



**US Army Corps
of Engineers**
Philadelphia District

Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390
ATTN: CENAP-OP-R

Public Notice

Public Notice No. Date

CENAP-OP-R-2015-1039-24

Application No. File No.

In Reply Refer to:
REGULATORY BRANCH

This District has received an application for a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344).

The purpose of this notice is to solicit comments and recommendations from the public concerning issuance of a Department of the Army permit for the work described below.

APPLICANT: New Jersey Department of Environmental Protection
Division of Coastal Engineering
1510 Hooper Avenue, Suite 140
Toms River, New Jersey 08753

WATERWAY: Atlantic Ocean, including waters just outside Little Egg Inlet

LOCATION: Proposed beach work would be from the northern terminus at Ocean Street in the Borough of Beach Haven, Ocean County, New Jersey, southward approximately 12,620 feet into the Holgate section of Long Beach Township, terminating at the northern limit of the U.S. Fish and Wildlife Service Edwin Forsythe Refuge. The proposed borrow site for obtaining sand would be an area in the Atlantic Ocean, just outside Little Egg Inlet, beginning approximately 3,000 feet east of the shoreline on the south side of the inlet (Galloway Township, Atlantic County), and extending approximately 9,000 feet to the southeast from there.

ACTIVITY: The applicant proposes a beach re-nourishment project within the area designated for the federal beach project by the Corps of Engineers known as "Barnegat Inlet to Little Egg Inlet (Long Beach Island)." In 1999, the Corps prepared a Final Feasibility Report and Integrated Environmental Impact Statement (EIS) for that project. In addition, the Corps prepared a Final Environmental Assessment (EA) in 2014 to evaluate a proposed expanded borrow area (D2) and any new information since the 1999 Report and EIS. In 2016, the Corps prepared a draft EA for an investigation of a new 2,050-acre borrow area near Little Egg Inlet. The applicant's proposed borrow area is situated within the area investigated by the Corps in 2016. The applicant is also the local sponsor of the Federal project. The two EAs referenced above are available on the Corps of Engineers web site:

<http://www.nap.usace.army.mil/Missions/Civil-Works/Public-Notices-Reports/>

A maximum of 1,500,000 cubic yards of sand would be pumped hydraulically via a cutter-head pipeline dredge to the beach from the proposed off-shore borrow site. The proposed beach fill would cover an area totaling 133.106 acres in both municipalities. Of this area, approximately

61.948 acres would be waterward of (below) the high tide line (HTL), with 39.948 acres filled in the inter-tidal zone (HTL to mean low water line or MLWL), and 22.000 acres below the MLWL (i.e. sub-tidal). The remaining 71.158 acres of fill area would be in uplands above the HTL.

The applicant proposes to build the beach consistent with the design for the authorized and constructed Corps of Engineers project. Dune construction elevation is +22.0' NAVD88 with a slope of 5:1 and a 30' wide crest. The overall dune width is 170'. The beach berm width varies from 150' to 200' at elevation +8.0' NAVD88 and a berm slope of 10:1. There are some modified slope areas with 20:1 to mean high water and then 10:1 to the existing bottom. The total length of the beach nourishment project is approximately 12,620 linear feet, including tapers to meet existing grades at the ends.

The proposed borrow site, situated just outside Little Egg Inlet, is 9,619 feet long. The western 6,353 feet of this length is 500 feet wide, and the eastern 3,266 feet is 700 feet wide. The borrow area is approximately 118 acres in size. It is situated inside the much larger area currently being investigated by the Corps of Engineers for potential use as a borrow area (approximately 2,050 acres in size). The sand would be dredged by hydraulic (cutter-head pipeline) method to a maximum depth of -24.0' NAVD88 (-21.23' mean low water), with a 2-foot maximum allowable over-dredge, for a total of -26.0' NAVD88 (-23.23' MLW). The dredged sand would be discharged via pipeline onto the ocean-front beach.

There are two (2) designated sites for land access to the beach by equipment, vehicles and workers: a) at Washington Avenue in Long Beach Township; and b) approximately 100 feet south of Nelson Avenue, on the border between Long Beach Township and Beach Haven Borough. Contractor staging areas would be located at two (2) locations: a) the southern half of the parking lot at the southern terminus of South Long Beach Boulevard (just below Cleveland Avenue); and b) the area below Nelson Avenue identified above. Aside from those areas, all materials or equipment shall be stockpiled or stored on the beach within the proposed nourishment area.

A specific schedule for the currently proposed work has not been established yet. However, current indications are that it may begin as early as summer 2017, and take up to 90 days to complete dredging/discharge operations. This does not include time for mobilization and demobilization of equipment, including dredges, which could add up to 3 more months to the total schedule. The applicant has requested authorization for 10 years of maintenance of the proposed project. The applicant currently anticipates that an additional one or two re-nourishment cycles may be required over the life of a 10-year permit, depending upon whether the Federal project is funded. The expected maximum volume for each such event would be up to 1.5 million cubic yards.

The State of New Jersey, Department of Environmental Protection (NJDEP), Division of Land Use Regulation (DLUR) has previously issued multiple Federal Consistency Determinations and Section 401 Water Quality Certifications to the U.S. Army Corps of Engineers from 2000 through 2016 for their federal beach nourishment project (NJDEP Files 1500-02-0007.1 and 1500-99-0001.1 & .2).

The applicant has stated the following as their position with regard to (a) avoidance and minimization of impacts to aquatic resources, and (b) compensatory mitigation for such impacts:

“The project proposes beach nourishment along the Township of Long Beach and Borough of Beach Haven on Long Beach Island to reconstruct areas eroded by post-construction storm damage in the southern portion of Area 6 of the authorized and constructed US Army Corps of Engineers Philadelphia District Barnegat Inlet to Little Egg Inlet, Long Beach Island, Ocean County, New Jersey Beachfill (USACOE Beachfill). Impact to waters of the United States has been minimized by keeping within the constructed footprint of the USACOE Beachfill. Because the project proposes beach nourishment within the previously authorized and constructed USACOE Beachfill area, compensatory mitigation should not be required.”

PURPOSE: The applicant's stated purpose is "beach nourishment / storm damage reduction."

Pursuant to Section 7 of the Endangered Species Act as amended, a preliminary review of this application indicates that the proposed work may have the potential to have an effect on the following federally listed (threatened) species under the jurisdiction of the U.S. Fish and Wildlife Service: piping plover (*Charadrius melodus*), seabeach amaranth (*Amaranthus pumilius*) and red knot (*Calidris canutus rufa*). Our initial determination is that the proposed project is not likely to adversely affect the indicated species. This office will consult with the U.S. Fish and Wildlife Service regarding this application and any necessary protection measures. As the evaluation of this proposal continues, additional information may become available which could modify this preliminary determination.

Pursuant to Section 7 of the Endangered Species Act as amended, a preliminary review of this application indicates that the proposed work may have the potential to have an effect on the following federally listed (threatened) species under the jurisdiction of the National Marine Fisheries Service (NMFS):

Atlantic sturgeon, all five Distinct Population segments (DPSs) (*Acipenser oxyrinchus oxyrinchus*), endangered (except Gulf of Maine DPS, threatened).

Green sea turtle (*Chelonia mydas*), threatened.

Kemp's Ridley sea turtle (*Lepidochelys kempii*), endangered.

