# Connecticut Department of Energy and Environmental Protection License*

## Section 401 Water Quality Certification
## Federal Coastal Consistency Concurrence

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|---|---|
| **Licensee(s):** | United States Department of Navy, SUBASENLON, c/o Capt. Craig Litty |
| **Licensee Address(s):** | Groton, CT 06349 |
| **License Number(s):** | 202611525-WQC FCC |
| **Municipality:** | City of Groton |
| **Project Description:** | Remove and replace Pier 8, conduct dredging with riverine sediment disposal, replace an existing quay wall and relocate an existing floating security barrier for submarine navigation and national security. |
| **Project Address/Location:** | SUBASENLON, Route 12 |
| **Waters:** | Thames River |
| **Authorizing CT Statute(s) and/or Federal Law:** | Section 401 CWA (33 USC 1341); CZMA 307(c)(1), 15 CFR 930 |
| **Applicable Regulations of CT State Agencies:** | 22a-426-1 to 9 |
| **Agency Contact:** | Land & Water Resources Division, Bureau of Water Protection & Land Reuse, 860-424-3019 |
| **License Expiration:** | Five (5) years from the date of issuance of this license. |
| **Project Site Plan Set:** | Forty-six (46) sheets of plans prepared by Stantec. |

*Connecticut's Uniform Administrative Procedure Act defines License to include, "*the whole or part of any agency permit, certificate, approval, registration, charter or similar form of permission required by law . . .*"

**License Enclosures:** LWRD Dredging and General Conditions; LWRD Work Commencement Form; LWRD Dredging Report; LWRD Compliance Certification Form; Site Plan Set

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**Authorized Activities:**

The Licensee is hereby authorized to conduct the following work as described in application # 202611525-WQC FCC and as depicted on any site plan sheets / sets cited herein:

1. demolish the existing approximately 50’ to 80’ wide by 480’ long Pier 8 and an existing quay wall consisting of the removal of the following structures:
    a. one hundred-one (101) 14-inch diameter steel H-piles each with a 26” diameter caisson, of which nine (9) are socketed;
    b. fifty-two (52) 14-inch diameter timber piles associated with existing dolphin clusters;
    c. ninety-three (93) 14-inch steel W-piles
    d. eleven (11) 14-inch diameter timber piles;
    e. sixteen (16) 8-inch H-piles;
    f. three (3) 14-inch steel H-piles;
    g. eleven (11) 12-inch steel W-piles;
2. construct a new fender and quay wall consisting of the following structures;
    a. eighty-eight (88) 23-inch PZ35 steel sheet piles for the new pier bulkhead wall;
    a. Five (5) 16-inch diameter polymetric fender piles;
    b. five (5) 14-inch steel H-piles;
3. using mechanical dredging equipment, conduct dredging within the existing Pier 8 footprint, turning basin and western navigation channel resulting in the total removal of 47,700 cubic yards over an approximately 423,300 square foot area as follows:
    a. remove approximately 4,500 cubic yards of sediment from an approximately 2,160 square foot area located adjacent to the new Pier 8 as part of a turning basin to a depth of -36’ MLLW with an allowable 2’ of over-dredge;
    b. remove approximately 18,200 cubic yards of sediment from an approximately 119,140 square foot area on either side of the new Pier 8 to a depth of -40’ MLLW with an allowable 2’ of over dredge;
    c. remove approximately 25,000 cubic yards of sediment from an approximately 302,000 square foot area along the western bank of the Thames River Navigation Channel to a depth of -36’ MLLW including a 2’ allowable over dredge for portions of this area which also function as a submarine turning basin and 1’ of allowable over dredge for the remainder of the area;
    d. place the dredged material in scows and transport the material to the two (2) existing Confined Aquatic Disposal (“CAD”) cells located within the Thames River;

4. construct a new 85’ wide by 561’ long Pier 8 located approximately 150’ north of the old Pier 8 with a top deck elevation of +9.0’ NAVD88, with associated utilities consisting of the installation of the following structures:
    a. one hundred-eight (108) 36-inch diameter steel pipe piles, of which seventy-eight (78) piles will be installed with a rock socket;
    b. forty-two (42) 36-inch diameter steel-encased drilled shafts;
    c. three hundred-fourteen (314) 16-inch diameter polymetric fender piles;
    d. four (4) 16-inch diameter polymetric fender piles associated with the new quay wall;
    e. nine (9) 14-inch steel H-piles
    f. four (4) 36-inch diameter steel-encased drilled shafts for an upland utility vault;
    g. two (2) 14-inch H-piles for an upland utility vault;
    h. eight (8) 10-inch steel H-piles for the upland utility vault;
5. realign the existing floating security barrier west of its current location including repositioning of several mooring anchors and buoys consisting of 9½’ wide by 9½’ long square floats connected to 10-ton 5’ wide by 5’ long by 5’ high anchors; and
6. install deck equipment, hardware, physical security measures and complete land-side work consisting of installation of utilities, new asphalt, fencing, bollards and miscellaneous finishing work.

***Failure to comply with the terms and conditions of this license shall subject the Licensee and / or the Licensee’s contractor(s) to enforcement actions and penalties as provided by law.***

**This license is subject to the following Terms and Conditions:**

1. **License Enclosure(s) and Conditions.** The Licensee shall comply with all applicable terms and conditions as may be stipulated within the License Enclosure(s) listed above.
2. The Licensee shall place the approximately 22,700 cubic yards of sediment removed from the Pier 8 berths and turning basin sediments within the existing Central CAD cell prior to the placement of the approximately 25,000 cubic yards of sediment removed from the western channel dredge footprint within the remaining CAD cell located in the Thames River.
3. The Licensee shall ensure that the approximately 47,700 cubic yards of material is managed in accordance with all applicable requirements of Chapter 446k Water Pollution Control, Chapter 445 Hazardous Waste, and Chapter 446d Solid Waste of the Connecticut General Statutes.
4. All unconfined in-water work shall be prohibited between February 1st and September 30th, inclusive of any calendar year to protect finfish, unless otherwise authorized in writing by the Commissioner.
5. All unconfined in-water dredging and major in-water construction activities shall be prohibited from June 1st through August 30th, inclusive of any calendar year to protect

spawning oysters unless the work is confined by floating turbidity curtains or piling or turbidity monitoring is measured to ensure the potential turbidity impacts do not adversely impact existing oyster beds.

6. All pile driving authorized herein shall employ a soft start and be confined behind turbidity curtains. A soft start should be used at the beginning of each workday, as well as whenever pile driving stops for a period of 30 minutes or more.
    a. a soft start with an impact hammer is defined as an initial set of three (3) strikes by the hammer at 40% energy, followed by a one-minute wait period, then two (2) subsequent 3-strike sets at 40% energy, with one-minute waiting periods, be initiating continuous impact driving.
    b. a soft start with a vibratory hammer is defined as pile driving for 15 seconds at reduced energy followed by a one-minute waiting period, then repeating this sequence two (2) more times, followed immediately by pile driving at full rate and energy.
7. All pile driving shall be prohibited from sunset to sunrise from March 15th to June 30th, inclusive of any calendar year to protect diadromous finfish, unless otherwise authorized in writing by the Commissioner.
8. The work authorized herein shall be conducted using land and water-based equipment during periods of high water. At no time shall any barge or vessel utilized in the execution of the work authorized herein be stored over intertidal flats, submerged aquatic vegetation or tidal wetland vegetation or in a location that interferes with navigation. In the event any barge or vessel associated with the authorized work is grounded, no dragging or prop dredging shall occur to free the barge. The barge or vessel must wait for the next high-water event to be removed from the substrate. It shall not be a defense to this provision for the Licensee to assert that it has no control over the operation of the barge or vessel.
9. Prior to the commencement of the work authorized herein, the Licensee shall obtain all necessary local, state and federal authorizations for the work authorized herein.
10. All waste material generated by the performance of the work authorized herein shall be placed by the Licensee at an upland site approved for the placement of such waste materials, as applicable. The Licensee shall ensure that no waste material enters the Thames River and must immediately remove any debris that enters the water.
11. On or before ninety (90) days after completion of the work authorized herein, the Licensee shall submit to the Commissioner an “as-dredged” survey of the work area showing contours, bathymetries, tidal datums, including any proposed elevation views and cross-sections included in the license. Such plans shall be the originals and be signed and sealed by an engineer, surveyor or architect, as applicable, who is licensed in the State of Connecticut.

Issued under the authority of the Commissioner of Energy and Environmental Protection on:

_____
Date

_____
Emma Cimino
Acting Commissioner
Department of Energy & Environmental Protection

## LWRD Dredging and General Conditions

1. **Time-of-Year Restriction.** Unless otherwise noted in the License, unconfined in-water excavation, dredging, filling or removal of debris or other material is prohibited, inclusive, in any year from June 1 through September 30 in order to protect spawning shellfish in the area unless otherwise authorized in writing by the Commissioner.

2. **Dredging Report.** Not later than two (2) weeks subsequent to the completion of any dredging activity authorized herein, the Licensee shall submit to DEEP.LWRDRegulatory@ct.gov a completed Dredging Report. A separate form shall be submitted by the Licensee for each distinct dredging activity conducted pursuant to this license.

3. **Bottom Disturbance.** Dragging the bottom with a spoil barge, scow, vessel, beam or similar equipment outside of any authorized area is prohibited.

4. **Material Handling.** Sidecasting or in-water rehandling of dredged or excavated material is prohibited.

5. **Barge Control.** Spoil scows or barges shall be loaded and navigated in a manner which prevents uncontrollable motion or spillage and washout of dredged or excavated materials.

6. **Sale of Sediment.** Sediment dredged pursuant to the license shall not be sold nor shall any fee for its use be charged without the express prior written authorization of the Commissioner and payment of a $4.00 per yard royalty to the state of Connecticut Department of Energy & Environmental Protection, pursuant to CGS section 22a-361(e).

7. **Sediment Disposal.** The Licensee shall dispose of aquatic sediments in accordance with the terms and conditions of the license.

8. **Submission of As-Dredged Plans**. On or before ninety (90) days after completion of the work authorized herein, the Licensee shall submit to DEEP.LWRDRegulatory@ct.gov an "as-dredged" survey of the work area showing contours, bathymetries, tidal datums and structures, as applicable. Such survey shall be the original one and be signed and sealed by an engineer, surveyor or architect, as applicable, who is licensed in the State of Connecticut.

## Open Water Disposal, if authorized in Project Description

1. **Material Disposal.** The Licensee shall dispose of dredged or excavated material in accordance with the requirements of the United States Army Corps of Engineers-New England District, except that if the authorized disposal site is modified, the Licensee shall submit a request for modification of the location to the Commissioner and shall not dispose of the material until such location modification has been approved in writing by the Commissioner.

2. **Disposal Site / Use Modification.** The Commissioner may modify the authorized disposal site

and direct dredged sediment to an alternate site for use as cap material, provided that no modification will take effect if such modification imposes uncompensated additional costs solely attributable to such modification on the Licensee.

3. **Disposal Monitoring.** The Licensee shall not dispose of dredged or excavated material unless said disposal is supervised and witnessed by an on-board inspector or documented by an automated disposal monitoring program approved by the United States Army Corps of Engineers-New England District.

4. **Barge Navigation.** Spoil scows or barges used by the Licensee for disposal of dredged or excavated material shall travel to and from the authorized disposal site utilizing sea lanes defined by the United States Army Corps of Engineers-New England District.

5. **Point Dumping.** The Licensee shall point-dump dredged or excavated materials at a specified buoy or set of coordinates identified by United States Army Corps of Engineers-New England District within the authorized disposal site.

## LWRD General Conditions

1. **Land Record Filing.** The Licensee shall file the Land Record Filing on the land records of the municipality in which the subject property is located not later than thirty (30) days after license issuance pursuant to Connecticut General Statutes (CGS) Section 22a-363g. A copy of the Notice with a stamp or other such proof of filing with the municipality shall be submitted to DEEP.LWRDRegulatory@ct.gov no later than sixty (60) days after license issuance. If a Land Record Filing form is not enclosed and the work site is not associated with an upland property, no filing is required.

2. **Contractor Notification.** The Licensee shall give a copy of the license and its attachments to the contractor(s) who will be carrying out the authorized activities prior to the start of construction and shall receive a written receipt for such copy, signed and dated by such contractor(s). The Licensee's contractor(s) shall conduct all operations at the site in full compliance with the license and, to the extent provided by law, may be held liable for any violation of the terms and conditions of the license. At the work site, the contractor(s) shall, whenever work is being performed, have on site and make available for inspection a copy of the license and the authorized plans.

3. **Work Commencement.** Not later than two (2) weeks prior to the commencement of any work authorized herein, the Licensee shall submit to DEEP.LWRDRegulatory@ct.gov, on the Work Commencement Form attached hereto, the name(s) and address(es) of all contractor(s) employed to conduct such work and the expected date for commencement and completion of such work, if any.

    - For water diversion activities authorized pursuant to 22a-377(c)-1 of the Regulations of Connecticut State Agencies, the Licensee shall also notify the Commissioner in writing two weeks prior to initiating the authorized diversion.
    - For emergency activities authorized pursuant Connecticut General Statutes Section 22a-6k, the Licensee shall notify the Commissioner, in writing, of activity

commencement at least one (1) day prior to construction and of activity completion no later than five (5) days after conclusion.

4. **License Notice.** The Licensee shall post the first page of the License in a conspicuous place at the work area while the work authorized therein is undertaken.

5. **Unauthorized Activities.** Except as specifically authorized, no equipment or material, including but not limited to, fill, construction materials, excavated material or debris, shall be deposited, placed or stored in any wetland or watercourse on or off-site. The Licensee may not conduct work within wetlands or watercourses other than as specifically authorized, unless otherwise authorized in writing by the Commissioner. Tidal wetlands means "wetland" as defined by section 22a-29 and "freshwater wetlands and watercourses" means "wetlands" and "watercourses" as defined by section 22a-38.

6. **Excavated Materials.** Unless otherwise authorized, all excavated material shall be staged and managed in a manner which prevents additional impacts to wetlands and watercourses.

7. **Best Management Practices.** The Licensee shall not cause or allow pollution of any wetlands or watercourses, including pollution resulting from sedimentation and erosion. In constructing or maintaining any authorized structure or facility or conducting any authorized activity, or in removing any such structure or facility, the Licensee shall employ best management practices to control storm water discharges, to prevent erosion and sedimentation, and to otherwise prevent pollution of wetlands and other waters of the State. For purposes of the license, "pollution" means "pollution" as that term is defined by CGS section 22a-423. Best Management Practices include, but are not limited, to practices identified in the *Connecticut Guidelines for Soil Erosion and Sediment Control* as revised, the *Connecticut Stormwater Quality Manual*, the Department of Transportation's *CTDOT Drainage Manual* as revised, and the Department of Transportation Standard Specifications as revised.

8. **In-Water Work Vessel Staging and Storage.** For any barge, vessel, skiff or floating work platform ("work vessels") utilized in the execution of the work authorized herein, the Licensee shall ensure that such work vessels:
   - do not rest on, or come in contact with, the substrate at any time, unless specifically authorized in the license.
   - are not stored over intertidal flats, submerged aquatic vegetation or tidal wetland vegetation or in a location that interferes with navigation. In the event any work vessel is grounded, no dragging or prop dredging shall occur to free it.

9. **Work Site Restoration.** Upon completion of any authorized work, the Licensee shall restore all areas impacted by construction, or used as a staging area or accessway in connection with such work, to their condition prior to the commencement of such work.

10. **Inspection.** The Licensee shall allow any representative of the Commissioner to inspect the project location at reasonable times to ensure that work is being or has been conducted in accordance with the terms and conditions of this license.

11. **Change of Use. (Applies only if a use is specified within the License "*Project Description*")**

a. The work specified in the license is authorized solely for the purpose set forth in the license. No change in purpose or use of the authorized work or facilities as set forth in the license may occur without the prior written approval of the Commissioner. The Licensee shall, prior to undertaking or allowing any change in use or purpose from that which is authorized by this license, request permission from the Commissioner for such change. Said request shall be in writing and shall describe the proposed change and the reason for the change.

b. A change in the form of ownership of any structure authorized herein from a rental/lease commercial marina to a wholly-owned common interest community or dockominium may constitute a change in purpose as specified in paragraph (a) above.

12. **Structure Use.** The use of fixed or floating structures, authorized herein, or berthed vessels, for permanent, temporary, or seasonal occupancy, when the primary purpose of such occupancy is the provision of overnight lodging accommodations, is a violation of this license. Sleeping aboard vessels is allowed as a secondary use of the vessel's principal water-dependent use. A water-dependent use is one that requires direct access to marine or tidal waters and which therefor cannot be located inland.

- A residential dock is for private access to the waters of the state as an accessory to residential upland use. Any other use or any commercial use, is a violation of this license.

- Structures at marinas and other water-dependent sites shall be used for the berthing of vessels solely for water-dependent purposes such as navigation and recreational or commercial boating. Any use of structures or berthed vessels for non-water dependent purposes is a violation of this license.

13. **De Minimis Alteration.** The Licensee shall not deviate from the authorized activity without prior written approval from the Commissioner. The Licensee may request a de minimis change to any authorized structure, facility, or activity. A de minimis alteration means a change in the authorized design, construction or operation that individually and cumulatively has minimal additional environmental impact and does not substantively alter the project as authorized.

- For diversion activities authorized pursuant to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, a de minimis alteration means an alteration which does not significantly increase the quantity of water diverted or significantly change the capacity to divert water.

14. **Extension Request.** The Licensee may request an extension of the license expiration date. Such request shall be in writing and shall be submitted to DEEP.LWRDRegulatory@ct.gov at least thirty (30) days prior to the license expiration. Such request shall describe the work done to date, what work still needs to be completed, and the reason for such extension. The Commissioner may extend the expiration date of this license for a period of up to one year, in order for the Licensee to complete the authorized activities. It shall be at the Commissioner's sole discretion to grant or deny such request. No more than three (3) one-year extensions will be granted under this license.

15. **No Work After License Expiration.** Work conducted after the license expiration date is a violation of the license and may subject the licensee to enforcement action, including penalties, as provided by law.

16. **License Transfer.** The license is not transferable without prior written authorization of the Commissioner. A request to transfer a license shall be submitted in writing and shall describe the proposed transfer and the reason for such transfer. The Licensee's obligations under the license shall not be affected by the passage of title to the license site to any other person or municipality until such time as a transfer is approved by the Commissioner.

17. **Document Submission.** Any document required to be submitted to the Commissioner under the license or any contact required to be made with the Commissioner shall, unless otherwise specified in writing by the Commissioner, be directed to:

    DEEP.LWRDRegulatory@ct.gov or

    Regulatory Section
    Land & Water Resources Division
    Department of Energy and Environmental Protection
    79 Elm Street
    Hartford, Connecticut 06106-5127
    860-424-3019

18. **Date of Document Submission.** The date of submission to the Commissioner of any document required by the license shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under the license, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three (3) days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in the license, the word "day" as used in the license means calendar day. Any document or action which is required by the license to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or a Connecticut or federal holiday.

19. **Certification of Documents.** Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under the license shall be signed by the Licensee and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."

20. **Accuracy of Documentation.** In evaluating the application for the license, the Commissioner has relied on information and data provided by the Licensee and on the Licensee's representations concerning site conditions, design specifications and the proposed work, including but not limited to representations concerning the commercial, public or private nature

of the work or structures, the water-dependency of said work or structures, its availability for access by the general public, and the ownership of regulated structures or filled areas. If such information proves to be false, deceptive, incomplete or inaccurate, the license may be modified, suspended or revoked, and any unauthorized activities may be subject to enforcement action.

**21. Limits of Liability.** In granting the license, the Commissioner has relied on all representations of the Licensee, including information and data provided in support of the Licensee's application. Neither the Licensee's representations nor the issuance of the license shall constitute an assurance by the Commissioner as to the structural integrity, the engineering feasibility or the efficacy of such design.

**22. Reporting of Violations.** In the event that the Licensee becomes aware that they did not or may not comply, or did not or may not comply on time, with any provision of this license or of any document incorporated into the license, the Licensee shall immediately notify the agency contact specified within the license and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the agency contact, the Licensee shall provide, for the agency's review and written approval, a report including the following information:

a. the provision(s) of the license that has been violated;

b. the date and time the violation(s) was first observed and by whom;

c. the cause of the violation(s), if known;

d. if the violation(s) has ceased, the duration of the violation(s) and the exact date(s) and times(s) it was corrected;

e. if the violation(s) has not ceased, the anticipated date when it will be corrected;

f. steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented; and

g. the signatures of the Licensee and of the individual(s) responsible for actually preparing such report.

If the violation occurs outside of normal business hours, the Licensee shall contact the Department of Energy and Environmental Protection Emergency Dispatch at 860-424-3333. The Licensee shall comply with any dates which may be approved in writing by the Commissioner.

**23. Revocation/Suspension/Modification.** The license may be revoked, suspended, or modified in accordance with applicable law.

**24. Other Required Approvals.** License issuance does not relieve the Licensee of their obligations to obtain any other approvals required by applicable federal, state and local law.

**25. Rights.** The license is subject to and does not derogate any present or future property rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and

to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.

**26. Condition Conflicts.** In the case where a project specific special condition listed on the license differs from, or conflicts with, one of the general conditions listed herein, the project specific special condition language shall prevail. It is the licensee's responsibility to contact the agency contact person listed on the license for clarification if needed prior to conducting any further regulated activities.

# LWRD DREDGING REPORT

(To be completed by Licensee)

License No(s).: 202611525-WQC FCC
Licensee Name: US Department of Navy, SUBASENLON
Address of Dredging Activity: Thames River, SUBASENLON, City of Groton

Dredging Contractor Information:

Name: _____
Mailing Address: _____
Business Phone: _____
Contact Person: _____
E-mail: _____

Dates Dredged: _____
Total Volume Dredged during this period: _____
Disposal Volume(s) and Location(s): _____

**If any portion of the dredged materials was used in a beneficial manner, please identify the beneficial use type (i.e. beach nourishment, habitat restoration, landfill cap, construction materials…), volume of dredged material utilized and the location of beneficial usage.

**Document Certification:**

"I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."

_____ _____
Signature of Licensee Date

If you have any questions pertaining to this form, please contact the Land & Water Resources Division at 860-424-3034.

Return to:
DEEP.LWRDRegulatory@ct.gov or
Land & Water Resources Division
State of Connecticut Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

# LWRD Work Commencement Form

**To:** DEEP.LWRDRegulatory@ct.gov or
Regulatory Section
Department of Energy and Environmental Protection
Land & Water Resources Division
79 Elm Street
Hartford, CT 06106-5127

**Licensee Name:** U.S. Dept. of the Navy SUBASENLON

**Municipality in which the project is occurring:** City of Groton

**DEEP License No(s):** #202611525-WQC FCC

**CONTRACTOR(s):**

# 1 Name: _____
Address: _____
Telephone: _____
E-mail: _____

# 2 Name: _____
Address: _____
Telephone: _____
E-mail: _____

# 3 Name: _____
Address: _____

Date Contractor(s) received a copy
of the license and approved plans: _____

EXPECTED DATE OF COMMENCEMENT OF WORK: _____

EXPECTED DATE OF COMPLETION OF WORK: _____

LICENSEE: _____ _____
(Signature) (Date)

# Compliance Certification Form

The following certification must be signed by the licensee working in consultation with a Connecticut-licensed design professional and must be submitted to the address indicated at the end of this form within ninety (90) days of completion of the authorized work.

1. Licensee Name: US Dept. of the Navy SUBASENLON

   DEEP License Number(s): #202611525-WQC FCC

   Municipality in which project is occurring:_____

2. **Check one:**

   (a) ☐ "I certify that the final site conditions and / or structures are in general conformance with the approved site plans". Identify and describe any deviations and attach to this form.

   (b) ☐ "The final site conditions and / or structures are not in general conformance with the approved site plans. The enclosed "as-built" plans note the modifications".

3. "I understand that any false statement in this certification is punishable as a criminal offence under section 53a-157b of the General Statutes and under any other applicable law."

_____ _____
Signature of Licensee Date

_____
Name of Licensee (print or type)

_____ _____
Signature of CT-Licensed Design Professional Date

_____
Name of CT-Licensed Design Professional (print or type)

_____
Professional License Number (if applicable)

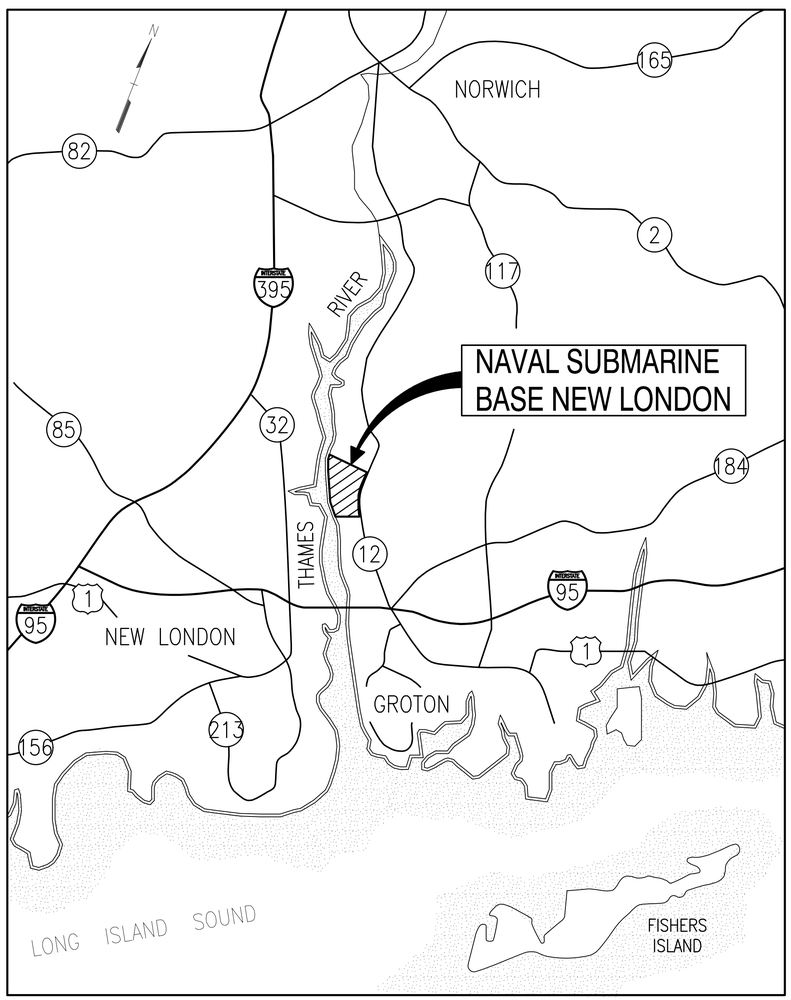
Affix Stamp Here

- As-built plans shall include: elevations or tidal datums, as applicable, and structures, including any proposed elevation views and cross sections included in the approved license plans. Such as-built plans shall be the original ones and be signed and sealed by an engineer, surveyor or architect, as applicable, who is licensed in the State of Connecticut.
- The Licensee will be notified by staff of the Land and Water Resources Division (LWRD) if further compliance review is necessary. Lack of response by LWRD staff does not imply compliance.

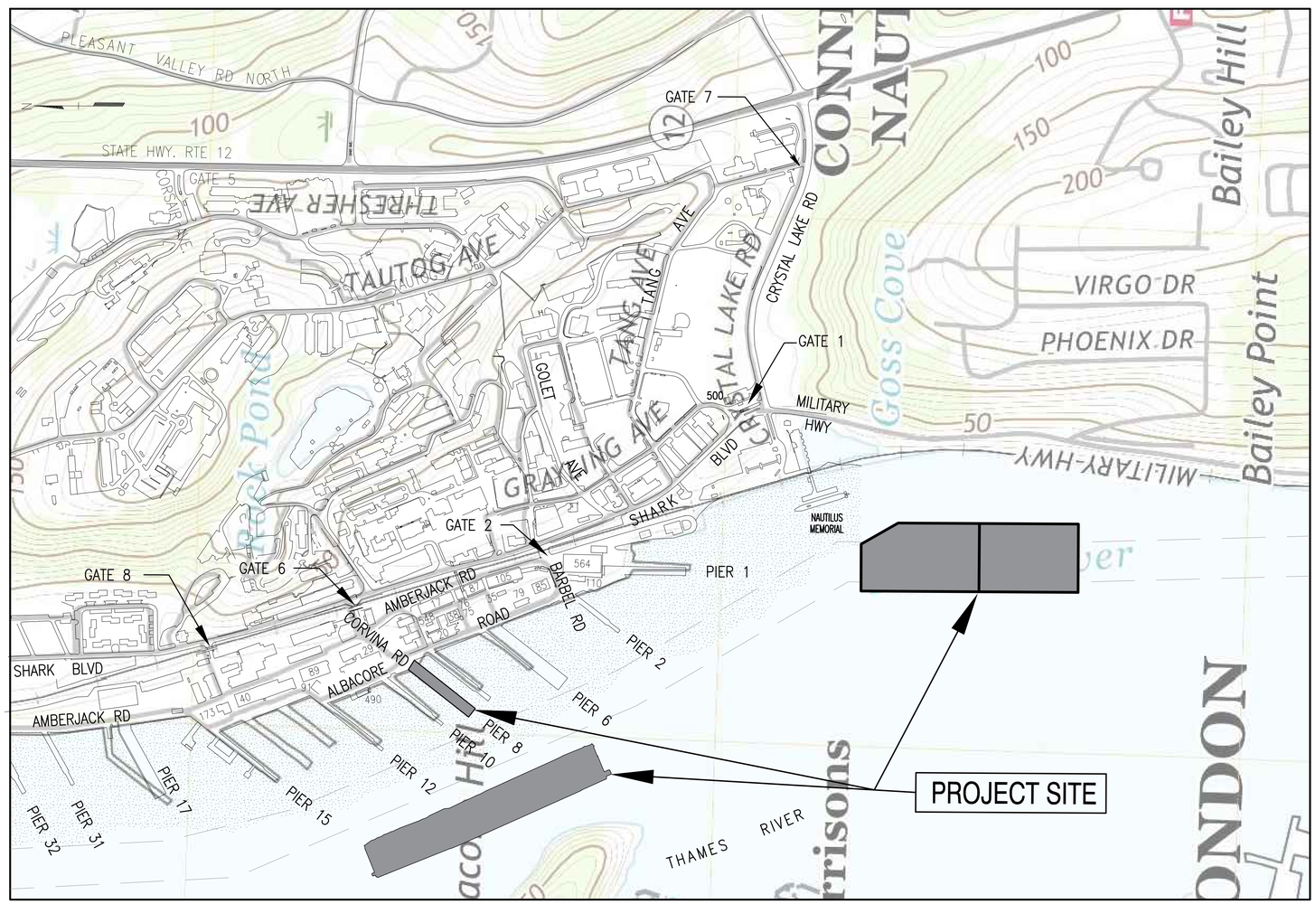
Submit this completed form to :
DEEP.LWRDRegulatory@ct.gov or
**Regulatory Section**
**Department of Energy and Environmental Protection**
**Land & Water Resources Division**
**79 Elm Street**
**Hartford, CT 06106-5127**

# P-194 SSN SUBMARINE PIER 8 REPLACEMENT
# NAVAL SUBMARINE BASE NEW LONDON

## GROTON, CONNECTICUT




VICINITY MAP
NOT TO SCALE
1




LOCATION MAP
NOT TO SCALE
2

| APPR | DATE | DESCRIPTION | SYM |
|---|---|---|---|
| | | | |

NAVFAC

PRELIMINARY
NOT FOR CONSTRUCTION

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY
XXXXX

SATISFACTORY TO DATE MM/DD/YY

| DES | DRW | CHK |
|---|---|---|
| PM/DM | | LBT/IAS |
| BRANCH MANAGER | | NEK |
| CHIEF ENG/ARCH | | JWJ |
| FIRE PROTECTION | | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

TITLE SHEET

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | |
| SHEET | - OF XX |

G-001

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\mcaromagno\DC\ACCDocs\Stantec Consulting\224101316_FY25_MILCON_P-194_REPLACE_SSN_BERTHING_PIER_8\Project Files\01_WIP\01_general\sheet_files\G-001 TITLE SHEET.dwg LAYOUT NAME: G-001 TITLE SHEET - PERMIT PLOTTED: Monday, December 22, 2025 - 4:11pm USER: mcaromagno

## GENERAL SHEET INDEX

| Index Number | Sheet Number | Sheet Title |
|---|---|---|
| 1 | G-001 | TITLE SHEET |
| 2 | G-002 | DRAWING INDEX |
| 3 | C-001 | LEGEND, ABBREVIATIONS & GENERAL NOTES |
| 4 | G-101 | OVERALL SITE PLAN |
| 5 | G-102 | CHANNEL LAYOUT PLAN |
| 6 | G-105 | CONTRACTOR ACCESS ROUTE PLAN |
| 7 | G-106 | WATERCOURSE IMPACTS |

## CIVIL SHEET INDEX

| Index Number | Sheet Number | Sheet Title |
|---|---|---|
| 8 | CD101 | SITE DEMOLITION PLAN - LANDSIDE NORTH |
| 9 | C-501 | EROSION CONTROL NOTES AND DETAILS - SHEET 1 OF 2 |
| 10 | C-502 | EROSION CONTROL NOTES AND DETAILS - SHEET 2 OF 2 |
| 11 | C-505 | SITE DETAILS - SHEET 3 OF 3 |
| 12 | C-101 | SITE PLAN - LANDSIDE NORTH |

## DREDGE SHEET INDEX

| Index Number | Sheet Number | Sheet Title |
|---|---|---|
| 13 | CN101 | OVERALL DREDGING PLAN |
| 14 | CN102 | CHANNEL WIDENING DREDGE PLAN |
| 15 | CN103 | TURNING BASIN DREDGE PLAN |
| 16 | CN105 | CAD CELL LOCATION PLAN |
| 17 | CN301 | DREDGING SECTIONS - SHEET 1 OF 4 |
| 18 | CN302 | DREDGING SECTIONS - SHEET 2 OF 4 |
| 19 | CN303 | DREDGING SECTIONS - SHEET 3 OF 4 |
| 20 | CN304 | DREDGING SECTIONS - SHEET 4 OF 4 |
| 21 | CN305 | DREDGING TYPICAL SECTIONS |

## STRUCTURAL SHEET INDEX

| Index Number | Sheet Number | Sheet Title |
|---|---|---|
| 22 | SD101 | OVERALL STRUCTURAL DEMOLITION PLAN |
| 23 | SD102 | DEMOLITION PIER PLAN |
| 24 | SD104 | DEMOLITION PLAN AT BELOW WHARF DECK |
| 25 | SD105 | DEMOLITION PLAN FOR PILES AN SHEET PILES |
| 26 | SD303 | TYPICAL SECTION FOR QUAY WALL DEMOLITION |
| 27 | S-102 | PILE PLAN - SHEET 1 OF 4 |
| 28 | S-103 | PILE PLAN - SHEET 2 OF 4 |
| 29 | S-104 | PILE PLAN - SHEET 3 OF 4 |
| 30 | S-105 | PILE PLAN - SHEET 4 OF 4 |
| 31 | S-122 | FENDER PILE PLAN - SHEET 1 OF 4 |
| 32 | S-123 | FENDER PILE PLAN - SHEET 2 OF 4 |
| 33 | S-124 | FENDER PILE PLAN - SHEET 3 OF 4 |
| 34 | S-125 | FENDER PILE PLAN - SHEET 4 OF 4 |
| 35 | S-110 | FRAMING PLAN - SHEET 4 OF 4 |
| 36 | S-106 | PILE PLAN AT QUAY WALL |
| 37 | S-111 | FRAMING PLAN AT QUAY WALL |
| 38 | S-312 | TYPICAL SECTION FOR UTILITY TRENCH AND VAULT |
| 39 | S-313 | SECTIONS LANDSIDE BULKHEAD |
| 40 | S-501 | TURBIDITY CURTAIN NOTES AND DETAILS |
| 41 | S-502 | PILE DETAILS - SHEET 1 OF 3 |
| 42 | S-503 | PILE DETAILS - SHEET 2 OF 3 |
| 43 | S-509 | BULKHEAD PILE DETAILS |
| 44 | S-540 | FENDER SYSTEM SECTIONS AND DETAILS - SHEET 1 OF 3 |
| 45 | S-541 | FENDER SYSTEM SECTIONS AND DETAILS - SHEET 2 OF 3 |
| 46 | S-542 | FENDER SYSTEM SECTIONS AND DETAILS - SHEET 3 OF 3 |
| | | |

APPR | DATE | DESCRIPTION | SYM

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A/E INFO

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ACTIVITY

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SATISFACTORY TO DATE MM/DD/YY

DES - | DRW - | CHK -

PM/DM --

BRANCH MANAGER -- --

CHIEF ENG/ARCH --

FIRE PROTECTION --

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

DRAWING INDEX

SCALE: AS NOTED

EPROJECT NO.: 1709726

CONSTR. CONTR. NO.

NAVFAC DRAWING NO.

SHEET 2 OF

G-002

DRAWFORM REVISION: 25 AUGUST 2020

# LEGEND

| EXISTING | NEW | DESCRIPTION |
|---|---|---|
| 1 | 1 | WORK KEYNOTE NUMBER |
| | | BUILDING |
| | | CONCRETE PAVEMENT / PAD |
| | | BITUMINOUS CONCRETE PAVING |
| D | D | STORM DRAIN MANHOLE / CATCH BASIN INLET |
| S | S | SANITARY SEWER MANHOLE |
| 6" W | 6" W | FRESH WATER (FW) |
| 12" W | 12" HPW | HIGH PRESSURE WATER (HPW) |
| 15" D | D | STORM DRAIN |
| 8" S | SS | SANITARY SEWER |
| 8" S | FM | SANITARY FORCE MAIN |
| E | E | UNDERGROUND ELECTRIC DUCT |
| T | T | UNDERGROUND TELECOMMUNICATIONS DUCT |
| X X X | | CHAINLINK FENCE |
| X 5.20 | 5.50 | SPOT ELEVATION |
| WV | | GATE VALVE |
| | PIV | POST INDICATOR VALVE |
| | | FIRE HYDRANT |
| | | FIRE DEPARTMENT CONNECTION (FDC) |
| | | REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP) |
| | | GUARD POST / BOLLARD |
| | | REMOVABLE GUARD POST / BOLLARD |
| | | STEEL RAZOR WIRE |
| | | SAWCUT AND DEMOLISH EXISTING BITUMINOUS CONCRETE PAVEMENT |
| | | DEMOLISH UTILITY SERVICE LINE / DUCT / CONDUIT |
| | | CONCRETE THRUST BLOCK |
| | | TOPSOIL AND TURF ESTABLISHMENT |
| | | DEMOLISH TOPSOIL AND TURF ESTABLISHMENT |
| | | DEMOLISH CONCRETE |
| | | LUC ZONE LIMITS |
| | | SEDIMENTATION CONTROL SYSTEM / SILT FENCE |
| | | SEDIMENTATION CONTROL SYSTEM AT CATCH BASIN / SILT SACK |

# CIVIL ABBREVIATIONS:

| | |
|---|---|
| @ | AT |
| ABND, AB | ABANDONED |
| AGG | AGGREGATE |
| APPROX | APPROXIMATE |
| ASTM | AMERICAN SOCIETY FOR TESTING AND MATERIALS |
| BLDG | BUILDING |
| BC | BARE COPPER |
| BCLC | BITUMINOUS CONCRETE LIP CURBING |
| BM | BENCHMARK |
| BOT | BOTTOM |
| BVC | BEGIN VERTICAL CURVE |
| BW | BACK OF WALL |
| BP | BEGIN POINT |
| CA | COMPRESSED AIR |
| CB | CATCH BASIN |
| CI | CAST IRON |
| CLF | CHAIN LINK FENCE |
| CONC | CONCRETE |
| CTE | CONNECT TO EXISTING |
| DIA | DIAMETER |
| DI, DIP | DUCTILE IRON PIPE |
| DMH | DRAIN MANHOLE |
| E | EASTING |
| ELEV (EL) | ELEVATION |
| EXIST, EX | EXISTING |
| FG | FINISH GRADE |
| FM | FORCE MAIN |
| FT | FEET |
| FW | FRESH WATER |
| GALV | GALVANIZED |
| H OR HORIZ | HORIZONTAL |
| HMA | HOT MIX ASPHALT |
| HP | HIGH POINT |
| HPA | HIGH PRESSURE AIR |
| HPW | HIGH PRESSURE WATER |
| INV | INVERT |
| L | LENGTH |
| LF | LINEAR FEET |
| LUC | LAND USE CONTROL |
| MHHW | MEAN HIGHER HIGH WATER |
| MIN | MINIMUM |
| N | NORTHING |
| N/A | NOT APPLICABLE |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| OH | OVERHEAD |
| PSI | POUNDS PER SQUARE INCH |
| PVC | POLYVINYL CHLORIDE |
| RC | REINFORCED CONCRETE |
| RCP | REINFORCED CONCRETE PIPE |
| SMH | SANITARY MANHOLE |
| SSFM | SANITARY SEWER FORCE MAIN |
| SSWR | GRAVITY SANITARY SEWER |
| TBM | TEMPORARY BENCH MARK |
| TR | TOP OF RIM |
| TYP | TYPICAL |
| UNK | UNKNOWN |
| UNO | UNLESS NOTED OTHERWISE |
| V OR VERT | VERTICAL |
| VSP | VERTICAL SEWER PIPE |
| W | WIDTH |
| W/ | WITH |
| WSA | WASTE STOCKPILE AREA |

# DRAWING NUMBER ABBREVIATIONS:

| | |
|---|---|
| C | CIVIL |
| CD | CIVIL DEMOLITION |

# GENERAL NOTES:

1. THE LOCATIONS SHOWN FOR EXISTING UNDERGROUND UTILITIES AND ABOVE GROUND FEATURES ARE BASED ON AVAILABLE BASE UTILITY PLANS AND MUST BE CONSIDERED APPROXIMATE. CONTRACTOR MUST FIELD LOCATE ALL UNDERGROUND UTILITIES THROUGH THE USE OF A QUALIFIED UNDERGROUND UTILITY LOCATION SERVICE PRIOR TO ANY EXCAVATION. UTILITIES LOCATED MUST BE INDICATED ON THE "AS-BUILT" DRAWINGS. NOTIFY THE CONTRACTING OFFICER 72 HOURS PRIOR TO COMMENCING DEMOLITION, EXCAVATION, OR CONSTRUCTION.
2. WATERFRONT UTILITY OPERATIONS WILL REMAIN ACTIVE THROUGHOUT THE WORK OF THE PROJECT. PROTECT EXISTING UTILITIES TO REMAIN, WITHIN THE LIMITS OF SHORE SIDE WORK, TO MAINTAIN UNINTERRUPTED SERVICE THROUGHOUT THE INSTALLATION. ANY DAMAGE INCURRED MUST BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE CONTRACTING OFFICER AT THE CONTRACTOR'S EXPENSE. NOTIFY THE CONTRACTING OFFICER A MINIMUM OF 15 DAYS IN ADVANCE OF ANY UTILITY OUTAGES.
3. ALL VALVES, FITTINGS, MANHOLES, ETC. HAVE BEEN LOCATED IN PLAN AND DIMENSIONS SHOWN MUST BE STRICTLY ADHERED TO UNLESS OTHERWISE DIRECTED BY THE CONTRACTING OFFICER. PROFILE STATIONING MUST BE ADJUSTED AS REQUIRED TO CONFORM TO PLAN DIMENSIONS.
4. EXISTING TOPOGRAPHY AND PHYSICAL FEATURES SHOWN ARE BASED ON SURVEYS PERFORMED ON SEPTEMBER 7, 2021 BY LOUREIRO ENGINEERING, PLAINVILLE, CONNECTICUT UNLESS OTHERWISE NOTED. VERTICAL CONTROL IS BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88). HORIZONTAL CONTROL IS BASED ON THE CONNECTICUT STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD83) AND WAS ESTABLISHED FROM BASE MONUMENTS #950 AND #951 LOCATED ON THE SUB BASE. CONTACT THE CONTRACTING OFFICER FOR ADDITIONAL MONUMENT AND BENCHMARKS LOCATED IN THE VICINITY OF PIER 31.
5. THE 100 YEAR BASE FLOOD ELEVATION ZONE AE EQUALS 12 FT. AND ZONE VE EQUALS 13 FT. ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
6. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN ACCORDANCE WITH THE LATEST VERSION OF, CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, AND THE SPECIFICATIONS.
7. NEW UTILITY STAKEOUT DIMENSIONS ARE TO CENTERLINE OF STRUCTURE AND CENTERLINE OF PIPE, UNLESS INDICATED OTHERWISE.
8. A 15' WIDE CLEAR VEHICLE ACCESS LANE MUST BE PROVIDED THROUGH THE PROJECT SITE ALONG ALBACORE ROAD AT ALL TIMES. PHASE DEMOLITION OPERATIONS AND TEMPORARY IMPROVEMENTS AS REQUIRED TO MEET THESE CONDITIONS.
9. DIG TEST PITS TO DETERMINE THE LOCATION AND ELEVATIONS OF EXISTING PIPING AT ALL CONNECTION POINTS PRIOR TO LAYING PIPE NEAR CONNECTION POINTS. IF NECESSARY, THE ELEVATIONS FOR NEW PIPING SHALL BE ADJUSTED AS DIRECTED BY THE CONTRACTING OFFICER.
10. UNDERGROUND UTILITIES, STRUCTURES AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED FROM RECORD MAPPING AND OTHER AVAILABLE DATA. THE OWNER OR IT'S REPRESENTATIVES HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. ADDITIONAL UNDERGROUND AND ABOVE GROUND FEATURES MAY EXIST THAT ARE NOT DEPICTED WITHIN THESE DOCUMENTS. THE EXISTENCE, SIZE AND LOCATION OF THESE FEATURES MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 OR WWW.CBYD.COM 72-HOURS PRIOR TO STARTING CONSTRUCTION IN ORDER TO VERIFY THE LOCATIONS OF EXISTING UTILITIES.
11. CONTRACTOR MUST COORDINATE WITH ALL OTHER DISCIPLINES AND FIELD VERIFY ALL DIMENSIONS AND CONDITIONS FOR FIT-UP OF NEW WORK PRIOR TO ORDERING MATERIAL AND FABRICATION.

