OFFICE OF ADJUDICATIONS

IN THE MATTER OF	***:***	***APPLICATION NO. 201905859***
CONNECTICUT PORT AUTHORITY (STATE PIER)	***:***	***May 21, 2021***

PROPOSED FINAL DECISION

I
SUMMARY

On May 7, 2019, the Connecticut Port Authority (Applicant) submitted an application seeking authorization to conduct activities regulated by the Connecticut Costal Management Act[1], statutes concerning tidal wetlands[2], and the statutes concerning structures dredging and fill[3] (Application) on property located at 200 State Pier Road, New London (State Pier). On December 16, 2020, staff of the land and water resources division of the Department's bureau of water protection and land reuse issued a notice of tentative determination recommending the Application be approved with the conditions specified in a draft permit appended to that notice. A hearing in this matter was requested by the Applicant. The parties to this matter are the Applicant, Department staff, and the City of New London (City); DRVN Enterprises, Inc. is an intervenor, and is subject to certain restrictions on its participation. (See Ruling on DRVN Enterprises, Inc. Request to Intervene, March 26, 2021).

A hearing to receive public comments was held on March 23, 2021; written comment was accepted until March 26, 2021. An evidentiary hearing was held on March 30, 2021. Both hearing

[1] General Statutes §§ 22a-90 to 22a-111, inclusive
[2] General Statutes §§ 22a-28 to 22a-35a, inclusive
[3] General Statutes §§ 22a-359 to 22a-363h, inclusive

sessions were held using the virtual meeting platform ZOOM, consistent with executive orders issued by the Governor.

On April 27, 2021, the Applicant and Department staff jointly filed an Agreed Draft Decision for my review and consideration, pursuant to Regs., Conn. State Agencies § 22a-3a-6(*l*)(3). The Agreed Draft Decision is appended hereto as Appendix 1. On May 3, 2021, the Intervenor filed an objection to the Agreed Draft Decision pursuant to Regs., Conn. State Agencies § 22a-3a-6(*l*)(3)(B). In a concurrently issued ruling, I have determined that a hearing on the Intervenor's objection was neither necessary nor required. (Ruling on Intervenor's Objection to the Agreed Draft Decision, May 21, 2021).

I adopt the Agreed Draft Decision, as supplemented herein, as my Proposed Final Decision in this matter. The facts found and conclusions reached in the Agreed Draft Decision, as supplemented herein, demonstrate that the proposed regulated activities, if conducted in accordance with the terms and conditions of the draft permit (Ex. DEEP-11, a copy of which is attached to the Agreed Draft Decision), comply with the relevant statutory and regulatory criteria. This determination is supported by a preponderance of the evidence in the record. I therefore recommend that the Commissioner approve the Application and issue the draft permit as a final permit.

II
FINDINGS OF FACT

I adopt, as part of my Proposed Final Decision, those facts found by the Agreed Draft Decision. In addition to the facts found therein, I find the following additional facts:

49. Marlin Peterson, and expert in marine terminal development, testified that use of State Pier for wind turbine component unloading from cargo ships, staging or assembly, and loading onto an installation vessel "is very much a water dependent use. Again, if we think about typical over the road or rail cargo, containers as we know have, our highways are limited to 30 or 40 tons per truckload, our rail services are typically limited in the 100 ton per rail car range, they're also limited in terms of circumference and the way they can turn a rail car. Offshore wind, for example, the nacelle, which is the center part where the rotor and the blades come together, that nacelle is 1,000 tons. Each of the towers, there's three towers per turbine, each tower is . . . 330 [tons]. So, the three of them together once they're fabricated is 1000 tons. The blades themselves are over 300 feet long. So, between the size and the characteristics of offshore wind components mandate that they be adjacent to a significant waterway therefore handled by barges, vessels or ships." (Test. M. Peterson, 3/30/21, 1:33:33).

III
CONCLUSIONS OF LAW

A
The Hearing Process

When issuing a Proposed Final Decision, it is typical to set out the scope and nature of the proceeding. In this matter, as in all other permitting matters, the relevant question before me is whether a preponderance of the evidence in the record demonstrates that the Applicant has met its burden of proving that it is entitled to the permit it seeks.[4] Regs., Conn. State Agencies § 22a-3a-6(f). To make such a determination, the evidence in the record is compared to relevant statutory and regulatory criteria. That question, and the evaluation of the relevant evidence and statutory and regulatory criteria it requires, is the only question before me in this matter.

Having set out what this matter is, it may prove more instructive to set out what this matter *is not*. I am not asked to determine who should control the state pier property. I can neither investigate the Applicant's contracting practices nor determine with whom the Applicant should

[4] In certain matters, a party granted intervening party status pursuant to General Statutes § 22a-19 may also bear a burden to demonstrate that the activities proposed are reasonably likely to unreasonably pollute or impair or destroy the public trust in the natural resources of the state. There is no party intervening pursuant to General Statutes § 22a-19 in this matter, so the only relevant burden of production or proof is that burden borne by the Applicant.

do business. While these issues may be subject to oversight, providing such oversight is not a part of this hearing process.

This hearing process is not a referendum on which types of cargo the Applicant should allow to pass through its facility, and this is not a forum in which to debate the relative merits of wind power as either a source of clean energy or a driver of economic activity. I cannot weigh the economic benefits of using the facility to process one kind of cargo over another. Indeed, it is the Applicant who must select the activities for which it will seek a permit; I am tasked only with determining if those activities selected – and the manner in which they will be conducted – comply with relevant law.

The Intervenor, and many members of the public, would have this Department take full oversight over the State Pier project, thereby interjecting into this mater any number of assertions and allegations entirely unrelated to the Costal Management Act, statutes concerning tidal wetlands, or the statutes concerning structures, dredging and filling. Such assertions and allegations are beyond the jurisdiction of this agency when considering the Application and are, therefore, not relevant to my recommendation in this matter. Administrative agencies are not trial courts with general subject matter jurisdiction, able to simultaneously consider multiple causes of action, grounded in different theories or areas of the law, provided each stem from a common nucleus of operative fact. Instead, "[a]n administrative agency, as a tribunal of limited jurisdiction, must act strictly within its statutory authority. It is a familiar principle that [an administrative agency] which exercises a limited and statutory jurisdiction is without jurisdiction to act unless it does so under the precise circumstances and in the manner particularly prescribed by the enabling legislation." (Internal quotation marks omitted, internal citations omitted.) *Nizzardo v. State Traffic Comm'n*, 259 Conn. 131, 156 (2002). When conducting a contested case proceeding such

as this one, an administrative agency may exercise only the jurisdiction delegated to it by the General Assembly to make the determinations required by relevant statutory criteria, and any implementing regulations. Put more plainly, the Department cannot assume oversight over allegations concerning contracting, procurement or ethics merely because those allegations concern the applicant seeking a permit, or the project for which a permit is required. Those allegations can be considered if, and only if, they touch upon criteria found in a statute the Department has been directed to administer.

Finally, this hearing process is intended, at least in part, to create a type of public square, with the goal of encouraging an exchange of ideas. But this particular public square is a highly ordered one. It specifies different roles for certain persons, depending on whether identified legal standards are satisfied. Each of those roles – as a party, intervening party, intervenor or member of the public – carries its own set of obligations and limitations. The hearing process provides certain identified times and places for public comments. It reserves other times and places for the participation of only parties and intervenors, although it provides for transparency even in times and places that do not allow for public participation. This is not a forum that should encourage ugly, profane, and personal attacks or spurious allegations of bias. Instead, using public comment as a guide, this hearing process must consider only relevant evidence and law.

B
The Request for Proposals

Chief among the objections raised by the Intervenor is that the regulated activities authorized by the Draft Permit are not consistent with a June 2018 Request for Proposals ("RFP") issued by the Applicant to solicit proposals for the management of State Pier. This RFP has not

been admitted to the evidentiary record and is not admitted merely because the Intervenor attached the document to its objection.

The Intervenor would have me use the RFP as a pseudo-Coastal Management Act. Using the approach advocated by the Intervenor, I would consider each statement therein as a policy statement binding on the Department in reaching a decision on the Applications. I need not, however, consider either the substance of the RFP or the Intervenors claims relative to it. As discussed above, assertions and allegations about the RFP are beyond the prescribed jurisdiction of the Department. I am tasked only with making a recommendation about whether the Applicant has satisfied its burden of proving that the Application and the regulated activities to be authorized by the Draft Permit comply with relevant statutory and regulatory criteria, namely those found in the Costal Management Act, the statutes concerning tidal wetlands, and the statutes concerning structures, dredging and filling. The Intervenor does not cite, and my review does not identify, any provision of statute or regulation which requires the Applicant to comply with the terms of the RFP before a permit can be issued. So, even assuming, *arguendo*, that the Intervenor is correct about all of the substantive claims relative to the RFP not analyzed herein, that would not be grounds to reject either the Agreed Draft Decision or deny the Application. There may very well be a forum dedicated to evaluating compliance with the RFP, but this contested case is not that forum.

C
Site Visit

The Intervenor, echoing a claim made in certain public comments, objects that no site visit was held which it claims was to the detriment of this process. The hearing process in this matter took place against the backdrop of an unprecedented global pandemic. By the time this decision

is issued, in Connecticut alone, more than 300,000 cases of COVID-19 have been diagnosed and more than 8,000 Connecticut residents have died. Although public health guidance has continuously evolved, the public has been consistently cautioned by both state and federal public health authorities to avoid crowds and to socially distance, even outdoors.

Public interest in this matter is significant, and it is reasonable to conclude that were a site visit to be held, it would be well attended. All site visits, but particularly on a site currently under construction or engaged in operations, require those in attendance to view the site in a group; members of the public are entitled to see those areas – and only those areas - of the site viewed by the hearing officer. A large crowd, required to move through a site together as a group, is not compatible with the guidance issued by public health authorities.

Furthermore, neither the Uniform Administrative Procedures Act ("UAPA"), General Statutes §§ 4-166 to 1-189g, inclusive, nor the Department's Rules of Practice ("Rules"), Regs., Conn. State Agencies §§ 22a-3a-1 to 22a-3a-6, inclusive, require a site visit. In fact, the phrase "site visit" does not appear in either the UAPA or the Rules. While it is true that site visits are often – but not always – held during the Department's hearing process, it is ultimately within a hearing officer's discretion to determine if a site visit is necessary.

This discretion is consistent with the purpose of a site visit. Our Supreme Court has determined that, when a site visit is held in the analogous context of a local land use proceeding "[t]he purpose of a site visit is to acquaint the members of a commission with the property at issue. . . . Investigative procedures, such as site inspections, therefore are not an integral part of the hearing process." (Internal quotation marks omitted.) *Grimes v. Conservation Comm. of Town of Litchfield*, 243 Conn. 266, 278 (1997). The same is true in this matter. A site visit is simply not an integral part of the Department's hearing process.

Even if a site visit were held, its purpose is not to provide the public access to a site, but instead to familiarize the hearing officer with a site. *Cf. Grimes*, supra, 243 Conn. At 278 (1997). It is true that the public may attend a site visit. However, public access is required only because the site visit is considered a public meeting. For that reason, the public must be permitted to accompany the hearing officer. Ultimately, public access to a site is an ancillary benefit of a site visit, but not its purpose.

In this matter, it was determined at the Status Conference on January 26, 2021 that a site visit would not be scheduled.[5] At that time, I indicated that that decision may be revisited if a review of the evidence demonstrated that a site visit was necessary. The evidence in the record, including the annotated aerial photographs and the testimony of the many expert witnesses, was sufficiently clear, and a site visit remains unnecessary.

D
Uncontradicted Expert Testimony

The Agreed Draft Decision correctly sets out the law concerning uncontradicted expert testimony. (Agreed Draft Decision, p. 29.) Because those conclusions of law are integral to my recommendation, I will briefly address this topic to amplify the analysis and conclusions found in the Agreed Draft Decision.

The Department may rely on its own expertise. *E.g., MacDermid v. Dep't of Environmental Protection,* 257 Conn. 128, 139 (2001)("When the application of agency regulations requires a technical, case-by-case review, that is precisely the type of situation that

[5] While just days ago most pandemic related mandates and restrictions were lifted, and while today most adults in Connecticut have been vaccinated against COVID-19, this determination was made in late January, at a time when the number of COVID-19 cases reported daily was significantly higher, relatively few residents were eligible to be vaccinated, and the timeline for vaccine availability was uncertain.

calls for agency expertise"); *Connecticut Building and Wrecking Co. v. Carothers*, 218 Conn. 580, 593 (1991)("An agency composed of [experts] is entitled . . . to rely on its own expertise within the area of its professional competence"). The testimony provided by experts from Department staff, Michael Grzywinski and Bruce Williams, was both credible and uncontradicted.

The Applicant also offered testimony from ten expert witnesses. "An administrative agency is not required to believe any of the witnesses, including expert witnesses... but it must not disregard the only expert evidence available on the issue . . . ." *Bain v. Inland Wetlands Commission*, 78 Conn. App. 808, 817 (2003). "The trier of fact is not required to believe unrebutted expert testimony, but may believe all, part or none of such unrebutted expert evidence." *Bancroft v. Commissioner of Motor Vehicles*, 48 Conn. App. 391, 405 (1998). I find this uncontradicted expert testimony to be credible, and rely on the conclusion of these experts, as well as Department staff's experts in making my determination that the Applicant has satisfied the relevant statutory and regulatory criteria and my recommendation that the requested permits be issued.[6]

E
Water Dependent Use

The Connecticut Costal Management Act, at General Statutes §22a-92(b)(1)(A), indicates that when considering an application of the type filed by the Applicant, the Department should give "highest priority and preference to water-depended uses and facilities in shorefront areas." Certain public comments questioned whether the proposed use of the facility is water-dependent. In particular, public comment focused on the use of the project to stage and assemble wind turbines. While there can be no dispute that the unloading of wind turbine components from cargo

[6] This reliance on uncontradicted expert testimony includes the testimony of, and conclusions reached by, Sean Maxell regarding potential impacts to sturgeon on the Thames River. Mr. Maxwell's testimony was the only expert testimony on this point introduced at hearing.

vessels or the loading of partially assembled wind turbines and associated components onto an installation vessel is water-dependent, certain comments argued that the staging and assembly of wind turbines will merely benefit from proximity to the water, but is not water dependent. It is, however, clear from the evidence in the record that this proposed use is water dependent.

Water-dependent uses are defined in General Statute § 22a-93(16), in relevant part, as "…those uses and facilities which require direct access to, or location in, marine or tidal waters and which therefore cannot be located inland, including but not limited to: . . . waterfront dock and port facilities, shipyards and boat building facilities [and] . . . industrial uses dependent upon water-borne transportation . . . which cannot reasonably be located or operated at an inland site[.]" It is first important to note that the use of the phrase "including but not limited to" indicates that this list is not intended to be exhaustive; that a particular use is not listed does not mean it is not water-dependent. Indeed, the proposed use is similar to many of the uses on the list.

The proposed regulated activities are necessary to construct (or rehabilitate) and operate of a waterfront dock and port facility, a water-dependent use. The record reflects that, while State Pier will be used for a time only to facilitate the installation of offshore wind turbines, with certain relatively minor modifications State Pier can, and likely will, be used to handle a variety of cargo in the future. (See Finding of Fact 27.) It is not clear that any inquiry, beyond the determination that State Pier will operate as a waterfront dock and port facility, is necessary. This may be the only inquiry into whether the use of State Pier is water-dependent that is required.

However, and to the extent such analysis is necessary, the evidence also clearly demonstrates that direct access to the water is critical for not only the loading and unloading of wind turbine components, but also their staging and assembly. Marlin Peterson, an expert in marine terminals, testified that due to the weight and length of wind turbine components, it is

impossible to transport them over roads or by rail. His testimony that the unloading of wind turbine components from cargo ships, staging and assembly of such components, and the loading of those components onto an installation vessel require direct access to a significant body of water is credible and compelling, and leads only to the conclusion that this use of State Pier is water dependent. The Coastal Management Act identifies industrial uses dependent on water-borne transportation as water-dependent. The use of State Pier described as described by Mr. Peterson falls either into that category of uses, or a very similar, closely related category of uses well covered by the statutory definition. I also note that Michael Grzywinski, testifying on behalf of Department staff, and himself an expert in coastal permitting, agreed that the proposed use of the facility was water-dependent. The expert testimony of Mr. Peterson and Mr. Grzywinski was not contradicted.

This issue is also implicated by the Intervenor's objection, wherein the Intervenor argues that the Application fails to give the necessary priority to preserving DRVN's previously existing water-dependent use. While the Coastal Management Act expresses some preference for certain water-dependent uses, namely commercial fishing and recreational boating, it also speaks to prioritizing water dependent uses generally. In this case, before and after the Application was filed, the uses of State Pier are water-dependent. While the Intervenor argues its previous, now discontinued, water-dependent use of State Pier to import salt for treating roads should be preserved and prioritized over other uses, it has identified no requirement in the law that mandates it.[7] Indeed, water-dependent use of State Pier has been prioritized; if the regulated activities

[7] By its own admission, the Intervenor received notice it must stop operating at State Pier before the commencement of this hearing, and ceased operations at State Pier before the issuance of this decision. It is the terms of the Intervenor's business relationship with the Applicant, and not the issuance of this permit, that required it to leave State Pier. And the record is clear that, should the Intervenor come to terms with the Applicant at some future time, State Pier can, with relatively minor modification, accommodate road salt as well as a variety of other types of cargo.

authorized by the Draft Permit are conducted State Pier will continue to serve a water-dependent use. The Intervenor would have the Department require the Applicant to engage in a particular water-dependent use, in a business relationship with a particular user. There is no provision in the law that would allow the Department to impose such a requirement.[8]

I therefore conclude that the regulated activities authorized by the Draft Permit give the necessary priority to water-dependent uses.

F
Fisheries Mitigation within New London Costal Area

The draft permit requires, as a condition of approval, a multi-faceted approach to fisheries mitigation. This approach is well described and analyzed in the Agreed Draft Decision, and supported by the expert testimony of both Bruce Williams, of Department staff, and several of the Applicant's experts. Of particular note, because the proposed regulated activities include the revitalization of inner city harbors and waterfronts "the adverse impacts to costal resources of any shorefront alteration are minimized and compensation in the form of resource restoration is provided to mitigate any remaining adverse impacts." General Statutes § 22a-92(c)(1)(L). The Draft Permit requires funding of an escrow to be used for fisheries mitigation that will occur offsite, with the intent of mitigating impacts to fisheries resources of the type to be impacted by the proposed regulated activities.

[8] In its Objection, the Intervenor states "[t]he [Agreed Draft Decision] fails to meet the RFP criteria for existing users of the New London Port. . . . The [Agreed Draft Decision] as submitted fails to address how it has made/will make accommodations to DRVN as an existing water dependent port user. . . . This fails to comply with the RFP . . . [which requires] accommodations and detailed information as to the treatment of existing water dependent [users] during construction." (Objection at pp. 9-10.) As stated above, it is only the relevant policies of statute and regulation, and not the RFP, which must be used to evaluate the Application. It is not necessary to determine whether the proposed regulated activities are consistent with the RFP, and a determination based on such an analysis would exceed the Department's jurisdiction in this matter.

Although the City of New London, an Intervening Party, did not object to the Agreed Draft Decision, the City did identify as an issue that the fisheries mitigation projects selected for funding using the escrow were located within the Thames River or Long Island Sound shorefronts of the City. The essence of the City's concern is simple; because impacts will occur along the New London shorefront, some of the escrowed mitigation funds should be spend there as well. However, the City has not identified statutory or regulatory criteria that require funds be spent in such a manner. The uncontradicted expert testimony of Mr. Williams demonstrates that projects were selected because they were in advanced stages of planning, able to be executed quickly, and based on the availability of private partners. Selecting projects on the basis of these criteria is not arbitrary or capricious, but rather a reasonable exercise of the Department's discretion. While I understand the City's disappointment that mitigation funds will not be used for a project in the City's immediate shorefront, I find no legal basis to modify the draft permit to require it. Further, the construction of a living shoreline, a measure to mitigate other impacts, will take place onsite and within New London's shoreline area.

IV
CONCLUSION AND RECOMMENDATION

When conducted in accordance with the terms and conditions specified in the draft permit, the proposed regulated activities will comply with the relevant statutory and regulatory criteria. I therefore recommend that the Commissioner approve the Application and issue the draft permit as a final permit.

Brendan Schain, Hearing Officer

SERVICE LIST

In the matter of
General Permit: Connecticut Port Authority (State Pier)

Party	
Land and Water Resources Division Bureau of Water Protection and Land Reuse Department of Energy and Environmental Protection	AAG Lori DiBella, Esq Lori.DiBella@ct.gov
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APPENDIX-1

STATE OF CONNECTICUT
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
OFFICE OF ADJUDICATIONS

IN THE MATTER OF **Application No. 201905859-SDF WQC TW**

CONNECTICUT PORT AUTHORITY (STATE PIER) **APRIL 26, 2021**

AGREED DRAFT DECISION

I. SUMMARY

On May 7, 2019, the Connecticut Port Authority ("Applicant") submitted an application to the Connecticut Department of Energy and Environment ("DEEP" or "Department") to conduct activities regulated by the Structures, Dredging and Fill Statutes (Conn. Gen. Stat. § 22a-359 *et seq.*), the Tidal Wetlands Act (Conn. Gen. Stat. § 22a-32 *et seq.*), the Tidal Wetlands Regulations (Conn. Regs. § 22a-30-1 *et seq.*), and the Coastal Management Act (Conn. Gen. Stat. § 22a-90 *et seq.*)[1] at 200 State Pier Road, in New London, CT ("Application"). DEEP-1. On June 3, 2019, Department staff sent a Notice of Insufficiency letter to the Applicant requesting additional information and recommending modifications to the project design. *Id.* Staff within the Department's Land and Water Resources Division ("LWRD") reviewed the Application and requested additional information and modifications to the original proposal. *Id.*; M. Grzywinski Testimony, Hearing Recording, 3/30/21, 02:24:34 (references to live testimony will be in the following format: "[Witness] Test., [Date], [Time]"). In response to the Notice of Insufficiency and subsequent communications with Department staff and other interested

[1] It should be noted that the Applicant also applied for a Water Quality Certificate under Section 401 of the Federal Clean Water Act, as amended, which was included in the Notice of Tentative Determination (DEEP-10), recommended for approval, but is not part of this proceeding.

stakeholders, the Project design was revised to move the install vessel location from the "south berth" to the "east berth" of the State Pier. DEEP-3B, DEEP-3M, DEEP-11. This change was made to address concerns over the proximity of the south berth vessel activity to existing vessel navigation in the Winthrop Cove area. DEEP-3M, DEEP-11. The Applicant also made changes to accommodate the vessel berth dredging and seabed preparation. DEEP-3B, DEEP-3M, DEEP-11

On October 30, 2020, the Applicant submitted a revised Joint Permit Application to DEEP and the U.S. Army Corps of Engineers ("USACE") for approval under the Structures, Dredging & Fill Act, the Tidal Wetlands Act and Regulations, and the Connecticut Coastal Management Act. DEEP-3 (DEEP-3A – 3ZZ). The Project, as revised, will include two phases of development, involving both on-shore and in-water work. DEEP-3B, DEEP-3E, DEEP-6, DEEP-11, APP-22, APP-23, APP-24, APP-25, APP-26, APP-27, APP-28, APP-29, APP-30, APP-32. The on-shore work, which is not subject to this permitting proceeding, will consist of demolition of existing buildings, excavation, grading and installation of a stormwater management system and utilities. DEEP-3B, DEEP-3E, DEEP-6, DEEP-11, APP-22, APP-23, APP-24, APP-25, APP-26, APP-27, APP-28, APP-29, APP-30, APP-32. The on-shore improvements will be beneficial to future use of the Property for cargo handling, staging and storage activities. DEEP-3B, DEEP-3E, DEEP-6, DEEP-11, APP-22, APP-23, APP-24, APP-25, APP-26, APP-27, APP-28, APP-29, APP-30, APP-32. The in-water activities will consist of (i) dredging of the turning basin and the delivery and installation berths, (ii) installation of a series of steel pipe and steel sheetpile bulkheads (i.e. combi-walls) along the Northeast Bulkhead, along the east side of the State Pier bulkhead and between the southern end of the existing State Pier and the southern end of the Central Vermont Railroad Pier, (iii) relieving

platforms for heavy lift platforms at the Northeast Bulkhead and State Pier, (iv) placement of dredged material and/or fill material in the area between the two piers for the creation of a new Central Wharf and (v) placement of stone/gravel to create rock pads within the delivery and installation berths to support jack-up vessel operations. DEEP-3B, DEEP-3E, DEEP-6, DEEP-11, APP-22, APP-23, APP-24, APP-25, APP-26, APP-27, APP-28, APP-29, APP-30, APP-32. The in-water and on-shore work will facilitate a Project purpose that upgrades the existing State Pier Facility into a heavy-lift capable port facility that will accommodate a wide variety of cargoes, including regional wind turbine generator ("WTG") staging and assembly, while continuing to facilitate the handling of other bulk, breakbulk and general cargo operations associated with steel, coil steel, lumber, copper billets and other cargo. DEEP-3B, DEEP-3E, DEEP-3FF, DEEP-6, APP-22, APP-23, APP-24, APP-25, APP-26, APP-27, APP-28, APP-29, APP-30, APP-32.

Thereafter LWRD staff prepared a Draft License. DEEP-11. On December 16, 2020, DEEP published a Notice of Tentative Determination (DEEP-10), indicating that LWRD staff recommended the Application be approved as conditioned in the Draft License. On December 3, 2020, the Applicant requested a hearing pursuant to C.G.S. § 22a-32 and § 22a-361(b)(A) (DEEP-4) given the extent of the public interest in the Project, and this hearing process was initiated. *See* DEEP-10; DEEP-11.

During the pre-hearing portion of this proceeding, on January 4, 2021, Kevin Blacker sought to intervene pursuant to C.G.S. § 4-177a and § 22a-3a-6(k)(2) of the Department's Rules of Procedure and C.G.S. § 22a-19. That request was denied. *See* Hearing Officer's Ruling on Blacker Request to Intervene, Jan. 25, 2021. On January 25, 2021, the City of New London ("City") sought to intervene pursuant to C.G.S. § 4-177a and § 22a-3a-6 of the Department's

Rules of Procedure. On January 29, 2021, the City filed an amended intervention request, seeking intervention pursuant to C.G.S. § 22a-99. The City's amended intervention request was granted. *See* Hearing Officer's Ruling on City of New London Request to Intervene, Feb. 5, 2021.

On January 26, 2021, a status conference was held by the Hearing Officer with representatives for the Applicant, LWRD staff and the City. The parties each submitted prehearing information on February 26, 2021, which contained the legal issues to be resolved, proposed witnesses and a list of proposed exhibits. *See* Hearing Officer's Status Conference Summary, Jan. 29, 2021. A prehearing conference was held on March 16, 2021 to address outstanding issues, identify and consent to proposed expert witnesses, and admit exhibits to facilitate an orderly and expeditious hearing process. *See id.*

On March 3, 2021, Steven Farrelly, as the president of DRVN Enterprises, Inc. ("DRVN"), filed a request for DRVN to intervene in this proceeding. The nature of DRVN's request was unclear as it did not include statutory citations nor was it a verified pleading under C.G.S. § 22a-19, and for those reasons, the Hearing Officer denied the request. *See* Hearing Officer's Ruling on DRVN Enterprises, Inc. Request to Intervene, Mar. 11, 2021. On March 15, 2021, DRVN submitted a second request to intervene ("Second Request") and subsequently, on March 16, 2021, DRVN submitted a third request to intervene ("Third Request"). The Second Request was denied. *See* Hearing Officer's Ruling on DRVN Enterprises, Inc. Request to Intervene, Mar. 26, 2021. The Third Request included a request for intervenor status pursuant to C.G.S. § 4-177a(b), and was granted by the Hearing Officer. *See id.* DRVN's participation as an intervenor in the hearing was limited to cross-examination of witnesses called by the parties

on issues relevant to the matter, namely whether the proposed regulated activity to be authorized by the Draft License complies with applicable statutory and regulatory criteria. *See id.*

No additional persons sought the status of intervenor or intervening party. A public hearing was held via remote video conference on March 23, 2021, and written public comments were accepted until March 26, 2021. The evidentiary hearing was held on March 30, 2021, via remote video conference. At the evidentiary hearing, testimony from twelve expert witnesses was accepted into the record on behalf of the Applicant and Department staff.