Leatherback sea turtle (*Dermochelys coriacea*), endangered.

Loggerhead sea turtle, Northwest Atlantic Ocean DPS (*Caretta caretta*), threatened.

Blue whale (*Balaenoptera musculus*), endangered.

Fin whale (*Balaenoptera physalus*), endangered.

Humpback whale (*Megaptera novaeangliae*), endangered.

North Atlantic right whale (*Eubalaena glacialis*), endangered.

Sei whale (*Balaenoptera borealis*), endangered.

Sperm whale (*Physeter macrocephalus*), endangered.

In addition, alewife (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*), collectively referred to as “river herring,” are designated as NMFS “species of concern.” This status does not carry any procedural or substantive protections under the ESA.

Our initial determination is that the proposed project is not likely to adversely affect the indicated species. This office will consult with the NMFS regarding this application and any necessary protection measures. As the evaluation of this proposal continues, additional information may become available which could modify this preliminary determination.

The decision whether to issue a permit will be based on an evaluation of the activity's probable impact including its cumulative impacts on the public interest. The 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 work must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the work will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs and welfare of the people. A Department of the Army permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The Corps of Engineers 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 of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on 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 and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Comments on the proposed work should be submitted, in writing, within 30 days to the District Engineer, U.S. Army Corps of Engineers, Philadelphia District, Wanamaker Building, 100 Penn Square East, Philadelphia, Pennsylvania 19107-3390.

The Corps has conducted a remote sensing survey of their proposed borrow area, which encompasses the area proposed for use by the applicant. They have consulted with the New Jersey Historic Preservation Office (NJ-HPO) regarding their findings as part of the above referenced Draft EA. There are multiple shipwreck sites and other unknown magnetic anomalies just outside the area proposed by the applicant for borrow. The applicant's project plans include avoidance buffers around these targets of 200 to 500 feet, depending on the target. Section 106 compliance, including consultation with NJ-HPO, is ongoing as part of this Regulatory Branch permit application review.

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act 1996 (Public Law 104-267), requires all Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH). The Corps of Engineers, Planning Division, has prepared an EFH assessment as part of a draft Environmental Assessment for their "Little Egg Inlet Sand Resource Borrow Area Investigation." The applicant's proposed borrow area occupies a small portion (roughly 5 percent) of the potential borrow area investigated by the Corps (Planning). The Corps'

assessment of the species listed in the "Guide to Essential Fish Habitat Designations in the Northeastern United States, Volume IV: New Jersey and Delaware", dated March 1999, specifically page 43, indicated that the proposed work could have immediate direct and indirect impacts on habitat for surfclams, black sea bass, scup, summer flounder, egg and larval stages of winter flounder and several shark species, including sandbar shark Habitat Area of Particular Concern (HAPC), among others.

Analysis of the Effects: Dredging within the Little Egg Inlet borrow area has the potential to impact EFH several ways: by direct entrainment of eggs and larvae; by the creation of higher suspended sediment levels in the water column, reducing feeding success for site-feeding fish; and by reducing water oxygen levels. Impacts would be primarily temporary in nature, during the actual dredging period or for a short duration afterward. Substrate conditions typically return to preconstruction conditions and the benthic community recovers through recolonization. Impacts to fish species with designated EFH can occur within inlets and estuaries as a variety of fish species migrate in and out of inlets, such as summer flounder. Dredging within the borrow site would not diminish topographic variability and would not create deep pits that allow for anoxia or siltation, environments unsuitable for recolonization, and the inlet shoal system regenerates naturally. The proposed project could impact surf clams although the numbers that occur in the inlet are very low. The neonate and juvenile stages of several shark species are predominately located in shallower coastal waters but are highly mobile and able to avoid the dredge during active pumping.

Corps of Engineers View: Based upon the above analysis, the Corps of Engineers has determined that the proposed project would not have a substantial adverse effect (i.e. not more than minimal adverse effect) on the EFH of managed species, or upon their life stages listed in the above referenced EFH guide, either individually, cumulatively or synergistically. This includes direct, indirect, site-specific and/or habitat-wide impact on EFH. The proposed project would not eliminate, diminish, nor disrupt the functions of EFH.

For the species identified in the above referenced Guide, including highly migratory pelagic species that may occur in the vicinity, the potential for adverse impacts to EFH would be considered temporary and minimal. The proposed dredging location is located sufficiently offshore and outside the actual mouth of the inlet that the likelihood of temporary elevated turbidity at the dredge is not likely to pose any (temporary) interference with fish migration in and out of the inlet. The inlet throat is sufficiently wide (approximately 4,000 feet) such that the proposed offshore dredging should not impede fish migration. Current scour depths in the inlet throat may exceed 40 feet, and currents through the inlet are likely to be relatively high. This would make the inlet throat itself unlikely habitat for EFH species, and in particular neonate or juvenile sandbar sharks other than as a transit corridor between the Great Bay/Mullica River estuary and the Atlantic Ocean. The effect on surfclams and other benthic organisms (that include food prey items) in the proposed borrow area is considered to be temporary as benthic studies have demonstrated recolonization following dredging operations from adjacent areas where the benthic community is left intact.

The total impact to EFH is considered minimal due to the nature of the proposed borrow area and the relatively small area that would be temporarily disturbed compared to the total habitat available in the project vicinity. Sand characteristics within Little Egg Inlet are similar to the sand resources occurring in adjacent areas along the LBI coastline and neighboring inlets. This

office has not completed consultation with NMFS on this action. Therefore, EFH conservation recommendations have not been identified at this time. Our preliminary determination may change as a result of consultation with the National Marine Fisheries Service.

In accordance with Section 307(c) of the Coastal Zone Management Act of 1972, applicants for Federal Licenses or Permits to conduct an activity affecting land or water uses in a State's coastal zone must provide certification that the activity complies with the State's Coastal Zone Management Program. The applicant has stated that the proposed activity complies with and will be conducted in a manner that is consistent with the approved State Coastal Zone Management (CZM) Program. No permit will be issued until the State has concurred with the applicant's certification or has waived its right to do so. Comments concerning the impact of the proposed and/or existing activity on the State's coastal zone should be sent to this office, with a copy to the State's Office of Coastal Zone Management.