# GENERAL NOTES CONT:

15. ELEVATION CONTOURS, SPOT GRADES, INVERTS AND DIMENSIONS ON CIVIL DRAWINGS ARE IN DECIMAL FEET UNLESS NOTED OTHERWISE.
16. WORK FROM GIVEN DIMENSIONS AND LARGE SCALE DETAILS ONLY. DO NOT SCALE DRAWINGS.
17. EXERCISE CARE TO PROTECT EXISTING BENCHMARKS, SYSTEMS, AND SURFACES TO REMAIN. ALL DAMAGED SYSTEMS AND SURFACES MUST BE REPAIRED OR REPLACED AS APPROVED BY THE CONTRACTING OFFICER AT NO ADDITIONAL COST TO THE GOVERNMENT.
18. NOTIFY CONTRACTING OFFICER AND REPORT ALL SPILLS AND LEAKS OF OIL OR OTHER HAZARDOUS SUBSTANCES (IE OIL, ANTIFREEZE, CHEMICALS, ETC.) OCCURRING DURING THE PERFORMANCE OF THIS CONTRACT IMMEDIATELY UPON DISCOVERY, REGARDLESS OF THE QUANTITY. CALL THE BASE FIRE DEPARTMENT TO REPORT THE SPILL. THE GOVERNMENT RESERVES THE RIGHT TO CLEAN UP, PACKAGE AND DISPOSE OF CONTRACTOR SPILLS OCCURRING ON THE BASE, AND BILL SUCH COSTS TO THE CONTRACTOR.
19. NOTIFY CONTRACTING OFFICER AND STOP WORK IMMEDIATELY IF HAZARDOUS MATERIAL SUCH AS PCB, LEAD PAINT, AND FRIABLE AND NON-FRIABLE ASBESTOS AND ANY OTHER MATERIAL THAT MAY BE HAZARDOUS TO HUMAN HEALTH IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS.

# TIDAL ELEVATIONS:

| | |
|---|---|
| MHHW | EL 1.21' |
| MHW | EL 0.92' |
| MLW | EL -1.65' |
| MLLW | EL -1.84' |

NOTES

1. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM (NAVD88) AT EL. 0.00
2. LOCAL OBSERVED TIDAL ELEVATIONS HAVE HISTORICALLY BEEN HIGHER AND CONTRACTOR MUST BE PREPARED TO OPERATE IN TIDAL CONDITIONS THAT DIFFER THAN THOSE DEPICTED ON THE 'TIDAL ELEVATIONS' TABLE. THERE WILL BE NO ADDITIONAL COMPENSATION FOR TIDAL CONDITIONS EXPERIENCED DURING CONSTRUCTION THAT VARY FROM HISTORICALLY PUBLISHED ELEVATIONS.

APPR | DATE | DESCRIPTION | SYM

NAVFAC

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SEAL

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A/E INFO

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ACTIVITY: XXXXX

SATISFACTORY TO | DATE: MM/DD/YY

| | |
|---|---|
| DES: KPG | DRW: ASM |
| CHK: PJK | |
| PM/DM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
CI.CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

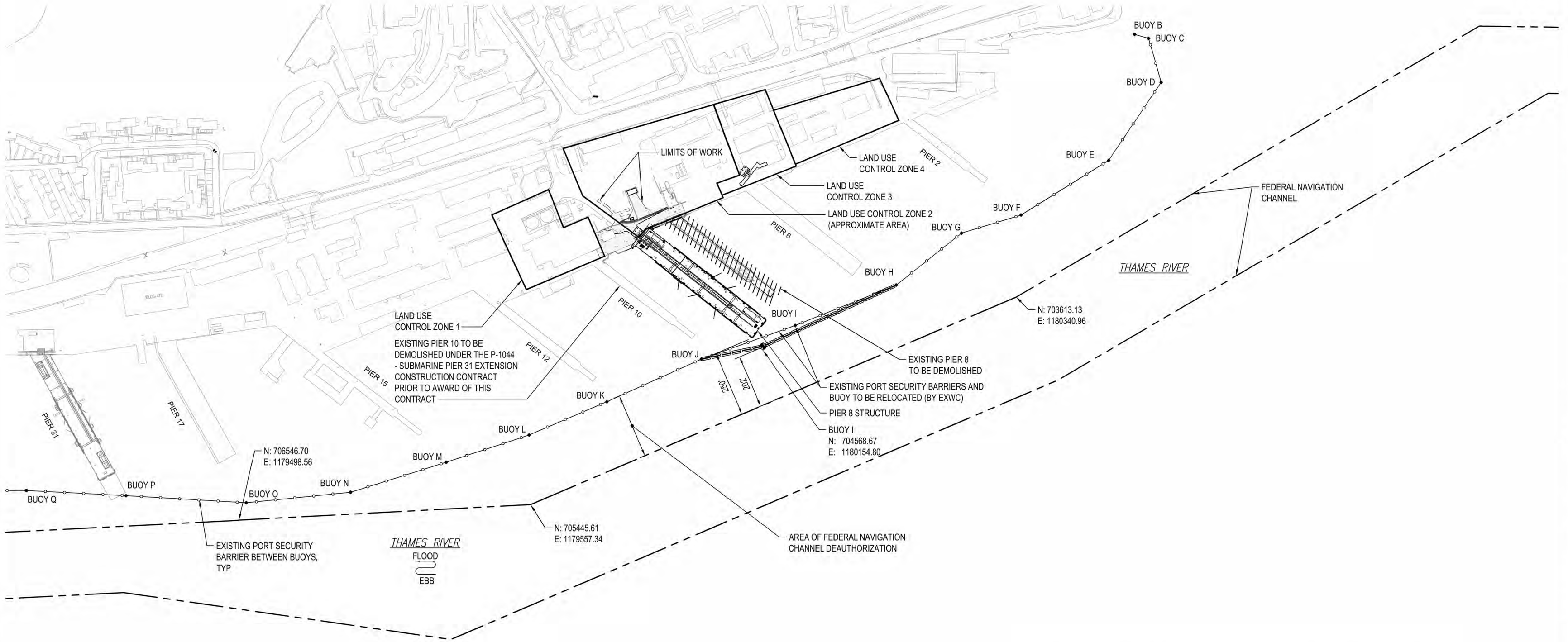
LEGEND, ABBREVIATIONS & GENERAL NOTES

SCALE: AS NOTED
EPROJECT NO.: 1709726
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
SHEET - OF XX

C-001

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\jahmone\DC\ACCDocs\Stantec Consulting\224101316_FY25_MILCON_P-194_REPLACE_SSN_BERTHING_PIER_8\Project Files\01_WIP\04_civil\sheet_files\C-002 CIVIL GENERAL NOTES.dwg LAYOUT NAME: C-001 LEGEND ABBREVIATIONS & GENERAL NOTES PLOTTED: Friday, November 14, 2025 - 1:56pm USER: ahmone




## BUOY LOCATION TABLE

| BUOY | NORTHING | EASTING |
|---|---|---|
| B | 703167.00 | 1181332.00 |
| C | 703113.70 | 1181317.20 |
| D | 703066.90 | 1181151.40 |
| E | 703265.00 | 1180856.40 |
| F | 703595.40 | 1180650.30 |
| G | 703820.00 | 1180582.00 |
| H | 704066.00 | 1180386.00 |
| I | 704460.90 | 1180260.40 |
| J | 704568.67 | 1180154.80 |
| K | 705157.90 | 1179945.60 |

## BUOY LOCATION TABLE

| BUOY | NORTHING | EASTING |
|---|---|---|
| L | 705451.50 | 1179819.90 |
| M | 705764.50 | 1179716.90 |
| N | 706125.00 | 1179603.70 |
| O | 706518.40 | 1179564.10 |
| P | 706972.00 | 1179591.00 |
| Q | 707347.39 | 1179610.40 |
| R | 707655.40 | 1179610.40 |
| S | 707959.10 | 1179605.80 |
| T | 708428.00 | 1179594.00 |
| U | 708678.80 | 1179752.80 |
| V | 708805.00 | 1180112.30 |

PLAN NORTH

## OVERALL SITE PLAN

SCALE: 1" = 200'

200' 0 200' 400'

1" = 200'

APPR | DATE | SYM | DESCRIPTION

NAVFAC

SEAL

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ACTIVITY:

SATISFACTORY TO DATE

| DES | CHG | DRW | CHG | CHK | MVG |
|---|---|---|---|---|---|
| PM/DM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
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NAVAL STATION - NORFOLK, VIRGINIA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

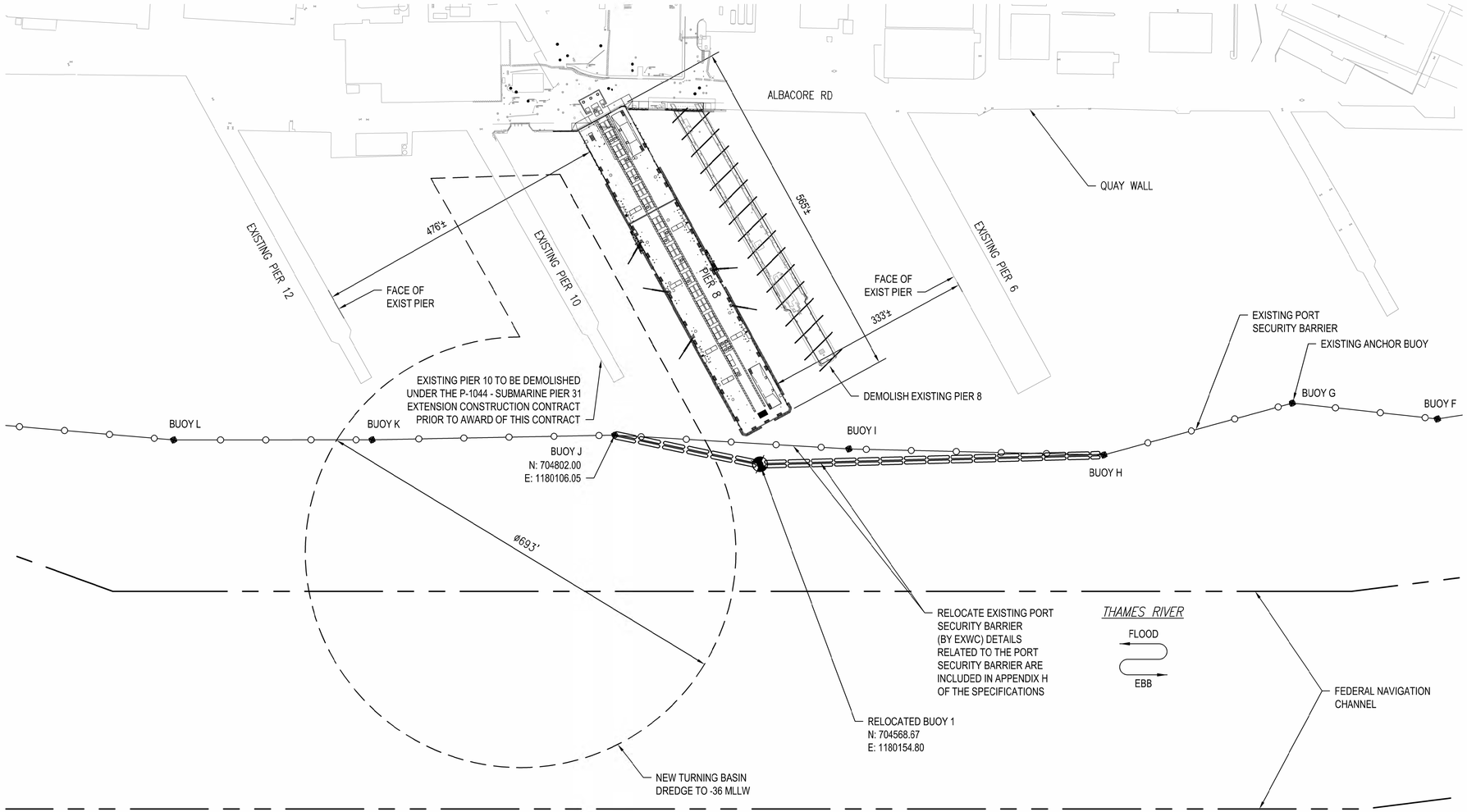
OVERALL SITE PLAN

| | |
|---|---|
| SCALE: | AS NOTED |
| EFPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942248 |
| SHEET | 5 OF 290 |

G-101

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\rfeliciano\DC\ACCDocs\Stantec Consulting\224103116_P-194_NEW - LONDON_PIER_8\Project Files\01_JWP\01_general\sheet_files\G-101 OVERALL SITE PLAN.dwg LAYOUT NAME: G-101 OVERALL SITE PLAN PLOTTED: Friday, July 24, 2026 - 10:38am USER: rfeliciano




# CHANNEL LAYOUT PLAN

SCALE: 1" = 100'

PLAN NORTH

1" = 100' 100' 0 100' 200'

| APPR | DATE | SYM | DESCRIPTION |
|---|---|---|---|
| | | | |

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|---|---|---|---|---|---|
| PM/DM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PRO"TECTION | | | | | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL STATION - NORFOLK, VIRGINIA

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GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

CHANNEL LAYOUT PLAN

SCALE: AS NOTED
EPROJECT NO.: 1709726
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12942249
SHEET 6 OF 290

G-102

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\hfriberg\DC\ACCDocs\Stantec Consulting\224101316_FY25_MILCON_P-194_REPLACE_SSN_BERTHING_PIER_8\Project Files\01_IMP\01_general\sheet_files\G-102 CHANNEL LAYOUT PLAN.dwg LAYOUT NAME: G-102 CHANNEL LAYOUT PLAN PLOTTED: Friday, July 24, 2026 - 3:19pm USER: hfriberg

FILE NAME: C:\Users\vfelicionn\DC\ACCDocs\Stantec Consulting\224101316_P-194_NEW-LONDON_PIER_8\Project Files\01_WIP\01_general\sheet_files\G-105 CONTRACTOR ACCESS ROUTE PLAN.dwg LAYOUT NAME: G-105 CONTRACTOR ACCESS ROUTE PLAN PLOTTED: Friday, July 24, 2026 - 10:37am USER: nfelicionn

Perpetual Easement

Perpetual Easement

**ALPHA LOT**
THE CONTRACTOR MAY SUBMIT A FORMAL REQUEST TO THE GOVERNMENT FOR USE OF A PORTION OF ALPHA LOT FOR SUPPLEMENTAL MATERIAL LAYDOWN AND STORAGE. AUTHORIZATION FOR USE IS SUBJECT TO GOVERNMENT REVIEW AND CONDITIONS FOR USE AT TIME OF REQUEST.

GATE 7, CONTRACTOR AND TRUCK ACCESS
FOR USE BY ALL COMMERCIAL VEHICLES AND OVERSIDE LOADS

SECURITY CHECK POINT FOR CONTRACTORS

BASE AND LOWER BASE PASS OFFICE - BUILDING 585
FOR CONTRACTOR PERSONNEL AND VEHICLES

OPEN PARKING FIRST COME FIRST SERVE AREA

WORKFORCE SHUTTLE VAN DROPOFF/PICKUP

GATE 7

ACCESS ROUTE

MAIN GATE
GATE 1

LOWER BASE CORRIDOR (
ACCESS FOR WORKFORCE SHUTTLE VAN

ACCESS ROUTE

GATE 4, 6, & 8
NO ACCESS

MAIN GATE, GATE 1
NOT FOR USE BY CONTRACTORS, COMMERCIAL VEHICLES, OR TRUCK ACCESS

PASS AND ID OFFICE - BUILDING 500

GATE 2 - SECURITY CHECK POINT
ACCESS TO/FROM LOWER BASE AND SECURITY CORRIDOR

SECURITY CHECK POINT - ACCESS TO/FROM WATERFRONT SECURITY CORRIDOR

GATE 10
NO ACCESS

FIRE DEPARTMENT BUILDING 107

WORKFORCE SHUTTLE VAN DROPOFF/PICKUP

EXISTING PIER 8 TO BE DEMOLISHED

PIER 8

**WATERFRONT SECURITY CORRIDOR**
- NO POV ACCESS
- NO PARKING OR MATERIAL STORAGE
- ACCESS FOR MATERIAL DELIVERY AND OVERSIZED LOADS
- LIMITED ACCESS FOR CONTRACTOR'S SUPERVISORY VEHICLES

MATERIAL LAYDOWN AND STORAGE AREA (10,000 SF), LIMITED CONTRACTOR'S SUPERVISORY PARKING (2 SPACES). PROVIDE AND MAINTAIN TEMPORARY CHAINLINK FENCE AND GATES TO SURROUND AREA

EXISTING PIER 10 TO BE DEMOLISHED UNDER THE P-1044 - SUBMARINE PIER 31 EXTENSION CONSTRUCTION CONTRACT PRIOR TO AWARD OF THIS CONTRACT

## GENERAL SHEET NOTES:

1. AUTHORIZATION FROM THE CONTRACTING OFFICER IS REQUIRED FOR ACCESS TO CONSTRUCTION WORK LOCATIONS WITHIN EXISTING SAFETY ARCS.

# CONTRACTOR ACCESS ROUTE PLAN

SCALE: 1" = 300'

PLAN NORTH

1" = 300' 0 300' 600'

| APPR | DATE | DESCRIPTION | SYM |
|---|---|---|---|
| | | | |

NAVFAC

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A/E INFO

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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | CHG | DRW | CHG | CHK | MVG |
|---|---|---|---|---|---|
| PM/DM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

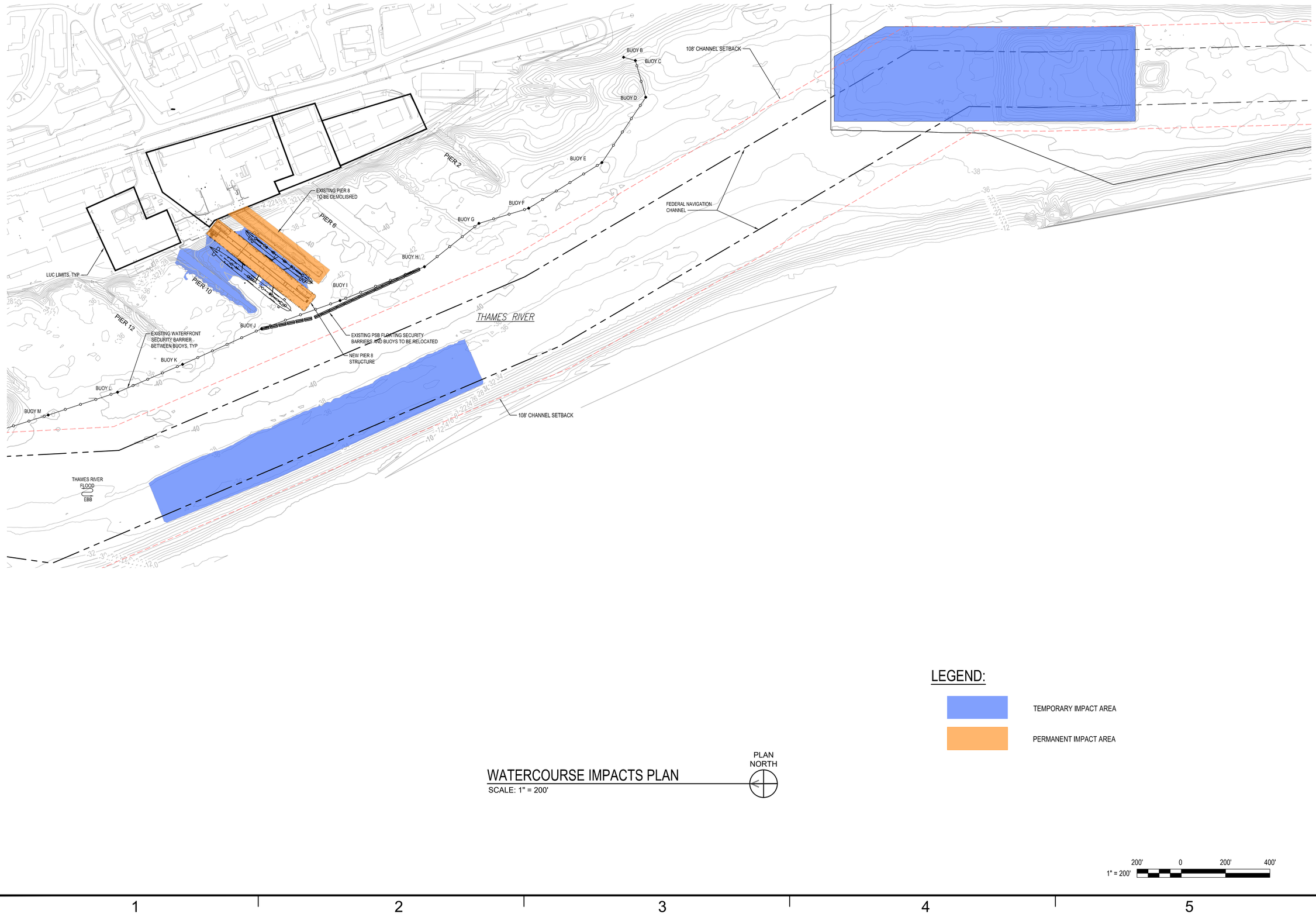
P-194 SSN SUBMARINE PIER 8 REPLACEMENT

CONTRACTOR ACCESS ROUTE PLAN

SCALE: AS NOTED
EPROJECT NO.: 1709726
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12942252
SHEET 9 OF 290

G-105

DRAWFORM REVISION: 25 AUGUST 2020




## LEGEND:

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA

## WATERCOURSE IMPACTS PLAN

SCALE: 1" = 200'

PLAN NORTH

200' 0 200' 400'

1" = 200'

| APPR | DATE | DESCRIPTION | SYM |
|---|---|---|---|

NAVFAC

PRELIMINARY NOT FOR CONSTRUCTION

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

XXXXX

SATISFACTORY TO DATE MM/DD/YY

| DES | DRW | CHK |
|---|---|---|

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|---|---|
| PM/DM | LBT/IIAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

WATERCOURSE IMPACTS

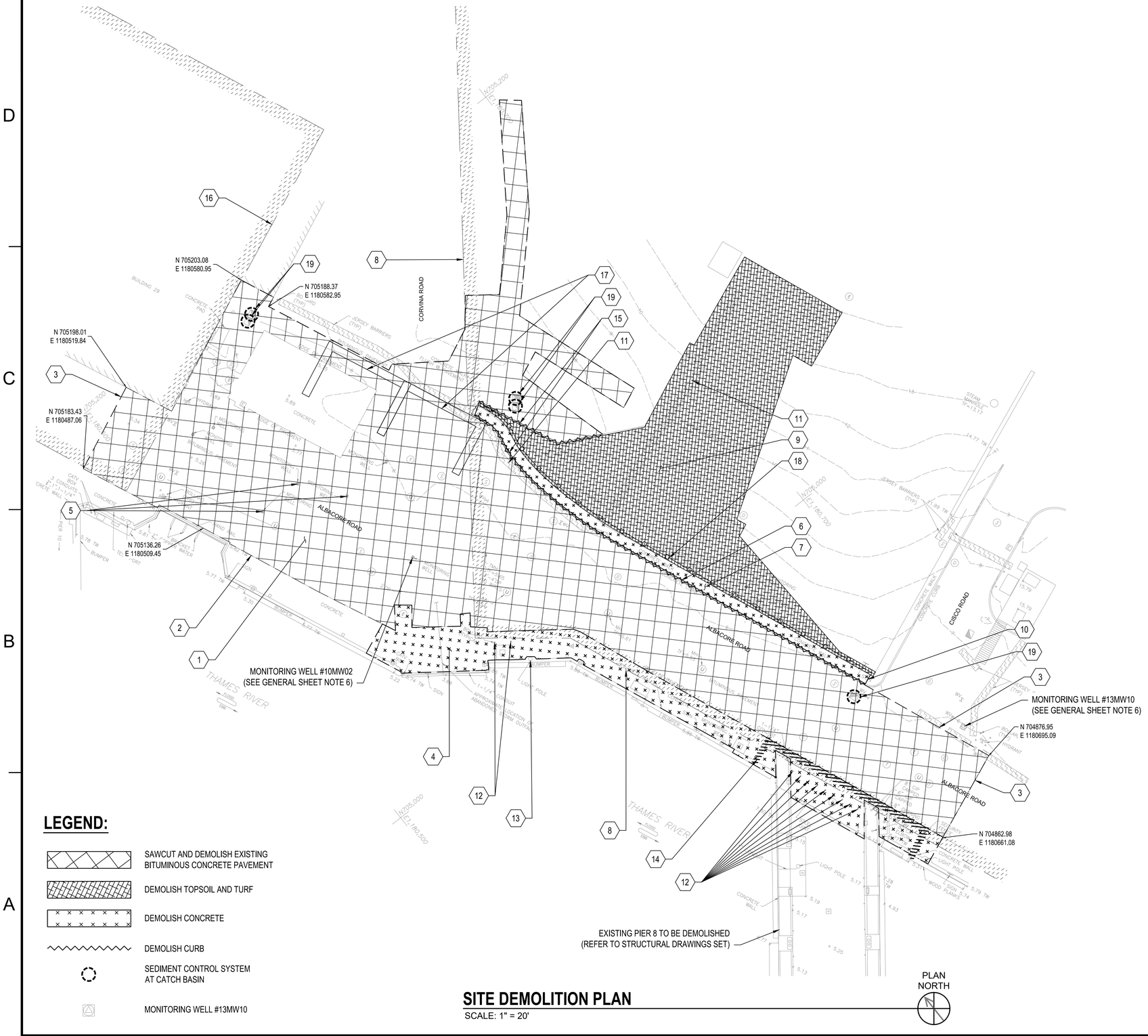
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|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | |
| SHEET | - OF XX |

G-106

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\vncromongno\DC\ACCDocs\Stantec Consulting\224101316_FY25_MILCON_P-194_REPLACE_SSN_BERTHING_PIER_8\Project Files\01_WIP\04_civil\sheet_files\G-106 WATERCOURSE IMPACTS.dwg LAYOUT NAME: G-101 OVERALL SITE PLAN PLOTTED: Monday, December 22, 2025 - 4:12pm USER: vncromongno

FILE NAME: C:\Users\kgannon\DC\ACCDocs\Stantec Consulting\224101316_P-194_NEW-LONDON_PIER_8\Project Files\01_WIP\04_civil\sheet_files\CD101 SITE DEMOLITION PLAN.dwg LAYOUT NAME: CD101 SITE DEMOLITION PLAN PLOTTED: Thursday, July 16, 2026 - 4:52pm USER: KGannon




## LEGEND:

- SAWCUT AND DEMOLISH EXISTING BITUMINOUS CONCRETE PAVEMENT
- DEMOLISH TOPSOIL AND TURF
- DEMOLISH CONCRETE
- DEMOLISH CURB
- SEDIMENT CONTROL SYSTEM AT CATCH BASIN
- MONITORING WELL #13MW10

## SITE DEMOLITION PLAN

SCALE: 1" = 20'

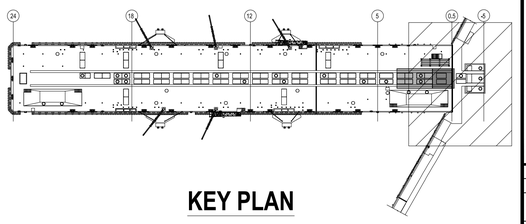
PLAN NORTH

## GENERAL SHEET NOTES:

1. SEE DRAWINGS C-001 AND C-002 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
2. SEE DRAWING CD102 FOR UTILITY DEMOLITION WORK.
3. LIMITS OF PAVEMENT REMOVAL AND DISPOSAL MUST MATCH LIMITS OF BITUMINOUS CONCRETE PAVEMENT, SEE C-101.
4. THE LANDSIDE AREA OF THE PIER IS PARTIALLY LOCATED WITHIN A LAND USE CONTROL ZONE (LUC). ANY EXCAVATION IN THESE AREAS WILL REQUIRE SPECIAL HANDLING AND DISPOSAL PROCEDURES. SEE PROJECT SPECIFICATIONS.
5. DURING CONSTRUCTION, WITHIN CONSTRUCTION LIMITS, CONTRACTOR TO REMOVE AND STORE JERSEY BARRIERS (± 215 LF) FOR REUSE. JERSEY BARRIERS TO BE REINSTALLED TO PRE-CONSTRUCTION LOCATION OR AS DIRECTED BY THE CONTRACTING OFFICER AFTER CONSTRUCTION IS FINISHED.
6. MONITORING WELL #13MW10 OR #10MW02 TO BE USED BY CONTRACTOR FOR COLLECTION OF REPRESENTATIVE GROUNDWATER CONTAINMENT SAMPLES. CONTRACTOR MAY PROPOSE OTHER SAMPLING LOCATION FOR APPROVAL BY CONTRACTING OFFICER.

## SHEET KEYNOTES:

1. DEMOLISH BITUMINOUS CONCRETE PAVEMENT ( ±20,015 SF).
2. DEMOLITION LIMITS OF BITUMINOUS CONCRETE PAVEMENT.
3. SAWCUT FOR PAVEMENT DEMOLITION, TYP.
4. SEE STRUCTURAL DRAWINGS FOR DEMOLITION OF EXISTING QUAY WALL, AND FENDERING SYSTEM.
5. MONITORING WELL TO REMAIN, PROTECT IN PLACE.
6. DEMOLISH CONCRETE CURB (±188 LF).
7. DEMOLISH CONCRETE SIDEWALK. SIDEWALK TO BE REMOVED TO THE NEAREST JOINT, AS REQUIRED TO PERMIT CONSTRUCTION (±748 SF).
8. LIMIT OF LUC ZONE 2.
9. REMOVE AND STOCKPILE TOPSOIL FOR REUSE. DEMOLISH TURF (±775 SY).
10. SAWCUT CONCRETE SIDEWALK FOR SIDEWALK REMOVAL, TYP. (±5 LF).
11. REMOVE AND SALVAGE TEMPORARY CONCRETE BARRIER CURB (JERSEY BARRIER), SEE GENERAL NOTE 5 (± 215 LF).
12. DEMOLISH GUARD POSTS (TOTAL 10 EA).
13. LIGHT POLE TO BE DEMOLISHED.
14. DEMOLISH EXISTING SECURITY FENCE (±100 LF).
15. DEMOLISH CONCRETE CURB (TOTAL 70 LF).
16. LIMIT OF LUC ZONE 1.
17. WASTE STOCKPILE AREA. CONTRACTOR TO COORDINATE EXACT FIELD LOCATION AND ANY RELOCATION WITH CONTRACTING OFFICER AS REQUIRED DURING CONSTRUCTION. REFER DRAWING C-505 FOR DETAILS.
18. SILT FENCE ( ±188 LF).
19. SEDIMENTATION CONTROL SYSTEM AT CATCH BASIN.




## KEY PLAN

20' 0 20' 40'

1" = 20'

| APPR | DATE | DESCRIPTION | SYM |
|---|---|---|---|

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | KPG | DRW | ASM | CHK | PJK |
|---|---|---|---|---|---|
| PM/DM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

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NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

SITE DEMOLITION PLAN

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942288 |
| SHEET | 45 OF 289 |

CD101

DRAWFORM REVISION: 25 AUGUST 2020

# SEDIMENTATION AND EROSION CONTROL NOTES:

1. SILTATION AND EROSION CONTROL MEASURES MUST BE INSTALLED PRIOR TO THE START OF ANY WORK AND MAINTAINED UNTIL ALL GROUND SURFACES ARE STABILIZED I.E. WITH TURF, PAVEMENT, ETC., AND MAY CONSIST OF SILT FENCING, HAY BALES, TEMPORARY SEDIMENTATION BASINS AND/OR SWALES, MULCH AND TEMPORARY SEEDING.

2. PROVIDE PERMANENT OR TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS, WATERCOURSES OR OTHER AREAS OF WATER IMPOUNDMENT BY CONSTRUCTION OPERATIONS. EVERY EFFORT MUST BE MADE TO PREVENT EROSION ON THE SITE AND/OR ONTO ABUTTING PROPERTY.

3. DIVERT SURFACE WATER RUN-OFF AWAY FROM EXPOSED RAW EARTH SURFACES THROUGH THE USE OF TEMPORARY BERMS, DIKES, DIVERSION CHANNELS AND/OR OTHER DIVERSION TECHNIQUES.

4. THE EROSION CONTROL FEATURES MUST BE INSTALLED AND MAINTAINED AND MUST BE CHECKED DAILY AND WITHIN 24-HOURS AFTER EACH SEVERE RAIN STORM (>0.5 INCHES) FOR DAMAGE. ANY DAMAGED CONTROL MEASURES SHALL BE REPLACED IMMEDIATELY. ALL SEDIMENTATION TRAPS AND SEDIMENTATION BASINS MUST HAVE THE ACCUMULATED SEDIMENT AND/OR CLEAN WATER REMOVED BEFORE IT SIGNIFICANTLY REDUCES THEIR STORAGE VOLUME OR FUNCTION, PRIOR TO THE NEXT RAIN STORM FORECAST FOR THE REGION.

5. AT ALL TIMES, HAVE ON HAND THE NECESSARY MATERIALS AND EQUIPMENT TO PROVIDE FOR EARLY SLOPE STABILIZATION AND CORRECTIVE MEASURES TO DAMAGED SLOPES. RESPOND TO MAINTENANCE OR ADDITIONAL MEASURES ORDERED BY THE GOVERNMENT WITHIN 24 HOURS.

6. OPERATE ALL EQUIPMENT AND PERFORM ALL CONSTRUCTION OPERATIONS SO AS TO MINIMIZE POLLUTION TO ADJACENT WATER COURSES OR WETLANDS AREAS. CEASE ANY OPERATIONS WHICH WILL INCREASE POLLUTION DURING RAIN STORMS.

7. ALL SLOPES OF STOCKPILE MATERIAL AND OTHER DISTURBED AREAS MUST BE STABILIZED AND PROTECTED BY SURROUNDING WITH SILT FENCING OR HAY BALES, OR OTHERWISE PROTECTED AS APPROVED. ALL DAMAGED AREAS MUST BE REPAIRED AS SOON AS POSSIBLE. LIMIT THE SURFACE AREA OF EACH MATERIAL EXPOSED TO SUFFICIENTLY PROTECT THE SLOPES TO PREVENT POLLUTION.

8. MULCHES: MUST BE HAY, STRAW, WOOD CELLULOSE, WOOD CHIPS, STONE, NETTING, BURLAP OR OTHER SUITABLE MULCH MATERIAL. MULCHES MUST BE REASONABLY CLEAN AND FREE OF NOXIOUS WEEDS AND DELETERIOUS MATERIALS. ASPHALT SPRAYS WILL NOT BE ALLOWED. PREVENT STRAW, WOOD CHIPS, ETC., FROM ENTERING ANY CATCH BASINS, RESERVOIRS OR WATERCOURSES.

9. HAY BALES: MUST BE PLACED AROUND ALL EXISTING DRAINAGE INLETS WITHIN THE PROJECT LIMITS. THEY MUST BE HELD IN PLACE BY TWO WOODEN STAKES IN EACH BALE. BALES MUST BE MAINTAINED OR REPLACED AS ORDERED BY THE CONTRACTING OFFICER UNTIL THEY ARE NO LONGER NECESSARY FOR THE PURPOSE INTENDED OR ARE ORDERED . HAY BALES MUST BE MADE OF HAY WITH 40 POUNDS MINIMUM WEIGHT AND 120 POUNDS MAXIMUM WEIGHT. WOOD STAKES MUST BE A MINIMUM OF 1 INCH BY 1 INCH NOMINAL SIZE BY A MINIMUM OF 3 FEET LONG.

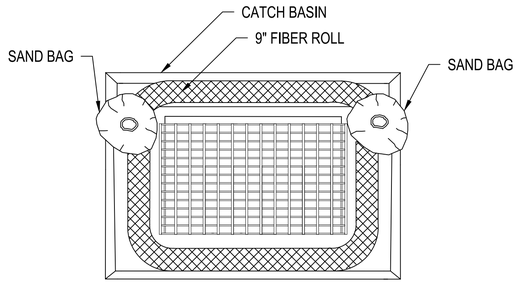
10. SILT FENCE: MUST CONSIST OF 3-FOOT WIDE GEOSYNTHETIC FABRIC WITH PREFABRICATED WOOD POSTS AS MANUFACTURED BY "MIRAFI" OR EQUAL. THE BOTTOM SIX INCHES OF FABRIC MUST BE BURIED BY EITHER TRENCHING OR BY LAYING THE SIX INCH SECTION HORIZONTALLY ON THE GROUND AND BURYING BY RAMPING THE 3/4" CRUSHED STONE UP TO THE CONTROL FENCE.

    - MINIMUM LENGTH OF SILT FENCE IS 15 L.F.
    - MAXIMUM POST SPACING IS 10 L.F.
    - JOINTS IN FILTER FABRIC MUST BE ONLY AT SUPPORT POSTS WITH MINIMUM 6" OVERLAP, SECURELY SEALED
    - TO THE EXTENT PRACTICAL, SILT FENCE MUST BE INSTALLED PARALLEL WITH CONTOUR OF THE LAND. WHERE THIS IS NOT PRACTICAL SILT FENCE CHECKS MAY BE REQUIRED.
    - SILT FENCE MUST BE BACKED WITH STAKED HAY BALES AT LOW POINTS OR CRITICAL AREAS WHERE CONCENTRATIONS OF RUNOFF MAY OCCUR.
    - SILT FENCE MUST NOT BE USED IN A WATER COURSE
    - FABRIC SUSCEPTIBLE TO SUNLIGHT DAMAGE MUST NOT BE USED IN ANY INSTALLATIONS WHERE EXPOSURE TO LIGHT WILL EXCEED 30 DAYS, UNLESS SPECIFICALLY AUTHORIZED.

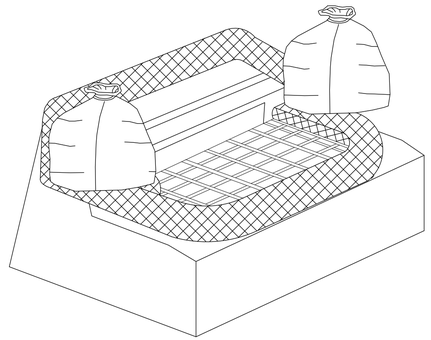
11. TEMPORARY SWALES AND SEDIMENTATION BASINS MAY BE CONSTRUCTED OF RIP-RAP, MULCH, HAY BALES OR JUTE MESH. PORTLAND CEMENT CONCRETE OR BITUMINOUS CONCRETE WILL NOT BE ALLOWED.