Testifying on behalf of the Department staff were Micheal Grzywinski and Bruce Williams. Mr. Grzywinski, an Environmental Analyst III with DEEP/LWRD, and the permitting analyst assigned to review the Application, testified regarding LWRD's review of the Application and its recommendation for approval in the Tentative Notice of Determination. DEEP-16; DEEP-15; M. Grzywinski Test., 3/30/21, starting at 02:23:40. Mr. Williams, a Fisheries Biologist in the Department's Bureau of Natural Resources – Fisheries Division, testified regarding acceptable mitigation for impacts and potential impacts to substrate and related potential impacts to fish habitat, including the recommendation for the establishment of a mitigation project agreement to fund specific fish habitat improvement projects to assist with the mitigation. DEEP-18; DEEP-17; B. Williams Test., 3/30/21, starting at 02:45:44.

Testifying on behalf of the Applicant were John H. Henshaw III; Michael J. Garbolski, P.E.; Marlin Peterson; Dennis Lowry, M.S.; Kristoffer J. van Naerssen, MEM/PWS; Edward Morin, M.S./RPA; Sean Maxwell, M.S.; Timothy O'Sullivan, M.S., SPWS; Pamela Neubert, Ph.D.; and Yan Zhang, Ph.D., P.E. Mr. Henshaw, the Executive Director for the Applicant, testified regarding the history of the State Pier Facility, the need for the project and the evolution of the project to support the offshore wind energy sector. APP-14; APP-22a; J. Henshaw Test.

3/30/21, starting at 02:15:13. Mr. Garbolski, a Civil Engineer, testified regarding the site history and current conditions, the project design, alternatives to the proposed project that were considered, the history of the application, and discussions with DEEP staff and other agencies to address concerns about the project. APP-12; APP-23; M. Garbolski Test., 3/30/21, starting at 01:57:46. Mr. Peterson, a Civil Engineer, testified regarding the civil engineering review of the proposed project and construction methodology and feasibility. APP-13; APP-24; M. Peterson Test., 3/30/21, starting at 01:21:20. Mr. Lowry, an Ecologist, testified regarding the environmental impacts of the project, mitigation plans, the history of the application, and discussions with DEEP staff and other agencies to address concerns about the project. APP-14; APP-25; D. Lowry Test., 3/30/21, starting at 02:01:58. Mr. Lowry also testified that the project is designed to comply with the relevant statutes and regulations, so as to minimize impacts on the environment to the greatest extent possible, and that mitigation is proposed for those impacts that cannot be avoided. *Id.* Mr. van Naerssen, an Aquatic Ecologist, testified regarding the environmental impacts of the project, mitigation plans, the history of the application, and discussions with DEEP staff and other agencies to address concerns about the project. APP-15; APP-26; K. van Naerssen Test., 3/30/21, starting at 01:09:26. Mr. van Naerssen also testified that the project is designed to comply with the relevant statutes and regulations, so as to minimize impacts on the environment to the greatest extent possible, and that mitigation is proposed for those impacts that cannot be avoided. *Id.* Mr. Morin, a Principal Archaeologist at AECOM, testified regarding the site conditions and project design as they relate to impacts on cultural and archaeological resources. APP-16; APP-27; E. Morin Test., 3/30/21, starting at 00:23:26. Mr. Morin also testified that the proposed project has been designed so as to minimize impacts on cultural and archaeological resources to the greatest extent possible, and that

mitigation is proposed for those impacts that cannot be avoided. *Id.* Mr. Maxwell, a Fisheries Biologist, testified regarding the impacts of the proposed project on marine fisheries resources. APP-17; APP-28; S. Maxwell Test., 3/30/21, starting at 00:44:23. Mr. Maxwell also testified that the project is designed to minimize impacts on marine fisheries resources to the greatest extent possible, and that mitigation is proposed for those impacts that cannot be avoided. *Id.* Mr. O'Sullivan, a Wetland and Wildlife Ecologist, testified regarding the environmental impacts of the project on wetlands resources and rare and endangered species. APP-18; APP-29; T. O'Sullivan Test., 3/30/21, starting at 00:55:28. Mr. O'Sullivan also testified that the project is designed to minimize impacts on wetlands resources and rare and endangered species to the greatest extent possible, and that mitigation is proposed for those impacts that cannot be avoided. *Id.* Dr. Neubert, a Benthic Marine Ecologist, testified regarding the environmental impacts of the project on benthic resources. APP-19; APP-30; P. Neubert Test., 3/30/21, starting at 01:03:41. Dr. Neubert testified that the project is designed to minimize impacts on benthic resources to the greatest extent possible, and that mitigation is proposed for those impacts that cannot be avoided. *Id.* Dr. Zhang, a Floodplain Hydrodynamics Expert, testified regarding the site conditions and the project design as they relate to potential impacts related to coastal flooding and storm impacts. APP-21; APP-32; Y. Zhang Test., 3/30/21, starting at 00:28:57. Dr. Zhang also testified that the project will result in negligible increased risks on the project property or neighboring properties due to coastal flooding or storm related impacts. *Id.*

Testifying as a fact witness for the City was Felix Reyes, the Director of the Office of Development for the City, who provided a lay opinion regarding three geographical locations within the City's limits that would be possible candidates to receive funding to assist with

environmental enhancement, the details of which were not specified. INT-1; F. Reyes Test., 3/30/21, starting at 00:17:39.

Based on a review of the record in this matter, including the documentary evidence, witness testimony, and public comment, the Applicant, through the presentation of substantial evidence, has met its burden of proof by demonstrating that the proposed activities, if conducted in accordance with the proposed Draft License, complies with the relevant statutory standards, namely the Structures, Dredging and Fill Statutes, the Tidal Wetlands Act and its Regulations, and the applicable portions of the Coastal Management Act. As such, the proposed Draft License (DEEP-11) should be issued as a Final License.

II. FINDINGS OF FACT

1. The Applicant is the owner of a waterfront property in New London, Connecticut at 200 State Pier Road and known as the State Pier Facility (the "Property"). DEEP-3B.

2. The Property consists of about 25 acres and has three general operational areas: the existing piers – Admiral Shear State Pier ("State Pier") and Central Vermont Railroad ("CVRR") Pier – and near dock shoreline areas, which are used to accommodate most of the port's cargo intermodal activity. It borders Winthrop Cove and the New England Central Railroad tracks to the west and the Thames River which flows into the New London Harbor to the east. DEEP-3B; DEEP-3E; DEEP-3M; DEEP-3N; DEEP-3R; APP-2; APP-22a.

3. The Property, and adjacent properties, are developed for industrial uses, including maritime-related import, export and domestic cargo handling, commercial vessel berthing areas, and transition to a land-based transportation/distribution network. A public access boat launch exists adjacent to the Property. The Cross Sound Ferry operates directly west of the Property across Winthrop Cove. DEEP-3B; DEEP-3M; APP-2.

4. An average of approximately one to two cargo ships per month called on the State Pier Facility prior to the filing of the application with DEEP. DEEP-3; APP-22a.

5. Under current operations, most cargo ships docking at the State Pier Facility utilize the east side of the existing State Pier, with only occasional use of either the west side of the State Pier or the east side of CVRR Pier. DEEP-3; APP-22a.

6. The west side of State Pier and the east side of CVRR Pier areas are not critical to the long-term operation of the facility. Post construction, cargo ships and wind power

project support vessels (WTG "delivery" and "installation" or "jack-up" vessels) are anticipated to primarily utilize the Heavy Lift areas created at the eastern side of the State Pier (East Berth) and at the Northeast Bulkhead. DEEP-3B; DEEP-3M; APP-2; APP-22a.

7. The proposed Project area would be located adjacent to areas of the current New London Federal Navigation Project ("FNP"). DEEP-3M; APP-1; APP-2.

8. The FNP is comprised of the following elements in the Project area (DEEP-3FF; DEEP-6; APP-22a):

    a. The 3.8-mile-long, 600' wide, Thames River Federal Channel (the "Main Ship Channel"), stretching from Long Island Sound to the State Pier at the northern end of the harbor. The majority of this channel has an authorized depth of -40'; however, the Main Ship Channel segment closest to (directly east of) the Property is officially authorized to a depth of -36'. The deepening of the channel to -40' (from its previous depth of -33') was completed in 1976 by the Department of the Navy. Per the New London Harbor Navigation Project website, USACE is responsible for maintaining the channel to a depth of -40' and a width of 500', if required for military and commercial vessel traffic.

    b. A 6,000' long waterfront channel, that is -23' deep and a minimum of 400' wide. This channel stems from the Main Ship Channel and provides access to the City of New London waterfront, including the Fort Trumbull, Shaw Cove, and the New London pier areas.

    c. The Winthrop Cove Branch Channel, which is -23' deep and located between the CVRR Pier and New London shoreline is 250' wide and 1,500' long.

    d. A -23' deep maneuvering area is located west of the Main Ship Channel and south of State Pier.

9. The FNP also used to include a second, eastern branch channel, known as the Long Dock Branch Channel, located between the State Pier and the CVRR Pier, which was -23' deep, 100' wide and 1,000' long. This branch channel was deauthorized in the Consolidated Appropriations Act, 2021. DEEP-6; APP-22a; APP-8. This deauthorization is a condition of the Draft License (DEEP-11) and was required to allow the creation of the Central Wharf area of the Project.

10. In addition to the above FNP features, a triangular -40' deep anchorage basin is depicted immediately east of State Pier on select USACE drawings, although this feature is not described on the USACE New London Harbor Navigation Project website. Based on correspondence with USACE personnel, this area was approved on paper but never built. The Applicant received approval from the U.S. Navy to eliminate this feature to accommodate the Project. DEEP-6; APP-22a.

11. The four existing mooring dolphins located approximately 200' to 650' east of the State Pier will be removed. APP-5; APP-6; APP-22a.

12. The mudline in the vicinity of the Northeast Bulkhead slopes sharply downwards and eastward towards the Main Ship Channel. The proposed Northeast Bulkhead dredging will require 1V:3H side slopes on its eastern and southern extents but not at its northern limits, due to proposed turning basin bathymetry. The northeastern corner of this proposed dredge area will have the closest distance to the existing Main Ship Channel. DEEP-3M; APP-2; APP-22a.

13. Construction of the Connecticut State Pier was completed in 1914, which involved extensive dredging between it and the CVRR Pier, as well as dredging of a channel from the State Pier to the main navigation channel in New London Harbor. The result of the State Pier construction and other nearby construction was a working waterfront that is industrial in nature and a shoreline at the Property that consists almost entirely of piers, bulkheads, and developed shoreline. DEEP-3B; DEEP-6; APP-25; APP-26.

14. The Property has three general operational areas: the existing piers –State Pier and the CVRR Pier – and the near-dock shoreline. The near-dock shoreline areas accommodate most of the port's cargo and intermodal activity. The near-dock shoreline contains two heavy load warehouse buildings totaling 102,000 sq. ft. with railcar and truck loading docks, two 3,200 sq. ft. equipment forklift maintenance buildings and an administration building. The area located at the head of the two piers is largely paved to facilitate forklift and tractor trailer movements. The shore edge consists of a combination of sheet piling, pile-supported docks, and stone block quay walls. The western area of the Property, adjoining the New England Central Railroad siding yard is largely unpaved with irregular topography. DEEP-3B; DEEP-3E; DEEP-3R; APP-2 APP-22a.

15. The Coastal Jurisdiction Limit at the Property is located at an elevation of +2.1', based on the NAVD88 datum. The Mean High Water line is located at elevation +0.92' and the Mean Low Water line is located at elevation -1.65', both also based on the NAVD88 datum. DEEP-3B; DEEP-3MM.

16. The State Pier Facility currently operates, and has historically operated, as a Maritime Security ("MARSEC") secure facility that does not allow upland access to the general public. No vessels currently berth between the pier areas on a regular basis. DEEP-3FF; DEEP-6; APP-22a.

17. In 2019, Gateway Terminal was awarded the contract to operate and manage the State Pier Facility. Gateway will serve as the terminal operator under a 20-year agreement. Under a Memorandum of Understanding and associated contractual agreements, the Applicant, Gateway and Orsted/Eversource, are in the process of implementing a two-phased plan for improvements to the State Pier Facility. The first phase is the Project activities, to upgrade the on-site infrastructure and the second phase will involve Orsted/Eversource entering into a 10-year facility and tenancy lease agreement with Gateway granting the joint venture use of the State Pier Facility for WTG assembly and staging. DEEP-3B; APP-22a.

18. The Project includes an expansion and significant infrastructure upgrades to water-dependent facilities at the State Pier Facility. Upon Project completion, future water-dependent opportunities in the region will be enhanced because the State Pier Facility will be able to accommodate a wider range of vessels than it currently can and it will possess one of the heaviest load capacities on the U.S. East Coast, making it well suited to accommodate the marine shipping industry and for handling a broad array of cargo for up to 70 years into the future. DEEP-3; DEEP-3FF; DEEP-6; APP-22a; M. Peterson Test., 3/30/21, 01:31:12 - 01:33:14.

19. The coastal resources found on the Property and in the vicinity of the project site are rocky shorefront, small areas of sandy shorefront, coastal hazard area, developed shorefront, nearshore waters, offshore waters, wildlife resources and habitat, benthic habitat, and indigenous aquatic life. DEEP-3B; DEEP-6; DEEP-3R; DEEP-3S; DEEP-3T; APP-25; APP-26-; APP-28; APP-29; APP-30.

20. There are no tidal wetlands located in the area between the CVRR Pier and the State Pier. DEEP-6.

21. There is a small area of existing tidal wetland vegetation located off the northeast portion of the Property, along the shoreline between the existing Amtrak Bridge and the Goldstar Bridge and immediately south of the existing state-owned public boat launch ramp. There are no direct tidal wetlands impacts proposed by the Applicant. The Applicant proposes to construct a living shoreline in this northeast area to further enhance the existing tidal wetlands and as mitigation for the proposed loss of benthic substrate. DEEP-6; DEEP-3M; DEEP-3EE; DEEP-3FF; DEEP-11; APP -25; APP-26-; APP-28; APP-29; APP-30.

22. On May 7, 2019, the Applicant applied to DEEP to conduct activities at the Property that are regulated by the Structures, Dredging and Fill Statutes, the Tidal Wetlands Act and its Regulations, and the Coastal Management Act. DEEP-1; DEEP-6; APP-3.

23. On June 3, 2019, Department staff sent a Notice of Insufficiency letter to the Applicant requesting additional information and recommending modifications to the project design. DEEP-1.

24. In response to the Notice of Insufficiency and subsequent communications with Department staff and other interested stakeholders, the Project design was revised to move the install vessel location from the "south berth" to the "east berth" of the State Pier. APP-4. This change was made to address concerns over the proximity of the south berth to existing vessel activity in the Winthrop Cove area. The Applicant also made the following changes in the project design in its October 2020 Joint Permit Application revision:

    a. To accommodate the vessel berth dredging and seabed preparation:

        i. Dredging of ~70,000 sq. ft. and ~98,000 cu. yd. for berthing areas without rock pad placement for the northeast (delivery vessel) berth.

ii. Dredging of ~170,000 sq. ft. and ~124,000 cu. yd. in support of rock pad installation areas for the northeast (delivery vessel) berth.

iii. Installation of ~107,000 cu. yd. of crushed stone within the jack-up pad / rock pad area for the northeast (delivery vessel) berth.

iv. Dredging of ~210,000 sq. ft. and ~122,000 cu. yd. of dredging in support of rock pad installation for the east (installation vessel) berth.

v. Installation of ~107,000 cu. yd. of crushed stone within the jack-up pad / rock pad area for the east (installation vessel) berth.

b. To accommodate the turning basin dredging:

i. Accounting for adjacent side slope alterations, the turning basin dredging was decreased to approximately 55,000 cu. yd. of material from an approximately 241,000 sq. ft. subset of the turning basin. DEEP-2.

25. The amended Application and plans for the project (DEEP 3A – 3ZZ), with a revision date of October 30, 2020, propose the following regulated activities:

a. demolition of approximately 420 linear feet and approximately 84,000 sq. ft. of the State Pier to facilitate construction of the pile-supported East Face Heavy Lift Area;

b. demolition of approximately 34,000 sq. ft. of select segments of the west face of State Pier concrete deck to facilitate fill placement;

c. demolition of approximately 1,500 sq. ft. at the East Face and approximately 1,500 sq. ft. at the southeast corner of State Pier to facilitate the mooring bollard installation identified below;

d. conduct dredging, using mechanical or hydraulic dredging means, of approximately 55,000 cu. yd. of material from an approximately 241,000 sq. ft. area within the areas identified as the Turning Basin, including approaches to both berths to a depth of -36' MLLW, with a 2' allowable over-dredge;

e. conduct dredging, using mechanical or hydraulic dredging means, of approximately 222,000 cu. yd. of material from an approximately 240,000 sq. ft. area within an area identified as the Northeast Bulkhead area to a depth of -38' MLLW, with a 2' allowable over-dredge for berthing layout and to -63' MLLW with a 2' allowable over-dredge for the seabed preparation work described below;

f. conduct dredging using mechanical or hydraulic dredging means approximately 122,000 cu. yd. of material from an approximately 210,000 sq. ft. area within an area identified as the East Berth area to a depth of -63'

MLLW, with a 2' allowable over-dredge for berthing and seabed preparation work identified below;

g. conduct seabed preparation along the Northeast Bulkhead and East Berth rock pads, located adjacent to their respective Heavy Lift Areas for installation of crushed gravel areas to allow for berthing of vessels with jack up legs. Placement of up to 107,000 cu. yd. of gravel in each dredged jack-up pocket area to a maximum thickness of 27';

h. using either land or water-based equipment install longitudinal steel sheeting or protected slope at the CVRR Pier;

i. install a king pile bulkhead between the State Pier and the CVRR Pier, tying into the new longitudinal sheet pile wall/riprap slope along the CVRR pier identified above;

j. place a total of approximately 400,000 cu. yd. of fill material consisting of suitable dredged material identified above and/or upland fill material over an approximately 322,000 sq. ft. area (approximately 7.4 acres) located between the CVRR Pier and State Pier to create the new Central Wharf with a finish grade of +9' NAVD88;

k. install approximately 1,000 linear feet of steel sheet pile along the State Pier East Face;

l. remove or relocate existing stone riprap and place approximately 15,600 cu. yd. of fill, consisting of pile structures, over an approximately 33,600 sq. ft. area (0.77 acres) at the existing State Pier East Face;

m. install a series of approximately 3' wide stone columns, or comparable technology such as vibro-compaction or wick drains, within the newly created Central Wharf and East Face Heavy Lift areas;

n. install approximately 1,115 linear feet of steel toewall at and adjacent to the base of the new State Pier East Face heavy Lift Area;

o. install upgraded energy-absorbing fender system and two (2) new mooring bollards at the State Pier;

p. install approximately 170 linear feet of steel sheetpile toewall along the waterward limit of an existing area of eelgrass with the height of the toewall extending approximately 1' above the mudline;

q. install high mast lights within the limits of the new facility;

r. install cold ironing (i.e., shore to ship electrical) infrastructure;

s. construct a 16' wide by 16' long reinforced concrete pad immediately landward of an existing seawall and install four (4) 36" diameter pipe piles and associated gangway to support Connecticut Department of Transportation Chester-Hadlyme ferry overwintering at the Northwest Bulkhead area;

t. install three (3) 60' diameter and one (1) 54" diameter stormwater outfall pipes with one-way check valves discharging to the Thames River and associated bedding stone and stormwater treatment systems located on the upland; and

u. construct a living shoreline consisting of stone riprap, energy-dissipating concrete "reef balls," suitable organic sediment, and tidal wetland plantings located at the northern corner of the subject property.

(collectively, the "Project"). DEEP-3B; DEEP-3E; DEEP-6; DEEP-11; DEEP-3R; APP-22a; APP-23; APP-24; APP-25; APP-26; APP-27; APP-28; APP-29; APP-30; APP-32.

26. The proposed structural improvements at the Property will be installed within the existing footprint of the two piers with the exception of the following activities (DEEP-3B; DEEP-3M; DEEP-6; APP-22a):

    a. Installation of a southern bulkhead and associated placement of associated fill between the State Pier and the CVRR Pier (i.e., creation of the new Central Wharf area).

    b. Dredging at the Northeast Berth and associated seabed preparation for jack-up vessels (installation of crushed gravel within deeper dredge pockets for vessel spud cans).

    c. Dredging adjacent to the new East Berth Heavy Lift area and associated seabed preparation for jack-up vessels (installation of crushed gravel within deeper dredge pockets for vessel spud cans). The proposed East Berth Heavy Lift area will be constructed largely within the existing confines of the current State Pier footprint.

    d. Dredging within the Turning Basin to improve vessel navigation conditions between the federal channel and the State Pier Facility berths.

27. Through the Project, the Applicant seeks to create infrastructure in Connecticut that will serve as a heavy-lift capable port facility that will accommodate a wide variety of cargoes, including long-term regional WTG staging and assembly, while continuing to facilitate the handling of other bulk, breakbulk and general cargo operations associated with steel, coil steel, lumber, copper billets and other cargo. DEEP-3B; DEEP-3E; DEEP-3R; DEEP-3S; DEEP-3DD; DEEP-3FF; APP-22a; APP-23; APP-24; APP-25; APP-26; APP-27; APP-28; APP-29; APP-30; APP-32.

28. Department staff had sufficient information to review and process the Application and no further information was required by the staff to make its Tentative Determination. DEEP-15; M. Grzywinski Test., 3/30/21, 02:27:46 - 02:29:09.

29. The proposed activities were reviewed by the Connecticut Department of Agriculture, Bureau of Aquaculture, which determined that the Project would not significantly impact a shellfish area. DEEP-3J; APP-26; APP-28; APP-29.

30. On March 19, 2019, DEEP's Bureau of Natural Resources Wildlife Division responded to the Applicant's request for a review under the Department's Natural Diversity Database ("NDDB"). The NDDB review indicated that it has records of the State-Threatened Peregrine Falcon (*Falco peregrinus)* nesting on the Gold Star Memorial Bridge and recommended work occur outside of the Peregrine Falcon's nesting season and the creation of a Peregrine Falcon Protection Plan ("Plan"), in the event work needed to occur during nesting season. A Plan was drafted by the Applicant's witness, Timothy O'Sullivan, and was subsequently approved by DEEP. The Plan imposes the following protection measures:

    a. The Applicant shall maintain an initial minimum buffer of 300' from an active Peregrine Falcon nest site;

    b. The Applicant must hire a Peregrine Falcon monitor for the breeding period to evaluate the falcon's behavior for signs of stress due to disturbance associated with construction activities. Should the Peregrine Falcon monitor determine construction activities are resulting in observable stress to the breeding falcons, the 600' buffer is to be implemented immediately;

    c. Should a Peregrine Falcon nest be observed within 300' of Project construction work, all work shall cease and the nest site should be reported to DEEP/NDDB for assistance;

    d. During construction, a construction phase contractor awareness program will be implemented, and a construction phase survey and monitoring plan will also be implemented and coordination with DEEP/NDDB and reporting to DEEP/NDDB will occur.

    DEEP-3G; APP-29.

31. On September 10, 2019, the Applicant applied for, and subsequently was granted, a Certificate of Permission by DEEP LWRD and a USACE General Permit 2 authorization for the sheet pile oversheeting of the Northeast Bulkhead, the demolition of the derelict pile-supported deck platform and the mooring dolphin demolition. DEEP-3B; DEEP-6; APP-5; APP-6.

32. The Project footprint encompasses over 10 acres of nearshore waters, which are located in Winthrop Cove immediately adjacent to the CVRR Pier and adjacent to the northern half of the Northeast Bulkhead and shoreline areas extending to Winthrop Point. The Project footprint contains over 16 acres of offshore waters located adjacent

to the State Pier and along the southern half of the Northeast Bulkhead, extending easterly to the navigational channel. The intertidal areas of the Project footprint include developed shorefront, rocky shorefront and sandy shorefront. The majority of the shoreline is developed shorefront, characterized as existing riprap or granite block and steel sheet pile pier and bulkhead faces. Rocky shorefront, erosion-resistant boulders and cobble, is present on the extreme western corner of the Property and north of the Northeast Bulkhead around Winthrop Point to the State boat launch. The extreme western corner of the Property also contains a small pocket beach/sandy shorefront. Both rocky and sandy shorefronts at the Property are generally unvegetated. DEEP-3B; DEEP-3R; DEEP-3S; DEEP-6; APP-25; APP-26-; APP-28; APP-29; APP-30.

33. Due to construction and land manipulation that has occurred since the mid- to late-nineteenth century, any archaeological potential has been lost on most of the Property, resulting in areas of low archaeological sensitivity. DEEP-3CC; APP-27; APP-34; APP-35.

34. The benthic communities observed within the area between the piers are consistent with the long-term use of the area as an active port with a largely developed shorefront, being comprised of opportunistic species that rapidly colonize benthic habitat after disturbance. No shellfish species were encountered and no eelgrass was present between the piers. DEEP-3S, DEEP-3T; DEEP- 6; APP-25; APP-26-; APP-28; APP-29; APP-30.

35. Developed shorefront, rocky shorefront, nearshore waters, off-shore waters and coastal hazard areas and associated benthic habitat will be affected by the dredging and filling activities of the Project. Fill impacts to natural resources associated with the existing developed shorefront are anticipated to be minimal in nature, as the algal and macroinvertebrate community currently present on the existing bulkhead areas, within the developed shorefront, are anticipated to quickly recolonize the new bulkheads. Fill impacts will have direct and indirect effects to the physical, chemical and biological properties of nearshore and offshore waters. DEEP-3R; DEEP-3S; DEEP-3T; DEEP-3FF; APP-25; APP-26-; APP-28; APP-29; APP-30.

36. Water quality effects from fill activities include temporary changes to water turbidity, water chemistry and dissolved oxygen, but these impacts will be highly localized and rapidly diminish with the cessation of construction activities. Chemical impairment to the water column from fill activities might occur due to a release of various chemical contaminants that may occur within the sediment when re-suspended into the water column, but these impacts will be temporary and localized in nature and not likely to pose a significant risk to human health or the environment. DEEP-3R; DEEP-3X; DEEP-3FF; DEEP-6; APP-25; APP-26.

37. The impacts to benthic habitat would be minimal, and are not expected to have any lasting effect upon the overall ecosystem services in the Thames River estuary. The disturbed benthic and sediment conditions also indicate poor fisheries habitat for foraging and spawning. DEEP-3T; APP-25; APP-26; APP-28; APP-29; APP-30.

38. Dredging and rock pad installation will affect nearshore waters by conversion of shallower waters to deeper nearshore or offshore waters, conversion of generally soft substrates to rocky substrates, direct impacts to the benthic community due to substrate and organism removal and temporary impacts to water quality and fisheries. Water quality effects from dredging activities include temporary changes to water turbidity, water chemistry and dissolved oxygen, but these impacts will be highly localized and rapidly diminish with the cessation of construction activities. Chemical impairment to the water column from dredging activities might occur due to a release of various chemical contaminants that may occur within the sediment when re-suspended into the water column, but these impacts will be temporary and localized in nature and not likely to pose a significant risk to human health or the environment. DEEP-3R; DEEP-3T; DEEP-6; APP-25.

