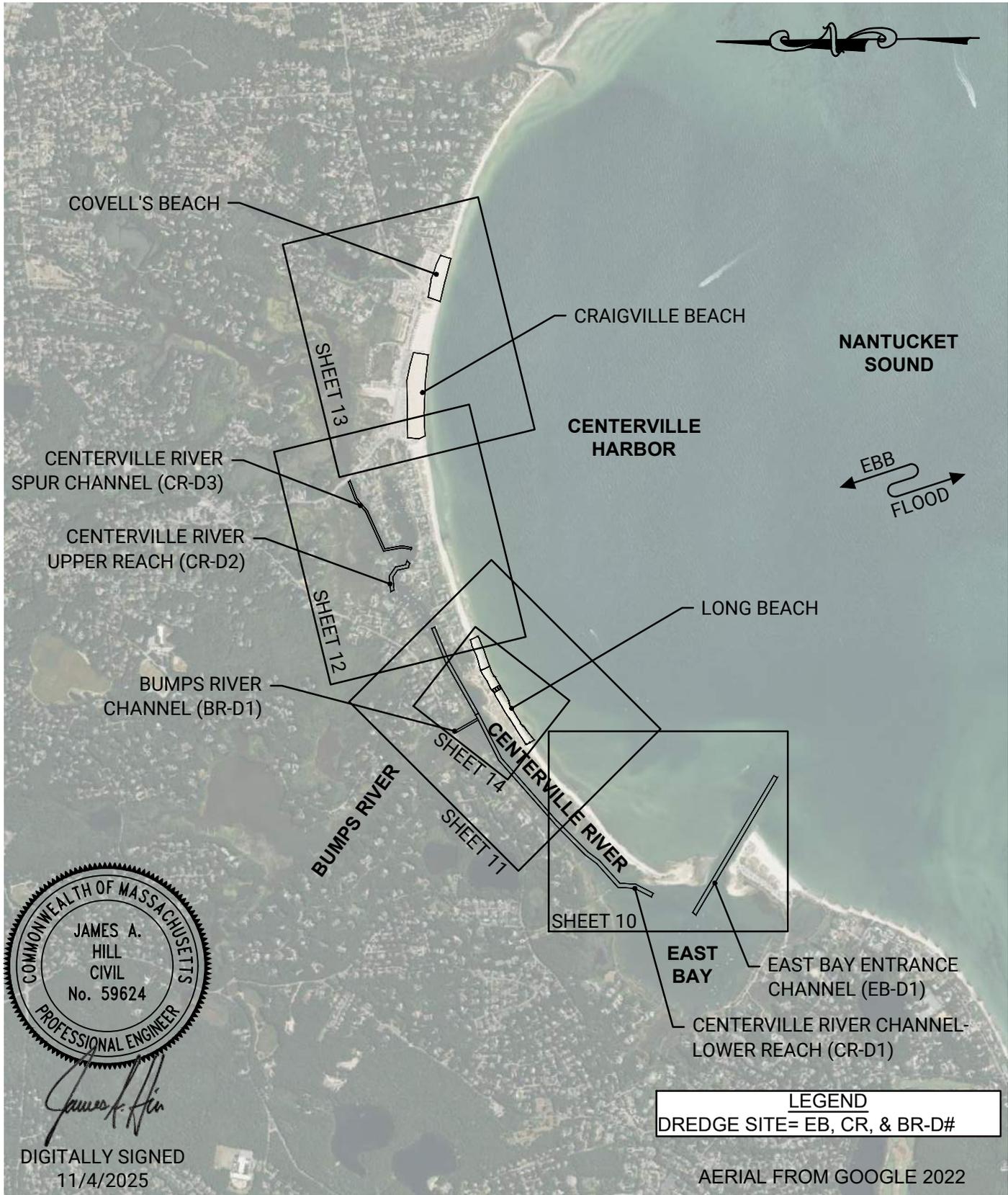


**SUMMARY AND
COORDINATES**
 BARNSTABLE HARBOR
 MILLWAY BEACH/BLISH POINT
 SANDY NECK

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING &
 BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

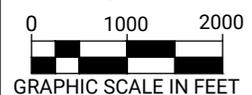
SHEET 8 OF 55



James A. Hill
 DIGITALLY SIGNED
 11/4/2025

LEGEND
 DREDGE SITE= EB, CR, & BR-D#

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840



DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'



SITE LOCATION PLAN
 CENTERVILLE HARBOR REGION

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING &
 BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

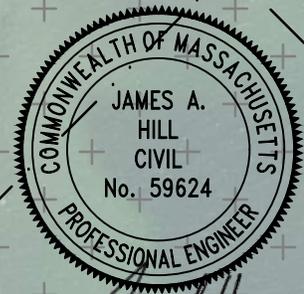
REV. 11/4/2025

SHEET 9 OF 55

CENTERVILLE RIVER CHANNEL-LOWER REACH (CR-D1)

AERIAL FROM GOOGLE 2022

APPROX. SHORELINE AT SEAWARD EDGE OF PROPERTY LINES (TYP.)

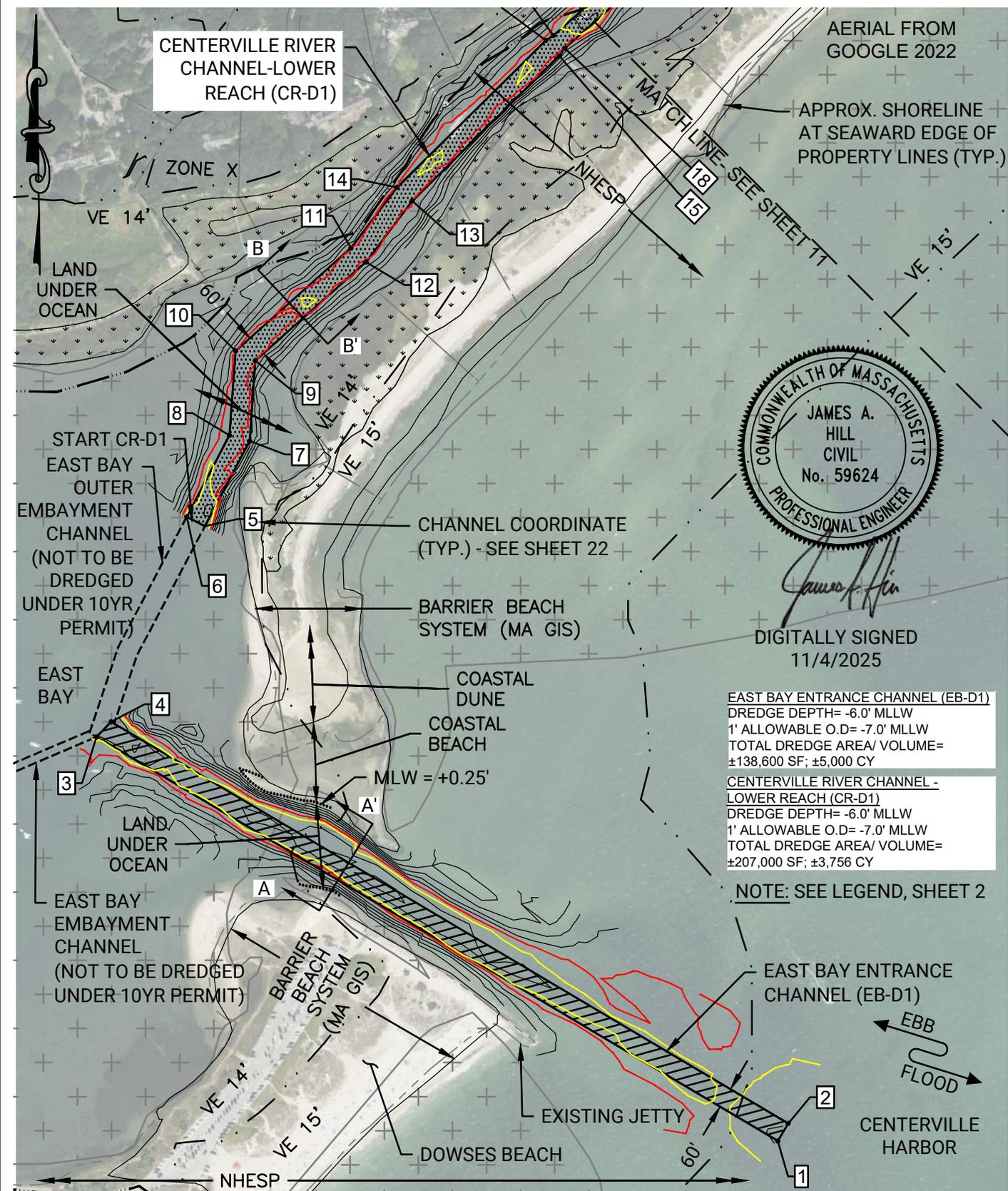


DIGITALLY SIGNED
11/4/2025

EAST BAY ENTRANCE CHANNEL (EB-D1)
DREDGE DEPTH= -6.0' MLLW
1' ALLOWABLE O.D= -7.0' MLLW
TOTAL DREDGE AREA/ VOLUME=
±138,600 SF; ±5,000 CY

CENTERVILLE RIVER CHANNEL - LOWER REACH (CR-D1)
DREDGE DEPTH= -6.0' MLLW
1' ALLOWABLE O.D= -7.0' MLLW
TOTAL DREDGE AREA/ VOLUME=
±207,000 SF; ±3,756 CY

NOTE: SEE LEGEND, SHEET 2



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840



DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'



PROPOSED DREDGE PLAN
EAST BAY (EB-D1) &
CENTERVILLE RIVER LOWER REACH (CR-D1) CHANNELS

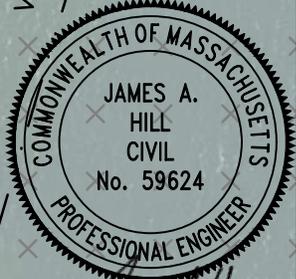
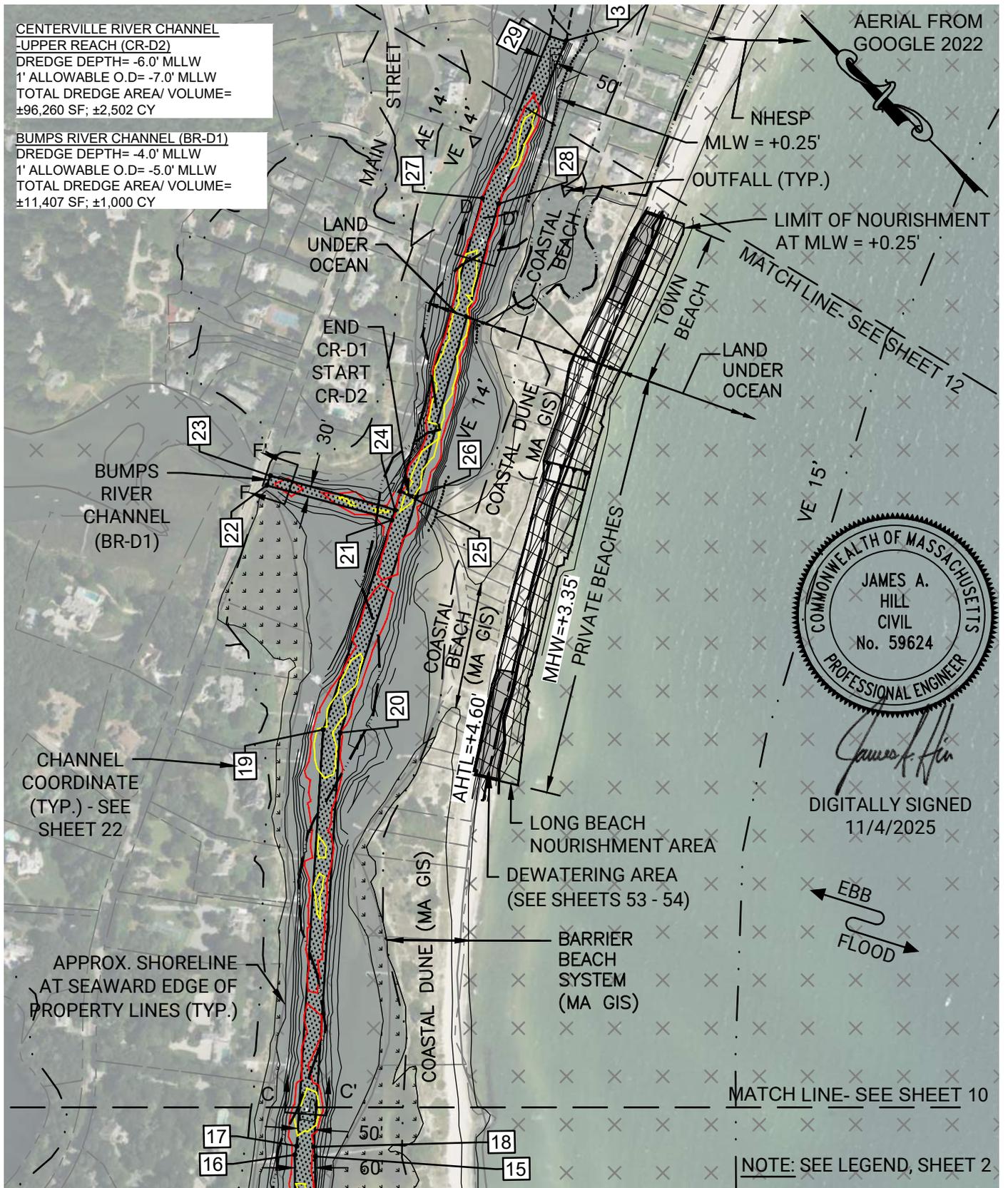
TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 10 OF 55

**CENTERVILLE RIVER CHANNEL
-UPPER REACH (CR-D2)**
 DREDGE DEPTH= -6.0' MLLW
 1' ALLOWABLE O.D= -7.0' MLLW
 TOTAL DREDGE AREA/ VOLUME=
 ±96,260 SF; ±2,502 CY

BUMPS RIVER CHANNEL (BR-D1)
 DREDGE DEPTH= -4.0' MLLW
 1' ALLOWABLE O.D= -5.0' MLLW
 TOTAL DREDGE AREA/ VOLUME=
 ±11,407 SF; ±1,000 CY



James A. Hill
 DIGITALLY SIGNED
 11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

0 200 400
 GRAPHIC SCALE IN FEET

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

Foth

PROPOSED DREDGE & NOURISHMENT PLAN
 CENTERVILLE RIVER LOWER (CR-D1) & UPPER (CR-D2) REACH & BUMPS RIVER (BR-D1) CHANNELS AND LONG BEACH (TOWN/PRIVATE)

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

AERIAL FROM GOOGLE, 2022

BARRIER BEACH SYSTEM (MA GIS)

MATCH LINE- SEE SHEET 13

CENTERVILLE RIVER SPUR CHANNEL (CR-D3)

CHANNEL COORDINATE (TYP.) - SEE SHEET 22

LAND UNDER OCEAN

LAND UNDER OCEAN

PORTION OF CR-D2 NOT TO BE DREDGED UNDER 10 YR PERMIT

CENTERVILLE RIVER SPUR CHANNEL (CR-D3)
DREDGE DEPTH= -4.0' MLLW
1' ALLOWABLE O.D= -5.0' MLLW
TOTAL DREDGE AREA/ VOLUME =
±46,500 SF; ±2,518 CY

MATCH LINE- SEE SHEET 11

NOTE: SEE LEGEND, SHEET 2

AE 13'

VE 15'

CRAIGVILLE BEACH

NHESP

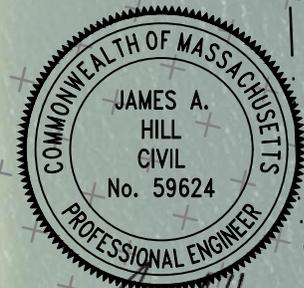
PORTION OF CR-D2 NOT TO BE DREDGED UNDER 10 YR PERMIT

APPROX. SHORELINE AT SEAWARD EDGE OF PROPERTY LINES (TYP.)

COASTAL BEACH (MA GIS)

COASTAL DUNE (MA GIS)

BARRIER BEACH SYSTEM (MA GIS)



DIGITALLY SIGNED
11/4/2025

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840



DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'



PROPOSED DREDGE & NOURISHMENT PLAN

CENTERVILLE RIVER UPPER REACH (CR-D2) & SPUR (CR-D3) CHANNELS AND CRAIGVILLE BEACH

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

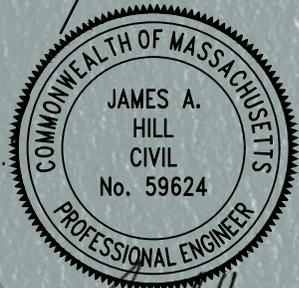
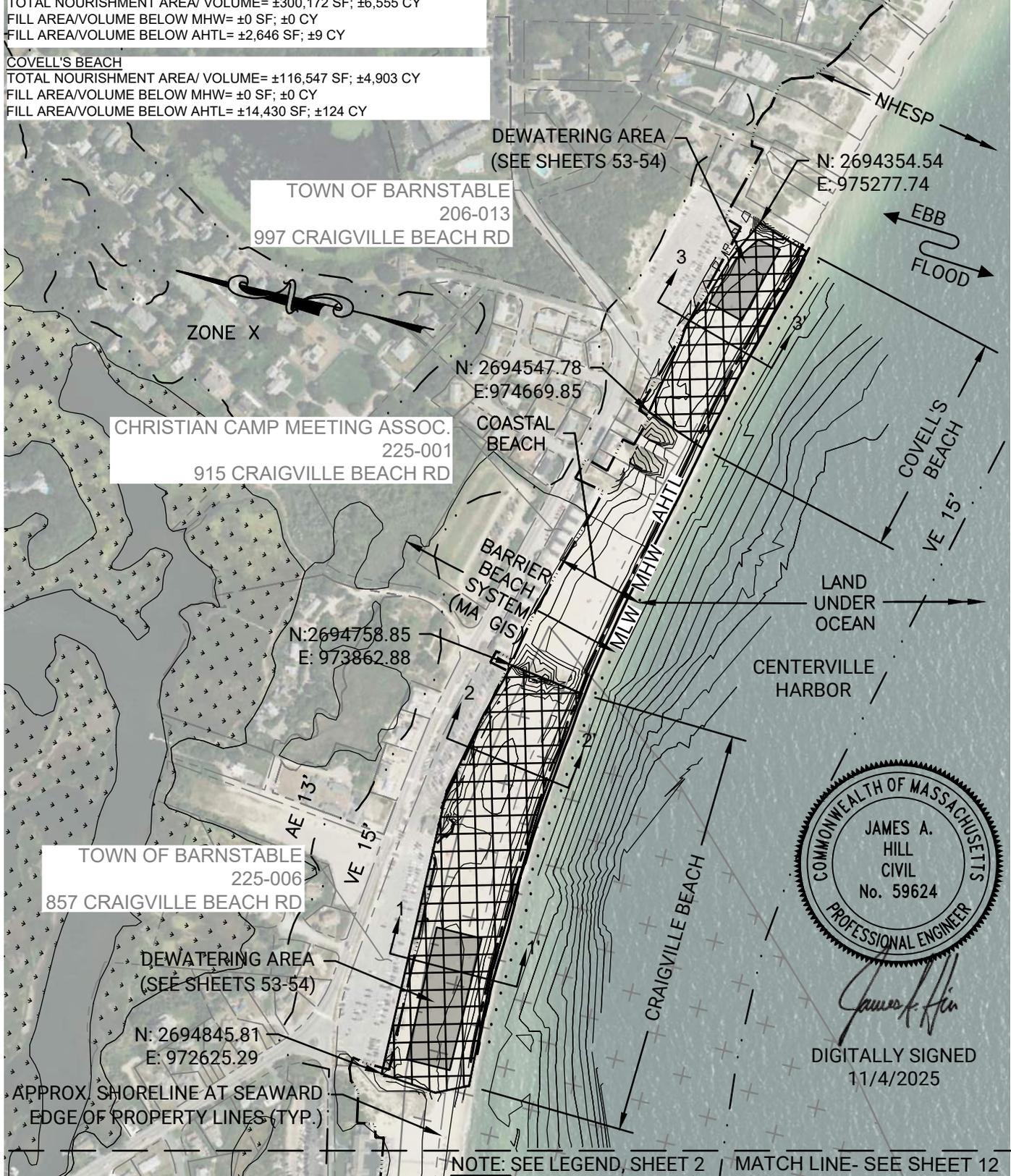
REV. 11/4/2025

SHEET 12 OF 55

CRAIGVILLE BEACH
 TOTAL NOURISHMENT AREA/ VOLUME= ±300,172 SF; ±6,555 CY
 FILL AREA/VOLUME BELOW MHW= ±0 SF; ±0 CY
 FILL AREA/VOLUME BELOW AHTL= ±2,646 SF; ±9 CY

COVELL'S BEACH
 TOTAL NOURISHMENT AREA/ VOLUME= ±116,547 SF; ±4,903 CY
 FILL AREA/VOLUME BELOW MHW= ±0 SF; ±0 CY
 FILL AREA/VOLUME BELOW AHTL= ±14,430 SF; ±124 CY

AERIAL FROM GOOGLE 2022



James A. Hill
 DIGITALLY SIGNED
 11/4/2025

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840



DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'



PROPOSED NOURISHMENT PLAN
 CRAIGVILLE AND COVELL'S BEACHES

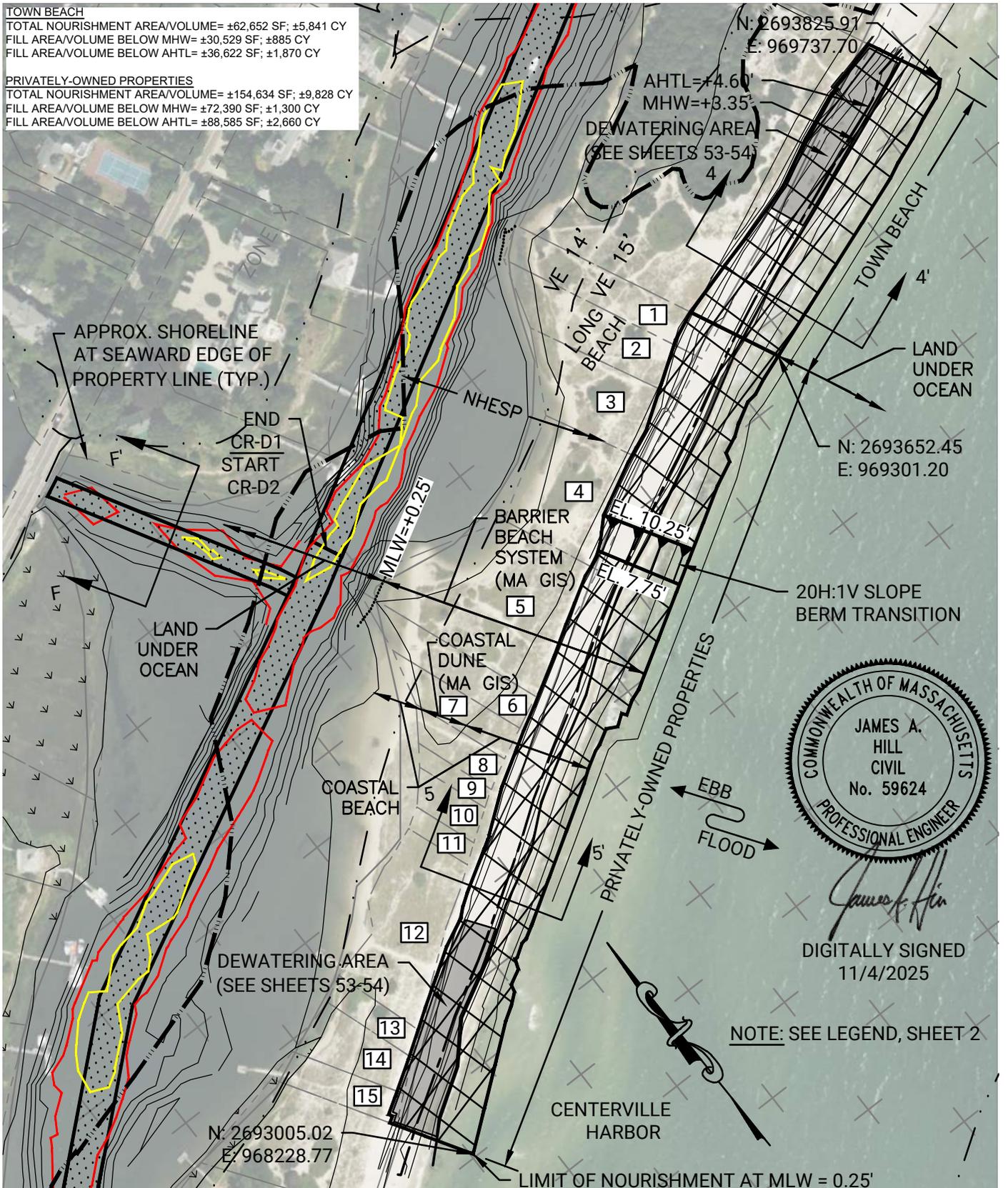
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 13 OF 55