12. TEMPORARY GRASS SEED MUST BE PERENNIAL RYE-GRASS (LOLIUM PERENNE) OR AN IMPROVED VARIETY THEREOF, SUCH AS MANHATTAN, HAVING A MINIMUM PURITY OF 98 PERCENT AND A MINIMUM GERMINATION OF 90 PERCENT.

13. AT THE COMPLETION OF THE PROJECT, AND AFTER ALL DISTURBED AREAS ARE STABILIZED, COMPLETELY REMOVE ALL SEDIMENTATION AND EROSION CONTROL MEASURES. ALL MULCH, HAY BALES AND TEMPORARY RIP-RAP MUST BE REMOVED FROM THE SITE.

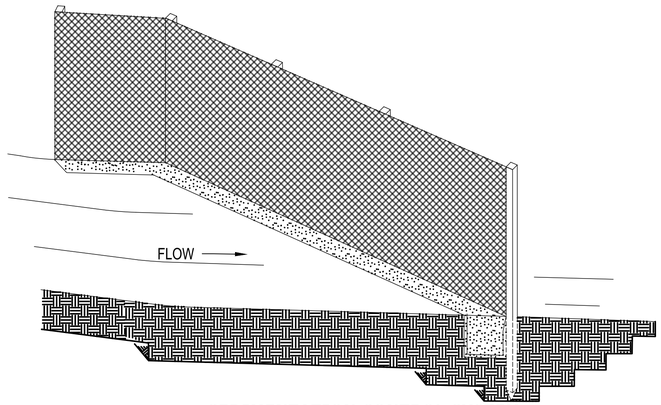



PLAN



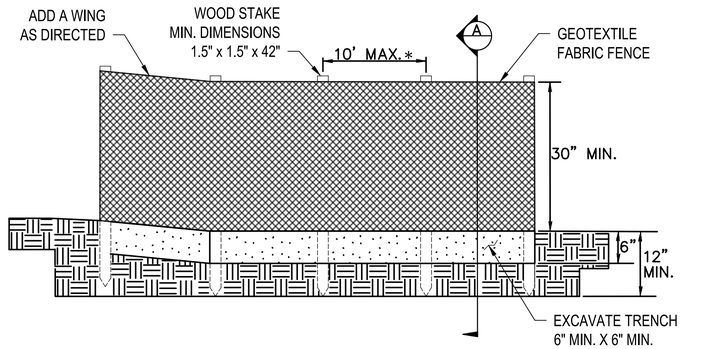
## C2 FIBER ROLL AT CATCH BASIN TOP

NOT TO SCALE



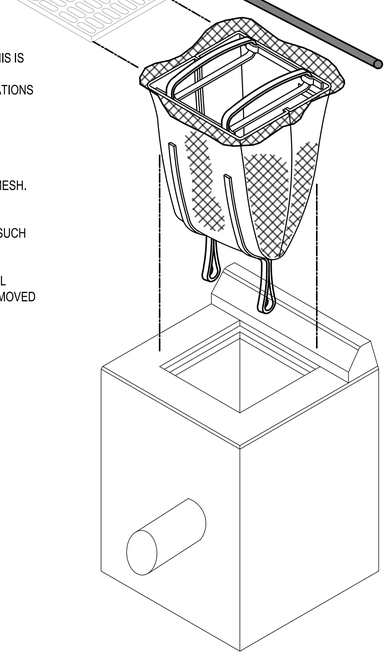

## SEDIMENTATION CONTROL SYSTEM

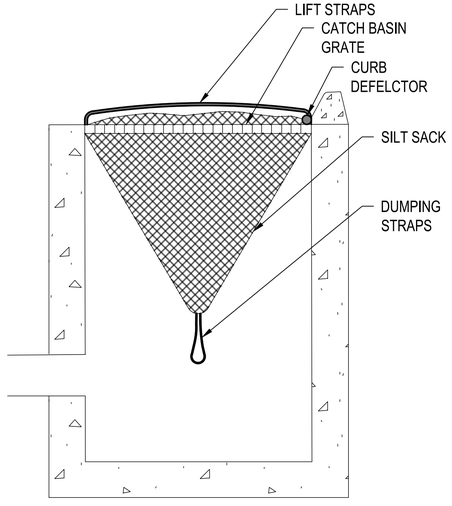
INSTALL THE WING WHEN THE FENCE IS MORE THAN 4' FROM THE TOE OF SLOPE AND THE FENCE LINE GRADIENT IS 5% OR MORE




## ELEVATION

* FOR SLOPES STEEPER THAN 2:1 USE A 5' POST SPACING OR AS DIRECTED BY THE ENGINEER

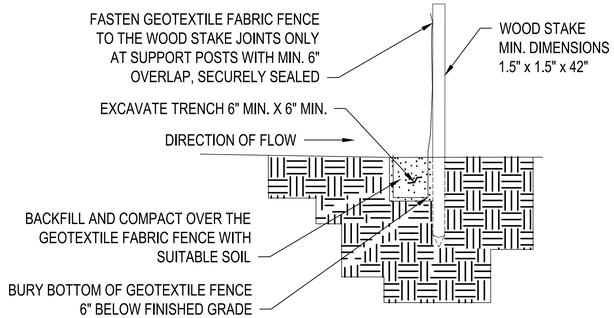





SECTION

## A2 INLET SEDIMENT CONTROL AT CATCH BASINS

NOT TO SCALE




SECTION A

## A4 SILT FENCE DETAIL

NOT TO SCALE

| APPR | DATE | DESCRIPTION | SYM |
|---|---|---|---|

NAVFAC

SEAL

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A/E INFO

APPROVED

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ACTIVITY

SATISFACTORY TO DATE

| DES | KPG | DRW | ASM | CHK | PJK |
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| PM/DM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

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GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

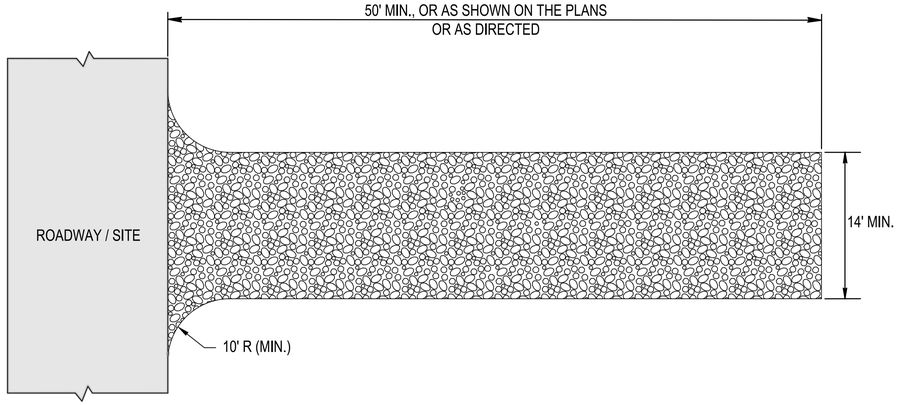
EROSION CONTROL NOTES & DETAILS - SHEET 1 OF 2

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942294 |
| SHEET | 51 OF 289 |

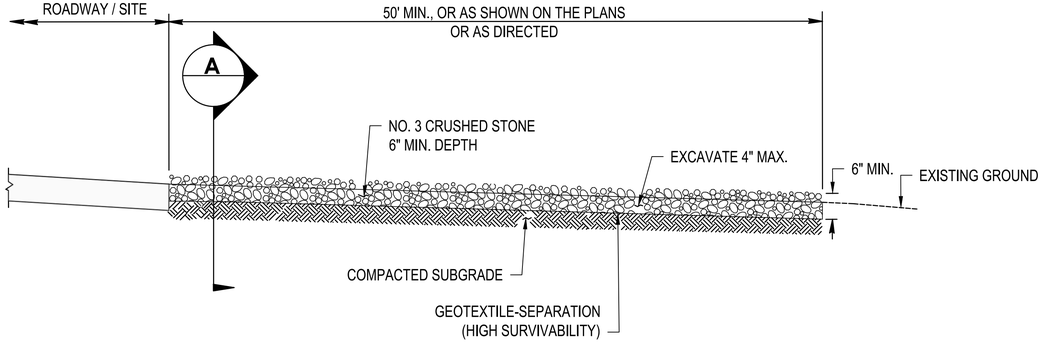
C-501

DRAWFORM REVISION: 25 AUGUST 2020

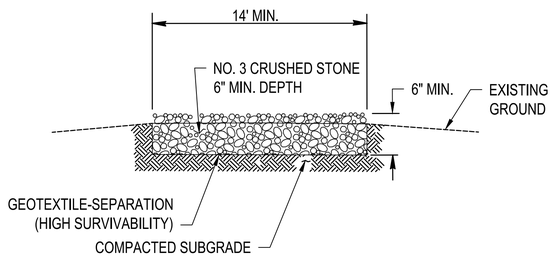
FILE NAME: C:\Users\kgannon\DC\ACCDocs\Stantec Consulting\224101316_P-194_NCW-LONDON_PIER_8\Project Files\01_WIP\04_civil\sheet_files\C-501 EROSION CONTROL NOTES & DETAILS - SHEET 1 OF 2.dwg LAYOUT NAME: C-501 EROSION CONTROL NOTES & DETAILS - SHEET 1 OF 2 PLOTTED: Thursday, July 16, 2026 - 5:05pm USER: KGannon




**PLAN**



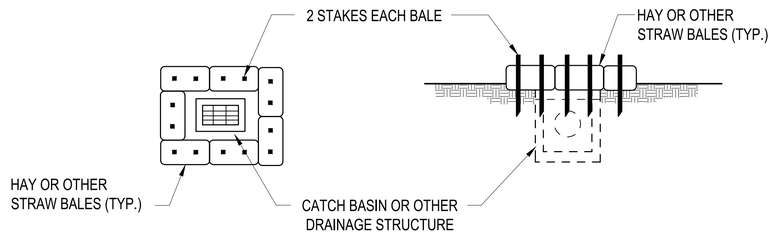

**ELEVATION**




**SECTION A**

## A1 ANTI TRACKING PAD DETAIL

NOT TO SCALE

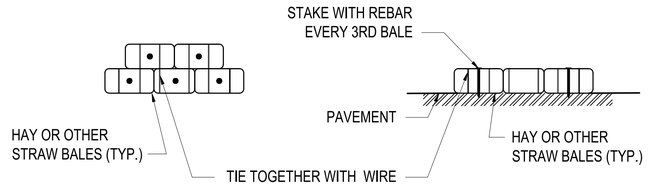



PLAN SECTION

NOTE:
1. ALL EXISTING OR NEW CATCH BASINS IN AREAS DISTURBED BY CONSTRUCTION MUST BE PROTECTED BY SEDIMENTATION CONTROLS.

## B3 HAY BALE DETAIL - CATCH BASIN IN A DEPRESSION

NOT TO SCALE




PLAN SECTION

NOTE:
1. PATCH HOLE WITH LIQUID BITUMEN AND COVER WITH SAND ONCE BALES ARE REMOVED OR MOVED.

## A3 HAY BALE ON PAVEMENT DETAIL

NOT TO SCALE

APPR | DATE | DESCRIPTION | SYM

NAVFAC

SEAL

Stantec

A/E INFO

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ACTIVITY

SATISFACTORY TO DATE

DES: KPG | DRW: ASM | CHK: PJK

PM/DM: LBT/IAS

BRANCH MANAGER: NEK

CHIEF ENG/ARCH: JWJ

FIRE PROTECTION: HPN

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NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

EROSION CONTROL NOTES & DETAILS - SHEET 2 OF 2

SCALE: AS NOTED

EPROJECT NO.: 1709726

CONSTR. CONTR. NO.

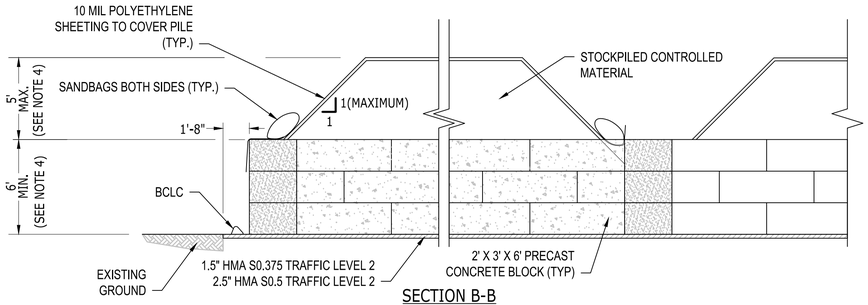
NAVFAC DRAWING NO.
12942295

SHEET 52 OF 289

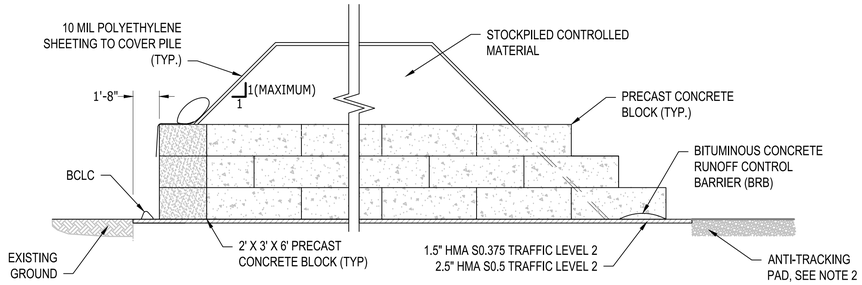
C-502

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\kgannon\DC\ACCDocs\Stantec Consulting\224101316_P-194_NEW-LONDON_PIER_8\Project Files\01_IWP\04_civil\sheet_files\C-502 EROSION CONTROL NOTES & DETAILS - SHEET 2 OF 2.dwg LAYOUT NAME: C-502 EROSION CONTROL NOTES & DETAILS - SHEET 2 OF 2 PLOTTED: Thursday, July 16, 2026 - 5:06pm USER: KGannon




SECTION B-B



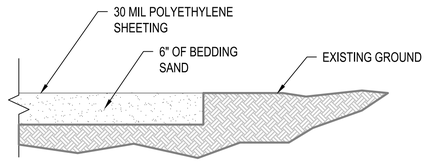

SECTION A-A

## B1 WASTE STOCKPILE AREA DETAIL

NOT TO SCALE (CD101)

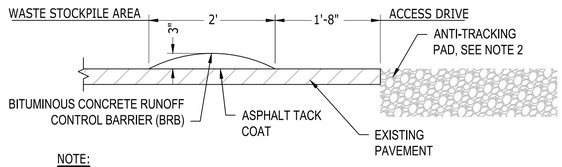
## GENERAL NOTES:

1. WSA INSTALLATION AND ALL REQUIRED MATERIAL ARE AS INDICATED ON THE WSA PLAN.
2. ANTI-TRACKING PAD MUST BE INSTALLED AS SHOWN ON PLAN AND IN ACCORDANCE WITH "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, 2002-SECTION 5-12."
3. WHERE FEASIBLE A MINIMUM OF 5' IMMEDIATELY OUTSIDE THE PERIMETER OF THE WSA MUST REMAIN CLEAR AND FREE OF ANY OBJECT TO PROVIDE ACCESS FOR MAINTENANCE.
4. HEIGHT OF THE CONCRETE BLOCKS, STOCKPILED CONTROLLED MATERIAL AND CONFIGURATION OF THE BINS MAY VARY BASED ON THE SIZE AS INDICATED ON THE PLANS OR AS DIRECTED BY THE CONTRACTING OFFICER.
5. THE WSA SURFACE MUST BE SUFFICIENTLY IMPERVIOUS TO PREVENT OR MINIMIZE THE TRANSFER OR INFILTRATION OF CONTAMINANTS FROM THE STOCKPILES TO THE GROUND. THE WSA SURFACE WILL VARY BASED ON SPECIFICS AND MAY BE CONSTRUCTED ON NEW OR EXISTING PAVEMENT, BEDDING SAND OR OTHER MATERIAL AS SHOWN ON THE PLAN(S).




## A1 BEDDING SAND OVER EXISTING GROUND DETAIL

NOT TO SCALE (CD101)




NOTE:

INSTALLATION OF BRB MUST BE ON PAVEMENT ONLY AND IS BASED ON FIELD CONDITIONS OR AS DETERMINED BY THE CONTRACTING OFFICER.

## A2 BITUMINOUS RUNOFF CONTROL BARRIER (BRB) DETAIL

NOT TO SCALE (CD101)

APPR | DATE | SYM | DESCRIPTION

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

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ACTIVITY

SATISFACTORY TO DATE

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|---|---|---|---|
| DES | KPG | DRW ASM | CHK PJK |
| PM/DM | | | LBT/IAS |
| BRANCH MANAGER | | | NEK |
| CHIEF ENG/ARCH | | | JWJ |
| FIRE PROTECTION | | | HPN |

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CLOORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

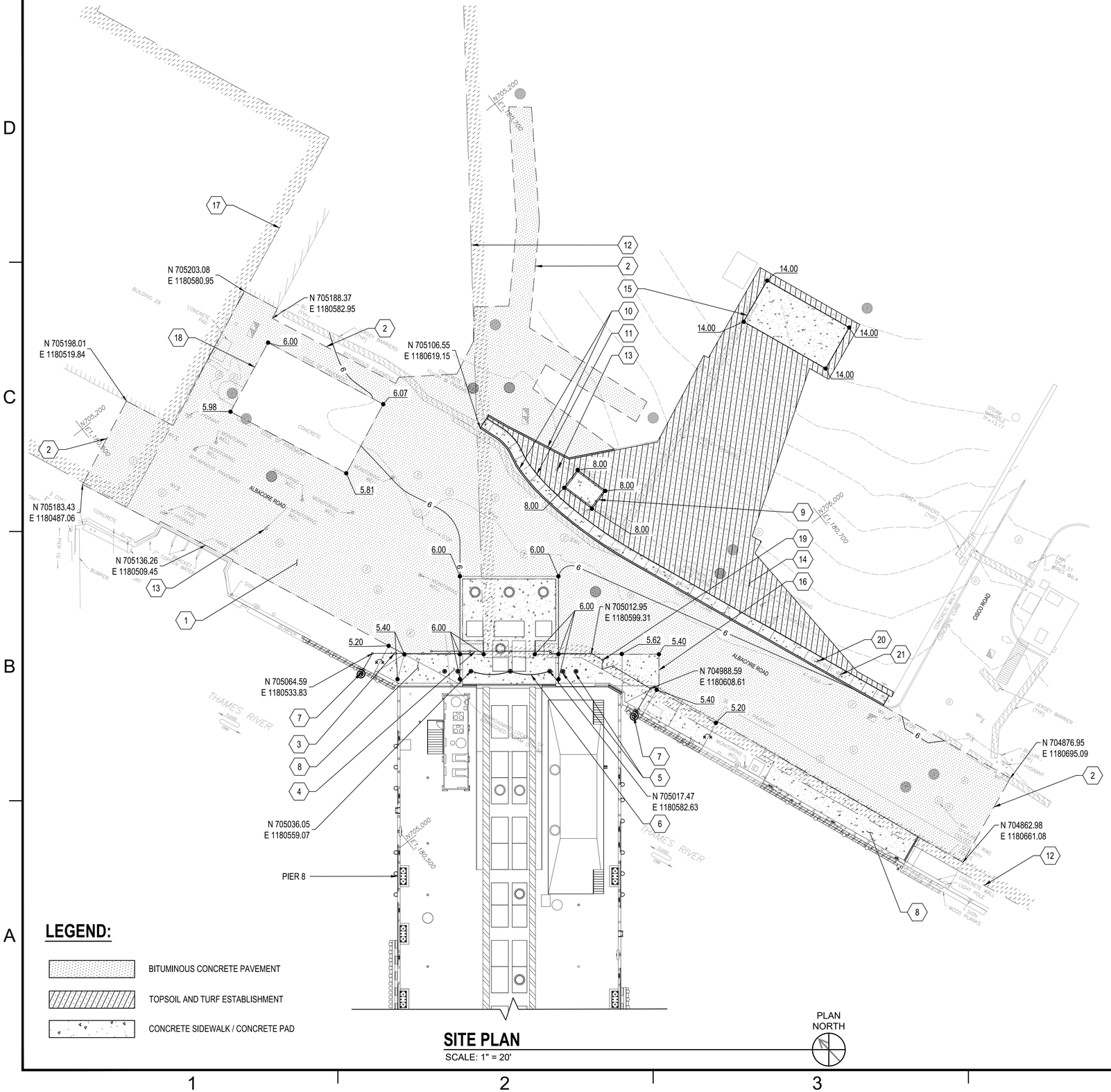
SITE DETAILS - SHEET 3 OF 3

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942298 |
| SHEET | 55 OF 289 |

C-505

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\kgannon\DC\ACCDocs\Stantec Consulting\x22401316_P-194_NEW-LONDON_PIER_8\Project Files\01_WIP\04_civil\sheet_files\C-505 SITE DETAILS - SHEET 3 OF 3.dwg LAYOUT NAME: C-505 SITE DETAILS - SHEET 3 OF 3 PLOTTED: Thursday, July 16, 2026 - 5:22pm USER: KGannon




## LEGEND:

- BITUMINOUS CONCRETE PAVEMENT
- TOPSOIL AND TURF ESTABLISHMENT
- CONCRETE SIDEWALK / CONCRETE PAD

## SITE PLAN

SCALE: 1" = 20'

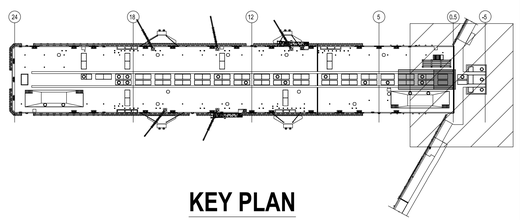
PLAN NORTH

## GENERAL SHEET NOTES:

1. SEE C-001 AND C-002 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
2. SEE DRAWING C-102 FOR UTILITY WORK.
3. LIMITS OF BITUMINOUS CONCRETE MUST MATCH LIMITS OF PAVEMENT REMOVAL, SEE CD101. NEW GRADES MUST MATCH EXISTING AND MAINTAIN CURRENT DRAINAGE PATTERNS. AT NO POINT MUST STORMWATER RUNOFF BE PERMITTED TO POND WITHIN THE AREA OF NEW PAVEMENT.
4. CONCRETE BARRIER CURBS WITHIN CONSTRUCTION LIMITS MUST BE TEMPORARILY RELOCATED, AS NEEDED, TO PERMIT CONSTRUCTION ACTIVITIES. BARRIER CURB MUST BE RESET TO ORIGINAL LOCATIONS ONCE FINAL CONDITION HAS BEEN ESTABLISHED.

## SHEET KEYNOTES:

1. BITUMINOUS CONCRETE PAVEMENT. REFER C3 / C-506 FOR DETAILS.
2. LIMITS OF BITUMINOUS CONCRETE PAVEMENT. (SAWCUT AND SEAL JOINT, MATCH EXISTING PAVEMENT FLUSH.)
3. 10' HIGH CHAIN LINK FENCE WITH 3 STRANDS OF BARBED WIRE. REFER C1 / C-503 FOR DETAILS.
4. 30' MANUAL SLIDING GATE, 10-FT HEIGHT. REFER A1 / C-503 FOR DETAILS.
5. REMOVABLE GUARD POSTS 5' O.C. ,TYP. REFER C3 / C-504 FOR DETAILS.
6. CABLE VEHICLE BARRIER. REFER A1 / C-504 FOR DETAILS.
7. GALVANIZED STEEL RAZOR WIRE (COILED) FOR ENTIRE HEIGHT OF CHAIN LINK FENCE. ATTACH RAZOR WIRE TO END POST WITH GALVANIZED POST TIES (TYP, BOTH SIDES)
8. REFER TO STRUCTURAL DRAWINGS FOR MORE QUAY WALL DETAILS.
9. CONCRETE PAD FOR REDUCED PRESSURE ZONE UNIT BACKFLOW PREVENTER. CONFIRM AND COORDINATE PAD SIZE WITH APPROVED HEATED AND INSULATED ENCLOSURE. REFER C1 / C-504 FOR DETAILS.
10. PRECAST CONCRETE CURB. REFER B4 / C-504 FOR DETAILS.
11. CONCRETE SIDEWALK. REFER A4 / C-504 FOR DETAILS.
12. LUC ZONE 2 LIMITS.
13. MONITORING WELL TO REMAIN AND BE PROTECTED IN PLACE, TYP.
14. TOPSOIL AND TURF ESTABLISHMENT.
15. SF6 SWITCHES PLATFORM. REFER TO DRAWINGS S-555, E-105 AND E-502 FOR DETAILS.
16. CONSTRUCTION JOINT WITH PREFORMED FILLER AND SEALANT, TYP.
17. LUC ZONE 1 LIMITS.
18. CONCRETE PAD TO REMAIN. MATCH PAVING FLUSH AROUND PERIMETER.
19. 4' WIDE PERSONNEL CHAIN LINK SWING GATE. REFER C4 / C-503 FOR DETAILS.
20. SIDEWALK EXPANSION JOINT, TYP.
21. SIDEWALK CONTROL JOINT, TYP.



## KEY PLAN

1" = 20' — 20' 0 20' 40'

| | |
|---|---|
| APPR | |
| DATE | |
| DESCRIPTION | |
| SYM | |

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | KPG | DRW ASM | CHK PJK |
| PM/DM | | | LBT/IAS |
| BRANCH MANAGER | | | NEK |
| CHIEF ENG/ARCH | | | JWJ |
| FIRE PROTECTION | | | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CLCORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

# P-194 SSN SUBMARINE PIER 8 REPLACEMENT

SITE PLAN

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942290 |
| SHEET | 47 OF 289 |

C-101

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\Vgannon\DC\ACCDocs\Stantec Consulting\Y24101316_P-194_NEW-LONDON_PIER_8\Project Files\01_AWP\04_civil\sheet_files\C-101 SITE PLAN.dwg LAYOUT NAME: C-101 SITE PLAN PLOTTED: Thursday, July 16, 2026 - 4:58pm USER: KGannon

FILE NAME: C:\Users\vncaromagno\DCA\ACCDocs\Stantec Consulting\224101316_FY25_MI_CON_P-194_REPLACE_SSN_BERTHING_PIER_8\Project Files\01_WIP\04_civil\sheet_files\CN101 OVERALL DREDGING PLAN.dwg LAYOUT NAME: CN101 OVERALL DREDGING PLAN – PERMIT PLOTTED: Monday, December 22, 2025 – 4:18pm USER: vncaromagno

## GENERAL SHEET NOTES:

1. ELEVATIONS SHOWN ON THE OVERALL DREDGING PLAN ARE REFERENCED TO MLLW.
2. ALL SOUNDINGS WERE OBTAINED BY HYDROGRAPHIC SURVEY PERFORMED BY NAVY IN SEPTEMBER 2024.

## LEGEND:

- AREA TO BE DREDGED
- CHANNEL LIMITS
- 38 — MINOR CONTOUR
- 40 — MAJOR CONTOUR
- 40 — EXISTING CONTOUR
- XYZ N = XX E = XX — SEDIMENT SAMPLING LOCATION

P8-2 VC
N = 704731.00
E = 1180469.00

P8-2 VC
N = 704729.65
E = 1180469.68

NEW PIER 8

P8-5 VC
N = 704611.93
E = 1180381.58

P8-5 VC
N = 704614.00
E = 1180378.00

P8-1 VC
N = 705083.22
E = 1180358.17

P8-1 VC
N = 705082.00
E = 1180356.00

P8-3 VC
N = 704972.00
E = 1180272.00

P8-4 VC
N = 704872.00
E = 1180205.00

P8-4 VC
N = 704871.84
E = 1180201.96

DREDGING FOR PIER AND TURNING BASIN
(SEE DRAWING CN103 FOR DETAILS)

108' CHANNEL SETBACK

FEDERAL NAVIGATION CHANNEL

NEW PIER 8 TURNING BASIN

THAMES RIVER

EXISTING PSB

WC-9 E
N = 704046.44
E = 1179963.90

WC-9 VC
N = 704052.34
E = 1179968.67

WC-7 VC
N = 704226.64
E = 1179839.06

WC-10 E
N = 703888.57
E = 1179939.86

WC-10 VC
N = 703892.71
E = 1179939.35

P8-6 VC
N = 704604.90
E = 1179673.52

P8-6 VC
N = 704604.00
E = 1179663.00

P8-7 VC
N = 704891.93
E = 1179581.14

P8-7 VC
N = 704899.00
E = 1179574.00

WC-8 VC
N = 704046.93
E = 1179801.78

WC-8 E
N = 704056.51
E = 1179804.17

WC-6 VC
N = 704264.69
E = 1179707.56

WC-5 AVC
N = 704425.35
E = 1179752.33

DREDGING FOR WESTERLY CHANNEL WIDENING
(SEE DRAWING CN102 FOR DETAILS)

WC1-E
N = 705224.65
E = 1179487.18

WC-1 VC
N = 705227.29
E = 1179405.83

WC-4 VC
N = 704511.96
E = 1179616.74

WC-3 VC
N = 704965.93
E = 1179484.69

WC-2 E
N = 705060.29
E = 1179352.11

WC3 E
N = 704954.03
E = 1179462.71

WC-2 VC
N = 705067.28
E = 1179352.20

108' CHANNEL SETBACK

## OVERALL DREDGING PLAN

SCALE: 1" = 80'

PLAN NORTH

80' 0 80' 160'
1" = 80'

| NO. | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

PRELIMINARY NOT FOR CONSTRUCTION

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

XXXXX

SATISFACTORY TO DATE MM/DD/YY

| DES - | DRW - | CHK - |
|---|---|---|

| | |
|---|---|
| PM/DM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CLOBE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

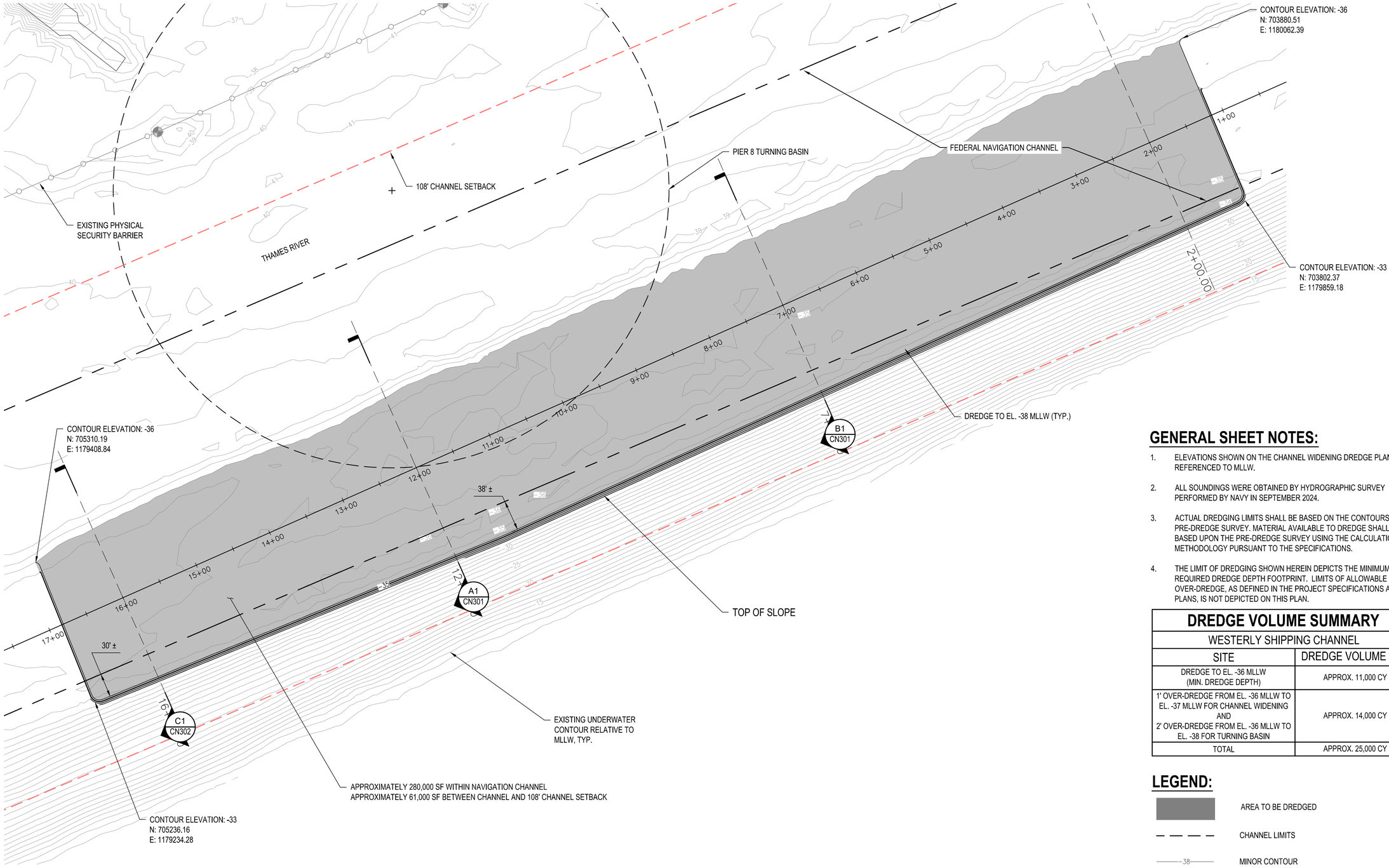
OVERALL DREDGING PLAN

SCALE: AS NOTED
EPROJECT NO.: 1709726
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
SHEET - OF XX

CN101

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\mcaramagno\DC\ACCDocs\Stantec Consulting\22410.1316_FY25_MILCON_P-194_REPLACE_SSN_BERTHING_PIER_8\Project Files\01_WIP\04_civil\sheet_files\CN102 CHANNEL WIDENING DREDGE PLAN.dwg LAYOUT NAME: CN102 CHANNEL WIDENING DREDGE PLAN – PERMIT PLOTTED: Monday, December 22, 2025 – 4:14pm USER: mcaramagno




## CHANNEL WIDENING DREDGE PLAN

SCALE: 1" = 60'

PLAN NORTH

## GENERAL SHEET NOTES:

1. ELEVATIONS SHOWN ON THE CHANNEL WIDENING DREDGE PLAN ARE REFERENCED TO MLLW.
2. ALL SOUNDINGS WERE OBTAINED BY HYDROGRAPHIC SURVEY PERFORMED BY NAVY IN SEPTEMBER 2024.
3. ACTUAL DREDGING LIMITS SHALL BE BASED ON THE CONTOURS OF THE PRE-DREDGE SURVEY. MATERIAL AVAILABLE TO DREDGE SHALL BE BASED UPON THE PRE-DREDGE SURVEY USING THE CALCULATION METHODOLOGY PURSUANT TO THE SPECIFICATIONS.
4. THE LIMIT OF DREDGING SHOWN HEREIN DEPICTS THE MINIMUM REQUIRED DREDGE DEPTH FOOTPRINT. LIMITS OF ALLOWABLE OVER-DREDGE, AS DEFINED IN THE PROJECT SPECIFICATIONS AND PLANS, IS NOT DEPICTED ON THIS PLAN.

**DREDGE VOLUME SUMMARY**

WESTERLY SHIPPING CHANNEL

| SITE | DREDGE VOLUME (CY) |
|---|---|
| DREDGE TO EL. -36 MLLW (MIN. DREDGE DEPTH) | APPROX. 11,000 CY |
| 1' OVER-DREDGE FROM EL. -36 MLLW TO EL. -37 MLLW FOR CHANNEL WIDENING AND 2' OVER-DREDGE FROM EL. -36 MLLW TO EL. -38 FOR TURNING BASIN | APPROX. 14,000 CY |
| TOTAL | APPROX. 25,000 CY |

## LEGEND:

- AREA TO BE DREDGED
- CHANNEL LIMITS
- 38 MINOR CONTOUR
- 40 MAJOR CONTOUR
- 40 EXISTING CONTOUR

60' 0 60' 120'
1" = 60'

| | |
|---|---|
| APPR | |
| DATE | |
| DESCRIPTION | |
| SYM | |

PRELIMINARY NOT FOR CONSTRUCTION

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY: XXXXX

SATISFACTORY TO DATE: MM/DD/YY

DES - DRW - CHK -

PM/DM: LBT/IAS
BRANCH MANAGER: NEK
CHIEF ENG/ARCH: JWJ
FIRE PROTECTION: HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

CHANNEL WIDENING DREDGE PLAN

SCALE: AS NOTED
EPROJECT NO.: 1709726
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
SHEET - OF XX

CN102

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\ymcarmagno\DC\ACCDocs\Stantec Consulting\224101316_FY25_MILCON_P-194_REPLACE_SSN_BERTHING_PIER_8\Project Files\01_WIP\04_civil\sheet_files\CN103_PIER 8 BERTHS AND TURNING BASIN DREDGE PLAN.dwg LAYOUT NAME: CN103 TURNING BASIN DREDGE PLAN - PERMIT PLOTTED: Monday, December 22, 2025 - 4:14pm USER: mcarmagno

CONTOUR ELEVATION: -38
N: 705222.37
E: 1179917.63

EXISTING WATERFRONT SECURITY BARRIER

DREDGE TO ELEVATION -38 MLLW, TYP.

108' CHANNEL SETBACK

CONTOUR ELEVATION: -38
N: 705022.91
E: 1180197.09

CONTOUR ELEVATION: -35
N: 705244.45
E: 1180365.01

A1
CN303
00.00

7+50

1+00

OUTFALL O-26

DREDGE TO ELEVATION -38 MLLW, TYP.

R346.50'

B1
CN303
00.00

CONTOUR ELEVATION: -40
N: 704815.79
E: 1180310.00

CENTER OF TURNING BASIN
N: 704866.02
E: 1179872.36

13+00

12+00

OUTFALL O-26B

A1
CN304

EXISTING ANCHOR BUOY

CONTOUR ELEVATION: -36
N: 704516.98
E: 1180309.40

C1
CN303
60.00

EXISTING UNDERWATER CONTOUR RELATIVE TO MLLW, TYP.

11+00

10+00

2+00

1+00

0+00

CONTOUR ELEVATION: -42
N: 704637.62
E: 1180140.76

96'-6"

204'-6"

C1
CN304

DREDGE TO ELEVATION -42 MLLW, TYP.

9+00

8+00

RELOCATED PSB

EXISTING ANCHOR BUOY

CONTOUR ELEVATION: -38
N: 704523.72
E: 1180350.00

FEDERAL NAVIGATION CHANNEL

7+00

PLAN NORTH

## GENERAL SHEET NOTES:

1. ELEVATIONS SHOWN ON THE TURNING BASIN DREDGING PLAN ARE REFERENCED TO MLLW.
2. ALL SOUNDINGS WERE OBTAINED BY HYDROGRAPHIC SURVEY PERFORMED BY NAVY IN SEPTEMBER 2024.
3. ACTUAL DREDGING LIMITS SHALL BE BASED ON THE CONTOURS OF THE PRE-DREDGE SURVEY. MATERIAL AVAILABLE TO DREDGE SHALL BE BASED UPON THE PRE-DREDGE SURVEY USING THE CALCULATION METHODOLOGY PURSUANT TO THE SPECIFICATIONS.
4. DREDGING OPERATIONS ARE REQUIRED WITHIN THE PROXIMITY OF FLOATING SECURITY BARRIERS AND BUOYS. DREDGING MUST AVOID IMPACTING THE SECURITY BARRIER AND BUOY ANCHOR SYSTEM. ANY CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER.