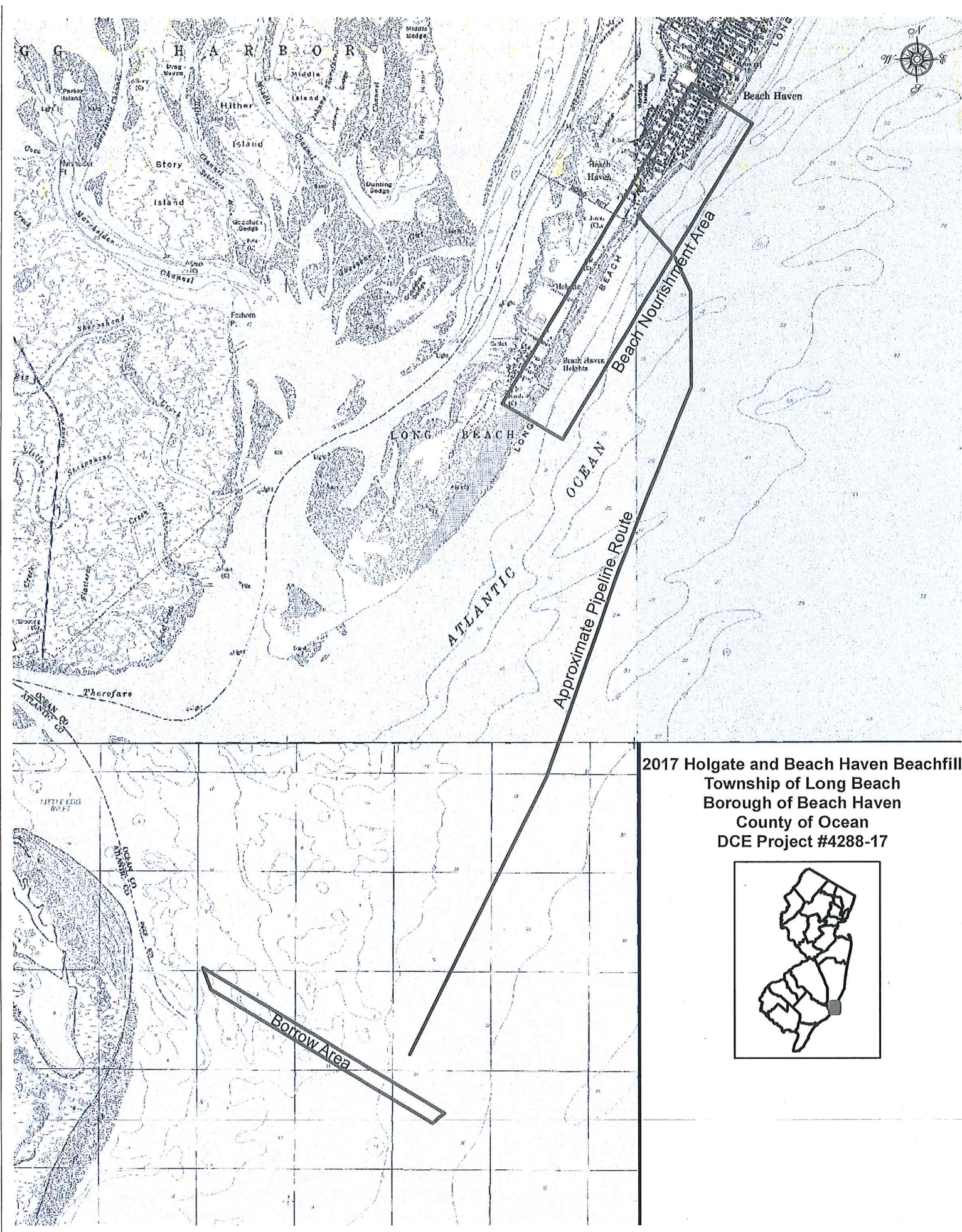
In accordance with Section 401 of the Clean Water Act, a Water Quality Certificate is necessary from the State government in which the work is located. Any comments concerning the work described above which relate to Water Quality considerations should be sent to this office with a copy to the State.

The evaluation of the impact of the work described above on the public interest will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act.

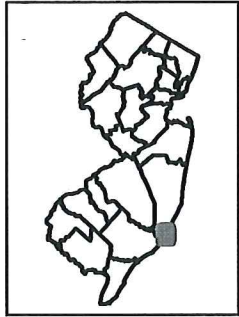
Any person may request, in writing, to the District Engineer, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for a public hearing shall state in writing, with particularity, the reasons for holding a public hearing.

Additional information concerning this permit application may be obtained by calling James Boyer at (215) 656-5826, by electronic mail to James.N.Boyer@usace.army.mil, or by writing to this office at the above address.

Edward E. Bonner
Chief, Regulatory Branch



2017 Holgate and Beach Haven Beachfill
 Township of Long Beach
 Borough of Beach Haven
 County of Ocean
 DCE Project #4288-17

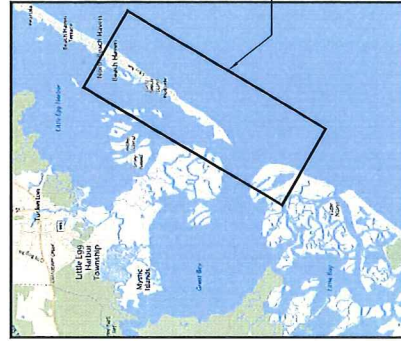


1 inch = 4,000 feet

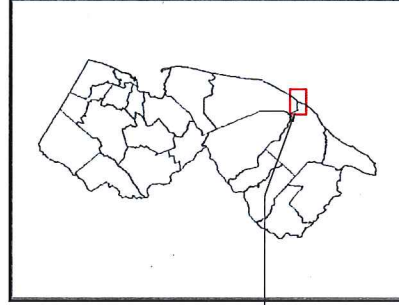
Tuckerton, Brigantine Inlet and Beach Haven USGS Quads
 Map Created March, 2017

STATE OF NEW JERSEY
 DEPT. OF ENVIRONMENTAL PROTECTION
 ENGINEERING & CONSTRUCTION
 DIVISION OF COASTAL ENGINEERING
 DCE PROJECT NO. 4288-17