TOWN BEACH
 TOTAL NOURISHMENT AREA/VOLUME= ±62,652 SF; ±9,841 CY
 FILL AREA/VOLUME BELOW MHW= ±30,529 SF; ±885 CY
 FILL AREA/VOLUME BELOW AHTL= ±36,622 SF; ±1,870 CY

PRIVATELY-OWNED PROPERTIES
 TOTAL NOURISHMENT AREA/VOLUME= ±154,634 SF; ±9,828 CY
 FILL AREA/VOLUME BELOW MHW= ±72,390 SF; ±1,300 CY
 FILL AREA/VOLUME BELOW AHTL= ±88,585 SF; ±2,660 CY



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

0 100 200
 GRAPHIC SCALE IN FEET

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

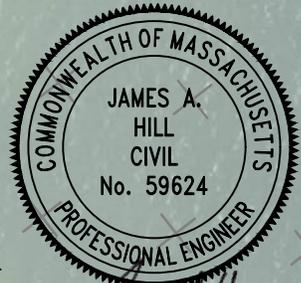
Foth

PROPOSED NOURISHMENT PLAN
 LONG BEACH
 (TOWN & PRIVATE)

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

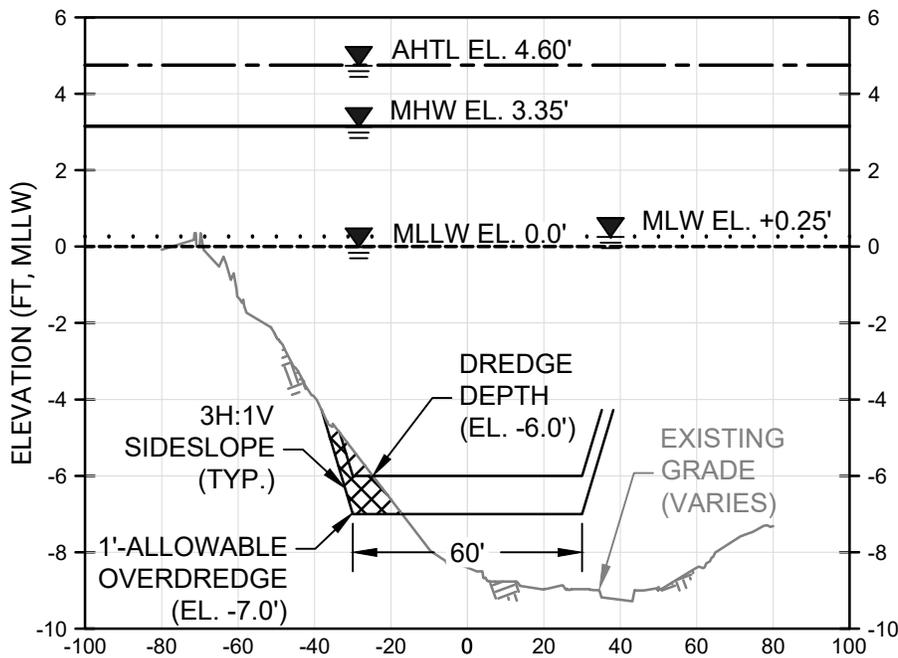
REV. 11/4/2025

SHEET 14 OF 55

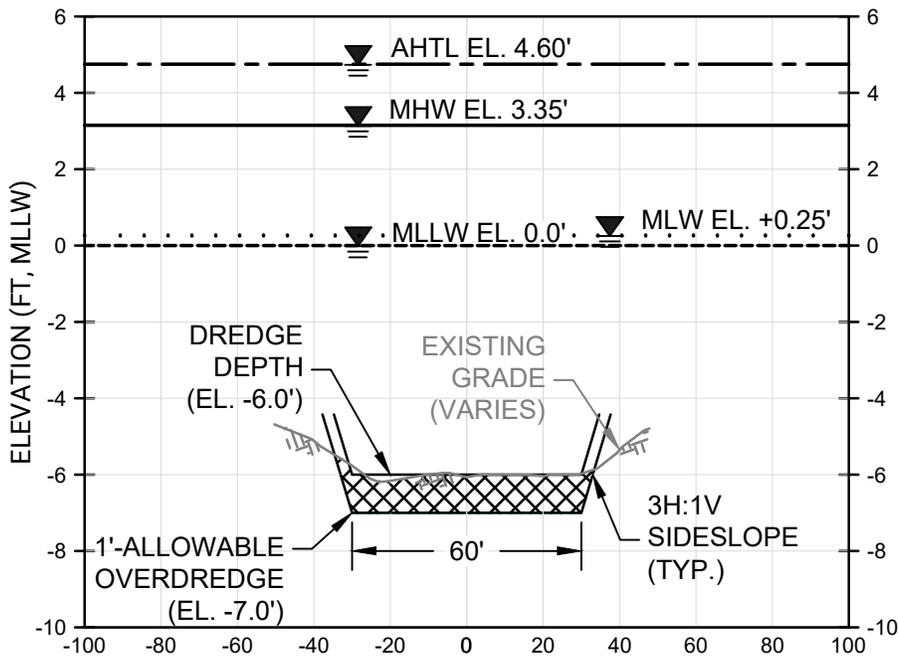


James A. Hill
 DIGITALLY SIGNED
 11/4/2025

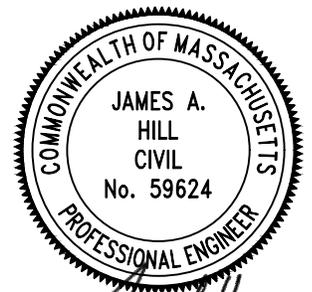
NOTE: SEE LEGEND, SHEET 2



TYPICAL SECTION A-A'
EAST BAY ENTRANCE CHANNEL (EB-D1)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

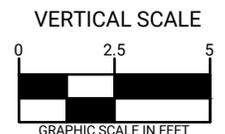
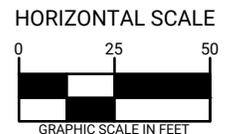


TYPICAL SECTION B-B'
CENTERVILLE RIVER CHANNEL - LOWER REACH (CR-D1)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill

DIGITALLY SIGNED
 11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

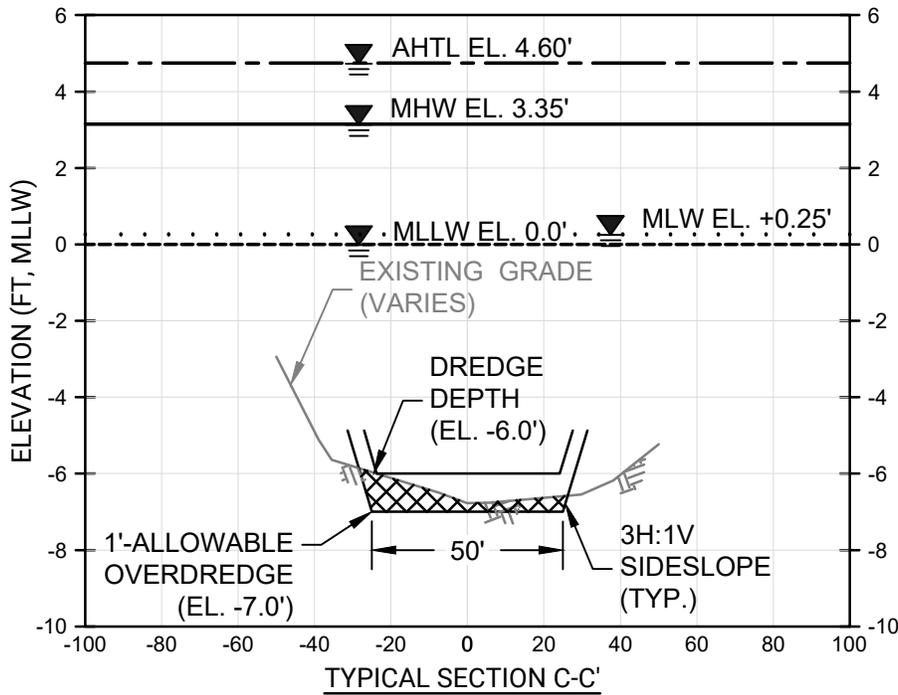


TYPICAL DREDGE SECTIONS
 EAST BAY ENTRANCE (EB-D1) &
 CENTERVILLE RIVER LOWER REACH (CR-D1) CHANNELS

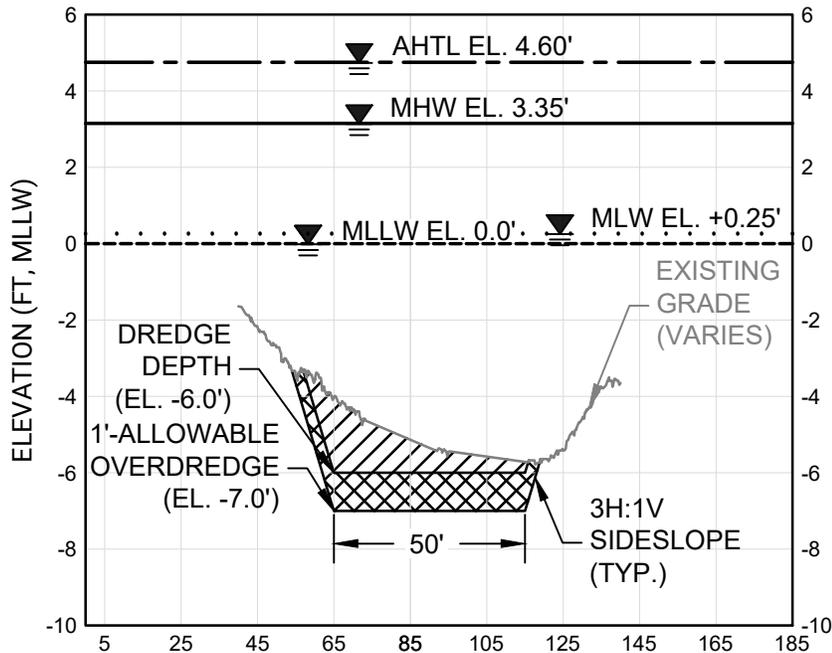
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING &
 BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

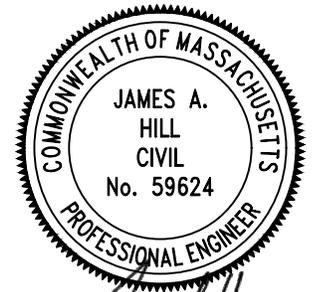
SHEET 15 OF 55



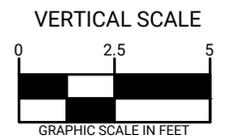
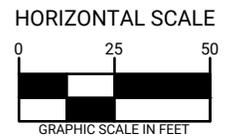
TYPICAL SECTION C-C'
CENTERVILLE RIVER CHANNEL - LOWER REACH (CR-D1)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



TYPICAL SECTION D-D'
CENTERVILLE RIVER CHANNEL - UPPER REACH (CR-D2)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill
 DIGITALLY SIGNED
 11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

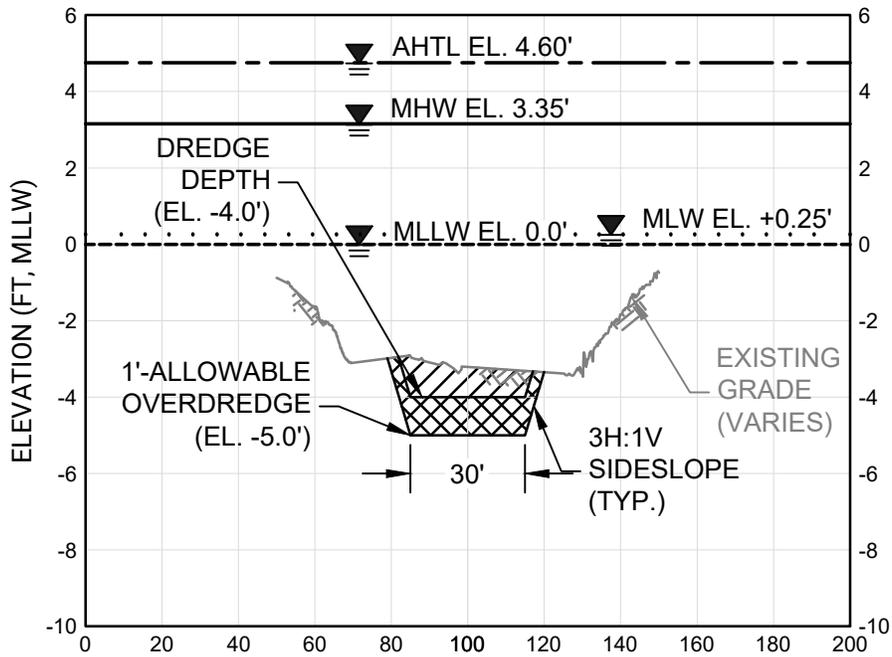


TYPICAL DREDGE SECTIONS
 CENTERVILLE RIVER LOWER REACH (CR-D1) AND UPPER REACH (CR-D2) CHANNELS

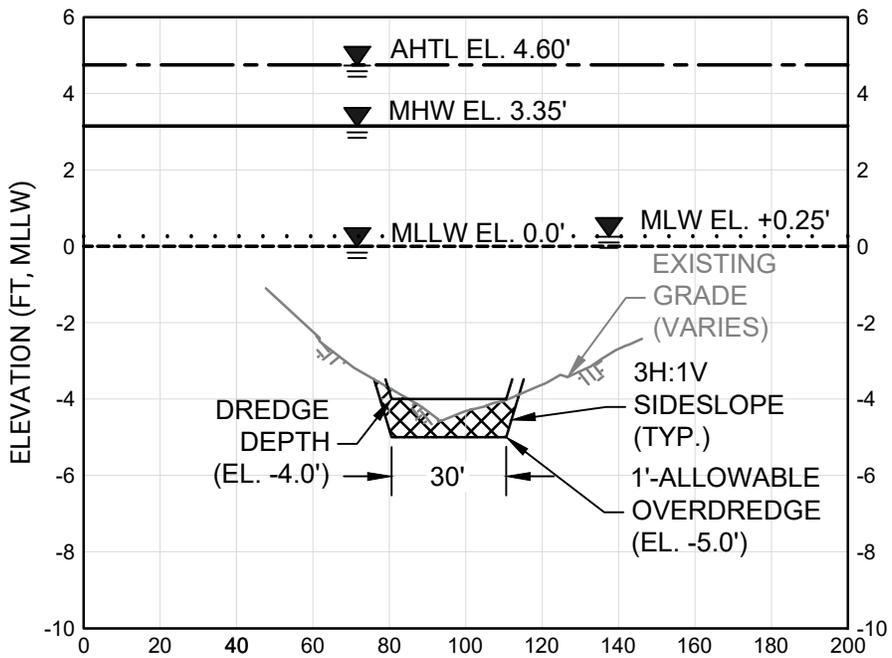
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

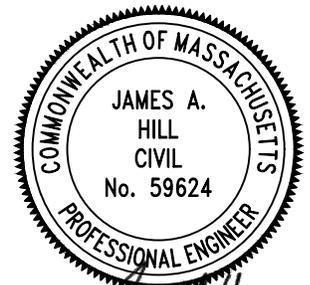
SHEET 16 OF 55



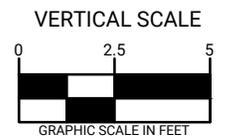
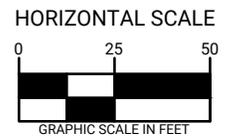
TYPICAL SECTION E-E'
CENTERVILLE RIVER SPUR CHANNEL (CR-D3)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



TYPICAL SECTION F-F'
BUMPS RIVER CHANNEL (BR-D1)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill
 DIGITALLY SIGNED
 11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

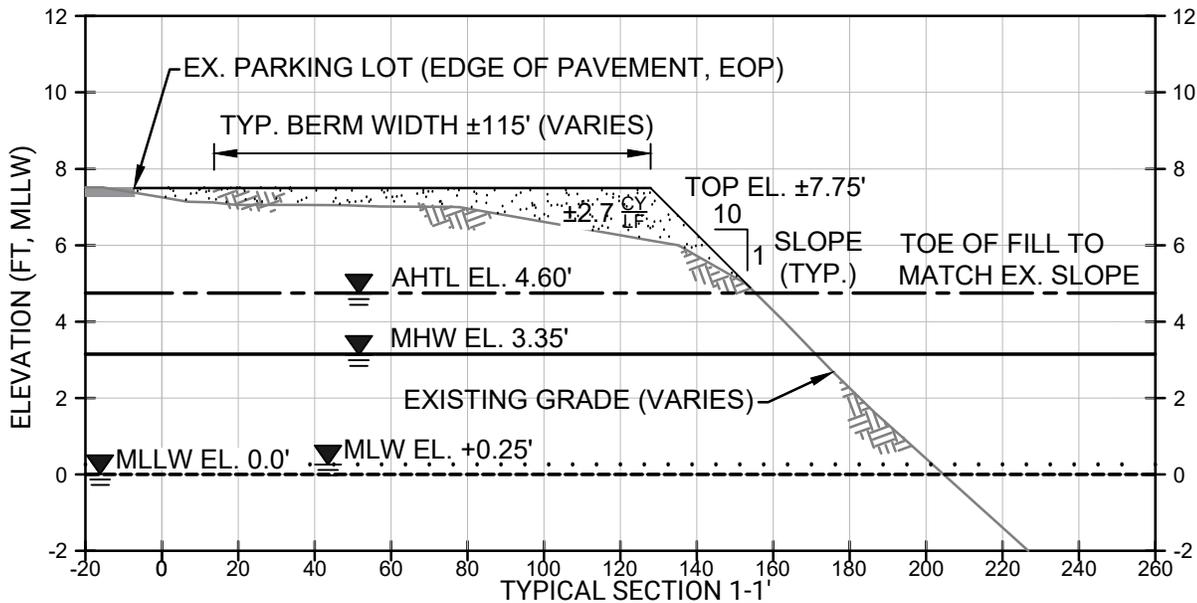


TYPICAL DREDGE SECTIONS
 CENTERVILLE RIVER SPUR (CR-D3) & BUMPS RIVER CHANNEL (BR-D1) CHANNELS

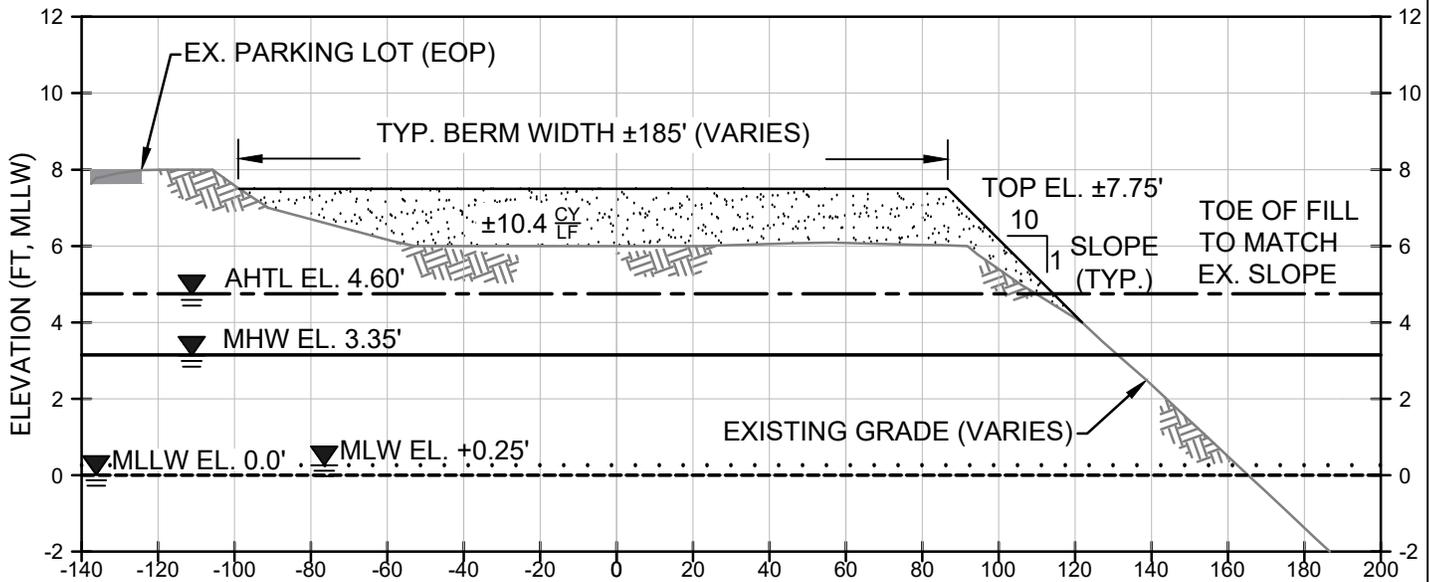
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

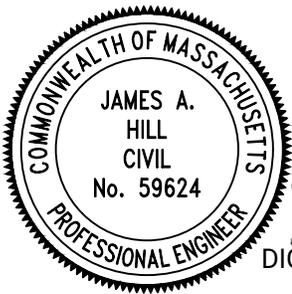
SHEET 17 OF 55



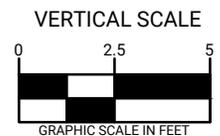
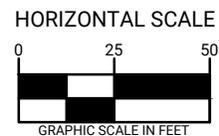
TYPICAL SECTION 1-1'
 CRAIGVILLE BEACH NOURISHMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



TYPICAL SECTION 2-2'
 CRAIGVILLE BEACH NOURISHMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill
 DIGITALLY SIGNED
 11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'



