



**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.
CENAP-OP-R-2015-0098-1

Date
APR 30 2015

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: Delaware River and Bay Authority

AGENT: S.T. Hudson Engineers, Inc.

WATERWAY: Delaware River

LOCATION: The proposed work is located in the Delaware River adjacent to the existing bridge piers supporting the center span of the Delaware Memorial Bridge between New Castle County, Delaware and Salem County, New Jersey. Coordinates for the project are: 39.688866 North Latitude and 75.518553 West Longitude.

ACTIVITY: The applicant is proposing to construct a new bridge protection system. The proposed work would include the installation of eight (8) separate solid-fill dolphin cells. Each cell would measure eighty (80) feet in diameter. Four cells would be installed at the piers supporting the western towers with two cells on the upstream side and two cells on the downstream side. The same configuration would be utilized for the dolphin cells at the piers supporting the eastern towers of the bridge. The dolphin cells at the western towers would be located a minimum of 454 feet from the edge of the Delaware River Federal navigation channel while the dolphin cells at the eastern towers would be located a minimum of 413 feet from the edge of the Delaware River Federal navigation channel.

The proposed cells would be located in water depths ranging from 35 to 45 feet at mean low water. The cells would be constructed with inter-locking steel sheet piles driven into the river bottom by a vibratory hammer. Once the sheet piling is in place the interior area of each dolphin cell would be backfilled with sand and gravel fill and then capped with a concrete slab. The total area of disturbance within the Delaware River for all eight dolphin cells would equal 0.92 acres. Additional information on the project location and design is shown in the attached plans.

PURPOSE: The purpose of the proposed project is to upgrade the existing bridge protection system and provide added protection to the existing bridge piers from potential ship collisions.

The applicant believes that the existing fender system surrounding the bridge piers is outdated and inadequate to protect the bridge from collisions with the larger and modern vessels entering the Delaware River. The proposed work has been designed to protect the bridge piers based upon a vessel design of 156,000 deadweight tons and traveling at a speed of 7 knots.

A preliminary review of this application has been conducted pursuant to Section 7 of the Endangered Species Act as amended. Shortnose sturgeon (*Acipenser brevirostrum*) occur in the Delaware River from the lower bay upstream to Lambertville, NJ. Adult shortnose sturgeon may occur in the project vicinity between mid-May and mid-November as they migrate between upstream spawning areas and downstream summer foraging areas. The project site would be used primarily as a migratory corridor. Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) also occur in the Delaware River. Five distinct populations of Atlantic sturgeon are listed under the Endangered Species Act. The Gulf of Maine DPS is listed as threatened; the New York Bight, Chesapeake Bay, Carolina and South Atlantic DPSs are listed as endangered. Atlantic sturgeon from any of the five DPSs may be present in the Delaware River. In the Delaware River and estuary, Atlantic sturgeon occur from the mouth of the Delaware Bay to the fall line near Trenton, NJ. Based upon available information, spawning for Atlantic sturgeon may occur in the Delaware River between river miles 73 and 93 and between river miles 105 and 120. The project site is located at approximately river mile 69 and would be used primarily as a migratory corridor. Based upon the installation of steel sheet piles by vibratory hammer, noise and turbidity levels are expected to be minor and localized. Based upon an established seasonal prohibition of pile driving between March 15 and May 31 it has been determined that the proposed work is not likely to adversely affect listed species or their critical habitat pursuant to Section 7 of the Endangered Species Act as amended. As the evaluation of this application 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.

Review of the National Register of Historic Places indicates that no registered properties or properties listed as eligible for inclusion therein are located within the permit area of the work.

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 on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely effect Essential Fish Habitat (EFH). An 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, has been conducted. According to this publication the project site is located in an area defined as the mixing zone of the Delaware River. This document along with other information available on the National Marine Fisheries Service website, indicates that various life stages of the following managed species can be found in the Delaware River mixing zone; winter flounder, windowpane flounder, American plaice, Atlantic sea herring, bluefish, Atlantic butterfish, summer flounder, scup, black sea bass, clear nose skate, winter skate and little skate.