## DREDGE VOLUME SUMMARY

TURNING BASIN AND PIER 8 BERTH

| SITE | DREDGE VOLUME (CY) |
|---|---|
| DREDGE TO EL. -36 MLLW (MIN DEPTH DREDGE) | APPROX. 10,200 CY |
| DREDGE TO EL. -37 MLLW (OVER-DREDGE DEPTH) | APPROX. 12,500 CY |
| TOTAL | APPROX. 22,700 CY |

## LEGEND:

- AREA TO BE DREDGED
- CHANNEL LIMITS
- MINOR CONTOUR (-38)
- MAJOR CONTOUR (-40)
- EXISTING CONTOUR (-40)
- EXISTING OUTFALL

50' 0 50' 100'
1" = 50'

## TURNING BASIN DREDGE PLAN

SCALE: 1" = 50'

| NO. | SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|---|

NAVFAC

PRELIMINARY NOT FOR CONSTRUCTION

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY: XXXXX

SATISFACTORY TO DATE: MM/DD/YY

| DES | DRW | CHK |
|---|---|---|
| | | |

| | |
|---|---|
| PM/DM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL SUBMARINE BASE NEW LONDON
NAVAL STATION - NORFOLK, VIRGINIA
GROTON, CT

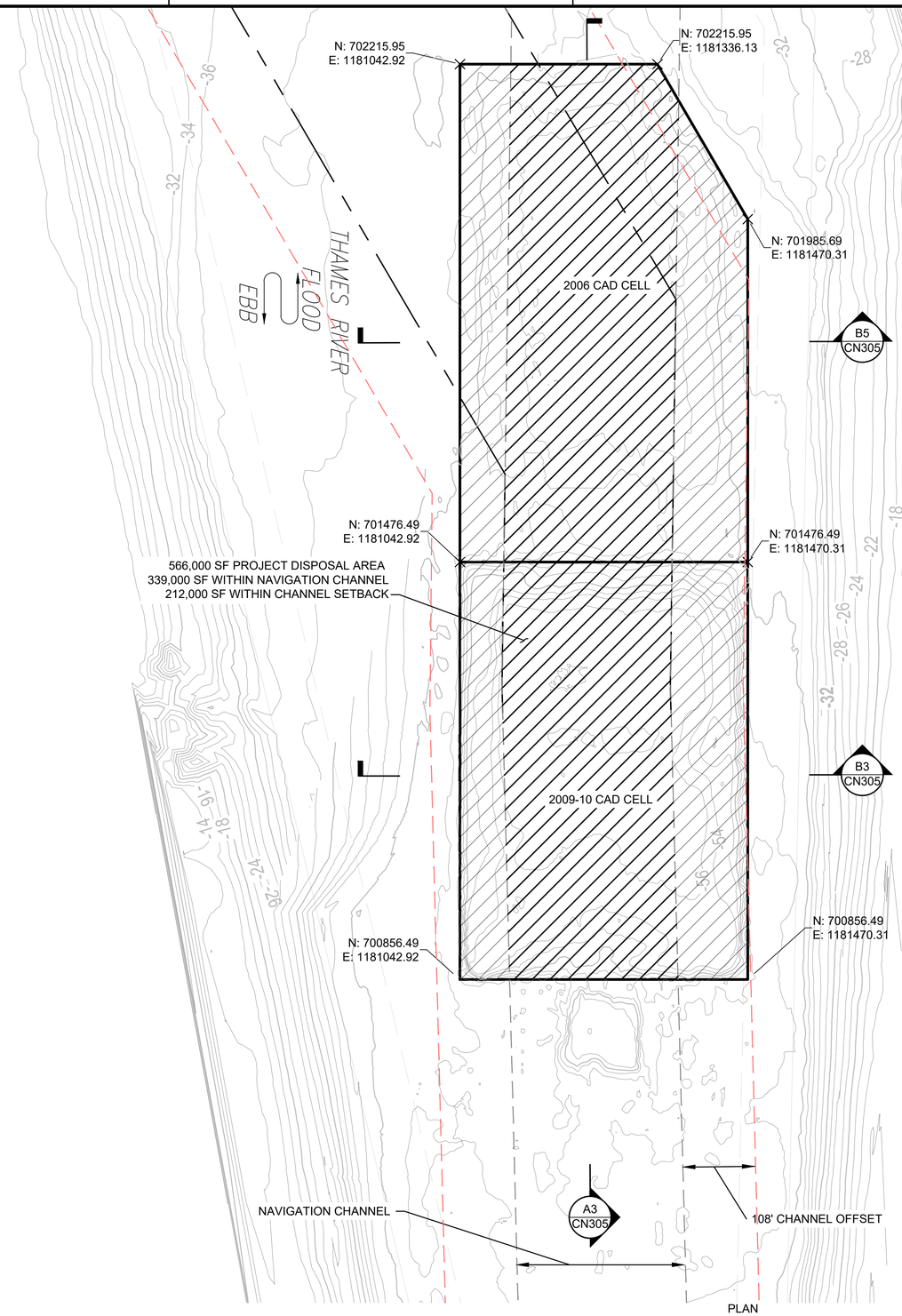
P-194 SSN SUBMARINE PIER 8 REPLACEMENT

TURNING BASIN DREDGE PLAN

SCALE: AS NOTED
EPROJECT NO.: 1709726
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
SHEET - OF XX

CN103

DRAWFORM REVISION: 25 AUGUST 2020




# CAD CELL LOCATION PLAN

SCALE: 1" = 100'

## GENERAL NOTES:

1. EXISTING BATHYMETRY IS BASED ON SURVEYS PERFORMED ON SEPTEMBER, 2024.
2. ELEVATIONS SHOWN ON THE DREDGING PLAN ARE REFERENCED TO MEAN LOWER LOW WATER (MLLW).
3. FOR DREDGE AREAS ADJACENT TO/UNDERNEATH PIERS, THE TOP 2'-0" OF DREDGE MATERIAL SHALL BE PLACED IN THE CAD CELL FIRST.
4. APPROXIMATELY 27,300 CY TO BE DISPOSED INTO 2010 CAD CELL (BERTH AND TURNING BASIN FOOTPRINT).
5. APPROXIMATELY 30,000 CY DISPOSED INTO BOTH 2006 AND 2010 CAD CELL (WESTERN CHANNEL FOOTPRINT)

## LEGEND:

- -30 — EXISTING MAJOR CONTOUR
- -32 — EXISTING MINOR CONTOUR
- CHANNEL LIMITS
- DISPOSAL AREA
- DISPOSAL AREA WITHIN CHANNEL LIMITS

100' 0 100' 200'
1" = 100'

APPR | DATE | DESCRIPTION | SYM

NAVFAC

PRELIMINARY NOT FOR CONSTRUCTION

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY: XXXXX

SATISFACTORY TO | DATE: MM/DD/YY

DES | DRW | CHK

PM/DM: LBT/IAS

BRANCH MANAGER: NEK

CHIEF ENG/ARCH: JWJ

FIRE PROTECTION: HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

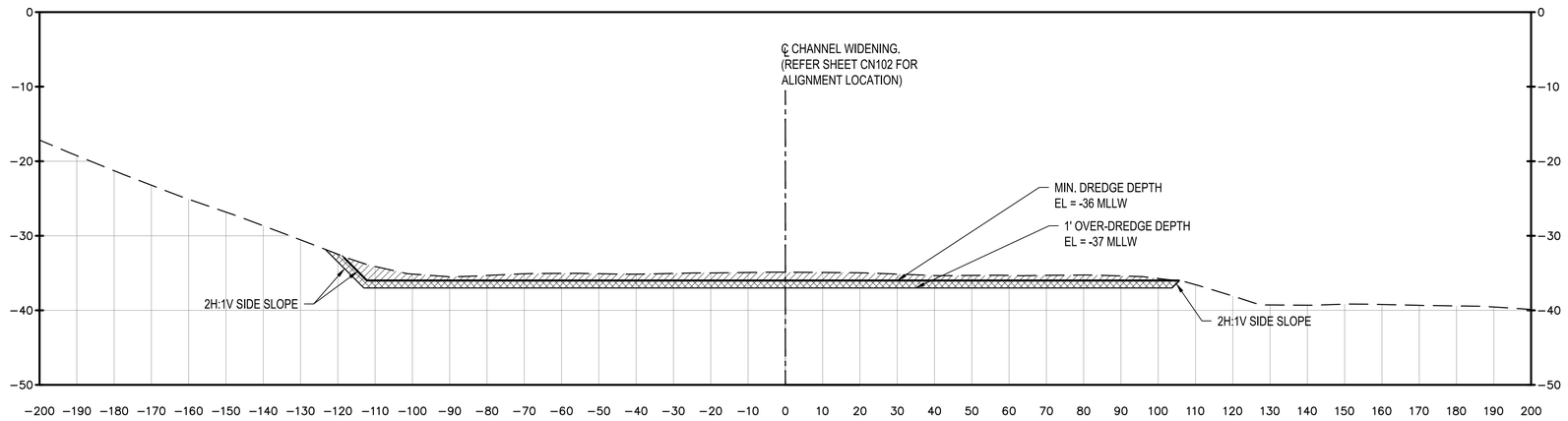
CAD CELL LOCATION PLAN

SCALE: AS NOTED
EPROJECT NO.: 1709726
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
SHEET - OF XX

CN105

DRAWFORM REVISION: 25 AUGUST 2020

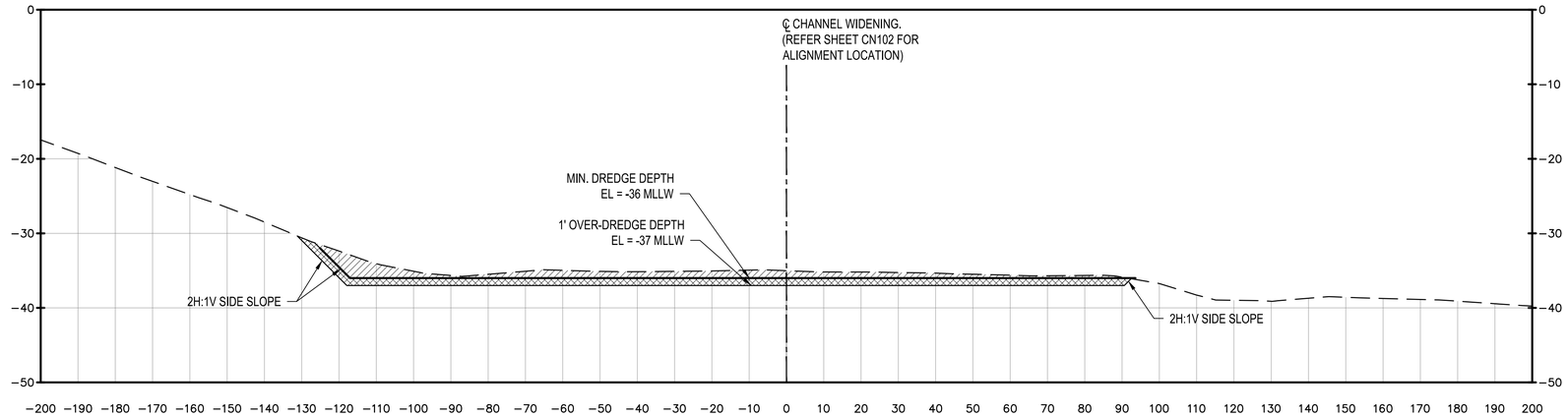
FILE NAME: C:\Users\jmcaromagno\OfC\ACADocs\Stantec Consulting\224101316_FY25_MILCON_P-194_REPLACE_SSN_BERTHING_PIER_8\Project Files\01_WIP\04_civil\sheet_files\CN104 CAD CELL LOCATION PLAN AND SECTIONS.dwg LAYOUT NAME: CN105_PERMIT PLOTTED: Monday, December 22, 2025 - 4:14pm USER: mcaromagno




## C1 CHANNEL WIDENING - DREDGING SECTION - STA. 2+00.00

SCALE: HORIZONTAL : 1" = 20'
VERTICAL : 1" = 10'

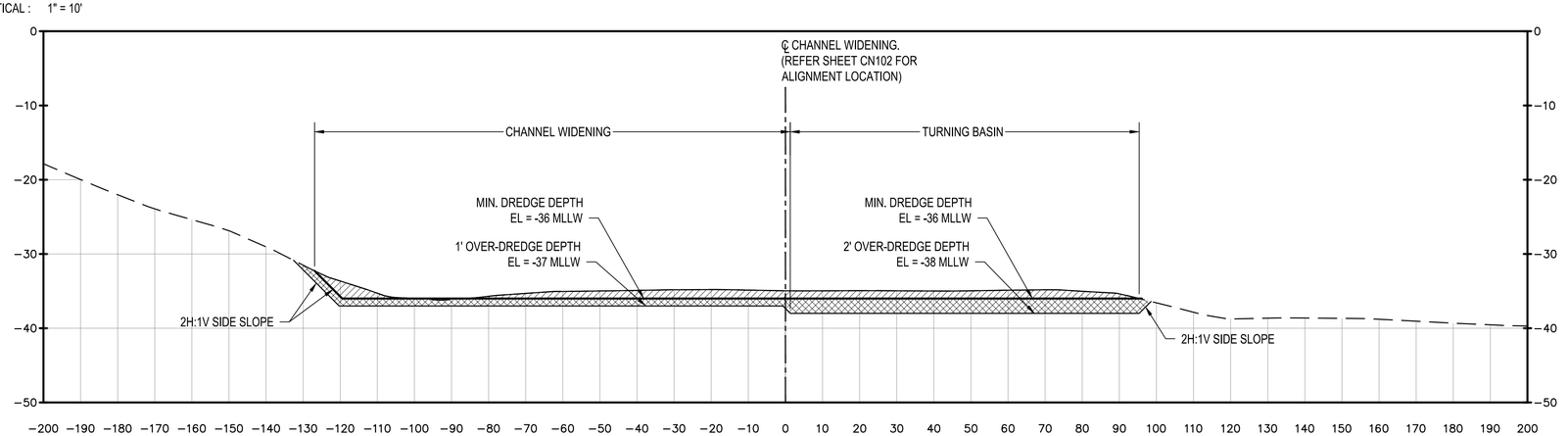
(CN102)




## B1 CHANNEL WIDENING - DREDGING SECTION - STA. 7+00.00

SCALE: HORIZONTAL : 1" = 20'
VERTICAL : 1" = 10'

(CN102)




## A1 CHANNEL WIDENING - DREDGING SECTION - STA. 12+00.00

SCALE: HORIZONTAL : 1" = 20'
VERTICAL : 1" = 10'

(CN102)

HORIZONTAL
20' 0 20' 40'
1" = 20'

VERTICAL
10' 0 10' 20'
1" = 10'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | KPG | DRW | MC | CHK | PJK |
|---|---|---|---|---|---|
| PM/DM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CLCORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

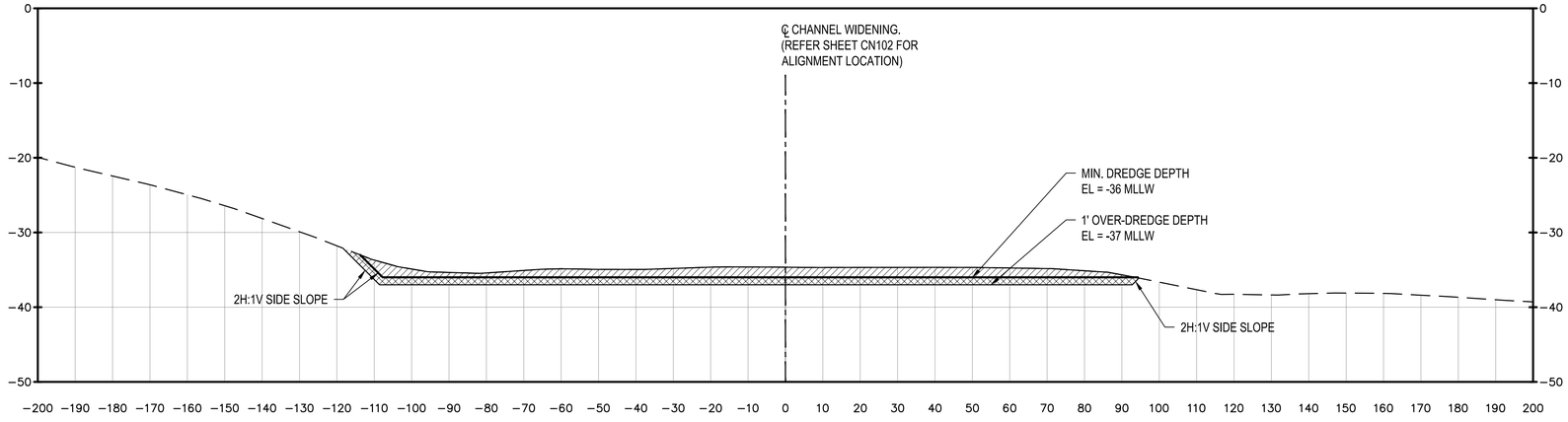
DREDGING SECTIONS - SHEET 1 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942282 |
| SHEET | 39 OF 289 |

CN301

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: C:\Users\kgonnon\OC\ACCDocs\Stantec Consulting\224101316_P-194_NEW-LONDON_PIER_8\Project Files\01_IWP\04_civil\sheet_files\CN301 DREDGING SECTIONS – SHEET 1 OF 4.dwg LAYOUT NAME: CN301 DREDGING SECTIONS – SHEET 1 OF 4 PLOTTED: Thursday, July 16, 2026 – 4:24pm USER: KGonnon




## C1 CHANNEL WIDENING - DREDGING SECTION - STA. 16+00.00

SCALE: HORIZONTAL : 1" = 20'
VERTICAL : 1" = 10'

(CN102)

HORIZONTAL
1" = 20'
20' 0 20' 40'

VERTICAL
1" = 10'
10' 0 10' 20'

APPR | DATE | SYM | DESCRIPTION

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES KPG | DRW MC | CHK PJK

PM/DM LBT/IAS
BRANCH MANAGER NEK
CHIEF ENG/ARCH JWJ
FIRE PROTECTION HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CLOSE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

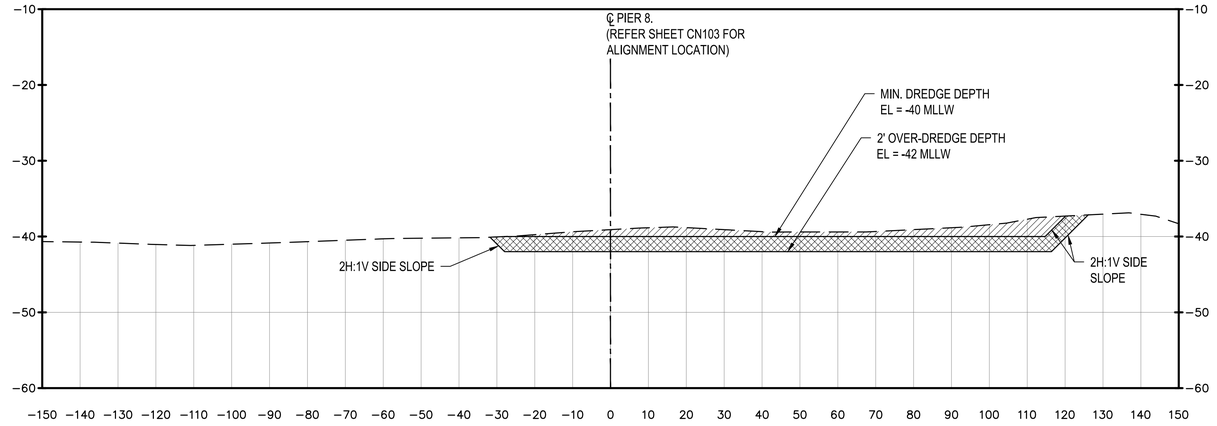
DREDGING SECTIONS - SHEET 2 OF 4

SCALE: AS NOTED
EPROJECT NO.: 1709726
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12942283
SHEET 40 OF 289

CN302

DRAWFORM REVISION: 25 AUGUST 2020

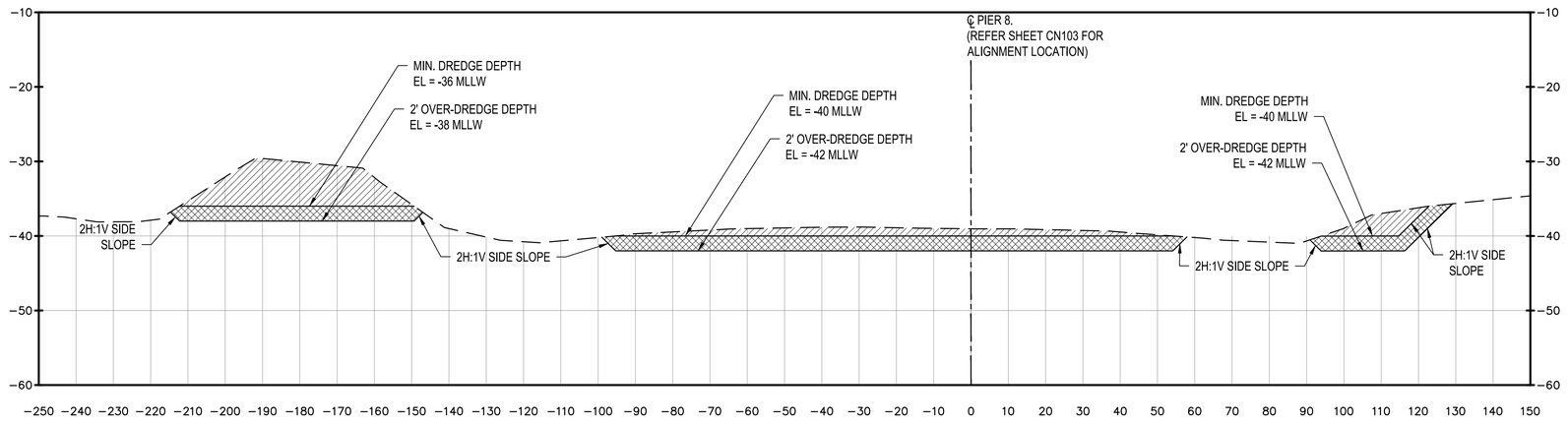
FILE NAME: C:\Users\kgannon\DC\ACCDocs\Stantec Consulting\224101316_P-194_NEW-LONDON_PIER_8\Project Files\01_IMP\04_civil\sheet_files\CN302 DREDGING SECTIONS - SHEET 2 OF 4.dwg LAYOUT NAME: CN302 DREDGING SECTIONS - SHEET 2 OF 4 PLOTTED: Thursday, July 16, 2026 - 4:24pm USER: KGannon




## C1 PIER 8 - DREDGING SECTION - STA. 2+00.00

SCALE: HORIZONTAL : 1" = 20'
VERTICAL : 1" = 10'

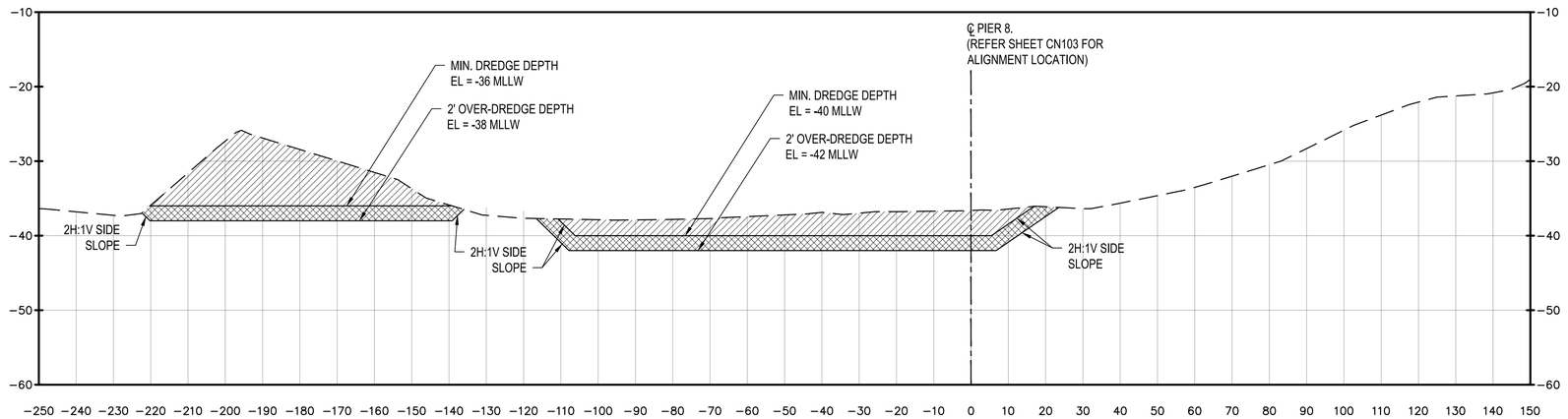
(CN103)




## B1 PIER 8 - DREDGING SECTION - STA. 4+00.00

SCALE: HORIZONTAL : 1" = 20'
VERTICAL : 1" = 10'

(CN103)




## A1 PIER 8 - DREDGING SECTION - STA. 6+00.00

SCALE: HORIZONTAL : 1" = 20'
VERTICAL : 1" = 10'

(CN103)

HORIZONTAL
1" = 20'
20' 0 20' 40'

VERTICAL
1" = 10'
10' 0 10' 20'

APPR | DATE | DESCRIPTION | SYM

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | KPG | DRW | MC |
| CHK | PJK | | |
| PM/DM | | LBT/IAS | |
| BRANCH MANAGER | | NEK | |
| CHIEF ENG/ARCH | | JWJ | |
| FIRE PROTECTION | | HPN | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CLICORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION • NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

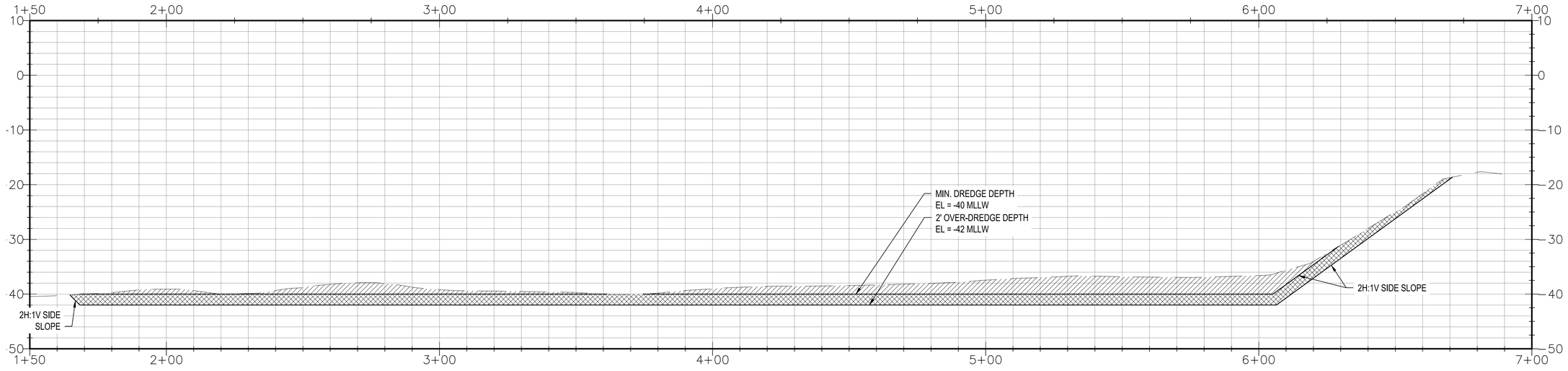
DREDGING SECTIONS - SHEET 3 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942284 |
| SHEET | 41 OF 289 |

CN303

DRAWFORM REVISION: 25 AUGUST 2020

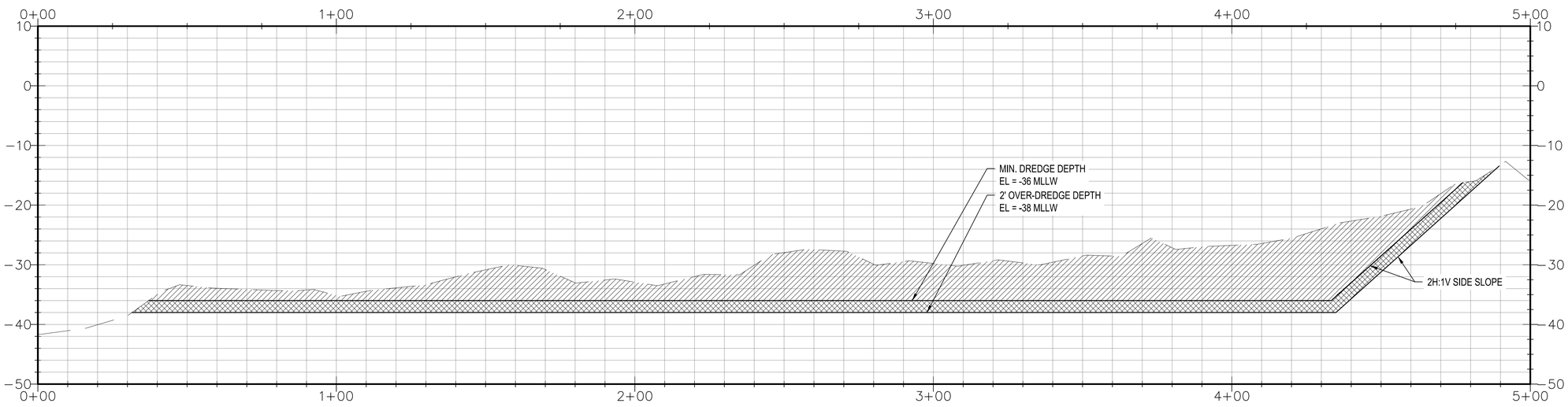
FILE NAME: C:\Users\kgannon\DCAD\Docs\Stantec Consulting\224101316_P-194_NEW-LONDON_PIER_8\Project Files\01_IMP\04_civil\sheet_files\CN303 DREDGING SECTIONS - SHEET 3 OF 4.dwg LAYOUT NAME: CN303 DREDGING SECTIONS - SHEET 3 OF 4 PLOTTED: Thursday, July 16, 2026 - 4:24pm USER: KGannon




## C1 PIER 8 - LONGITUDINAL DREDGE SECTION

SCALE: HORIZONTAL : 1" = 20'
VERTICAL : 1" = 10'

(CN103)




## A1 OLD PIER 10 - LONGITUDINAL DREDGE SECTION

SCALE: HORIZONTAL : 1" = 20'
VERTICAL : 1" = 10'

(CN103)

HORIZONTAL
20' 0 20' 40'
1" = 20'

VERTICAL
10' 0 10' 20'
1" = 10'

APPR | DATE | SYM | DESCRIPTION

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | KPG | DRW MC | CHK PJK |
| PM/DM | | | LBT/IAS |
| BRANCH MANAGER | | | NEK |
| CHIEF ENG/ARCH | | | JWJ |
| FIRE PROTECTION | | | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

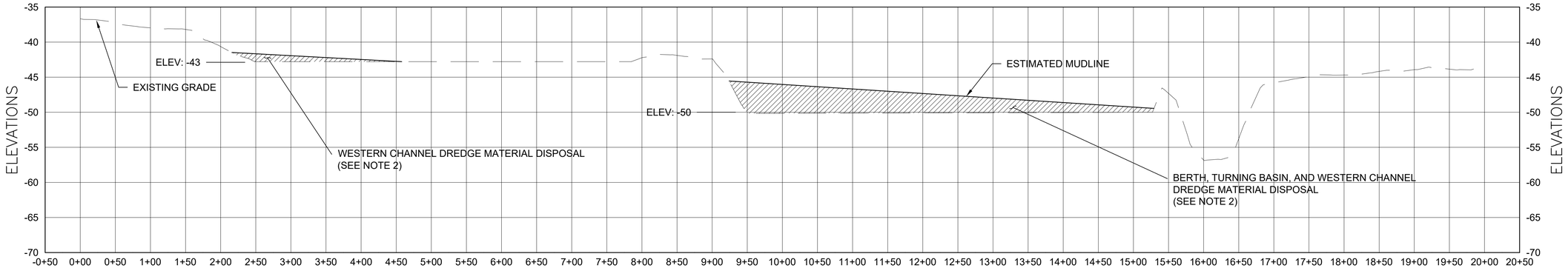
DREDGING SECTIONS - SHEET 4 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942285 |
| SHEET | 42 OF 289 |

CN304

DRAWFORM REVISION: 25 AUGUST 2020

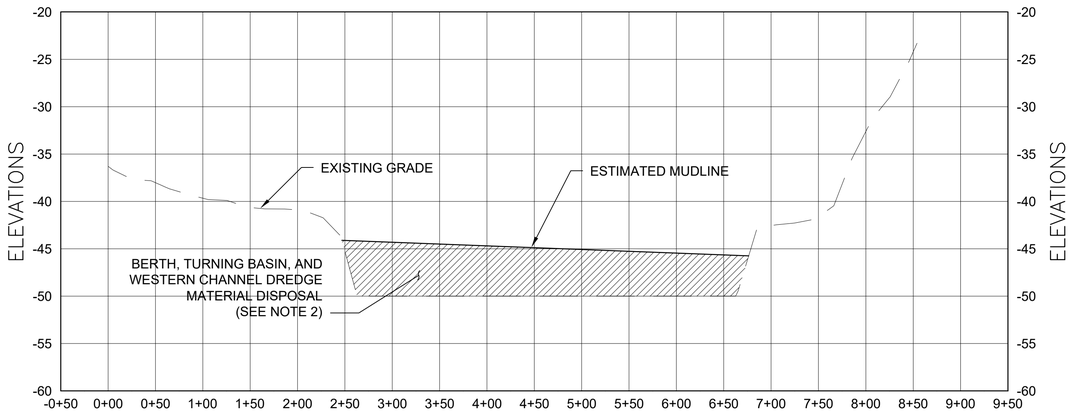
FILE NAME: C:\Users\vgannon\DC\ACDocs\Stantec Consulting\22410316_P-194_NEW-LONDON_PIER_8\Project Files\01_MP\04_civil\sheet_files\CN304 DREDGING SECTIONS - SHEET 4 OF 4.dwg LAYOUT NAME: CN304 DREDGING SECTIONS - SHEET 4 OF 4 PLOTTED: Thursday, July 16, 2026 - 4:24pm USER: KGannon




## CAD CELL LONGITUDINAL TYPICAL SECTION

HORIZ. SCALE: 1" = 80'
VERT. SCALE: 1" = 8'

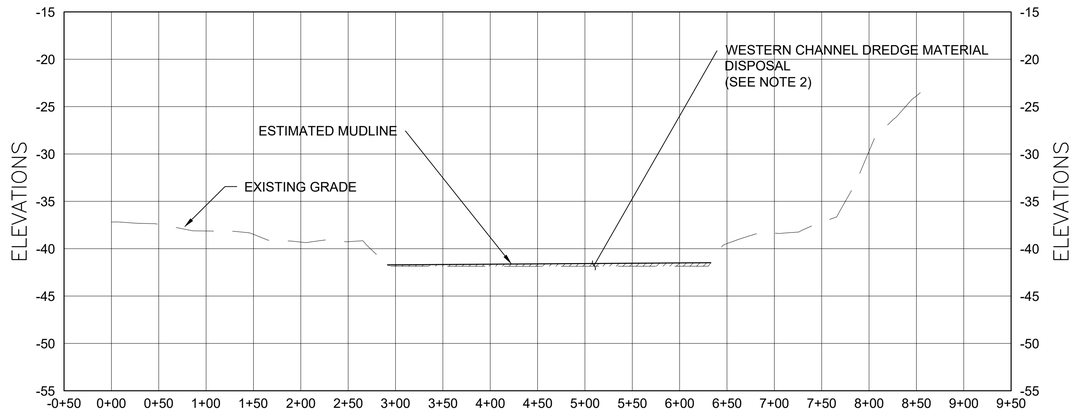
CN105 C3




## 2010 CAD CELL TRANSVERSE TYPICAL SECTION

HORIZ. SCALE: 1" = 80'
VERT. SCALE: 1" = 8'

CN105 B3




## 2006 CAD CELL TRANSVERSE TYPICAL SECTION

HORIZ. SCALE: 1" = 80'
VERT. SCALE: 1" = 8'

CN105 A3

## GENERAL NOTES:

1. ELEVATIONS SHOWN ON THE DREDGING PLAN ARE REFERENCED TO MEAN LOWER LOW WATER (MLLW).
2. FOR DREDGE AREAS ADJACENT TO/UNDERNEATH PIERS, THE TOP 2'-0" OF DREDGE MATERIAL SHALL BE PLACED IN THE CAD CELL FIRST.

APPR | DATE | DESCRIPTION | SYM

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| | |
|---|---|
| DES KPG | DRW ASM CHK PJK |
| PM/DM | LBT/MAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI.CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

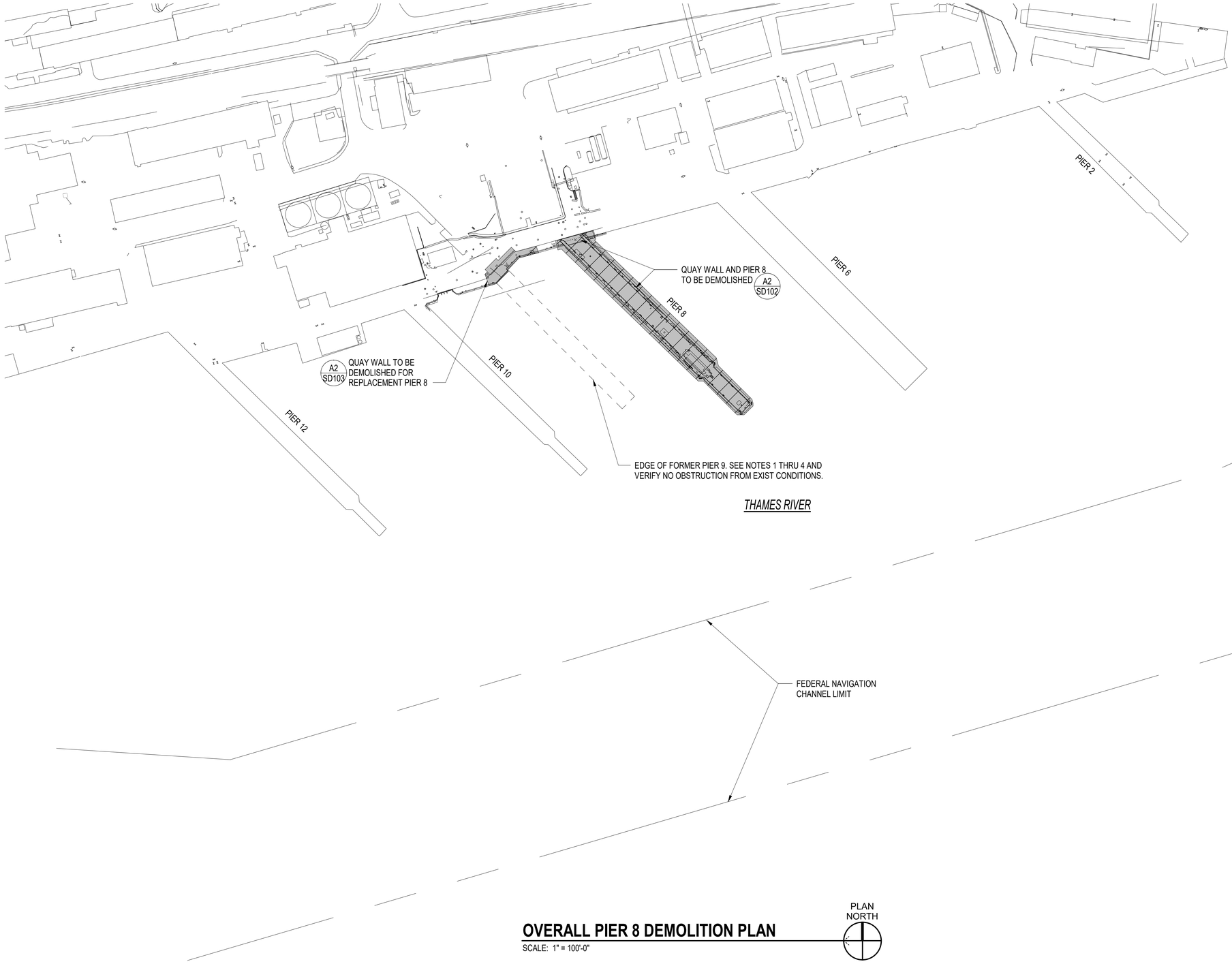
CAD CELL SECTIONS

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942532 |
| SHEET | 289 OF 290 |

CN305

DRAWFORM REVISION: 25 AUGUST 2020

FILE NAME: \\sd0254-ppfss01\shared_projects\224101316\16_cad_revit\cad\05_civil\CN305 TYPICAL SECTIONS.dwg LAYOUT NAME: CN305 (2) PLOTTED: Tuesday, July 28, 2026 - 9:53am USER: mcaromagno




## GENERAL SHEET NOTES:

1. VERIFY IN THE FIELD THAT PILES (TOTAL 46) NEAR THE END OF FORMER PIER 9 WERE CUT OFF BELOW THE EXISTING GROUNDLINE.
2. VERIFY IN THE FIELD THE REMAINING PILES AND FENDER PILES (TOTAL 405) FOR FORMER PIER 9 WERE REMOVED IN THEIR ENTIRETY.
3. PIER AND PILE INFORMATION SHOWN ON THIS DRAWING HAS BEEN OBTAINED FROM THE RECORD DRAWINGS LOCATED IN APPENDIX A OF THE SPECIFICATIONS. REFER TO APPENDIX A FOR ADDITIONAL INFORMATION.
4. LOCATE, REMOVE IN THEIR ENTIRETY AND DISPOSE ANY REMAINING PILE STUMPS AND FENDER PILES LEFT IN PLACE THAT INTERFERE WITH NEW PILE LOCATIONS.
5. THE CONTRACTOR MUST PLAN TO EXPERIENCE DEBRIS, PILE STUBS, CONCRETE BREAKS, ETC. BELOW THE WATER LINE. ANY ITEMS CONFLICTING WITH INSTALLATION OF NEW PILES MUST BE REMOVED.

## OVERALL PIER 8 DEMOLITION PLAN

SCALE: 1" = 100'-0"

PLAN NORTH

## LEGEND:

LIMITS OF DEMOLITION

1" = 100'

0 100' 200' 400'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | CHG | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PM/DM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

OVERALL STRUCTURAL DEMOLITION PLAN

SCALE: AS NOTED

EPROJECT NO.: 1709726

CONSTR. CONTR. NO.