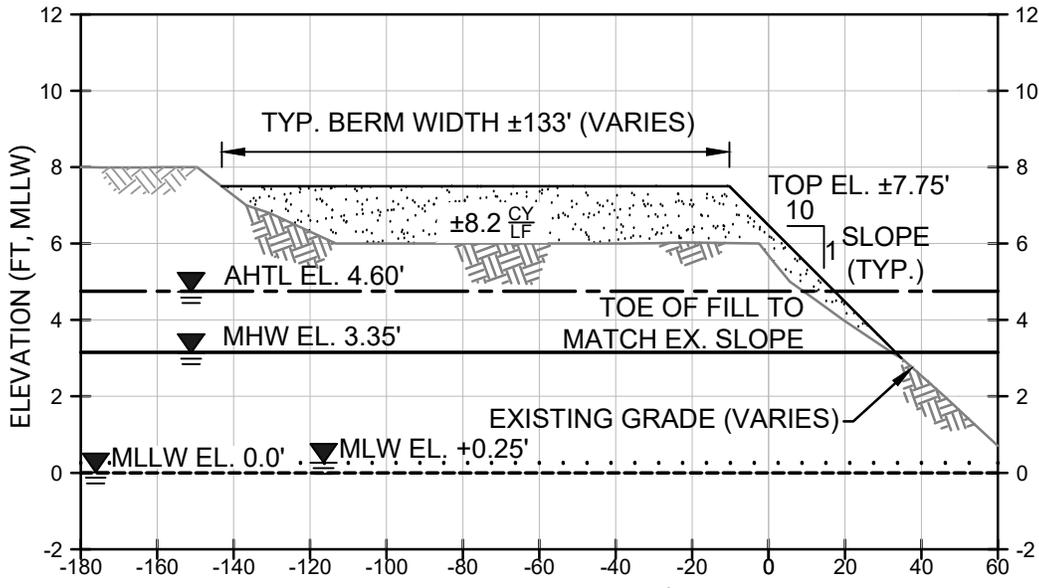
TYPICAL NOURISHMENT SECTIONS

CRAIGVILLE BEACH

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 18 OF 55

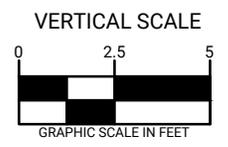
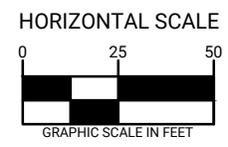


TYPICAL SECTION 3-3'
COVELL'S BEACH NOURISHMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill

DIGITALLY SIGNED
11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'



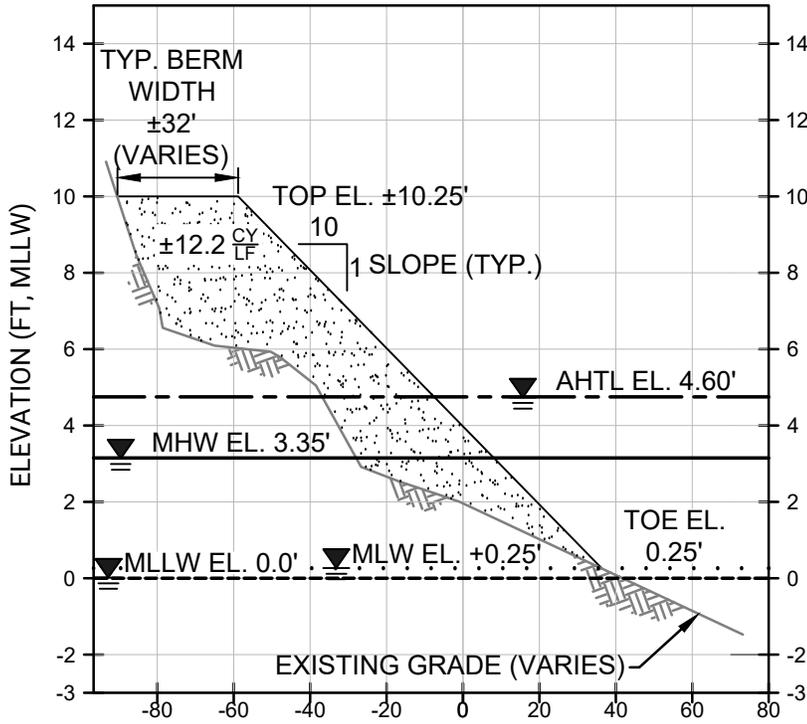
TYPICAL NOURISHMENT SECTIONS

COVELL'S BEACH

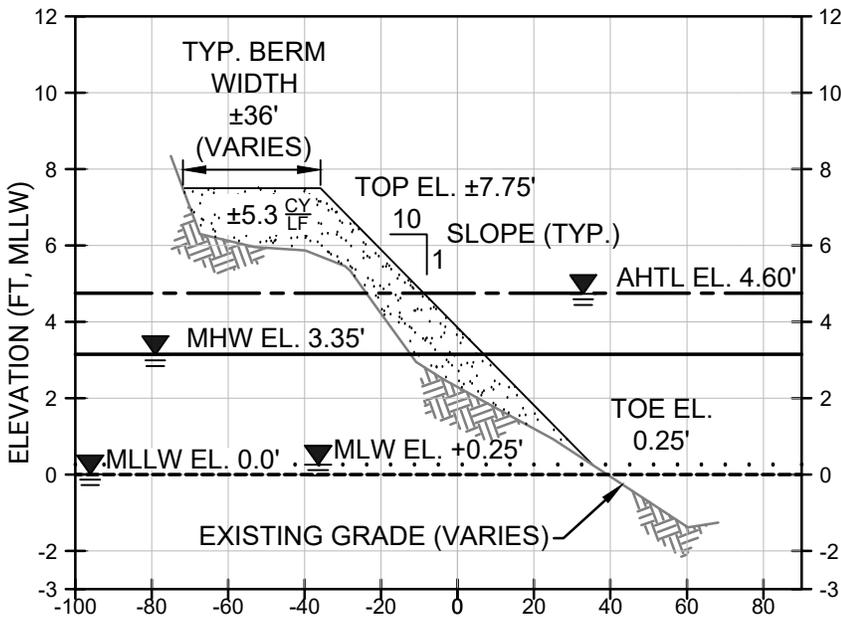
TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

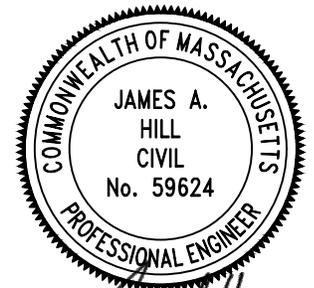
SHEET 19 OF 55



TYPICAL SECTION 4-4'
 TOWN BEACH NOURISHMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

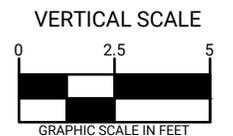
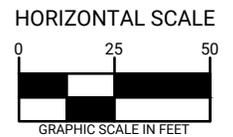


TYPICAL SECTION 5-5'
 PRIVATELY-OWNED BEACH NOURISHMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill

DIGITALLY SIGNED
 11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 MHW = +3.35'
 AHTL = +4.60'



TYPICAL NOURISHMENT SECTIONS
 LONG BEACH
 (TOWN & PRIVATE)

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

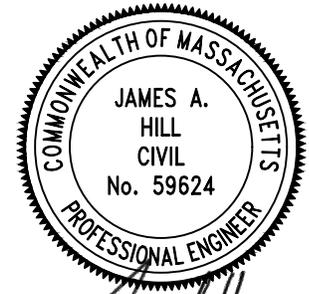
SHEET 20 OF 55

CENTERVILLE HARBOR REGION
DREDGE AND NOURISHMENT SUMMARY

DREDGE SITE	NOURISHMENT SITE(S)*	OCCURANCE*
EAST BAY ENTRANCE CHANNEL (EB-D1)	LONG, CRAIGVILLE, & COVELL'S BEACHES	UNLIMITED OVER DURATION OF 10 YEAR PERMIT
CENTERVILLE RIVER CHANNEL LOWER REACH (CR-D1)	LONG, CRAIGVILLE, & COVELL'S BEACHES	1 TIME BEACH NOURISHMENT
CENTERVILLE RIVER CHANNEL UPPER REACH (CR-D2)	LONG, CRAIGVILLE, & COVELL'S BEACHES	1 TIME BEACH NOURISHMENT
CENTERVILLE RIVER SPUR CHANNEL (CR-D3)	LONG, CRAIGVILLE, & COVELL'S BEACHES	1 TIME BEACH NOURISHMENT
BUMPS RIVER CHANNEL (BR-D1)	LONG, CRAIGVILLE, & COVELL'S BEACHES	1 TIME BEACH NOURISHMENT

**NOURISHMENT LOCATION/OCCURRENCE AS PER USACE 2015-01632 SUITABILITY DETERMINATION ADDENDUM ISSUED ON 8/1/2022 FOR THE TOWN OF BARNSTABLE, MA 10-YEAR COMPREHENSIVE DREDGE AND NOURISHMENT PROGRAM.*

ID	Parcel#	Parcel address	Owner
1	185037	0 LONG BEACH RD	CARLSON, PATRICIA M TR C R MCMANMON PRT
2	185038	0 LONG BEACH RD	773 SOUTH MAIN STREET LLC
3	185039	0 LONG BEACH RD	PATALINO, MARGARET C & PATRICK M TRS
4	185055	0 LONG BEACH RD	NOMINEE TRUST SERVICES LLC
5	185040	0 LONG BEACH RD	RUST, FREDERICK WILLI & LOUISE D
6	185041	0 LONG BEACH RD	BARNSTABLE LAND TRUST INC
7	185042	0 LONG BEACH RD	SMITH, JACQUELIN
8	185017	0 LONG BEACH RD	HARRISON, VIRGINIA G
9	185043	0 LONG BEACH RD	HAMILTON, LAVALETTES
10	185044	0 LONG BEACH RD	PRYSHLAK, ADRIAN P & MARYL
11	185045	0 LONG BEACH RD	LUND, MARK F & AMYC
12	185046	0 LONG BEACH RD	RAPO, SEPO E & JUDITH A
13	185047	0 LONG BEACH RD	GRIFFIN, COREYA TR
14	185048	0 LONG BEACH RD	FRENCH, ELSA D ET AL
15	185049	0 LONG BEACH RD	LEMITT, MARSHAL



James A. Hill

DIGITALLY SIGNED
11/4/2025

**PUBLIC ACCESS EASEMENT IN PERPETUITY GRANTED UNDER "ORDER OF TAKING BY EMINENT DOMAIN FOR NOURISHMENT PURPOSES" BETWEEN TOWN OF BARNSTABLE AND PRIVATE PARCEL OWNERS AS RECORDED BARNSTABLE COUNTY REGISTRY OF DEEDS ON 09/23/2002

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
MHW = +3.35'
AHTL = +4.60'



SUMMARY
EAST BAY, CENTERVILLE &
BUMPS RIVERS AND LONG,
CRAIGVILLE, & COVELL'S
BEACHES

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

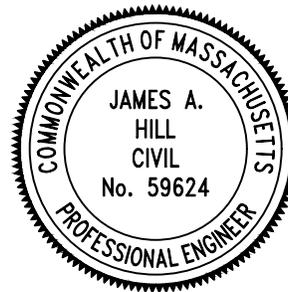
REV. 11/4/2025

SHEET 21 OF 55

**CENTERVILLE HARBOR
CHANNEL COORDINATES**

NAD83 - MASSACHUSETTS MAINLAND, USFT

POINT	EASTING (X)	NORTHING (Y)	POINT	EASTING (X)	NORTHING (Y)
1	967679.78	2689469.66	31	970067.87	2694646.58
2	967710.41	2689521.25	32	970103.64	2694610.60
3	965681.04	2690656.24	33	970383.50	2695090.80
4	965723.85	2690700.57	34	970410.91	2695043.05
5	965998.61	2691274.65	35	970614.59	2695111.38
6	965945.49	2691302.56	36	970600.85	2695059.96
7	966129.84	2691524.45	37	970745.49	2695019.75
8	966070.89	2691541.24	38	970700.65	2694990.10
9	966146.72	2691760.79	39	970776.32	2694873.99
10	966088.61	2691789.37	40	970733.26	2694835.95
11	966427.16	2692091.12	41	970999.01	2694797.26
12	966471.44	2692050.22	42	971009.51	2694740.76
13	966607.45	2692229.63	43	971028.02	2694789.21
14	966562.23	2692269.30	44	971135.58	2694728.63
15	967038.30	2692655.00	45	971129.58	2694779.44
16	966999.18	2692700.69	46	971657.75	2694908.04
17	967021.07	2692715.22	47	971639.29	2694954.56
18	967054.65	2692678.16	48	971989.71	2695058.18
19	967940.50	2693524.78	49	971969.11	2695103.74
20	967968.77	2693483.05	50	971052.63	2694919.65
21	968517.92	2693817.42	51	971022.18	2694920.05
22	968330.68	2694149.04	52	971010.79	2695179.09
23	968358.09	2694161.54	53	970977.51	2695197.00
24	968544.63	2693831.13	54	971555.87	2695424.66
25	968595.00	2693859.47	55	971539.79	2695450.32
26	968616.38	2693814.13	56	971748.71	2695585.84
27	969374.06	2694297.86	57	971733.39	2695612.13
28	969395.93	2694252.80	58	972002.30	2695680.94
29	969851.61	2694494.92	59	971979.47	2695704.41
30	969875.79	2694450.81			



James A. Hill

DIGITALLY SIGNED
11/4/2025

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
MHW = +3.35'
AHTL = +4.60'



COORDINATES
EAST BAY, CENTERVILLE AND
BUMPS RIVERS

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 22 OF 55

AERIAL FROM MASSGIS 2022

LEGEND

DREDGE SITE= CB,SR,WB,NB-D#
(-8')= CHANNEL DEPTH (MLLW DATUM)

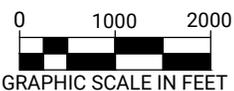


James A. Hill
DIGITALLY SIGNED
11/4/2025

- 1 (-8') COTUIT BAY ENTRANCE CHANNEL (CB-D1)
- 2 (-10') COTUIT BAY EMBAYMENT CHANNEL (CB-D2)
- 3 (-11') COTUIT BAY EMBAYMENT CHANNEL (CB-D3)
- 4 (-9') COTUIT BAY EMBAYMENT CHANNEL (CB-D4)
- 5 (-7') COTUIT BAY EMBAYMENT CHANNEL (CB-D5)
- 6 (-6' & -8') SEAPUIT RIVER CHANNEL (SR-D1)
- 7 (-8') WEST BAY OUTER ENTRANCE CHANNEL (WB-D1)
- 8 (-11') WEST BAY INNER ENTRANCE CHANNEL (WB-D2)
- 9 (-8') WEST BAY SPUR CHANNEL (WB-D3)
- 10 (-8') NORTH BAY NARROWS CHANNEL (NB-D1)
- 11 (-8') NORTH BAY STREET CHANNEL (NB-D2)
- 12 DEAD NECK BEACH
- 13 DEAD NECK BEACH EXTENSION
- 14 ROPES BEACH
- 15 CROSS ST. (RILEY'S) BEACH
- 16 LOOP BEACH



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840



DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'

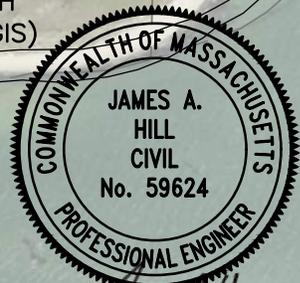
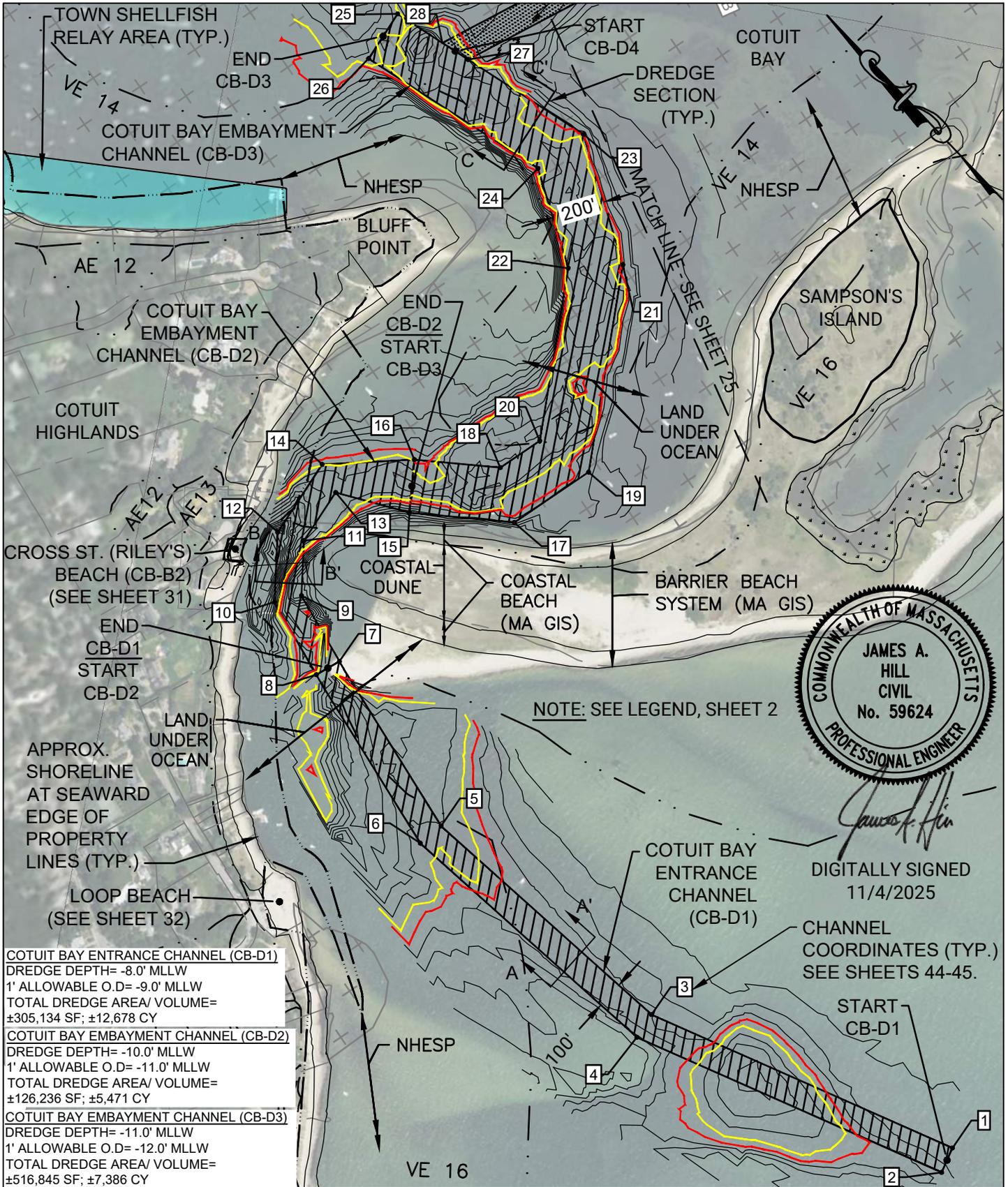


SITE LOCATION PLAN
THREE BAYS REGION - COTUIT BAY, WEST BAY, NORTH BAY, & SEAPUIT RIVER

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 23 OF 55



James A. Hill

DIGITALLY SIGNED
11/4/2025

CHANNEL COORDINATES (TYP.)
SEE SHEETS 44-45.

NOTE: SEE LEGEND, SHEET 2

COTUIT BAY ENTRANCE CHANNEL (CB-D1)
DREDGE DEPTH= -8.0' MLLW
1' ALLOWABLE O.D.= -9.0' MLLW
TOTAL DREDGE AREA/ VOLUME=
±305,134 SF; ±12,678 CY
COTUIT BAY EMBAYMENT CHANNEL (CB-D2)
DREDGE DEPTH= -10.0' MLLW
1' ALLOWABLE O.D.= -11.0' MLLW
TOTAL DREDGE AREA/ VOLUME=
±126,236 SF; ±5,471 CY
COTUIT BAY EMBAYMENT CHANNEL (CB-D3)
DREDGE DEPTH= -11.0' MLLW
1' ALLOWABLE O.D.= -12.0' MLLW
TOTAL DREDGE AREA/ VOLUME=
±516,845 SF; ±7,386 CY

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'

0 250 500
GRAPHIC SCALE IN FEET

PROPOSED DREDGE PLAN
COTUIT BAY ENTRANCE (CB-D1) & EMBAYMENT (CB-D2, CB-D3, CB-D4) CHANNELS

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 24 OF 55

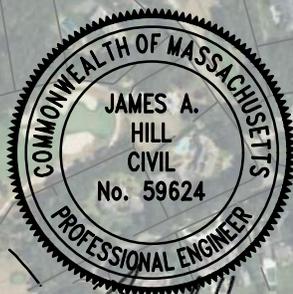
c:\pwworking\foth\jameshill\20250220\02 barnstable 10yr-three bays-plot

(-9') COTUIT BAY EMBAYMENT CHANNEL (CB-D4)
 DREDGE DEPTH = -9.0' MLLW
 1' ALLOWABLE O.D = -10.0' MLLW
 TOTAL DREDGE AREA/ VOLUME =
 ±71,179 SF; ±6,582 CY

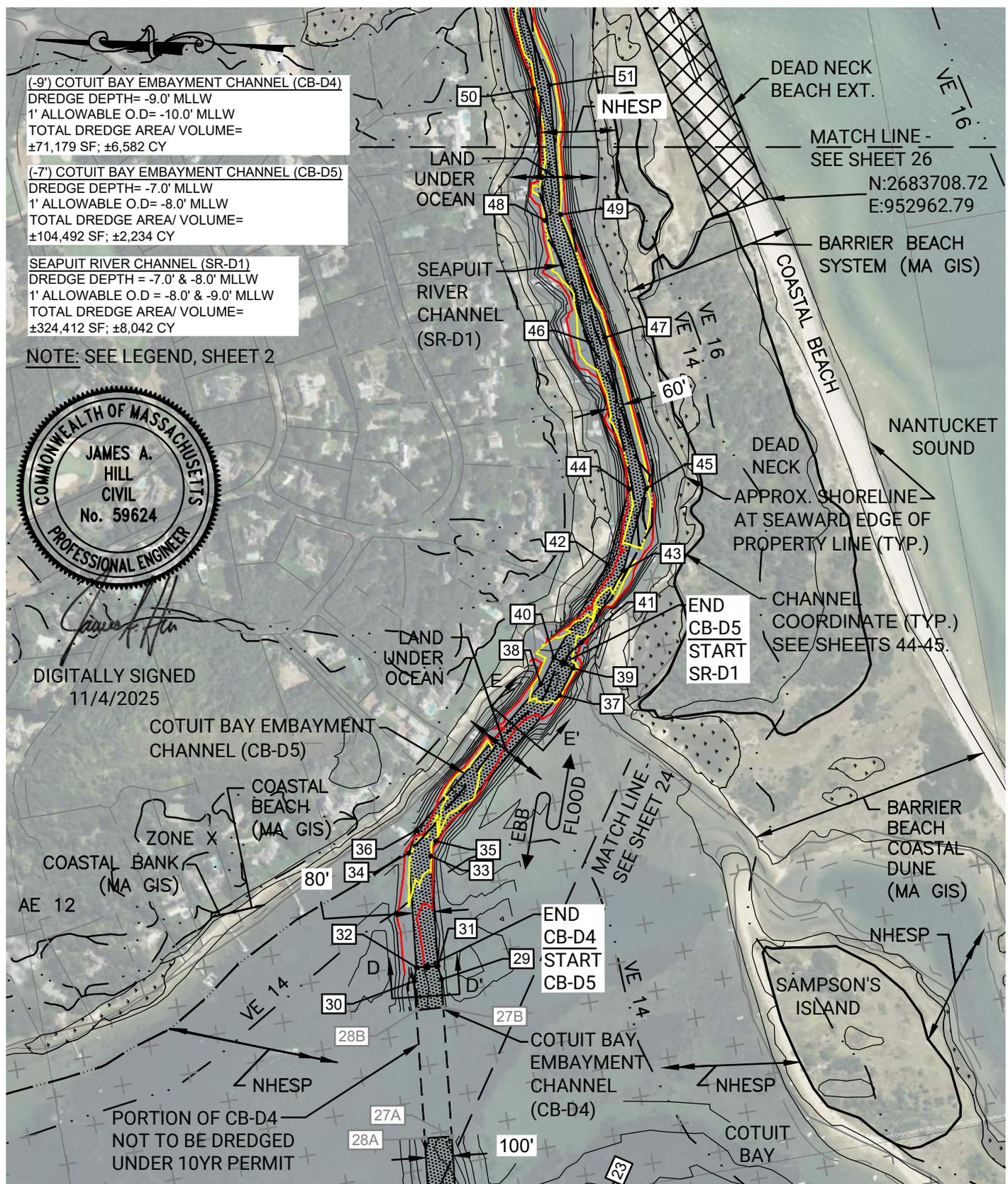
(-7') COTUIT BAY EMBAYMENT CHANNEL (CB-D5)
 DREDGE DEPTH = -7.0' MLLW
 1' ALLOWABLE O.D = -8.0' MLLW
 TOTAL DREDGE AREA/ VOLUME =
 ±104,492 SF; ±2,234 CY