2017 HOLGATE & BEACH HAVEN BEACHFILL
 TOWNSHIP OF LONG BEACH
 TOWNSHIP OF BEACH HAVEN
 COUNTY OF OCEAN



PROPOSED PROJECT AREA

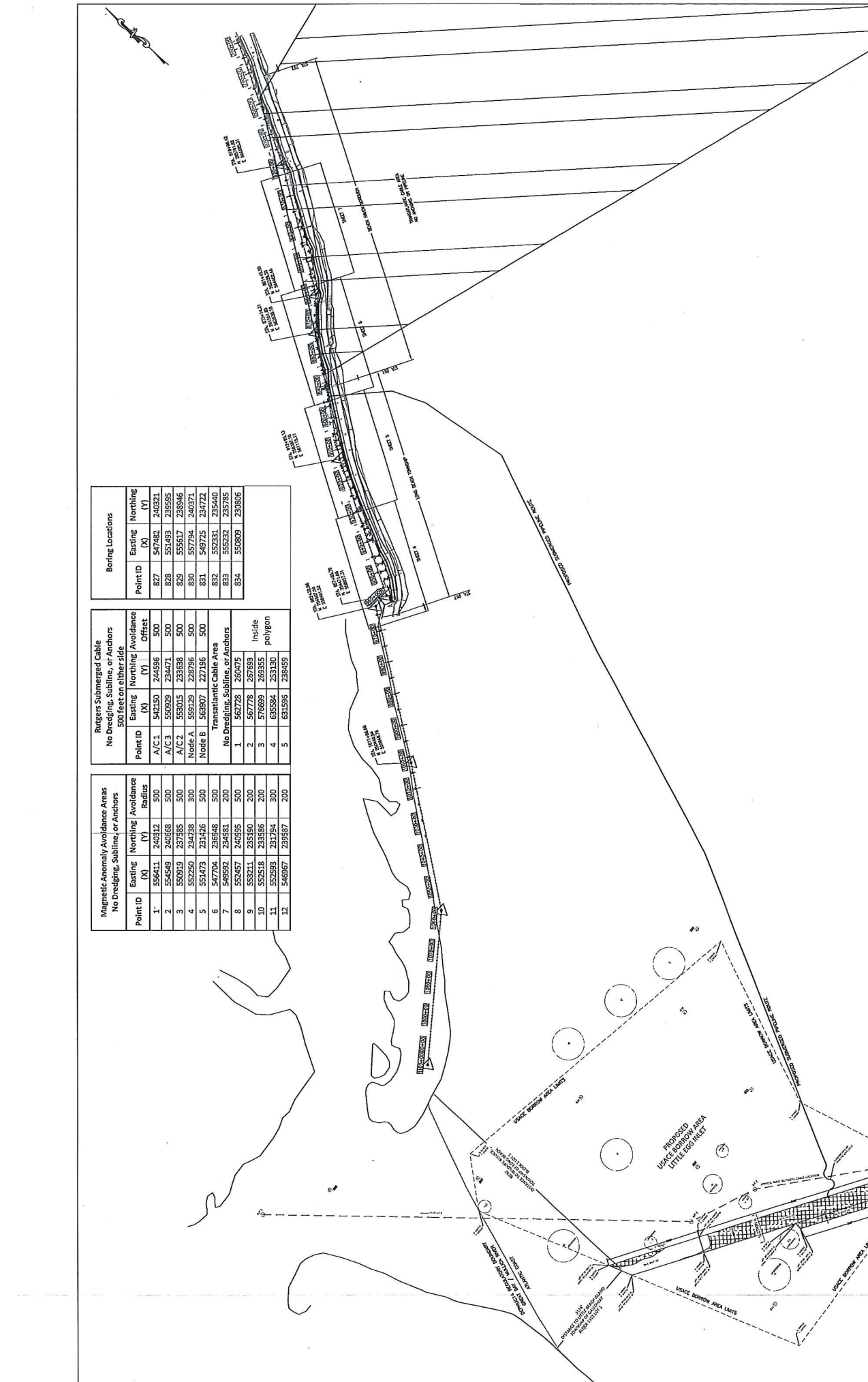


		STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF COASTAL ENGINEERING	
OWEN, LITTLE, & LITTLE A PROFESSIONAL CORPORATION 1000 ROUTE 100 SUITE 200 BEACH HAVEN, NJ 08008 TEL: 856.261.1100 FAX: 856.261.1101		2017 HOLGATE & BEACH HAVEN BEACHFILL TOWNSHIP OF LONG BEACH TOWNSHIP OF BEACH HAVEN COUNTY OF OCEAN	
PREPARED BY: O.L.L. CHECKED BY: O.L.L. DATE: 08/14/17	PROJECT NO.: 4288-17 SHEET NO.: 1 OF 1	DRAWN BY: O.L.L. CHECKED BY: O.L.L. DATE: 08/14/17	PROJECT NO.: 4288-17 SHEET NO.: 1 OF 1

Magnetic Anomaly Avoidance Areas No Dredging, Subline, or Anchors			
Point ID	Easting [X]	Northing [Y]	Avoidance Radius
1	556411	240312	500
2	554549	240668	500
3	550919	237385	500
4	552250	234738	300
5	551473	231426	500
6	547704	236548	500
7	549592	234381	200
8	552457	240995	500
9	553211	235190	200
10	553518	233586	200
11	552393	231794	300
12	549567	239387	200

Rutgers Submerged Cable No Dredging, Subline, or Anchors 500 feet on either side			
Point ID	Easting [X]	Northing [Y]	Avoidance Offset
A/C.1	542150	244596	500
A/C.3	550929	234471	500
A/C.2	553015	233638	500
Node A	559129	228796	500
Node B	563907	227196	500

Boring Locations			
Point ID	Easting [X]	Northing [Y]	
827	547482	240321	
828	551483	239595	
829	555617	238946	
830	557794	240371	
831	549725	234722	
832	552331	235440	
833	555232	235785	
834	550909	230805	

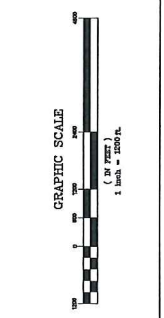


OWEN LITTLE
INCORPORATED
A PROFESSIONAL ENGINEERING FIRM
1000 WEST 10TH STREET
NEW BRUNSWICK, NJ 08901
TEL: 732-839-2000
FAX: 732-839-2001

FRANK J. LITTLE, JR.
P.E., P.P.
[Signature]
New Jersey Professional Engineer
No. 12-10000000000000000000
No. 12-10000000000000000000

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF COASTAL ENGINEERING
2017 HULGATE & BEACH HAVEN BEACHHILL
PROJECT OVERVIEW

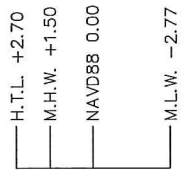
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PROJECT NO.	17-000
DATE	10/26/2017
SCALE	AS SHOWN
PROJECT NO.	17-000
DATE	10/26/2017
SCALE	AS SHOWN
PROJECT NO.	17-000



Magnetic Anomaly Avoidance Areas		
No Dredging, Subline, or Anchors	Point ID	Radius
1	556411	240312
2	554549	240688
3	550919	237985
4	552250	234738
5	551473	231426
6	547704	226948
7	549592	224981
8	552457	240995
9	553211	235190
10	552518	233986
11	552699	231794
12	546867	239587

Rutgers Submerged Cable		
No Dredging, Subline, or Anchors	Point ID	Radius
1	542150	244596
2	550229	234471
3	553015	233638
4	559129	228796
5	563907	227196

BORINGS	
Point ID	Coordinates (X, Y)
827	547482, 240321
828	551493, 239595
829	555677, 238846
830	557794, 240371
831	549725, 234722
832	552331, 235440
833	552332, 235785
834	550809, 230806