The managed species listed above are marine species that migrate into estuarine habitats during various life stages and seasons. The available information would indicate that the species listed above would require salinity levels greater than 5 parts per thousand (ppt). According to the Comprehensive Conservation and Management Plan for the Delaware Estuary prepared by the Delaware Estuary Program salinity levels at the project site would be expected to range between 0.1 ppt during periods of high river flows to as much as 15 ppt during periods of low river flows. During periods of high-river flows which generally occur during the early spring through early summer months, the salinity levels at the project site would not be conducive to the listed species and as such would not be described as essential fish habitat for these species during high flow conditions. During the period of low river flows which generally occur during the late summer and through early winter months, the listed species are generally migrating off-shore or south toward deeper and/or warmer water temperatures. As such, the proposed project site would have only marginal value as habitat for the listed species and would have only minor direct adverse effects to the listed species. However, the Delaware River does support annual spawning migrations of anadromous fisheries such as shad and herring that are identified as prey species for the managed species described in the Delaware River mixing zone. According to the essential fish habitat regulations developed by the National Marine Fisheries Service under the Magnuson-Stevens Fisheries Conservation and Management Act, adverse effects to essential fish habitat can occur at any location if there is an indirect effect on managed species. Noise levels from the proposed work would be expected to be localized to the project site since a vibratory hammer would be used for the sheet pile installation. Further, the installation of the dolphin cells and their associated backfilling would not be expected to generate any significant amount of turbidity. With the inclusion of a seasonal restriction to prohibit pile driving activities between March 15 and May 31, the effects on anadromous fisheries spawning migrations would be minimal. Based upon the above analysis, the Corps of Engineers has determined that the

proposed project would have only minor adverse effects on EFH, either individually, cumulatively or synergistically.

With regard to compensatory mitigation, the applicant has offered that the development of deep water habitat to compensate for the loss of deep water habitat resulting from the proposed project is no warranted or practicable.

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.

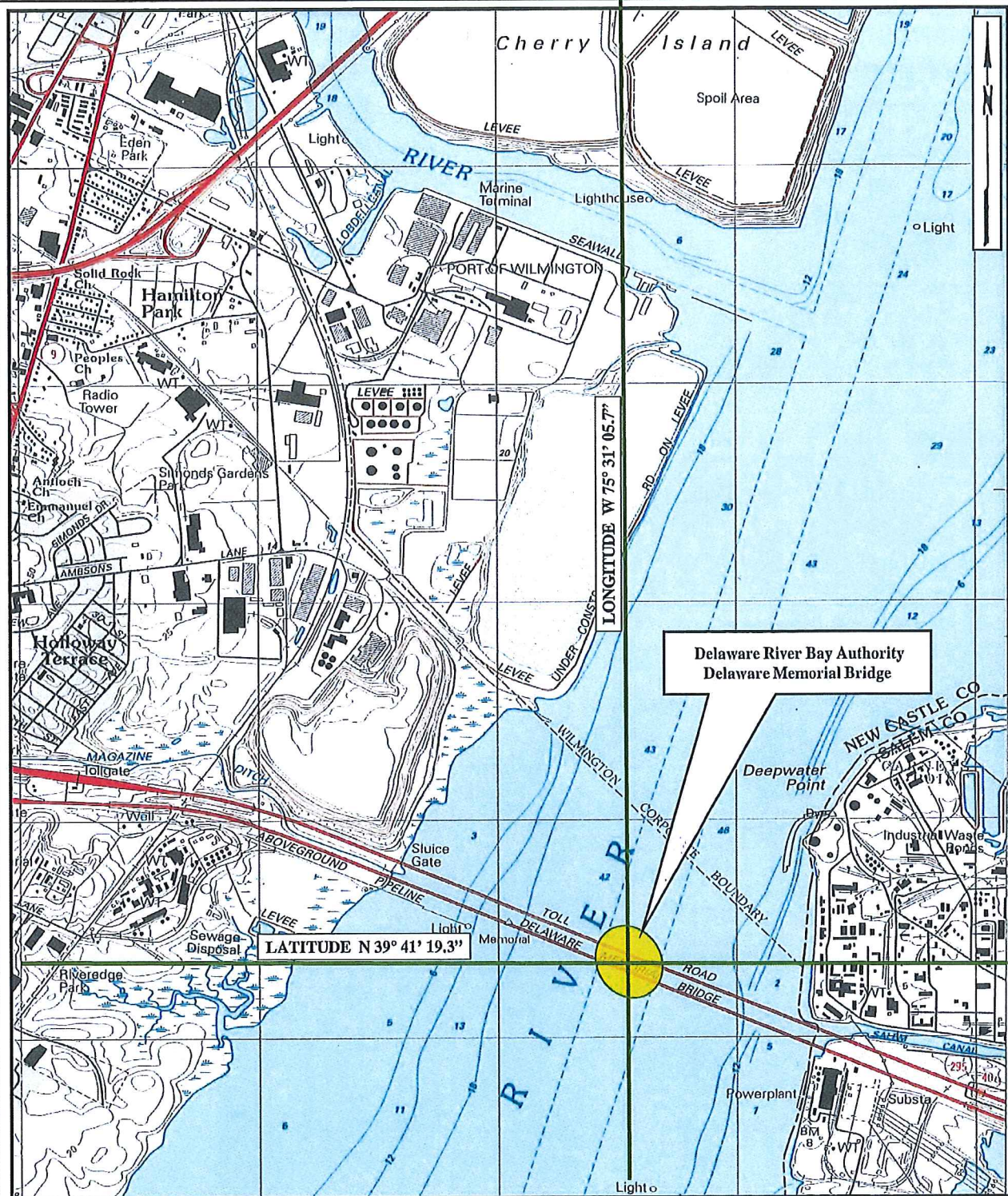
The evaluation of the impact of the work described above on the public interest will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act.