SEAPUIT RIVER CHANNEL (SR-D1)
 DREDGE DEPTH = -7.0' & -8.0' MLLW
 1' ALLOWABLE O.D = -8.0' & -9.0' MLLW
 TOTAL DREDGE AREA/ VOLUME =
 ±324,412 SF; ±8,042 CY

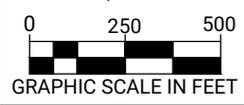
NOTE: SEE LEGEND, SHEET 2



James A. Hill
 DIGITALLY SIGNED
 11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840



DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

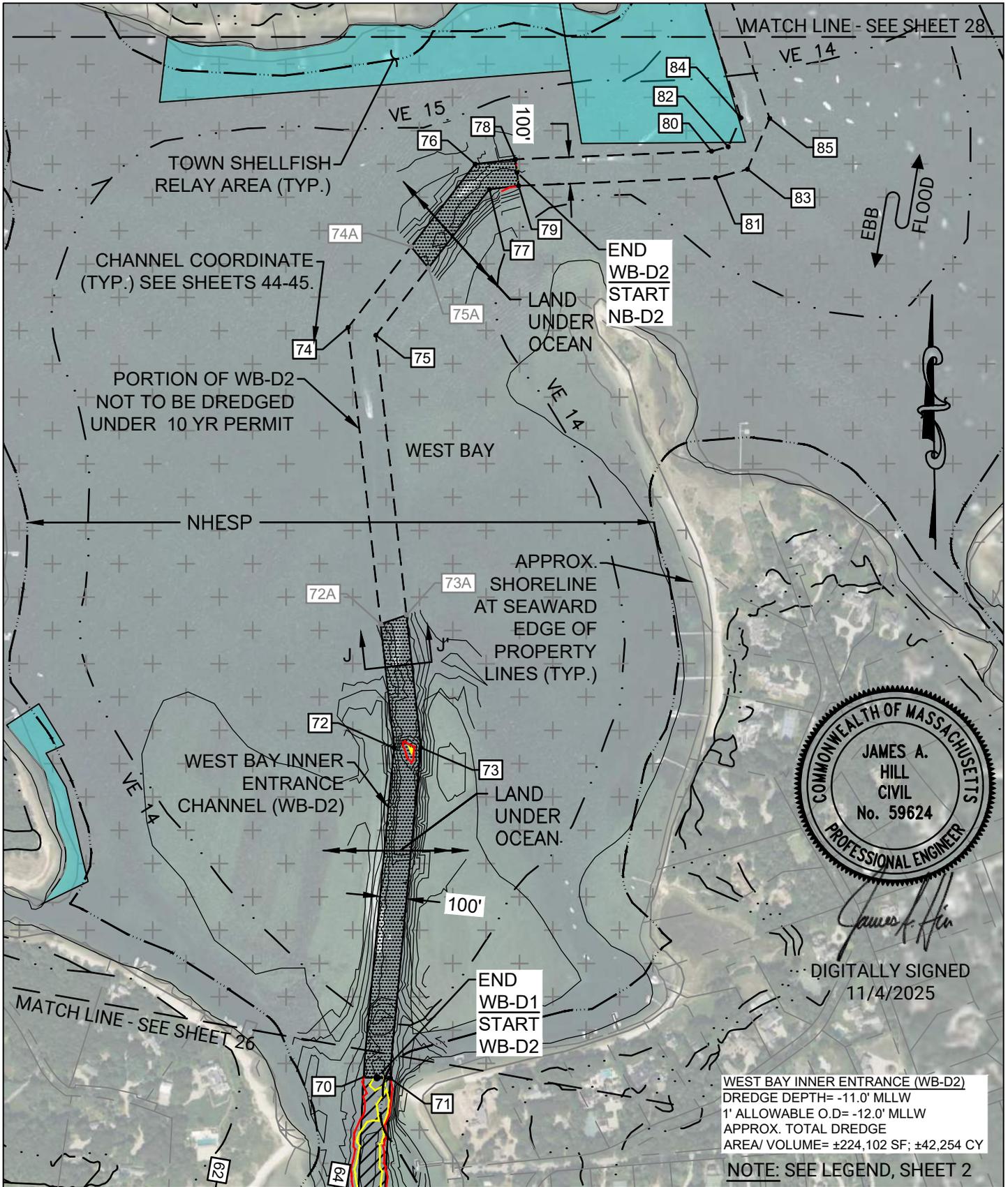
PROPOSED DREDGE & NOURISHMENT PLAN
 COTUIT BAY EMBAYMENT (CB-D4 & CB-D5) & SEAPUIT RIVER (SR-D1) CHANNELS AND DEAD NECK BEACH

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 25 OF 55

c:\pw_world\paw_int\civ_jan9\053080\25002 barnstable 10yr-three bays-plot



WEST BAY INNER ENTRANCE (WB-D2)
 DREDGE DEPTH= -11.0' MLLW
 1' ALLOWABLE O.D.= -12.0' MLLW
 APPROX. TOTAL DREDGE
 AREA/ VOLUME= ±224,102 SF; ±42,254 CY

NOTE: SEE LEGEND, SHEET 2

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

PROPOSED DREDGE PLAN
WEST BAY OUTER ENTR. (WB-D1) & INNER ENTR. (WB-D2) CHANNELS

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 27 OF 55



c:\pw_work\fdpw_int\vc_jan95053068022b002 barnstable 10yr-three bays-plot

NORTH BAY CHANNEL (NB-D2) - MAINTENANCE & IMPROVEMENT
 MAINTENANCE DREDGE DEPTH= -6.0' MLLW
 IMPROVEMENT DREDGING FROM -6.0' MLLW TO -8.0' MLLW
 1' ALLOWABLE O.D. = -9.0' MLLW
 TOTAL DREDGE AREA = ±235,542 SF
 TOTAL MAINTENANCE DREDGE VOLUME = ±39 CY
 TOTAL IMPROVEMENT DREDGE VOLUME = ±16,407 CY

**MAINTENANCE DREDGING TO -6.0' MLLW
 IMPROVEMENT DREDGING FROM -6.0' MLLW TO
 -8.0' MLLW WITH 1' ALLOWABLE O.D. TO -9.0' MLLW**

**END IMPROVEMENT DREDGING
 START MAINTENANCE &
 IMPROVEMENT DREDGING**

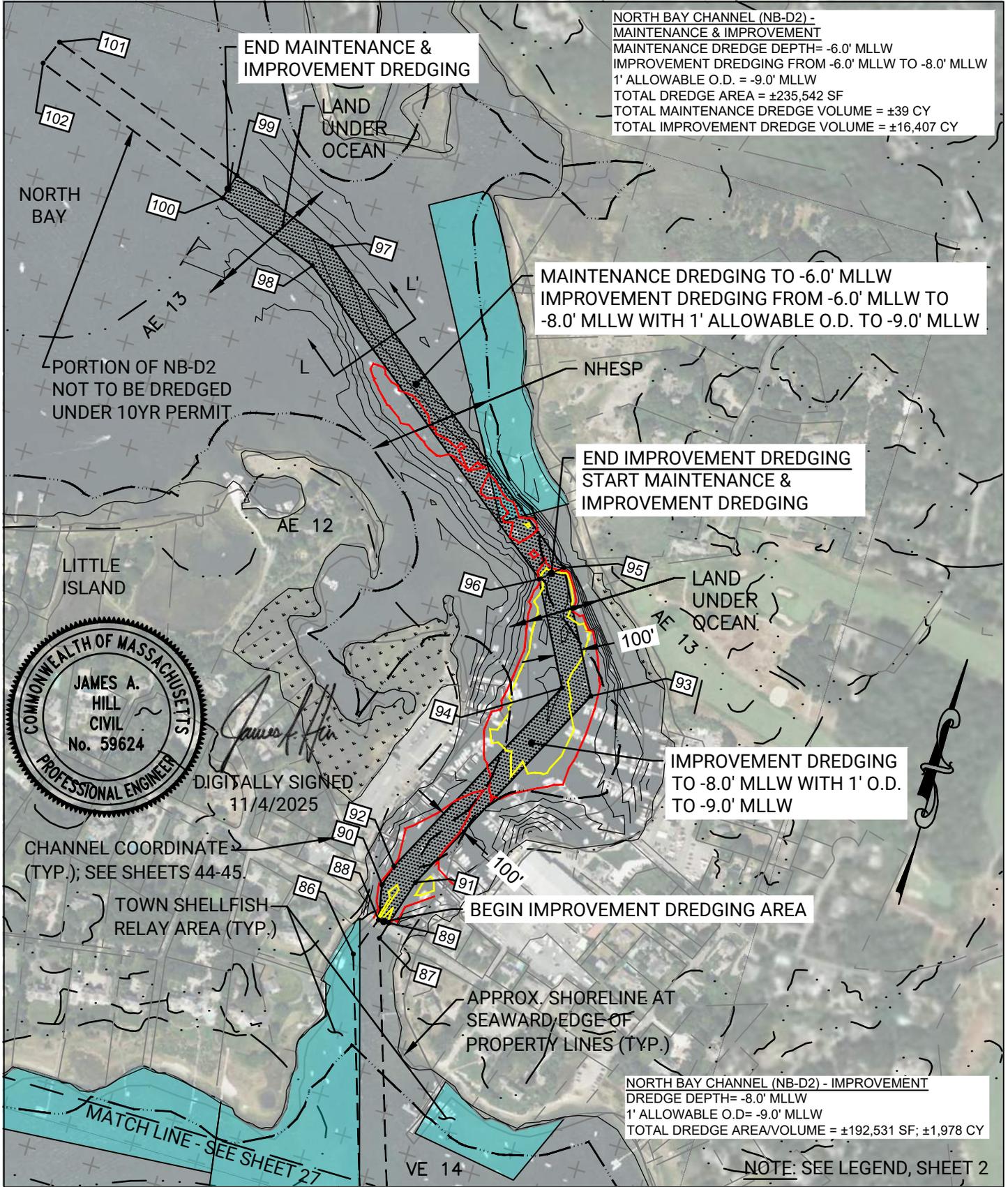
**IMPROVEMENT DREDGING
 TO -8.0' MLLW WITH 1' O.D.
 TO -9.0' MLLW**

BEGIN IMPROVEMENT DREDGING AREA

NORTH BAY CHANNEL (NB-D2) - IMPROVEMENT
 DREDGE DEPTH= -8.0' MLLW
 1' ALLOWABLE O.D.= -9.0' MLLW
 TOTAL DREDGE AREA/VOLUME = ±192,531 SF; ±1,978 CY

NOTE: SEE LEGEND, SHEET 2

**END MAINTENANCE &
 IMPROVEMENT DREDGING**



DIGITALLY SIGNED
 11/4/2025

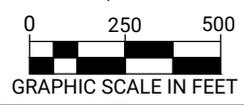
CHANNEL COORDINATE
 (TYP.); SEE SHEETS 44-45.

TOWN SHELLFISH
 RELAY AREA (TYP.)

APPROX. SHORELINE AT
 SEAWARD EDGE OF
 PROPERTY LINES (TYP.)

MATCH LINE - SEE SHEET 27

FOTH INFRASTRUCTURE AND
 ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840



DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'



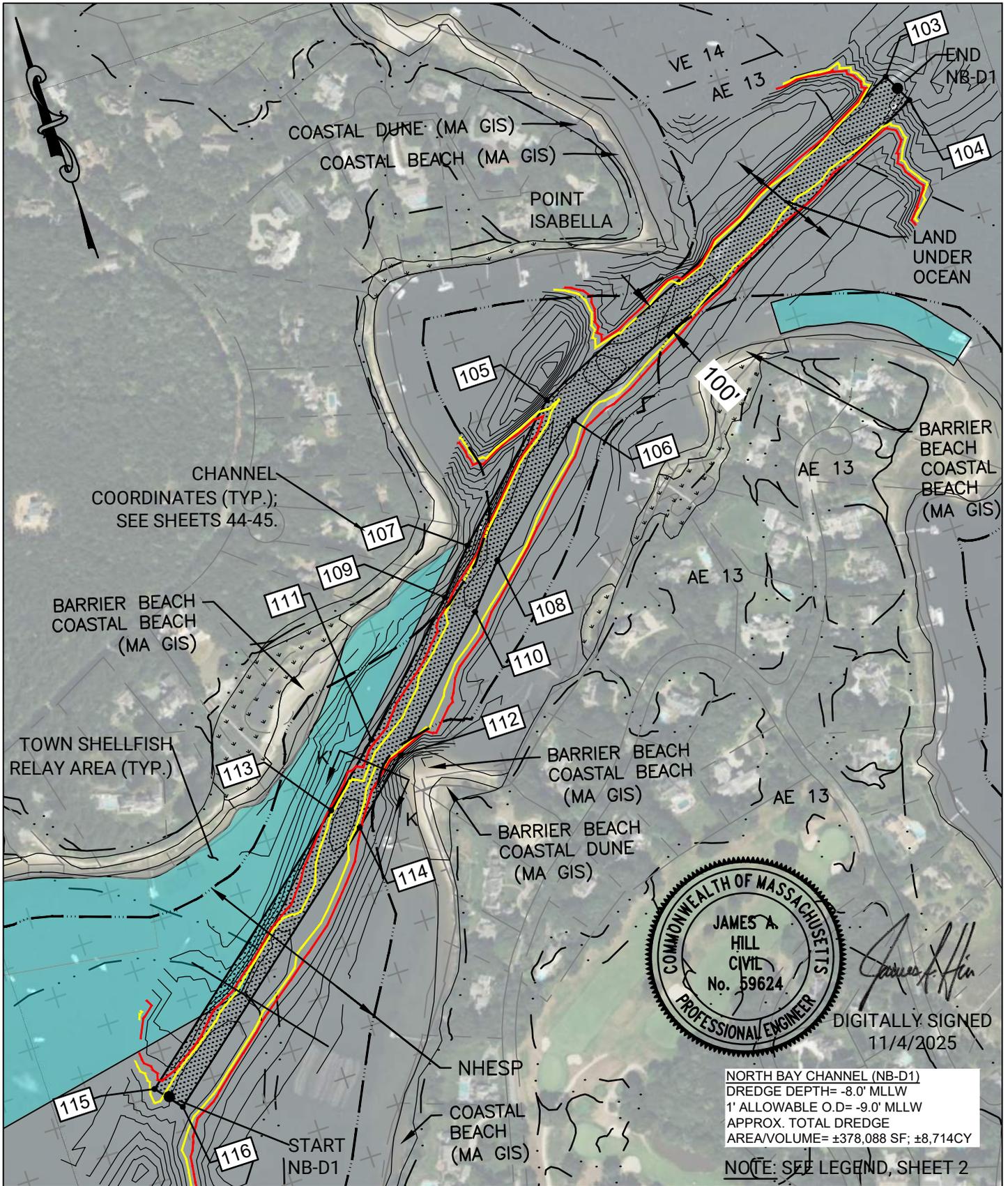
**PROPOSED DREDGE
 PLAN**
 NORTH BAY STREET
 CHANNEL (NB-D2)

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING &
 BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 28 OF 55

c:\pw_work\fdpw_int\vc_jan5\0530880\28002 barnstable 10yr-three bays-plot



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840



DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'



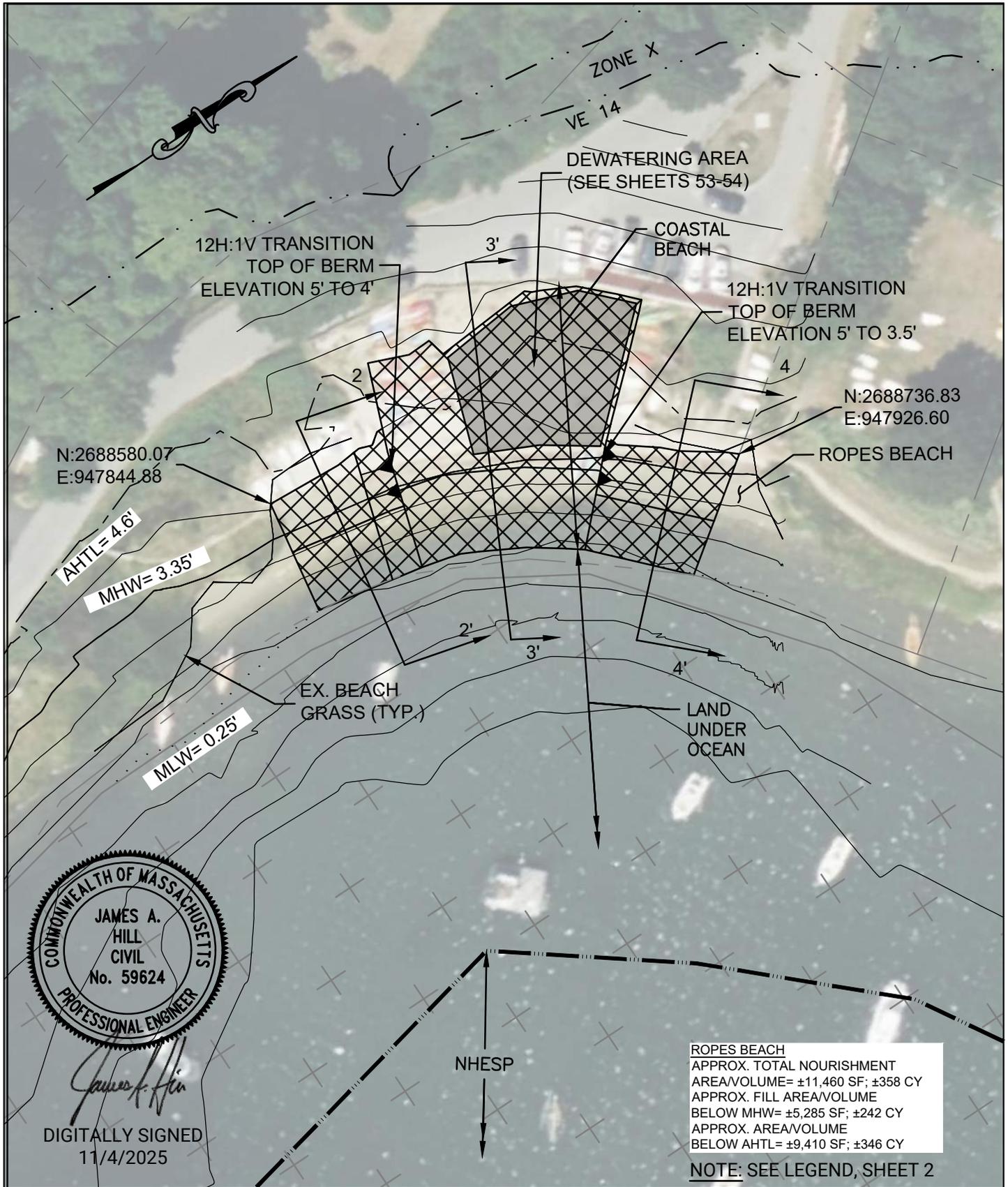
PROPOSED DREDGE PLAN
NORTH BAY NARROWS CHANNEL (NB-D1)

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 29 OF 55

c:\pwworking\foth\env\c\james\59624\2025002 barnstable 10y-three bays-plot



James A. Hill
 DIGITALLY SIGNED
 11/4/2025

ROPES BEACH
 APPROX. TOTAL NOURISHMENT
 AREA/VOLUME= ±11,460 SF; ±358 CY
 APPROX. FILL AREA/VOLUME
 BELOW MHW= ±5,285 SF; ±242 CY
 APPROX. AREA/VOLUME
 BELOW AHTL= ±9,410 SF; ±346 CY

NOTE: SEE LEGEND, SHEET 2

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

0 25 50
 GRAPHIC SCALE IN FEET

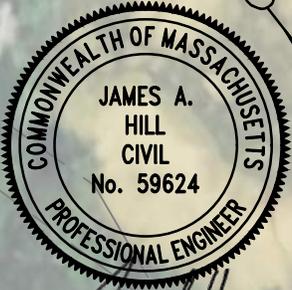
DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

PROPOSED NOURISHMENT PLAN
 ROPES BEACH

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025 SHEET 30 OF 55

c:\pw_world\ripw_int\vc_jan5\053088022\002 barnstable 10y-three bays-plot



James A. Hill

DIGITALLY SIGNED
11/4/2025

APPROX. SHORELINE AT
SEAWARD EDGE OF
PROPERTY LINES (TYP.)

N:2684495.59
E:947537.44

MLW=0.25'
MHW=3.35'
AHTL=4.60'

COASTAL
BEACH

DEWATERING
AREA (SEE
SHEETS 53-54)

LAND
UNDER
OCEAN

CROSS ST.