39. The closest distance from the dredge pocket side slopes proposed at the new East Berth area to the Main Ship Channel is anticipated to be approximately 50'. DEEP-3M, DEEP-11; APP-22a.

40. The eastern edge of the State Pier (which will not change location after completion of the Project) is approximately 325' from the Main Ship Channel at its closest point. DEEP-3M; DEEP-11; APP-2; APP-22a.

41. A typical vessel berthed at the East Berth will be approximately 185' from the western extent of the Main Ship Channel. Vessel width may vary. DEEP-3M; DEEP-11; APP-22a.

42. The environmental impact from the installation of bulkheads and dredging will be short-term and will quickly stabilize after construction is completed. The Project involves the installation of a new on-site stormwater collection and treatment system in the upland portions of the Property. The Property does not currently have a functioning stormwater system, so through installation of the stormwater system, the Project will significantly improve the quality of runoff from the Property. A soil erosion control plan has been developed to minimize soil erosion and sedimentation throughout the duration of the Project, which will implement best management practices that control soil detachment, control water movement and control sediment deposition. DEEP-3B; DEEP-3G; DEEP-3R; DEEP-6; APP-23; APP-24; APP-25; APP-26.

43. Alternative Project configurations were considered, mainly related to the design of the Central Wharf area. Several other New England ports were also reviewed to determine their capability to serve as a WTG port, however, the regional alternatives did not possess the necessary criteria to support such a use. The State Pier Facility is the only viable facility to meet the criteria for a WTG port that can serve utility-scale offshore wind farms. The Project will enable the State Pier Facility to support offshore wind development by providing the necessary conditions to load, unload, stage, pre-assemble, and accommodate the unique requirements associated with offshore wind installation vessels, that include the provision of essential heavy lift capacity associated with offshore wind turbine components. A pile-supported design

will not provide the requisite operational flexibility needed for the Project and the State Pier Facility. The alternatives analysis also included the "No Build" option, which was rejected because it would not allow the Applicant to make the necessary upgrades to the State Pier Facility to accommodate a wider range of cargo opportunities, which is consistent with the State Pier Facility's Master Plan from 2011 and the Applicant's Connecticut Maritime Strategy from 2018. DEEP-3DD; DEEP-3LL; APP-22a; APP-23; APP-24; APP-25; D. Lowry Test., 3/30/21, 02:12:27 - 02:14:43.

44. To mitigate unavoidable impacts to coastal resource areas, the Project proposes the implementation of a living shoreline, the objective of which is to enhance shoreline resource areas to provide coastal storm surge softening and improved fisheries, mollusk, tidal wetland and buffer habitat. The Draft License authorizes the creation of the living shoreline and includes a condition that the Applicant "submit to the Commissioner for her review and written approval a Living Shoreline Wetland Creation Plan." As additional mitigation for fisheries habitat, the Applicant will work with DEEP and USACE to identify viable and appropriate fisheries projects that need funding. As a condition of the Draft License, the Applicant shall execute an Escrow Agreement for a fisheries management plan and mitigation plan for restoration projects as approved by DEEP. DEEP-3B; DEEP-3R; DEEP-3S; DEEP-3EE; DEEP-3FF; DEEP-6; DEEP-11; APP-22a; APP-23; APP-24; APP-25; APP-26; APP-28; APP-29; APP-30; D. Lowry Test., 3/30/21, 02:07:25 - 02:10:34; B. Williams Test., 3/30/21, 02:48:08 - 02:49:08, 02:50:09 - 02:55:29, 02:58:31 - 03:06:45.

45. The Project has been designed to avoid and minimize environmental impacts to the extent practicable and the Applicant is committed to construction phase avoidance and minimization procedures designed to reduce impacts to marine resources, which include procedures to minimize the effects of construction noise related to utilizing impact and vibratory hammers, as well as lessening the impacts of suspended sediments associated with dredging and measures to reduce the likelihood of a vessel strike on fish and wildlife. DEEP-3B; DEEP-3R; DEEP-3S; DEEP-3EE; DEEP-3FF; DEEP-6, DEEP-3WW; APP-9; APP-26; APP-28; APP-29.

46. To protect spawning species, and as based on input from various regulatory agencies, including DEEP and the Bureau of Aquaculture, a "no in-water-work" window is anticipated annually from June through September, with the understanding that select, confined in-water Project activities, including fill placement, may progress during this period behind sheeting and/or turbidity curtains. It is anticipated that the Project would have a Time-of-Year window between October 1 through January 31, annually, to allow for dredging activities. No dredging would occur from February through September of any given year. Further, the Applicant anticipates that pile driving activities conducted between March 16 through October 31 may be subject to soft start provisions to provide adequate time for fish and marine mammals to leave the vicinity and avoid acoustic impacts. DEEP-3B; DEEP-3G; DEEP-3J; DEEP-3R; DEEP-3WW; DEEP-11; APP-9; APP-10; APP-23; APP-24; APP-25; APP-26; APP-28; APP-29; APP-30.

47. The Project will take approximately two years to construct, weather and tidal conditions permitting. Construction will adhere to all time-of-year restrictions and other conditions imposed within the Draft License. The Project will be completed in two phases, generally moving from upland area work to in-water work. Phase 1 work will generally consist of on-shore improvements, including demolition of buildings, excavation, grading and installation of a stormwater management system and utilities. Removal of the derelict in-water structures and bulkhead oversheeting will also occur in Phase 1. Phase 2 work will generally consist of in-water and over-water improvements such as dredging, fill placement and marine construction for creation of the new Central Wharf area and heavy-lift pad. Overlap between the Phase 1 and Phase 2 activities is anticipated. DEEP-3B; DEEP-3R; DEEP-3S; DEEP-6; DEEP-11; APP-7; APP-22a; APP-23; APP-24; APP-25; APP-26; APP-27; APP-28; APP-29; APP-30; APP-32

48. The Project impacts have been minimized to the greatest extent and those impacts that could not be avoided or minimized will be mitigated. No further minimization or mitigation of environmental or public trust impacts than those identified in DEEP-11 were recommended by DEEP Staff. DEEP-3B; DEEP-3R; DEEP-3S; DEEP-3T; DEEP-3DD; DEEP-3EE; DEEP-3FF; DEEP-6; APP-9; APP-10; APP-22a; APP-23; APP-24; APP-25; APP-26; APP-27; APP-28; APP-29; APP-30; APP-32.

III. CONCLUSIONS OF LAW

The activities proposed in the Application, as conditioned by the proposed Draft License, are regulated by the Structures, Dredging and Fill Statutes, the Tidal Wetlands Act and its Regulations, and the applicable portions of the Coastal Management Act. This statutory framework requires a balancing of interests and requires applicants to minimize impacts to coastal resources and, if appropriate, mitigate those impacts that cannot be avoided or minimized. The Application and evidence presented during the hearing supports the assertion that the Applicant's exercise of its littoral right to wharf out can be achieved while minimizing or mitigating impacts to coastal resources, wildlife, navigation, and coastal sedimentation and erosion patterns.

A. Applicable Statutory Standard

To satisfy its burden, the Applicant must demonstrate compliance with the statutory standards contained in the Structures, Dredging and Fill Statutes, the Tidal Wetlands Act and its

implementing regulations, and the Coastal Management Act. The Structures, Dredging and Fill Statutes require that the Department give due regard for indigenous aquatic life, fish and wildlife, the prevention or alleviation of shore erosion and coastal flooding, the use and development of adjoining uplands, the improvement of coastal and inland navigation for all vessels, including small craft for recreation purposes, the use and development of adjacent lands and properties and the interests of the state, including pollution control, water quality, recreational use of public water and management of coastal resources, with proper regard for the rights and interests of all persons concerned. *See* Conn. Gen. Stat. § 22a-359.

The Coastal Management Act includes several general policy statements and requirements regarding the management of Connecticut's coastal resources and the review of proposed structures in coastal areas, including:

- Section 22a-92(a)(1), which requires that the development, preservation or use of the land and water resources of the coastal area will proceed in a manner consistent with the capability of the land and water resources to support development, preservation or use without significantly disrupting either the natural environment or sound economic growth;

- Section 22a-92(a)(2), which requires the preservation and enhancement of coastal resources;

- Section 22a-92(a)(3), which requires that high priority and preference be given to uses and facilities which are dependent upon proximity to the water or the shorelands immediately adjacent to marine and tidal waters;

- Section 22a-92(a)(4), which requires the resolution of conflicts between competing uses on the shorelands adjacent to marine and tidal waters by giving preference to uses that minimize adverse impacts on natural coastal resources while providing long term and stable economic benefits;

- Section 22a-92(a)(5), which requires consideration of the potential impact of a rise in sea level, coastal flooding and erosion patterns on coastal development so as to minimize damage to and destruction of life and property and minimize the necessity of public expenditure and shoreline armoring to protect future new development from such hazards;

- Section 22a-92(a)(9), which requires the coordination of planning and regulatory activities of public agencies at all levels of government to ensure maximum protection of coastal resources while minimizing conflicts and disruption of economic development;

- Section 22a-92(a)(10), which requires that the state and the coastal municipalities provide adequate planning for facilities and resources which are in the national interest as defined in section 22a-93 and to ensure that any restrictions or exclusions of such facilities or uses are reasonable.

- Section 22a-92(b)(1)(A), which requires the management of uses in the coastal boundary through existing municipal planning, zoning and other local regulatory authorities and through existing state structures, dredging, wetlands, and other state siting and regulatory authorities, giving highest priority and preference to water-dependent uses and facilities in shorefront areas;

- Section 22a-92(b)(1)(C), which requires the promotion, through existing state and local planning, development, promotional and regulatory authorities, of the development, reuse or redevelopment of existing urban and commercial fishing ports giving highest priority and preference to water-dependent uses, including but not limited to commercial and recreational fishing and boating uses; to disallow uses which unreasonably congest navigation channels, or unreasonably preclude boating support facilities elsewhere in a port or harbor; and to minimize the risk of oil and chemical spills at port facilities;

- Section 22a-92(b)(1)(D), which requires that structures in tidal wetlands and coastal waters be designed, constructed and maintained to minimize adverse impacts to coastal resources, circulation and sedimentation patterns, water quality, and flooding and erosion, to reduce to the maximum extent practicable the use of fill, and to reduce conflicts with the riparian rights of adjacent landowners;

- Section 22a-92(b)(1)(F), which requires the use of rehabilitation, upgrading and improvement of existing transportation facilities as the primary means of meeting transportation needs in the coastal area;

- Section 22a-92(b)(1)(I), which requires the protection, and where feasible, upgrade of facilities serving the commercial fishing and recreational boating industries; to maintain existing authorized commercial fishing and recreational boating harbor space unless the demand for these facilities no longer exists or adequate space has been provided; to design and locate, where feasible, proposed recreational boating facilities in a manner which does not interfere with the needs of the commercial fishing industry;

- Section 22a-92(b)(1)(J), which requires reasonable mitigation measures where development would adversely impact historical, archaeological, or paleontological resources that have been designated by the state historic preservation officer;

- Section 22a-92(b)(2)(B), which requires management of rocky shorefronts so as to ensure that development proceeds in a manner which does not irreparably reduce the capability of the system to support a healthy intertidal biological community; to provide feeding grounds and refuge for shorebirds and finfish, and to dissipate and absorb storm and wave energies;

- Section 22a-92(b)(2)(C), which requires the preservation of the dynamic form and integrity of natural beach systems in order to provide critical wildlife habitats, a reservoir for sand supply, a buffer for coastal flooding and erosion, and valuable recreational opportunities; that coastal uses are compatible with the capabilities of the system and do not unreasonably interfere with natural processes of erosion and sedimentation, and the encouragement of restoration and enhancement of disturbed or modified beach systems;

- Section 22a-92(b)(2)(E), which requires the preservation of tidal wetlands and the prevention of the despoliation and destruction thereof in order to maintain their vital natural functions; the encouragement of rehabilitation and restoration of degraded tidal wetlands and where feasible and environmentally acceptable, to encourage the creation of wetlands for the purposes of shellfish and finfish management, habitat creation and dredge spoil disposal;

- Section 22a-92(b)(2)(F), which requires the management of coastal hazard areas so as to ensure that development proceeds in such a manner that hazards to life and property are minimized and to promote nonstructural solutions to flood and erosion problems except in those instances where structural alternatives prove unavoidable and necessary to protect commercial and residential structures and substantial appurtenances that are attached or integral thereto, constructed as of January 1, 1995, infrastructural facilities or water-dependent uses;

- Section 22a-92(b)(2)(G), which requires the promotion, through existing state and local planning, development, promotional and regulatory programs, of the use of existing developed shorefront areas for marine-related uses, including but not limited to, commercial and recreational fishing, boating and other water-dependent commercial, industrial and recreational uses;

- Section 22a-92(c)(1)(B), which requires the disallowance of any filling of tidal wetlands and nearshore, offshore and intertidal waters for the purpose of creating new land from existing wetlands and coastal waters which would otherwise be undevelopable, unless it is found that the adverse impacts on coastal resources are minimal;

- Section 22a-92(c)(1)(I), which requires the management of the state's fisheries in order to promote the economic benefits of commercial and recreational fishing, enhance recreational fishing opportunities, optimize the yield of all species, prevent the depletion or extinction of indigenous species, maintain and enhance the productivity of natural estuarine resources and preserve healthy fisheries resources for future generations;

- Section 22a-92(c)(1)(L), which requires that projects promote the revitalization of inner city urban harbors and waterfronts by encouraging appropriate reuse of historically developed shorefronts, which may include minimized alteration of an existing shorefront in order to achieve a significant net public benefit, provided (i) such shorefront site is permanently devoted to a water-dependent use and the ownership of any filled lands remain with the state or an instrumentality thereof in order to secure public use and benefit in perpetuity, (ii) landward development of the site is constrained by highways, railroads or other significant infrastructure facilities, (iii) no other feasible, less environmentally damaging alternatives exist, (iv) the adverse impacts to coastal resources of any shorefront alteration are minimized and compensation in the form of resource restoration is provided to mitigate any remaining adverse impacts, and (v) such reuse is consistent with the appropriate municipal coastal program or municipal plan of development.

- Section 22a-92(c)(2)(A), which requires the management of estuarine embayments so as to ensure that coastal uses proceed in a manner that assures sustained biological productivity, the maintenance of healthy marine populations and the maintenance of essential patterns of circulation, drainage and basin configuration.

The Coastal Management Act defines "adverse impacts on coastal resources" as

including but not limited to:

- Degrading water quality through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics, heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity (C.G.S § 22a-93(15)(A));

- Degrading existing circulation patterns of coastal waters through the significant alteration of patterns of tidal exchange or flushing rates, freshwater input, or existing basin characteristics and channel contours (C.G.S § 22a-93(15)(B);

- Degrading natural erosion patterns through the significant alteration of littoral transport of sediments in terms of deposition or source reduction (C.G.S § 22a-93(15)(C),

- Degrading natural or existing drainage patterns through the significant alteration of groundwater flow and recharge and volume of runoff (C.G.S § 22a-93(15)(D));

- Increasing the hazard of coastal flooding through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones (C.G.S § 22a-93(15)(E));

- Degrading visual quality through significant alteration of the natural features of vistas and view points (C.G.S § 22a-93(15)(F));

- Degrading or destroying essential wildlife, finfish or shellfish habitat through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of the natural species or significant alteration of the natural components of the habitat (C.G.S § 22a-93(15)(G)); and

- Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or function (C.G.S § 22a-93(15)(H)).

Under the Tidal Wetlands Act, in the granting or denial of a permit, the Commissioner shall consider the effect of the proposed work on the public health and welfare, marine fisheries, shellfisheries, wildlife, and the protection of life and property from flood, hurricane and other natural disasters. *See* Conn. Gen. Stat. § 22a-33. Due regard must also be given to the preservation of tidal wetlands policy, which states that, "it is declared that much of the wetlands of this state has been lost or despoiled by unregulated dredging, dumping, filling and like activities and that the remaining wetlands of this state are all in jeopardy of being lost or despoiled by these and other activities, that such loss or despoliation will adversely affect, if not entirely eliminate:

- the value of such wetlands as sources of nutrients to finfish, crustacea and shellfish of significant economic value;

- that such loss or despoliation will destroy such wetlands as habitats for plants and animals of significant economic value;

- will eliminate or substantially reduce marine commerce, recreation and aesthetic enjoyment;

- and that such loss or despoliation will, in most cases, disturb the natural ability of tidal wetlands to reduce flood damage and adversely affect the public health and welfare;

- that such loss or despoliation will substantially reduce the capacity of such wetlands to absorb silt and will thus result in the increased silting of channels and harbor areas to the detriment of free navigation."

See Conn. Gen. Stat. § 22a-28.

The Tidal Wetlands Regulations set forth criteria upon which a proposed project should be reviewed and evaluated. *See* Conn. Regs. § 22a-30-10. In order to determine that a proposed activity will preserve the wetlands of the state and not lead to their despoliation and destruction the Commissioner shall, as applicable, find that:

- There is no alternative for accomplishing the applicant's objectives which is technically feasible and would further minimize adverse impacts;
- Any structure or fill will be no greater in length, width and height than necessary to accomplish its intended function;
- Pile supported construction will be used to the fullest extent practicable;
- All reasonable measures which would minimize the adverse impacts of the proposed activity on the wetlands of the state and adjoining coastal and tidal resources are incorporated as limitations on or conditions to the permit.

See Conn. Regs. § 22a-30-10(b).

In order to decide that a proposed activity will not destroy existing or potential recreational or navigational uses, the Commissioner shall, as applicable, find that:

- The proposed activity will not unreasonably interfere with established public rights of access to and use of wetlands, or with access to the portion of the shoreline below the mean high tide elevation that is held in public trust by the state, or with access to and use of public recreational facilities, both in operation and planned;
- The proposed activity will not be located in a way which unreasonably interferes with a navigable channel or small craft navigation;
- The proposed activity will not cause or contribute to sedimentation problems in adjacent or nearby navigable waters, navigation channels, anchorages or turning basins.

See Conn. Regs. § 22a-30-10(c).

In order to decide that a proposed activity will not cause or produce unreasonable erosion or sedimentation the Commissioner shall, as applicable, find that:

- The proposed activity will not cause significant changes in current patterns, water velocity or exposure to storm or wave conditions which result in adverse effects on erosion or sedimentation patterns;

- Temporary erosion control measures will be utilized on the project site both during and after construction;

- When permanent erosion control measures are proposed, non-structural alternatives are utilized unless structural alternatives are demonstrated to be unavoidable and necessary to protect infrastructural facilities, water-dependent uses and existing inhabited structures;

- Any structure or fill shall not cause a significant adverse impact on the movement of sediments on or along the shoreline; not cause erosion of adjacent or downdrift areas; if necessary, include provision for the transfer of sediment to downdrift areas to prevent those areas from being deprived of sediments;

- The perimeter of all areas proposed to be filled, dredged or excavated are suitably stabilized to prevent spillover or erosion of material into adjoining wetland or watercourse areas;

- When areas are proposed to be dredged, they are laid out so as to make the best practical use of existing water depths; they are designed to avoid siltation of any existing natural or established navigation channel; the best available methods are used to reduce sedimentation.

See Conn. Regs. § 22a-30-10(d).

In order to determine that a proposed activity will not result in significant adverse impacts on marine fisheries, shellfisheries or wildlife, the Commissioner shall, as applicable, find that:

- The existing biological productivity of any wetland will not be unreasonably affected;

- Habitat areas, such as habitat of rare and endangered wildlife and fish species, will not be destroyed, filled, or otherwise unreasonably affected;

- Wildlife and their nesting, breeding or feeding habitats will not be unreasonably reduced or altered;

- Erosion from the proposed activity will not result in the formation of deposits harmful to any fish, shellfish or wildlife habitat;

- Shellfish beds will not be adversely affected by changes in Water circulation and depth patterns around and over the shellfish beds; natural relief of shellfish beds; grain size and distribution of sediment in shellfish beds;

- The timing of construction activities takes into consideration the movements and life stages of fish, shellfish, and wildlife;

- The proposed activity will not unreasonably interfere with the harvesting or maintenance of leased, franchised or natural shellfish beds.

See Conn. Regs. § 22a-30-10(e).

In order to decide that a proposed activity will not result in a significant adverse impact on the circulation and quality of coastal or tidal waters the Commissioner shall, as applicable, find that:

- The proposed activity will not cause the significant adverse alteration of patterns of tidal exchange or flushing rates, freshwater input or existing basin characteristics and channel contours;
- Water stagnation will be neither caused nor contributed to, and the ability of wetlands and adjacent water bodies to flush themselves will not be adversely affected;
- Pile-supported construction will be utilized to the fullest extent practical;
- The proposed activity will not result in water pollution which unduly affects: the bottom fauna; the physical or chemical nature of the bottom; the propagation and habitats of shellfish, finfish and wildlife.

See Conn. Regs. § 22a-30-10(f).

In order to decide that a proposed activity is consistent with the need to protect life and property from hurricanes or other natural disasters, including flooding, the Commissioner shall, as applicable, find that:

- The proposed activity will not increase the potential for flood or hurricane damage on adjacent or adjoining properties;
- The proposed activity will not increase the exposure of any property, land or structures to damage from storm waves and erosion produced thereby;
- The proposed activity will not result in significant increase in the velocity or volume of flood water flow both in streams and estuaries;
- The proposed activity will not significantly reduce the capacity of any stream, river, creek or other water course to transmit flood waters generated by hurricanes or other storm events and will not result in significantly increased flooding either up or downstream of its location.

See Conn. Regs. § 22a-30-10(g).

In order to decide that a proposed activity within the coastal boundary, as defined and mapped in accordance with section 22a-94 of the General Statutes as amended by section 4 of Public Act 79-535, is consistent with the state policy that water-dependent uses of the shorefront be given highest priority and preference, the Commissioner shall, as applicable, find that:

- All reasonable measures which would minimize adverse impacts on future water-dependent uses are incorporated as limitations on or conditions to the permit;
- The proposed activity will not unreasonably interfere with the riparian rights of adjacent landowners or claimants of water or shellfish rights in or adjacent to the wetlands.

See Conn. Regs. § 22a-30-10(h).

Under the Tidal Wetlands Regulations, the following activities are generally incompatible with the functions of wetlands and with established public policy for their management: dredging; filling; installation of electric, gas, water or other utilities which would change the natural contours of the wetland or prevent reestablishment of wetland vegetation or impede tidal circulation; installation of drainage control structures such as dry wells, retention basins, filters, open swales, or ponds; disposal of dredged materials; grading; excavation; construction of solid fill docks; construction of bulkheads, groins, revetments, berms and other shoreline stabilization structures; construction of commercial or industrial use facilities or public buildings which do not require water access, and construction of water-dependent commercial or industrial use facilities or public buildings on fill. *See* Conn. Regs. § 22a-30-11(c).

In light of the overlapping statutory requirements, the proper analysis of the Project's compliance with the applicable statutes focuses on the major topics highlighted within the exhibits and testimony in the record.

B. Expert Testimony

When considering technically complex issues, administrative agencies typically rely on experts. *See River Bend Associates, Inc. v. Conservation & Inland Wetlands Commission*, 269 Conn. 57, 78 (2004) (determination of impacts to an inland wetland is a technically complex matter for which inland wetlands commissions typically rely on evidence provided by experts). "When the application of agency regulations requires a technical, case-by-case review, that is precisely the type of situation that calls for agency expertise." *MacDermid v. Dep't of Environmental Protection,* 257 Conn. 128, 139 (2001). The issues raised in this proceeding are also the type of issues on which the Department may rely on its own expertise. *See Connecticut Building and Wrecking Co. v. Carothers*, 218 Conn. 580, 593 (1991) ("An agency composed of [experts] is entitled . . . to rely on its own expertise within the area of its professional competence.")

John Henshaw, Michael J. Garbolski, Marlin Peterson, Dennis Lowry, Kristoffer J. van Naerssen, Edward Morin, Sean Maxwell, Timothy O'Sullivan, Pamela Neubert, Yan Zhang, Micheal Grzywinksi and Bruce Williams each testified whether, in their expert opinion, the Project complied with the relevant statutory criteria. DEEP-15; DEEP-17; APP-22a; APP-23; APP-24; APP-25; APP-26; APP-27; APP-28; APP-29; APP-30; APP-32; *see generally* Hearing Transcript, 3/30/21, starting at 00:23:36. All responded that the Project complied. These expert opinions were credible and provide a substantial basis in fact upon which the Hearing Officer may base his recommendation. No expert evidence was offered to refute their opinions. *See Feinson v. Conservation Comm'n,* 180 Conn. 421, 429 (lay commission must accept expert testimony). The analysis that follows is intended to amplify the general conclusions reached by these experts and provide context for the recommendation that the proposed Draft License should be issued as a Final License.

C. The Public Trust and the Applicant's Littoral Rights

It is well settled that owners of waterfront property have the right to erect structures to reach navigable waters.

> The owner of the adjoining upland has certain exclusive yet qualified rights and privileges in the waters and submerged land adjoining his upland. He has the exclusive privilege of wharfing out and erecting piers over and upon such soil and of using it for any purpose which does not interfere with navigation, and he may convey these privileges separately from the adjoining land. He also has the right of accretion, and generally of reclamation, and the right of access by water to and from his upland.

Rochester v. *Barney*, 117 Conn. 462, 468 (1933). However, the Applicant's littoral rights are subject to reasonable regulation. Connecticut courts have recognized that "the state may regulate [the exercise of littoral rights] in the interest of the public." *Lane v. Comm. of Envtl. Protection*, 136 Conn. App. 135, 157-58 (2012). As stated in the recent Superior Court decision in *Nussbaum v. Commissioner of the Dept. of Energy and Environmental Protection*:

> [T]he hearing officer also considered and contrasted the Plaintiff's littoral rights which, as a shore property owner, do authorize him to use the intertidal area, subject to the applicable statutes and regulations, and subject to the public's rights. These rights are ancient common-law rights that are subject to a balancing against the public's right to access the public trust. Thus, littoral rights include the right to wharf out into the water, and to build a pier, dock or other structure whose purpose is to facilitate the coastal landowner's access to and use of the water. These rights are not absolute and have been properly regulated.

Nussbaum v. Dep't of Energy & Envtl. Prot., 2019 WL 6742078, at *5 (Conn. Super. Ct. Nov. 14, 2019). "An evaluation of these competing rights typically requires that the rights of the littoral property owner to wharf out be balanced against the right of the public to access the public trust." *In the Matter of Heerdt*, Application No. 201810092-SDF, Proposed Final Decision, Feb. 3, 2020, p. 4, adopted in *Final Decision*, Jan. 22, 2021; *see also, Nussbaum, supra*, at *2 ("[T]he Commissioner was required to consider and balance the private landowner's property rights with the state's and the public's interest and rights in land which is held in public

trust to determine whether the structure . . . unreasonably impairs the public rights in view of the balance of rights.");

Within the permitting regime created by the applicable statutes, the Department seeks to ensure than an application minimizes intrusion into the public trust. The record in this matter reveals that these competing rights are well balanced. The Property already has two existing piers that extend into the waters of New London Harbor – the State Pier and the CVRR Pier. Both have existed for many decades, since 1914, and represent an existing encroachment into public trust waters and an exercise of the littoral rights of the Applicant's predecessors in interest, including the State of Connecticut, which once owned the Property. The Applicant does not propose any further waterward encroachment of structures into New London Harbor. Rather, it proposes to improve the existing piers within their current footprints and fill the area between the two piers to create the Central Wharf area. Therefore, the analysis of the impact on the public's rights focuses on the loss of the approximately 7 acres that is proposed to be filled.