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 Mr. Edward Bonner at 215-656-5932, via email at edward.e.bonner@usace.army.mil, or writing this office at the above address.



Frank J. Cianfrani
Chief, Regulatory Branch



PROJECT SITE LOCATION MAP
 UNITED STATES GEOLOGIC SURVEY QUADRANGLE
 DELAWARE RIVER BAY AUTHORITY
 DELAWARE MEMORIAL BRIDGE
 SCALE 1:24000 (1"=2000')

DRBA

H-6922-18



S. T. HUDSON ENGINEERS, INC.

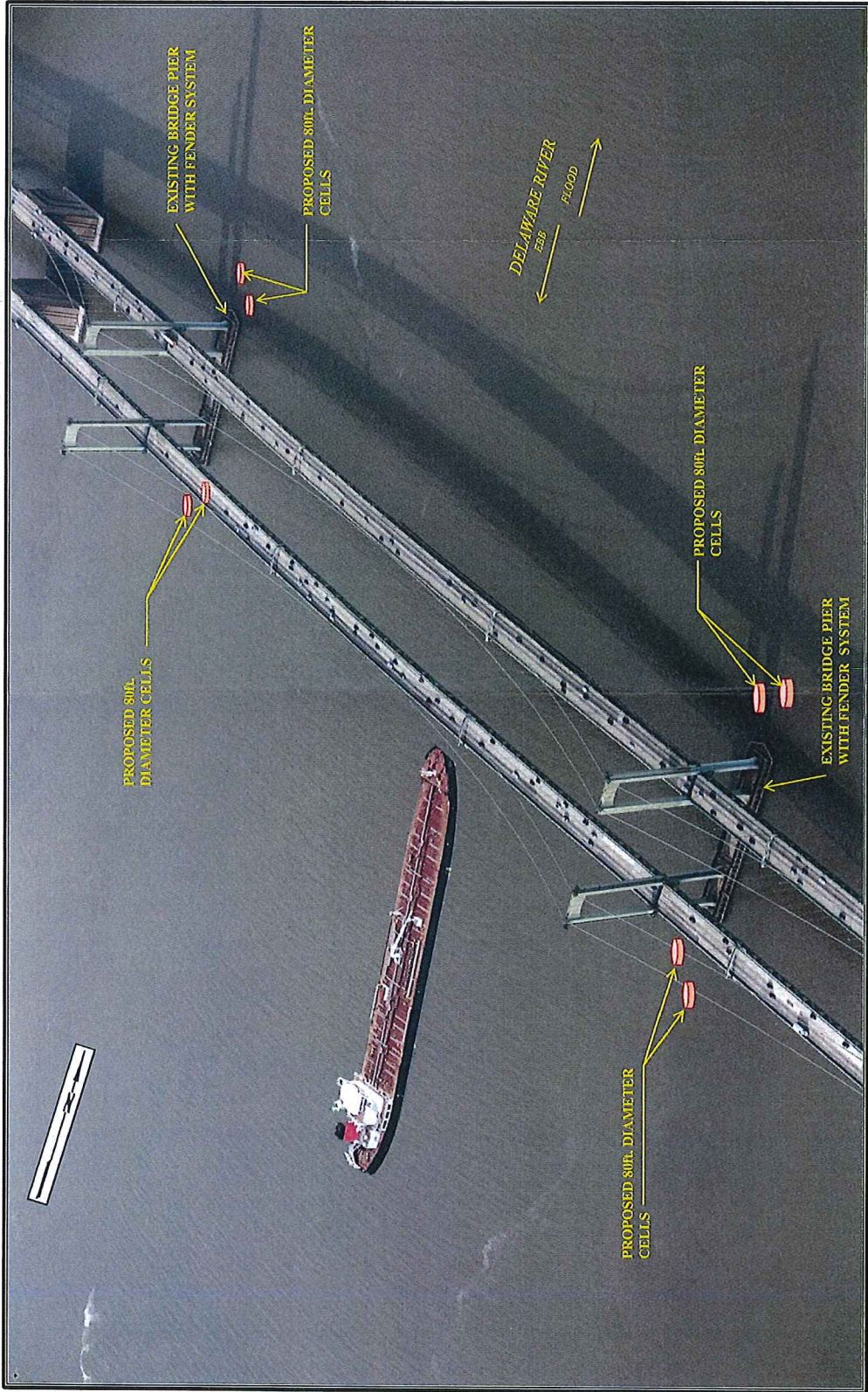
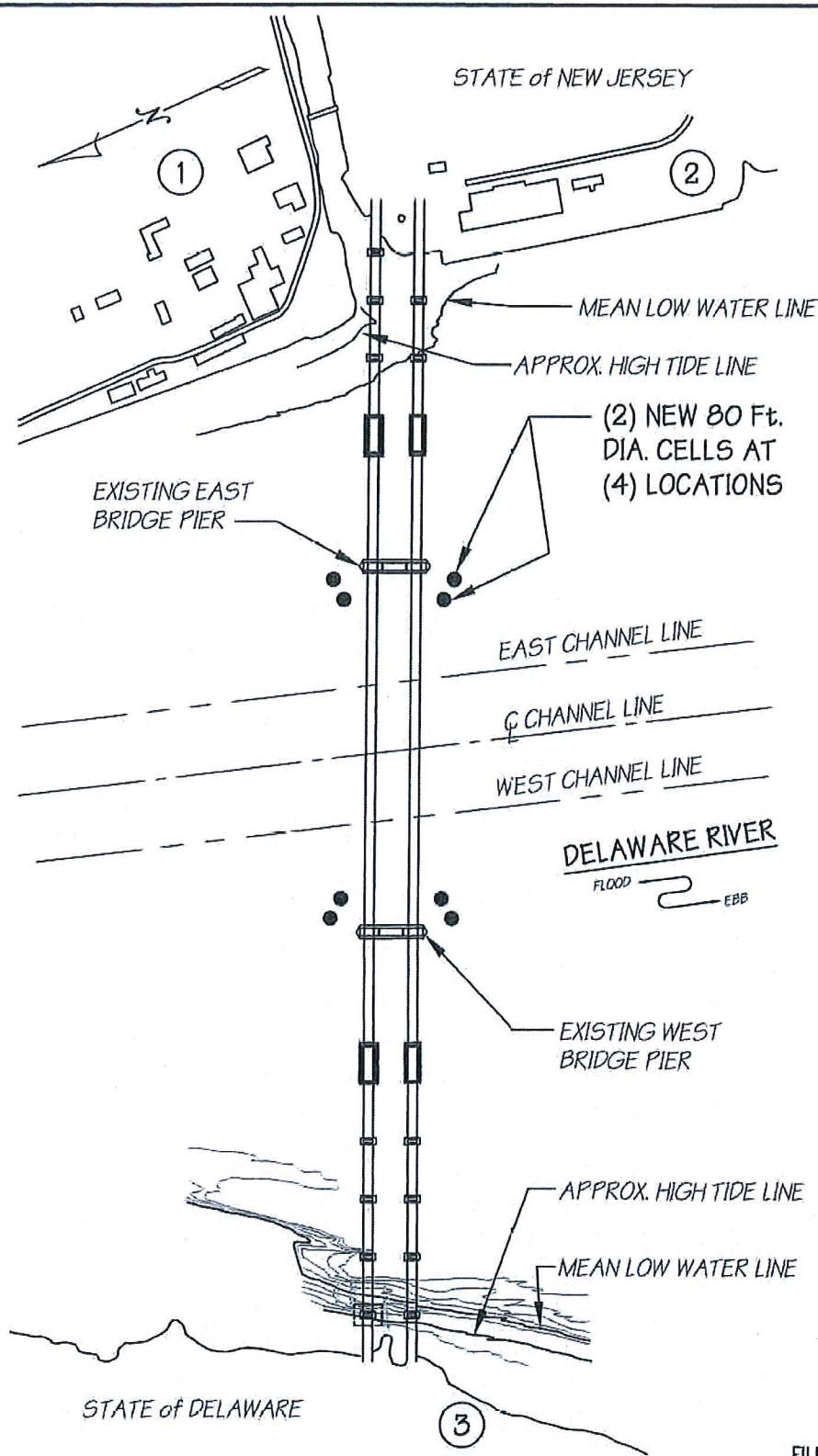