AE 13

5

5'

NHESP

COTUIT BAY

VE 14

VE 16

N:2684432.21
E:947482.68

CROSS ST. (RILEY'S) BEACH
APPROX. TOTAL NOURISHMENT
AREA/VOLUME= ±5,378 SF; ±382 CY
APPROX. FILL AREA/VOLUME BELOW
MHW= ±3,706 SF; ±251 CY
APPROX. FILL AREA/VOLUME BELOW
AHTL= ±4,704 SF; ±345 CY

NOTE: SEE LEGEND, SHEET 2

FOTH INFRASTRUCTURE AND
ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

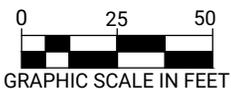
DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'

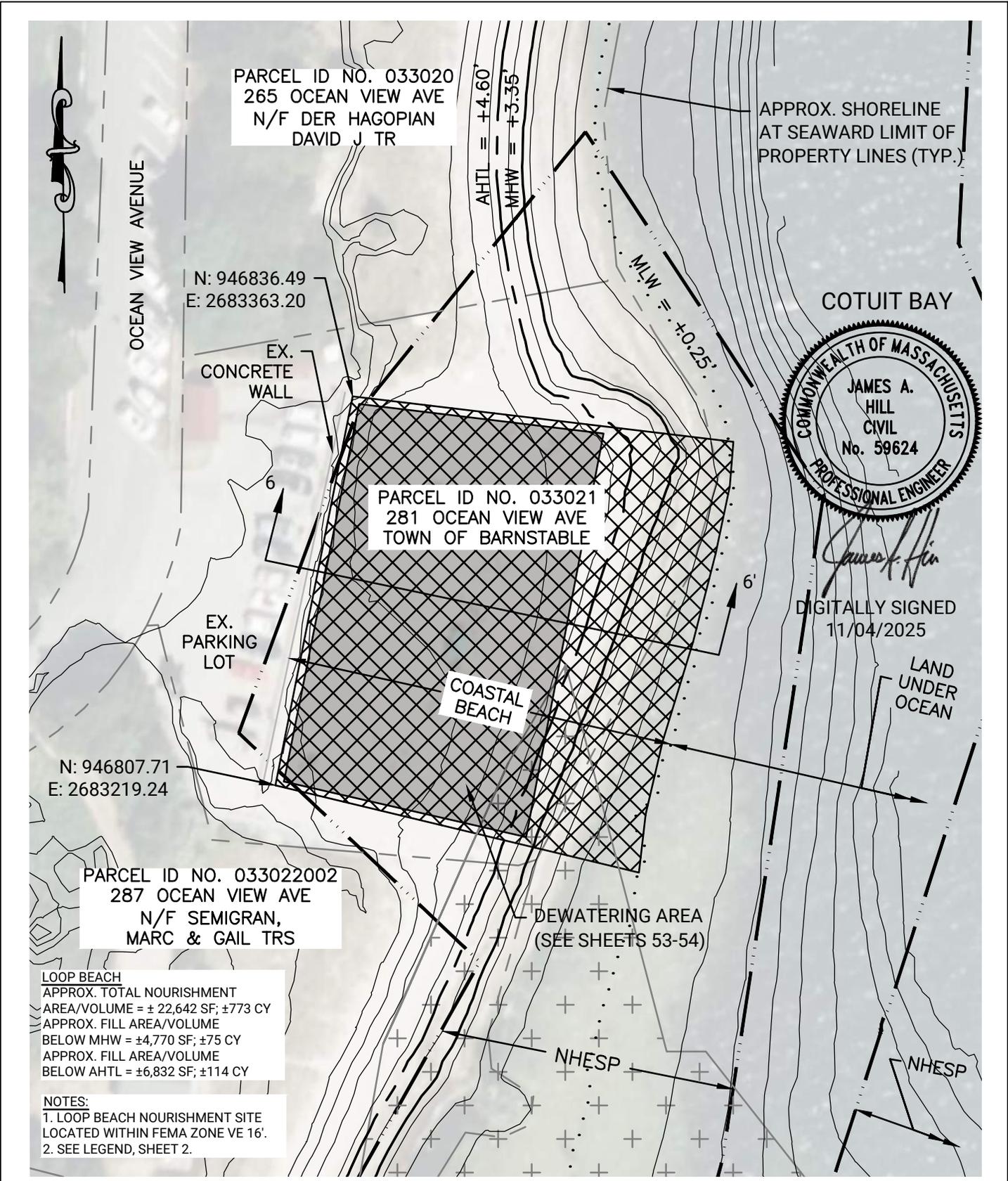
**PROPOSED
NOURISHMENT PLAN**
CROSS STREET (RILEY'S)
BEACH

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 31 OF 55





c:\pwworking\foth\james_hill\033022002 barnstable 10yr-loop beach.plot

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

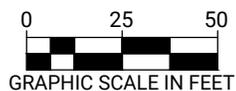
DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'

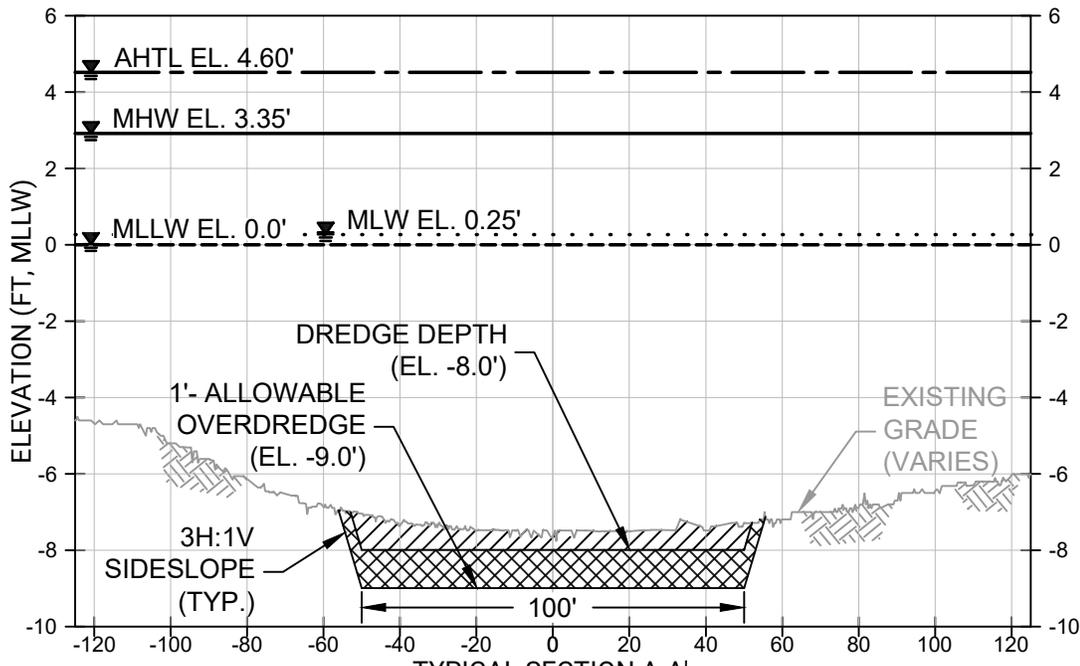
PROPOSED NOURISHMENT PLAN
LOOP BEACH

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

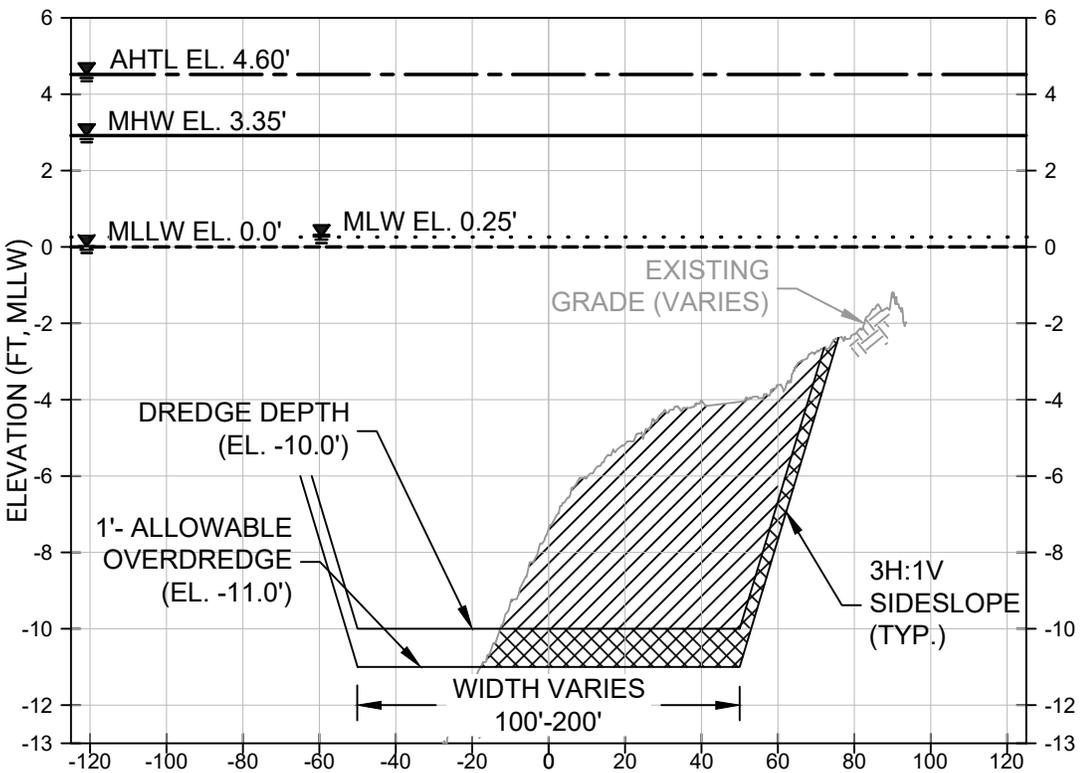
REV. 11/4/2025

SHEET 32 OF 55

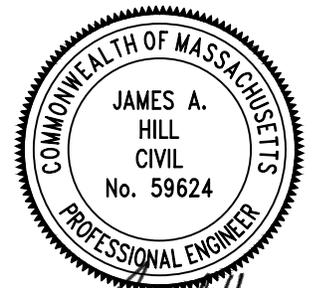




TYPICAL SECTION A-A'
COTUIT BAY ENTRANCE CHANNEL (CB-D1)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

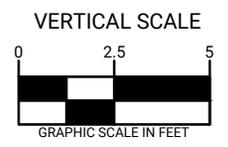
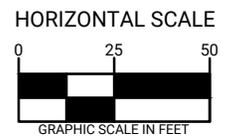


TYPICAL SECTION B-B'
COTUIT BAY EMBAYMENT CHANNEL (CB-D2)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill

DIGITALLY SIGNED
 11/4/2025



c:\pw_world\pw_in\vc_jan050308022002 barnstable 10yr-three bays-sections

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

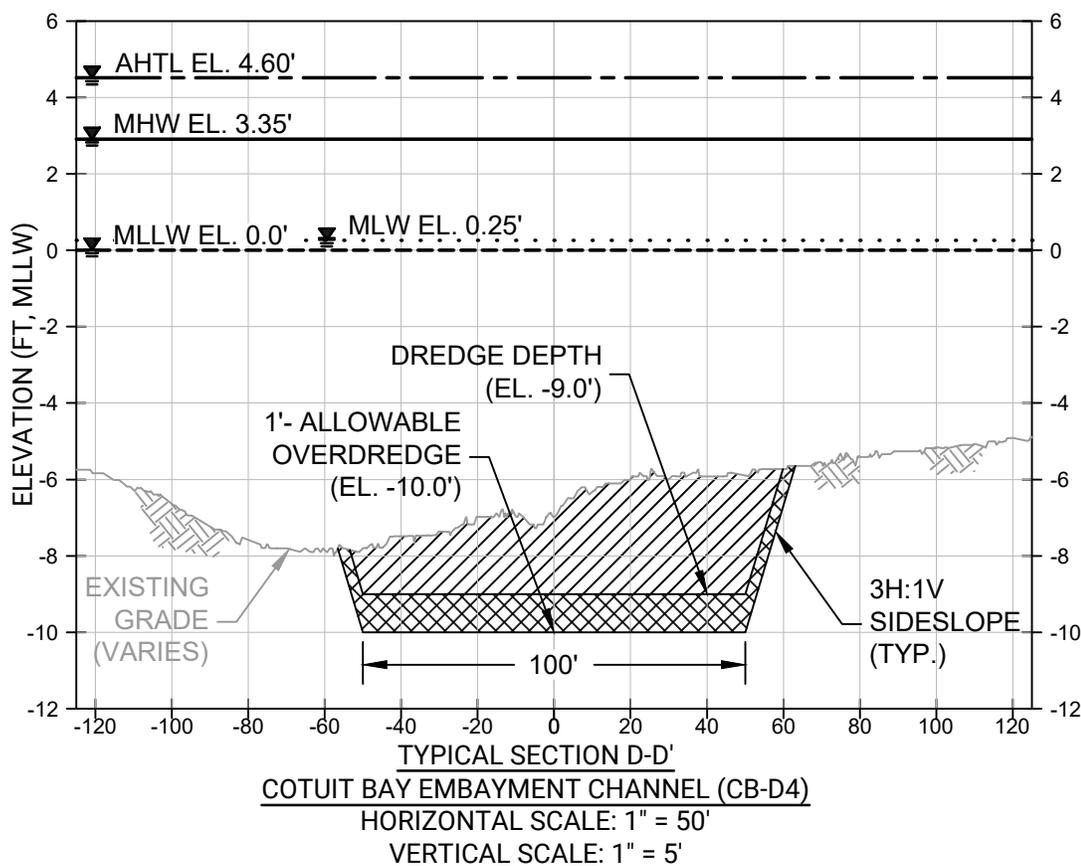
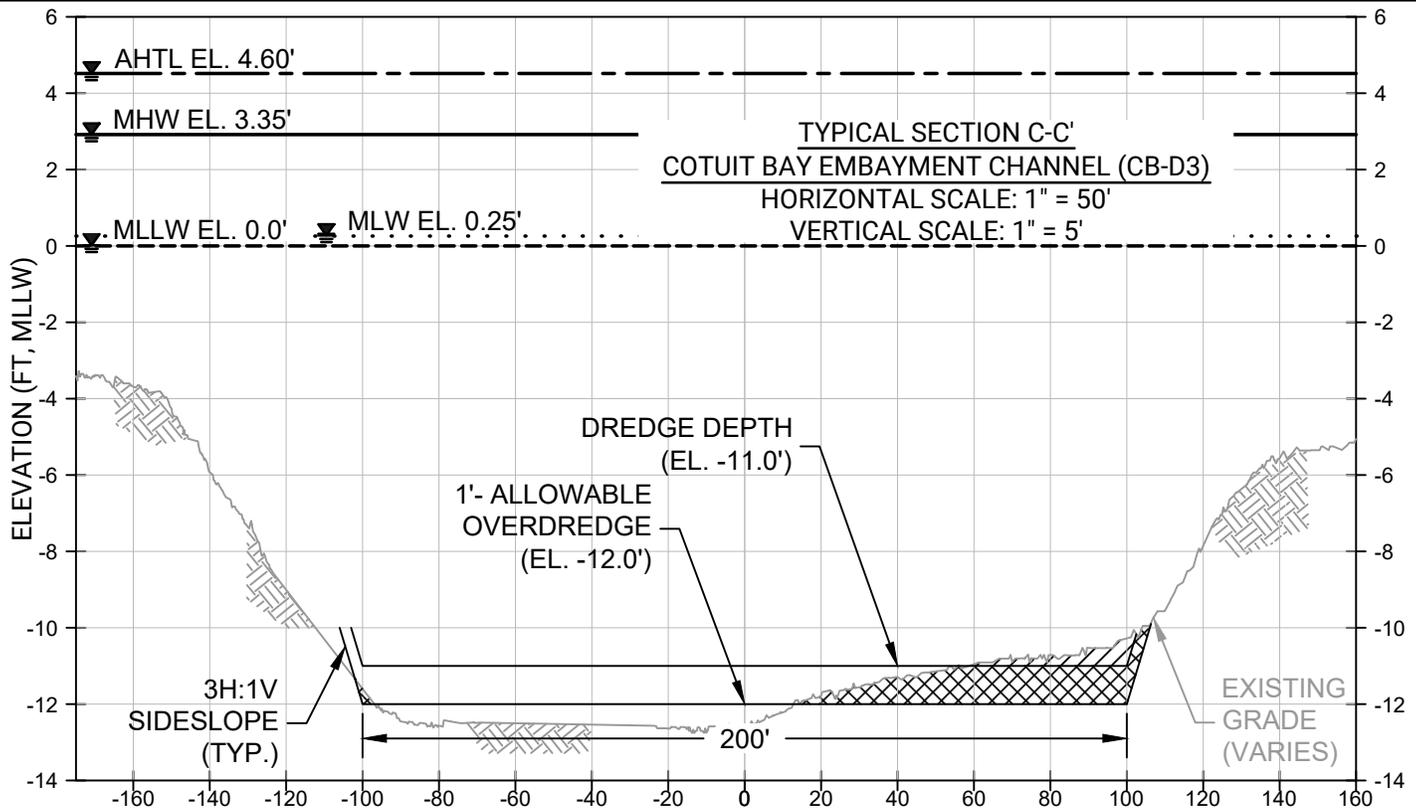


TYPICAL DREDGE SECTIONS
 COTUIT BAY ENT. (CB-D1) & EMBAYMENT (CB-D2) CHANNELS

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

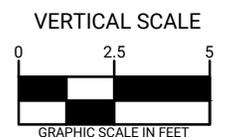
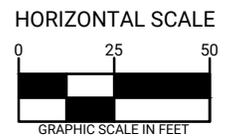
REV. 11/4/2025

SHEET 33 OF 55



James A. Hill

DIGITALLY SIGNED
11/4/2025



c:\pwworking\foth\james.foth\2025\10y-three bays-sections

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'

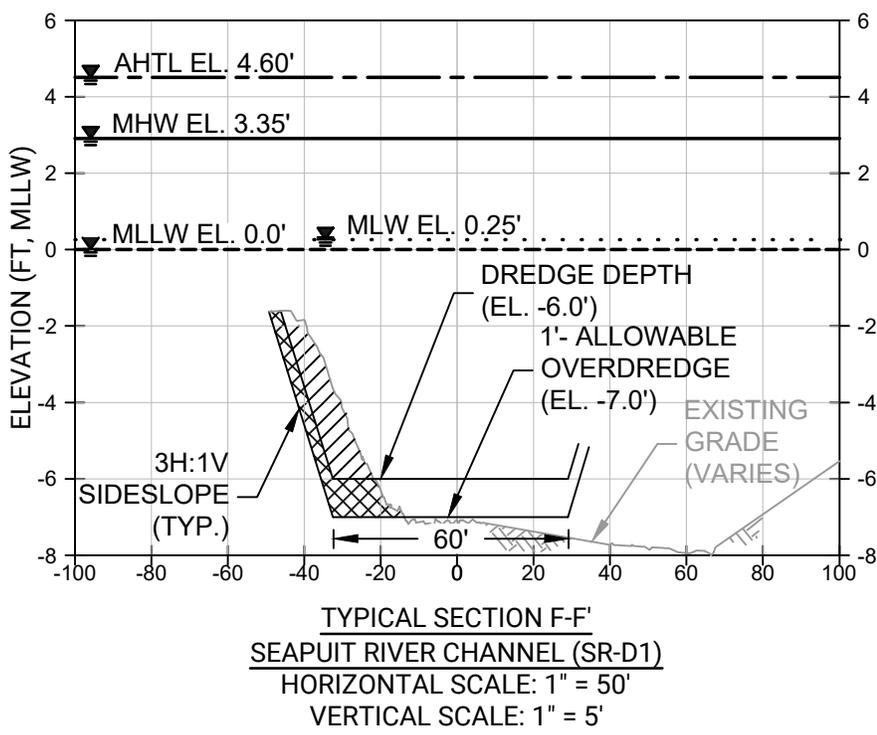
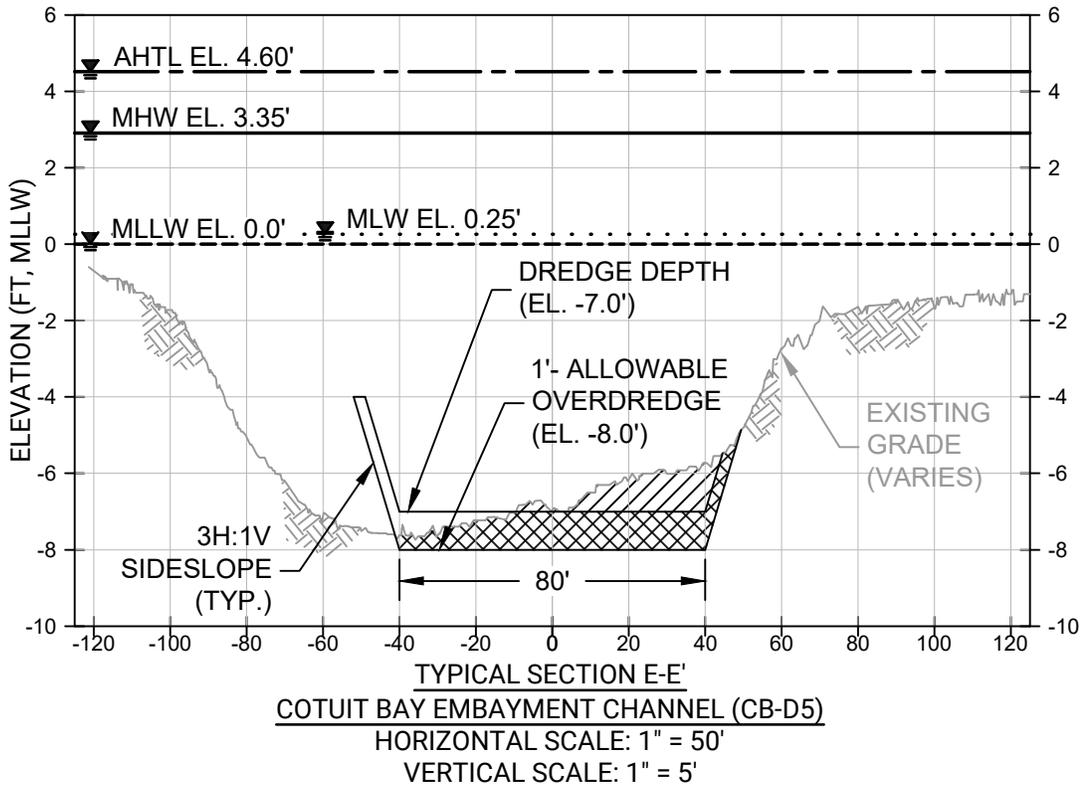


TYPICAL DREDGE SECTIONS
COTUIT BAY EMBAYMENT CHANNELS
(CB-D3, CB-D4)

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

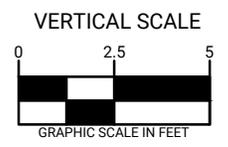
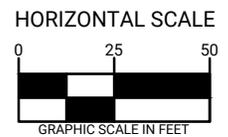
SHEET 34 OF 55



COMMONWEALTH OF MASSACHUSETTS
 JAMES A. HILL
 CIVIL
 No. 59624
 PROFESSIONAL ENGINEER

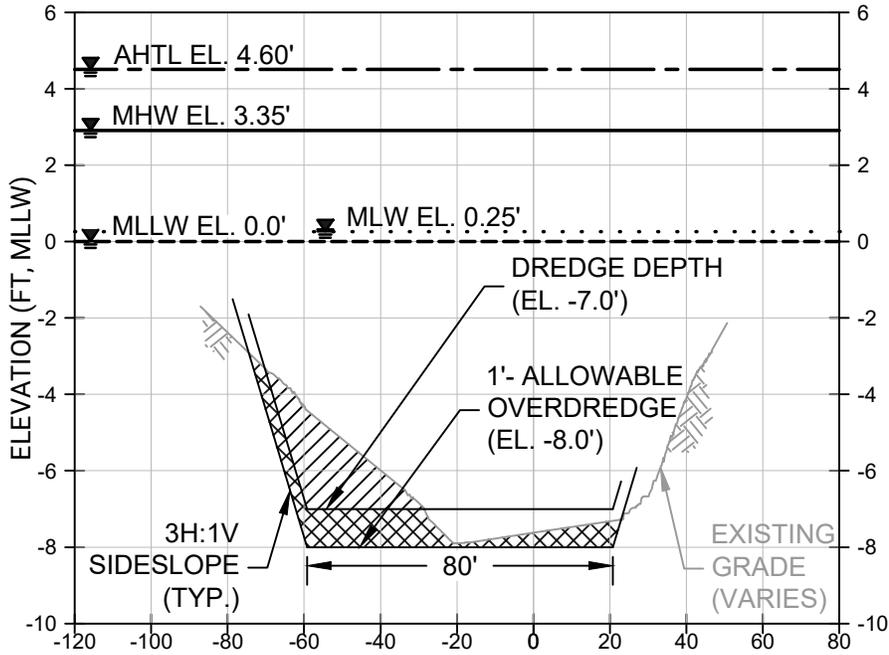
James A. Hill

DIGITALLY SIGNED
 11/4/2025

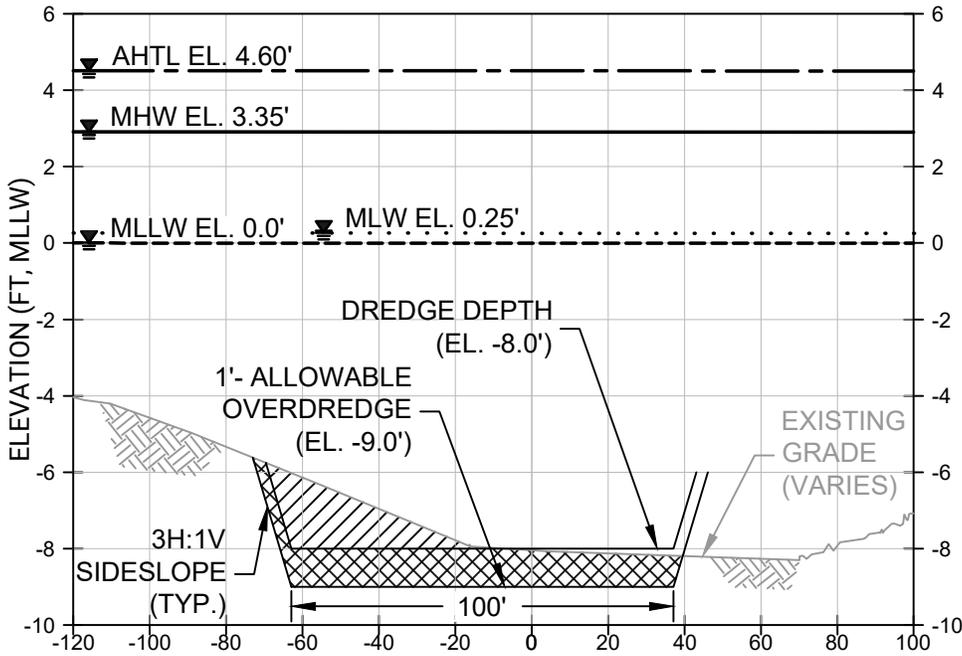


c:\pw_world\pw_int\vc_jan0503080220002 barnstable 10yr-three bays-sections

<p>FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC. 114 TOURO STREET NEWPORT, RI 02840</p>	<p>DATUM: MLLW = 0.00' MLW = +0.25' NAVD88 = +2.15' MHW = +3.35' AHTL = +4.60'</p> 	<p>TYPICAL DREDGE SECTIONS COTUIT BAY EMBAYMENT CHANNEL (CB-D5) & SEAPUIT RIVER (SR-D1) CHANNELS</p>	<p>TOWN OF BARNSTABLE, MA COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT DEPARTMENT OF PUBLIC WORKS 382 FALMOUTH ROAD, HYANNIS, MA 02601</p> <p>REV. 11/4/2025 SHEET 35 OF 55</p>
---	---	--	---