First, the Property is operated as a Maritime Security ("MARSEC") facility pursuant to Coast Guard regulations and does not permit upland access to the general public. DEEP-3B; DEEP-3FF; DEEP-6; APP-22a. As such, there is no public access from the upland portion of the Property to public waters and there are no plans to allow public access across the Property following construction of the Project because the area will be an active marine terminal with MARSEC protocols that will continue to prohibit public access. Therefore, there is no proposed change, and thus no adverse impact, on the public access to public waters from the Property due to the Project.

Second, the fact that the proposed Central Wharf will occupy an area where a structure previously did not exist does not *ipso facto* create an unreasonable impact on the public's rights.

If that was the case, no new coastal structures could be built in Connecticut. Rather, the rights of the public must be balanced against the rights and goals of the Applicant and the applicable statutory criteria to result in a structure that does not unreasonably impair the public's rights.

No cargo vessels currently berth between the piers on a regular basis. APP-22a. While filling between the piers will result in a loss of berthing space at the Property, that space was underutilized and its loss, in exchange for the creation of the Central Wharf area, will result in an overall enhancement of the Property's ability to handle a wide variety of cargo, including bulk, breakbulk and project-related cargo, in addition to WTG operations. The loss of berthing space does not represent a negative impact on the public's rights, but is rather a decision by the Applicant to reconfigure its commercial port structures to accommodate a new water-dependent use.

The area between the piers is also not subject to active public navigation and is not available to the general public for berthing. DEEP-3B; DEEP-6; APP-22a. Access to the area between the piers and access to Property from the water is restricted due to MARSEC security protocols, site safety restrictions, and commercial activities. DEEP-3B; DEEP-3FF; DEEP-6; APP-22a. As such, while the Project would permanently eliminate the public's ability to use the waters between the State Pier and CVRR Pier, the creation of the Central Wharf complies with CMA policies – principally C.G.S. § 22a-92(c)(1)(L), which encourages the revitalization of inner city urban harbors and waterfronts – and overall use of public trust waters will not be changed significantly, due to the limited existing access to the specific area between the piers and the fact that public access to other areas within New London Harbor will not be negatively affected by the Project.

Lastly, public access to the Thames River Boat Launch and parking areas will not be affected during the construction phase of the Project or following the completion of construction. DEEP-3B; DEEP-6; APP-22a. Therefore, there will be no unreasonable interference with the use of public recreational facilities by the Project and, thus, no negative impact on the public's rights in that regard.

In conclusion, given the existing limited public access rights to the area affected by the Project, the proposed activities will not unreasonably interfere with established public rights to access the shoreline below mean high water or the waters of the State and the Project is a reasonable exercise of the Applicant's littoral rights in compliance with the applicable statutory and regulatory criteria.

D. Impacts on Sedimentation and Erosion

The intertidal areas of the Project footprint include developed shorefront, rocky shorefront and sandy shorefront. The majority of the shoreline is developed shorefront, characterized as existing riprap or granite block and steel sheet pile pier and bulkhead faces. DEEP-3B; DEEP-6; DEEP-3R; DEEP-3S; APP-2; APP-25. Rocky shorefront, consisting of erosion-resistant boulders and cobble, is present on the extreme western corner of the Property and north of the Northeast Bulkhead around Winthrop Point to the State boat launch. *Id.* The extreme western corner of the Property also contains a small pocket beach/sandy shorefront. *Id.* The rocky and sandy shorefront areas are generally unvegetated. DEEP-3S; APP-25. A soil erosion control plan has been developed to minimize soil erosion and sedimentation throughout the duration of the Project, as well as a turbidity monitoring plan to be followed during in-water activities, both of which will implement best management practices that control soil detachment, control water movement and control sediment deposition. DEEP-3B; DEEP-3G; DEEP-3R; DEEP-3FF; DEEP-6; APP-9; APP-24; APP-25; APP-26.

Due to the nature of the area to be impacted by the Project – mostly developed shorefront areas that are already bulkheaded and, thus, not a source of sediment – and the proposed erosion control plan, the Project will have little impact on sediment transport through erosion of the intertidal zone or upland areas. DEEP-6; DEEP-3R. The Project is also very unlikely to cause or produce unreasonable erosion or sedimentation and the existing relationship between eroding and depositional coastal landforms (to the extent it currently exists) will remain. APP-24; APP-25.

E. Impacts on Flooding

The Property is currently split between two FEMA Flood Insurance Rate Map (FIRM) panels and is comprised of FEMA Flood Hazard Zones, Zone VE (Elevation 14 ft), Zone AE (Elevation 11 ft) and Zone X. The Project will result in the pier area, shoreline and upland area being graded to a relatively level surface ranging in elevation from 7.75' to 9' NAVD88, which is required in order for the Property to function as a modern marine terminal, including its anticipated use as an offshore WTG staging port. DEEP-3B; DEEP-6; APP-32; APP-33; M. Peterson Test, 3/30/21, 01:26:21 - 01:30:20. The largest grade change is in the upland hill area which will be graded down to approximately 8' to 9' NAVD88 to be consistent with the adjacent upland. APP-32. As a condition of the Draft License (DEEP-11), prior to commencement of work authorized, the Applicant was required to file a Conditional Letter of Map Revision ("CLOMR") with FEMA. DEEP-11. The CLOMR was filed in March 2021. APP-32; APP-33. The CLOMR was submitted to capture the proposed changes to the base flood elevations and the FIRM mapping change resulting from upland grade changes to the Property. *Id.* The removal of the upland hill will result in a mapping change in that area from Zone X to Zone AE (Elevation 11 ft). *Id.* The proposed FIRM mapping change is solely caused by the removal of the hill and does not affect the outer limit of the base flood inundation. APP-32; APP-33; M. Peterson Test,

3/30/21, 01:26:21 - 01:27:48. There will be no other structures impacted by either of these changes. APP-32; APP-33.

Therefore, the Project, as designed: (1) is not expected to adversely alter coastal flooding on the Property or neighboring properties; (2) will not alter the flood inundation characteristics beyond the Property under the 100-year coastal storm condition; and (3) will not result in the significant increase in the velocity or volume of flood water flow in the Thames River estuary and will not reduce the capacity of the Thames River to transmit flood waters generated by any storm event. DEEP-6; APP-32.

F. Impact to Coastal Resources

The identified coastal resources found on the Property and in its vicinity are developed shorefront, rocky shorefront, sandy shorefront/beach, nearshore waters, off-shore waters and associated benthic habitat and coastal hazard areas. DEEP-3B; DEEP-6; DEEP-3R; DEEP-3S; DEEP-3T; APP-25; APP-26-; APP-28; APP-29; APP-30. The area between the piers contains sediments comprised of anoxic black silty mud with some minor zones of black sand/black gravel. DEEP-3T; APP-25; APP-30. The benthic infaunal community in that area is typical of anthropogenically disturbed southern New England estuarine habitat. DEEP-3T; APP-25; APP-30. The benthic communities between the piers are consistent with the long-term use of the area as an active port with a largely developed shorefront, being comprised of opportunistic species that rapidly colonize benthic habitat after disturbance. DEEP-3T; APP-25; APP-30. No shellfish species or eelgrass were found between the piers. DEEP-3T; APP-25; APP-30.

Fill impacts to those coastal resources associated with the existing developed shorefront are anticipated to be minimal in nature, as the algal and macroinvertebrate community currently present on the existing bulkhead areas, within the developed shorefront, are anticipated to quickly recolonize the new bulkheads. DEEP-3R; DEEP-3T; DEEP-3FF; APP-9; APP-10; APP-

25; APP-26; APP-28; APP-29; APP-30. The benthic habitat assessment concluded that there will not be discernable functional impacts to the Thames River estuary as a result of the Project. DEEP-3T; APP-25; APP-30. Fill impacts will have direct and indirect effects to the physical, chemical and biological properties of nearshore and offshore waters, but as discussed below, the proposed filling activities comply with the permitting criteria. DEEP-3R; DEEP-3T; APP-9; APP-10; APP-25; APP-26; APP-28; APP-29; APP-30.

Water quality effects from fill activities include temporary changes to water turbidity, water chemistry and dissolved oxygen, but these impacts will be highly localized and rapidly diminish with the cessation of construction activities. Chemical impairment to the water column from fill activities might occur if chemical contaminants exist within the sediment and such sediment is re-suspended into the water column; however, even if this were to happen, these impacts will be temporary and localized in nature (since all filling is proposed to occur behind the new bulkhead between the State Pier and CVRR Pier) and not likely to pose a significant risk to human health or the environment. DEEP-3R; DEEP-3X; APP-25

Dredging and rock pad installation will affect nearshore waters by conversion of shallower waters to deeper nearshore or offshore waters, conversion of generally soft substrates to rocky substrates, and will have direct impacts to the benthic community due to substrate and organism removal and temporary impacts to water quality and fisheries. DEEP-3R; DEEP-3T; APP-9; APP-10; APP-25; 26. Water quality effects from dredging activities include temporary changes to water turbidity, water chemistry and dissolved oxygen, but these impacts will be highly localized and rapidly diminish with the cessation of construction activities. DEEP-3R; APP-25. Chemical impairment to the water column from dredging activities might occur if chemical contaminants are present within the sediment, and portions of the sediment are re-

suspended into the water column during the process of removing it from the river, but these impacts will be temporary and localized in nature and not likely to pose a significant risk to human health or the environment. DEEP-3R; DEEP-3T, DEEP-3X; APP-25.

Construction period impacts will be temporary in nature and will not have long-term effects on biological resources or human use in the area. The final Project schedule will be determined by multiple factors including regulatory approvals, contracting and other variables. To protect spawning species, and as based on input from DEEP Fisheries, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, and the Bureau of Aquaculture, a "no in-water-work" window is anticipated annually from June through September, with the understanding that select, confined in-water Project activities may progress behind sheeting and/or turbidity curtains once established during this period. DEEP-3B; DEEP-3G; DEEP-3J; DEEP-3R; DEEP-3WW; DEEP-11; APP-9; APP-10; APP-23; APP-24; APP-25; APP-26; APP-28; APP-29; APP-30.

The Project minimizes coastal resource impacts to the maximum extent practicable. Where impacts to coastal resources are unavoidable, mitigation measures are proposed and will be implemented. DEEP-3B; DEEP-3R; DEEP-3S; DEEP-3T; DEEP-3DD; DEEP-3EE; DEEP-3FF; DEEP-6; APP-9; APP-10; APP-22a; APP-23; APP-24; APP-25; APP-26; APP-27; APP-28; APP-29; APP-30; APP-32. The Project proposes the implementation of a living shoreline, the objective of which is to enhance shoreline resource areas to provide coastal storm surge softening and improved fisheries, mollusk, tidal wetland and buffer habitat. DEEP-3B; DEEP-3R; DEEP-3S; DEEP-3EE; DEEP-3FF; DEEP-6; DEEP-11; APP-10; APP-22a; APP-23; APP-24; APP-25; APP-26; APP-28; APP-29; APP-30. The Draft License authorizes the creation of the living shoreline and includes a condition that the Applicant "submit to the Commissioner for

her review and written approval a Living Shoreline Wetland Creation Plan." DEEP-11; D. Lowry Test., 3/30/21, 02:07:25 - 02:10:34; B. Williams Test., 3/30/21, 02:48:08 - 02:49:08, 02:50:09 - 02:55:29, 02:58:31 - 03:06:45. As additional mitigation for fisheries habitat, the Applicant has worked with DEEP and USACE to identify viable and appropriate fisheries projects that need funding. *Id.; see also* APP-25; APP-26; APP-30. As a condition of the Draft License, the Applicant shall execute an Escrow Agreement for a fisheries management plan and mitigation plan for restoration projects as approved by DEEP. DEEP-11.

The Applicant has met its burden to show, through the presentation of substantial evidence, that the Project, as conditioned by the Draft License, minimizes impacts to these coastal resources in compliance with Conn. General Statutes §§ 22a-359; 22a-92(a)(1), 22a-92(a)(2), 22a-92(a)(3), 22a-92(a)(4), 22a-92(a)(5), 22a-92(a)(9), 22a-92(a)(10), 22a-92(b)(1)(A), 22a-92(b)(1)(C), 22a-92(b)(1)(D), 22a-92(b)(1)(F), 22a-92(b)(1)(I), 22a-92(b)(1)(J), 22a-92(b)(2)(B), 22a-92(b)(2)(C), 22a-92(b)(2)(E), 22a-92(b)(2)(F), 22a-92(b)(2)(G), 22a-92(c)(1)(B), 22a-92(c)(1)(I), 22a-92(c)(1)(L), 22a-92(c)(2)(A); 22a-93(15)(A)-(H); 22a-33; 22a-28; and Conn. Regs. §§ 22a-30-10(b)-(h), 22a-30-11(c).and provides mitigation for those impacts that are unavoidable. Department staff determined that there would be no unacceptable adverse impacts to the coastal resources, including: wildlife, shellfish, finfish, developed shorefront, water quality, and navigation. Although the coastal waters will be temporarily impacted by the filling and dredging, Department staff concluded that there would be no long-term environmental impacts from the Project.

G. Mitigation

There is an abundance of evidence in the record that the Project was designed to avoid and minimize environmental impacts, including in the construction phase. DEEP-15; APP-9; APP-25; APP-26. This includes environmental impacts to wetland resources and state and

federal listed species. APP-29. Part of the Project is a construction monitoring program from April through June as part of a Peregrine Falcon Protection Plan, included in the Project after consultation with DEEP Wildlife Division, which requires that any construction activities within 600' of an observed peregrine falcon nest be monitored and appropriately controlled with the assistance of an ornithologist. DEEP-6; DEEP-15; APP-29. The minimization measures also include "no in-water-work" windows during certain times of the year to reduce impacts to marine resources and protect spawning species, which were included in the Project after consultation with DEEP and the Bureau of Aquaculture. DEEP-15; APP-9; APP-25; APP-26; APP-28. DEEP concluded that the time of year restrictions can be used for the protection of finish, shellfish and other species, and that the Draft License has sufficient seasonal conditions. M. Grzywinski Test., 3/30/2021, 02:30:48 - 02:31:41; *see* DEEP-11.

The record also supports the conclusion that any potential environmental impacts from the Project, identified and discussed separately herein in prior sections, that were not able to be addressed through project design or permit conditions will be appropriately mitigated. DEEP-15. The mitigation for the Project has a multi-prong approach. D. Lowry Test., 3/30/2021, 02:07:36. The first component to the approach is a living shoreline project. D. Lowry Test., 3/30/2021, 02:07:47. Although there are no tidal wetlands in the area located between the CVRR Pier and the State Pier, as part of the mitigation for any unavoidable environmental impacts associated with the Project, there is a condition in the Draft License requiring that the Applicant submit for the Commissioner's approval a Living Shoreline Wetland Creation Plan to enhance existing tidal wetlands for the proposed loss of benthic substrate. DEEP-6; DEEP-11. The living shoreline is the primary reason why the Project came under the jurisdiction of the Tidal Wetlands Act, nonetheless all requirements of the Act were reviewed and determined to be met. M. Grzywinski

Test., 3/30/2021, 02:37:28 - 02:38:02. The living shoreline provides onsite mitigation, but was insufficient for the entire Project; so offsite mitigation was also required by DEEP as part of the mitigation package for the Project. B. Williams Test., 3/30/2021, 02:48:16 - 02:49:00. Therefore, in addition to the living shoreline project, DEEP Fisheries Division also recommended compensatory mitigation for impacts to fish habitat caused by the dredging and filling activity associated with the Project. DEEP-6; DEEP-17.

The record reflects that compensatory mitigation was selected for this Project as the best mechanism to mitigate these impacts because the consensus among fisheries professionals is that artificial, in-kind or on-site replacement of lost fish habitat is not a feasible mitigation strategy. DEEP-6; DEEP-17; B. Williams Test., 3/30/2021, 03:01:10. Due to these technical constraints regarding opportunities for on-site mitigation, for this Project, DEEP looked to offsite opportunities for mitigation. M. Grzywinski Test., 3/30/2021, 02:36:50 - 02:36:58. To meet this requirement, the record reflects that the Applicant has worked with both DEEP and USACE to identify viable and appropriate fisheries projects that needed funding to serve as the compensatory mitigation piece for impacts of the Project. APP-25; APP-26; APP-30. Such compensation is targeted for the resource that is impacted and the intent of DEEP with this Project was to direct the compensation towards impacted fisheries resources, and not just any variety of environmental project as might have been done historically, but now is something DEEP seeks to avoid, with the clear intent in this Project to direct mitigation to impacted fisheries resources. B. Williams Test., 3/30/2021, 02:49:43 - 02:50:16. DEEP also concluded that the selected mitigation projects should specifically restore, enhance, and protect the fisheries resources in Connecticut, and included fishways and dam removal projects. DEEP-17; B. Williams Test., 3/30/2021, 03:01:19 - 03:01:38.

Work on the second prong of the multi-prong mitigation approach for the Project, involving the Applicant and DEEP Fisheries, dates back over the last two years and includes meetings for the purpose of identifying eligible enhancement projects to mitigate the impacts. D. Lowry Test., 3/30/2021, 02:09:05 - 02:09:32. In selecting projects for inclusion in the mitigation package for this Project, DEEP would not select a project outside the scope of fisheries resources to mitigate a fisheries related impact, in order to try to best offset the impact to the affected resource. B. Williams Test., 3/30/2021, 02:59:23 - 03:00:09. Therefore, as another condition of the Draft License, and to effectuate the performance of the fisheries impacts related mitigation, the Applicant is required, and has repeatedly expressed its intent on the record to execute, an Escrow Agreement for fisheries mitigation and restoration projects that have been identified and approved by DEEP for incorporation into the agreement. DEEP-11; APP-25; APP-26; APP-30.

Evidence in the record reflects that this same approach of securing compensatory mitigation of impacts through a project escrow agreement was used in four similar DEEP permit application matters involving the Fishers Island Ferry District application located in New London (#199501565-PF), Electric Boat Corporation in Groton (201807501-SDFWQC), Cross Sound Ferry (201906592-SDFWQC) and Harbour House Condominium Association (201908880-SDFWQC). DEEP-6; DEEP-17. The record also supports a finding and conclusion that in selecting suitable compensatory mitigation projects for inclusion in the Escrow Agreement for this Project, DEEP besides selecting appropriate projects to address the impact as discussed above, also selected projects that are highly likely to be capable of implementation within a short timeframe in order to actually effectuate mitigation for project impacts in a timely fashion. DEEP-17; B. Williams Test., 3/30/2021, 02:51:22 - 02:52:18 (Stating, we want to see that these projects can be done efficiently, unfortunately too many groups come forward with

projects that are unrealistic, do not have an environmental benefit or have an unrealistic timeframe.). In terms of how this affects project selection, the record reflects that DEEP Fisheries permit staff assigned to review coastal permits are aware of any coastal projects that are in any way beyond the preliminary stages of development, for consideration. B. Williams Test., 03:05:24 - 03:06:17. With the inclusion of twelve projects in Tier I of the Escrow Agreement (at DEEP-11) that are already in active development and are ready for implementation within twelve months from the execution of the escrow, and identifying additional Tier II projects that can be implemented in the same timeframe in the event a Tier I project cannot be implemented, the Applicant through this condition will be able to timely address any impacts to fisheries resources. DEEP-17; B. Williams Test., 3/30/2021, 02:51:57 - 02:52:50; 03:03:53 - 03:04:02.

In regard to the specific benefits of the mitigation package, the record reflects that multiple Tier I projects identified in the Escrow Agreement are in the Thames River watershed. D. Lowry Test., 3/30/2021, 02:09:56. All projects in the Escrow Agreement will provide further benefit to migratory fish species impacted by the Project by reconnecting marine and freshwater habitats. DEEP-17. Therefore, the evidence in the record supports a finding and conclusion that the mitigation projects contained in the Escrow Agreement address the environmental impact of the Project on fisheries resources, including in particular the impacts to Winter Flounder, that result from filling activity in the area between the State Pier and CVRR Pier and also the dredging activity associated with creating two vessel berthing areas. DEEP-17. The record also supports the conclusion that these fisheries enhancement measures identified by DEEP in the Escrow Agreement are anticipated to have an overall net improvement in fisheries resources along the Connecticut coastal area compared to the anticipated direct impacts of the Project and have a net benefit on the marine ecosystem. APP-30; P. Neubert Test., 3/30/2021, 01:07:19 - 01:08:57.

This mandated mitigation will provide enhanced resources through the creation of reef habitat and coastal resiliency. APP- 30.

On the issue of mitigation, the record unquestionably supports the conclusion that the Applicant has met its burden to show, through the presentation of substantial evidence, that the Project, as conditioned by the Draft License, mitigates any environmental impacts to coastal resources in compliance with the Coastal Management Act, General Statutes Sections 22a-90 to 22a-111, inclusive, and specifically Section 22a-92(c)(1)(L), and the State policy promoting the revitalization of inner city urban harbors and waterfronts, provided under subsection (iv) that "the adverse impacts to coastal resources of any shorefront alteration are minimized and compensation in the form of resource restoration is provided to mitigate any remaining adverse impacts." DEEP concluded that this provision of the Act allows for offsite compensation for impacts which is specifically authorized to promote revitalization of a city port as in this Project. M. Grzywinski Test., 3/30/2021, 02:34:19 - 02:35:44; *see also* DEEP-15.

H. Impacts on Water-Dependent Uses

As discussed above, the principal statute governing water-dependent activities in Connecticut is the Coastal Management Act, Conn. Gen. Stat. § 22a-90 *et. seq*. The policies of the Act guide coastal zone development and regulatory activities. *Id.* Issuance of permits under the program requires a balancing of rights. *Nussbaum v. Dep't of Energy & Envtl. Prot.*, 2019 WL 6742078, at *4-5 (Conn. Super. Ct. Nov. 14, 2019). The Act at Sections 22a-92(a)(3), 22a-92(b)(1)(A), and 22a-92(c)(1)(L)(i) of the General Statutes, requires that high priority and preference be given to uses and facilities which are dependent upon proximity to the water or the shorelands immediately adjacent to marine and tidal waters, with the final cited provision specifically focusing on water-dependent uses in the revitalization of ports. Water-dependent uses are defined in section 22a-93(16) of the Act as:

> …those uses and facilities which require direct access to, or location in, marine or tidal waters and which therefore cannot be located inland, including but not limited to: Marinas, recreational and commercial fishing and boating facilities, finfish and shellfish processing plants, waterfront dock and port facilities, shipyards and boat building facilities, water-based recreational uses, navigation aides, basins and channels, industrial uses dependent upon water-borne transportation or requiring large volumes of cooling or process water which cannot reasonably be located or operated at an inland site and uses which provide general public access to marine or tidal waters;

In evaluating this issue, a review of the history is relevant. The record reflects that during its history, the Project site was used by the Navy, under the operation of the CT DOT, and space at the site was also rented to commercial fishermen and an aquaculture operation. DEEP-6. In its more recent history, the Project site was used for breakbulk operations for steel, coil steel, lumber, copper billets and salt storage. *Id*. Cargo ships have docked at the existing State Pier primarily utilizing the east side, with only occasional use of the west side of the State Pier or the east side of the CVRR Pier. *Id.* The Project and its new Central Wharf are expected to provide significant operational improvements over existing conditions for water-dependent uses, including housing a regional WTG assembly facility. *Id.* As part of its review of the application for the Project for consistency under the Coastal Management Act, DEEP made the determination that the Applicant's proposed use, including the offshore WTG assembly use, is a water-dependent use compliant with all applicable standards. DEEP-3FF; M. Grzywinski Test., 3/30/2021, 02:29:23 - 02:30:19. DEEP also determined that the Act's policy favors allowing modifications to shorelines to help revitalize ports and that the Project proposal is consistent with that policy. M. Grzywinski Test., 3/30/2021, 02:32:44 - 02:34:09. DEEP further determined that the Project will not have an adverse impact on future water-dependent uses at the site. M. Grzywinski Test., 3/30/2021, 02:43:52 - 02:44:19. In particular, DEEP found that a restart of the import of road salt is one of the many water-dependent uses that can be accommodated at the site. M. Grzywinski Test., 3/30/2021, 02:44:20 - 02:44:48; see also, M. Peterson Test.,

3/30/2021, 01:51:09 - 01:51:38 (describing how the facility is suitable for a road salt business in the future). In addition, in terms of two to three commercial fishing vessels that use the CVRR Pier as their home port, but whose contract has expired, the Applicant is working with the commercial fishermen as required by condition six of the Draft License to find a relocation or accommodation, and the currently preferred and nearly finalized option is to allow them to stay in an area on site. DEEP-11; J. Henshaw Test., 3/30/2021, 02:19:08 - 02:21:48.

In addition to the above evidence in the record regarding the ability to accommodate and not impair future water-dependent uses, the record also reflects that the Bureau of Aquaculture was contacted about the Project and stated that there are no state deeded or leased grounds in the project area. DEEP-6. Therefore, there are no concerns about shellfish rights with this Project. Also, the record supports the finding that the Project will not have an adverse impact on the rights of riparian and adjacent landowners, given that the subject Property is already developed as an industrial port and the surrounding shoreline is developed for industrial and commercial marine uses already. APP-24.

In conclusion, with respect to the issue of water-dependent uses, the record supports the conclusion that the Applicant has met its burden to show, through the presentation of substantial evidence, that the Project, as conditioned by the Draft License is consistent with the provisions of the Coastal Management Act covering water-dependent uses and with the corresponding provisions of Conn. Regs. § 22a-30-10(h).

I. Alternative Analysis

Alternatives to the proposed filling of the Central Wharf area, including a "No Build" option and a pile-supported deck, were considered and determined to not be prudent or feasible, and would either have comparable environmental impacts as the filling between the piers – in the case of a pile-supported structure – or fail to allow the Applicant to make the necessary upgrades

to the State Pier Facility – in the "No Build" scenario. DEEP-3DD; APP-22a; APP-23; APP-24; D. Lowry Test., 3/30/21, 02:12:27 - 02:14:43. Accordingly, the alternatives assessment supports the finding that the Project, including the proposed filling between the piers, is the least damaging practicable alternative from the standpoint of environmental impacts. *Id.*

J. Visual Impacts

The applicable statutory scheme provides that "degrading visual quality through significant alteration of the natural features of vistas and viewpoints" is included in the definition of "adverse impact to coastal resources." General Statutes § 22a-93(15)(F). This section is intended to preserve views of particular statewide significance. *See Coen v. Ledyard Zoning Comm'n,* 2011 Conn. Super. LEXIS 2663 (Conn. Super. Ct., Oct. 19, 2011) (affordable housing development did not degrade view of coastal resource despite being 40' in height and exceeding zoning regulations by 5'). Moreover, development which changes a view does not necessarily have an adverse impact. *Smith v. Zoning Bd. of Appeals*, 1991 Conn. Super. LEXIS 771 (Conn. Super. Ct. 1991).

The Property is visible from two state parks, Fort Griswold, approximately 2,880' to the east in the City of Groton, and Fort Trumbull, approximately 4,770' to the south in the City of New London. DEEP-6; *see also* APP-1 (providing distances from nearest edge of Project site to closest point of both state parks). The only proposed regulated activity which could possibly have any impact on views of the Property is the creation of the Central Wharf; however, such construction will not significantly alter or degrade the current view of the Property from either state park. When WTG operations are underway at the Property (as shown in the renderings in DEEP-3MM), there will be times when the views from the state parks will include the wind turbine towers and vessels used for wind turbine construction. This view, however, will be temporary, since WTG operations are not expected to occur year-round, and will be in character

with the Property's long-time use as a commercial marine terminal used for the import and export of goods, and the temporary berthing of vessels engaged in such activities. DEEP-6; APP-22a. Use of the Property for the handling of traditional breakbulk cargo will be similar to current activities at the Property. DEEP-6; APP-22a. Given the standards applicable to determining whether a new coastal structure represents an adverse visual impact, it is clear that the Project will not result in an adverse visual impact under the Coastal Management Act.