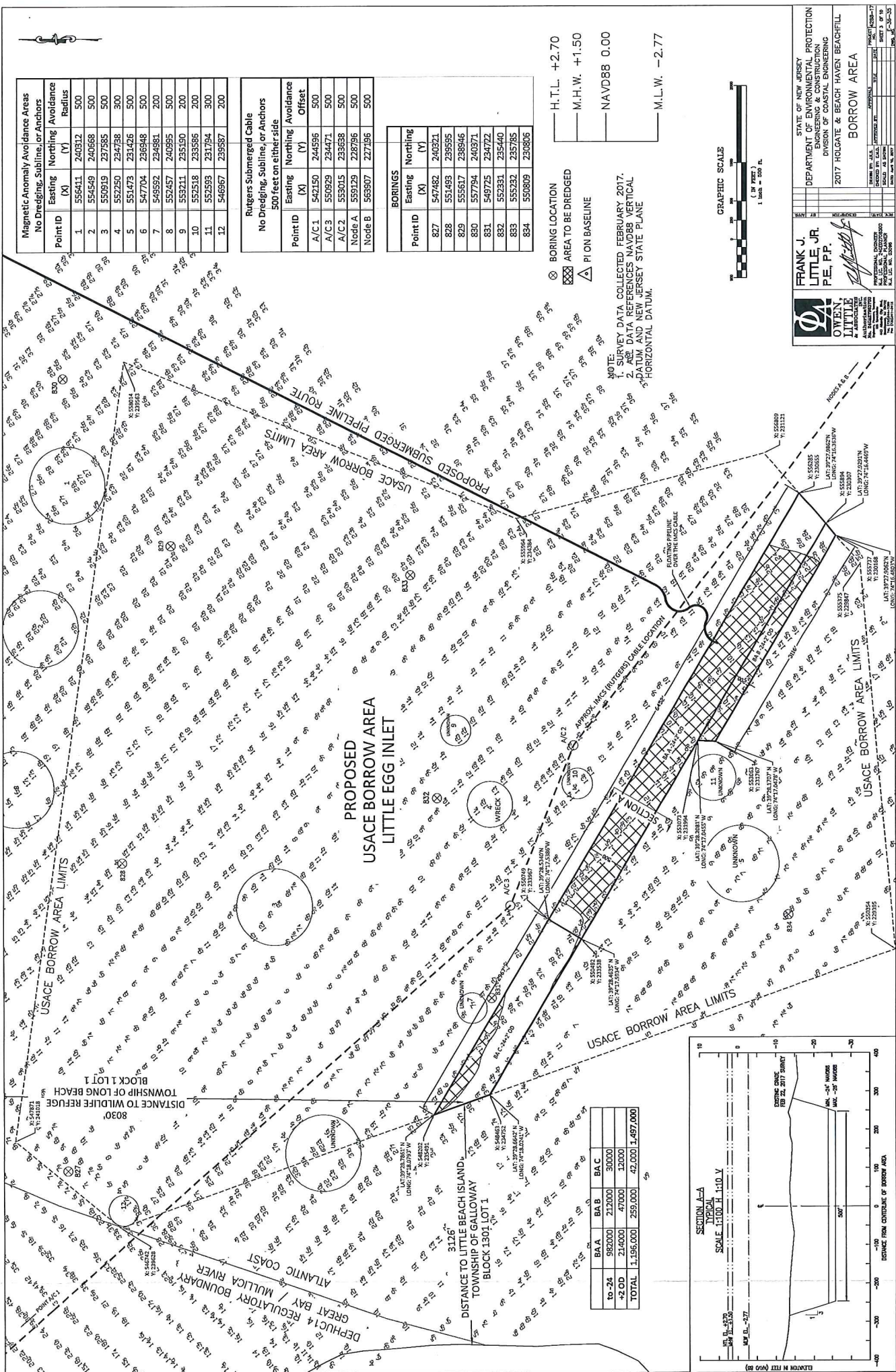
STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENGINEERING & CONSTRUCTION
DIVISION OF COASTAL ENGINEERING

2017 HOLGATE & BEACH HAVEN BEACHFILL
BORROW AREA

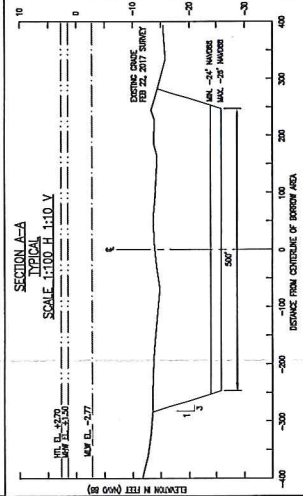
FRANK J. LITTLE, JR.
P.E., P.P.

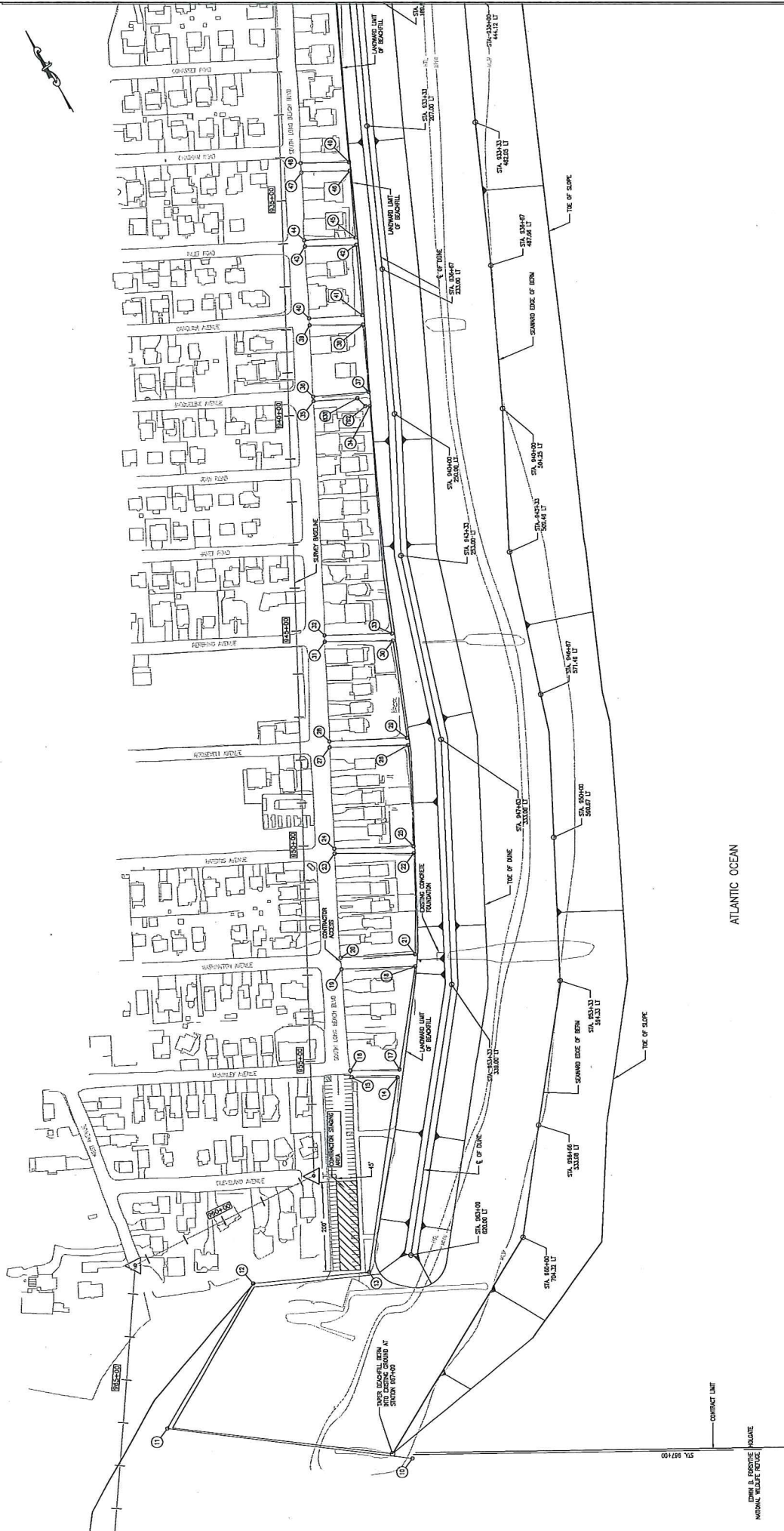
OWEN LITTLE
INCORPORATED
REGISTERED PROFESSIONAL ENGINEER
NO. 24000
EXPIRES 12/31/2020
100 WEST WASHINGTON STREET
NEW JERSEY 07102-3000
TEL: 908.439.2000
FAX: 908.439.2001

NOTE:
1. SURVEY DATA COLLECTED FEBRUARY 2017.
2. DATA REFERENCES NAVD88 VERTICAL DATUM AND NEW JERSEY STATE PLANE HORIZONTAL DATUM.