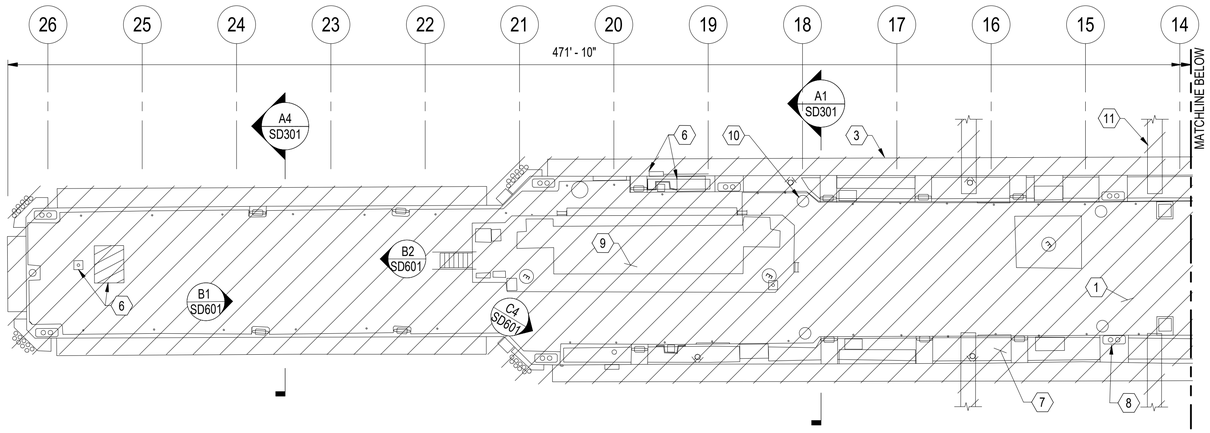
NAVFAC DRAWING NO.
12942306

SHEET 63 OF 290

SD101

DRAWFORM REVISION: 25 AUGUST 2020

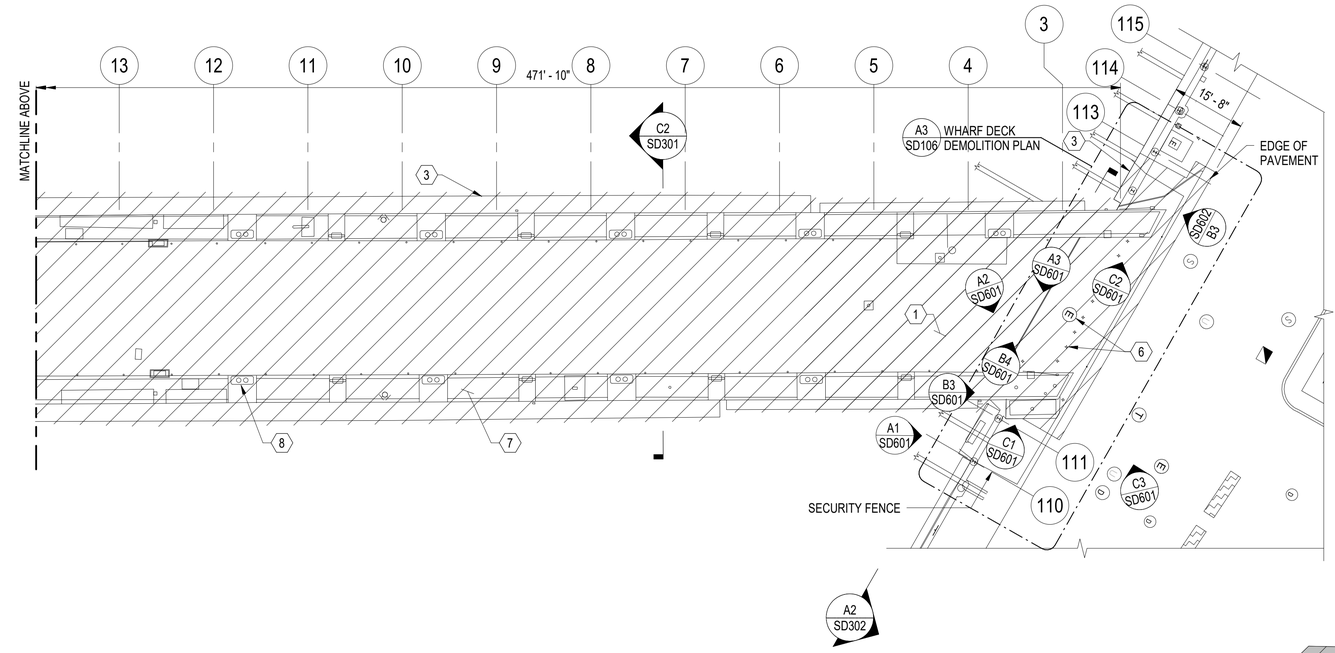
SD101
7/22/2026 5:20:52 PM
Autodesk Docs://2241013\16_P-194_NEW LONDON_PIER_8/PIERP194-1709726-S.rvt




## C2 EXISTING PIER 8 DEMOLITION PLAN - PART 1 OF 2

SCALE: 1/16" = 1'-0" (SD101)

PLAN NORTH




## A2 EXISTING PIER 8 DEMOLITION PLAN - PART 2 OF 2

SCALE: 1/16" = 1'-0" (SD101)

PLAN NORTH

## GENERAL SHEET NOTES:

1. REFER TO APPENDIX A OF THE SPECIFICATIONS FOR THE RECORD DRAWINGS OF THE EXISTING PIER. NOTE THAT RECORD DRAWINGS REFLECT ORIGINAL CONSTRUCTION AND SITE CONDITIONS ARE SUBJECT TO CHANGES OVER TIME.
2. REMOVE EXISTING PIER 8 AND ALL APPURTENANCES IN ITS ENTIRETY. REMOVE AND DISPOSE EXISTING SUBSTATIONS, GANGWAYS AND JIB CRANES REFER TO THE REFERENCE DOCUMENTS IN APPENDIX A ATTACHED TO THE SPECIFICATIONS.
3. REMOVE EXISTING PILES IN THEIR ENTIRETY.
4. BULKHEAD-SUPPORTING BATTER PILES BELOW INSHORE SLAB ARE NOT SHOWN FOR CLARITY. SEE RECORD DRAWINGS IN APPENDIX A ATTACHED TO THE SPECIFICATIONS.
5. PROTECT EXISTING PILES DURING DEMOLITION OF PIER DECK AND FRAMING TO PREVENT UNSUPPORTED PILES FROM FAILURE.
6. SEE CIVIL AND ELECTRICAL DRAWINGS FOR DEMOLITION , RETENTION, AND RELOCATION OF EXISTING UTILITIES ON PIER 8.
7. PROVIDE SUPPORT FOR PILES WITH PILE JACKETS VERIFY IN THE FIELD UNTIL DEMOLITION IS COMPLETED.
8. THE FOLLOWING MECHANICAL ITEMS MUST BE SALVAGED AND RETURNED TO OWNER:
   - A. BACKFLOW PREVENTER USED ALONG THE PIER TO PROTECT THE WATER SERVICE.
   - B. POTABLE WATER MANIFOLDS AND OUTLETS
9. REFER TO ELECTRICAL DRAWING ED103 FOR ITEMS SALVAGED AND RETURNED TO OWNER.

## SHEET KEYNOTES:

1 DEMOLISH EXISTING REINFORCED CONCRETE DECK AND CURB.

3 DEMOLISH EXISTING TIMBER FENDER PILES, COMPOSITE CHOCKS, AND COMPOSITE WALE AT THE FACE OF WHARF WITHIN DEMOLITION LIMIT.

6 DEMOLISH EXISTING AMENITIES ON WHAR DECK AND THEIR FOUNDATIONS IN THEIR ENTIRETY, TYPICAL.

7 DEMOLISH EXISTING UTILITY TRENCH COVER, TYPICAL.

8 DEMOLISH EXISTING MOORING BOLLARD, TYPICAL.

9 DEMOLISH EXISTING SUBSTATION, TYPICAL.

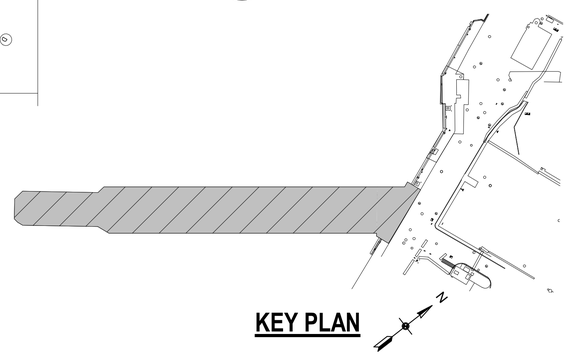
10 DEMOLISH EXISTING JIB CRANE, TYPICAL.

11 DEMOLISH EXISTING GANGWAYS, TYPICAL.

## LEGEND:

LIMITS OF DEMOLITION

# BENT DESIGNATION



## KEY PLAN

1/16" = 1' - 0" 0 5' 10' 20' 30' 60'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

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SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AFC | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PMDM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

DEMOLITION PIER PLAN

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942307 |
| SHEET | 64 OF 290 |

SD102

DRAWFORM REVISION: 25 AUGUST 2020

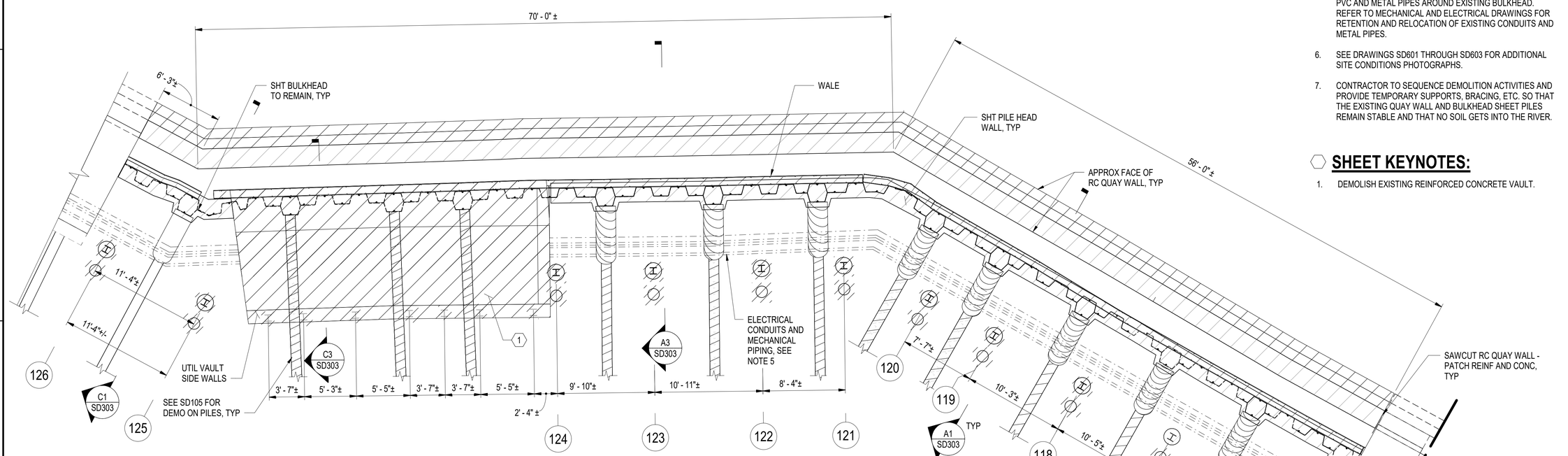
7/22/2026 5:20:53 PM SD102
Autodesk Docs://2241101316_P-194_NEW-LONDON_PIER_8/PIER*P194-1709726-S.rvt

## GENERAL SHEET NOTES:

1. SEE APPENDIX A INCLUDED IN THE SPECIFICATIONS FOR MORE INFORMATION ON EXISTING WHARF AND BENT PILES. NOTE THAT RECORD DRAWINGS REFLECT ORIGINAL CONSTRUCTION AND SITE CONDITIONS ARE SUBJECT TO CHANGES OVER TIME.
2. SEE DRAWING SD103 FOR DECK AND FENDER SYSTEM DEMOLITION.
3. SEE DRAWING SD105 FOR PILE DEMOLITION.
4. SEE DRAWINGS SD901 THROUGH SD904 FOR ISOMETRIC VIEW OF EXISTING CONDITIONS AND DEMOLITION.
5. SEE DRAWING SD603 FOR PHOTOGRAPHS OF EXISTING UTILITY SHOWN AS APPROXIMATE UNDER WHARF CONCRETE DECK. REROUTE AND DIRECT BURY EXISTING PVC AND METAL PIPES AROUND EXISTING BULKHEAD. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR RETENTION AND RELOCATION OF EXISTING CONDUITS AND METAL PIPES.
6. SEE DRAWINGS SD601 THROUGH SD603 FOR ADDITIONAL SITE CONDITIONS PHOTOGRAPHS.
7. CONTRACTOR TO SEQUENCE DEMOLITION ACTIVITIES AND PROVIDE TEMPORARY SUPPORTS, BRACING, ETC. SO THAT THE EXISTING QUAY WALL AND BULKHEAD SHEET PILES REMAIN STABLE AND THAT NO SOIL GETS INTO THE RIVER.

## SHEET KEYNOTES:

1. DEMOLISH EXISTING REINFORCED CONCRETE VAULT.




## EXISTING WHARF DEMOLITION PLAN BELOW WHARF DECK AT FORMER PIER 9

A2

SCALE: 3/16" = 1'-0"

PLAN NORTH

## LEGEND:

LIMITS OF DEMOLITION

(#) WHARF BENT LINE

## KEY PLAN

3/16" = 1' - 0"

0 5' 10' 20'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AFC | CHK | MJF |
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| | |
|---|---|
| PMDM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI. CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

DEMOLITION PLAN AT BELOW WHARF DECK

SCALE: AS NOTED

EPROJECT NO.: 1709726

CONSTR. CONTR. NO.

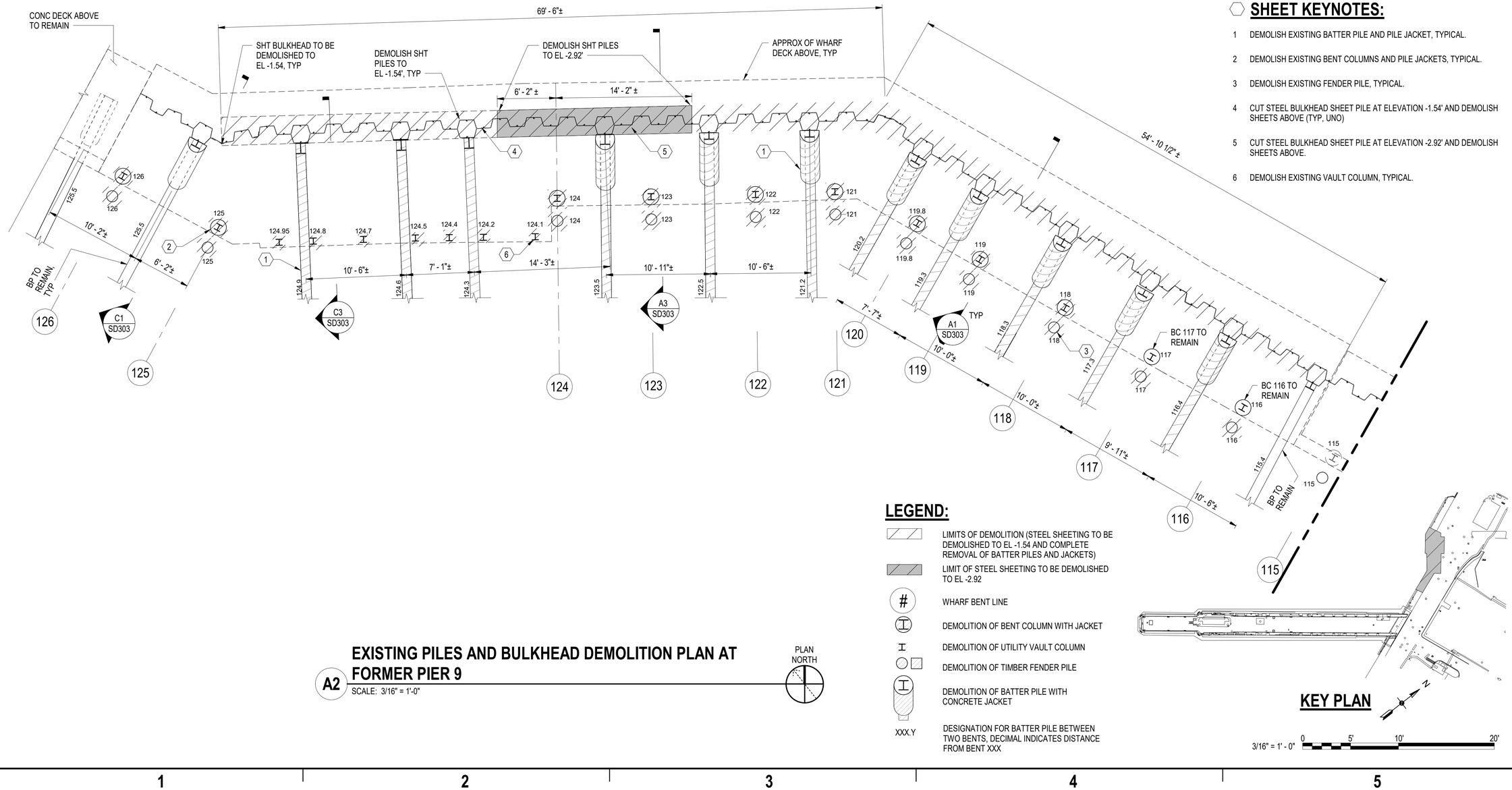
NAVFAC DRAWING NO. 12942309

SHEET 66 OF 290

SD104

DRAWFORM REVISION: 25 AUGUST 2020

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SD104
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## EXISTING PILES AND BULKHEAD DEMOLITION PLAN AT FORMER PIER 9

A2 SCALE: 3/16" = 1'-0"

PLAN NORTH

## GENERAL SHEET NOTES:

1. SEE APPENDIX A INCLUDED IN THE SPECIFICATIONS FOR MORE INFORMATION ON EXISTING WHARF AND BENT PILES. NOTE THAT RECORD DRAWINGS REFLECT ORIGINAL CONSTRUCTION AND SITE CONDITIONS ARE SUBJECT TO CHANGES OVER TIME.
2. SEE DRAWINGS SD901 THROUGH SD904 FOR ISOMETRIC VIEW OF EXISTING CONDITIONS AND DEMOLITION.
3. SEE DRAWING SD105 FOR DEMOLITION OF HEADWALL FOR STEEL SHEETING AND STEEL WALE WITHIN LIMIT OF DEMOLITION.
4. SEE DRAWINGS SD601 THROUGH SD603 FOR ADDITIONAL SITE CONDITIONS PHOTOGRAPHS.
5. PROVIDE NECESSARY SUPPORT FOR PILES AND PILE JACKETS (VERIFY IN THE FIELD) UNTIL DEMOLITION IS COMPLETED.
6. CONTRACTOR TO SEQUENCE DEMOLITION ACTIVITIES AND PROVIDE TEMPORARY SUPPORTS, BRACING, ETC. SO THAT THE EXISTING QUAY WALL AND BULKHEAD SHEET PILES REMAIN STABLE AND THAT NO SOIL GETS INTO THE RIVER.

## SHEET KEYNOTES:

1 DEMOLISH EXISTING BATTER PILE AND PILE JACKET, TYPICAL.

2 DEMOLISH EXISTING BENT COLUMNS AND PILE JACKETS, TYPICAL.

3 DEMOLISH EXISTING FENDER PILE, TYPICAL.

4 CUT STEEL BULKHEAD SHEET PILE AT ELEVATION -1.54' AND DEMOLISH SHEETS ABOVE (TYP, UNO)

5 CUT STEEL BULKHEAD SHEET PILE AT ELEVATION -2.92' AND DEMOLISH SHEETS ABOVE.

6 DEMOLISH EXISTING VAULT COLUMN, TYPICAL.

## LEGEND:

- LIMITS OF DEMOLITION (STEEL SHEETING TO BE DEMOLISHED TO EL -1.54 AND COMPLETE REMOVAL OF BATTER PILES AND JACKETS)
- LIMIT OF STEEL SHEETING TO BE DEMOLISHED TO EL -2.92
- # WHARF BENT LINE
- DEMOLITION OF BENT COLUMN WITH JACKET
- DEMOLITION OF UTILITY VAULT COLUMN
- DEMOLITION OF TIMBER FENDER PILE
- DEMOLITION OF BATTER PILE WITH CONCRETE JACKET
- XXX.Y DESIGNATION FOR BATTER PILE BETWEEN TWO BENTS, DECIMAL INDICATES DISTANCE FROM BENT XXX



## KEY PLAN

3/16" = 1' - 0" 0 5' 10' 20'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AFC | CHK | MJF |
|---|---|---|---|---|---|
| PMDM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

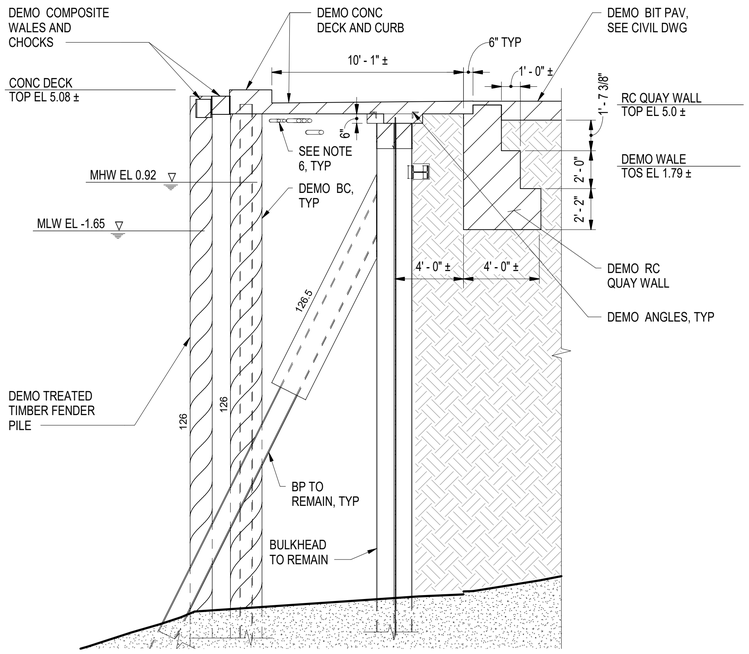
DEMOLITION PLAN FOR PILES AND SHEET PILES

SCALE: AS NOTED
EPROJECT NO.: 1709726
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12942310
SHEET 67 OF 290

SD105

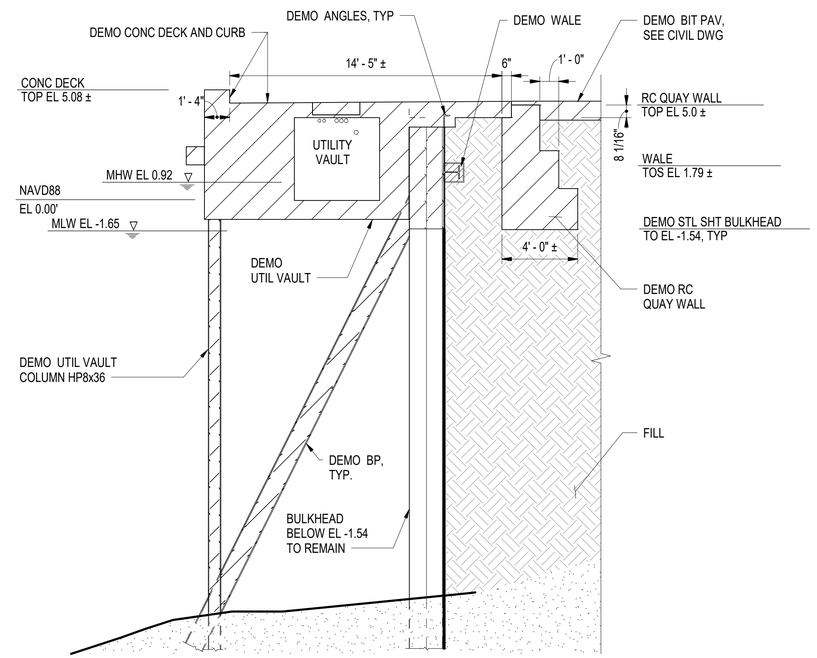
DRAWFORM REVISION: 25 AUGUST 2020

7/22/2026 5:21:01 PM
SD105
Autodesk Docs://22#101316_P-194_NEW-LONDON_PIER_8/PIERP194-170972#-S.rvt



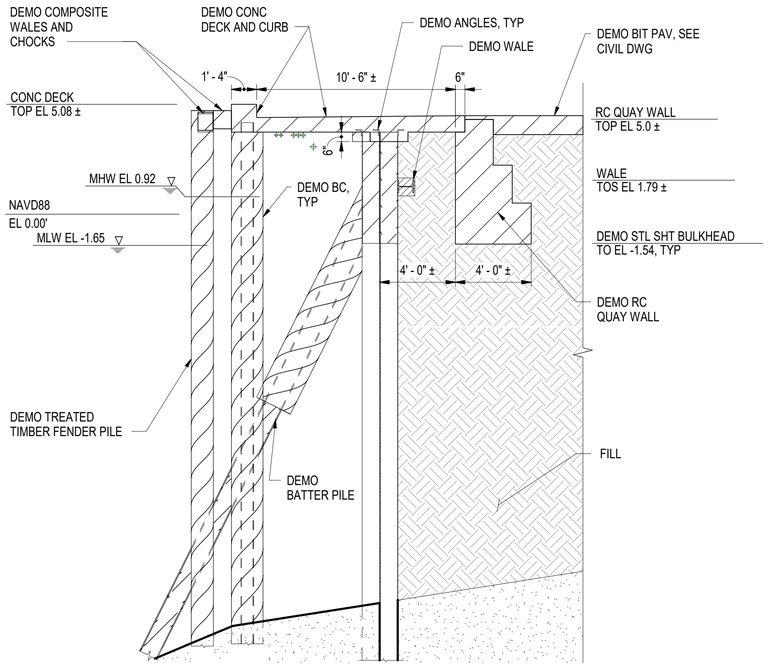

## C1 DEMOLITION AT NORTH OF UTILITY VAULT

1/4" = 1'-0" (SD103, SD104, SD105)



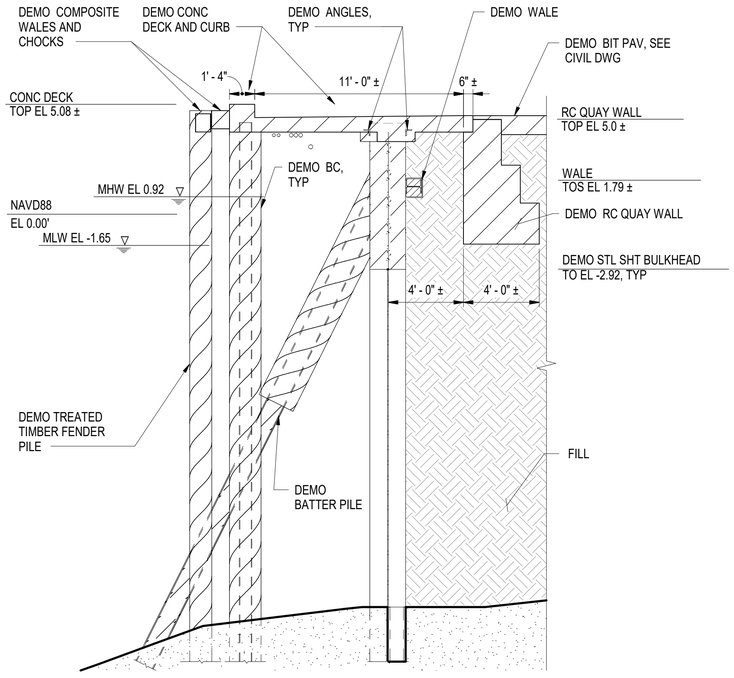

## C3 TYPICAL DEMOLITION SECTION AT UTILITY VAULT

1/4" = 1'-0" (SD103, SD104, SD105)




## A1 TYPICAL DEMOLITION SECTION WITH STEEL SHEETING DEMOLISHED TO ELEVATION -1.54'

1/4" = 1'-0" (SD103, SD104, SD105)




## A3 TYPICAL DEMOLITION SECTION WITH STEEL SHEETING DEMOLISHED TO ELEVATION -2.92'

1/4" = 1'-0" (SD103, SD104, SD105)

## GENERAL SHEET NOTES:

1. SEE APPENDIX A INCLUDED IN THE SPECIFICATIONS FOR MORE INFORMATION ON EXISTING WHARF AND BENT PILES. NOTE THAT RECORD DRAWINGS REFLECT ORIGINAL CONSTRUCTION AND SITE CONDITIONS ARE SUBJECT TO CHANGES OVER TIME.
2. CONTRACTOR MUST FIELD LOCATE ALL EXISTING UNDERGROUND UTILITIES.
3. CONTRACTOR TO SEQUENCE DEMOLITION ACTIVITIES AND PROVIDE TEMPORARY SUPPORTS, BRACING, ETC. SO THAT THE EXISTING QUAY WALL REMAINS STABLE AND THAT NO SOIL GETS INTO THE RIVER.
4. SEE DRAWINGS SD901 THROUGH SD904 FOR ISOMETRIC VIEW OF EXISTING CONDITIONS AND DEMOLITION LIMITS.
5. SEE DRAWINGS SD601 THROUGH SD603 FOR ADDITIONAL SITE CONDITION PHOTOGRAPHSGRAPHS.
6. REFER TO ELECTRICAL DRAWINGS FOR RETENTION AND RELOCATION OF EXISTING CONDUITS AND METAL PIPES.
7. SEE DRAWING SD105 FOR BULKHEAD DEMOLITION LIMITS.
8. SEE SD103 TO SD105 AND SD901 FOR BATTER PILES, FENDER PILES AND BENT COLUMN NUMBERS.

## LEGEND:

LIMIT OF DEMOLITION

XXX.Y DECIMAL USED TO DESIGNATE PILE INDICATING DISTANCE TO WHARF BENT LINE XXX

1/4" = 1' - 0" 0 1' 5' 10' 15'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

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SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | KCJ | CHK | MJF |
|---|---|---|---|---|---|
| PMDM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

DEPARTMENT OF THE NAVY
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CI CORE - HAMPTON ROADS

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NAVAL SUBMARINE BASE NEW LONDON — GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

TYPICAL SECTION FOR QUAY WALL DEMOLITION

SCALE: AS NOTED

EPROJECT NO.: 1709726

CONSTR. CONTR. NO.

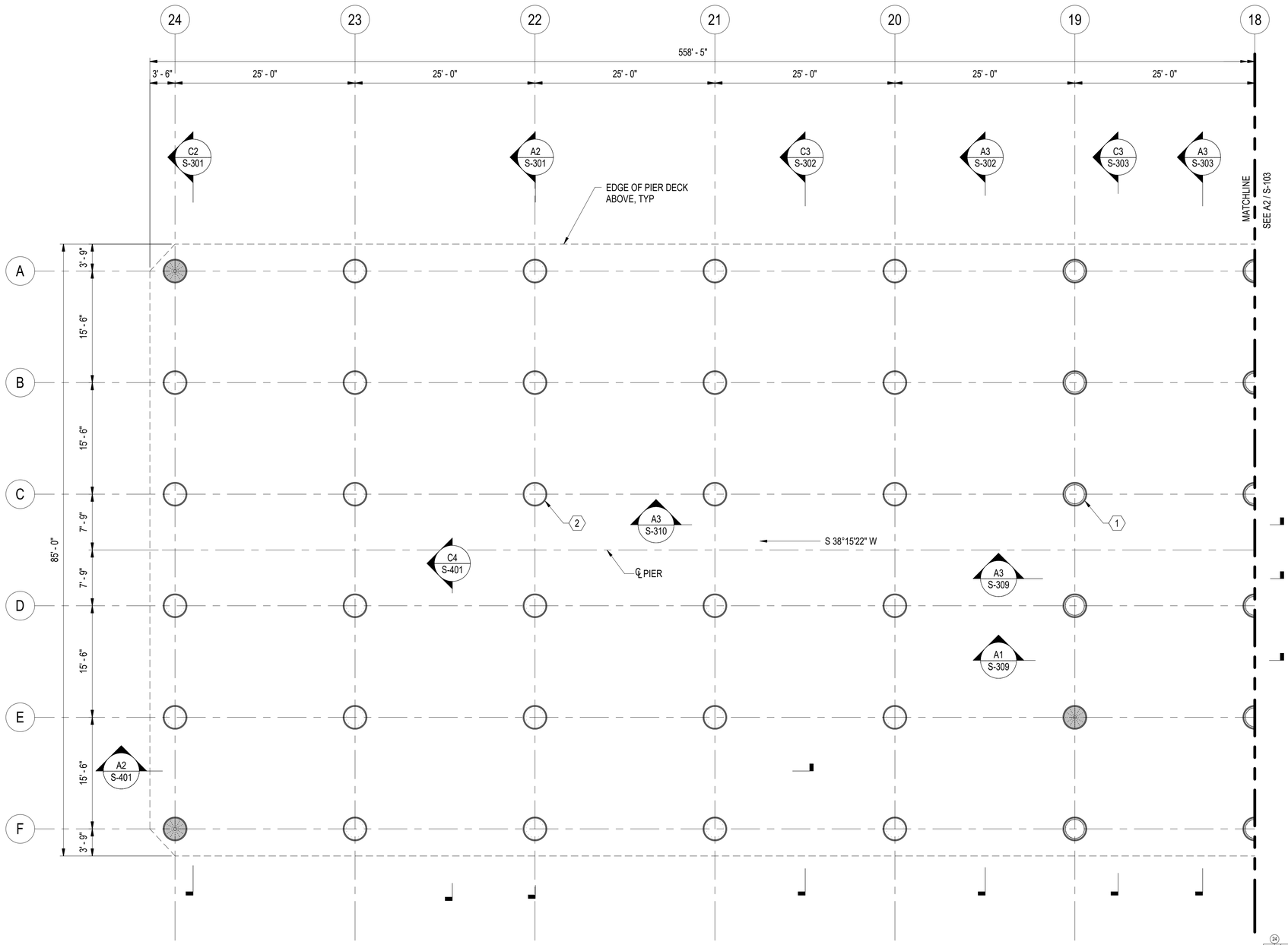
NAVFAC DRAWING NO. 12942314

SHEET 71 OF 290

SD303

DRAWFORM REVISION: 25 AUGUST 2020

7/22/2020 5:21:07 PM SD303
Autodesk Docs://22410316_P-194_NEW-LONDON_PIER_8/PIERP194-1709726-S.rvt




## GENERAL SHEET NOTES:

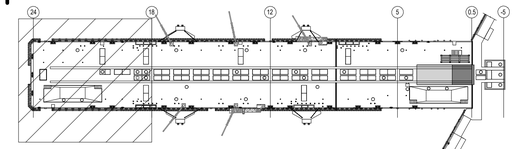
1. ALL PILES TO BE INSTALLED WITH DRIVING SHOES, SEE PILE SCHEDULE ON DRAWING S-601
2. ALL PILES AT BENTS 18 AND 19 TO BE INSTALLED WITH ROCK SOCKETS.
3. ALL PILES AT BENTS 20 THROUGH 24 TO BEAR DIRECTLY ON ROCK SURFACE.
4. ALL PILES TO BE INSTALLED WITH HDPE JACKETS.

## SHEET KEYNOTES:

1. 36" DIAMETER CONCRETE-FILLED STEEL PIPE PILE WITH ROCK SOCKET, SEE DRAWING S-503, TYPICAL.
2. 36" DIAMETER CONCRETE-FILLED STEEL PIPE PILE SITTING ON ROCK, SEE DRAWING S-502, TYPICAL.

## LEGEND:

- 36" DIA CONCRETE-FILLED STEEL PIPE PILE SITTING ON ROCK
- (#) BENT DESIGNATION
- (A) PILE ROW DESIGNATION
- PDA TEST PILE
- 36" DIAMETER CONCRETE-FILLED STEEL PIPE PILE WITH ROCK SOCKET




## KEY PLAN

A2 **PILE PLAN - SHEET 1 OF 4**
SCALE: 1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0"  0  5'  10'  15'  30'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

SEAL

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AEP | CHK | MJF |
|---|---|---|---|---|---|
| PMDM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

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NAVAL STATION - NORFOLK, VA

GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

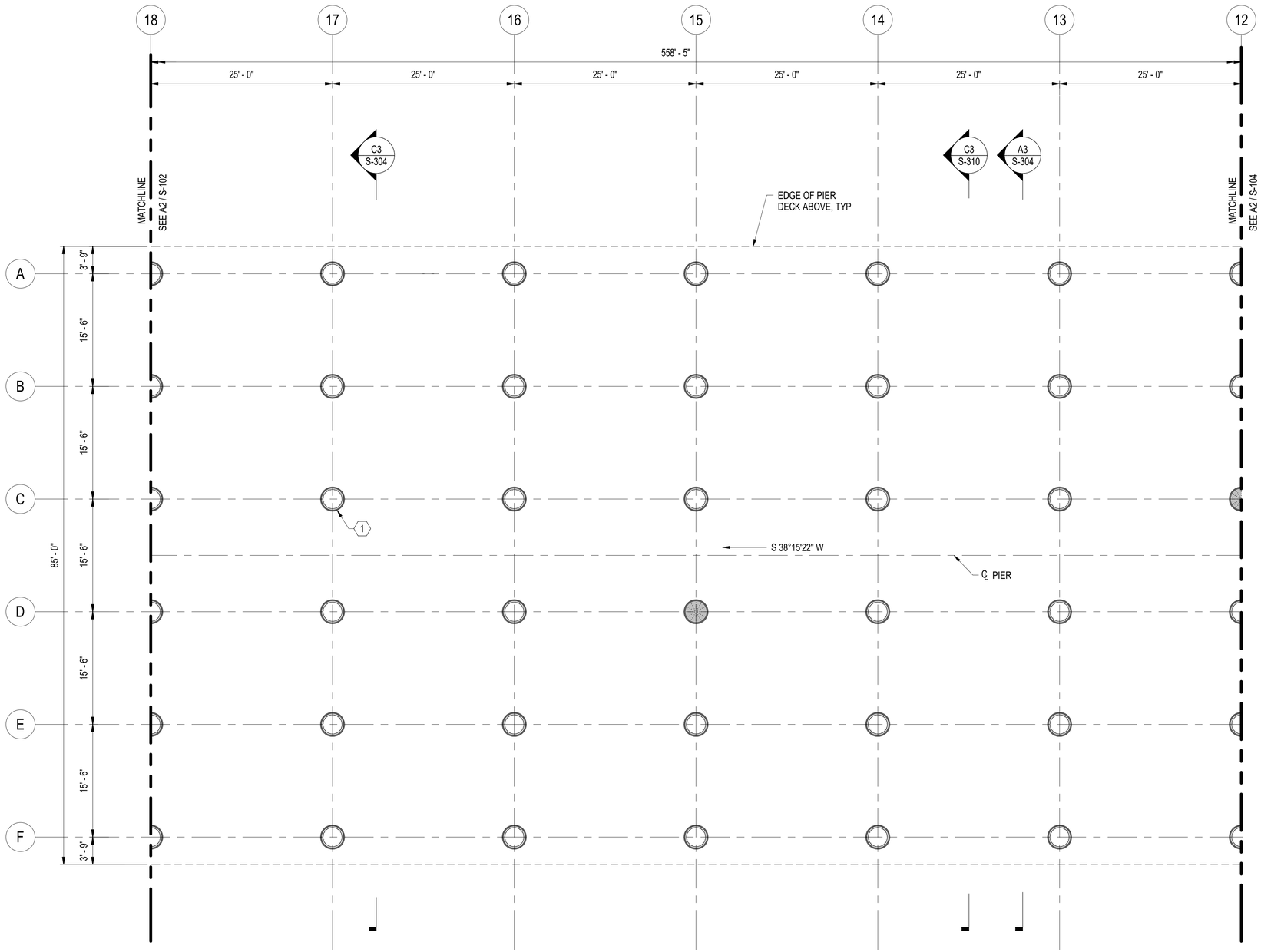
PILE PLAN - SHEET 1 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942324 |
| SHEET | 81 OF 290 |

S-102

DRAWFORM REVISION: 25 AUGUST 2020


S-102
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## GENERAL SHEET NOTES:

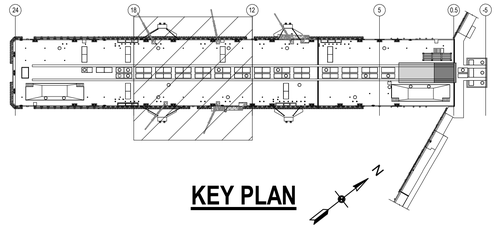
1. ALL PILES TO BE INSTALLED WITH DRIVING SHOES, SEE PILE SCHEDULE ON DRAWING S-601
2. ALL PILES AT BENTS 12 TO 17 TO BE INSTALLED WITH ROCK SOCKETS.
3. ALL PILES TO BE INSTALLED WITH HDPE JACKETS.

## SHEET KEYNOTES:

1. 36" DIAMETER CONCRETE-FILLED STEEL PIPE PILE WITH ROCK SOCKET, SEE DRAWING S-503, TYPICAL.

## LEGEND:

- (#) BENT DESIGNATION
- (A) PILE ROW DESIGNATION
- PDA TEST PILE
- 36" DIAMETER CONCRETE-FILLED STEEL PIPE PILE WITH ROCK SOCKET




## KEY PLAN

1/8" = 1' - 0"

0 5' 10' 15' 30'

## A2 PILE PLAN - SHEET 2 OF 4

SCALE: 1/8" = 1'-0"

PLAN NORTH

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

SEAL

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AEP | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PMDM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
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NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

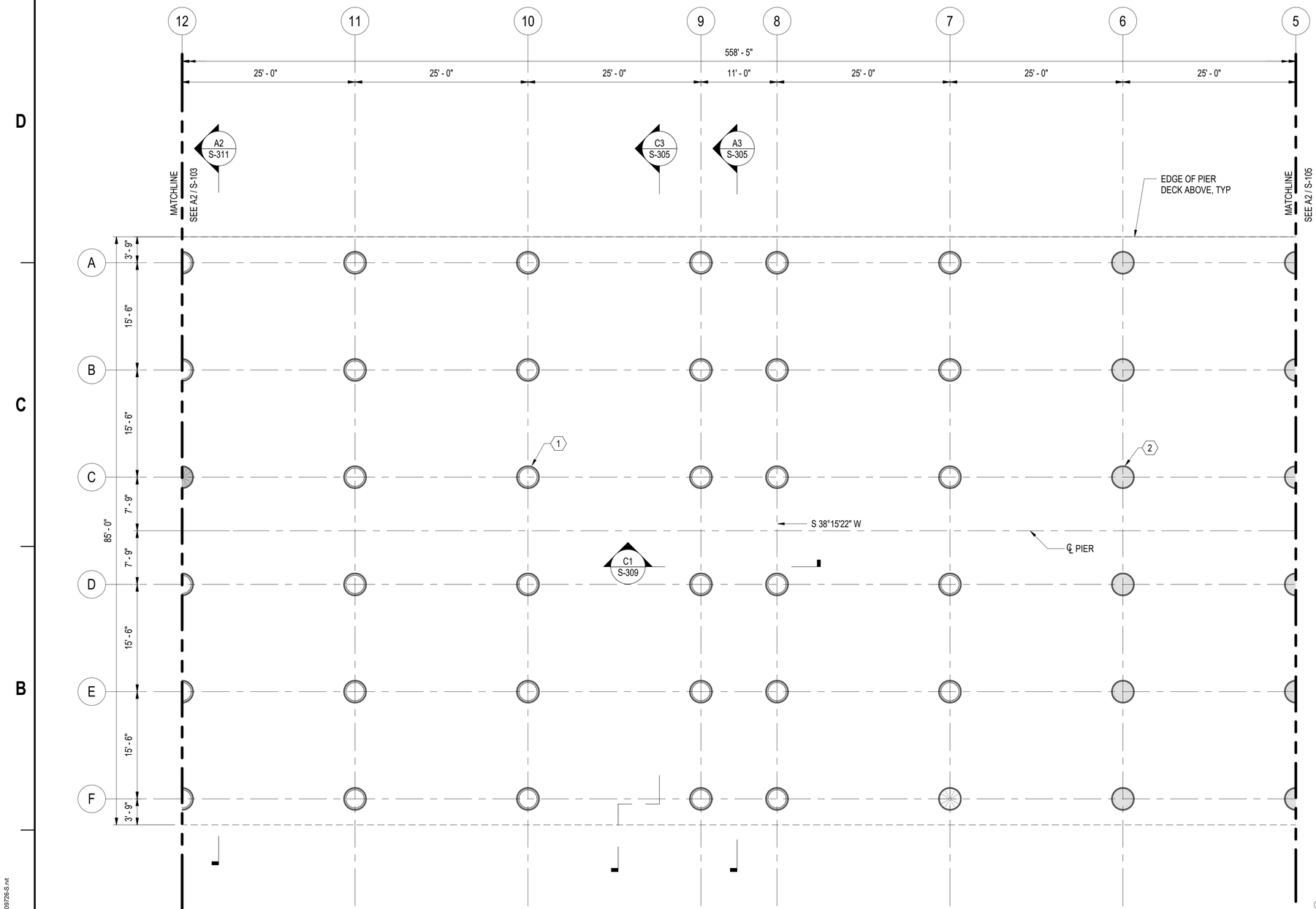
PILE PLAN - SHEET 2 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942325 |
| SHEET | 82 OF 290 |

S-103

DRAWFORM REVISION: 25 AUGUST 2020

7/22/2020 5:21:59 PM S-103
Autodesk Docs://22410316_P-194_NEW LONDON_PIER_8/PIERP194-1709726-S.rvt




## GENERAL SHEET NOTES:

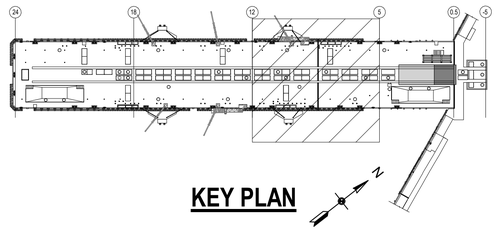
1. ALL PILES AT BENTS 7 THROUGH 12 TO BE INSTALLED WITH DRIVING SHOES AND ROCK SOCKET. SEE PILE SCHEDULE ON DRAWING S-601.
2. ALL PILES AT BENTS 5 AND 6 ARE DRILLED SHAFTS WITH ROCK SOCKETS.
3. ALL PILES TO BE INSTALLED WITH HDPE JACKETS.