K. Impacts to Navigation

The substantial evidence in the record demonstrates that the Project will have minimal impacts to navigation. First, there will be no physical impacts to New London Harbor or the FNP that will impact navigation. DEEP-3B; DEEP-6; APP-22a. While elements of the proposed dredging are in close proximation to the FNP, no direct impacts to the Main Ship Channel will occur as a result of the Project. DEEP-3B; DEEP-6; APP-22a. There will be encroachment in the Main Ship Channel's buffer zone (an area that extends from the edge of the FNP boundary for a distance that is equal to three times the authorized depth of the channel) due to dredging of side slopes for the Project, however, such activities will not unreasonably interfere with the use and continued maintenance of the FNP, nor will they cause or contribute to sedimentation problems in or adjacent to the FNP. DEEP-3B; DEEP-6; APP-22a. The filling between the two piers to create the Central Wharf area will also not impact the FNP because the former Long Dock Branch Channel that existed in that area was deauthorized by Congress in the Consolidated Appropriations Act, 2021, and is no longer part of the FNP. DEEP-3B; DEEP-6; APP-8; APP-22a.

The filling between the two piers to create the Central Wharf area will prohibit vessels from berthing in that area, but the loss of such berthing space to the Applicant is not an impact on public navigation. The loss of the area between the piers is not a significant impact on

navigation because, as discussed above in the section on Public Trust impacts, the area between the piers is not subject to active public navigation due to MARSEC security protocols, site safety restrictions, and commercial activities. DEEP-3B; DEEP-6; APP-22a. Also, that area is not a passage to other areas of New London Harbor, but a dead-end, man-made cove between two commercial piers. Therefore, while the Project will permanently eliminate the public's ability to use the waters between the State Pier and CVRR Pier, the overall use of public trust waters for navigation will not be changed significantly, due to the limited existing access to that area and the fact that the public's ability to navigate in other areas within New London Harbor will not be negatively affected by the Project.

Second, the Project will have minimal impacts on vessels operating within New London Harbor in the vicinity of the Property. To remove the potential for conflicts with other harbor users, especially the Cross Sound Ferry ("CSF"), the Project was revised from its original design (shown on exhibit APP-3) to relocate the installation vessel berth from the South side of the Central Wharf to the East side of the existing State Pier. APP-2. The East Berth location for the installation vessel berth currently services the large bulk carriers that presently call on the State Pier and will therefore not require other local waterway users to substantially alter their existing transit patterns or otherwise cause undue burden on these operators.

Evidence in the record of consultations between the Applicant and the general public and stakeholders, including CSF, the Mayor of New London, the New London Port Authority, the Groton Harbormaster, the Connecticut State Pilot's Commission, U.S. Coast Guard, U.S. Navy, local fishermen and others, determined that aside from the periodic presence of WTG installation and delivery vessels onsite and their transit via the Main Ship Channel, no significant navigational impacts are anticipated from the facility's WTG vessel operations transiting the

harbor. In addition, potential in-harbor navigational concerns are manageable and would be alleviated using standard vessel planning, communication and traffic coordination between all involved parties, i.e., ferry operators, U.S. Coast Guard, U.S. Navy, local Pilots and WTG vessel operators. DEEP-3B; DEEP-6; APP-22a.

To prevent navigation conflicts during construction, the Applicant will mark-out work areas with suitable marine buoys. These high visibility buoys (as well as silt curtains when in use) will demarcate the limits of in-water work within this working waterfront area to avoid potential interference with navigation in the harbor around the Property. In addition, a *Notice to Mariners* will be issued for New London Harbor via the U.S. Coast Guard and/or New London Harbormaster to appraise vessel operators in the vicinity of the Property during ongoing construction activities. APP-22a.

In conclusion, aside from the periodic presence of installation and delivery vessels onsite and their transit via the federal navigational channel in accordance with applicable maritime rules of the road, no significant navigational impacts are anticipated from operations at the Property following the completion of the Project.

IV. CONCLUSION

The Department's tentative determination that the Project should be permitted (DEEP-10), as conditioned by the Draft License (DEEP-11), is supported by the substantial evidence in the record. The Applicant has met its burden of proving, by a preponderance of the evidence, that the proposed activities should be permitted through the credible testimony of expert witnesses and the submission of documentary evidence as described above. The substantial evidence in the record indicates that unreasonable environmental harm is not likely to occur if the Project is constructed pursuant to the conditions in the Draft License.

V. RECOMMENDATION

For the reasons stated above, the proposed Draft License attached hereto as Exhibit A, should be issued as Final License.

AGREEMENT

Based on the foregoing, the undersigned hereby agree to the granting of a license subject to the standard and special conditions stated in the Draft License, attached hereto.

STAFF OF THE DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION, LAND & WATER RESOURCES DIVISION

WILLIAM TONG
ATTORNEY GENERAL

By */s/ Lori D. DiBella*
Lori D. DiBella
Assistant Attorney General
Office of the Attorney General
165 Capitol Avenue
Hartford, CT 06106

Applicant,
CONNECTICUT PORT AUTHORITY

By */s/ John P. Casey*
Its Attorneys
John P. Casey, Esq.
Jessica D. Bardi, Esq
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103

CERTIFICATION

I hereby certify that a copy of the foregoing was e-mailed on April 26, 2021 to the Hearing Officer and the following:

Party – DEEP Staff:
Lori D. DiBella
Lori.dibella@ct.gov
Assistant Attorney General
165 Capitol Avenue
Hartford, CT 06106

Party – City of New London:
Jeffrey T. Londregan, Esq.
JLondregan@clsmlaw.com
Conway, Londregan, Sheehan & Monaco, P.C.
38 Huntington Street
New London, CT 06320

Courtesy Copy:
Kevin Blacker
Kjblacker@sbcglobal.net

Intervenor:
Steve Farrelly
President
DRVN Enterprises Inc.
steve@drvninc.com

/s/ John P. Casey
John P. Casey

Exhibit A

Connecticut Department of ENERGY & ENVIRONMENTAL PROTECTION

Draft

Bureau of Water Protection and Land Reuse
Land & Water Resources Division

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

Connecticut Department of Energy and Environmental Protection License*

Structures, Dredging & Fill and Tidal Wetlands Permit
Section 401 Water Quality Certification

Licensee(s):	Connecticut Port Authority, c/o John Henshaw
Licensee Address(s):	455 Boston Post Road, Suite 204 Old Saybrook, CT 06475
License Number(s):	201905859-SDF TW WQC
Municipality:	City of New London
Project Description:	Conduct dredging with on site disposal, install a bulkhead, place fill and conduct other site improvements for marine industrial use.
Project Address/Location:	200 State Pier Road
Waters:	Thames River
Authorizing CT Statute(s) and/or Federal Law:	CGS Section 22a-359 to 363g; CGS Section 22a-90 to 112; Section 401 CWA (33 USC 1341); CGS Section 22a-28 to 35
Applicable Regulations of CT State Agencies:	22a-426-1 to 9, 22a-30-1 to 17
Agency Contact:	Land & Water Resources Division, Bureau of Water Protection & Land Reuse, 860-424-3019
License Expiration:	Seven (7) years from the date of issuance of this license.
Project Site Plan Set:	Thirty-five (35) Sheets of plans dated October 23, 2020, signed October 27 and October 28, 2020.
License Enclosures:	Compliance Certification Form, LWRD Dredging Report Form, Land Record Filing, LWRD Dredging and General Conditions, Site Plan Set, Work Commencement Form

*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 . . .*"

Authorized Activities:

The Licensee is hereby authorized to conduct the following work as described in application # 201905859-SDF TW WQC and as depicted on any site plan sheets / sets cited herein:

1. demolition of approximately 420 linear feet and approximately 84,000 square feet of the Admiral Shear State Pier ("State Pier") to facilitate construction of the pile-supported East Face Heavy Lift Area;
2. demolition of approximately 34,000 square feet of select segments of the west face of State Pier concrete deck to facilitate fill placement;
3. demolition of approximately 1,500 square feet at the east face and approximately 1,500 square feet at the southeast corner of State Pier to facilitate mooring bollard installation identified below;
4. conduct dredging using mechanical or hydraulic dredging means approximately 55,000 cubic yards of material from an approximately 241,000 square foot area within the areas identified as the Turning Basin, including approaches to both berths to a depth of -36' MLLW, with a 2' allowable over-dredge;
5. conduct dredging using mechanical or hydraulic dredging means approximately 222,000 cubic yards of material from an approximately 240,000 square foot area within an area identified as the Northeast Bulkhead area to a depth of -38' MLLW, with a 2' allowable over-dredge for berthing layout and to -63' MLLW with a 2' allowable over-dredge for the seabed preparation work described below;
6. conduct dredging using mechanical or hydraulic dredging means approximately 122,000 cubic yards of material from an approximately 210,000 square foot area within an area identified as the East Berth area to a depth of -63' MLLW, with a 2' allowable over-dredge for berthing and seabed preparation work identified below;
7. conduct seabed preparation along the Northeast Bulkhead and East Berth rock pads, located adjacent to their respective Heavy Lift Areas for installation of crushed gravel areas to allow for berthing of vessels with jack up legs. Placement of up to 107,000 cubic yards of gravel in each dredged jack-up pocket area to a maximum thickness of 27';
8. using either land or water-based equipment install longitudinal steel sheeting or protected slope at the Central Vermont Railroad ("CVRR") Pier;
9. install a king pile bulkhead between the State Pier and the CVRR Pier, tying into the new longitudinal sheet pile wall/slope along the CVRR pier identified above;
10. place a total of approximately 400,000 cubic yards of fill material consisting of the dredged material identified above and upland fill material over an approximately 322,000 square foot area (approximately 7.4 acres) located between the CVRR Pier and State Pier to create the new Central Wharf with a finish grade of +9' NAVD88;
11. install approximately 1,000 linear feet of steel sheet pile along the State Pier East Face;
12. remove or relocate existing stone riprap and place approximately 15,600 cubic yards of fill, consisting of pile structures, over an approximately 33,600 square foot area (0.77 acres) at the existing State Pier east Face;
13. install a series of approximately 3' wide stone columns, or comparable technology, within the newly created Central Wharf and East Face Heavy Lift areas;
14. install approximately 1,115 linear feet of steel toewall at and adjacent to the base of the new State Pier East Face heavy Lift Area;
15. install upgraded energy-absorbing fender system and two (2) new mooring bollards at the State Pier;

16. install approximately 170 linear of steel sheetpile toewall along the waterward limit of an existing area of existing eelgrass bed with the height of the toewall extending approximately 1 foot above mudline;
17. install high mast lights with the limits of the new facility;
18. install cold ironing infrastructure;
19. construct a 16' wide by 16' long reinforced concrete pad immediately landward of an existing seawall and install four (4) 36" diameter pipe piles and associated gangway to support ConnDOT Chester-Hadlyme ferry overwintering at the Northwest Bulkhead area;
20. install three (3) 60' diameter and one (1) 54" diameter stormwater outfall pipes with one-way check valves discharging to the Thames River and associated bedding stone and stormwater treatment systems located on the upland; and
21. construct a living shoreline consisting of stone riprap, energy-dissipating concrete "reef balls", suitable organic sediment, and tidal wetland plantings located at the northern corner of the subject property.

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. Prior to the commencement of the work authorized herein, the Licensee shall submit a copy of the FINAL Remedial Action Plan for the Commissioner's review and written approval. Upon receipt of the Commissioner's approval, the Licensee shall place the dredged sediment and upland soil between the existing State Pier and CVRR Pier in accordance with the FINAL Remedial Action Plan Connecticut State Pier, New London, Connecticut, dated June 2020 prepared for the Connecticut Department of Transportation by TRC Environmental Corporation. The Remedial Action Plan (RAP) is incorporated herein by reference.
3. The work authorized herein shall not commence until the US Army Corps of Engineers Federal Navigation Project Long Dock Branch Channel has been Congressionally deauthorized. The Licensee shall provide the Commissioner with a copy of the deauthorization.
4. Prior to the commencement of the work authorized herein, the Licensee shall file a Conditional Letter of Map Revision (CLOMR) with FEMA. Upon completion of the work authorized herein, the Licensee shall file a Letter of Map Revision (LOMR) with FEMA.
5. Prior to the commencement of the work authorized herein, the Licensee shall submit to the Commissioner for her review and written approval a Water Quality Monitoring Plan and a Turbidity Control Plan. The Licensee shall implement the measures of each plan upon receiving written approval by the Commissioner.
6. The Licensee shall assist the City of New London Port Authority in finding a suitable location for the existing commercial fishermen.
7. Within one hundred twenty (120) days following the issuance of this license, the Licensee shall sign the Escrow Agreement ("Agreement") identified in Exhibit A of this License and

provide a signed copy of the Agreement to the Commissioner for her review and written approval.

8. Prior to the commencement of the work authorized herein, the Licensee shall demarcate the area of existing eelgrass and provide a 10' buffer around the area. The Licensee shall maintain the demarcation in optimal condition for the duration of the construction activities identified herein and shall avoid any work within this area.
9. All unconfined in-water work shall be prohibited between June 1st through September 30th, inclusive, of any calendar year in order to protect spawning shellfish unless otherwise authorized in writing from the Commissioner.
10. All work authorized herein shall not be conducted between April 1st through June 30th to protect Peregrine Falcons or the work shall be conducted in accordance with the DEEP NDDB Project Peregrine Falcon Protection Plan.
11. Prior to the commencement of the work authorized herein the Licensee shall obtain all necessary local, state and federal authorizations for the work authorized by this license.
12. The Licensee shall install and maintain floating turbidity curtains around the work area identified in **Authorized Activities** paragraphs 1. through 21., with the exception of the activities identified in paragraphs 4. through7, above.
13. Prior to the commencement of the work authorized herein, the Licensee shall submit to the Commissioner for her review and written approval a Living Shoreline Wetland Creation Plan. Such plan shall include a narrative description of the proposed living shoreline, methodology for construction, quantities of stone riprap for a proposed sill, volume and area of organic sediment, tidal wetland identification and plant density and associated plans. The Licensee shall implement the measures of each plan upon receiving written approval by the Commissioner.
14. The Licensee shall conduct a minimum of a 3-year monitoring program which shall include the submission of an annual monitoring report on or before October 30th of each growing season for the Commissioner's review and comment. Such annual report shall contain at a minimum the following information: 1.) remedial actions taken during the monitoring year, such as: slope stabilization, replanting of upland vegetation, and controlling invasive plant species; 2.) visual estimates of percent cover of surviving vegetation; 3.) general health and vigor of the surviving plants; 4.) site photographs; and 5.) remedial measures recommended to achieve or maintain the slope stabilization of the restoration area. The Licensee shall immediately implement any additional remedial recommendations that may be prescribed by the Commissioner in writing. If the Commissioner determines following the 3-year monitoring program that the approved restoration plan has not been successful, the Licensee shall submit for review and written approval of the Commissioner a revised plan to achieve restoration at this site.
15. The Licensee shall install and maintain water quality improvement measures on the upland and the one-way check valves on the outfall pipes authorized herein and shall maintain these improvements and valves in optimal condition for the life of the structures.
16. All waste material generated by the performance of the work authorized herein shall be disposed of by the Licensee at an upland site approved for the disposal 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.

17. 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 or survey 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

Betsey Wingfield
Deputy Commissioner
Department of Energy & Environmental Protection

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

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 the Commissioner 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 the Commissioner 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 the Commissioner 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 the Commissioner, 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, *2004 Connecticut Stormwater Quality Manual*, Department of Transportation's *ConnDOT Drainage Manual* as revised, and the Department of Transportation Standard Specifications as revised.

8. **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.

9. **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.

10. **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.

11. **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.

12. **Extension Request.** The Licensee may request an extension of the license expiration date. Such request shall be in writing and shall be submitted to the Commissioner 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. It shall be the Commissioner's sole discretion to grant or deny such request.

13. **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.

14. **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.

15. **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:

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

16. **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.

17. **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."

18. **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.

19. **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.

20. **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.

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

22. 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.

23. 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.

24. 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.

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

Bureau of Water Protection & Land Reuse
Land & Water Resources Division

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Land Record Filing*

To: City of New London Clerk

Signature and

NOTE: Due to the electronic delivery of this license and the legal requirement to have a live signature on this document, the "Land Record Filing" as detailed in General Condition #1 will be sent to you via U.S. Mail.

Date:

Subject: State Pier , 200 State Pier Road, New London
License #201905859-SDF TW WQC

If you have any questions pertaining to this matter, please contact the Land & Water Resources Division at 860-424-3019.

Return to:

Land & Water Resources Division
State of Connecticut
Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

*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 the Commissioner no later than sixty (60) days after license issuance.

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

Bureau of Water Protection & Land Reuse
Land & Water Resources Division

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Work Commencement Form

To: Regulatory Section
Department of Energy and Environmental Protection
Land & Water Resources Division
79 Elm Street
Hartford, CT 06106-5127

Licensee Name: _____
Municipality in which the project is occurring: City of New London
DEEP License No(s): 201905859-SDFWQC

CONTRACTOR(s):

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

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

3 Name: _____
Address: _____
Telephone: _____
E-mail: _____

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)

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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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: _____

   DEEP License Number(s): 201905859-SDFWQC

   Municipality in which project is occurring: City of New London

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 :
Regulatory Section
Department of Energy and Environmental Protection
Land & Water Resources Division
79 Elm Street
Hartford, CT 06106-5127

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

DREDGING REPORT

(To be completed by Licensee)

License No(s).: _____
Licensee Name: _____
Address of Dredging Activity: _____
_____

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:

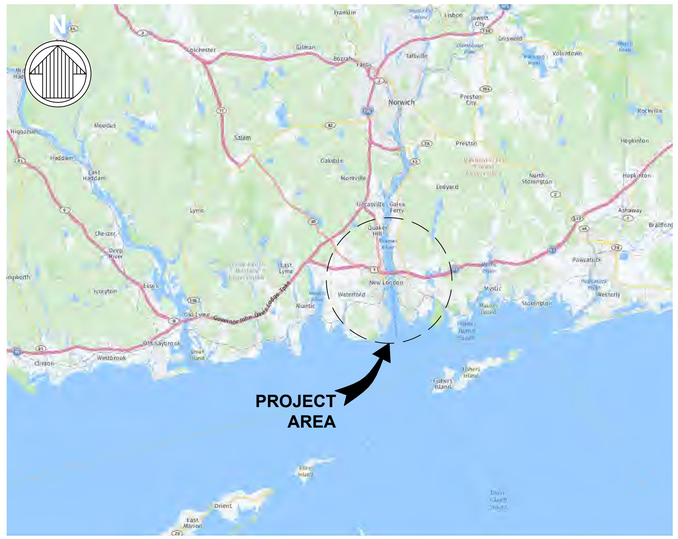
"I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete 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

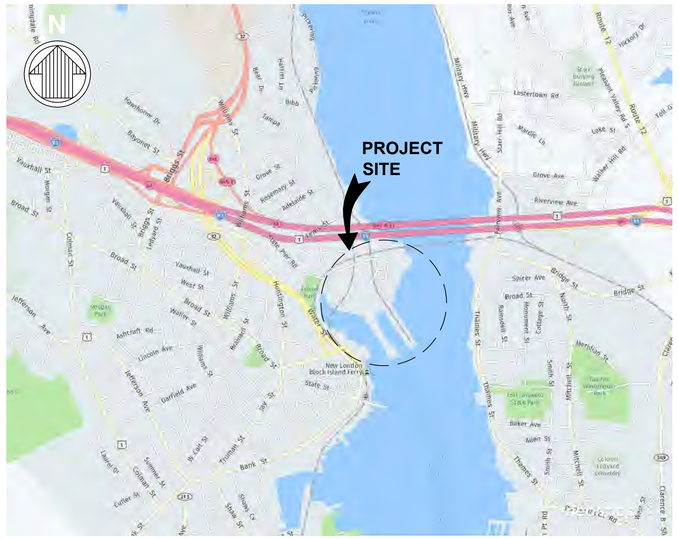
If you have any questions pertaining to this form, please contact the Land & Water Resources Division at 860-424-3034.

Return to:
Land & Water Resources Division
State of Connecticut Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY
NEW LONDON, CONNECTICUT



AREA MAP



LOCATION MAP

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PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

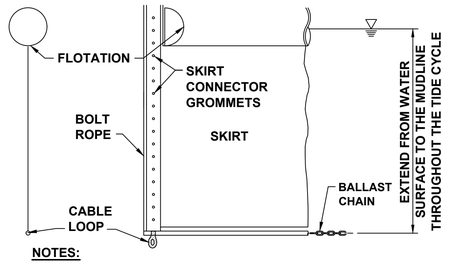
SEAL

GENERAL NOTES

1. ALL FEDERAL, STATE, AND LOCAL SAFETY REGULATIONS ARE TO BE STRICTLY FOLLOWED.
2. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL PROTECTION STANDARDS, LAWS AND REGULATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE CONSTRUCTION SITE AND THE AREAS OF WORK WHILE PERFORMING THE WORK OF THIS CONTRACT. CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE CONSTRUCTION SITE ON A DAILY BASIS. NO BURNING OF DEBRIS SHALL BE PERMITTED.
4. DURING ALL PHASES OF THE WORK ALL PRECAUTIONS SHALL BE TAKEN AS NECESSARY OR AS REQUIRED TO PERMANENTLY PREVENT CONTAMINATED WATER, VEHICLE FLUIDS, CONSTRUCTION DEBRIS, AND ANY OTHER CONTAMINANT FROM ENTERING THE WATERWAY.
5. CONTRACTOR SHALL INSTALL A FLOATING BOOM SYSTEM THAT FULLY ENCLOSES THE WORK AREA. THIS BOOM SHALL BE ANCHORED IN PLACE OR ATTACHED TO A FIXED STRUCTURE. THIS BOOM SHALL BE CAPABLE OF COLLECTING ANY FLOATING DEBRIS GENERATED DURING CONSTRUCTION ACTIVITIES. DEBRIS SHALL BE COLLECTED AND DISPOSED OF FROM THIS BOOM ON A DAILY BASIS.

TURBIDITY CURTAIN:

1. A FLOATING TURBIDITY BARRIER MAY BE DEPLOYED AROUND AND/OR IMMEDIATELY ADJACENT TO THE WORK AREA AS SHOWN ON SHEET 11 DURING EACH CONSTRUCTION PHASE THAT IS EXPECTED TO PRODUCE DEBRIS AND/OR SEDIMENT IN 600 FOOT (MAX) LENGTHS. THE CONTRACTOR IS RESPONSIBLE FOR STAYING UNDER THE TURBIDITY LIMIT SET BY THE STATE. DURING ALL PHASES OF WORK, THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE METHODOLOGY AND SUBMIT TO THE STATE FOR APPROVAL. ALTERNATIVE METHODOLOGY MUST BE SUBMITTED 45 DAYS PRIOR TO FILL PLACEMENT BETWEEN PIERS.
2. TURBIDITY CURTAIN WILL BE AVAILABLE ON-SITE FOR USE AS WARRANTED BASED ON MONITORING OF TURBIDITY TO MAINTAIN COMPLIANCE WITH PERMIT CONDITIONS.
3. TO SERVE AS A BARRIER FOR OPERATIONS DURING PLACEMENT BETWEEN THE PIERS, A HEAVY DUTY TYPE III OR TYPE IV TURBIDITY CURTAIN WITH A BOTTOM ANCHOR SHALL BE INSTALLED. THE CONTRACTOR MAY UTILIZE EQUIPMENT TO LEVEL THE RIVER BOTTOM TO IMPROVE THE FUNCTIONALITY OF THE TURBIDITY CURTAIN AND MAY UTILIZE PILES OR OTHER ANCHORS TO KEEP THE TURBIDITY CURTAIN IN PLACE DURING OPERATIONS. THE CONTRACTOR SHALL PERFORM DAILY VISUAL INSPECTIONS, WITH A PHYSICAL CHECK ON THE TURBIDITY CURTAIN WITHIN 24 HOURS OF ANY MAJOR STORM OR ICE EVENT.



NOTES:

1. FIGURE IS FOR REFERENCE ONLY. TURBIDITY CURTAIN SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL.
2. CURTAIN ANCHORAGE TO STRUCTURE AND MUDLINE SHALL BE SUBMITTED BY THE CONTRACTOR.

TURBIDITY CURTAIN

EROSION AND SEDIMENT CONTROL NOTES

GENERAL EROSION CONTROL NOTES

1. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN CONFORMANCE WITH THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (CT DEEP) "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL" DEEP BULLETIN NO. 34 , LATEST REVISION, AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION (CTDOT) "2004 CONNECTICUT STORM WATER QUALITY MANUAL", LATEST REVISION, AND THE CTDOT FORM 817.
2. INSTALL ALL EROSION CONTROL MEASURES SHOWN, SPECIFIED OR REQUIRED BY THE ENGINEER PRIOR TO ANY CONSTRUCTION MEASURES UNTIL FINAL SURFACE TREATMENTS ARE IN PLACE AND/OR UNTIL ALL PERMANENT VEGETATION IS ESTABLISHED.
3. MARK WORK LIMIT LINE(S) PRIOR TO STARTING WORK. DO NOT DISTURB VEGETATION OR TOPSOIL BEYOND THE PROPOSED LIMIT LINE. COORDINATE WITH THE ENGINEER FOR THE LOCATIONS FOR THE TEMPORARY STOCKPILING OF TOPSOIL DURING CONSTRUCTION.
4. FINE GRADE AND IMMEDIATELY SEED ALL SIDE SLOPES, SHOULDER AREAS, AND DISTURBED VEGETATED AREAS. ALL GRADING TO BE A MAXIMUM SLOPE OF 2:1, COMPACTED, AND STABILIZED. SLOPES GREATER THAN 2:1 TO RECEIVE EROSION CONTROL BLANKET.
5. REMOVE ALL SEDIMENT TRACKED ON PUBLIC RIGHT-OF-WAYS AT THE END OF EACH DAY.
6. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM NECESSARY FOR CONSTRUCTION.
7. ALL CATCH BASINS SHALL BE PROTECTED WITH SILT SACKS, HAY BALE RINGS, OR SILT FENCE THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED.
8. WHENEVER POSSIBLE, EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION, ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING CONSTRUCTION.
9. THE CONTRACTOR SHALL USE APPROVED METHODS/MATERIALS FOR PREVENTING THE BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES ONTO ADJACENT PROPERTIES AND SITE AREAS.
10. AFTER CONSTRUCTION, EROSION AND SEDIMENTATION WITHIN PROJECT LIMITS WILL BE MANAGED BY FINISHED TERMINAL SURFACE.
11. MINIMIZING WIND EROSION AND CONTROLLING DUST WILL BE ACCOMPLISHED BY ONE OR MORE OF THE FOLLOWING METHODS:
    A. COVERING 30% OR MORE OF THE SOIL SURFACE WITH NON-ERODIBLE MATERIAL.
    B. ROUGHENING THE SOIL TO PRODUCE RIDGES PERPENDICULAR TO THE PREVAILING WIND.
    C. FREQUENT WATERING OF EXCAVATION AND FILL AREAS.
12. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1-3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
13. CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
14. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.
15. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
16. THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES INCLUDING REPLACING OR REPAIRING ANY DAMAGED DEVICES DUE TO ANY CONSTRUCTION ACTIVITY BY OTHERS.
17. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
18. SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.