TYPICAL SECTION G-G'
SEAPUIT RIVER CHANNEL (SR-D1)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

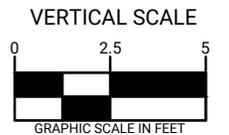
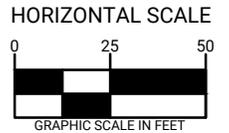


TYPICAL SECTION H-H'
WEST BAY SPUR CHANNEL (WB-D3)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill

DIGITALLY SIGNED
 11/4/2025



c:\pw_workdir\pw_in\vc_jan0503080220002 barnstable 10yr-three bays-sections

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

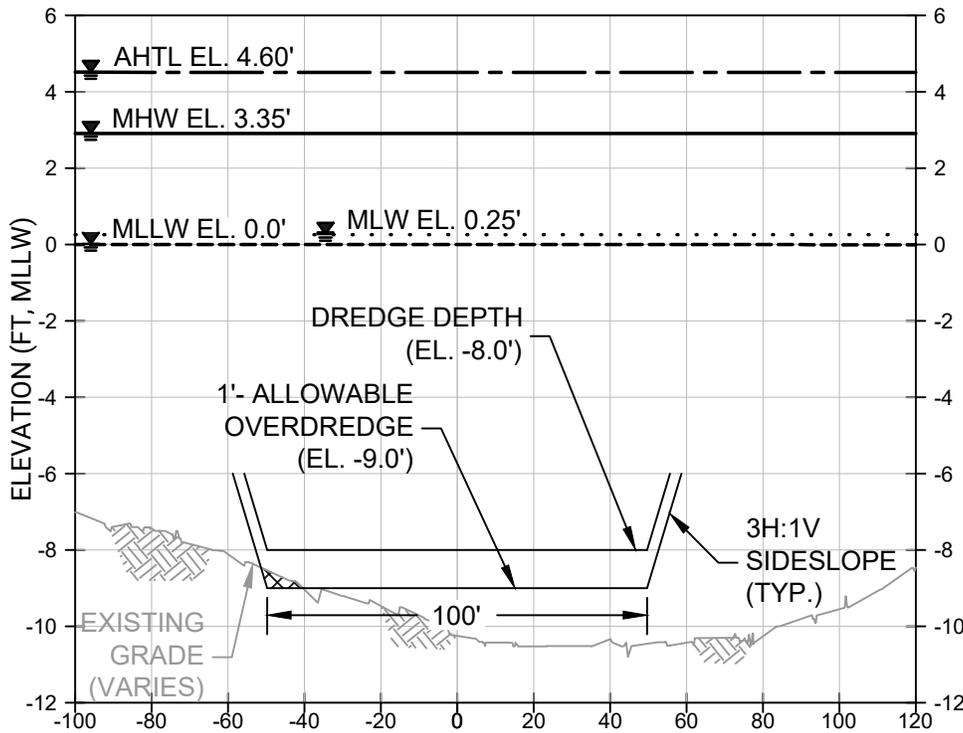


TYPICAL DREDGE SECTIONS
 SEAPUIT RIVER (SR-D1) & WEST BAY SPUR (WB-D3) CHANNELS

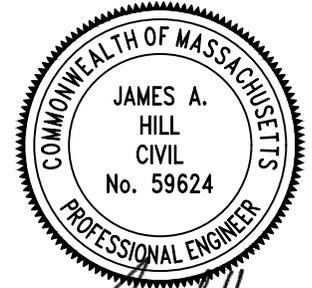
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 36 OF 55

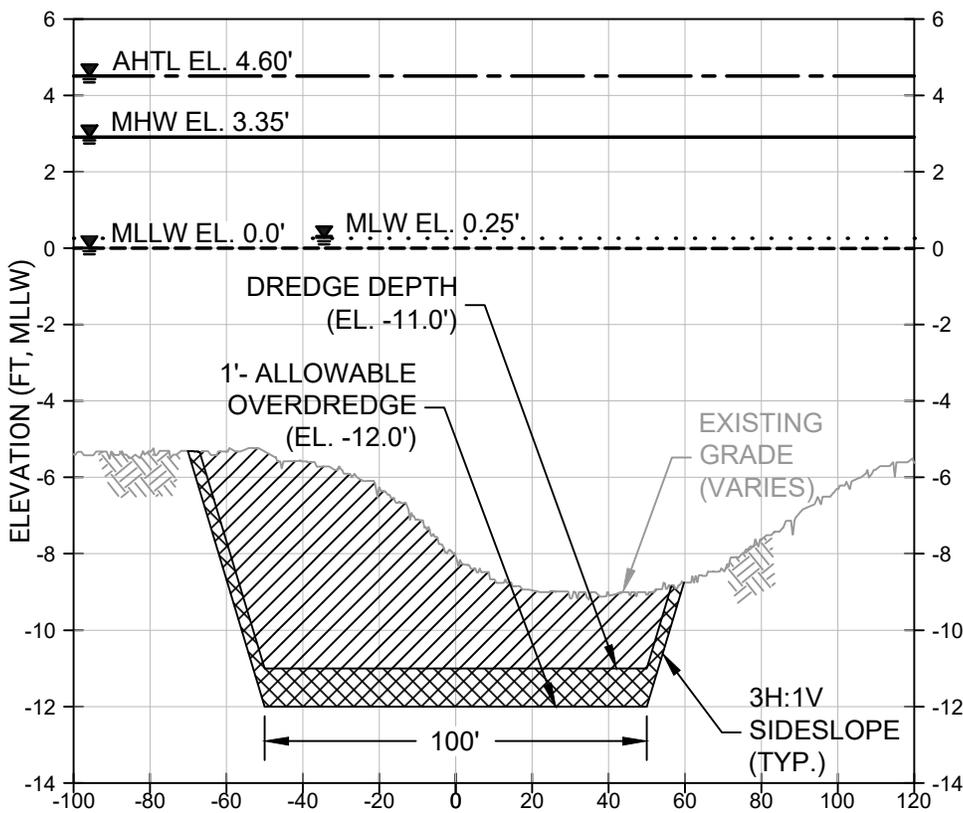


TYPICAL SECTION I-I'
WEST BAY OUTER
ENTRANCE CHANNEL (WB-D1)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

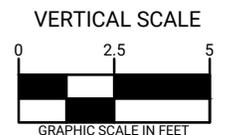
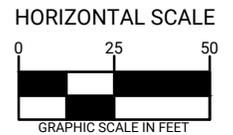


James A. Hill

DIGITALLY SIGNED
 11/4/2025



TYPICAL SECTION J-J'
WEST BAY INNER ENTRANCE
CHANNEL (WB-D2)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

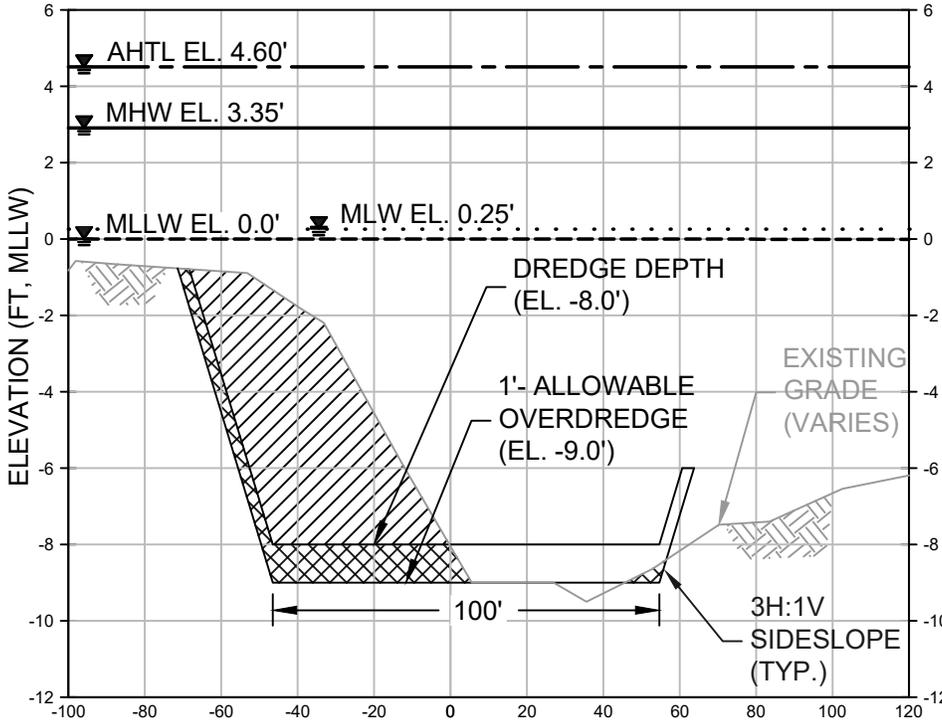


TYPICAL DREDGE SECTIONS
 WEST BAY OUTER (WB-D1) & INNER (WB-D2) ENTRANCE CHANNELS

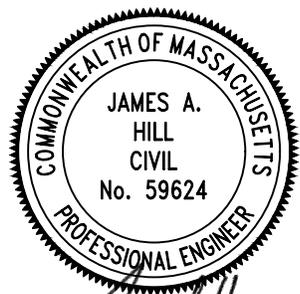
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

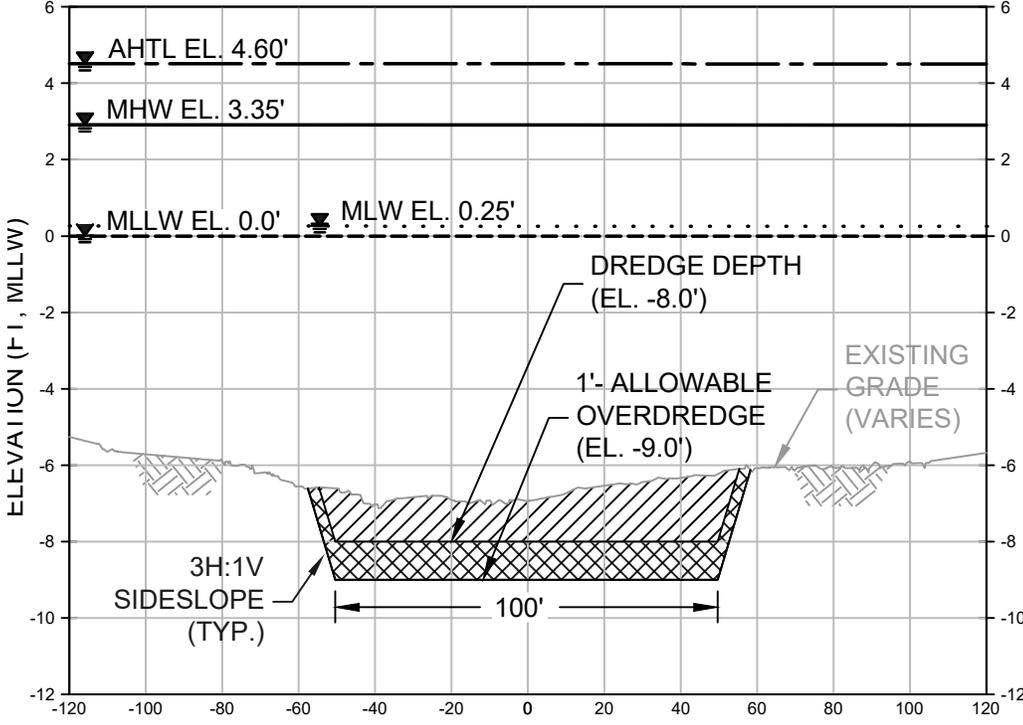
SHEET 37 OF 55



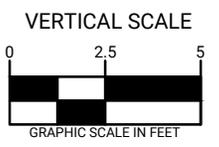
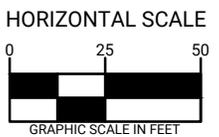
TYPICAL SECTION K-K'
 NORTH BAY NARROWS
 CHANNEL (NB-D1)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill
 DIGITALLY SIGNED
 11/4/2025



TYPICAL SECTION L-L'
 NORTH BAY STREET
 CHANNEL (NB-D2)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



c:\pwworking\foth\jmh\0306080220002 barnstable 10yr-three bays-sections

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

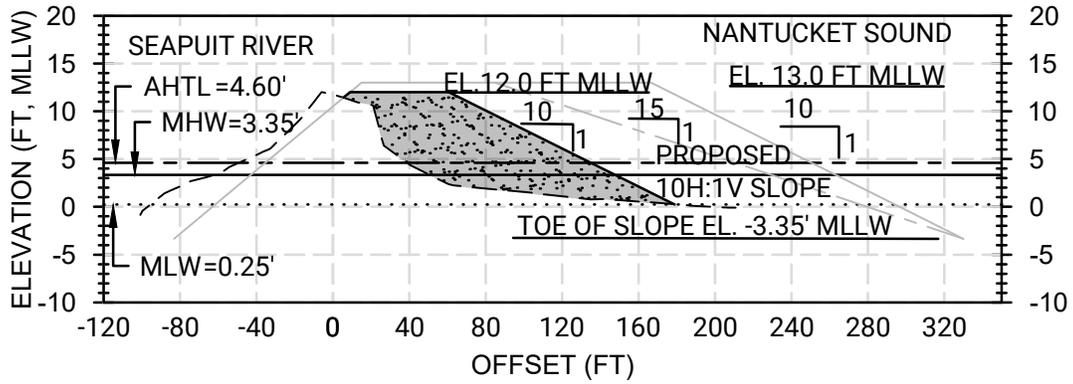


TYPICAL DREDGE SECTIONS
 NORTH BAY NARROWS (NB-D1)
 & BAY STREET (NB-D2)
 CHANNELS

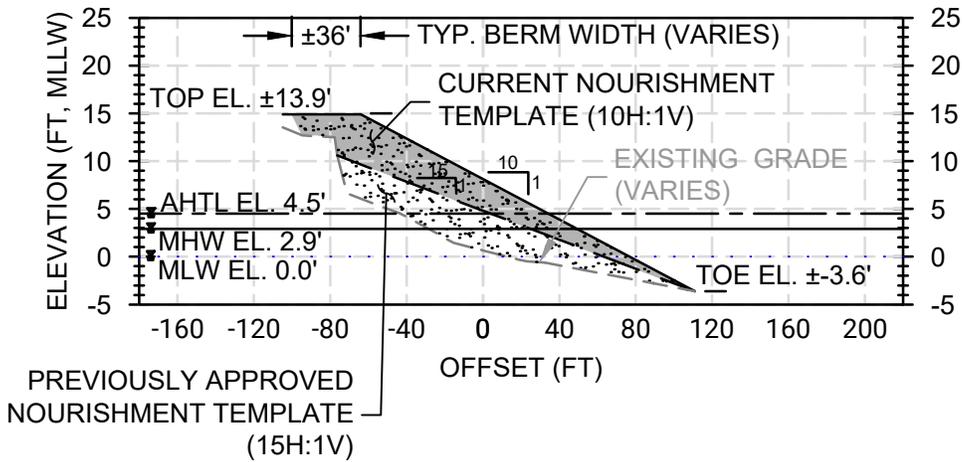
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING &
 BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 38 OF 55



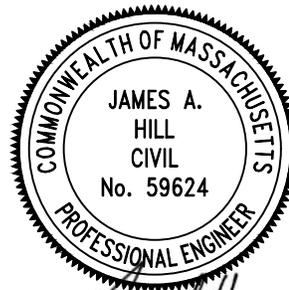
TYPICAL SECTION 1-1'
 DEAD NECK BEACH
 HORIZONTAL SCALE: 1" = 100'
 VERTICAL SCALE: 1" = 20'



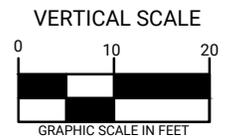
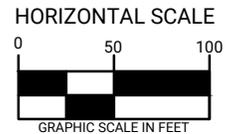
TYPICAL SECTION 1a-1a'
 DEAD NECK BEACH EXTENSION
 HORIZONTAL SCALE: 1" = 100'
 VERTICAL SCALE: 1" = 20'

SECTION VIEW LEGEND

- — — — — EX. GRADE FROM SURVEY DATED 3/23/2023
- █ PROP. NOURISHMENT FILL
- — — — — PREV. AUTH. NOURISHMENT TEMPLATE; CH. 91 PERMIT NO. 14437& USACE NAE-2013-02073
- — — — — PREV. AUTH. NOURISHMENT TEMPLATE; CH. 91 PERMIT NO. 9123& USACE CENAE-CO-R-199701302
- — — — — PROPOSED 12FT EL. BERM WITH 10H:1V SLOPE TO MLW (WIDTH VARIES)
- · · · · TOE EL. TO MATCH EX. GRADE AT MLW (EL+0.25'MLLW)



James A. Hill
 DIGITALLY SIGNED
 11/4/2025



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

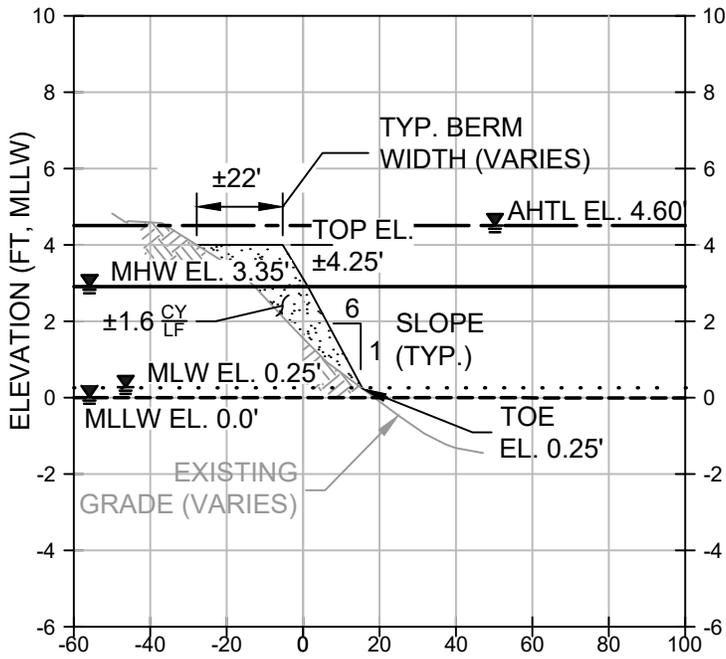


TYPICAL NOURISHMENT SECTIONS
 DEAD NECK BEACH

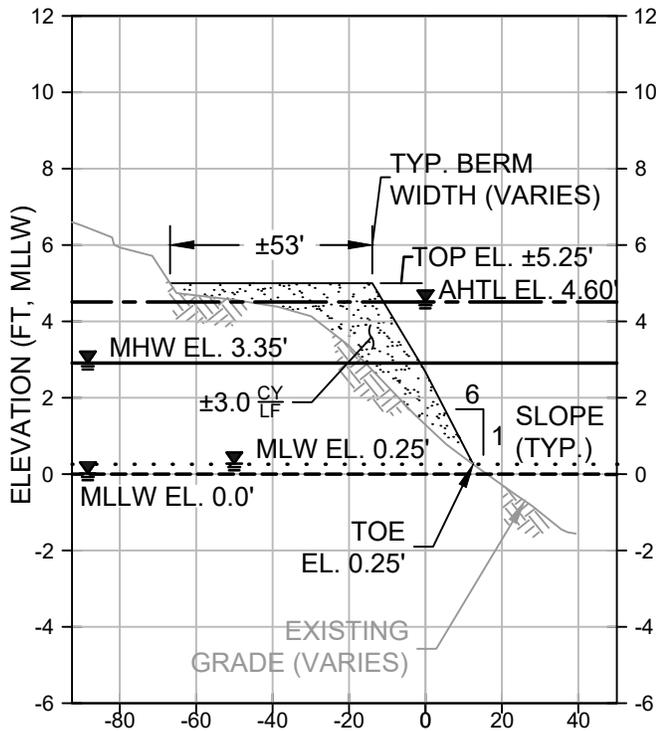
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

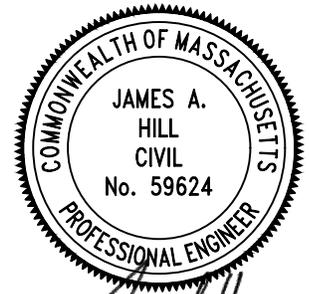
SHEET 39 OF 55



TYPICAL SECTION 2-2'
ROPES BEACH
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

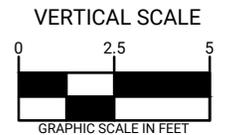
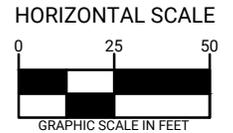


TYPICAL SECTION 3-3'
ROPES BEACH
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill

DIGITALLY SIGNED
 11/4/2025



c:\pw_work\rd\pw_in\vc_jan050308022002 barnstable 10yr-three bays-sections

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

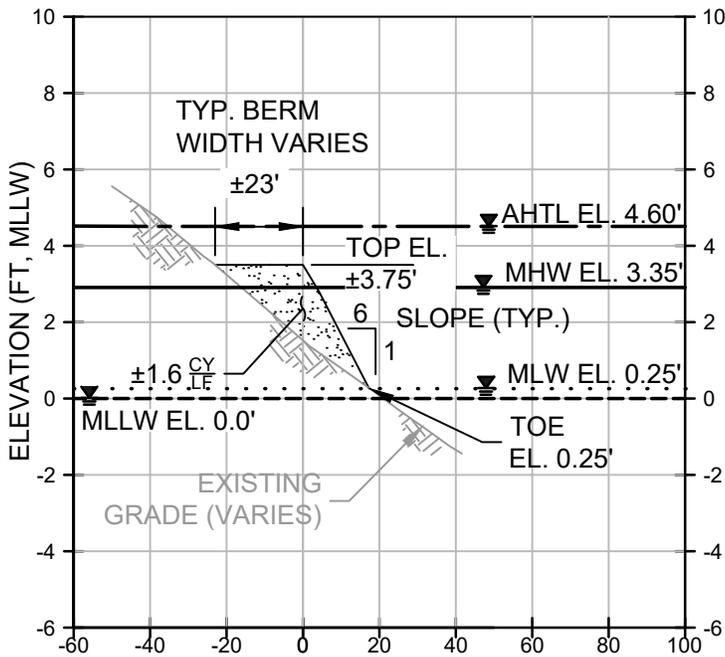


TYPICAL NOURISHMENT SECTION
ROPES BEACH

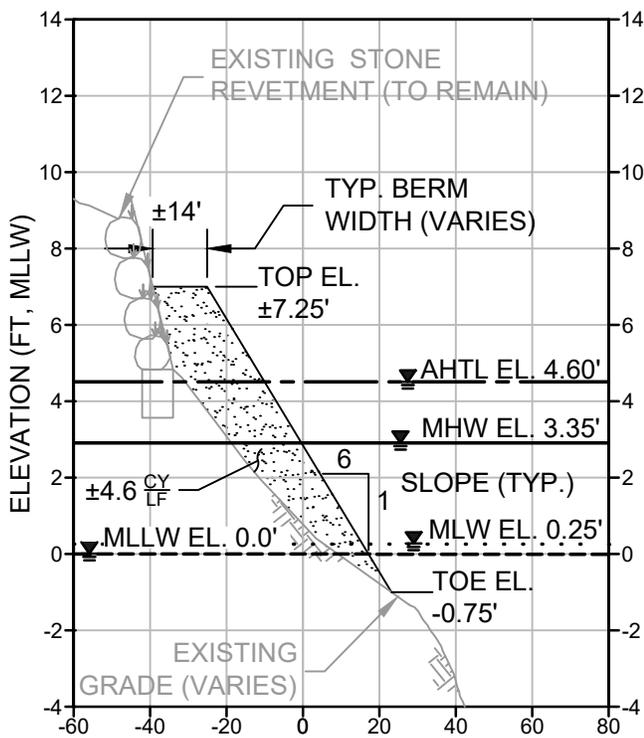
TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 40 OF 55