PHOTO No. 5: ORTHOGRAPHIC AERIAL VIEW OF THE DELAWARE MEMORIAL BRIDGE, SHOWING PROPOSED DOLPHIN (CELL) PROTECTION.

H-6922-1B



ADJACENT PROPERTY OWNERS:

- ① E.I. DuPont deNemours and Co.
- ② Calpine Corporation
- ③ Delaware River & Bay Authority

DATUM CHART:

HIGH TIDE LINE +5.5

MEAN HIGH WATER +5.3

MEAN LOW WATER +0.0

PLAN

SCALE: 1" = 1000'

NOTE: FINAL DESIGN REQUIRED FOR CONSTRUCTION. THIS DRAWING IS FOR PERMITTING PURPOSES ONLY.

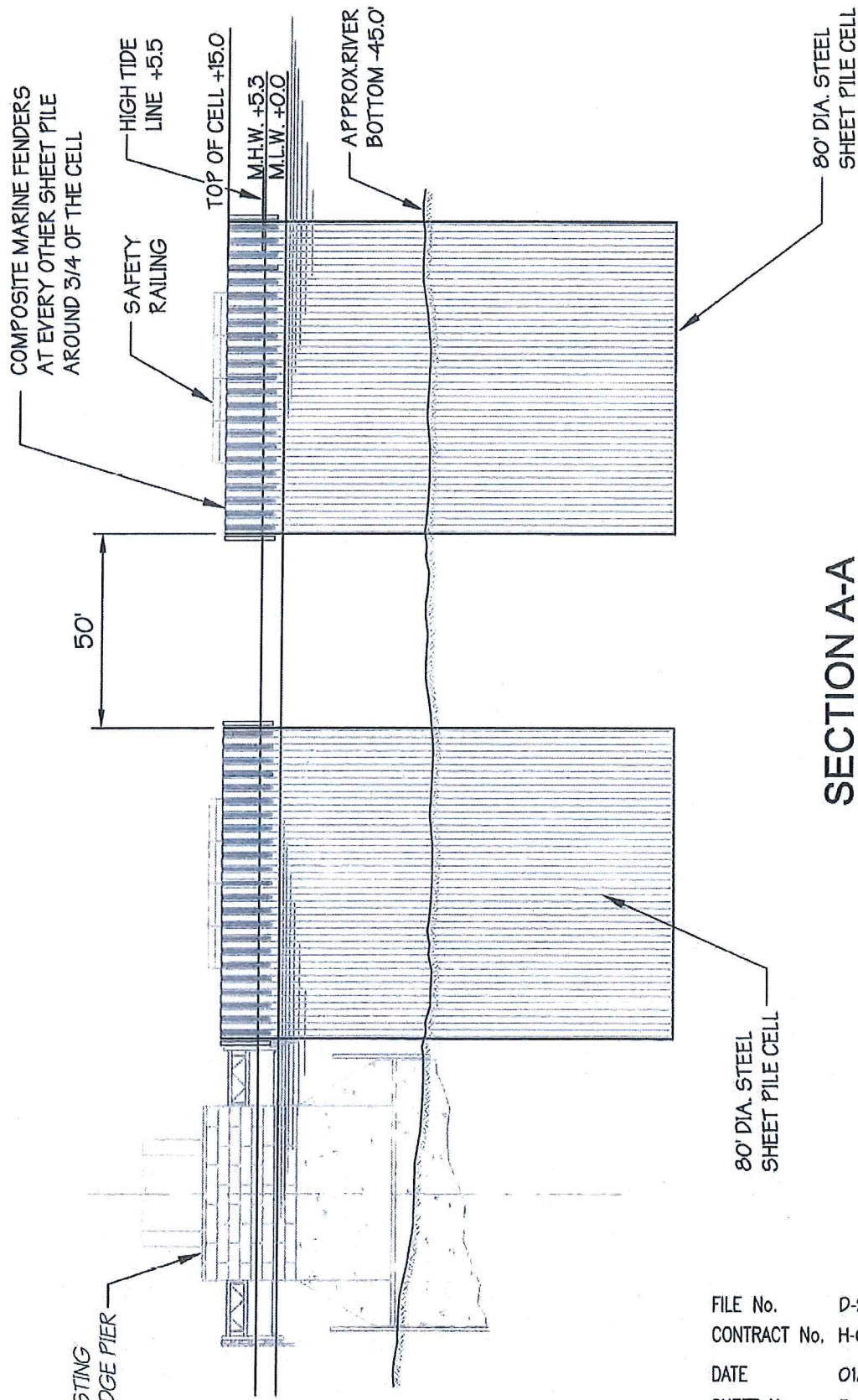
S.T. HUDSON ENGINEERS, INC.
 PROFESSIONAL ENGINEERS & CONSULTANTS



900 Dudley Avenue
 Cherry Hill, N.J. 08002
 Phone 856-342-8600
 Fax No. 856-342-8323

FILE No. D-2505
 CONTRACT No. H-6922-18
 DATE 01/28/15
 SHEET No. 1 of 4