## SHEET KEYNOTES:

1. 36" DIAMETER CONCRETE-FILLED STEEL PIPE PILE WITH ROCK SOCKET, SEE DRAWING S-503.
2. 36" DIAMETER STEEL-ENCASED DRILLED SHAFT WITH ROCK SOCKET, SEE DRAWING S-502.

## LEGEND:

- 36" DIA CONCRETE-FILLED STEEL PIPE PILE WITH ROCK SOCKET
- 36" DIA STEEL ENCASED DRILLED SHAFT WITH ROCK SOCKET AND HDPE JACKET
- (#) BENT DESIGNATION
- (A) PILE ROW DESIGNATION
- PDA TEST PILE




KEY PLAN

1/8" = 1' - 0"  0  5'  10'  15'  30'

## A2 PILE PLAN - SHEET 3 OF 4

SCALE: 1/8" = 1'-0"

PLAN NORTH

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|
| | | | |

NAVFAC

SEAL

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AEP | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PM/CM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

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NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

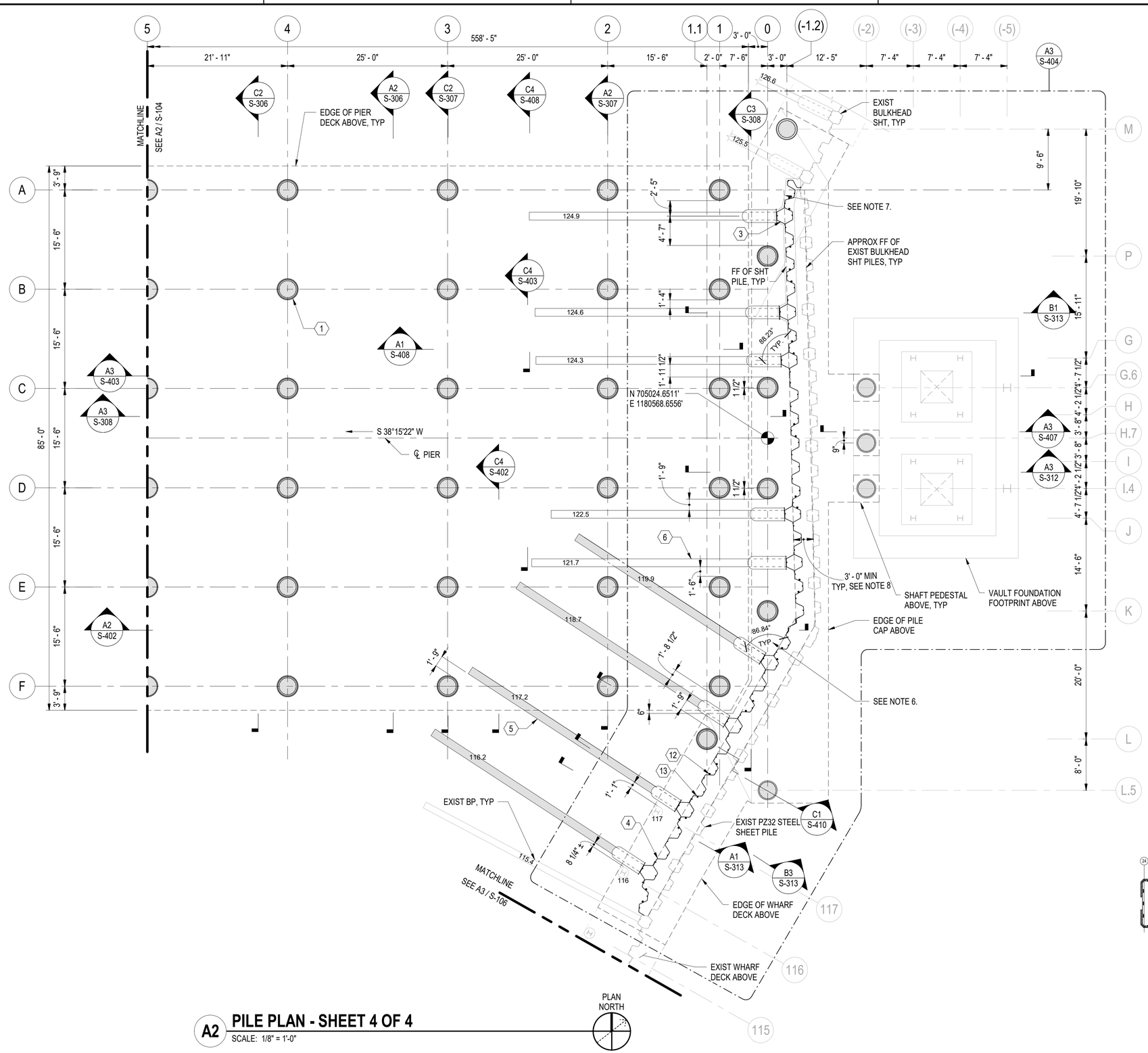
PILE PLAN - SHEET 3 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942326 |
| SHEET | 83 OF 290 |

S-104

DRAWFORM REVISION: 25 AUGUST 2020

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S-104
Autodesk Docs://224101316_P-194_NEW-LONDON_PIER_8/PIERP194-1709726-S.rvt




## A2 PILE PLAN - SHEET 4 OF 4

SCALE: 1/8" = 1'-0"

## GENERAL SHEET NOTES:

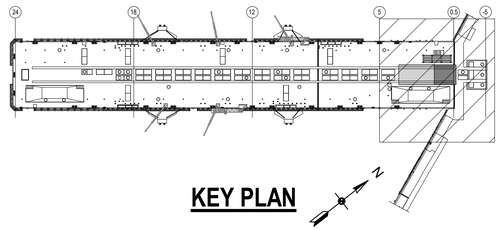
1. FOR LANDSIDE WORK, SEE PART PLANS ON S-404 AND S-405.
2. SEE APPENDIX A INCLUDED IN THE SPECIFICATIONS FOR MORE INFORMATION ON EXISTING WHARF AND BENT PILES.
3. CONTRACTOR TO SEQUENCE CONSTRUCTION ACTIVITIES AND PROVIDE TEMPORARY SUPPORTS, BRACING, ETC. SO THAT THE EXISTING QUAY WALL AND BULKHEAD SHEET PILES REMAIN STABLE AND THAT SOIL IS RETAINED AND NO SOIL GETS INTO THE RIVER.
4. DRILLED SHAFTS INSTALLED LANDSIDE OF THE EXISTING BULKHEAD DO NOT REQUIRE A PILE JACKET.
5. JACKETS ON BATTER PILES TO BE INSTALLED AFTER PILE INSTALLATION.
6. VERIFY IN THE FIELD FOR ANGLE TO INSTALL THROUGH SHAFTS IN PLACE SEE BATTER ANGLES ON DRAWING S-509.
7. VERIFY IN THE FIELD FOR ANGLE TO INSTALL IN PARALLEL TO PIER CENTERLINE. SEE BATTER ANGLES ON DRAWING S-509.
8. THE MINIMUM CLEARANCE BETWEEN FRONT FACES OF BULKHEAD SHEET PILES IS BASED ON SPACE ESTIMATED TO INSTALL BULKHEAD SHEETING. DEMOLISH EXISTING PZ35 PIECE TO ALLOW COMPLETE INSTALLATION OF WALE AFTER EXISTING BATTER PILES ARE DEMOLISHED.

## SHEET KEYNOTES:

1. 36" DIAMETER STEEL-ENCASE DRILLED SHAFT (BENTS -2 TO 4), SEE S-502, TYPICAL.
3. PZ35 STEEL SHEET PILE PIECE, TYPICAL.
4. PZ35 STEEL SHEET PILE, TYPICAL.
5. HP14x89 (4 TOTAL) WITH JACKET TO BE INSTALLED BETWEEN DRILLED SHAFTS IN PLACE, TYPICAL.
6. HP14x73 (5 TOTAL) WITH JACKET TO BE INSTALLED IN PARALLEL TO PIER CENTERLINE, TYPICAL.
12. 5' x 5' x75" 180# HIGH POTENTIAL ALUMINUM ANODE (1 FOR EVERY 3 SHEETS FRONT AND BACK), TYPICAL.
13. CATHODIC PROTECTION MONITORING TEST STATION (2 TOTAL), SEE S-557 FOR MORE INFORMATION, TYPICAL.

## LEGEND:

- 36" DIA STEEL-ENCASED DRILLED SHAFT WITH ROCK SOCKET AND HDPE JACKET
- # BENT DESIGNATION
- A PILE ROW DESIGNATION
- HP 14x89 WITH JACKET
- HP 14x73 WITH JACKET
- HP 10x42
- HP 14x102
- SUMP PIT
- WORKING POINT
- XXX.Y DESIGNATION FOR BATTER PILE BETWEEN TWO BENTS, DECIMAL INDICATES DISTANCE FROM BENT XXX
- CATHODIC PROTECTION TEST STATION
- HIGH-POTENTIAL ALUMINUM ANODE



## KEY PLAN

1/8" = 1' - 0"

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

SEAL

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AEP | CHK | MJF |
|---|---|---|---|---|---|
| PMDM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENGR/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

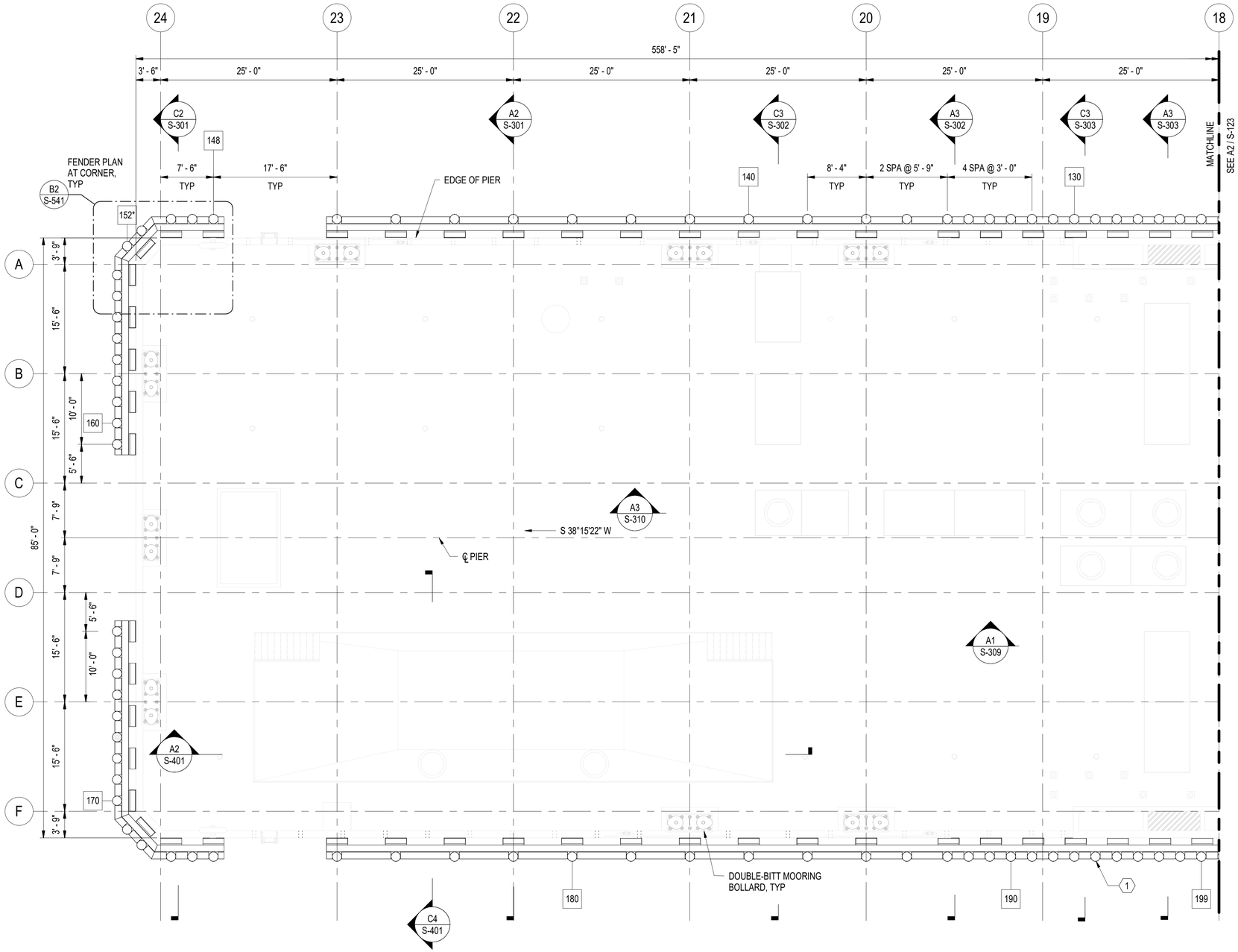
PILE PLAN - SHEET 4 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942327 |
| SHEET | 84 OF 290 |

S-105

DRAWFORM REVISION: 25 AUGUST 2020

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Autodesk Docs://Z241013\0_P-194_NEW-LONDON_PIER_8/PIER\P194-1709726-S.rvt




## A2 FENDER PILE PLAN - SHEET 1 OF 4

SCALE: 1/8" = 1'-0"

PLAN NORTH

## GENERAL SHEET NOTES:

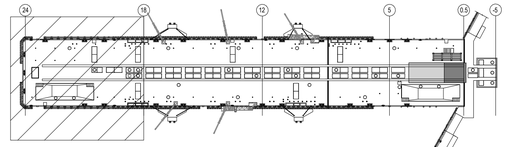
1. SEE DRAWING SD602 AND SD603 FOR FENDER PILES AND TEST PILES SCHEDULE.
2. SEE DRAWING S-116 THROUGH S-120 FOR PIER DECK INFORMATION.

## SHEET KEYNOTES:

1. COMPOSITE FENDER SYSTEM, TYPICAL. SEE DRAWINGS S-540 AND S-542.

## LEGEND:

- (#) BENT DESIGNATION
- ### FENDER PILE NUMBER
- PDA TEST FENDER PILE, TYP
- COMPOSITE FENDER SYSTEM




## KEY PLAN

1/8" = 1' - 0"

0 5' 10' 15' 30'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AN | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PMDM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

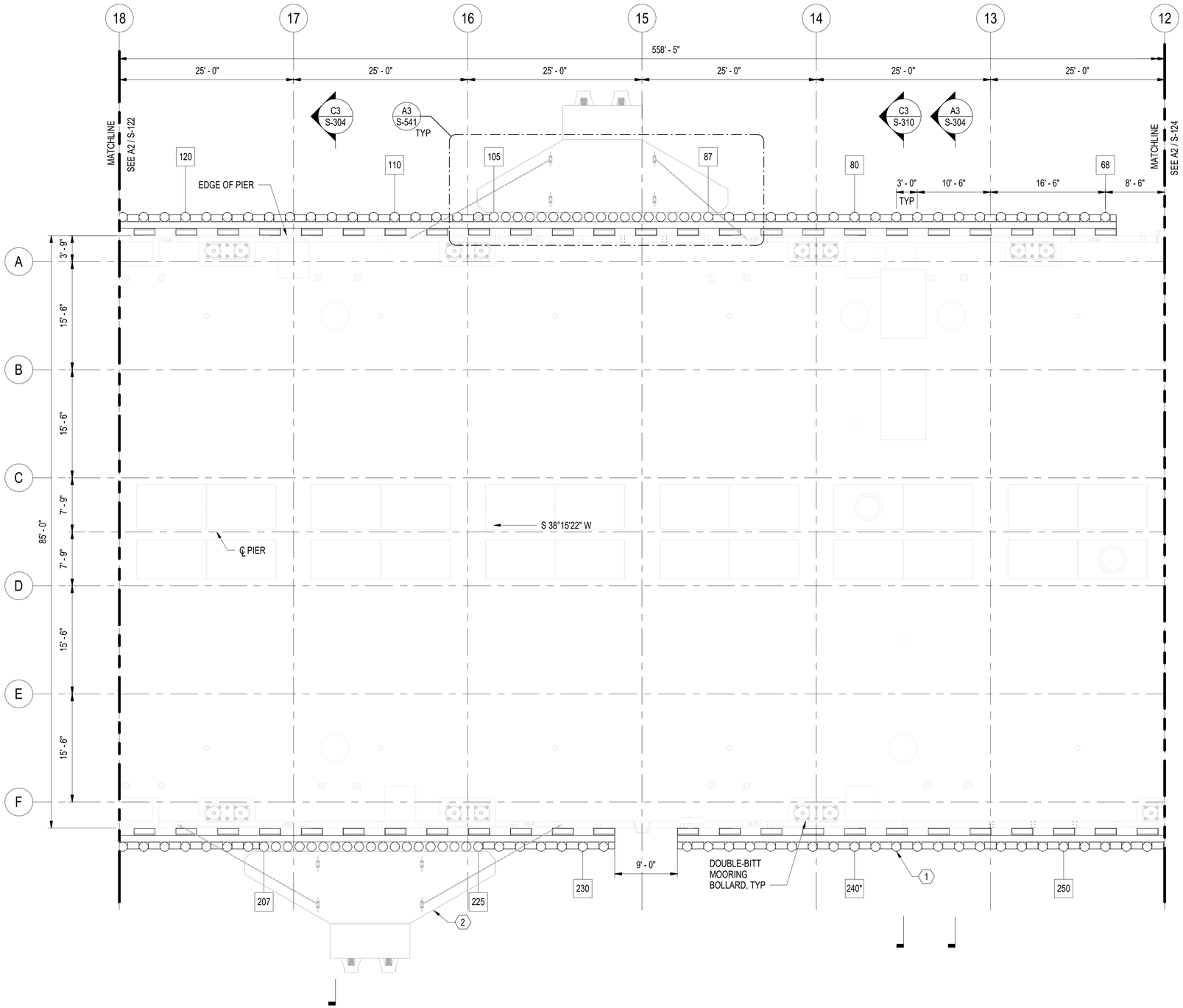
FENDER PILE PLAN - SHEET 1 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942344 |
| SHEET | 101 OF 290 |

S-122

DRAWFORM REVISION: 25 AUGUST 2020

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S-122




## GENERAL SHEET NOTES:

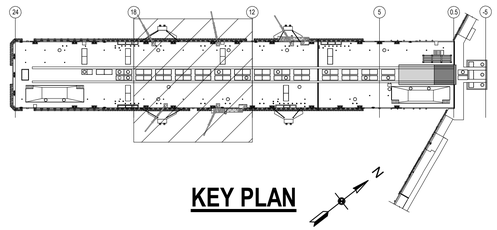
1. SEE DRAWING SD602 AND SD603 FOR FENDER PILES AND TEST PILES SCHEDULE.
2. SEE DRAWING S-116 THROUGH S-120 FOR PIER DECK INFORMATION.

## SHEET KEYNOTES:

1. COMPOSITE FENDER SYSTEM, TYPICAL. SEE DRAWINGS S-540 AND S-541.
2. COMPOSITE CAMEL SEE DRAWINGS S-543 THROUGH S-547. HYDROPNEUMATIC FENDERS ARE NOT SHOWN FOR CLARITY AND ONLY ASSUMED TO BE USED DURING HEAVY WEATHER MOORING EVENTS WHEN SUBMARINE CANNOT LEAVE THE PIER. SEE S-553 FOR MORE INFORMATION.

## LEGEND:

- (#) BENT DESIGNATION
- [###] FENDER PILE NUMBER
- PDA TEST FENDER PILE, TYP
- COMPOSITE FENDER SYSTEM




## KEY PLAN

1/8" = 1' - 0"  0  5'  10'  15'  30'

## A2 FENDER PILE PLAN - SHEET 2 OF 4

SCALE: 1/8" = 1'-0"

PLAN NORTH

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|
| | | | |

NAVFAC

SEAL

Stantec

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AN | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PMDM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

# P-194 SSN SUBMARINE PIER 8 REPLACEMENT

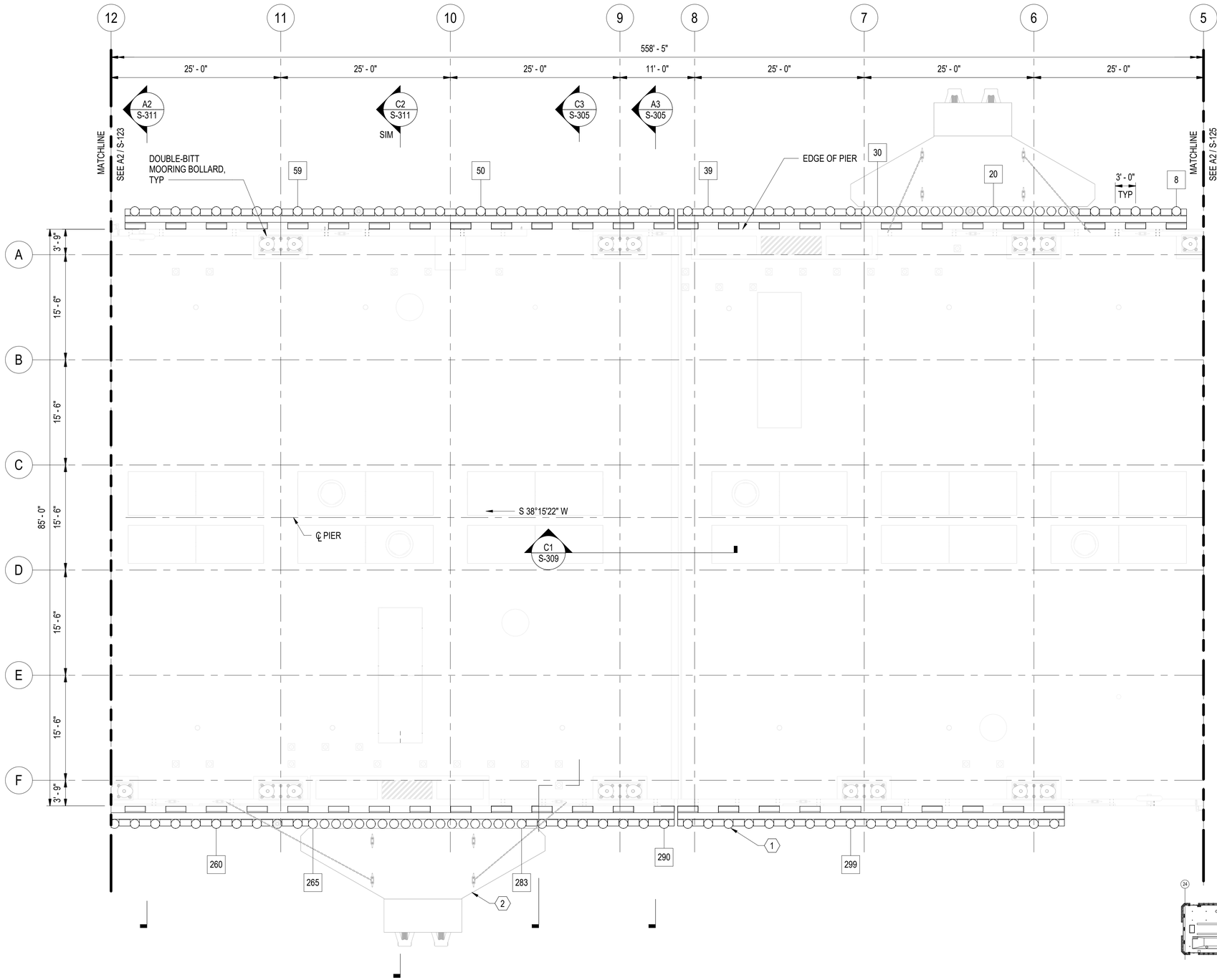
FENDER PILE PLAN - SHEET 2 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942345 |
| SHEET | 102 OF 290 |

S-123

DRAWFORM REVISION: 25 AUGUST 2020

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Autodesk Docs://224101316_P-194_NEW LONDON_PIER_8/PIERP194-1709726-S.rvt
S-123




## GENERAL SHEET NOTES:

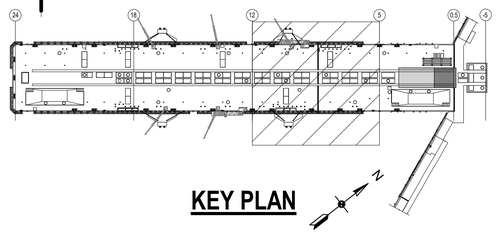
1. SEE DRAWING SD602 AND SD603 FOR FENDER PILES AND TEST PILES SCHEDULE.
2. SEE DRAWING S-116 THROUGH S-120 FOR PIER DECK INFORMATION.

## SHEET KEYNOTES:

1. COMPOSITE FENDER SYSTEM SEE S-540 THROUGH S-542 FOR MORE INFORMATION.
2. COMPOSITE CAMEL SEE DRAWINGS S-543 THROUGH S-547. HYDROPNEUMATIC FENDERS ARE NOT SHOWN FOR CLARITY AND ONLY ASSUMED TO BE USED DURING HEAVY WEATHER MOORING EVENTS WHEN SUBMARINE CANNOT LEAVE THE PIER. SEE S-553 FOR MORE INFORMATION.

## LEGEND:

- (#) BENT DESIGNATION
- [###] FENDER PILE NUMBER
- PDA TEST FENDER PILE, TYP
- COMPOSITE FENDER SYSTEM




## KEY PLAN

1/8" = 1' - 0"

0 5' 10' 15' 30'

## A2 FENDER PILE PLAN - SHEET 3 OF 4

SCALE: 1/8" = 1'-0"

PLAN NORTH

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

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ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AN | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PMDM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

DEPARTMENT OF THE NAVY
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NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

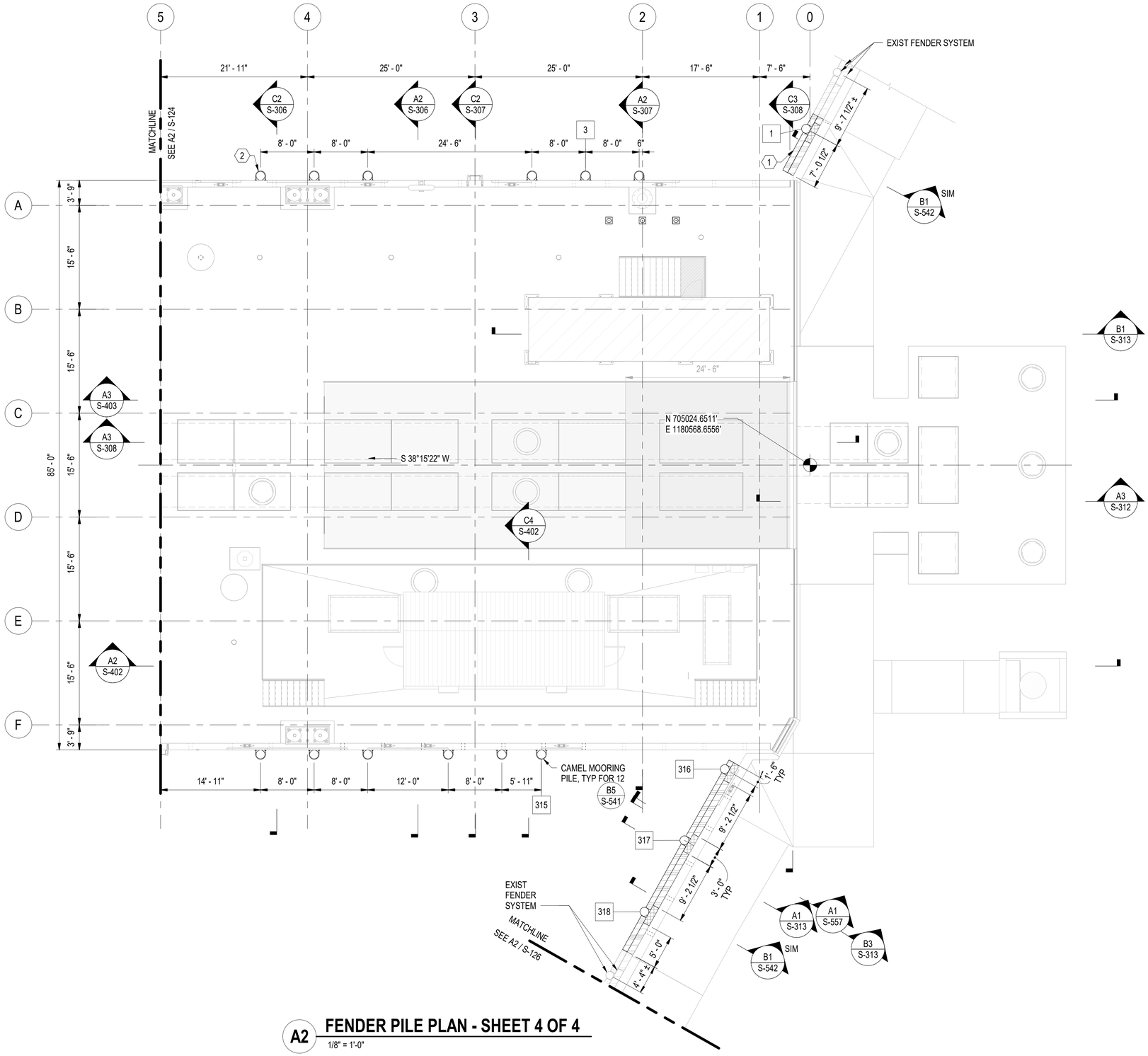
FENDER PILE PLAN - SHEET 3 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942346 |
| SHEET | 103 OF 290 |

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DRAWFORM REVISION: 25 AUGUST 2020

7/22/2026 5:23:28 PM S-124
Autodesk Docs://22410316_P-194_NEW-LONDON_PIER_8/PIER P194-1709726-S.rvt




## A2 FENDER PILE PLAN - SHEET 4 OF 4

1/8" = 1'-0"

## GENERAL SHEET NOTES:

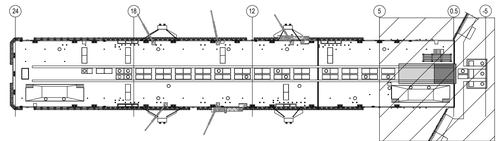
1. SEE DRAWING SD602 AND SD603 FOR FENDER PILES AND TEST PILES SCHEDULE.
2. SEE DRAWING S-116 THROUGH S-120 FOR PIER DECK INFORMATION.

## SHEET KEYNOTES:

1. COMPOSITE FENDER SYSTEM SEE S-540 THROUGH S-542 FOR MORE INFORMATION.
2. CAMEL PILE, TYPICAL. SEE DRWAING S-542.

## LEGEND:

- CAMEL MOORING PILE
- COMPOSITE FENDER SYSTEM
- WORKING POINT




## KEY PLAN

1/8" = 1' - 0"

0 5' 10' 15' 30'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

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SATISFACTORY TO DATE

| DES | JZ | DRW | AN | CHK | MJF |
|---|---|---|---|---|---|
| PMDM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
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NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
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P-194 SSN SUBMARINE PIER 8 REPLACEMENT

FENDER PILE PLAN - SHEET 4 OF 4

SCALE: AS NOTED

EPROJECT NO.: 1709726

CONSTR. CONTR. NO.

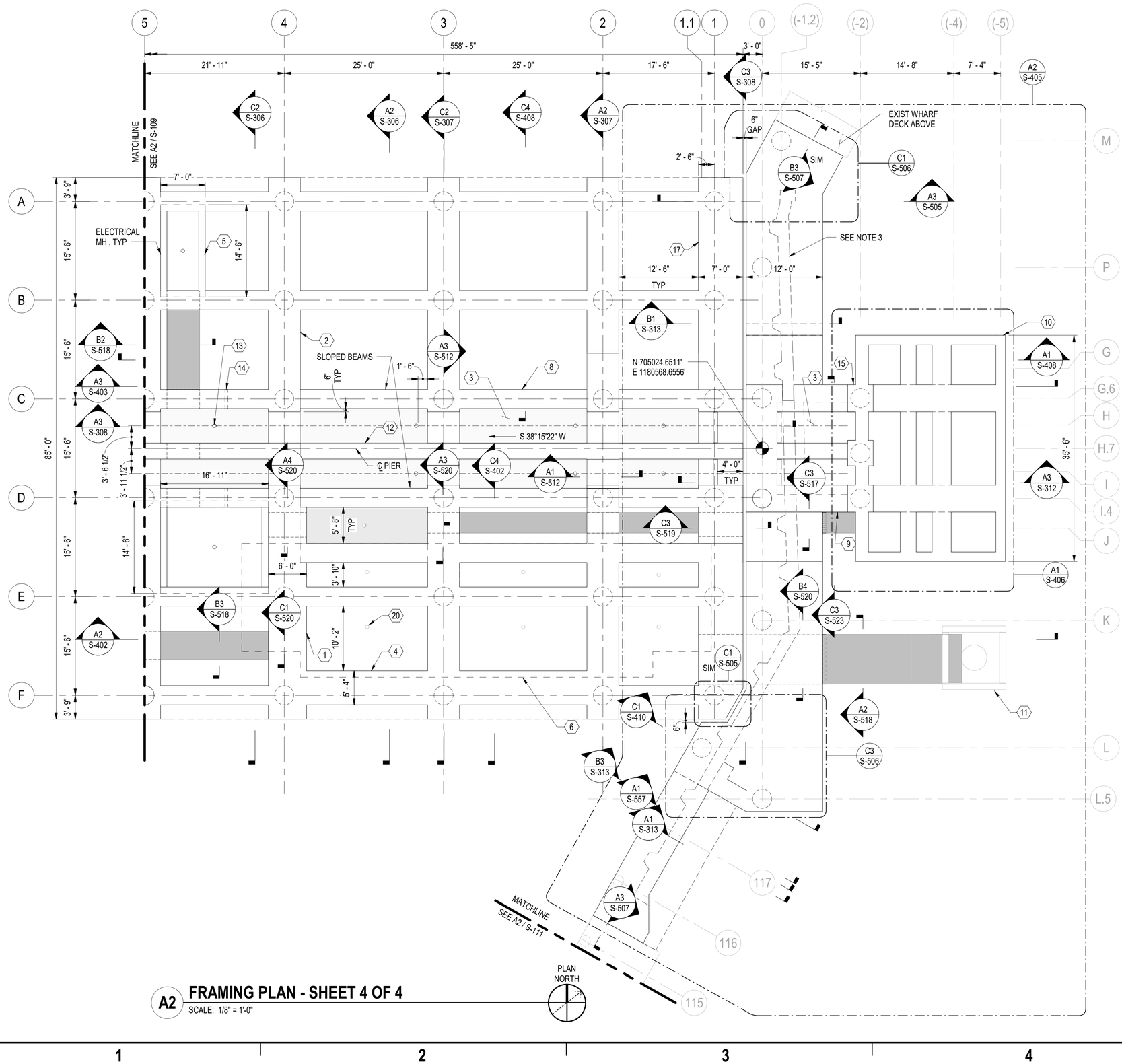
NAVFAC DRAWING NO. 12942347

SHEET 104 OF 290

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DRAWFORM REVISION: 25 AUGUST 2020

7/22/2025 5:23:33 PM
Autodesk Docs://2241101316_P-194_NEW LONDON_PIER_8/PIERP194-1709726-S.rvt
S-125




## GENERAL SHEET NOTES:

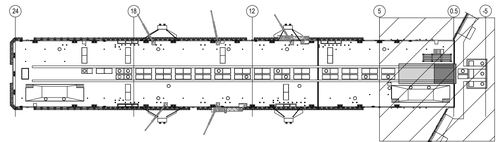
1. THE PILE CAP AT BENT 1 IS 7'-0" WIDE. ADJUST REINFORCEMENT AS REQUIRED AT PILE CAP CHAMFER FOR REBAR CONTINUITY .
2. PILE CAP AT BENT 0 IS 12'-0" WIDE AND 3'-0" DEEP, AS TYPICAL, AND 5'-6" AT CENTER ACCESS RAMP. SEE DRAWING S-405 FOR CHANGE OF WIDTH AND SLOPE.
3. PROVIDE BLOCK OUT UNDER PILE CAP AT BENT 0. SEE DRAWINGS S-405 AND S-504 FOR ADDITIONAL DETAILS.

## SHEET KEYNOTES:

1. 6'-0" WIDE BY 4'-6" DEEP CAST-IN-PLACE CONCRETE PILE CAP, TYPICAL.
2. 5'-0" WIDE BY 4'-6" DEEP CAST-IN-PLACE CONCRETE PILE CAP, TYPICAL.
3. CAST-IN-PLACE CONCRETE UTILITY TRENCH SLAB, TYPICAL.
4. 5'-4" WIDE BY 4'-6" DEEP CAST-IN-PLACE CONCRETE BEAM, TYPICAL.
5. PRECAST CONCRETE MANHOLE BELOW, TYPICAL.
6. SUBSTATION, SEE S-402 FOR MORE INFORMATION, TYPICAL.
8. 3'-0" WIDE BY 4'-6" DEEP CAST-IN-PLACE CONCRETE BEAM, TYPICAL.
9. 4'-3" WIDE BY 3'-0" DEEP CAST IN PLACE CONCRETE BEAM, TYPICAL.
10. UTILITY VAULT, SEE S-406 AND S-407 FOR MORE INFORMATION, TYPICAL.
11. ELECTRICAL DUCTBANK AND MANHOLE - SEE ELECTRICAL DRAWINGS.
12. CAST-IN-PLACE 2'-6" THICK TRENCH WALL, TYPICAL.
13. DRAIN WITH ONE WAY VALVE, TYPICAL.
14. 8" DIAMETER OPENING, TYPICAL.
15. 4'-0" WIDE BY 4'-0" DEEP CAST-IN-PLACE CONCRETE COLUMN, TYPICAL.
17. 7'-0" WIDE BY 4'-6" DEEP CAST-IN-PLACE CONCRETE PILE CAP, TYPICAL.
20. 8" HEAVY DUTY SLEEVED DECK DRAIN (2'-9" LONG) WITH FRAME AND GRATE, TYPICAL.