INITIAL PHASE EROSION CONTROL NOTES

1. PRIOR TO THE LAND DISTURBING CONSTRUCTION, THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE OWNER.
2. THE CONTRACTOR SHALL REVIEW THE PROJECT SEQUENCE SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL COVER IS EXPOSED ONLY IN SMALL QUANTITIES.
3. A COPY OF THE APPROVED LAND DISTURBANCE PLAN SHALL BE PRESENT ON THE SITE AT ALL TIMES.
4. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
5. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE ACTIVITY SHALL BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.
6. PRIOR TO ANY OTHER CONSTRUCTION, A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE OR ONTO ANY PUBLIC ROADWAY.
7. THE FOLLOWING INITIAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY.
    A. THE CONSTRUCTION ENTRANCE, CONSISTING OF A MINIMUM PAD SIZE OF 12 FT BY 50 FT WITH A MINIMUM OF 6" THICK STONE. THE STONE SIZE SHOULD CONSIST OF COURSE AGGREGATE BETWEEN 1-1/2" & 3-1/2" IN DIAMETER AND OVERLAID ON A GEOTEXTILE UNDERLINER. THE GEOTEXTILE UNDERLINER SHALL MEET THE REQUIREMENTS OF AASHTO M288-96, SECTION 7.3 SEPARATION REQUIREMENTS. (ROCK INSTALLATION TO COINCIDE WITH DEMOLITION)
    B. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCE, ALL PERIMETER EROSION CONTROL AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE INITIAL EROSION CONTROL PLAN.
    C. GEOTEXTILE SILT FENCE SHOULD BE INSTALLED AT THE PERIMETER OF THE DISTURBED AREA IF CONDITIONS WARRANT INSTALLATION OR SHOWN ON THE PLANS. THE GEOTEXTILE SILT FENCE SHOULD BE PLACED IN ACCORDANCE WITH THE CONNECTICUT EROSION & SEDIMENTATION CONTROL GUIDELINES. THE GEOTEXTILE SILT FENCE SHOULD BE KEPT ERECT AT ALL TIMES AND REPAIRED WHEN REQUESTED BY THE SITE INSPECTOR OR THE PROJECT DESIGN PROFESSIONAL OF RECORD. SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHES 1/2 HEIGHT OF THE BARRIER. THE PERIMETER SILT FENCE SHOULD BE INSPECTED DAILY FOR ANY FAILURES. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY.
    D. INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL EXISTING STORM STRUCTURES AS SHOWN ON THE PLAN, SEE SEPARATE DETAILS FOR SPECIFICS ON TYPE OF INLET PROTECTION SPECIFIED.
8. AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT RESIDENT ENGINEER. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT RESIDENT ENGINEER APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORESEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR MUST CONSTRUCT ANY ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE SITE INSPECTION.
9. AFTER APPROVAL OF THE INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH CONSTRUCTION, CLEARING AND GRUBBING ACTIVITIES.
10. NO BURN OR BURY PITS SHALL BE PERMITTED ON THE CONSTRUCTION SITE.

GRADING AND FINAL PHASE EROSION CONTROL NOTES

1. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL GROUND COVER IS EXPOSED ONLY IN SMALL QUANTITIES AND THEREFORE LIMITED DURATIONS, BEFORE PERMANENT EROSION PROTECTION IS ESTABLISHED.
2. SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.
4. CUT AND FILL SLOPES ARE TO BE AS SHOWN ON PLAN BUT SHALL NOT EXCEED "2H:1V"
5. THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE PRELIMINARY GRADING PHASE OF CONSTRUCTION.
    A. GEOTEXTILE SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLANS AND PER THE DETAIL SHOWN ON SHEET 6.
    B. INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL STORM STRUCTURES AS THEY ARE CONSTRUCTED/MODIFIED. SEE PLAN VIEW FOR SPECIFIC TYPE AND SEPARATE DETAILS FOR ADDITIONAL INFORMATION ON TYPE OF INLET PROTECTION SPECIFIED.
    C. ALL DRAINAGE SWALES SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.
    D. ALL GRADED AREAS SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.
6. THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE FINAL EROSION CONTROL PHASE OF CONSTRUCTION.
    A. ALL GEOTEXTILE SILT FENCE SHALL BE REMOVED AT PROJECT COMPLETION.
    B. INLET SEDIMENT PROTECTION MEASURES SHALL BE REMOVED.
    C. ALL PERMANENT VEGETATIVE COVER WILL BE FULLY ESTABLISHED.
    D. CONSTRUCTION ENTRANCE WILL BE REMOVED AT PROJECT COMPLETION.
7. UPON COMPLETION OF THE PROJECT AND RECEIPT OF CERTIFICATE OF OCCUPANCY, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND DISPOSE OF THEM UNLESS NOTED ON PLANS.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

NOTES - 1 OF 2
STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN (ESPC)

EROSION AND SEDIMENT CONTROLS

1. ALL PERIMETER GEOTEXTILE SILT FENCES AND CONSTRUCTION EXITS SHALL BE IN PLACE PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. WHEN CONSTRUCTION ACTIVITIES HAVE CEASED IN AN AREA, THAT AREA SHALL BE STABILIZED WITHIN 14 DAYS.

OTHER CONTROLS

1. NO WASTE WILL BE DISPOSED OF INTO STORMWATER INLETS OR WATERS OF THE STATE.

WASTE MATERIALS

1. ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR MORE OFTEN IF NECESSARY AND TRASH WILL BE HAULED AS REQUIRED BY LOCAL REGULATIONS. NO CONSTRUCTION WASTE WILL BE BURIED ON-SITE.
2. ALL PERSONNEL WILL BE INSTRUCTED ON PROPER PROCEDURES FOR WASTE DISPOSAL. A NOTICE STATING THESE PRACTICES WILL BE POSTED AT THE JOBSITE AND THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE

1. ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT, WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONNEL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE ESPCP FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS SHEETS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.
2. THE CONTRACTOR WILL IMPLEMENT THE SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN THE ESPCP AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT WITH STORMWATER DISCHARGES. IF SUCH CONTACT OCCURS, THE STORMWATER DISCHARGE WILL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORMWATER. IT SHALL BE THE RESPONSIBILITY OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC PLAN.

SANITARY WASTES

1. A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED FOR EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE SANITARY UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH LOCAL AND STATE REGULATIONS.
2. ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMPs MUST BE IMPLEMENTED, SUCH AS GRAVEL BAGS OR SPECIALLY DESIGNED PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTES FROM CONTRIBUTING TO STORMWATER DISCHARGES. THE LOCATION OF THE SANITARY WASTES UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN GRADING PHASE BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

OFFSITE VEHICLE TRACKING

1. A STABILIZED CONSTRUCTION ENTRANCE IS TO BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENT. SEE SHEET 4 FOR CONSTRUCTION ENTRANCE DETAILS. THE PAVED STREET ADJACENT TO THE SITE EXIT WILL BE INSPECTED DAILY FOR TRACKING OF MUD, DIRT OR ROCK. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

INVENTORY FOR POLLUTION PREVENTION PLAN

1. THE FOLLOWING MATERIALS ARE EXPECTED ON-SITE DURING CONSTRUCTION: CONCRETE PRODUCTS, ASPHALT, PETROLEUM BASED FUELS AND LUBRICANTS FOR EQUIPMENT, TAR, METAL REINFORCING, PAINTS/FINISHES, PAINT SOLVENTS, LUMBER, CRUSHED STONE, PLASTIC, METAL, AND CONCRETE PIPES.

SPILL PREVENTION

1. PRACTICES SUCH AS GOOD HOUSEKEEPING, PROPER HANDLING OF HAZARDOUS PRODUCTS AND PROPER SPILL CONTROL PRACTICES WILL BE FOLLOWED TO REDUCE THE RISK OF SPILLS AND SPILLS FROM DISCHARGING INTO STORMWATER RUNOFF.

GOOD HOUSEKEEPING

1. QUANTITIES OF PRODUCTS STORED ON-SITE WILL BE LIMITED TO THE AMOUNT NEEDED FOR THE JOB.
2. PRODUCTS AND MATERIALS WILL BE STORED IN A NEAT, ORDERLY MANNER IN APPROPRIATE CONTAINERS PROTECTED FROM RAINFALL, WHERE POSSIBLE.
3. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH MANUFACTURER LABELS LEGIBLE AND VISIBLE.
4. PRODUCTS MIXING, DISPOSAL AND DISPOSAL OF PRODUCT CONTAINERS WILL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
5. THE CONTRACTOR WILL INSPECT SUCH MATERIALS TO ENSURE PROPER USE, STORAGE AND DISPOSAL.

PRODUCT SPECIFIC PRACTICES

1. PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTION AND REGULAR PREVENTIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORMWATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.
2. PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORMWATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
3. CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE OWNER'S PROPERTY.
4. FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THAT MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP .
5. BUILDING MATERIALS/FORMWORK - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ON-SITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

SPILL CLEANUP AND CONTROL PRACTICES

1. LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
2. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
3. SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
4. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTS AS REQUIRED BY LOCAL, STAT, AND FEDERAL REGULATIONS.
5. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
6. FOR SPILLS OF UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
7. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

HANDLING OF SOIL MATERIALS

1. EXCAVATED SOIL MATERIALS, EXCEPT FOR EXCAVATED ASPHALT AND CONCRETE, SHALL BE USED FOR BACKFILLING AND FILLING PROVIDED IT MEETS THE FOLLOWING REQUIREMENTS:
   - A. THE MATERIAL DOES NOT CONTAIN DELETERIOUS AMOUNTS OF:
     - a. ORGANIC CLAYS, SILTS, OR PEATS
     - b. MISCELLANEOUS DEBRIS, SUCH AS BUT NOT LIMITED TO, TIMBER, METAL, PLASTICS, GLASS, OR REFUSE
     - c. STONES OR CONCRETE PIECES LARGER THAN THREE (3) INCHES IN SIZE.
   - B. THE MATERIAL IS NOT FROZEN AND DOES NOT CONTAIN ICE.
   - C. THE MATERIAL IS NOT OIL STAINED AND DOES NOT HAVE A NOTICEABLE "OIL ODOR".
   - D. THE MATERIAL IS COMPACTABLE AS DETERMINED BY THE OWNER'S REPRESENTATIVE.
2. ALL EXCAVATED SOIL THAT EXHIBITS EVIDENCE OF CONTAMINATION INCLUDING, BUT NOT LIMITED TO, SHEENS, STAINING, AND ODORS SHALL BE SEGREGATED FROM SOIL NOT EXHIBITING SUCH EVIDENCE. SOIL WITH INDICATORS OF CONTAMINATION SHALL NOT BE USED AS BACKFILL.
3. TRANSPORT ALL EXCAVATED SOIL EXHIBITING EVIDENCE OF CONTAMINATION TO THE STOCKPILE AREA AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
4. SUBMIT TO THE OWNER'S REPRESENTATIVE A SOIL STOCKPILE MANAGEMENT PLAN DESCRIBING MEASURES FOR SOIL CONTAINMENT WITHIN THE STOCKPILE AREA AND MAINTENANCE OF THE STOCKPILE AREA.
5. THE OWNER'S REPRESENTATIVE WILL PERFORM REQUIRED SOIL SAMPLING AND TESTING FOR OFF-SITE SOIL REUSE OR DISPOSAL. THE OWNER'S REPRESENTATIVE WILL PROVIDE TO THE CONTRACTOR A COPY OF THE LABORATORY REPORT CONTAINING THE LABORATORY ANALYTICAL DATA.
6. WHEN DIRECTED BY THE OWNER'S REPRESENTATIVE, TRANSPORT AND REUSE OR DISPOSE THE SOIL MATERIALS OFF AUTHORITY PROPERTY IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
7. SUBMIT INFORMATION ON THE TRANSPORTERS OF SOIL MATERIALS INCLUDING CURRENT APPLICABLE STATE-ISSUED WASTE TRANSPORTERS PERMITS TO THE OWNER'S REPRESENTATIVE FOR APPROVAL AT LEAST 2 WEEKS PRIOR TO THE COMMENCEMENT OF TRUCKING ACTIVITIES.
8. SUBMIT DOCUMENTATION OF REUSE OR DISPOSAL OF SOIL MATERIALS DETAILING EXECUTION OF MANIFESTS OR BILLS OF LADING FOR ALL SOIL MATERIAL REMOVED AND TRANSPORTED FROM THE SITE. DOCUMENTS SHALL BE SIGNED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE REMOVAL OF SOIL OFF-SITE. EXECUTED MANIFESTS OR BILLS OF LADING SHALL BE SIGNED BY THE RECEIVING FACILITY AND COPIES SHALL BE PROVIDED TO THE OWNER'S REPRESENTATIVE WITHIN 72 HOURS.

INSPECTIONS

1. EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT THE CONTRACTOR'S SITE, QUALIFIED PERSONNEL PROVIDED BY THE CONTRACTOR SHALL INSPECT: (A) ALL AREAS AT THE CONTRACTOR'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; (B) ALL LOCATIONS AT THE CONTRACTOR'S SITE WHERE VEHICLES ENTER OF EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING; AND (C) MEASURE RAINFALL ONCE EACH TWENTY-FOUR HOUR PERIOD AT THE SITE. THESE INSPECTIONS MUST BE CONDUCTED UNTIL PROJECT COMPLETION.
2. QUALIFIED PERSONNEL (PROVIDED BY THE CONTRACTOR) SHALL INSPECT AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER THE FOLLOWING: (A) DISTURBED AREAS OF THE CONTRACTOR'S CONSTRUCTION SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION; (B) AREAS USED BY THE CONTRACTOR FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE CONTRACTOR'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).
3. QUALIFIED PERSONNEL (PROVIDED BY THE CONTRACTOR) SHALL INSPECT AT LEAST ONCE PER MONTH UNTIL PROJECT COMPLETION THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).
4. BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.
5. A REPORT SUMMARIZING THE SCOPE OF EACH INSPECTION AND THE NAME(S) OF PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND ACTIONS TAKEN SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION. SUCH REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE, THE REPORT SHALL CONTAIN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN.

PROJECT VERTICAL DATUM	
NEW LONDON, THAMES RIVER, CT STATION ID 8461490	ELEVATONS (NAVD88)
100 YEAR BASE FLOOD	+11.0
HIGHEST OBSERVED	+8.73
NGVD29	+2.85
COASTAL JURISDICTION LINE	+2.1
MHHW	+1.21
MHW	+0.92
NAVD88	0.00
MSL	-0.30
MTL	-0.37
MLW	-1.65
MLLW	-1.84
LOWEST OBSERVED	-5.84

NOTE: MLLW ELEVATIONS ARE 1.84' ABOVE NAVD88.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

NOTES - 2 OF 2

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

SEDIMENT FENCE Sd1

DEFINITION

A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED. THE SEDIMENT FENCE IS CONSTRUCTED OF STAKES AND SYNTHETIC FILTER FABRIC WITH A RIGID WIRE FENCE BACKING WHERE NECESSARY FOR SUPPORT. SEDIMENT FENCE CAN BE PURCHASED WITH POCKETS PRESEWN TO ACCEPT USE OF STEEL FENCE POSTS.

PURPOSE

A SEDIMENT FENCE INTERCEPTS AND DETAINS SMALL AMOUNTS OF SEDIMENT FROM DISTURBED AREAS DURING CONSTRUCTION OPERATIONS AND REDUCES RUNOFF VELOCITY DOWN A SLOPE. SEDIMENT FENCES MAY ALSO BE USED TO CATCH WIND-BLOWN SAND AND TO CREATE AN ANCHOR FOR SAND DUNE CREATION.

DESIGN RECOMMENDATIONS

DEPTH OF IMPOUNDED WATER SHOULD NOT EXCEED 1.5 FEET AT ANY POINT ALONG THE FENCE.
DRAINAGE AREA LIMITED TO ¼ ACRE PER 100 FT OF FENCE, AND NO MORE THAN 1.5 ACRES IN TOTAL; OR IN COMBINATION WITH A SEDIMENT BASIN ON A LARGER SITE. AREA IS FURTHER RESTRICTED BY SLOPE STEEPNESS AS SHOWN IN THE FOLLOWING TABLE.

MAXIMUM SLOPE	
LAND SLOPE (%)	DISTANCE ABOVE FENCE (FEET)
2	250
5	180
10	100
20	50
30	30

MATERIALS AND USE

FILTER FABRIC
THE FILTER FABRIC USED IN A SEDIMENT FENCE MUST HAVE SUFFICIENT STRENGTH TO WITHSTAND VARIOUS STRESS CONDITIONS. IT ALSO MUST HAVE THE ABILITY TO ALLOW PASSAGE OF WATER WHILE RETAINING SOIL PARTICLES. FILTER FABRIC FOR A SEDIMENT FENCE IS AVAILABLE COMMERCIALLY.

SUPPORT POSTS
FOUR-INCH DIAMETER PINE, 1.33 LB./LINEAR FT. STEEL, OR SOUND QUALITY HARDWOOD WITH A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES. STEEL POSTS SHOULD HAVE PROJECTIONS FOR FASTENING FABRIC. DRIVE POSTS SECURELY, AT LEAST 16 INCHES INTO THE GROUND, ON THE DOWNSLOPE SIDE OF THE TRENCH. SPACE POSTS A MAXIMUM OF 8 FEET IF FENCE IS SUPPORTED BY WIRE, 6 FEET IF EXTRA-STRENGTH FABRIC IS USED WITHOUT SUPPORT WIRE. ADJUST SPACING TO PLACE POSTS AT LOW POINTS ALONG THE FENCE LINE.

SUPPORT WIRE
WIRE FENCE (14 GAUGE WITH 6-INCH MESH) IS REQUIRED TO SUPPORT STANDARD STRENGTH FABRIC.

REINFORCED, STABILIZED OUTLETS
ANY OUTLET WHERE STORM FLOW BYPASS OCCURS MUST BE STABILIZED AGAINST EROSION.
SET OUTLET ELEVATION SO THAT WATER DEPTH CANNOT EXCEED 1.5 FEET AT THE LOWEST POINT ALONG THE FENCE LINE.

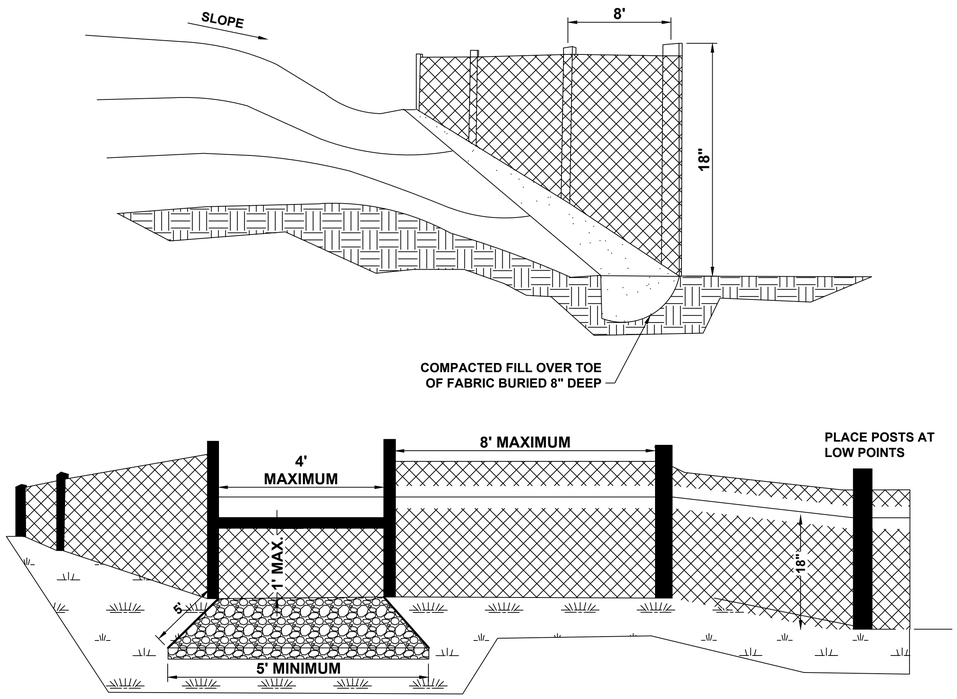
SET FABRIC HEIGHT AT 1 FOOT MAXIMUM BETWEEN SUPPORT POSTS SPACED NO MORE THAN 4 FEET APART. INSTALL A HORIZONTAL BRACE BETWEEN THE SUPPORT POSTS TO SERVE AS AN OVERFLOW WEIR AND TO SUPPORT TOP OF FABRIC. PROVIDE A RIPRAP SPLASH PAD A MINIMUM 5 FEET WIDE, 1 FOOT DEEP, AND 5 FEET LONG ON LEVEL GRADE. THE FINISHED SURFACE OF THE RIPRAP SHOULD BLEND WITH SURROUNDING AREA, ALLOWING NO OVERFALL. THE AREA AROUND THE PAD MUST BE STABLE.

CONSTRUCTION RECOMMENDATIONS

DIG A TRENCH APPROXIMATELY 8 INCHES DEEP AND 4 INCHES WIDE, OR A V-TRENCH; ALONG THE LINE OF THE FENCE, UPSLOPE SIDE.
FASTEN SUPPORT WIRE FENCE SECURELY TO THE UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES. WIRE SHOULD EXTEND 6 INCHES INTO THE TRENCH.
ATTACH CONTINUOUS LENGTH OF FABRIC TO UPSLOPE SIDE OF FENCE POSTS. AVOID JOINTS, PARTICULARLY AT LOW POINTS IN THE FENCE LINE. WHERE JOINTS ARE NECESSARY, FASTEN FABRIC SECURELY TO SUPPORT POSTS AND OVERLAP TO THE NEXT POST.
PLACE THE BOTTOM ONE FOOT OF FABRIC IN THE TRENCH. BACKFILL WITH COMPACTED EARTH OR GRAVEL.
FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION, AND BOTTOM.
TO REDUCE MAINTENANCE, A SHALLOW SEDIMENT STORAGE AREA MAY BE EXCAVATED ON THE UPSLOPE SIDE OF FENCE WHERE SEDIMENTATION IS EXPECTED.
PROVIDE GOOD ACCESS TO DEPOSITION AREAS FOR CLEANOUT AND MAINTENANCE.
SEDIMENT FENCES SHOULD BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED. RETAINED SEDIMENT MUST BE REMOVED AND PROPERLY DISPOSED OF, OR MULCHED AND SEEDED.

MAINTENANCE

A SEDIMENT FENCE REQUIRES A GREAT DEAL OF MAINTENANCE. SILT FENCES SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIR AS NECESSARY.
REMOVE SEDIMENT DEPOSITS PROMPTLY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON FENCE. TAKE CARE TO AVOID UNDERMINING FENCE DURING CLEANOUT.
IF THE FABRIC TEARS, DECOMPOSES, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE IT IMMEDIATELY.
REPLACE BURLAP USED IN SEDIMENT FENCES AFTER NO MORE THAN 60 DAYS.
REMOVE ALL FENCING MATERIALS AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED. SEDIMENT DEPOSITS REMAINING AFTER THE FABRIC HAS BEEN REMOVED SHOULD BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.



SEDIMENT FENCE
SCALE: N.T.S.

CONSTRUCTION ENTRANCE Co

DEFINITION

A TEMPORARY STONE-STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE.

PURPOSE

TO PROVIDE A STABLE ENTRANCE AND EXIT FROM A CONSTRUCTION SITE AND KEEP MUD AND SEDIMENT OFF PUBLIC ROADS.

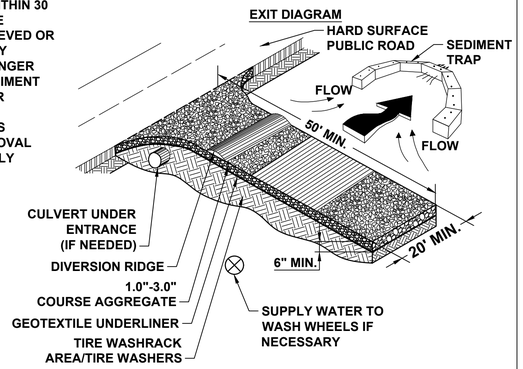
DESIGN RECOMMENDATIONS

REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE AND CROWN FOUNDATION FOR POSITIVE DRAINAGE.
STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 1 TO 3-INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT PLACED ON A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
PAD DIMENSIONS: THE MINIMUM LENGTH OF THE GRAVEL PAD SHOULD BE 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH MAY BE USED. LONGER ENTRANCES WILL PROVIDE BETTER CLEANING ACTION. THE PAD SHOULD EXTEND THE FULL WIDTH OF THE CONSTRUCTION ACCESS ROAD OR 10 FEET WHICHEVER IS GREATER. THE AGGREGATE SHOULD BE PLACED AT LEAST SIX INCHES THICK.
A GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE FILL AND THE EARTH SURFACE BELOW THE PAD TO REDUCE THE MIGRATION OF SOIL PARTICLES FROM THE UNDERLYING SOIL INTO THE STONE AND VICE VERSA. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT.
IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6 TO 8 INCHES HIGH WITH 3:1 SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FT FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHOULD BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
WASHING: IF THE SITE CONDITIONS ARE SUCH THAT THE MAJORITY OF MUD IS NOT REMOVED FROM THE VEHICLE TIRES BY THE GRAVEL PAD, THEN THE TIRES SHOULD BE WASHED BEFORE THE VEHICLE ENTERS THE ROAD OR STREET. THE WASH AREA SHOULD BE A LEVEL AREA WITH 3-INCH WASHED STONE MINIMUM, OR A COMMERCIAL RACK.
WASH WATER SHOULD BE DIRECTED INTO A SEDIMENT TRAP, A VEGETATED FILTER STRIP, OR OTHER APPROVED SEDIMENT TRAPPING DEVICE. SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY WATERCOURSES.
A FILTER FABRIC FENCE SHOULD BE INSTALLED DOWN-GRADIENT FROM THE CONSTRUCTION ENTRANCE IN ORDER TO CONTAIN ANY SEDIMENT-LADEN RUNOFF FROM THE ENTRANCE.

MAINTENANCE

THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE.
INSPECT ENTRANCE/EXIT PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER HEAVY RAINS OR HEAVY USE.
REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD IMMEDIATELY.
MUD AND SOIL PARTICLES WILL EVENTUALLY CLOG THE VOIDS IN THE GRAVEL AND THE EFFECTIVENESS OF THE GRAVEL PAD WILL NOT BE SATISFACTORY. WHEN THIS OCCURS, THE PAD SHOULD BE TOP-DRESSED WITH NEW STONE. COMPLETE REPLACEMENT OF THE PAD MAY BE NECESSARY WHEN THE PAD BECOMES COMPLETELY CLOGGED.
IF WASHING FACILITIES ARE USED, THE SEDIMENT TRAPS SHOULD BE CLEANED OUT AS OFTEN AS NECESSARY TO ASSURE THAT ADEQUATE TRAPPING EFFICIENCY AND STORAGE VOLUME IS AVAILABLE. VEGETATIVE FILTER STRIPS SHOULD BE MAINTAINED TO INSURE A VIGOROUS STAND OF VEGETATION AT ALL TIMES.
RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY PRACTICES ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

CRUSHED STONE CONSTRUCTION EXIT



CONSTRUCTION ENTRANCE
SCALE: N.T.S.

DUST CONTROL ON DISTURBED AREAS Du

DEFINITION

CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS, AND DEMOLITION SITES.

PURPOSE

TO PREVENT SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES.

TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES THAT MAY BE HARMFUL OR INJURIOUS TO HUMAN HEALTH, WELFARE, OR SAFETY, OR TO ANIMALS OR PLANT LIFE.

CONDITIONS

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON AND OFF-SITE DAMAGE MAY OCCUR WITHOUT TREATMENT.

METHOD AND MATERIALS

VEGETATIVE COVER. SEE SPECIFICATION DS2 - DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING).