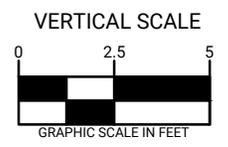
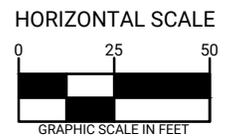
TYPICAL SECTION 4-4'
ROPES BEACH
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



TYPICAL SECTION 5-5'
CROSS STREET (RILEY'S) BEACH
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill
 DIGITALLY SIGNED
 11/4/2025



c:\pwworking\foth\env\james_hill\030880\220002 barnstable 10yr-three bays-sections

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

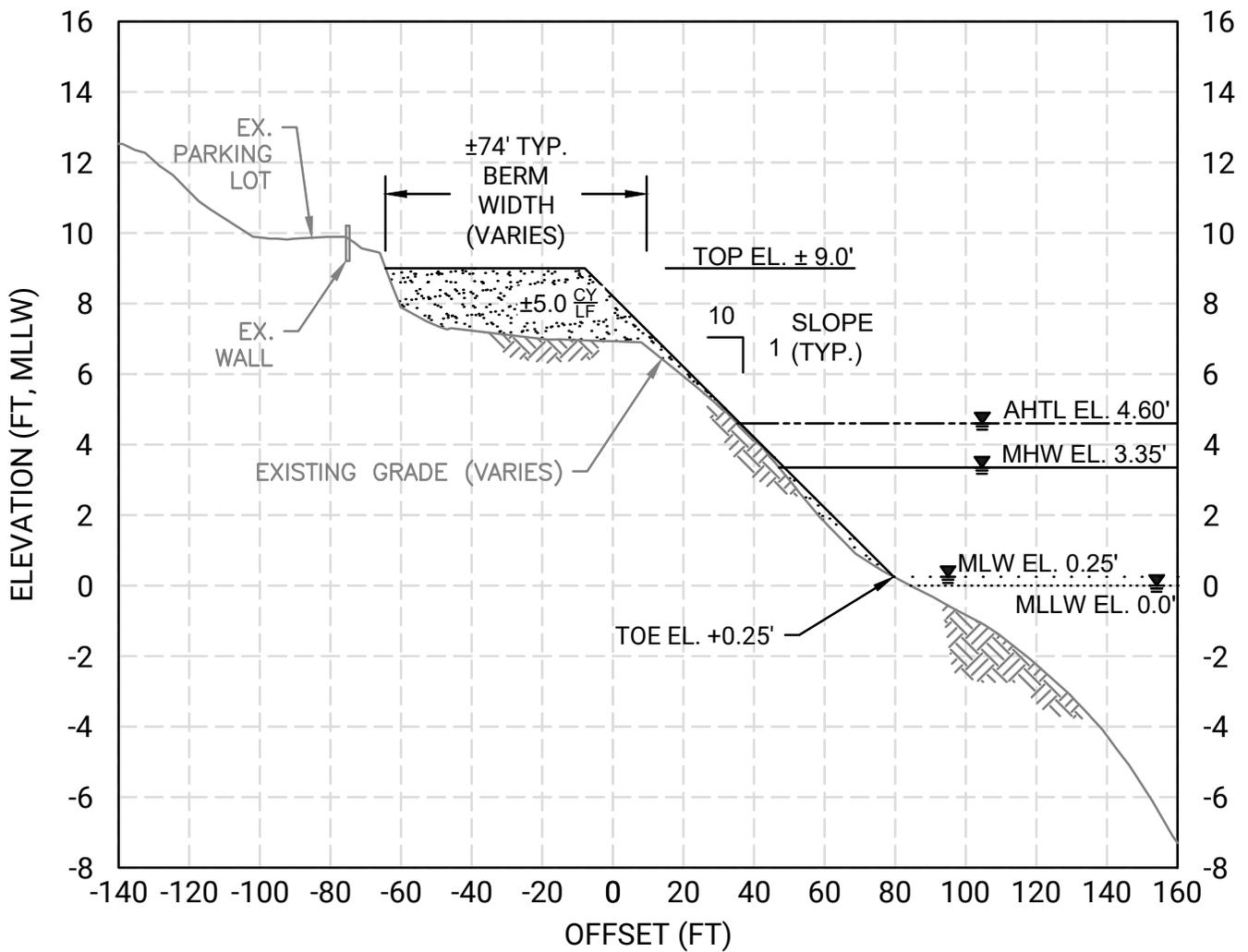


TYPICAL NOURISHMENT SECTION
 ROPES BEACH AND
 CROSS ST. (RILEY'S) BEACH

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING &
 BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

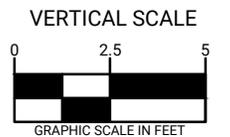
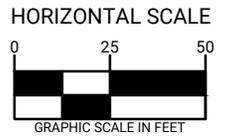
SHEET 41 OF 55



TYPICAL SECTION 6-6'
 LOOP BEACH
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



James A. Hill
 DIGITALLY SIGNED
 1/2/2024



FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'



TYPICAL NOURISHMENT SECTION
 LOOP BEACH

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 42 OF 55

**THREE BAYS REGION
DREDGE AND NOURISHMENT SUMMARY**

DREDGE SITE	NOURISHMENT SITE(S)*	OCCURANCE*
COTUIT ENTRANCE CHANNEL (CB-D1)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	UNLIMITED OVER DURATION OF 10 YEAR PERMIT
COTUIT EMBAYMENT CHANNEL (CB-D2)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	UNLIMITED OVER DURATION OF 10 YEAR PERMIT
COTUIT EMBAYMENT CHANNEL (CB-D3)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	1 TIME BEACH NOURISHMENT
COTUIT EMBAYMENT CHANNEL (CB-D4)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	1 TIME BEACH NOURISHMENT
COTUIT EMBAYMENT CHANNEL (CB-D5)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	1 TIME BEACH NOURISHMENT
SEAPUIT RIVER CHANNEL (SR-D1)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	1 TIME BEACH NOURISHMENT
WEST BAY OUTER ENTRANCE CHANNEL (WB-D1)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	UNLIMITED OVER DURATION OF 10 YEAR PERMIT
WEST BAY INNER ENTRANCE CHANNEL (WB-D2)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	1 TIME BEACH NOURISHMENT
WEST BAY SPUR CHANNEL (WB-D2)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	1 TIME BEACH NOURISHMENT
NORTH BAY NARROWS CHANNEL (NB-D1)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	1 TIME BEACH NOURISHMENT
NORTH BAY (BAY ST.) CHANNEL (NB-D2)	DEAD NECK**, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	1 TIME BEACH NOURISHMENT



James A. Hill

DIGITALLY SIGNED
11/4/2025

**NOURISHMENT LOCATION/OCCURRENCE AS PER USACE 2015-01632 SUITABILITY DETERMINATION ADDENDUM ISSUED ON 8/1/2022 FOR THE TOWN OF BARNSTABLE, MA 10-YEAR COMPREHENSIVE DREDGE AND NOURISHMENT PROGRAM.*

***PUBLIC ACCESS EASEMENT IN PERPETUITY GRANTED IN PERPETITY BY THREE BAYS PRESERVATION, INC, TO TOWN OF BARNSTABLE AS RECORDED AT THE BARNSTABLE COUNTY REGISTRY OF DEEDS ON 02/20/2024 (BK 36228; PGS 126-133 ;#6323).*

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'



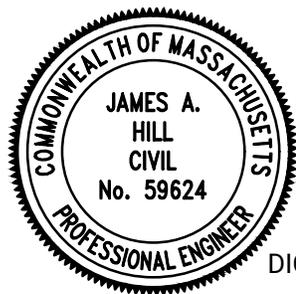
**SUMMARY
THREE BAYS CHANNELS**

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

THREE BAYS CHANNELS

NAD83 - MASSACHUSETTS MAINLAND, USFT

POINT	EASTING (X)	NORTHING (Y)	POINT	EASTING (X)	NORTHING (Y)
1	948446.59	2681120.52	29	950336.37	2685397.90
2	948361.75	2681067.58	30	950347.41	2685497.30
3	947793.46	2682167.27	31	950387.17	2685402.33
4	947700.26	2682127.73	32	950396.00	2685481.84
5	947536.91	2683195.67	33	950791.66	2685357.40
6	947436.41	2683185.41	34	950816.14	2685435.17
7	947567.73	2683920.52	35	950842.93	2685329.45
8	947467.90	2683927.76	36	950894.77	2685392.30
9	947588.06	2684204.74	37	951292.35	2684785.58
10	947490.77	2684241.55	38	951344.91	2684847.57
11	947711.77	2684370.05	39	951382.38	2684720.26
12	947648.07	2684451.85	40	951433.09	2684782.41
13	947911.80	2684451.85	41	951470.63	2684672.77
14	947928.67	2684568.75	42	951737.59	2684525.14
15	948097.82	2684235.60	43	951704.65	2684474.39
16	948224.75	2684390.02	44	951998.04	2684399.89
17	948402.57	2683984.96	45	951986.97	2684338.64
18	948474.57	2684184.96	46	952556.04	2684450.51
19	948739.30	2683984.96	47	952563.91	2684390.98
20	948653.29	2684184.96	48	953027.89	2684532.63
21	949281.97	2684557.65	49	953039.49	2684471.37
22	949104.84	2684661.49	50	953514.82	2684489.73
23	949434.02	2685045.87	51	953517.29	2684429.27
24	949221.29	2685035.42	52	954400.52	2684641.55
25	949110.76	2685810.19	53	954405.63	2684581.55
26	948926.56	2685732.29	54	954513.43	2684641.55
27	949233.32	2685520.41	55	954491.25	2684581.55
28	949188.67	2685625.99	56	954728.31	2684457.50
27A	949758.56	2685462.10	57	954697.50	2684404.88
28A	949770.10	2685559.19	58	955043.60	2684245.26
27B	950233.15	2685409.36	59	955173.83	2684170.38
28B	950240.89	2685506.91	60	955175.24	2684247.47



James A. Hill

DIGITALLY SIGNED
11/4/2025

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'



COORDINATES
THREE BAYS CHANNELS

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 44 OF 55

THREE BAYS CHANNELS

NAD83 - MASSACHUSETTS MAINLAND, USFT

POINT	EASTING (X)	NORTHING (Y)	POINT	EASTING (X)	NORTHING (Y)
61	956021.15	2684154.92	87	957827.12	2689624.60
62	956069.21	2684232.23	88	957804.55	2689689.45
63	956069.21	2684131.47	89	957845.96	2689688.57
64	956667.65	2684226.66	90	957780.03	2689818.74
65	956663.01	2684126.71	91	957897.24	2689862.81
66	956719.47	2683182.85	92	957803.43	2689898.26
67	956619.67	2683187.65	93	958331.45	2690719.95
68	956847.96	2681186.98	94	958218.64	2690718.52
69	956747.44	2681191.74	95	958097.69	2691154.05
70	956696.99	2684823.95	96	958020.73	2691085.97
71	956796.90	2684819.22	97	956922.55	2692063.11
72	956811.38	2686059.22	98	956873.30	2691974.78
73	956911.90	2686059.89	99	956505.93	2692219.30
72A	956760.77	2686524.01	100	956478.11	2692122.94
73A	956857.84	2686558.34	101	955726.46	2692511.52
74	956639.57	2687637.24	102	955689.21	2692418.69
75	956743.36	2687607.80	103	954886.68	2692477.42
74A	956875.21	2687940.10	104	954932.38	2692388.47
75A	956939.97	2687860.48	105	953617.28	2691871.37
76	957115.98	2688249.55	106	953674.89	2691788.31
77	957169.32	2688155.25	107	953254.44	2691529.49
78	957266.24	2688267.66	108	953326.35	2691459.86
79	957278.24	2688168.43	109	953142.06	2691402.61
80	958001.94	2688297.66	110	953214.59	2691333.68
81	958017.34	2688198.23	111	952798.82	2691065.88
82	958064.17	2688314.47	112	952867.48	2690993.15
83	958136.61	2688230.45	113	952618.02	2690901.64
84	958111.66	2688423.25	114	952683.49	2690826.02
85	958219.68	2688420.74	115	951853.44	2690270.92
86	957749.67	2689539.66	116	951917.07	2690193.78



James A. Hill

DIGITALLY SIGNED
11/4/2025

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'



COORDINATES (CON'T)
THREE BAYS CHANNELS

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 45 OF 55



MILL POND



James A. Hill

DIGITALLY SIGNED
11/4/2025

WARREN'S COVE

PRINCE COVE MARINA BASIN & CHANNEL (PC-D2)

PRINCE COVE

PRINCE COVE ENTRANCE CHANNEL (PC-D1)

SHEET 45

BOG POND

DAM POND

NORTH BAY

LEGEND
DREDGE SITE = PC-D#

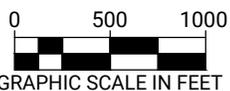
c:\pw_work\ri\pw_in\vc_jan0632752\0002 barnstable 10yr-prinse cove-plot

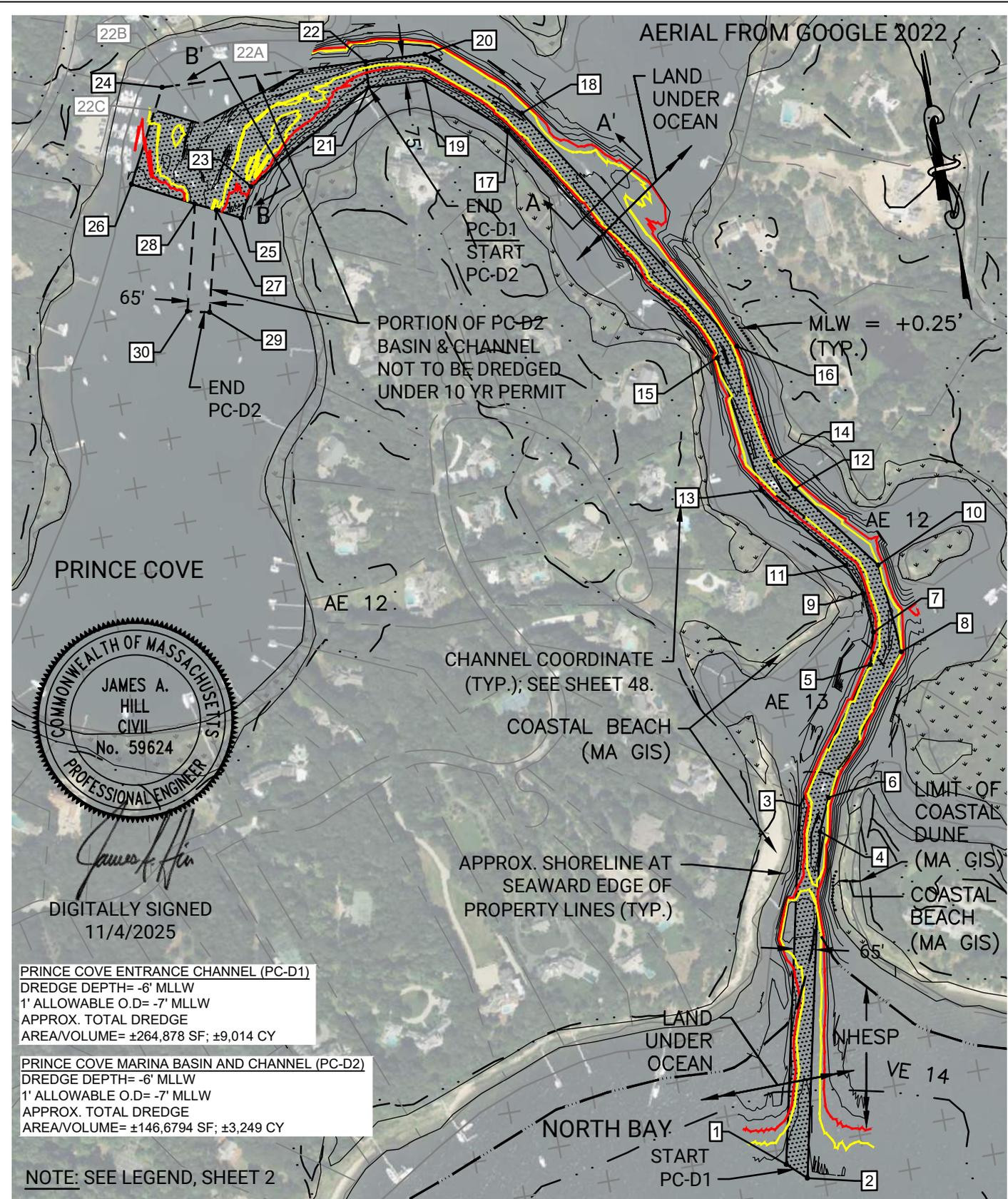
FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'

SITE LOCATION PLAN
PRINCE COVE REGION

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601





James A. Hill
 DIGITALLY SIGNED
 11/4/2025

PRINCE COVE ENTRANCE CHANNEL (PC-D1)
 DREDGE DEPTH= -6' MLLW
 1' ALLOWABLE O.D.= -7' MLLW
 APPROX. TOTAL DREDGE
 AREA/VOLUME= ±264,878 SF; ±9,014 CY

PRINCE COVE MARINA BASIN AND CHANNEL (PC-D2)
 DREDGE DEPTH= -6' MLLW
 1' ALLOWABLE O.D.= -7' MLLW
 APPROX. TOTAL DREDGE
 AREA/VOLUME= ±146,6794 SF; ±3,249 CY

NOTE: SEE LEGEND, SHEET 2

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

0 200 400
 GRAPHIC SCALE IN FEET

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'

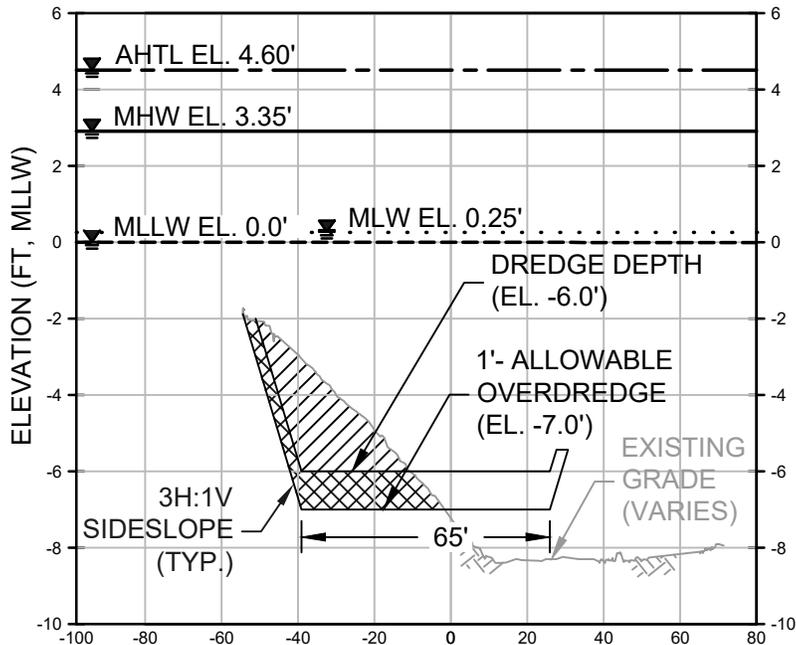
PROPOSED DREDGE PLAN
 PRINCE COVE ENT. CHANNEL (PC-D1) & MARINA BASIN AND CHANNEL (PC-D2)

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

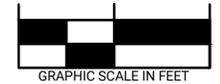
SHEET 47 OF 55

c:\pwworking\foth\env\c\james\59624\2025\10yr-prince-cove-plot

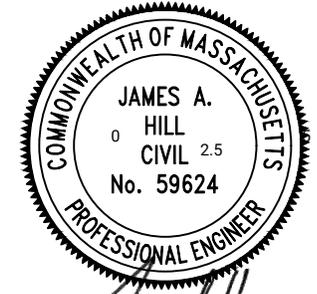
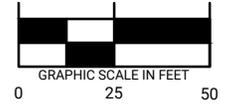


TYPICAL SECTION A-A'
PRINCE COVE ENTRANCE CHANNEL (PC-D1)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

HORIZONTAL SCALE

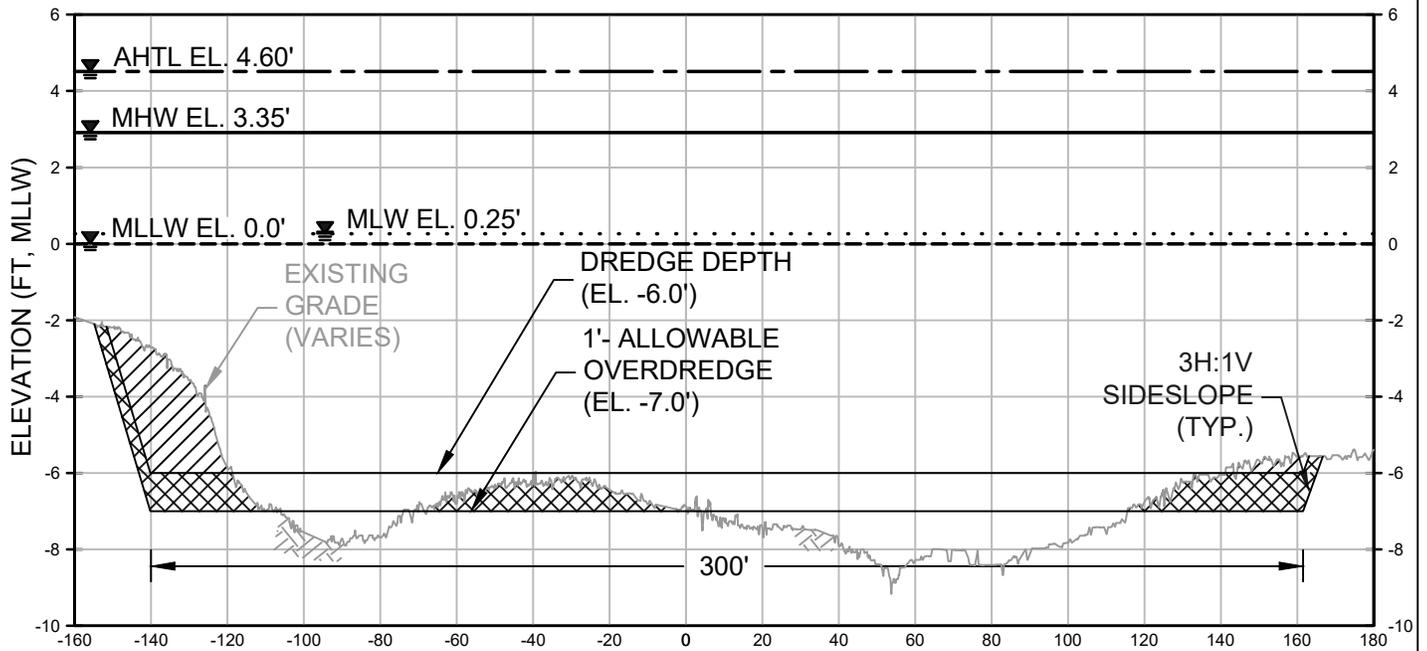


VERTICAL SCALE



James A. Hill

DIGITALLY SIGNED
 11/4/2025



TYPICAL SECTION B-B'
PRINCE COVE MARINA BASIN AND CHANNEL (PC-D2)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

c:\pwworking\foth\jameshill\0308022025\02 barnstable 10yr-three bays-sections

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840

DATUM:
 MLLW = 0.00'
 MLW = +0.25'
 NAVD88 = +2.15'
 MHW = +3.35'
 AHTL = +4.60'