## LEGEND:

- (#) BENT DESIGNATION, START OF PIER, OR PILE LINE
- (A) PILE ROW DESIGNATION
- 36" DIA PILE BELOW
- ELECTRICAL DUCT BANK
- CIP CONCRETE SLAB
- CIP UTILITY TRENCH SLAB
- WORKING POINT




## KEY PLAN

1/8" = 1' - 0"

0 5' 10' 15' 30'

## A2 FRAMING PLAN - SHEET 4 OF 4

SCALE: 1/8" = 1'-0"

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

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ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AN | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PMDM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

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NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
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NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

# P-194 SSN SUBMARINE PIER 8 REPLACEMENT

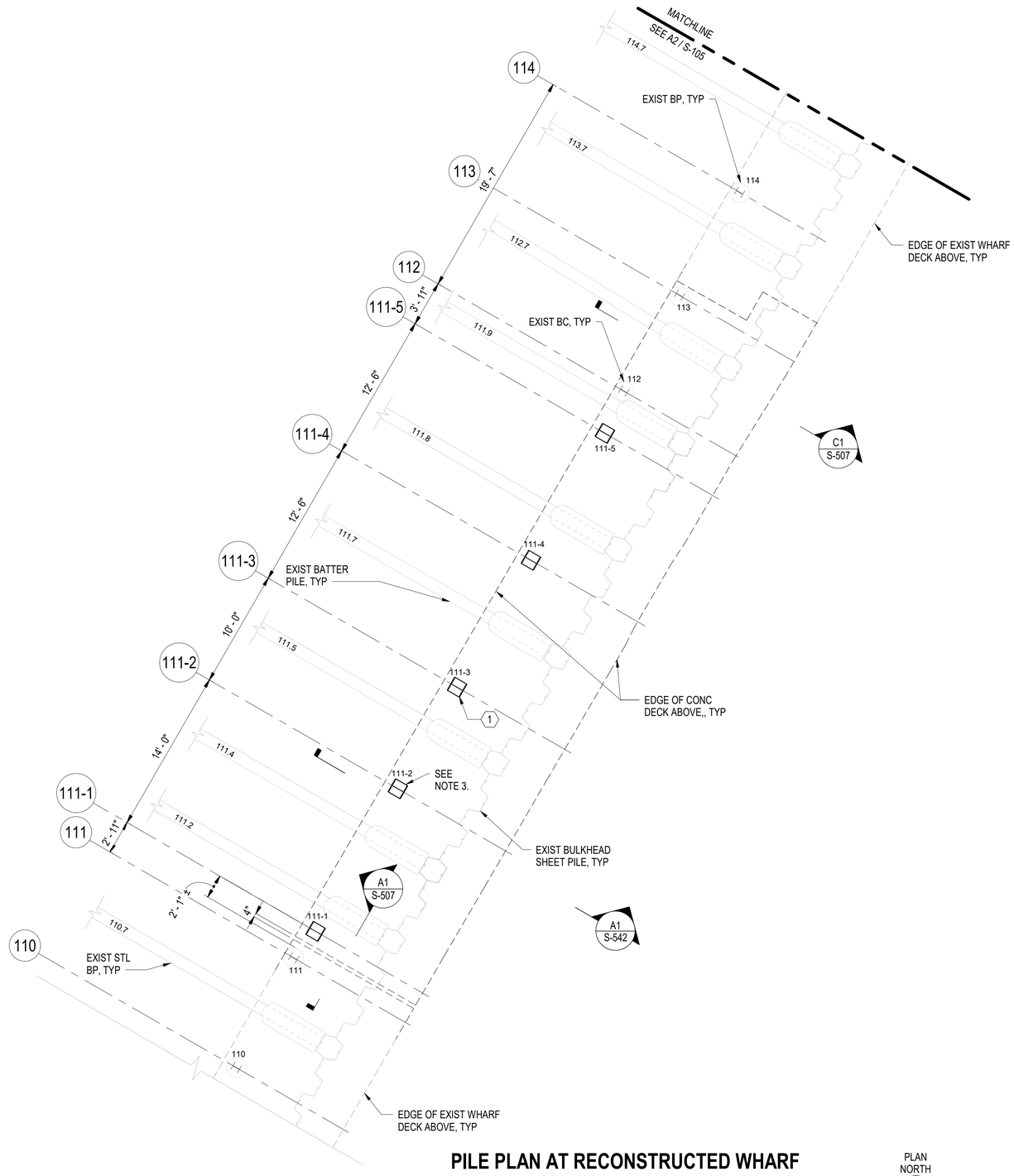
FRAMING PLAN - SHEET 4 OF 4

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942332 |
| SHEET | 89 OF 290 |

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Autodesk Docs://22#101310_P-194_NEW-LONDON_PIER_8/PIERP194-1709726-S.rvt
S-110




## PILE PLAN AT RECONSTRUCTED WHARF (FORMER PIER 8 LANDEND)

A3 SCALE: 3/16" = 1'-0"

PLAN NORTH

## GENERAL SHEET NOTES:

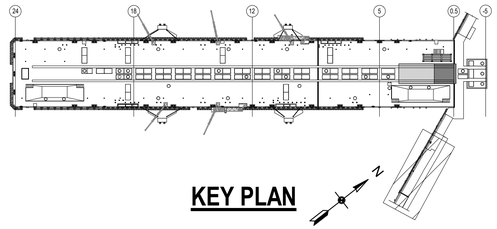
1. SEE DRAWING S-111 FOR WHARF FRAMING PLAN.
2. SEE DRAWING S-120 AND S-126 FOR WHARF DECK AND FENDER PILE PLAN.
3. SEE DRAWING S-508 FOR JACKET DETAILS ON HP14, TYPICAL.

## SHEET KEYNOTES:

1. HP 14x73 (5 TOTAL) WIT PILE JACKET, TYPICAL.

## LEGEND:

| | |
|---|---|
| # | BENT DESIGNATION |
| | HP 14x73 (5 TOTAL) WITH PILE JACKET |
| XXX.Y | DESIGNATION FOR BATTER PILE BETWEEN TWO BENTS, DECIMAL INDICATES DISTANCE FROM BENT XXX |




## KEY PLAN

3/16" = 1' - 0" 0 5' 10' 20'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

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SATISFACTORY TO DATE

| DES | JZ | DRW | AEP | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PMDM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

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CI CORE - HAMPTON ROADS

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NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

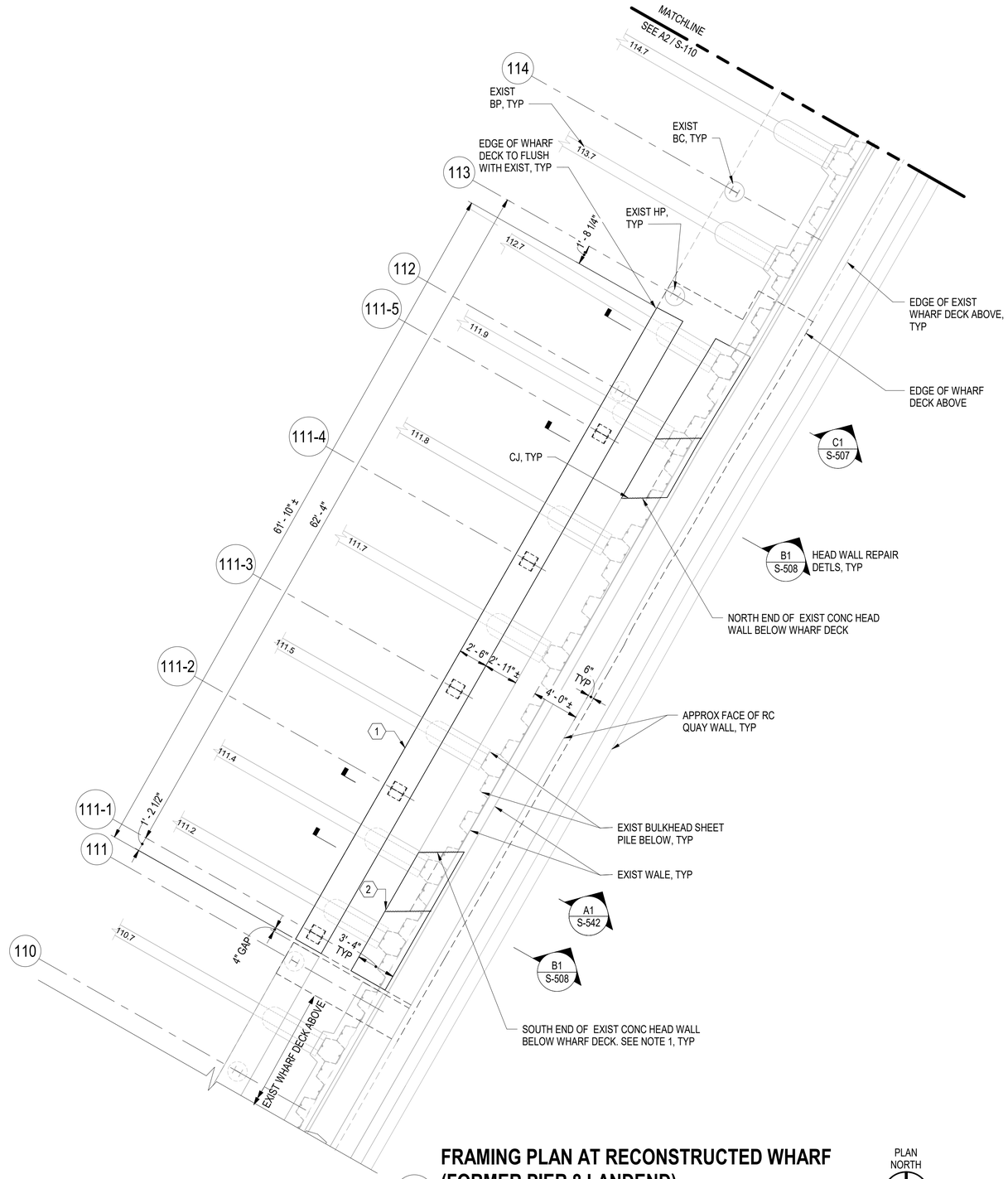
PILE PLAN AT RECONSTRUCTED WHARF (FORMER PIER 8 LANDEND)

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942328 |
| SHEET | 85 OF 290 |

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DRAWFORM REVISION: 25 AUGUST 2020

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## FRAMING PLAN AT RECONSTRUCTED WHARF (FORMER PIER 8 LANDEND)

A2

SCALE: 3/16" = 1'-0"

PLAN NORTH

## GENERAL SHEET NOTES:

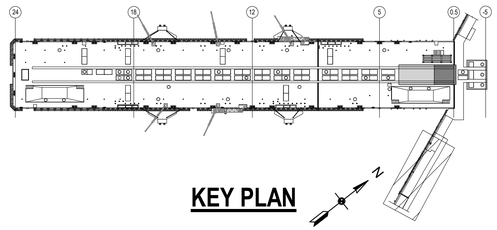
1. PROVIDE CONCRETE HEAD BEAM BETWEEN WHARF DECK AND TOP OF EXISTING BULKHEAD SHEETING.

## SHEET KEYNOTES:

1. 2'-6"x 2'-6" CONCRETE EDGE BEAM. SEE DRAWING S-507.
2. 2'-0" DEEP 3'-4" WIDE CONCRETE HEAD BEAM.

## LEGEND:

| | |
|---|---|
| (#) | BENT DESIGNATION |
| ◫ | HP 14x73 (5 TOTAL) WITH PILE JACKET |
| XXX.Y | DESIGNATION FOR BATTER PILE BETWEEN TWO BENTS, DECIMAL INDICATES DISTANCE FROM BENT XXX |




## KEY PLAN

3/16" = 1' - 0"

0 5' 10' 20'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|
| | | | |

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ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AN | CHK | MJF |
|---|---|---|---|---|---|
| PMDM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

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CI CORE - HAMPTON ROADS
NAVAL SUBMARINE BASE NEW LONDON
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NAVAL STATION - NORFOLK, VA
GROTON, CT

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

FRAMING PLAN AT RECONSTRUCTED WHARF (FORMER PIER 8 LANDEND)

SCALE: AS NOTED

EPROJECT NO.: 1709726

CONSTR. CONTR. NO.

NAVFAC DRAWING NO.
12942333

SHEET 90 OF 290

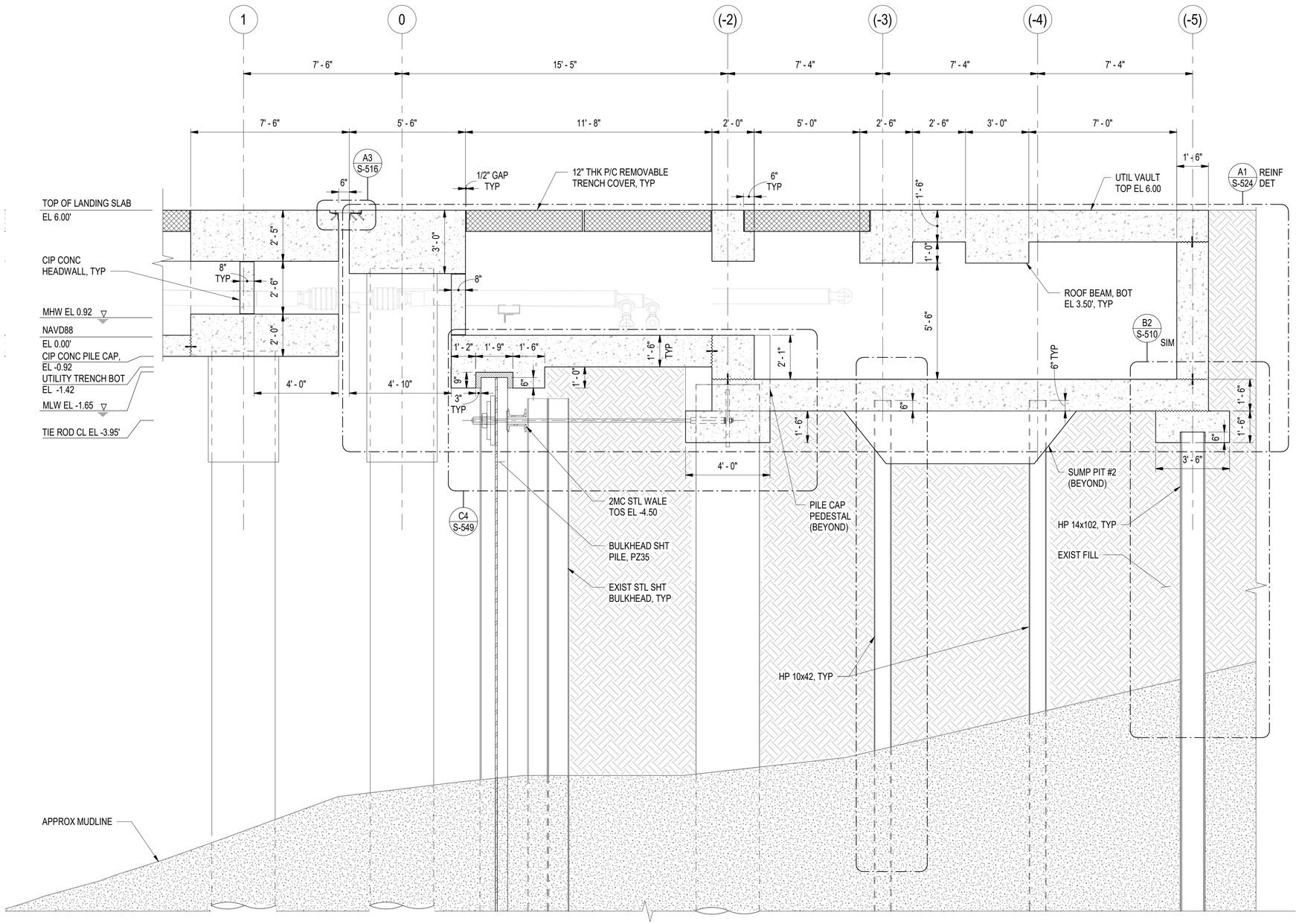
S-111

DRAWFORM REVISION: 25 AUGUST 2020


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## GENERAL SHEET NOTES:

ARMORED ANGLES AT PRECAST REMOVABLE COVERS NOT SHOWN FOR CLARITY. SEE DETAIL A1 ON S-522.




## A3 LONGITUDINAL SECTION AT UTILITY TRENCH AND VAULT

3/8" = 1'-0" (S-110,S-119,S-125,S-405)

3/8" = 1' - 0" 0 1' 2' 3' 4' 5' 10'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|
| | | | |

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ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AN | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PMDM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

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CI CORE - HAMPTON ROADS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT

# P-194 SSN SUBMARINE PIER 8 REPLACEMENT

## TYPICAL SECTION FOR UTILITY TRENCH AND VAULT

SCALE: AS NOTED

EPROJECT NO.: 1709726

CONSTR. CONTR. NO.

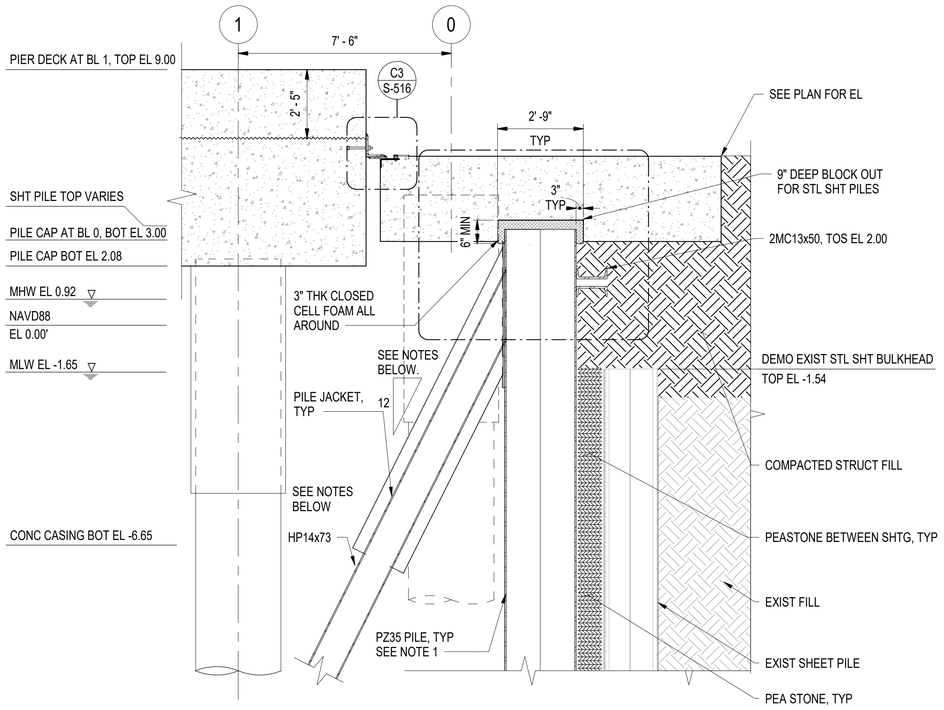
NAVFAC DRAWING NO.
12942366

SHEET 123 OF 290

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DRAWFORM REVISION: 25 AUGUST 2020

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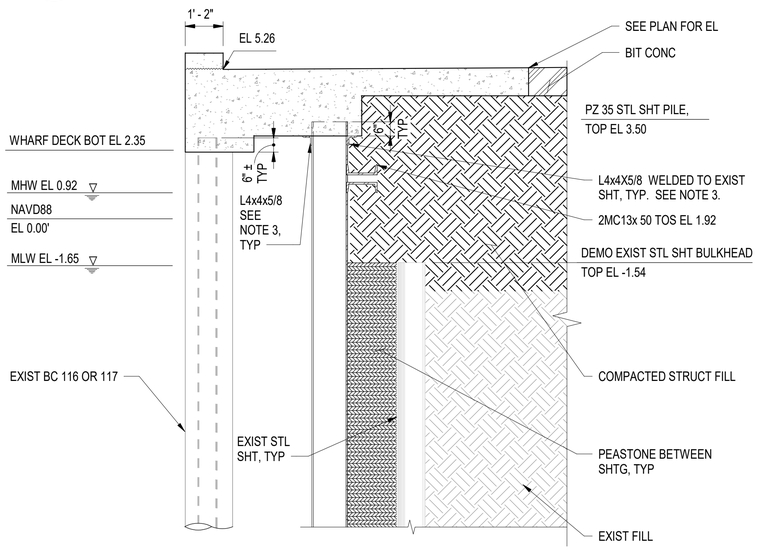



NOTES:

1. FOR THE BATTER PILE 121.7 AT THE NORTH OF SHAFT LOCATED AT GRIDLINE F & GRIDLINE 1. THE BATTER IS 12V:6.6H.
2. BATTER IS 12V:6H AS TYPICAL FOR BATTER PILES AT OTHER LOCATIONS.

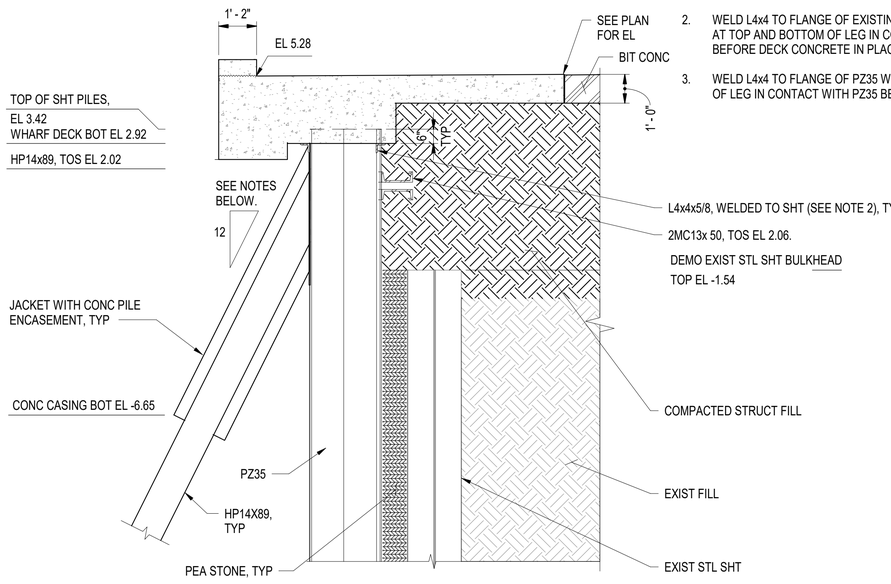
## B1 TYPICAL DETAILS FOR PILE CAP CONNECTION AT BATTER PILE

3/8" = 1'-0" (S-105)




## A1 TYPICAL DECK ELEVATION BEYOND BATTER PILE

3/8" = 1'-0" (S-105, S-404, S-405)




NOTES:

1. FOR THE BATTER PILE AT THE SOUTH OF SHAFT LOCATED AT GRIDLINE F & GRIDLINE 1. THE BATTER PILE IS 12V:5.7H.
2. BATTER ANGLE IS 12V:6H AS TYPICAL FOR BATTER PILES AT OTHER LOCATIONS

## B3 TYPICAL DECK ELEVATION AT BATTER PILE

3/8" = 1'-0" (S-105, S-404, S-405, S-504)

## GENERAL SHEET NOTES:

1. AT BATTER PILE LOCATIONS WELD PZ35 STEEL SHEET PILE WITH PZ35 PIECE. SEE DETAILS ON DRAWING S-509.
2. WELD L4x4 TO FLANGE OF EXISTING STEEL SHEETING WITH 1/4" FILLET WELDS AT TOP AND BOTTOM OF LEG IN CONTACT WITH EXISTING STEEL SHEETING BEFORE DECK CONCRETE IN PLACE, TYPICAL.
3. WELD L4x4 TO FLANGE OF PZ35 WITH 1/4" FILLET WELDS AT TOP AND BOTTOM OF LEG IN CONTACT WITH PZ35 BEFORE DECK CONCRETE IN PLACE, TYPICAL.

3/8" = 1' - 0"  0  1'  2'  3'  4'  5'  10'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|

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ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AN | CHK | MJF |
|---|---|---|---|---|---|
| PMDM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

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NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
CI CORE - HAMPTON ROADS
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CT
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

P-194 SSN SUBMARINE PIER 8 REPLACEMENT

SECTIONS LANDSIDE BULKHEAD

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942367 |
| SHEET | 124 OF 290 |

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DRAWFORM REVISION: 25 AUGUST 2020

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## MATERIALS:

1. TURBIDITY CURTAIN BARRIERS MUST BE ORANGE IN COLOR IN ORDER TO ATTRACT THE ATTENTION OF NEARBY BOATERS.
2. THE TURBIDITY CURTAIN FABRIC MUST MEET THE MINIMUM REQUIREMENTS NOTED IN TABLE 1 ON THIS DRAWING.
3. SEAMS IN THE TURBIDITY CURTAIN FABRIC MUST BE EITHER VULCANIZED WELDED OR SEWN, AND MUST DEVELOP THE FULL STRENGTH OF THE FABRIC.
4. FLOATATION DEVICES MUST BE FLEXIBLE, BUOYANT UNITS CONTAINED IN AN INDIVIDUAL FLOTATION SLEEVE OR COLLAR ATTACHED TO THE CURTAIN. BUOYANCY PROVIDED BY THE FLOATATION UNITS MUST BE SUFFICIENT TO SUPPORT THE WEIGHT OF THE CURRENT AND MAINTAIN A FREEBOARD OF AT LEAST 3 INCHES ABOVE THE WATER SURFACE LEVEL AS INDICATED IN THE TURBIDITY CURTAIN DETAIL ON THIS DRAWING.
5. LOAD LINES MUST BE FABRICATED INTO THE TOP AND BOTTOM OF ALL FLOATING TURBIDITY CURTAINS. THE TOP LOAD LINE MUST CONSIST OF WOVEN WEBBING OR VINYL-SHEATHED STEEL CABLE AND MUST HAVE A BREAK STRENGTH IN EXCESS OF 10,000 POUNDS. THE SUPPLEMENTAL (BOTTOM) LOAD LINE MUST CONSIST OF A CHAIN INCORPORATED INTO THE BOTTOM HEM OF THE CURTAIN OF SUFFICIENT WEIGHT TO SERVE AS BALLAST TO HOLD THE CURTAIN IN A VERTICAL POSITION. ADDITIONAL ANCHORAGE MUST BE PROVIDED AS NECESSARY. THE LOAD LINES MUST HAVE SUITABLE CONNECTING DEVICES WHICH DEVELOP THE FULL BREAKING STRENGTH FOR CONNECTING TO LOAD LINES IN ADJACENT SECTIONS (SEE TURBIDITY CURTAIN DETAIL ON THIS DRAWING).
6. BOTTOM ANCHORS ARE REQUIRED. BOTTOM ANCHORS MUST BE SUFFICIENT TO HOLD THE CURTAIN IN THE SAME POSITION RELATIVE TO THE BOTTOM OF THE WATERCOURSE WITHOUT INTERFERING WITH THE ACTION OF THE CURTAIN. THE ANCHOR MAY DIG INTO THE BOTTOM (GRAPPLING HOOK, PLOW, OR FLUKE TYPE) OR MAY BE WEIGHTED (MUSHROOM TYPE), AND SHOULD BE ATTACHED TO A FLOATING ANCHOR BUOY VIA AN ANCHOR LINE. THE ANCHOR LINE WOULD THEN RUN FROM THE BUOY TO THE TOP LOAD LINE OF THE CURTAIN. THESE LINES MUST CONTAIN ENOUGH SLACK TO ALLOW THE BUOY AND CURTAIN TO FLOAT FREELY WITH A WATER SURFACE ELEVATION INCREASE FROM THE MEAN LOWER LOW WATER (MLLW) ELEVATION TO THE MEAN HIGHER HIGH WATER (MHHW) ELEVATION WITHOUT PULLING THE BUOY OR CURTAIN DOWN. THESE LINES MUST BE CHECKED REGULARLY TO MAKE SURE THEY DO NOT BECOME ENTANGLED WITH DEBRIS. ANCHOR SPACING WILL VARY WITH CURRENT VELOCITY AND POTENTIAL WIND AND WAVE ACTION, THEREFORE THE MANUFACTURER'S RECOMMENDATIONS SHOULD BE FOLLOWED. SEE ORIENTATION OF EXTERNAL ANCHORS AND ANCHOR BUOYS AS SHOWN IN FIGURE 1 ON THIS DRAWING FOR INSTALLATION.

## INSTALLATION:

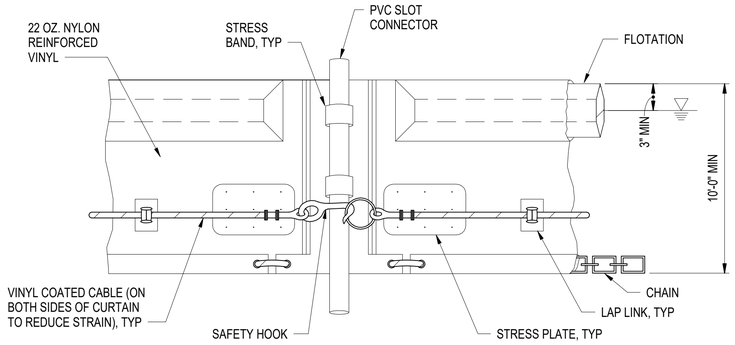
1. THE CURTAIN SHOULD NEVER TOUCH THE BOTTOM. A MINIMUM 1 FOOT "GAP" SHOULD EXIST BETWEEN THE WEIGHTED LOWER END OF THE SKIRT AND THE BOTTOM AT MLLW. MOVEMENT OF THE LOWER SKIRT OVER THE BOTTOM DUE TO CURRENT OR ELEVATION FLUCTUATION ON THE FLOTATION SYSTEM MAY FAN AND STIR SEDIMENTS ALREADY SETTLED OUT.
2. TURBIDITY CURTAINS SHOULD BE LOCATED PARALLEL TO THE DIRECTION OF FLOW OF A MOVING BODY OF WATER. TURBIDITY CURTAIN SHOULD NOT BE PLACED ACROSS THE MAIN FLOW OF A SIGNIFICANT BODY OF MOVING WATER.
3. WHEN SIZING THE LENGTH OF A FLOATING CURTAIN, ALLOW AN ADDITIONAL 10 TO 20 PERCENT VARIANCE TO STRAIGHT LINE MEASUREMENTS. THIS WILL ALLOW FOR MEASURING ERRORS, MAKE INSTALLING EASIER AND REDUCE STRESS FROM POTENTIAL WAVE ACTION DURING HIGH WINDS.
4. AN ATTEMPT SHOULD BE MADE TO AVOID AN EXCESSIVE AMOUNT OF JOINTS IN THE CURTAIN. A MINIMUM CONTINUOUS SPAN OF 50 FEET BETWEEN JOINTS IS REQUIRED.
5. FOR STABILITY REASONS, A MAXIMUM SPAN OF 100 FEET BETWEEN JOINTS (ANCHOR OR STAKE LOCATIONS) IS REQUIRED. IF SPACINGS EXCEEDING THIS ARE ALLOWED BY THE MANUFACTURER, DATA MUST BE SUBMITTED FOR REVIEW.
6. THE ENDS OF THE CURTAIN (BOTH FLOATING UPPER AND WEIGHTED LOWER) SHOULD EXTEND WELL UNDER THE EXISTING STRUCTURE TO BE REMOVED. THE ENDS SHOULD BE SECURED FIRMLY TO FULLY ENCLOSE THE AREA WHERE SEDIMENT MAY ENTER THE WATER.
7. TYPICAL ALIGNMENTS OF TURBIDITY CURTAINS CAN BE SEEN IN FIGURE 2 ON THIS DRAWING. THE NUMBER AND SPACING OF EXTERNAL ANCHORS MAY VARY DEPENDING ON CURRENT VELOCITIES AND POTENTIAL WIND AND WAKE ACTION. THE MANUFACTURER'S RECOMMENDATIONS SHOULD BE FOLLOWED.
8. IN RIVERS OR IN OTHER MOVING WATER, IT IS IMPORTANT TO SET ALL THE CURTAIN ANCHOR POINTS. CARE MUST BE TAKEN TO ENSURE THAT ANCHOR POINTS ARE OF SUFFICIENT HOLDING POWER TO RETAIN THE CURTAIN UNDER THE EXISTING CURRENT CONDITIONS, PRIOR TO PUTTING THE FURLED CURTAIN INTO THE WATER. AGAIN, ANCHOR BUOYS SHOULD BE EMPLOYED ON ALL ANCHORS TO PREVENT THE CURRENT FROM SUBMERGING THE FLOTATION AT THE ANCHOR POINTS.
9. WHEN THE ANCHORS ARE SECURE, THE FURLED CURTAIN SHOULD BE SECURED TO THE UPSTREAM ANCHOR POINT AND THEN SEQUENTIALLY ATTACHED TO EACH NEXT DOWNSTREAM ANCHOR POINT UNTIL THE ENTIRE CURTAIN IS IN POSITION. AT THIS POINT, AND BEFORE UNFURLING, THE "LAY" OF THE CURTAIN SHOULD BE ASSESSED AND ANY NECESSARY ADJUSTMENTS MADE TO THE ANCHORS. FINALLY, WHEN THE LOCATION IS ASCERTAINED TO BE AS DESIRED, THE FURLING LINES SHOULD BE CUT TO ALLOW THE SKIRT TO DROP.
10. ALWAYS ATTACH ANCHOR LINES TO THE FLOATATION DEVICE, NOT TO THE BOTTOM OF THE CURTAIN. THE ANCHORING LINE ATTACHED TO THE FLOATATION DEVICE ON THE DOWNSTREAM SIDE WILL PROVIDE SUPPORT FOR THE CURTAIN. ATTACHING THE ANCHORS TO THE BOTTOM OF THE CURTAIN COULD CAUSE PREMATURE FAILURE OF THE CURTAIN DUE TO THE STRESSES IMPARTED ON THE MIDDLE SECTION OF THE CURTAIN.

## REMOVAL:

1. CARE SHOULD BE TAKEN TO PROTECT THE SKIRT FROM DAMAGE AS THE TURBIDITY CURTAIN IS DRAGGED FROM THE WATER.
2. IF THE CURTAIN IS TO BE REUSED AT THE SITE, THE AREA SELECTED TO BRING THE CURTAIN ASHORE SHOULD BE FREE OF SHARP ROCKS, BROKEN CEMENT, DEBRIS, ETC. SO AS TO MINIMIZE DAMAGE WHEN HAULING THE CURTAIN. ANY DAMAGE TO THE CURTAIN MUST BE REPAIRED AS SPECIFIED.
3. IF THE CURTAIN HAS A DEEP SKIRT, IT CAN BE FURTHER PROTECTED BY RUNNING A SMALL BOAT ALONG ITS LENGTH WITH A CREW INSTALLING FURLING LINES BEFORE ATTEMPTING TO REMOVE THE CURTAIN FROM THE WATER.

## MAINTENANCE:

1. THE CONTRACTOR MUST BE RESPONSIBLE FOR MAINTENANCE OF THE TURBIDITY CURTAIN FOR THE DURATION OF THE PROJECT IN ORDER TO ENSURE THE CONTINUOUS PROTECTION OF THE WATERWAY.
2. SHOULD REPAIRS TO THE GEOTEXTILE E FABRIC BECOME NECESSARY, REPAIR KITS AVAILABLE FROM THE ORIGINAL MANUFACTURER MUST BE USED. MANUFACTURER'S INSTRUCTIONS MUST BE FOLLOWED TO ENSURE THE ADEQUACY OF THE REPAIR.
3. WHEN THE CURTAIN IS NO LONGER REQUIRED, THE CURTAIN AND RELATED COMPONENTS MUST BE REMOVED IN SUCH A MANNER AS TO MINIMIZE TURBIDITY. REMAINING SEDIMENT MUST BE SUFFICIENTLY SETTLED BEFORE REMOVING THE CURTAIN.




# TURBIDITY CURTAIN DETAILS

| TABLE 1 - FABRIC PROPERTIES | |
|---|---|
| TABLE 1 - TURBIDITY CURTAIN | REQUIREMENT |
| THICKNESS (MILS) | 45 |
| WEIGHT (OZ./SY) | 22 |
| TENSILE STRENGTH (LB) | 300 |
| UV INHIBITOR | REQUIRED |

## NOTE:

ANCHORING WITH BUOYS, AS SHOWN, REMOVES ALL VERTICAL FORCES FROM THE CURTAIN. HENCE, THE CURTAIN WILL NOT SINK FROM WIND OR CURRENT LOADS. FINAL CONFIGURATION AND DETAILS AS RECOMMENDED BY MANUFACTURER.

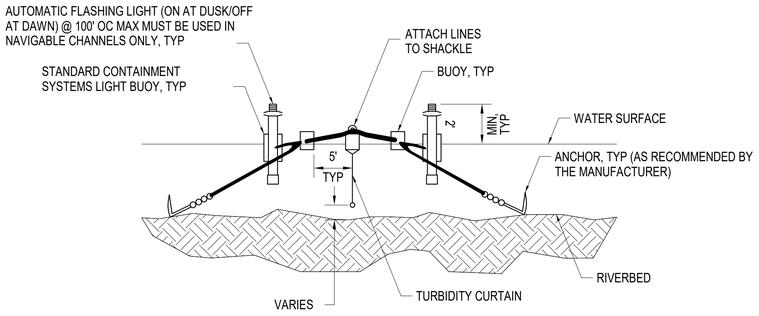
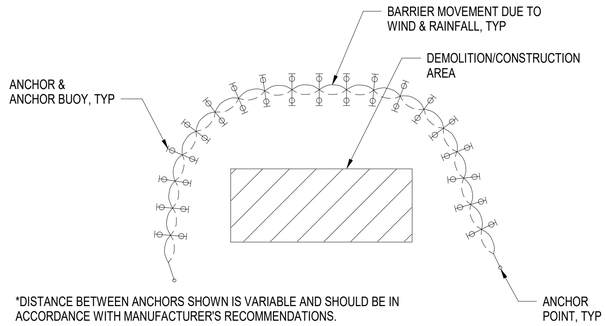



FIGURE 1 - SECTION




*DISTANCE BETWEEN ANCHORS SHOWN IS VARIABLE AND SHOULD BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

FIGURE 2 - PLAN

| | APPR | DATE | DESCRIPTION | SYM |
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| CHIEF ENGR/CH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

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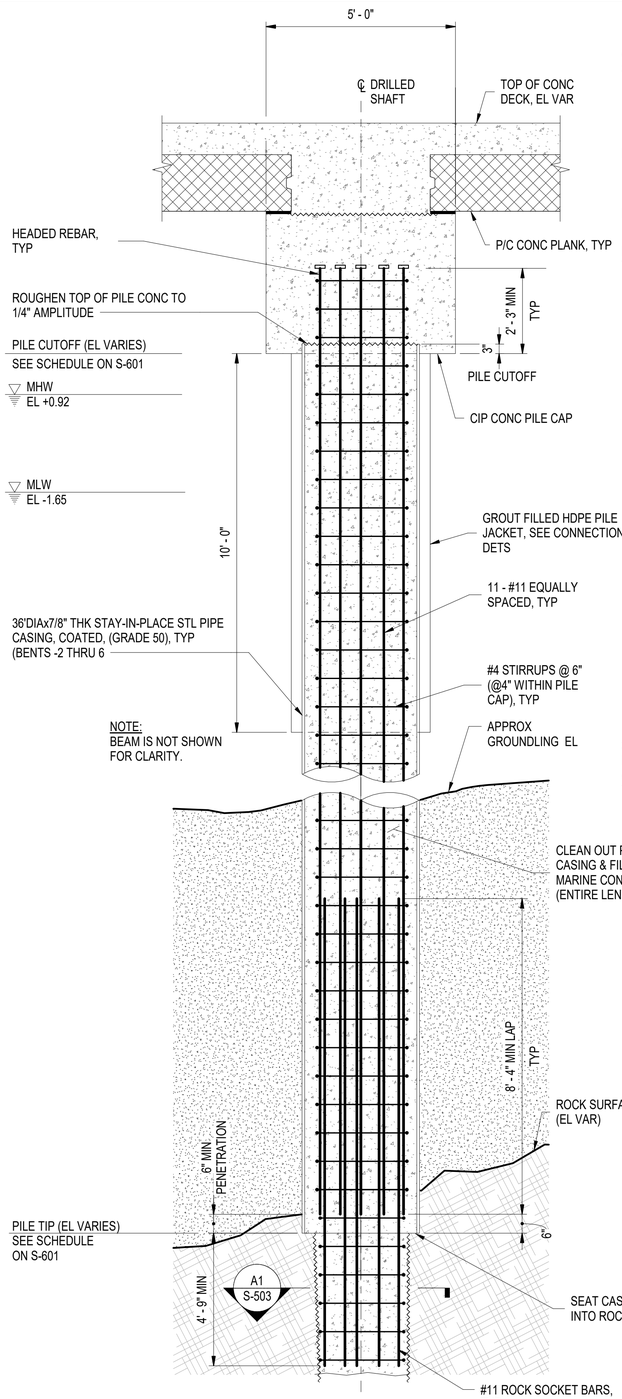
TURBIDITY CURTAIN NOTES & DETAILS

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942378 |
| SHEET | 135 OF 290 |

S-501

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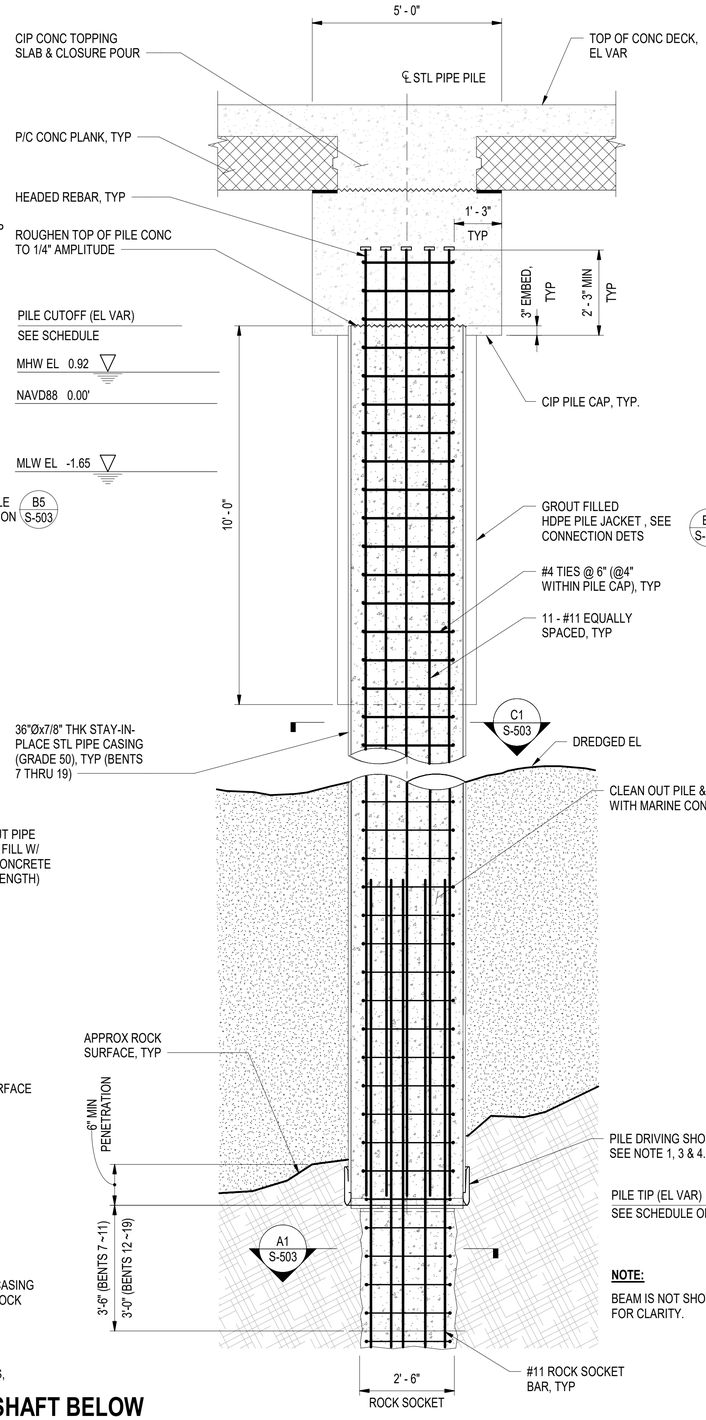
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S-501




## TYPICAL DETAIL FOR STEEL- ENCASED DRILLED SHAFT BELOW PILE CAP (BENTS -2 TO 6)

A1 1/2" = 1'-0"

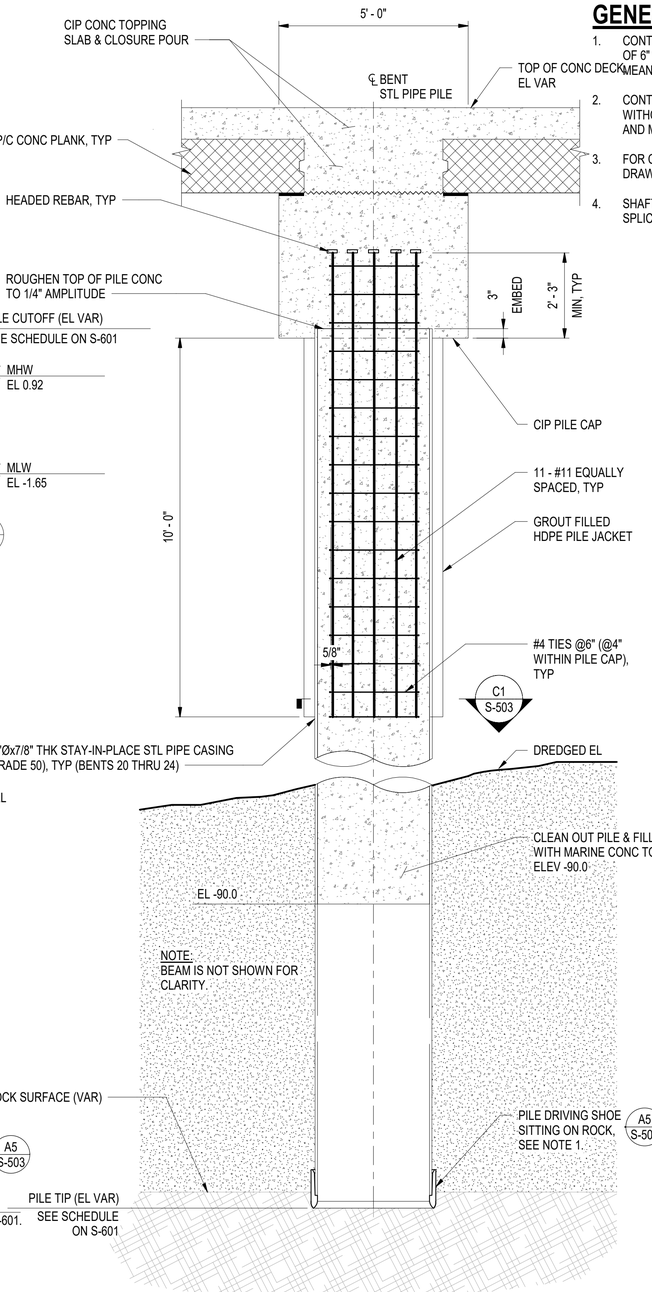
(S-115)




## TYPICAL DETAILS FOR STEEL PIPE PILE BELOW PILE CAP (BENTS 7-19)

A2 1/2" = 1'-0"

(S-102)(S-103)(S-104)




## TYPICAL DETAILS FOR STEEL PIPE PILE SITTING ON ROCK BELOW PILE CAP (BENTS 20-24)

A4 1/2" = 1'-0"

(S-103)

## GENERAL SHEET NOTES:

1. CONTRACTOR TO ADVANCE PILES INTO ROCK A MINIMUM OF 6" WITHOUT DAMAGING PILES USING APPROPRIATE MEANS AND METHODS.
2. CONTRACTOR TO OBTAIN ADEQUATE SEAT AND SEAL WITHOUT DAMAGING PILES USING APPROPRIATE MEANS AND METHODS.
3. FOR CATHODIC PROTECTION ON PILES, SEE ELECTRICAL DRAWINGS FOR ANODE LAYOUT AND DETAILS.
4. SHAFT REINFORCEMENT MAY MECHANICALLY COUPLED OR SPLICED WITH LAP LENGTHS AS SHOWN ON S-004.