PROPOSED:	BRIDGE PIER PROTECTION
AT:	DELAWARE MEMORIAL BRIDGE
COUNTY OF:	NEW CASTLE, DELAWARE
APPLICATION BY:	DELAWARE RIVER & BAY AUTHORITY



EXISTING BRIDGE PIER

NOTE: FINAL DESIGN REQUIRED FOR CONSTRUCTION. THIS DRAWING IS FOR PERMITTING PURPOSES ONLY.

S.T. HUDSON ENGINEERS, INC.
 PROFESSIONAL ENGINEERS & CONSULTANTS
 900 Dudley Avenue
 Cherry Hill, N.J. 08002
 Phone 856-342-8600
 Fax No. 856-342-8323



SECTION A-A

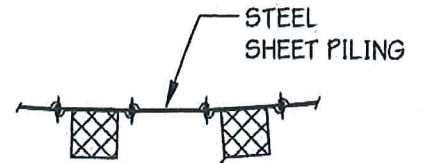
SCALE: 1" = 40'

FILE No. D-2505
 CONTRACT No. H-6922-1B
 DATE 01/28/15
 SHEET No. 3 of 4

PROPOSED:	BRIDGE PIER PROTECTION
AT:	DELAWARE MEMORIAL BRIDGE
COUNTY OF:	NEW CASTLE, DELAWARE
APPLICATION BY:	DELAWARE RIVER & BAY AUTHORITY