BA A	BA B	BAL
+0 to +24	982000	212000
+2 OD	214000	47000
TOTAL	1,196,000	259,000
		42,000
		1,497,000





NOTE:
 1. SURVEY DATA COLLECTED OCTOBER, 2016.
 2. ALL DATA REFERENCES NAVD88 VERTICAL DATUM AND NEW JERSEY STATE PLANE HORIZONTAL DATUM.

- H.T.L. +2.70
- M.H.W. +1.50
- NAVD88 0.00
- M.L.W. -2.77

GRAPHIC SCALE
 (IN FEET)
 1 inch = 340 ft.

OWEN LITTLE
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 SUITE 200
 DENVER, CO 80202
 TEL: 303.733.1100
 FAX: 303.733.1101
 WWW.OWENLITTLE.COM

STATE OF NEW JERSEY
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 ENGINEERING & CONSTRUCTION
 DIVISION OF COASTAL ENGINEERING

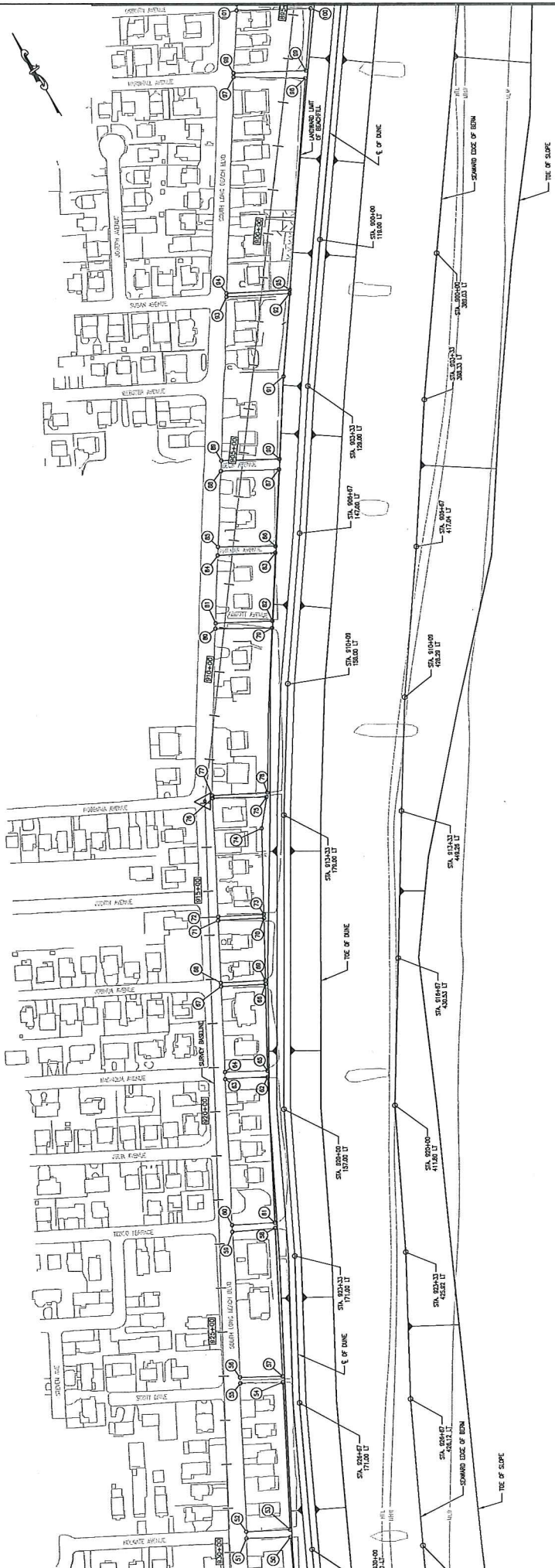
2017 HOLGATE & BEACH HAVEN BEACHFILL
 BEACH PLAN VIEW

PROJECT NO. 15-00000000
 DRAWING NO. 15-00000000-01
 SHEET NO. 1 OF 10
 DATE: 10/20/16

APPROVED BY: [Signature]
 PROJECT MANAGER: [Signature]
 PROFESSIONAL ENGINEER
 NO. 12-00000000
 EXPIRES: 12/31/2018

ATLANTIC OCEAN

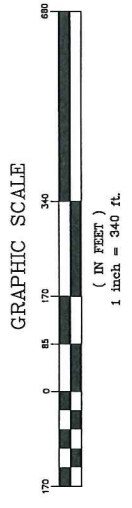
EDWARD S. BROOKS JR.
 MEDICAL MALPRACTICE INSURANCE




ATLANTIC OCEAN

- H.T.L. +2.70
- M.H.W. +1.50
- NAVD88 0.00
- M.L.W. -2.77

NOTE:
 1. SURVEY DATA COLLECTED OCTOBER, 2016.
 2. ALL DATA REFERENCES NAVD88 VERTICAL DATUM AND NEW JERSEY STATE PLANE HORIZONTAL DATUM.





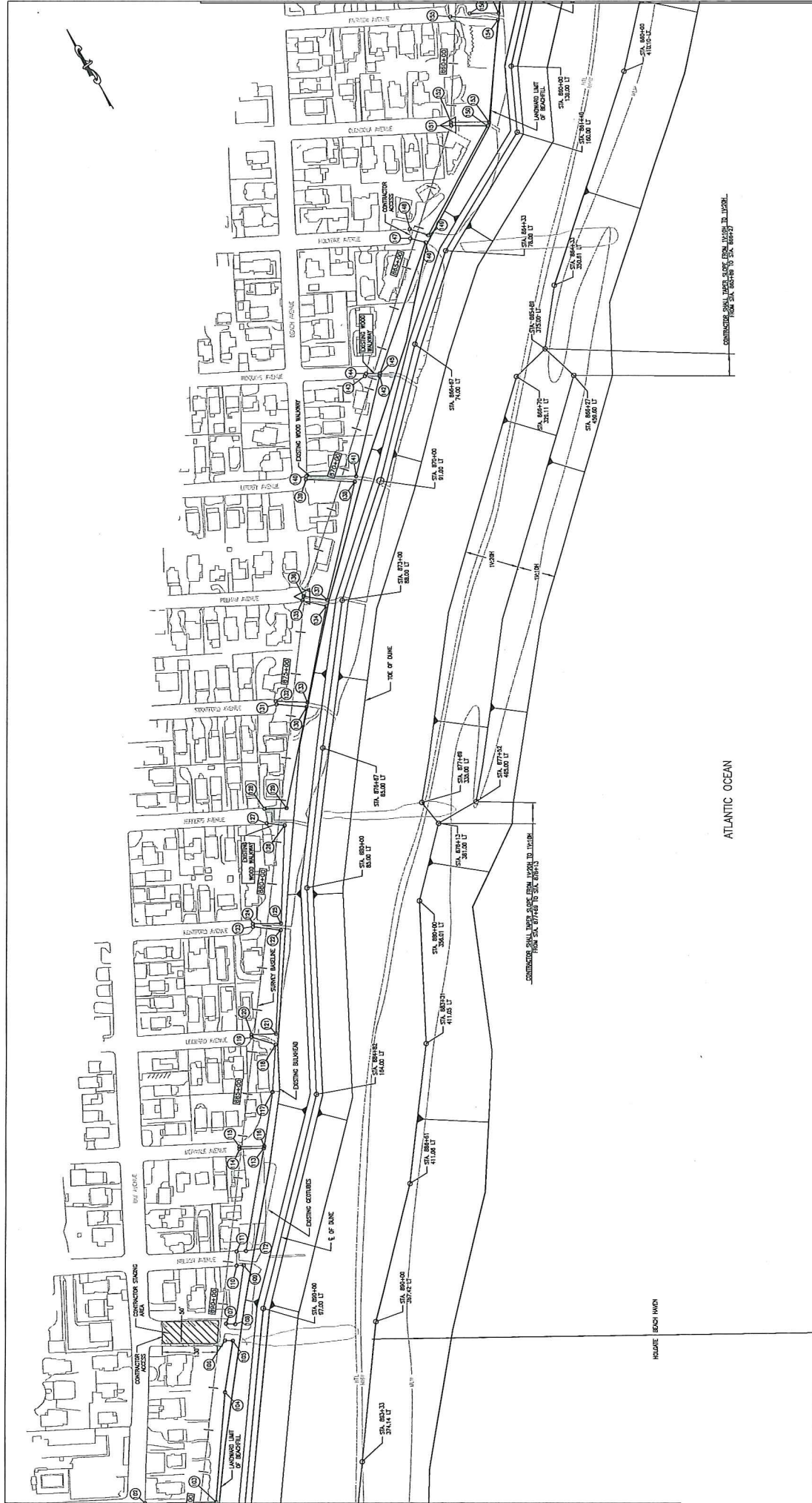
STATE OF NEW JERSEY
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 ENGINEERING & CONSTRUCTION
 DIVISION OF COASTAL ENGINEERING