1/2" = 1' - 0"  0  6"  1'  2'  3'  4'  5'

1" = 1' - 0"  0  6"  1'  2'  3'

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| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

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# P-194 SSN SUBMARINE PIER 8 REPLACEMENT

## PILE DETAILS - SHEET 1 OF 3

SCALE: AS NOTED
EPROJECT NO.: 1709726
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12942379
SHEET 136 OF 290

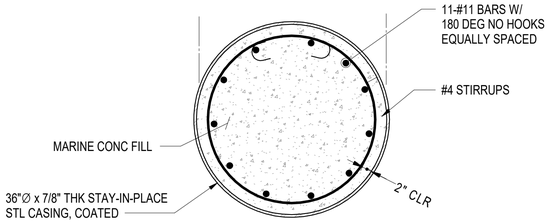
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S-502

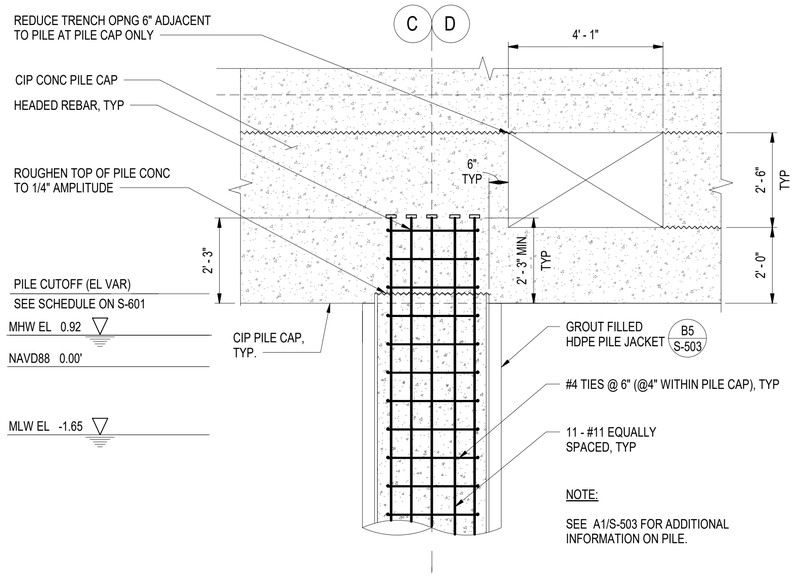
## GENERAL SHEET NOTES:

1. ATTACH DRIVING SHOE TO PIPE PILE PER MANUFACTURER RECOMMENDATION.
2. FOR CATHODIC PROTECTION ON PILES, SEE ELECTRICAL DRAWINGS FOR ANODE LAYOUT AND DETAILS.
3. CONTRACTOR TO ADVANCE PILES INTO ROCK SURFACE A MINIMUM OF 6" WITHOUT DAMAGING PILES USING APPROPRIATE MEANS AND METHODS SEE DRAWING S-601 FOR PILE TIP ELEVATIONS, TYPICAL.
4. CONTRACTOR TO OBTAIN ADEQUATE SEAT AND SEAL WITHOUT DAMAGING PILES USING APPROPRIATE MEANS AND METHODS.



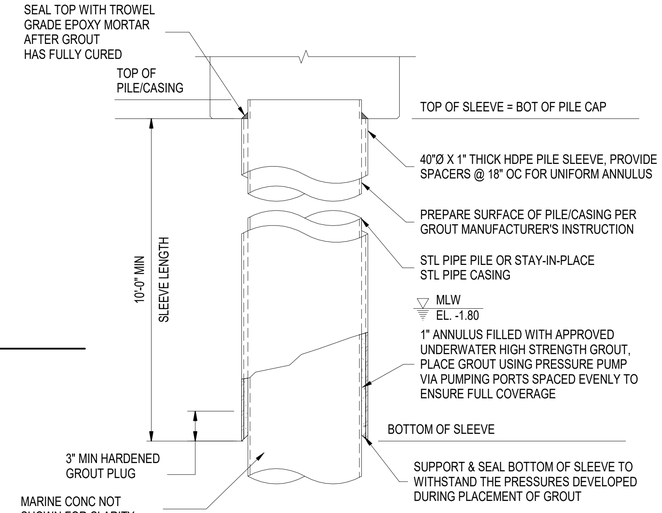

### C1 TYPICAL SECTION FOR DRILLED SHAFT

1" = 1'-0" (S-502)



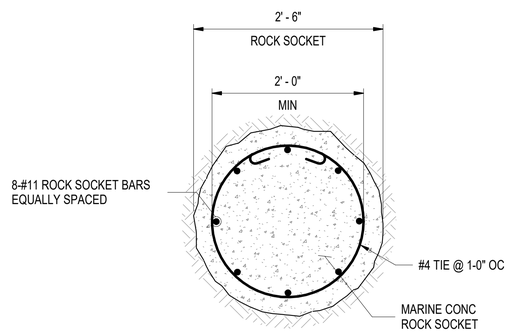

### C3 TYPICAL REINFORCEMENT DETAILS FOR STEEL PIPE PILE OR DRILLED SHAFT ADJACENT TO UTILITY TRENCH

1/2" = 1'-0" (S-102, S-103, S-104)




### B5 HDPE PIPE JACKET

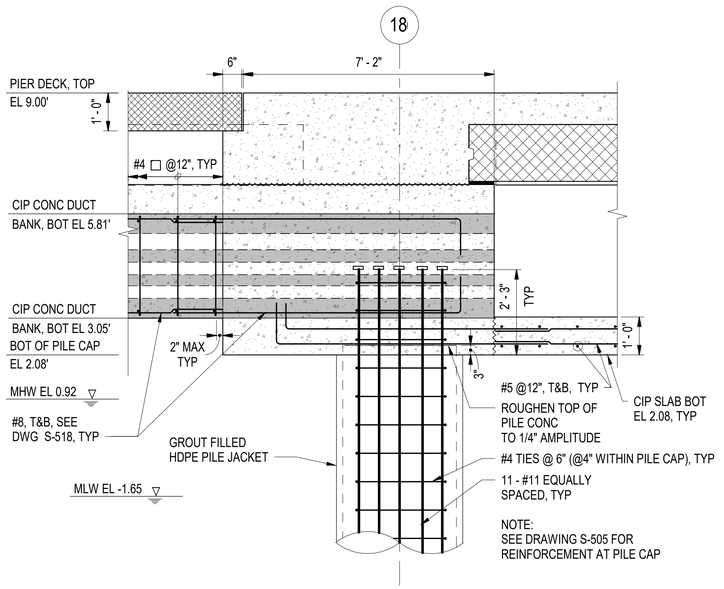
1/2" = 1'-0" (S-502, S-503, S-504)




### A1 TYPICAL SECTION FOR ROCK SOCKET

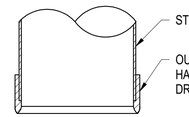
1" = 1'-0" (S-502)

(S-502, S-503)




### A3 ADDITIONAL REINFORCEMENT DETAILS AT BENT 18

1/2" = 1'-0" (S-107, S-109)




### A5 PILE DRIVING SHOE

1/2" = 1'-0" (S-503)

1/2" = 1' - 0" 0 6" 1' 2' 3' 4' 5'

| SYM | DESCRIPTION | DATE | APPR |
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PILE DETAILS - SHEET 2 OF 3

SCALE: AS NOTED

EPROJECT NO.: 1709726

CONSTR. CONTR. NO.

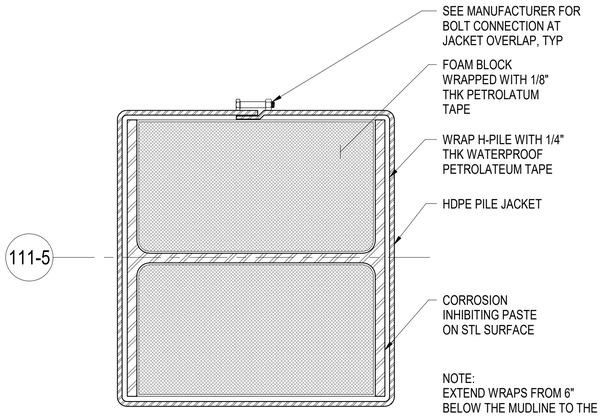
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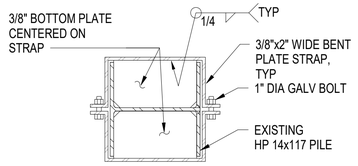
SHEET 137 OF 290

S-503

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NOTE:

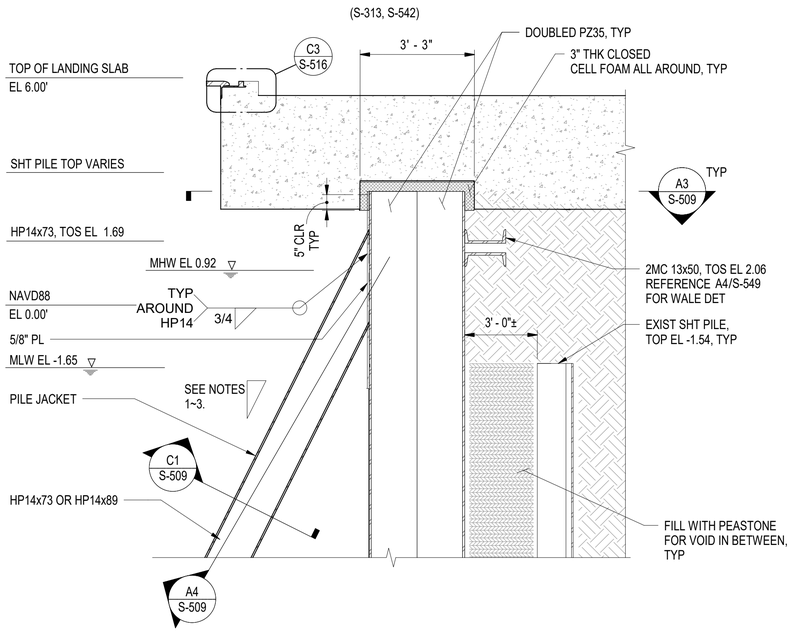
STOPPER BAND AND BOTTOM PLATE MUST BE SIZED TO SUIT EXISTING PILE AND NEW JACKET. HOT DIP GALVANIZE STOPPER ASSEMBLY AFTER FABRICATION

## GENERAL SHEET NOTES:

1. FOR THE BATTER PILE 121.7 AS SHOWN ON DRAWING S-404, THE BATTER ANGLE IS 12V:6.6H.
2. FOR THE BATTER PILE 119.9 AS SHOWN ON DRAWING S-404, THE BATTER ANGLE IS 12V:5.7H.
3. BATTER ANGLE IS 12V:6H AS TYPICAL FOR OTHER BATTER PILES.
4. ANGLE FROM STEEL SHEETING FRONT FACE TO CENTERLINE OF HP14 IS 88.23 DEG FOR BATTER PILES LOCATED BELOW PIER 8 AND 86.84 DEG BEYOND PIER 8. SEE ADDITIONAL DETAILS ON DRAWING S-105.
5. ANGLES SHOWN FOR BATTER PILES ARE ESTIMATED BASED ON RECORD DRAWINGS, CONTRACTOR MUST FIELD VERIFY AND ENSURE PILE INSTALLATION WILL NOT BE IN CONFLICT WITH DRILLED SHAFTS IN PLACE.

## C1 TYPICAL SECTION DETAIL FOR BATTER H PILE JACKET

3" = 1'-0" (_S-508)

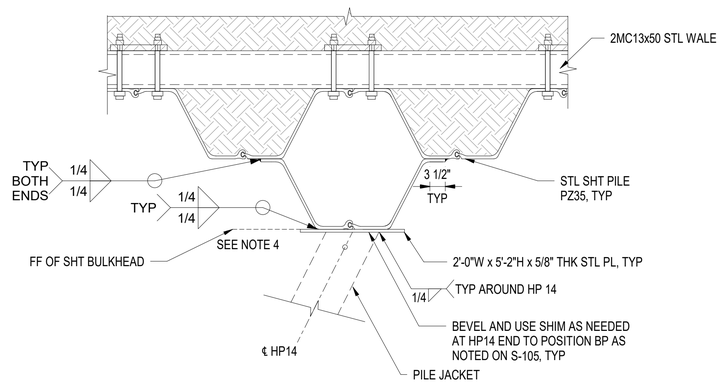



## A1 TYPICAL CONNECTION DETAILS BETWEEN BATTER PILE AND BULKHEAD SHEET PILES

1/2" = 1'-0" (S-313)(S-314, S-406, S-504)

## C3 SECTION - STOPPER BAND

1" = 1'-0"

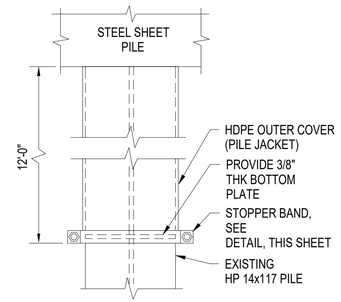



NOTE:

1. SEAL GAPS BETWEEN PILE JACKET AND 5/8" THK PL.

## A3 TYPICAL DETAIL JACKET AT SHEET PILE

3/4" = 1'-0" (S-404)




## A4 H PILE JACKET

1" = 1'-0" (S-509)

1" = 1' - 0" 0 6" 1' 2' 3'

1 1/2" = 1' - 0" 0 3" 6" 9" 1' 2'

1/2" = 1' - 0" 0 6" 1' 2' 3' 4' 5'

3/4" = 1' - 0" 0 6" 1' 2' 3' 4' 5'

| SYM | DESCRIPTION | DATE | APPR |
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| PMDM | LBT/IIAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

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P-194 SSN SUBMARINE PIER 8 REPLACEMENT

BULKHEAD PILE DETAILS

| | |
|---|---|
| SCALE: | AS NOTED |
| EPROJECT NO.: | 1709726 |
| CONSTR. CONTR. NO. | |
| NAVFAC DRAWING NO. | 12942386 |
| SHEET | 143 OF 290 |

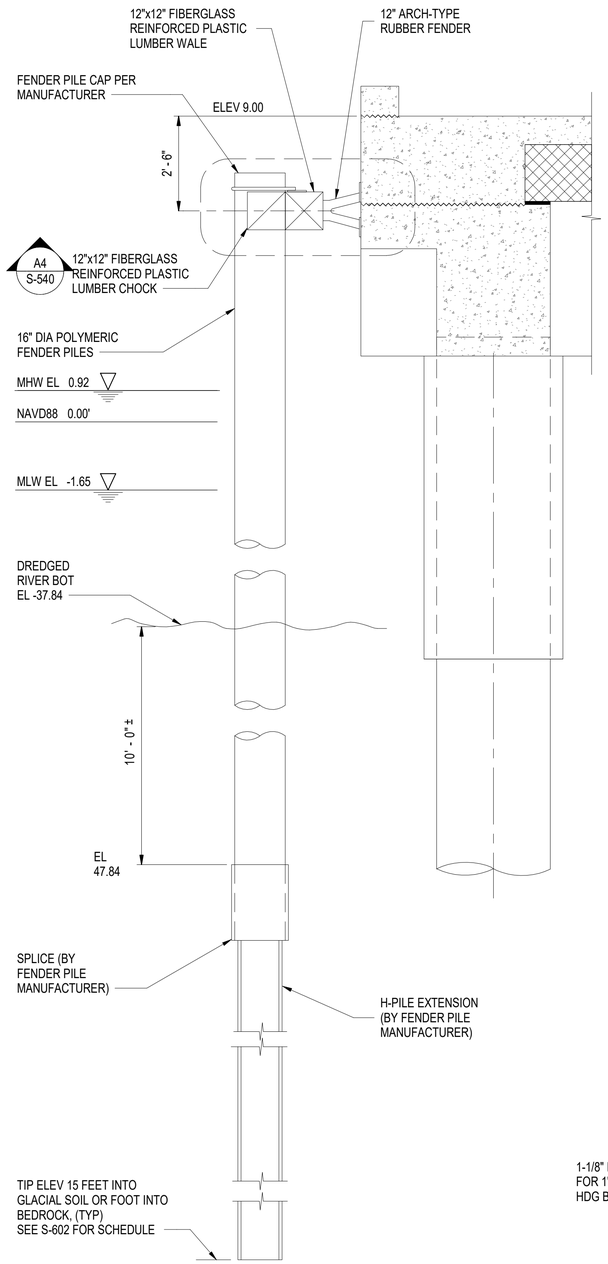
S-509

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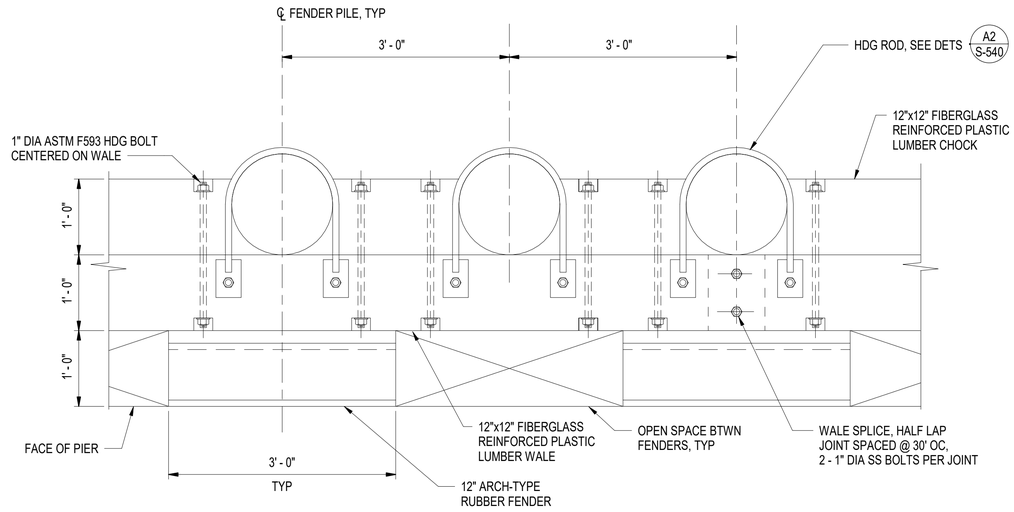
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## GENERAL SHEET NOTES:

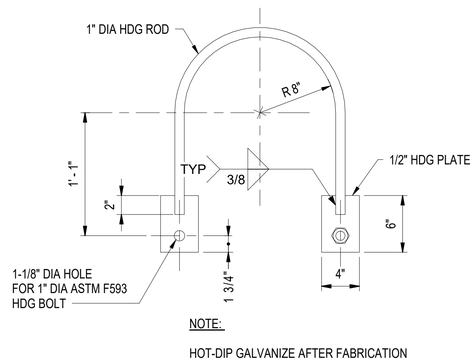
1. TO AVOID DRILLING THROUGH REINFORCEMENT, LOCATE EDGE BEAM REINFORCEMENT PRIOR TO DRILLING AND INSTALLATION OF FENDER ANCHORS TO.
2. PROVIDE PROPER MECHANISM TO ENSURE NUTS ARE SECURED DURING INSTALLATION.




### A1 FENDER SECTION
1/2" = 1'-0" (S-311)



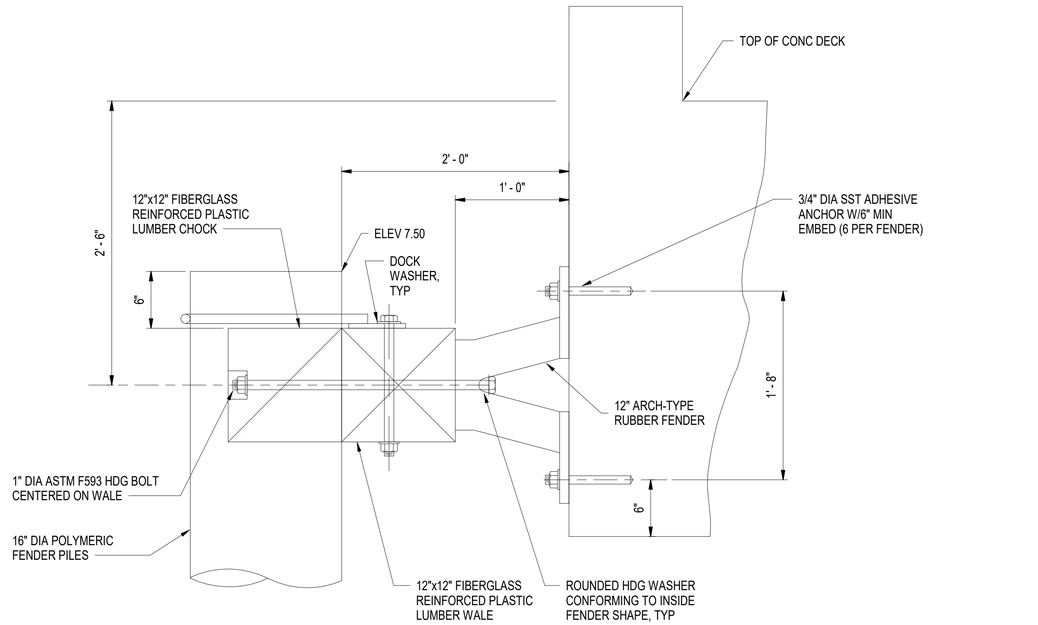

### C3 FENDER LAYOUT - POLYMERIC FENDER PILES
1/2" = 1'-0"




NOTE:

HOT-DIP GALVANIZE AFTER FABRICATION

### A2 FENDER PILE CONNECTION DETAIL
1 1/2" = 1'-0"




### A4 FENDER CONNECTION DETAIL
1 1/2" = 1'(S-119, S-126)

1/2" = 1'-0" 0 6" 1' 2' 3' 4' 5'

1 1/2" = 1'-0" 0 3" 6" 9" 1' 2'

APPR | DATE | SYM | DESCRIPTION

NAVFAC

SEAL

Stantec

A/E INFO

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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | JZ | DRW | AEP | CHK | MJF |
|---|---|---|---|---|---|
| PMDM | | | | | LBT/IAS |
| BRANCH MANAGER | | | | | NEK |
| CHIEF ENG/ARCH | | | | | JWJ |
| FIRE PROTECTION | | | | | HPN |

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FENDER SYSTEM SECTIONS & DETAILS - SHEET 1 OF 3

SCALE: AS NOTED

EPROJECT NO.: 1709726

CONSTR. CONTR. NO.

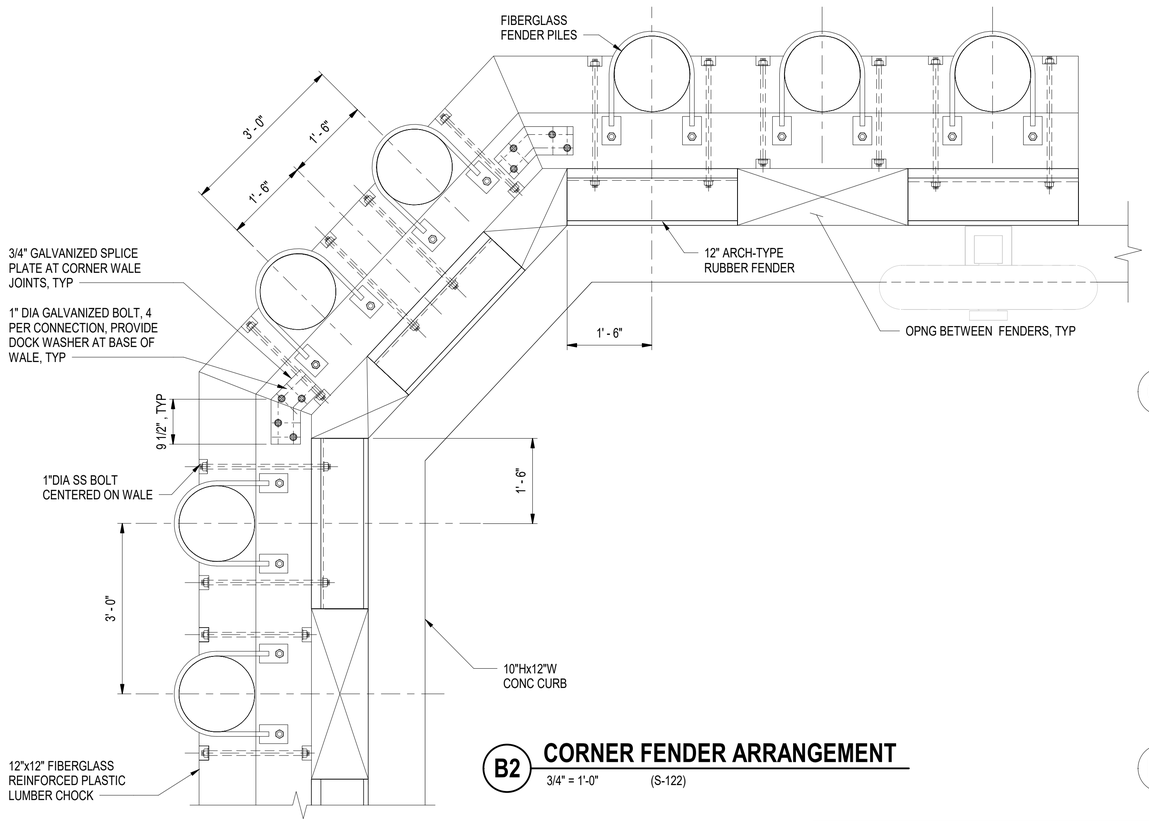
NAVFAC DRAWING NO.
12942417

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S-540

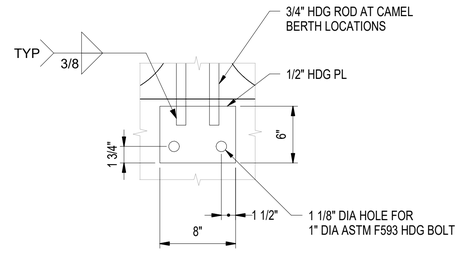
DRAWFORM REVISION: 25 AUGUST 2020

7/22/2026 5:25:43 PM S-540
Autodesk Docs://2241101316_P-194_NEW-LONDON_PIER_8/PIER/P194-1709726-S.rvt




## B2 CORNER FENDER ARRANGEMENT

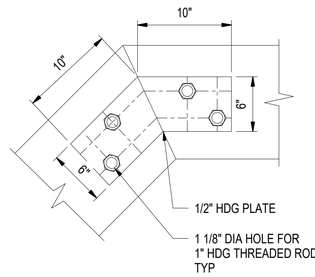
3/4" = 1'-0" (S-122)




NOTE: HOT-DIP GALVANIZE AFTER FABRICATION

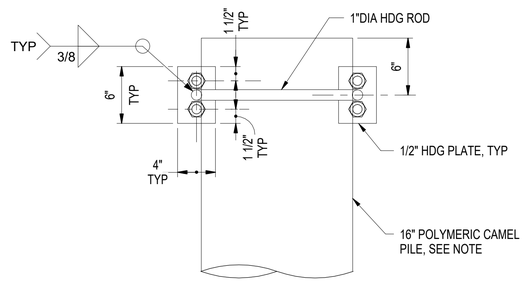
## C3 FENDER PILE CONNECTION DETAILS AT CAMELS

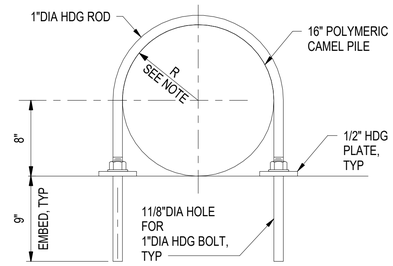
1 1/2" = 1'-0" (S-541)




## B3 CORNER FENDER SPLICE PLATE DETAIL

1 1/2" = 1'-0"



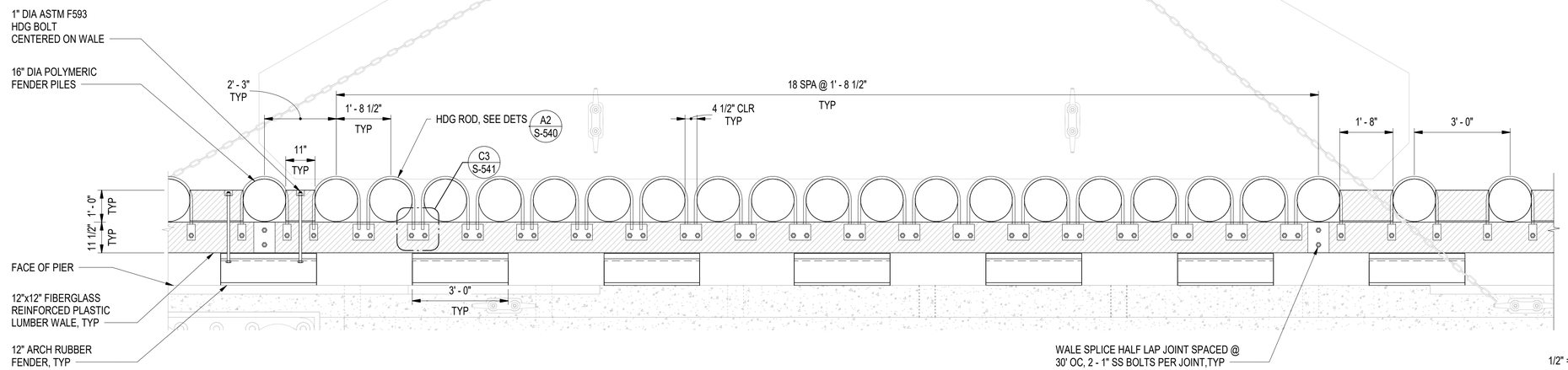




NOTE:

FOR CAMEL PILE H-PILE EXTENSION,
SEE DETAILS ON S-536

## B5 TYPICAL DETAILS FOR CAMEL PILES

1 1/2" = 1'-0" (S-116, S-125, S-306, S-402)




## A3 FENDER LAYOUT - POLYMERIC FENDER PILES AT BERTHING LOCATIONS

1/2" = 1'-0" (S-123)

1/2" = 1' - 0" 0 6" 1' 2' 3' 4' 5'

1 1/2" = 1' - 0" 0 3" 6" 9" 1' 2'

3/4" = 1' - 0" 0 6" 1' 2' 3' 4' 5'

| SYM | DESCRIPTION | DATE | APPR |
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| DES | JZ | DRW | AEP | CHK | MJF |
|---|---|---|---|---|---|

| | |
|---|---|
| PM/CM | LBT/IAS |
| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

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FENDER SYSTEM SECTIONS & DETAILS - SHEET 2 OF 3

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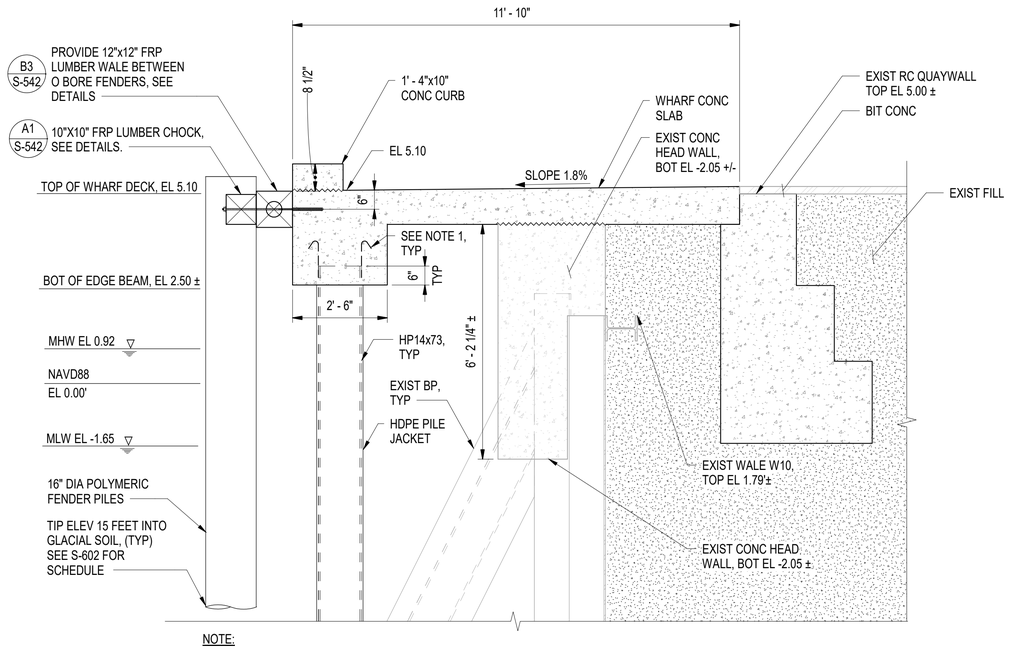
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NOTE:

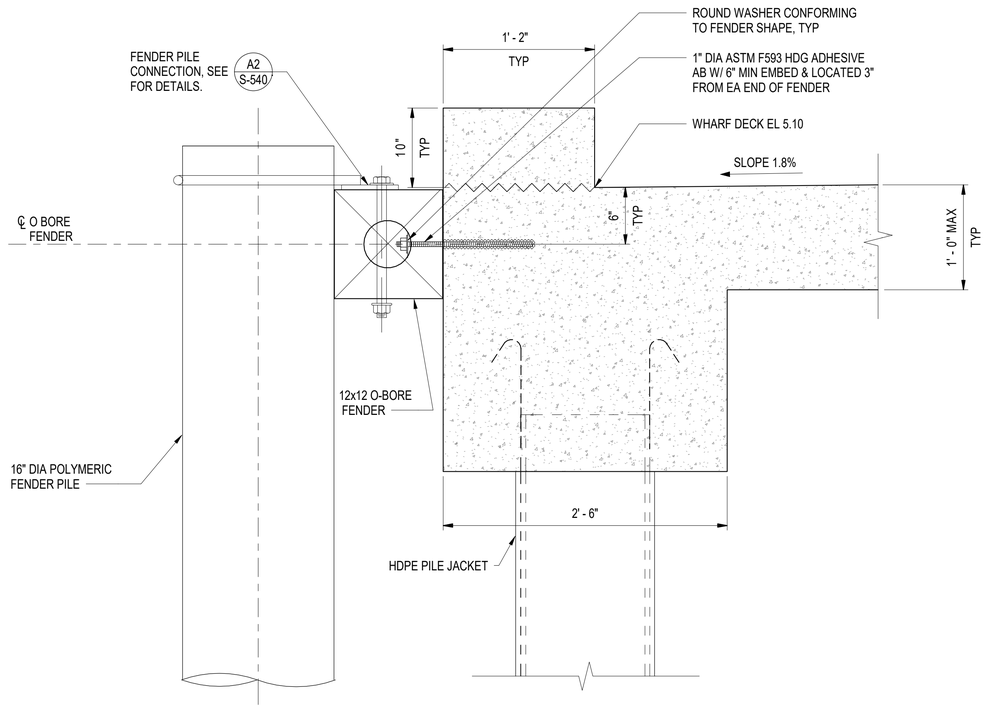
COORDINATE ALL CIVIL WORK AND CUT AND FILL LIMITS.

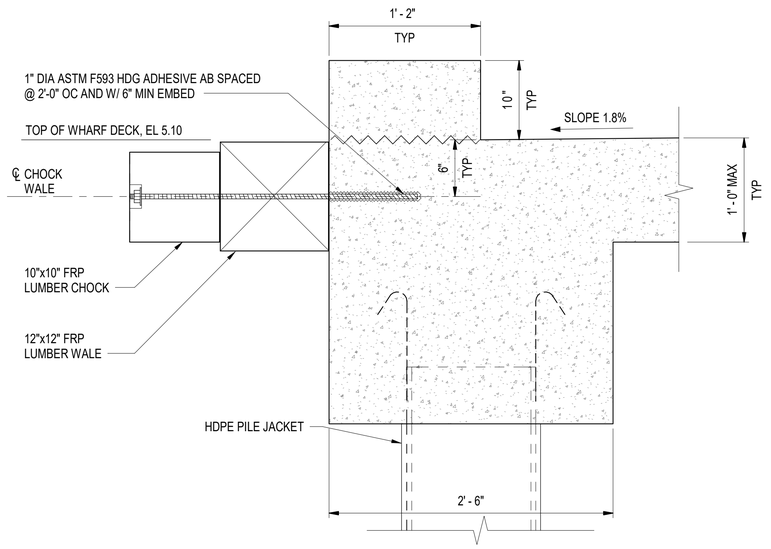
## B1 COMPOSITE FENDER SYSTEM ALONG WHARF

1/2" = 1'-0" (S-106, S-111, S-120, S-126)

NOTE:

1. SEE DRAWING S-510 FOR ADDITIONAL DETAILS ON REINFORCING STEEL TO BE WELDED ON HP14.



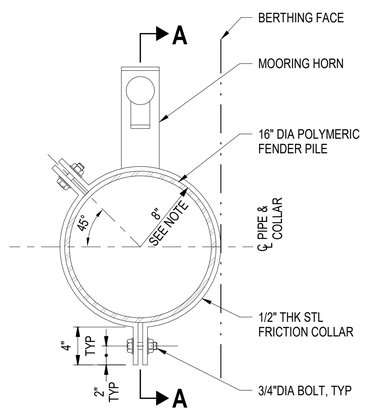



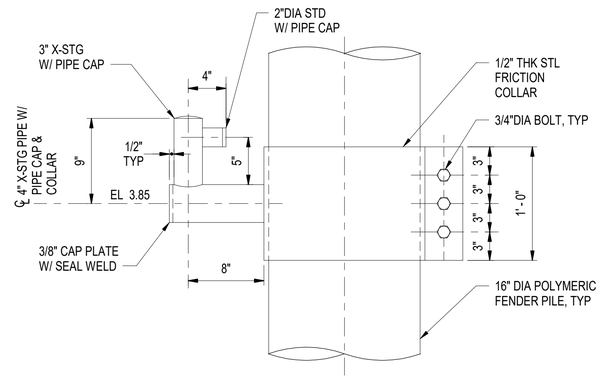

## A1 TYPICAL CONNECTION DETAILS FOR WHARF WALE AND CHOCK

1 1/2" = 1'-0" (S-101, S-126, S-542)

## B3 TYPICAL CONNECTION DETAILS FOR WHARF FENDER AND FENDER PILE

1 1/2" = 1'-0" (S-101, S-126, S-542)




NOTE:

PROVIDE MOORING HORN ON FENDER PILES AS SHOWN ON DWGS S-116 THRU S-118.

## SECTION A-A

## A4 MOORING HORN

1 1/2" = 1'-0" (S-118, S-116, S-117, S-118)

1/2" = 1' - 0" 0 6" 1' 2' 3' 4' 5'

1 1/2" = 1' - 0" 0 3" 6" 9" 1' 2'

| SYM | DESCRIPTION | DATE | APPR |
|---|---|---|---|
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| | |
|---|---|
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| BRANCH MANAGER | NEK |
| CHIEF ENG/ARCH | JWJ |
| FIRE PROTECTION | HPN |

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FENDER SYSTEM SECTIONS & DETAILS - SHEET 3 OF 3

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