OPENING IN
CONCRETE SLAB
FOR SETTLEMENT
REPLACEMENT

5' THK. REINFORCED
CONCRETE SLAB



B

B

SAFETY
RAILING

**STEEL SHEET PILING
TYPICAL PLAN**

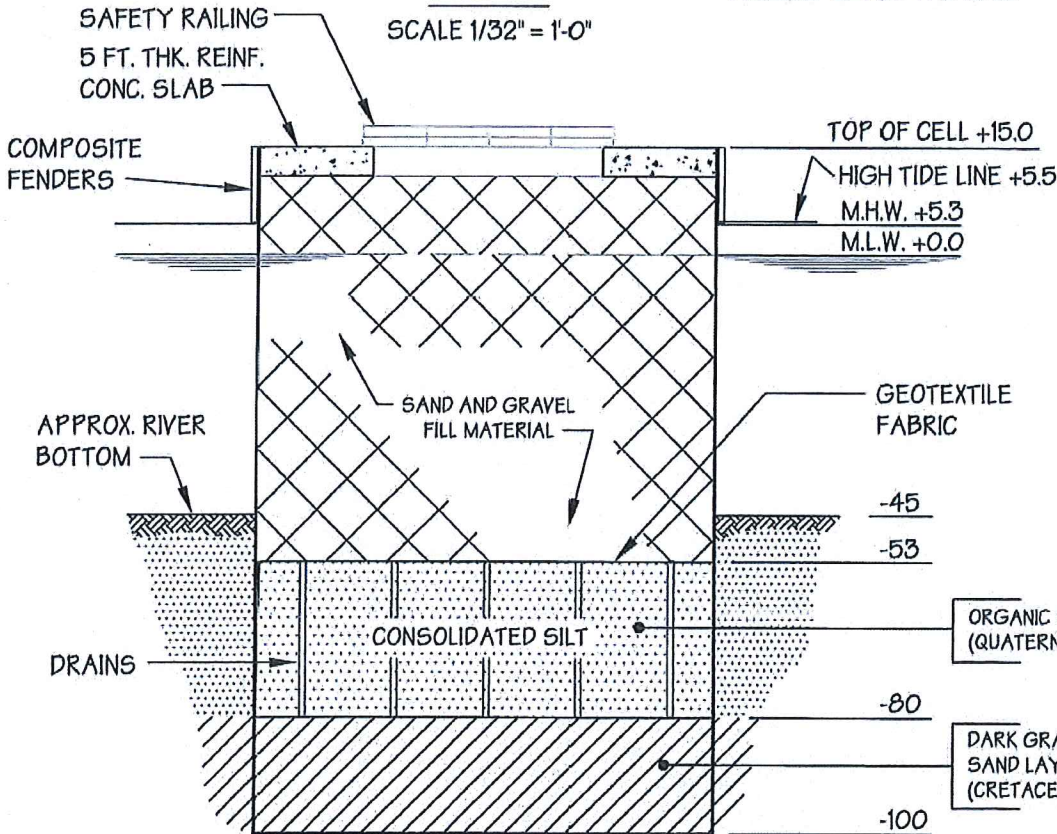
SCALE: NONE

80' DIA. STEEL
SHEET PILE CELL

COMPOSITE MARINE FENDERS
AT EVERY OTHER SHEET PILE
AROUND 3/4 OF THE CELL

PLAN

SCALE 1/32" = 1'-0"



SECTION B-B

SCALE 1/32" = 1'-0"