TYPICAL DREDGE SECTIONS
 PRINCE COVE ENTRANCE CHANNEL (PC-D1) & MARINA BASIN (PC-D2)

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 48 OF 55

**THREE BAYS REGION
DREDGE AND NOURISHMENT SUMMARY**

DREDGE SITE	NOURISHMENT SITE(S)*	OCCURANCE*
PRINCE COVE ENTRANCE CHANNEL (PC-D1)	DEAD NECK, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	1 TIME BEACH NOURISHMENT
PRINCE COVE MARINA BASIN & CHANNEL (PC-D2)	DEAD NECK, CROSS ST. (RILEY'S), LOOP, & ROPES BEACHES	1 TIME BEACH NOURISHMENT



DIGITALLY SIGNED
11/4/2025

**NOURISHMENT LOCATION/OCCURRENCE AS PER USACE 2015-01632 SUITABILITY DETERMINATION ADDENDUM ISSUED ON 8/1/2022 FOR THE TOWN OF BARNSTABLE, MA 10-YEAR COMPREHENSIVE DREDGE AND NOURISHMENT PROGRAM.*

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'



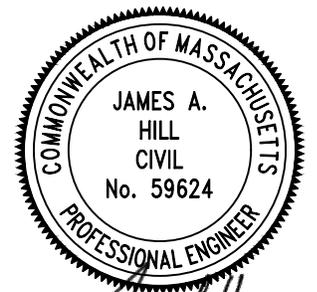
**SUMMARY
PRINCE COVE**

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 49 OF 55

PRINCE COVE COORDINATES		
NAD83 - MASSACHUSETTS MAINLAND, USFT		
POINT	EASTING (X)	NORTHING (Y)
1	954928.17	2694080.46
2	954982.11	2694029.14
3	955155.10	2695107.85
4	955200.76	2695022.94
5	955433.77	2695479.71
6	955243.10	2695116.89
7	955460.03	2695571.18
8	955530.07	2695499.83
9	955450.61	2695688.62
10	955509.10	2695762.20
11	955415.19	2695778.38
12	955308.77	2696027.09
13	955210.85	2696039.98
14	955266.46	2696118.27
15	955153.85	2696445.70
16	955216.27	2696468.61
17	954668.93	2697212.43
18	954718.90	2697255.01
19	954455.58	2697400.83
20	954469.32	2697476.15
21	954290.54	2697410.19
22	954294.75	2697485.86
22A	954118.43	2697495.66
22B	953788.55	2697392.25
22C	953660.72	2697456.48
23	953897.91	2697185.87
24	953693.92	2697519.28
25	953853.54	2697099.93
26	953554.56	2697255.64
27	953785.74	2697135.24
28	953727.35	2697164.90
29	953712.53	2696844.63
30	953649.26	2696859.30



James A. Hill

DIGITALLY SIGNED
11/4/2025

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

DATUM:
MLLW = 0.00'
MLW = +0.25'
NAVD88 = +2.15'
MHW = +3.35'
AHTL = +4.60'



COORDINATES
PRINCE COVE

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 50 OF 55

NOTES:

1. DREDGE SITES SHOWN ARE BASED UPON THE COMBINED 2020 & 2022 SEDIMENT SUITABILITY DETERMINATION, USACE #: NAE-2015-01632.
2. COORDINATES ARE BASED ON NAD 83 STATE PLANE MASSACHUSETTS MAINLAND.
3. ELEVATIONS REFER TO MEAN LOWER LOW WATER (MLLW) DATUM FOR EACH REGION. ELEVATIONS CAN BE REFERENCED TO NAVD88 USING THE DATUM SHIFT CHART.
4. DATUM SHIFT VALUES TAKEN FROM VDATUM ONLINE (VERSION 4.5.1) FOR EACH REGION.
5. FEMA ELEVATIONS SHOWN ARE RELATIVE TO NAVD88. FEMA LINES TAKEN FROM THE NATIONAL FLOOD HAZARD LAYER (NFHL) VIEWER AT <https://www.fema.gov/flood-maps/national-flood-hazard-layer>.
6. ORTHO-IMAGERY IS APPROXIMATE UNLESS OTHERWISE NOTED AND SHOULD BE USED AS A GENERAL REFERENCE ONLY.
7. LIMITS OF SHELLFISH SUITABILITY AREAS AND NATURAL HERITAGE ENDANGERED SPECIES HABITAT LIMITS TAKEN FROM MA GIS. SHELLFISH SUITABILITY AREAS HAVE NOT BEEN FIELD SURVEYED/CONFIRMED TO SUPPORT HABITAT.
8. LIMITS OF SALTMARSH AND COASTAL FEATURES DETERMINED BY SURVEYS SHOWN IN **TABLES 1 & 2 (SEE SHEET 52)** AND SUPPLEMENTED WITH MA GIS.
9. PROPERTY LINES TAKEN FROM MA GIS AND ARE APPROXIMATE.
10. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS THE RESULTS OF SURVEYS CONDUCTED ON THE DATES SHOWN, AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME. INTERPOLATED INFORMATION BETWEEN SOUNDING RUNS IN NOT GUARANTEED. SHOALS, OBSTRUCTIONS, OR OTHER DIFFERING CONDITIONS MAY EXIST BETWEEN THOSE SOUNDING RUNS. CONSULT WITH FOTH FOR MORE DETAILED INFORMATION.
11. POSSESSION AND USE OF THE MATERIAL CONTAINED ON THESE DRAWINGS IS GRANTED ONLY IN CONNECTION WITH ITS USE AS IT RELATED TO THE TITLED PROJECT. ANY OTHER USE, REPRODUCTION, OR DISCLOSURE OF THE INFORMATION CONTAINED HEREON IS EXPRESSLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF FOTH.

© COPYRIGHT 2025, FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.

**REGION A
BARNSTABLE HARBOR / SANDY NECK**

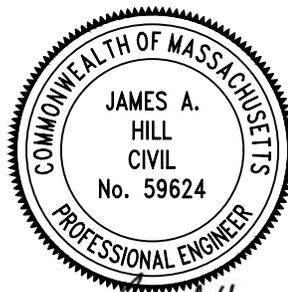
DATUM OFFSETS		
MLLW	NAVD88	
12.78	7.12	AHTL
10.35	4.69	MHHW
9.94	4.28	MHW
5.66	0.00	NAVD 88
0.28	-5.38	MLW
0.00	-5.66	MLLW

OFFSETS TAKEN FROM
VDATUM ONLINE VERSION (4.5.1)
FOR THE PROJECT SITE

**REGIONS C, D, & E
CENTERVILLE HARBOR, THREE BAYS, & PRINCE COVE**

DATUM OFFSETS		
MLLW	NAVD88	
4.60	2.45	AHTL
3.65	1.50	MHHW
3.35	1.20	MHW
2.15	0.00	NAVD 88
0.25	-1.90	MLW
0.00	-2.15	MLLW

OFFSETS TAKEN FROM
VDATUM ONLINE VERSION (4.5.1)
FOR THE PROJECT SITES



DIGITALLY SIGNED
11/4/2025

c:\pw_work\fdpw_e\ivc_jan5\06738562\002 barnstable 10yr-project notes

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

**PROJECT NOTES &
DATUM SHIFT CHARTS**



TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 51 OF 55

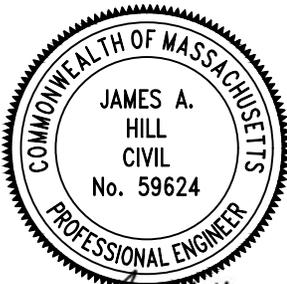
Project Region	10-Year Permit Dredge Site ID	Location	Survey Date(s)
Barnstable Harbor/Sandy Neck (Region A)	BH-D4	Barnstable Harbor Outer Entrance Channel	2/1/2016
Centerville Harbor (Region C)	EB-D1	East Bay Entrance Channel	7/18/2017; 8/12/2017
	CR-D1	Centerville River Channel-Lower Reach	8/2/2017
	CR-D2	Centerville River Channel-Upper Reach	7/18/2017; 8/2/2017
	CR-D3	Centerville River Spur Channel	8/2/2017
	BR-D1	Bumps River Channel	8/14/2017
Three Bays (Region D)	CB-D1	Cotuit Bay Entrance Channel	8/14/2017
	CB-D2	Cotuit Bay Embayment Channel	8/14/2017
	CB-D3	Cotuit Bay Embayment Channel	8/9/2017; 8/14/2017
	CB-D4	Cotuit Bay Embayment Channel	8/9/2017
	CB-DS	Cotuit Bay Embayment Channel	8/14/2017
	SR-D1	Seapuit River Channel	9/15/2017
	WB-D1	West Bay Outer Entrance Channel	8/15/2017; 9/15/2017
	WB-D2	West Bay Inner Entrance Channel	8/15/2017
	WB-D3	West Bay Spur Channel	9/15/2017
	NB-D1	North Bay Narrows Channel	8/8/2017; 8/9/2017; 8/15/2017; 10/2/2017
	NB-D2	North Bay Street Channel	8/8/2017; 10/2/2017
Prince Cove (Region E)	PC-D1	Prince Cove Entrance Channel	9/7/2017
	PC-D2	Prince Cove Marina Basin & Channel	9/7/2017

TABLE 1: SUMMARY OF SURVEY DATES - DREDGE SITES

Project Region	Location	Survey Date(s)
Barnstable Harbor/Sandy Neck (Region A)	Millway Beach / Blish Point	6/8/2017 ³ ; 8/23/2017; 11/1/2017
	Sandy Neck Public Beach	10/30/2017
Centerville Harbor (Region C)	Town Beach at Long Beach	10/5/2017
	Private Beach Areas at Long Beach	10/5/2017
	Craigville Beach	8/24/2017; 10/5/2017
	Coville Beach	10/5/2017
Three Bays & Prince Cove (Regions D & E)	Dead Neck Barrier Beach	8/15/2017; 9/15/2017
	Dead Neck Barrier Beach - Extension ¹	Sept. 2013
	Rope's Beach	12/14/2018
	Cross St. (Riley's) Beach	12/14/2018
	Loop Beach ²	11/8/2018

¹Topographic survey data provided by Sullivan Engineering, Inc. as associated with Dead Neck Sompson's Island, Dredging & Nourishment Plan, Barnstable (Osterville), MA.
²Data taken from 2018 USACE Topobathy LiDAR Survey published 11/8/2018; Downloaded from NOAA Digital Coast Data Access Viewer.
³Limits of Saltmarsh located as part of the topographic survey & supplemented with MA GIS.

TABLE 2: SUMMARY OF SURVEY DATES - BEACH NOURISHMENT SITES



James A. Hill

DIGITALLY SIGNED
11/4/2025

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

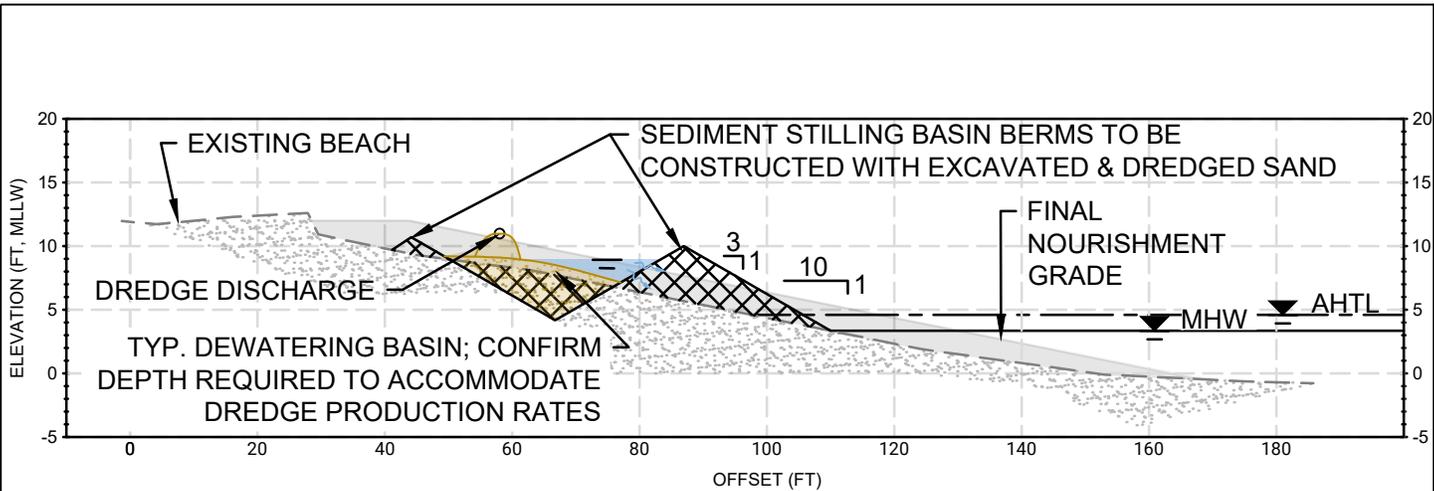


**SUMMARY TABLES FOR
DREDGE SITE AND
BEACH NOURISHMENT
SURVEY DATES**

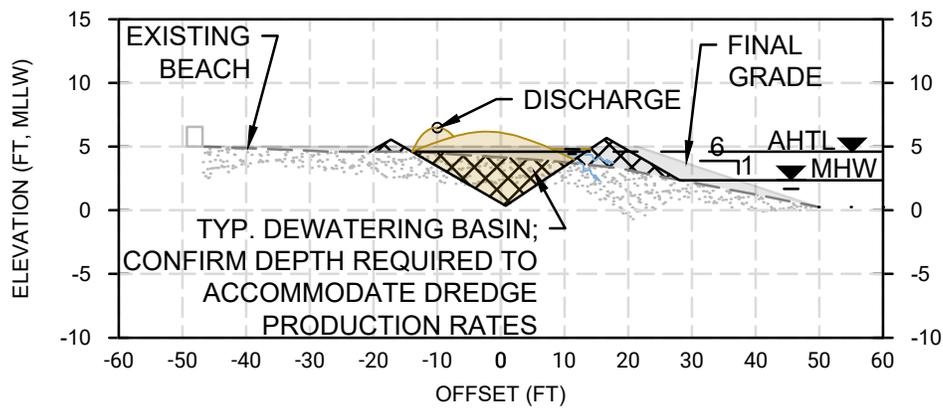
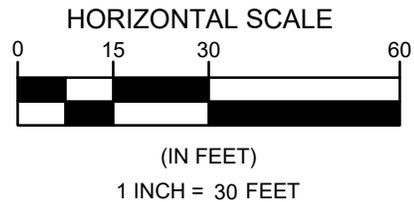
TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

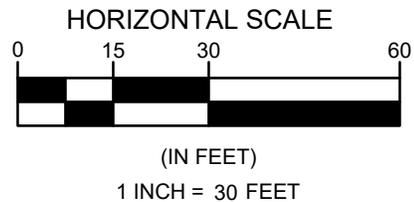
SHEET 52 OF 55



**TYPICAL SEDIMENT STILLING BASIN
WITH 10H:1V NOURISHMENT**
HORIZONTAL SCALE: 1" = 30'
VERTICAL EXAGGERATION = 2X



**TYPICAL SEDIMENT STILLING BASIN
WITH 6H:1V NOURISHMENT**
HORIZONTAL SCALE: 1" = 30'
VERTICAL EXAGGERATION = 2X



c:\pw_work\fdpw_int\c_jan050537872025 dewatering details

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840

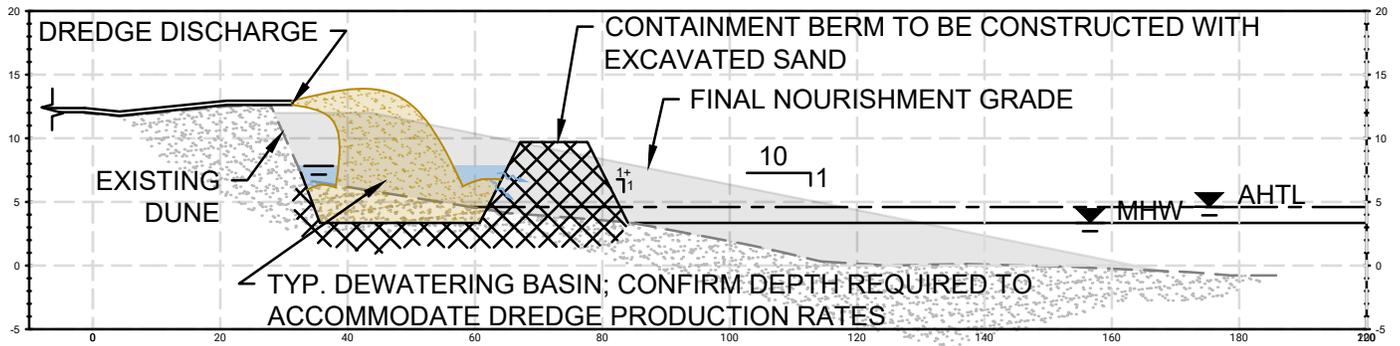
TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

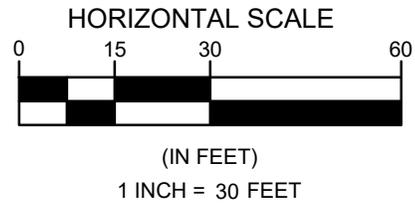
SHEET 53 OF 54



TYPICAL SEDIMENT DEWATERING DETAILS



TYPICAL DEWATERING BASIN DETAIL
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL EXAGGERATION = 2X



DEWATERING NOTES:

1. DEWATERING AREAS SHALL BE LOCATED WITHIN PROPOSED NOURISHMENT AREAS TO MINIMIZE IMPACTS TO AREAS NOT RECEIVING NOURISHMENT.
2. DEWATERING AREAS SHALL BE LOCATED ABOVE THE MEAN HIGH WATER LINE WHERE POSSIBLE
3. LOCATION OF SEDIMENT DEWATERING WITHIN NOURISHMENT LIMITS MAY VARY DEPENDING ON SITE SPECIFIC NOURISHMENT NEEDS.
4. DEWATERING AREAS SHALL BE MAINTAINED DURING DREDGING AND RESTORED TO THE PROPOSED NOURISHMENT GRADE AT THE END OF EACH DREDGE AND NOURISHMENT CYCLE.
5. WORK LIMITS FOR EQUIPMENT AND FINAL CONSTRUCTED EDGE OF NOURISHMENT WILL BE NO CLOSER THAN 3 FEET AWAY FROM THE EDGE OF EXISTING SALTMASH, IF ANY EXISTS.
6. THE FINAL LOCATION AND INSTALLATION OF THE DREDGE DISCHARGE (SLURRY) DISCHARGE PIPE SHALL BE COORDINATED WITH THE TOWN AND DREDGE CONTRACTOR PRIOR TO THE START OF WORK.
7. THE DREDGE DISCHARGE (SLURRY) PIPE, HEAVY EQUIPMENT AND FOOT TRAFFIC SHALL AVOID ANY/ALL IMPACTS TO EXISTING SALTMARSH AREAS.
8. SIZE OF TEMPORARY BERMS AND DEPTH OF DEWATERING AREA SHALL BE CONSTRUCTED TO ACCOMMODATE DREDGE PRODUCTION AND MINIMIZE LOSS OF SEDIMENT.
9. ALL AREAS OUTSIDE OF THE NOURISHMENT LIMITS THAT DISTURBED FROM DREDGING AND NOURISHMENT OPERATIONS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS.
10. THE CONTRACTOR IS RESPONSIBLE FOR MANAGING ANY/ALL EFFLUENT DISCHARGE RESULTING FROM THE DEWATERING OF DREDGE SEDIMENTS. ALL LOCAL, STATE AND FEDERAL WATER QUALITY STANDARDS SHALL BE MET.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY SEDIMENT RUN-OFF FROM ANY TEMPORARY STOCKPILES OF DEWATERED SEDIMENTS.

c:\pw_work\fdpw_int\c_jan9\0533787\2025 dewatering details

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
 114 TOURO STREET
 NEWPORT, RI 02840



TYPICAL SEDIMENT DEWATERING DETAILS (CON'T) AND DEWATERING NOTES

TOWN OF BARNSTABLE, MA
 COMPREHENSIVE DREDGING & BEACH NOURISHMENT PROJECT
 DEPARTMENT OF PUBLIC WORKS
 382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 54 OF 54

Region	Waterway	Dredge ID	Dredge Site	Est. Dredge Reoccurrence Interval (Yrs.)*	Est. Frequency (events/10 yrs)	Est. Dredge Volume (CY)	Total Dredge Volume of 10-Year Permit
A	Barnstable Harbor	BH-D4	Barnstable Harbor Outer Entrance Channel	3-5	3	5,000	15,000
C	Centerville Harbor	EB-D1	East Bay Entrance Channel	8-10	1	5,000	5,000
		CR-D1	Centerville River Channel-Lower Reach	15-20	1	3,756	3,756
		CR-D2	Centerville River Channel-Upper Reach	15-20	1	2,502	2,502
		CR-D3	Centerville River Spur Channel	15-20	1	2,518	2,518
		BR-D1	Bumps River Channel	15-20	1	1,000	1,000
D	Three Bays	CB-D1	Cotuit Bay Entrance Channel	5-10	2	12,678	25,356
		CB-D2	Cotuit Bay Embayment Channel (10')	8-10	1	5,471	5,471
		CB-D3	Cotuit Bay Embayment Channel (11')	10-15	1	7,386	7,386
		CB-D4	Cotuit Bay Embayment Channel (9')	10-15	1	6,582	6,582
		CB-D5	Cotuit Bay Embayment Channel (7')	10-15	1	2,234	2,234
		WB-D1	West Bay Outer Entrance (8')	5-10	2	800	1,600
		WB-D2	West Bay Inner Entrance (11')	10-15	1	42,254	42,254
		WB-D3	West Bay Spur Channel (8')	5-10	2	775	1,550
		SR-D1	Seapuit River Channel (7')	8-10	1	8,042	8,042
		NB-D2	Bay St. Bridge Channel (8'); NEW south + MAINT north	>35 (north ch); TBD (south ch)	1	18,424	18,424
		NB-D1	North Bay Channel (8')	>45	1	8,714	8,714
E	Prince Cove	PC-D1	Prince Cove Entrance Channel	>50	1	9,014	9,014
		PC-D2	Prince Cove Marina Basin & Channel	>50	1	3,249	3,249
TOTAL ESTIMATED DREDGE VOLUME OF 10YEAR PERMIT(CY)							169,652

c:\pw_work\fd\pw_in\vc_jan9\0554-1652\0002 barnstable 10yr-dredge cycle chart

FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC.
114 TOURO STREET
NEWPORT, RI 02840



ESTIMATED DREDGE EVENT INTERVAL CHART

TOWN OF BARNSTABLE, MA
COMPREHENSIVE DREDGING &
BEACH NOURISHMENT PROJECT
DEPARTMENT OF PUBLIC WORKS
382 FALMOUTH ROAD, HYANNIS, MA 02601

REV. 11/4/2025

SHEET 55 OF 55