TILLAGE
THIS PRACTICE IS DESIGNED TO ROUGHEN AND BRING CLODS TO THE SURFACE. IT IS AN EMERGENCY MEASURE THAT SHOULD BE USED BEFORE WIND EROSION STARTS. BEGIN PLOWING ON WINDWARD SIDE OF CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT THAT MAY PRODUCE THE DESIRED EFFECT.

IRRIGATION
THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED.

BARRIERS
SOLID BOARD FENCES, SNOWFENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 15 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION.

CALCIUM CHLORIDE
APPLY AT RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT VEGETATION
SEE SPECIFICATION DS3-DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION). EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

DUST CONTROL ON DISTURBED AREAS
SCALE: N.T.S.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

EROSION AND SEDIMENT CONTROL NOTES - 1 OF 3

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

INLET PROTECTION Sd2

DEFINITION

A SEDIMENT FILTER OR AN EXCAVATED IMPOUNDING AREA AROUND A STORM DRAIN, DROP INLET, OR CURB INLET.

PURPOSE

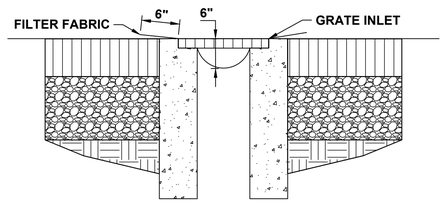
USED TO PREVENT SEDIMENT FROM ENTERING STORM DRAINAGE SYSTEMS DURING CONSTRUCTION..

INSTALLATION

FILTER FABRIC SHOULD BE ENOUGH TO REACH FROM SIDE TO SIDE OF THE INLET. ALLOW FABRIC TO BE SAG NO MORE THAN 6" FROM THE TOP OF THE GRATE. FILTER FABRIC SHOULD HAVE AT LEAST A 6"OVERHANG ALONG THE OUTSIDE OF THE GRATE.

MAINTENANCE

REMOVE AND REPLACE FILTER FABRIC WHEN SEDIMENT HAS COVERED A MAJORITY OF FILTER FABRIC IN THE INLET. CAUTION SHOULD BE USED IN ORDER TO MAKE SURE FABRIC DOES NOT DROP IN THE INLET BELOW WHEN REPLACING.



INLET PROTECTION
SCALE: N.T.S.

RIPRAP St

DEFINITION

A PERMANENT, EROSION-RESISTANT GROUND COVER OF LARGE, LOOSE, ANGULAR STONE.

PURPOSE

TO PROTECT SLOPES, STREAMBANKS, CHANNELS, OR AREAS SUBJECT TO EROSION BY WAVE ACTION.

ROCK RIPRAP PROTECTS SOIL FROM EROSION DUE TO CONCENTRATED RUNOFF. IT IS USED TO STABILIZE SLOPES THAT ARE UNSTABLE DUE TO SEEPAGE. IT IS ALSO USED TO SLOW THE VELOCITY OF CONCENTRATED RUNOFF WHICH IN TURN INCREASES THE POTENTIAL FOR INFILTRATION.

CONSTRUCTION RECOMMENDATIONS

SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC OR RIPRAP SHOULD BE CLEARED AND GRUBBED TO REMOVE ALL ROOTS, VEGETATION, AND DEBRIS AND PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.

EXCAVATE DEEP ENOUGH FOR BOTH FILTER AND RIPRAP. COMPACT ANY FILL MATERIAL TO THE DENSITY OF SURROUNDING UNDISTURBED SOIL.

EXCAVATE A KEYWAY IN STABLE MATERIAL AT BASE OF SLOPE TO REINFORCE THE TOE. KEYWAY DEPTH SHOULD BE 1.5 TIMES THE DESIGN THICKNESS OF RIPRAP AND SHOULD "EXTEND A HORIZONTAL DISTANCE EQUAL TO THE DESIGN THICKNESS.

ROCK AND/OR GRAVEL USED FOR FILTER AND RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION. VOIDS IN THE ROCK RIPRAP SHOULD BE FILLED WITH SPALLS AND SMALLER ROCKS.

FILTER

INSTALL SYNTHETIC FILTER FABRIC OR A SAND/GRAVEL FILTER ON SUBGRADE.

SYNTHETIC FILTER FABRIC

PLACE FILTER FABRIC ON A SMOOTH FOUNDATION. OVERLAP EDGES AT LEAST 12 INCHES, WITH ANCHOR PINS SPACED EVERY 3 FT ALONG OVERLAP. FOR LARGE STONES, A 4-INCH LAYER OF SAND MAY BE NEEDED TO PROTECT FILTERCLOTH.

GEOTEXTILE FABRICS SHOULD BE PROTECTED FROM PUNCTURE OR TEARING DURING PLACEMENT OF THE ROCK RIPRAP BY PLACING A CUSHION OF SAND AND GRAVEL OVER THE FABRIC. DAMAGED AREAS IN THE FABRIC SHOULD BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHOULD BE A MINIMUM OF 12 INCHES.

SAND/GRAVEL FILTER

SPREAD WELL-GRADED AGGREGATE IN A UNIFORM LAYER TO THE REQUIRED THICKNESS (6 INCHES MINIMUM). IF TWO OR MORE LAYERS ARE SPECIFIED, PLACE THE LAYER OF SMALLER STONES FIRST AND AVOID MIXING THE LAYERS.

STONE PLACEMENT

PLACE RIPRAP IMMEDIATELY AFTER INSTALLING FILTER.

INSTALL RIPRAP TO FULL THICKNESS IN ONE OPERATION. DO NOT DUMP THROUGH CHUTES OR USE ANY METHOD THAT CAUSES SEGREGATION OF STONE SIZES. AVOID DISLODGING OR DAMAGING UNDERLYING FILTER MATERIAL WHEN PLACING STONE.

IF FABRIC IS DAMAGED, REMOVE RIPRAP AND REPAIR FABRIC BY ADDING ANOTHER LAYER, OVERLAPPING THE DAMAGED AREA BY 12 INCHES.

PLACE SMALLER STONES IN VOIDS TO FORM A DENSE, UNIFORM, WELL-GRADED MASS SELECTIVE LOADING AT THE QUARRY AND SOME HAND PLACEMENT MAY BE NECESSARY TO OBTAIN AN EVEN DISTRIBUTION OF STONE SIZES.

BLEND THE STONE SURFACE SMOOTHLY WITH THE SURROUNDING AREA ALLOWING NO PROTRUSIONS OR OVERFALL.

SINCE RIPRAP IS USED WHERE EROSION POTENTIAL IS HIGH, CONSTRUCTION MUST BE SEQUENCED SO THAT THE RIPRAP IS PUT IN PLACE WITH THE MINIMUM POSSIBLE DELAY. DISTURBANCE OF AREAS WHERE RIPRAP IS TO BE PLACED SHOULD BE UNDERTAKEN ONLY WHEN FINAL PREPARATION AND PLACEMENT OFTHE RIPRAP CAN FOLLOW IMMEDIATELY BEHIND THE INITIAL DISTURBANCE.

WHERE RIPRAP IS USED FOR OUTLET PROTECTION, THE RIPRAP SHOULD BE PLACED BEFORE OR IN CONJUNCTION WITH THE CONSTRUCTION OF THE PIPE OR CHANNEL

MAINTENANCE

RIPRAP SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM FOR DISPLACED STONES, SLUMPING, AND EROSION AT EDGES, ESPECIALLY DOWNSTREAM OR DOWNSLOPE. IF THE RIPRAP HAS BEEN DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY BEFORE FURTHER DAMAGE CAN TAKE PLACE.

WOODY VEGETATION SHOULD BE REMOVED FROM THE ROCK RIPRAP ANNUALLY BECAUSE TREE ROOTS WILL EVENTUALLY DISLODGE THE RIPRAP.

IF THE RIPRAP IS ON A CHANNEL BANK, THE STREAM SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT BARS THAT MAY CHANGE FLOW PATTERNS WHICH COULD DAMAGE OR DISPLACE THE RIPRAP.

RIP RAP
SCALE: N.T.S.

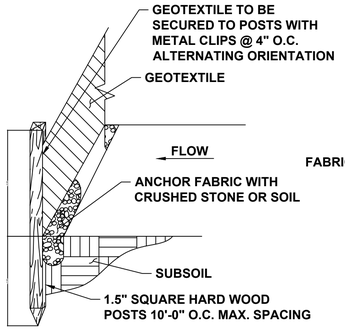
PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

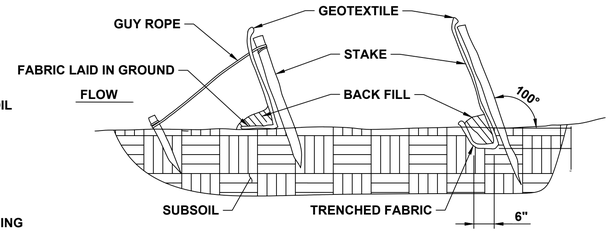
EROSION AND SEDIMENT CONTROL NOTES - 2 OF 3

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

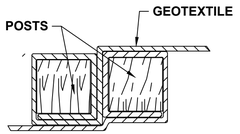
SEAL



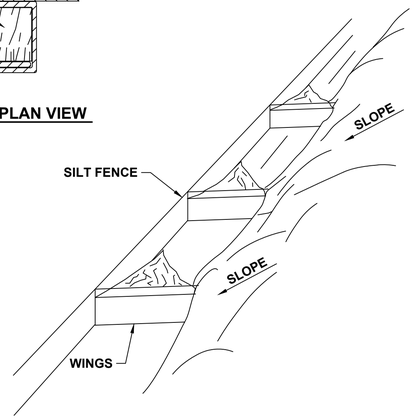
SILT FENCE



BACK FILL OR TRENCH FABRIC TOE



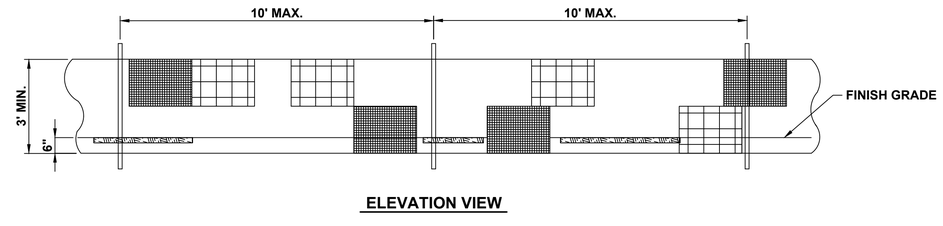
FENCE JOINT PLAN VIEW



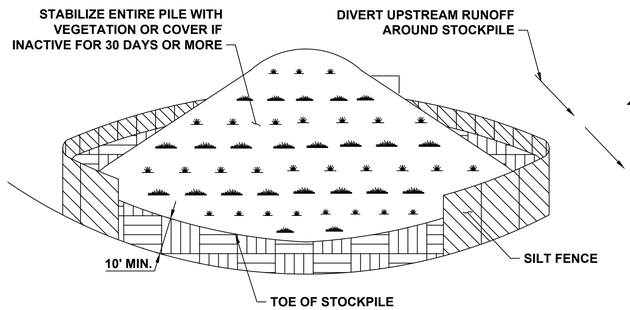
SILT FENCE SYSTEM PLACEMENT ON TOE OF SLOPE

GEOTEXTILE SILT FENCE NOTES:

1. GEOTEXTILE FENCE SHOULD BE PLACED SO THE FENCE LEANS TOWARD THE SOURCE OF SEDIMENT.
2. MAXIMUM SPACING FOR WOODEN STAKES OR STEEL POSTS IS 10'-0".
3. WOOD STAKES SHALL HAVE A MINIMUM CROSS-SECTION SIZE OF 1.5"x1.5" AND A MINIMUM LENGTH OF 3'-6". SILT FENCE SUBJECT TO HEAVY LOADS SHALL BE REINFORCED WITH STEEL POSTS AT LEAST 0.5 LB. PER FOOT WITH A MINIMUM LENGTH OF 4 FT.
4. WOODEN STAKES OR STEEL POSTS SHALL BE DRIVEN TO A MINIMUM OF 12" INTO THE GROUND.
5. 6" OF GEOTEXTILE SHALL BE BURIED BY BACK FILLING OR TRENCHING AND AT LEAST 30" IN HEIGHT OF GEOTEXTILE SHALL BE EXPOSED.
6. FABRIC SHALL BE JOINED ONLY AT A SUPPORT POST WITH A MINIMUM OF 6" OVERLAP AND SECURELY SEALED.
7. UPON REESTABLISHMENT OF GROUND COVER IN DISTURBED AREAS AND WHEN DIRECTED BE YHE ENGINEER OR UPON FINAL INSPECTION, FENCE AND ANY SEDIMENT SHALL BE REMOVED. AT NO TIME WILL THE FENCE REMAIN IN PLACE AFTER PROJECT COMPLETION.
8. GEOTEXTILE FENCE SHALL NOT BE USED IN A WATER COURSE.
9. ONLY GEOTEXTILE FROM THE DEPARTMENTS APPROVED PRODUCT LIST SHALL BE USED.
10. BACK FILLING OF GEOTEXTILE SHALL ONLY BE USED WHEN GROUND IS FROZEN OR WHERE OTHER OBSTRUCTIONS ARE ENCOUNTERED THAT PROHIBIT TRENCHING; E.G., STUMPS OR ROCKS.
11. CLEAN OUT ACCUMULATED SEDIMENT WHEN ONE-HALF OF THE ORIGINAL HEIGHT OF THE GE3OTEZTILE FENCE BECOMES FILLED WITH SEDIMENT OR AS DIRECTED BY THE ENGINEER.
12. POSITION POSTS TO OVERLAP MAKING CERTAIN THAT FABRIC FOLDS AROUND EACH POST ONE FULL TURN.
13. DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OF BUILT-UP SEDIMENT AT JOINTS.
14. WHEN USING SILT FENCE ALONG TOE OF SLOPE, ADD WINGS TO PREVENT SEDIMENT FROM MOVING ALONG THE FENCE AND OFF THE SITE.



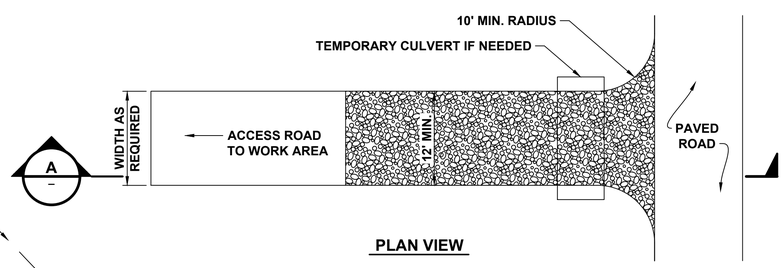
ELEVATION VIEW



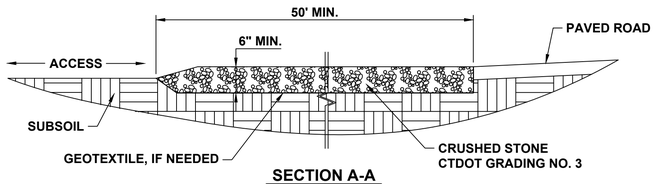
TEMPORARY SOIL STOCKPILING NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR HAY BALES, THEN STABILIZED WITH VEGETATION OR COVERED WITH POLYETHYLENE SHEETING AND SANDBAGS.
4. A POLYETHYLENE MEMBRANE UNDERLAYMENT MAY BE REQUIRED PER ENGINEER REQUESTS.

TEMPORARY SOIL STOCKPILING



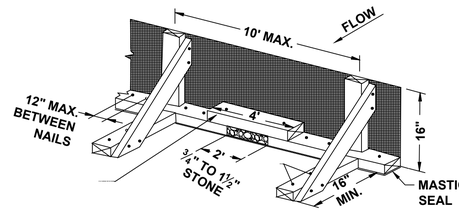
PLAN VIEW



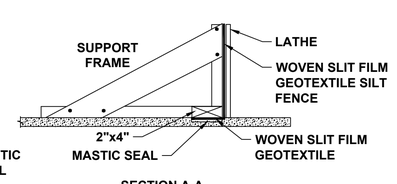
SECTION A-A

CONSTRUCTION ENTRANCE NOTES:

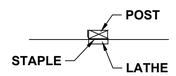
1. TOPSOIL AND ORGANICS SHOULD BE REMOVED PRIOR TO INSTALLATION.
2. CONSTRUCTION ENTRANCE TO BE LOCATED WHERE ACCESS ROAD MEETS PAVED ACCESS/DRIVEWAY.
3. AFTER CONSTRUCTION, ANY DEBRIS SHOULD BE CLEARED FROM THE TRACKING PAD, THE PAD RE-LEVELED AND 2'-4" OF 3/4" CRUSHED GRAVEL SHOULD BE ADDED TO FILL VOIDS AND CREATE A SMOOTH SURFACE WITH A 2% CROWN OR CROSS-SLOPE.



ISOMETRIC VIEW



SECTION A-A



JOINING ADJACENT SECTIONS OF GEOTEXTILE

SILT FENCE ON PAVEMENT

CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH X 4 INCH LUMBER.
2. USE WOVEN SLIT FILM GEOTEXTILE, SUCH AS POLYPROPYLENE, NYLON, POLYESTER, ETHYLENE, OR APPROVED SIMILAR MATERIAL.
3. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS.
4. SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
5. PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
6. KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4.
7. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
8. PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT-LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
9. SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS.
10. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

EROSION AND SEDIMENT CONTROL NOTES - 3 OF 3

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

CONSTRUCTION ENTRANCE
OUTFALL (TYP)
EELGRASS BED
EXISTING SHORELINE
100 YEAR FLOOD ZONE LIMIT EL. +11.0
LIMIT OF DREDGING IMPACT
COASTAL JURISDICTION LINE EL. +2.1
PROPOSED SPOT GRADE (TYP)
PROPOSED TIED-BACK STEEL SHEET PILE BULKHEAD
APPROXIMATE AREA OF PROPOSED TEMPORARY SEDIMENT TRAP (TYP)
EXISTING EXP JOINT (TYP)
LIMIT OF DISTURBANCE
OFFICE PARKING AREA 12,000± SF
OFFICE AREA 15,000± SF
SITE PARKING AREA 12,000± SF
SITE ACCESS GATE
OFFICE AREA TERMINAL ACCESS ROAD
RAILROAD ELECTRICAL SUBSTATION
ELEVATED AMTRAK EAST-WEST RAIL
WAREHOUSE 2
STATE PIER ROAD
SECURITY FENCE (TYP)
THAMES RIVER
FEDERAL CHANNEL LIMIT (TYP)
FORMER NAVY ANCHORAGE AREA
PROPOSED TIED-BACK, KING-PILE STEEL SHEET PILE BULKHEAD
PUMP AND PORTABLE SEDIMENT TANK SYSTEM FOR FILTRATION OF DISPLACED WATER DURING FILL PLACEMENT BETWEEN PIERS
EXISTING PILE SUPPORTED PIER SKIRT (TYP)
WESTERN LIMIT OF STATE PIER
EXISTING EASTERN EXTENT CVRR PIER
COASTAL JURISDICTION LINE EL. +2.1
EXISTING GRANITE BLOCK WALL
TEMPORARY STOCKPILE COVERED BY TEMPORARY SOIL STABILIZATION MATTING SLOPE
WINTHROP COVE
EXISTING CONCRETE/ GRANITE BLOCK WALL
FEDERAL CHANNEL LIMIT (TYP)
EXISTING POCKET BEACH SHALL BE PRESERVED

LEGEND

- EXISTING CONTOUR ELEVATION
- X8.25 PROPOSED SPOT ELEVATION

ESC LEGEND

- CE — CONSTRUCTION ENTRANCE
- GSF — GEOTEXTILE SILT FENCE
- SFP — SILT FENCE ON PAVEMENT
- LOD — LIMIT OF DISTURBANCE
- TC — TURBIDITY CURTAIN
- TST TEMPORARY SEDIMENT TRAP

NOTES:

1. TURBIDITY CURTAIN MAY BE USED AS A PROPOSED METHODOLOGY TO SEAL OFF AREA BETWEEN PIERS PRIOR TO INSTALLATION OF KING-PILE STEEL SHEET PILE BULKHEAD. THE CONTRACTOR IS RESPONSIBLE FOR STAYING UNDER THE TURBIDITY LIMIT SET BY THE STATE. DURING ALL PHASES OF WORK THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE METHODOLOGY AND SUBMIT TO THE STATE FOR APPROVAL. PUMPING AND FILTRATION METHODOLOGY MUST BE SUBMITTED 45 DAYS PRIOR TO FILL PLACEMENT BETWEEN PIERS.
2. A TURBIDITY CURTAIN MAY BE INSTALLED IN AN AREA IF THERE IS EVIDENCE OF EXCEEDING THE TURBIDITY LIMIT SET BY REGULATORY AUTHORITIES IN THE RIVER DURING THE DEWATERING PROCESS.
3. PUMP AND FILTRATION SYSTEM AT SOUTHEAST CORNER OF CVRR PIER SHALL BE OPERATIONAL AT ALL TIMES DURING FILL PLACEMENT ACTIVITIES AND SHALL BE APPROVED BY DEEP.
4. FILTRATION PUMP, PIPE, AND TANK SHALL BE SIZED TO EXCEED VOLUME AND RATE OF FILL BEING PLACED BETWEEN PIERS.
5. OFFICE AND PARKING AREA GRADES TO APPROXIMATELY MATCH EXISTING GRADES.
6. TOPOGRAPHIC SURVEY PERFORMED BY GM2 ASSOCIATED INC. BY ROBOTIC TOTAL STATION BETWEEN JULY 24, 2019 AND AUGUST 22, 2019.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

EROSION AND SEDIMENT CONTROL PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

120' 0' 120' 240'
SCALE: 1"=120'

STORAGE DOME

100 YEAR FLOOD ZONE LIMIT
EL. +11.0
(TYP)

NORTHEAST
BULKHEAD

CONCRETE PAD

ADMIN. BUILDING

THAMES RIVER

MOORING DOLPHIN
(TYP)

FEDERAL
CHANNEL LIMIT
(TYP)

FORMER NAVY
ANCHORAGE
AREA

TRAILERS

NORTHEAST ANNEX

HIGH MAST LIGHT
(TYP)

ELEVATED AMTRAK
EAST-WEST RAIL

WAREHOUSE
2

WAREHOUSE
1

ADMIRAL SHEAR STATE PIER (STATE PIER)

COASTAL
JURISDICTION LINE
EL. +2.1'

FEDERAL CHANNEL
LIMITS (TYP)

STATE
PIER ROAD

RIP RAP SLOPE
(TYP)

STEEL SHEETING
AND TIMBER PILES

STEEL FRAME
WAREHOUSE

RAIL LINE
(TYP)

CVRR PIER

NORTHWEST
BULKHEAD

HIGH MAST LIGHT
(TYP)

FEDERAL CHANNEL LIMIT
(TYP)

NOTES:

1. ELEVATIONS SHOWN ARE IN NAVD88 DATUM.
2. HYDROGRAPHIC SURVEY PERFORMED STEELE ASSOCIATES MARINE CONSULTANTS, LLC. ON AUGUST 15, 2019.
3. TOPOGRAPHIC SURVEY PERFORMED BY GM2 ASSOCIATED INC. BY ROBOTIC TOTAL STATION BETWEEN JULY 24, 2019 AND AUGUST 22, 2019.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

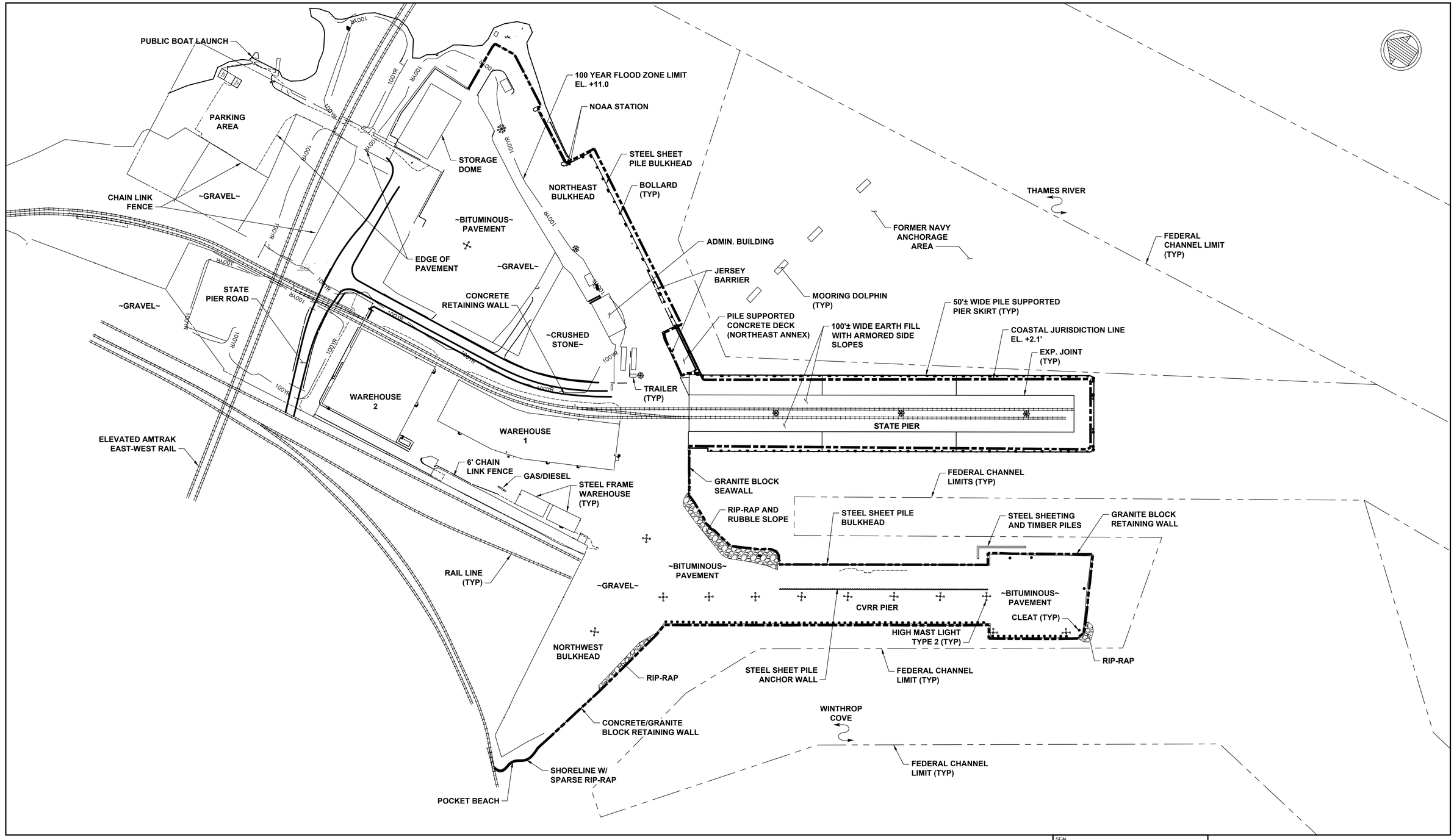
moffatt & nichol

EXISTING TOPOGRAPHIC AND HYDROGRAPHIC PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

120' 0' 120' 240'
SCALE: 1"=120'



PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

EXISTING CONDITIONS PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

120' 0' 120' 240'
SCALE: 1"=120'

NOAA STATION

NORTHEAST BULKHEAD

CONCRETE PAD

TRAILERS

TERMINAL ACCESS ROAD

ADMIN. BUILDING

PILE SUPPORTED CONCRETE DECK (NORTHEAST ANNEX)

WAREHOUSE 2

WAREHOUSE 1

ELEVATED AMTRAK EAST-WEST RAIL

RAILROAD TRACKS

STATE PIER ROAD

RAILROAD TRACKS

GAS / DIESEL TANKS AND CONCRETE PADS

STEEL FRAME WAREHOUSE

CONCRETE RETAINING WALL

RIP RAP SLOPE

POCKET BEACH

THAMES RIVER

FORMER NAVY ANCHORAGE AREA

SEE MOORING PLATFORM SECTION SHEET 26 FOR DETAILS

MOORING DOLPHIN (TYP)

FEDERAL CHANNEL LIMIT (TYP)

APPROX. DEMOLITION OF STATE PIER EAST APRON ±22,120 SF

APPROX. DEMOLITION OF STATE PIER FILL SECTION ±39,465 SF

D / 11

APPROX. DEMOLITION FOR PROPOSED MOORING

APPROX. DEMOLITION FOR PROPOSED MOORING

100'-0"

48'-0"

62'-0"

STATE PIER

APPROX. DEMOLITION OF STATE PIER WEST APRON ±55,525 SF

398'-0"

420'-0"

234'-6"

RIP RAP AND RUBBLE SLOPE

FEDERAL CHANNEL LIMIT (TYP)

STEEL SHEETING AND TIMBER PILES

CVRR PIER

RIP RAP (TYP)

REMOVE EXISTING PAVEMENT ON CVRR PIER

DEMOLISH ALL HIGH MAST LIGHTS (TYPES 1 AND 2) AND FOUNDATIONS. SALVAGE LIGHT POLES

WINTHROP COVE

FEDERAL CHANNEL LIMIT (TYP)

LEGEND

DEMOLISH AND REMOVE STRUCTURE.