2017 HIGHLGATE & BEACH HAVEN BEACHFILL
 BEACH PLAN VIEW

PROJECT NO.	16-00000
DATE	10/20/16
SCALE	AS SHOWN
PROJECT LOCATION	HIGHLGATE & BEACH HAVEN BEACHFILL
PROJECT NO.	16-00000
DATE	10/20/16
SCALE	AS SHOWN
PROJECT LOCATION	HIGHLGATE & BEACH HAVEN BEACHFILL

FRANK J. LITTLE, JR.
 P.E., P.P.
(Signature)

PROFESSIONAL ENGINEER
 LICENSE NO. 12-00000000
 N.J. LIC. NO. 00000000



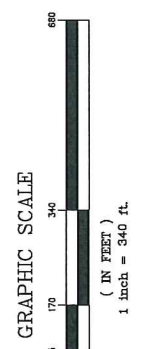
CONTRACTOR SHALL MAINTAIN EXISTING BEACH WIDTH TO 100.00 FT.
FROM STA. 874.49 TO STA. 880.00 FT.

ATLANTIC OCEAN

HOURS: 8:00 AM - 5:00 PM

- H.T.L. +2.70
- M.H.W. +1.50
- NAVD88 0.00
- M.L.W. -2.77

NOTE:
1. SURVEY DATA COLLECTED OCTOBER, 2016.
2. ALL DATA REFERENCES NAVD88 VERTICAL DATUM AND NEW JERSEY STATE PLANE HORIZONTAL DATUM.

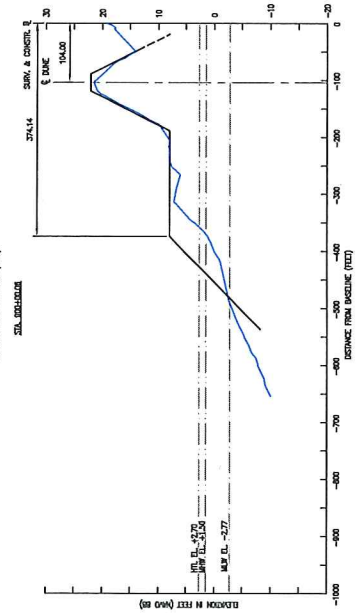
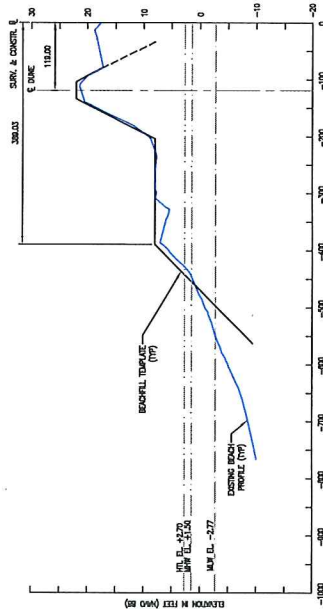
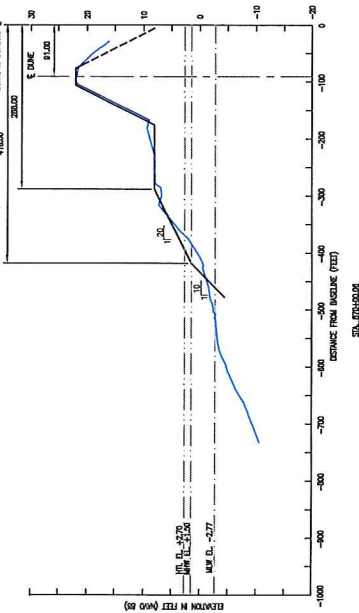
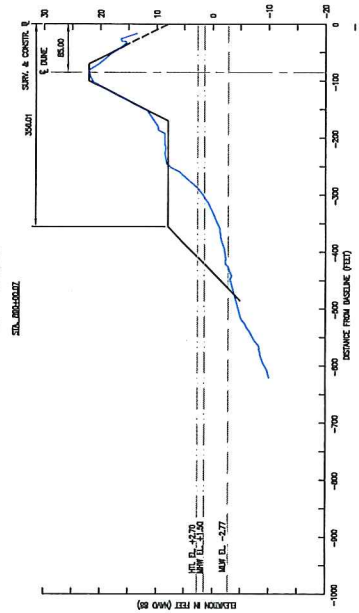
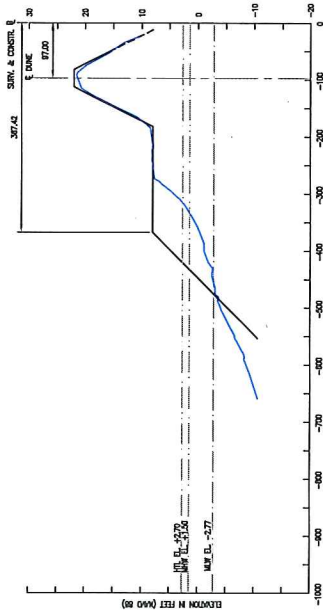
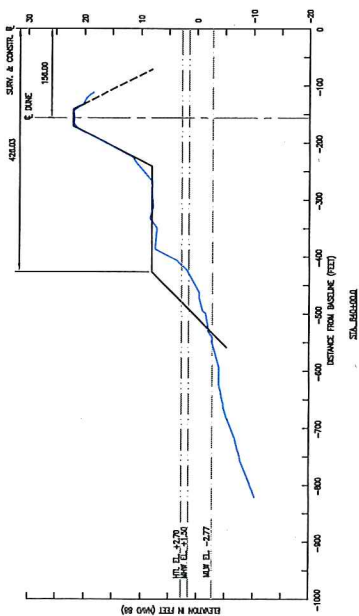
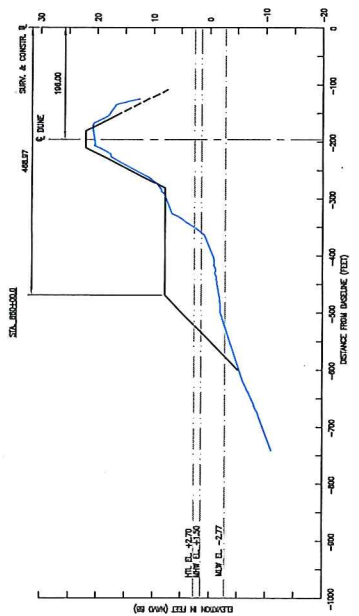
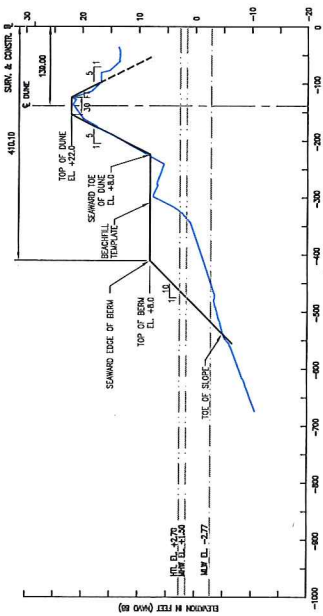