FILE No. D-2505
CONTRACT No. H-6922-18
DATE 01/28/15
SHEET No. 4 of 4

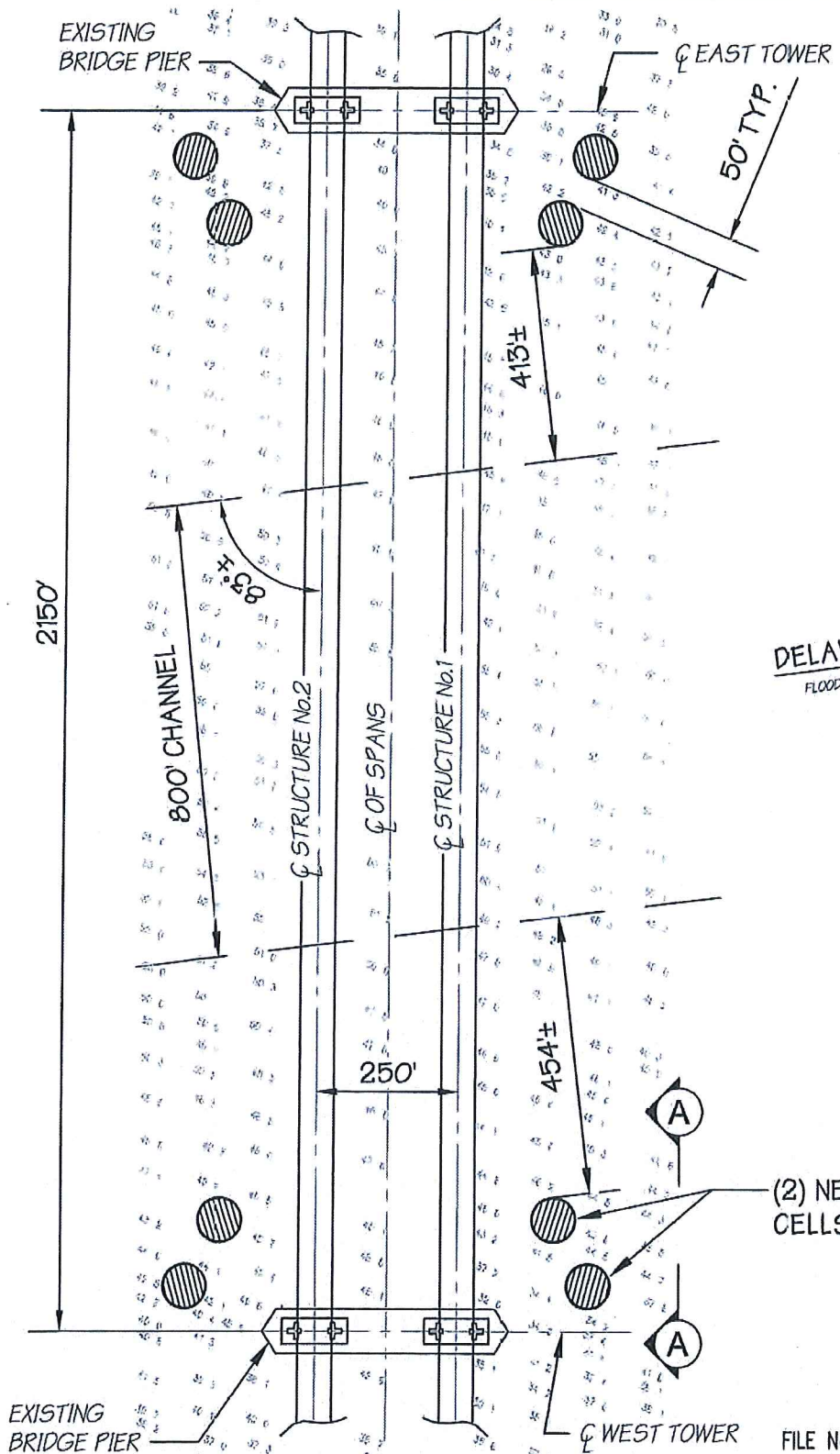
NOTE: FINAL DESIGN REQUIRED FOR CONSTRUCTION. THIS
DRAWING IS FOR PERMITTING PURPOSES ONLY.

S.T. HUDSON ENGINEERS, INC.
PROFESSIONAL ENGINEERS & CONSULTANTS



900 Dudley Avenue
Cherry Hill, N.J. 08002
Phone 856-342-8600
Fax No. 856-342-8323

PROPOSED:	BRIDGE PIER PROTECTION
AT:	DELAWARE MEMORIAL BRIDGE
COUNTY OF:	NEW CASTLE, DELAWARE
APPLICATION BY:	DELAWARE RIVER & BAY AUTHORITY



NOTE:
SOUNDINGS ARE REFERENCED TO U.S. ARMY
CORPS OF ENGINEERS DATUM AND ARE
EXPRESSED IN FEET AND TENTHS OF A FOOT.

DELAWARE RIVER
FLOOD  EBB

(2) NEW 80 Ft. DIA.
CELLS AT (4) LOCATIONS

PLAN
SCALE: 1" = 300'

NOTE: FINAL DESIGN REQUIRED FOR CONSTRUCTION. THIS
DRAWING IS FOR PERMITTING PURPOSES ONLY.

S.T. HUDSON ENGINEERS, INC.
PROFESSIONAL ENGINEERS & CONSULTANTS



900 Dudley Avenue
Cherry Hill, N.J. 08002
Phone 856-342-6600
Fax No. 856-342-8323

FILE No. D-2505
CONTRACT No. H-6922-1B
DATE 01/28/15
SHEET No. 2 of 4

PROPOSED: BRIDGE PIER PROTECTION	
AT:	DELAWARE MEMORIAL BRIDGE
COUNTY OF:	NEW CASTLE, DELAWARE
APPLICATION BY: DELAWARE RIVER & BAY AUTHORITY	