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 ENGINEERING & CONSTRUCTION
 DIVISION OF COASTAL ENGINEERING
 2017 HOLGATE & BEACH HAVEN BEACHFILL
 BEACH PLAN VIEW

DATE	NO. 888	SCALE	DATE
10/10/16		AS SHOWN	10/10/16



NOTE:
1. SURVEY DATA COLLECTED OCTOBER, 2016.
2. SURVEY DATA COLLECTED FROM A VERTICAL DATUM AND NEW JERSEY STATE PLANE HORIZONTAL DATUM.

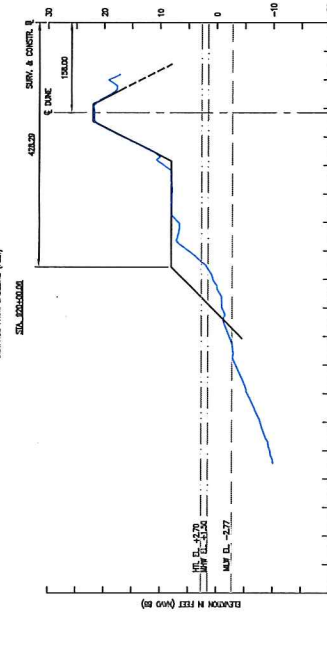
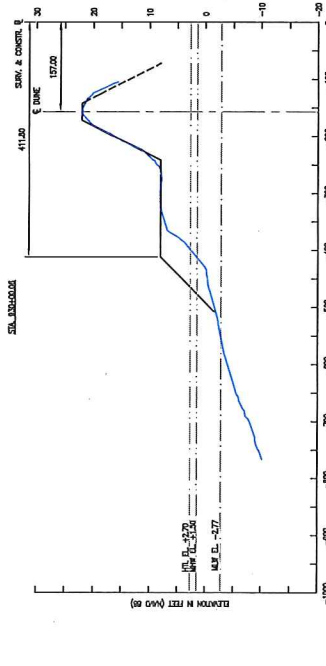
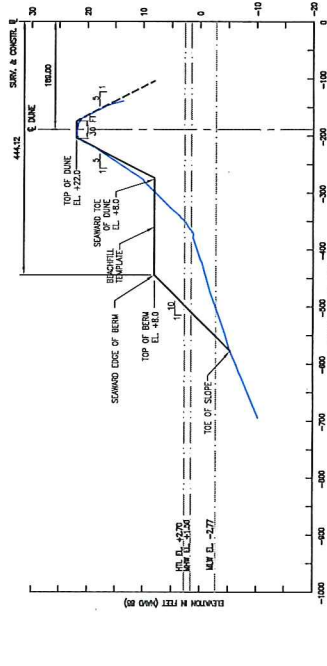
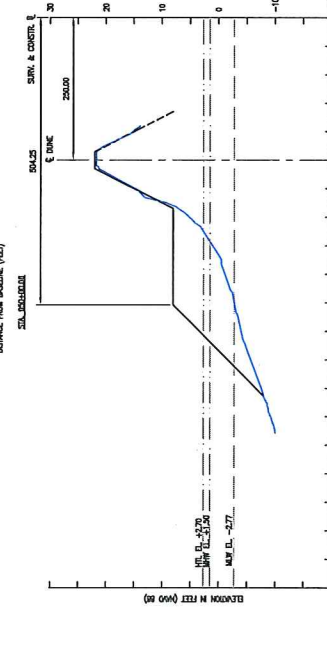
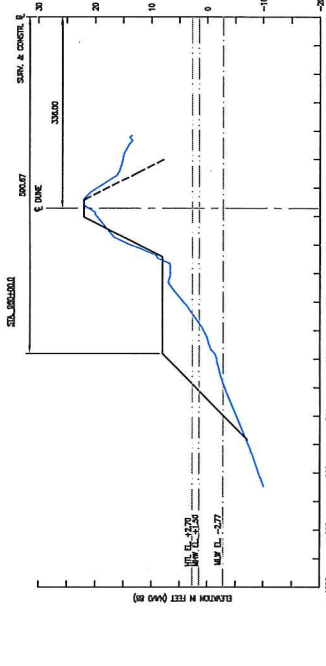
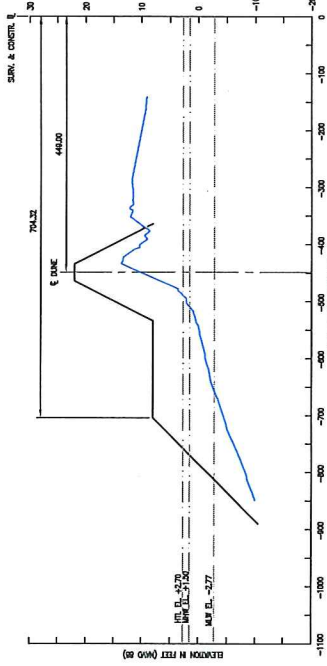


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STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF COASTAL ENGINEERING
2017 HOLGATE & BEACH HAVEN BEACHFILL
BEACH CROSS SECTIONS

PROJECT NO.	16-100-17
SHEET # OF #	10 OF 10
TITLE	BEACH CROSS SECTIONS
DATE	10/20/16
DESIGNED BY	FRANK J. LITTLE, JR.
CHECKED BY	FRANK J. LITTLE, JR.
DATE	10/20/16



NOTE:
 1. SURVEY DATA COLLECTED OCTOBER, 2016.
 2. DATUM REFERENCES AND/OR VERTICAL DATUM AND NEW JERSEY STATE PLANE HORIZONTAL DATUM.

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STATE OF NEW JERSEY
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 ENGINEERING & CONSTRUCTION
 DIVISION OF COASTAL ENGINEERING

2017 HOLGATE & BEACH HAVEN BEACHFILL
 BEACH CROSS SECTIONS

DATE	NOV 14, 2017	PROJECT	2017 HOLGATE & BEACH HAVEN BEACHFILL
BY	FRANK J. LITTLE, JR.	CHECKED BY	FRANK J. LITTLE, JR.
SCALE	AS SHOWN	DATE	NOV 14, 2017
FIG. NO.	17	PROJECT NO.	17-001
REV. NO.	0	DATE	NOV 14, 2017