REMOVE EXISTING PAVEMENT, LEVEL AND COMPACT AREA TO EL +9.0'. DEMOLISH AND DISPOSE OF MISCELLANEOUS UPLANDS MATERIALS/STRUCTURES.

DEMOLITION NOTES:

1. ABANDONED OR NON-FUNCTIONAL UTILITIES SHALL BE DEMOLISHED AND DISPOSED. FUNCTIONAL UTILITIES MAY BE RELOCATED TO ACCOMMODATE SITE OPERATIONS.
2. REMOVE AND DISPOSE OF ALL CHAIN LINK FENCING.
3. ALL ELEVATIONS GIVEN IN NAVD88 DATUM.
4. NOAA STATION SHALL BE REMOVED AND STORED.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

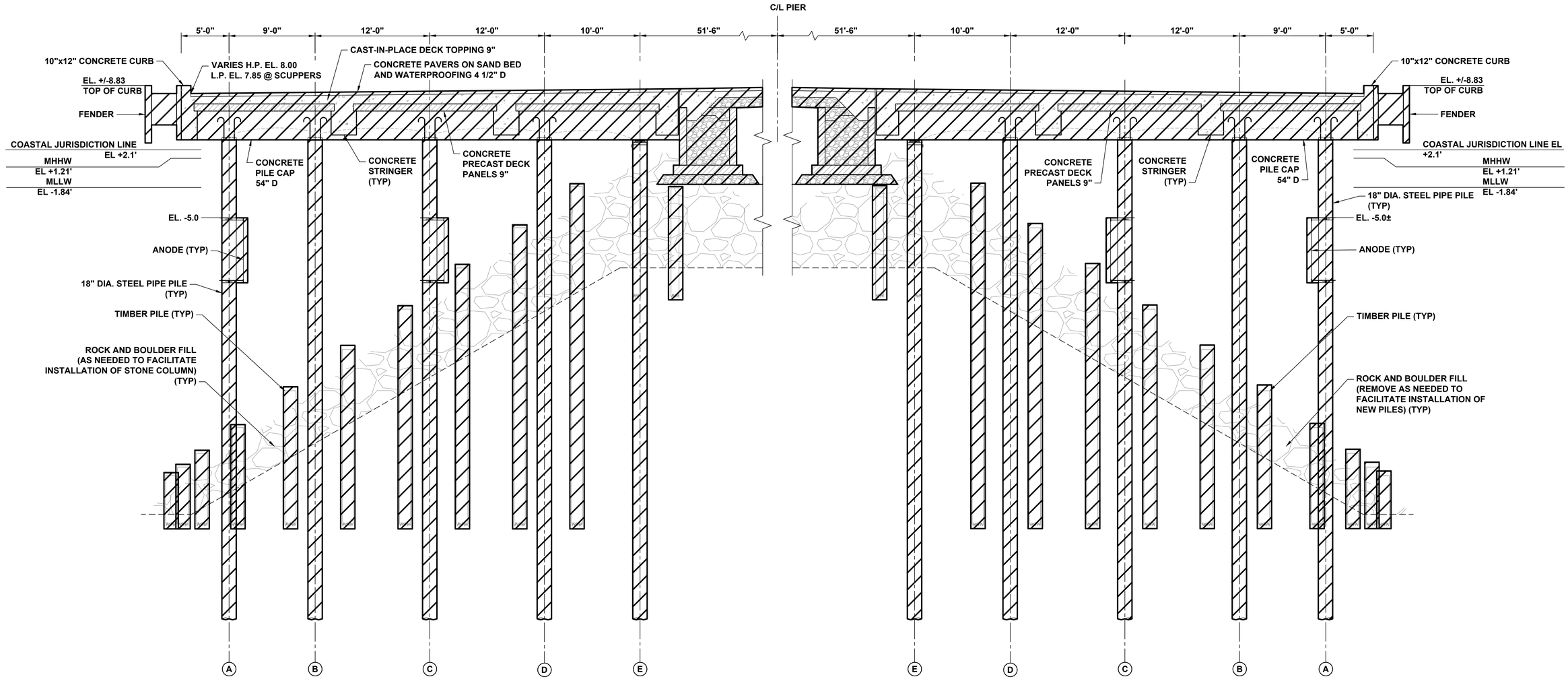
DEMOLITION AND REMOVAL PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

120' 0' 120' 240'

SCALE: 1"=120'



D/10 SECTION
SCALE: 3/16" = 1'-0"

NOTE:

1. ALL BOLLARDS AND FENDER SYSTEMS SHALL BE SALVAGED AND STORED AS DIRECTED BY OWNER.
2. STEEL PIPE AND TIMBER PILES ARE TO BE REMOVED VIA VIBRO-HAMMER

LEGEND

DEMOLISH AND REMOVE STRUCTURE

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

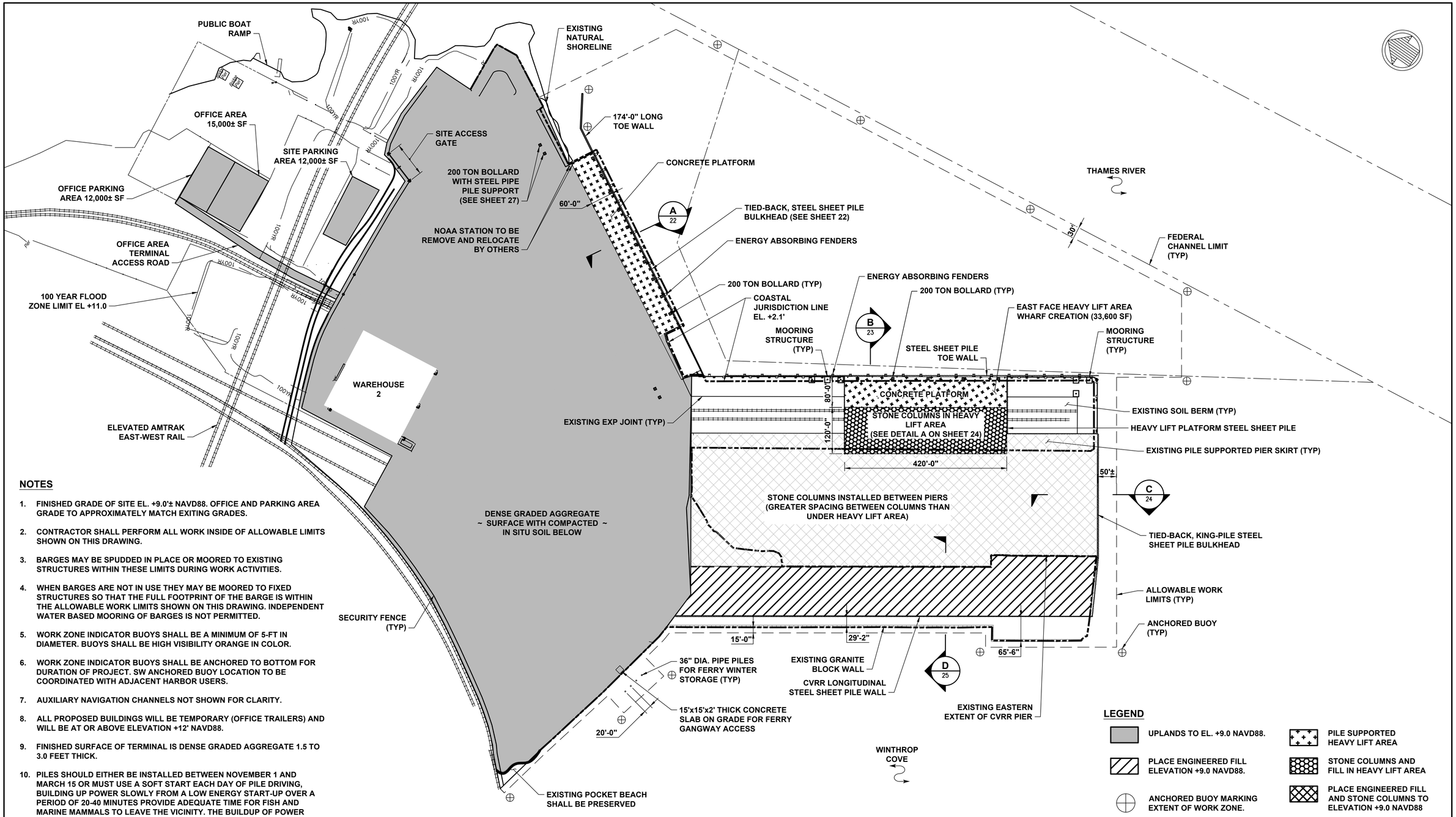
moffatt & nichol

EXISTING STATE PIER PILE SUPPORTED PLATFORM

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

8'-0" 0'-0" 4'-0" 8'-0"
SCALE: 3/16"=1'-0"



NOTES

1. FINISHED GRADE OF SITE EL. +9.0'± NAVD88. OFFICE AND PARKING AREA GRADE TO APPROXIMATELY MATCH EXITING GRADES.
2. CONTRACTOR SHALL PERFORM ALL WORK INSIDE OF ALLOWABLE LIMITS SHOWN ON THIS DRAWING.
3. BARGES MAY BE SPUDDED IN PLACE OR MOORED TO EXISTING STRUCTURES WITHIN THESE LIMITS DURING WORK ACTIVITIES.
4. WHEN BARGES ARE NOT IN USE THEY MAY BE MOORED TO FIXED STRUCTURES SO THAT THE FULL FOOTPRINT OF THE BARGE IS WITHIN THE ALLOWABLE WORK LIMITS SHOWN ON THIS DRAWING. INDEPENDENT WATER BASED MOORING OF BARGES IS NOT PERMITTED.
5. WORK ZONE INDICATOR BUOYS SHALL BE A MINIMUM OF 5-FT IN DIAMETER. BUOYS SHALL BE HIGH VISIBILITY ORANGE IN COLOR.
6. WORK ZONE INDICATOR BUOYS SHALL BE ANCHORED TO BOTTOM FOR DURATION OF PROJECT. SW ANCHORED BUOY LOCATION TO BE COORDINATED WITH ADJACENT HARBOR USERS.
7. AUXILIARY NAVIGATION CHANNELS NOT SHOWN FOR CLARITY.
8. ALL PROPOSED BUILDINGS WILL BE TEMPORARY (OFFICE TRAILERS) AND WILL BE AT OR ABOVE ELEVATION +12' NAVD88.
9. FINISHED SURFACE OF TERMINAL IS DENSE GRADED AGGREGATE 1.5 TO 3.0 FEET THICK.
10. PILES SHOULD EITHER BE INSTALLED BETWEEN NOVEMBER 1 AND MARCH 15 OR MUST USE A SOFT START EACH DAY OF PILE DRIVING, BUILDING UP POWER SLOWLY FROM A LOW ENERGY START-UP OVER A PERIOD OF 20-40 MINUTES PROVIDE ADEQUATE TIME FOR FISH AND MARINE MAMMALS TO LEAVE THE VICINITY. THE BUILDUP OF POWER SHOULD OCCUR IN UNIFORM STAGES TO PROVIDE A CONSTANT INCREASE IN OUTPUT.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

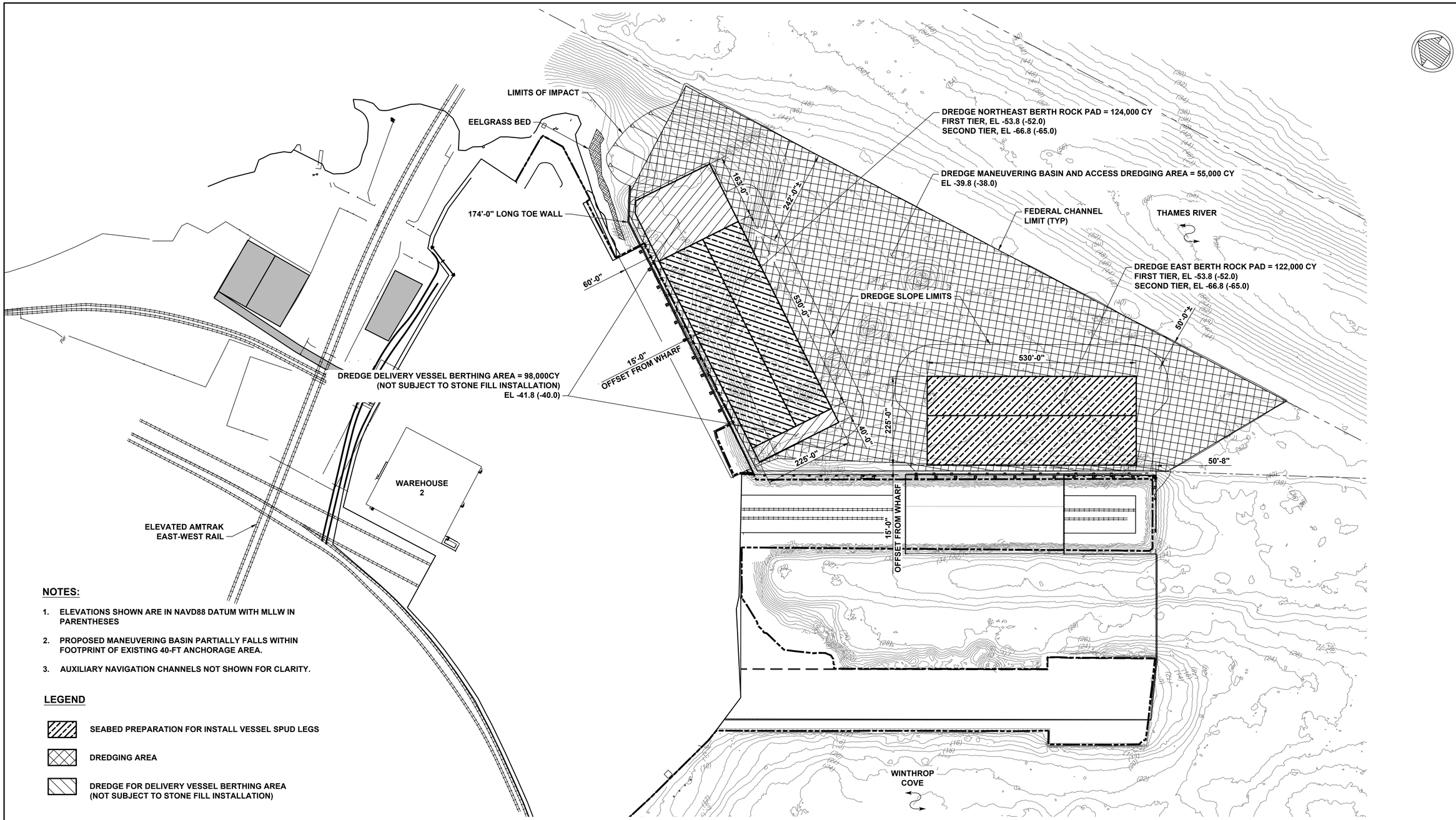
moffatt & nichol

PROPOSED PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

120' 0' 120' 240'
SCALE: 1"=120'



NOTES:

1. ELEVATIONS SHOWN ARE IN NAVD88 DATUM WITH MLLW IN PARENTHESES
2. PROPOSED MANEUVERING BASIN PARTIALLY FALLS WITHIN FOOTPRINT OF EXISTING 40-FT ANCHORAGE AREA.
3. AUXILIARY NAVIGATION CHANNELS NOT SHOWN FOR CLARITY.

LEGEND

- SEABED PREPARATION FOR INSTALL VESSEL SPUD LEGS
- DREDGING AREA
- DREDGE FOR DELIVERY VESSEL BERTHING AREA (NOT SUBJECT TO STONE FILL INSTALLATION)

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

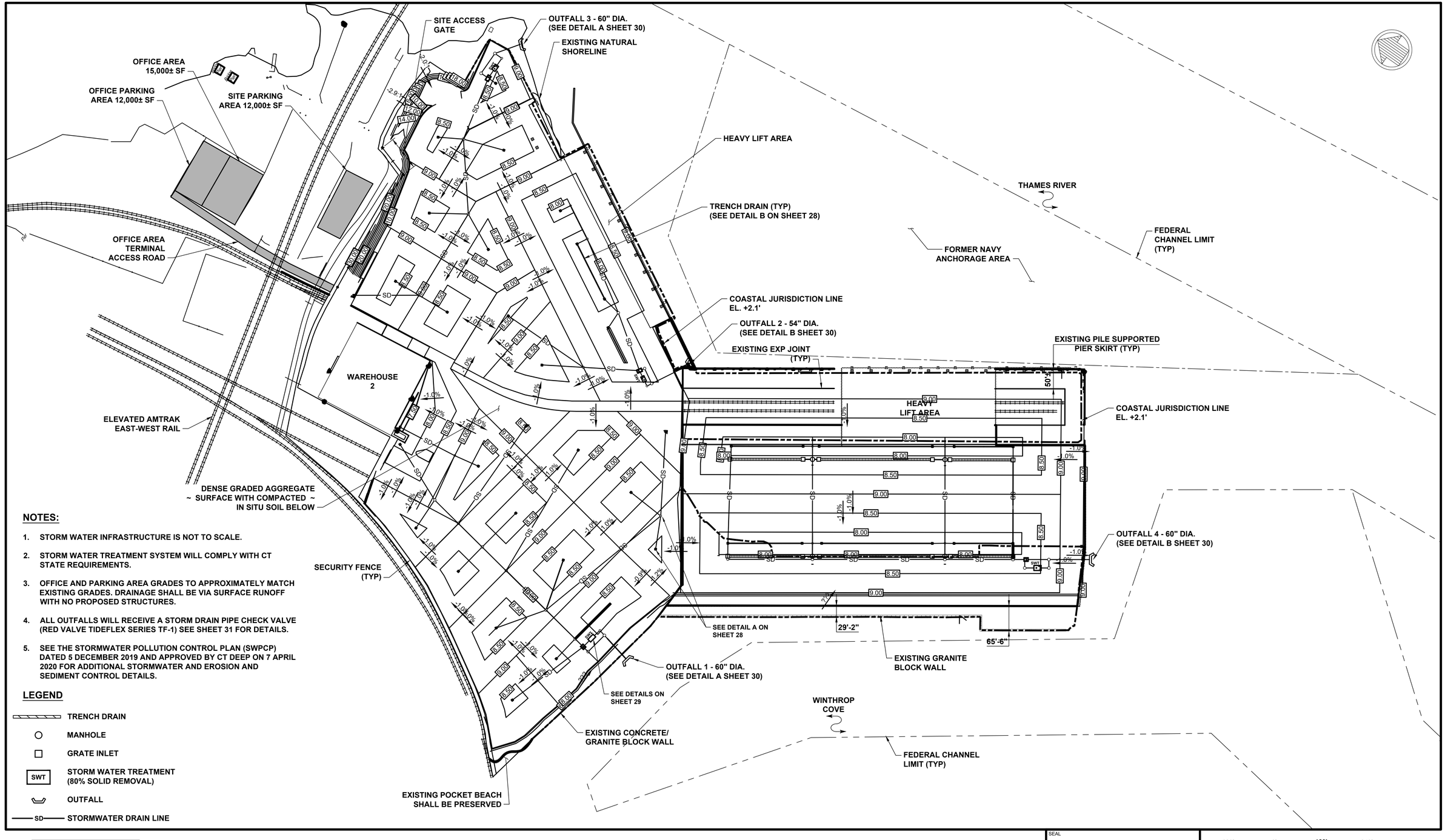
moffatt & nichol

PROPOSED DREDGING PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

120' 0' 120' 240'
SCALE: 1"=120'



NOTES:

1. STORM WATER INFRASTRUCTURE IS NOT TO SCALE.
2. STORM WATER TREATMENT SYSTEM WILL COMPLY WITH CT STATE REQUIREMENTS.
3. OFFICE AND PARKING AREA GRADES TO APPROXIMATELY MATCH EXISTING GRADES. DRAINAGE SHALL BE VIA SURFACE RUNOFF WITH NO PROPOSED STRUCTURES.
4. ALL OUTFALLS WILL RECEIVE A STORM DRAIN PIPE CHECK VALVE (RED VALVE TIDEFLEX SERIES TF-1) SEE SHEET 31 FOR DETAILS.
5. SEE THE STORMWATER POLLUTION CONTROL PLAN (SWPCP) DATED 5 DECEMBER 2019 AND APPROVED BY CT DEEP ON 7 APRIL 2020 FOR ADDITIONAL STORMWATER AND EROSION AND SEDIMENT CONTROL DETAILS.

LEGEND

- TRENCH DRAIN
- MANHOLE
- GRATE INLET
- SWT — STORM WATER TREATMENT (80% SOLID REMOVAL)
- OUTFALL
- SD — STORMWATER DRAIN LINE

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

GRADING AND DRAINAGE PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

120' 0' 120' 240'
SCALE: 1"=120'

EXISTING NATURAL SHORELINE

INSTALLATION OF OFFICE PARKING AREA 12,000± SF

INSTALLATION OF OFFICE AREA 15,000± SF

INSTALLATION SITE PARKING AREA 12,000± SF

INSTALLATION OFFICE AREA TERMINAL ACCESS ROAD

SITE ACCESS GATE

200 TON BOLLARD WITH STEEL PIPE PILE SUPPORT (SEE SHEET 27)

160'-0" LONG TOE WALL (PHASE 2)

HEAVY LIFT AREA

LIMIT OF FORMER NAVY ANCHORAGE AREA

THAMES RIVER

NOAA STATION

DEMOLITION OF MOORING DOLPHINS

INSTALLATION OF TIED-BACK, STEEL SHEET PILE BULKHEAD (PHASE 1)

FEDERAL CHANNEL LIMIT (TYP)

TRANSPORT AND INSTALL UPLAND EARTH MOUND TO AREA BETWEEN STATE AND CVRR PIER (PHASE 2 WORK)

LIMITS OF DREDGE FOR MANEUVERING BASIN

INSTALLATION OF 200 TON BOLLARD (TYP)

STEEL SHEET PILE TOE WALL CUT OFF 3' ABOVE MUDLINE

MOORING DOLPHIN (TYP)

HEAVY LIFT AREA

WAREHOUSE 2

150'

INSTALLATION OF ENERGY ABSORBING FENDERS (TYP)

ELEVATED AMTRAK EAST-WEST RAIL

REMOVE RAILROAD IN UPLANDS AREA FROM NORTHERN EXTENT OF STATE PIER TO STATE PIER ROAD

420'

235'

WESTERN LIMIT OF STATE PIER

DEMOLISH STRUCTURE AND REMOVE RAILROAD IN HEAVY LIFT AREA

INSTALLATION OF TIED-BACK, KING-PILE STEEL SHEET PILE BULKHEAD

SECURITY FENCE (TYP)

FILL PLACEMENT AND COMPACTION

INSTALL DENSE GRADED AGGREGATE ~ SURFACE WITH COMPACTED ~ IN SITU SOIL BELOW

29'-2"

CVRR LONGITUDINAL STEEL SHEET PILE WALL

65'-6"

INSTALL FOUR (4) 36" DIA. PIPE PILES FOR FERRY WINTER STORAGE (TYP)

EXISTING GRANITE BLOCK WALL

INSTALL FILL AND COMPACT TOP OF CVRR PIER

INSTALL 15'x15'x2' THICK CONCRETE SLAB ON GRADE FOR FERRY GANGWAY ACCESS

WINTHROP COVE

EXISTING EASTERN EXTENT CVRR PIER

FERRY AT BERTH FOR WINTER STORAGE (64.8-FT x 30-FT)

EXISTING CONCRETE/ GRANITE BLOCK WALL

FEDERAL CHANNEL LIMIT (TYP)

EXISTING POCKET BEACH SHALL BE PRESERVED

NOTES:

1. UPLANDS STORMWATER INFRASTRUCTURE WILL BE INSTALLED DURING PHASE 1.
2. STORMWATER INFRASTRUCTURE BETWEEN THE PIERS WILL BE INSTALLED IN PHASE 2.
3. COP/CT GP APPROVED WORK MAY PROCEED UNDER EXISTING APPROVALS.

LEGEND

PHASE 1

PHASE 2

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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PHASING PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

120' 0' 120' 240'
SCALE: 1"=120'

EXISTING NATURAL SHORELINE

INSTALLATION OF TIED-BACK, STEEL SHEET PILE BULKHEAD AND ASSOCIATED PILE SUPPORTED PLATFORM (SEE SHEET 19)

200 TON BOLLARD WITH STEEL PIPE PILE SUPPORT (SEE SHEET 27)

NOAA STATION TO BE REMOVE AND RELOCATE BY OTHERS

LIMIT OF FORMER NAVY ANCHORAGE AREA

DEMOLITION OF MOORING DOLPHINS

THAMES RIVER

FEDERAL CHANNEL LIMIT (TYP)

INSTALLATION OF ENERGY ABSORBING FENDERS (TYP)

DEMOLITION OF NORTHEAST ANNEX

WAREHOUSE 2

200 TON BOLLARD (TYP)

INSTALLATION OF TIED BACK STEEL SHEET PILE BULKHEAD

ELEVATED AMTRAK EAST-WEST RAIL

COASTAL JURISDICTION LINE EL. +2.1'

WESTERN LIMIT OF STATE PIER

DENSE GRADED AGGREGATE ~ SURFACE WITH COMPACTED ~ IN SITU SOIL BELOW

EXISTING EASTERN EXTENT CVRR PIER

29'-2"

65'-6"

EXISTING GRANITE BLOCK WALL

WINTHROP COVE

EXISTING CONCRETE/ GRANITE BLOCK WALL

FEDERAL CHANNEL LIMIT (TYP)

EXISTING POCKET BEACH SHALL BE PRESERVED

WORK COVERED UNDER CERTIFICATE OF PERMISSION #201910828-COP AND USACE CT GENERAL PERMIT AUTHORIZATION (NAE-2018-02161)

1. DEMOLITION OF NORTHEAST ANNEX.
2. INSTALLATION OF OVERSHEETING AT NORTHEAST BULKHEAD AND ANNEX.
3. DEMOLITION OF MOORING DOLPHINS.

LEGEND

WORK COVERED UNDER CERTIFICATE OF PERMISSION

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

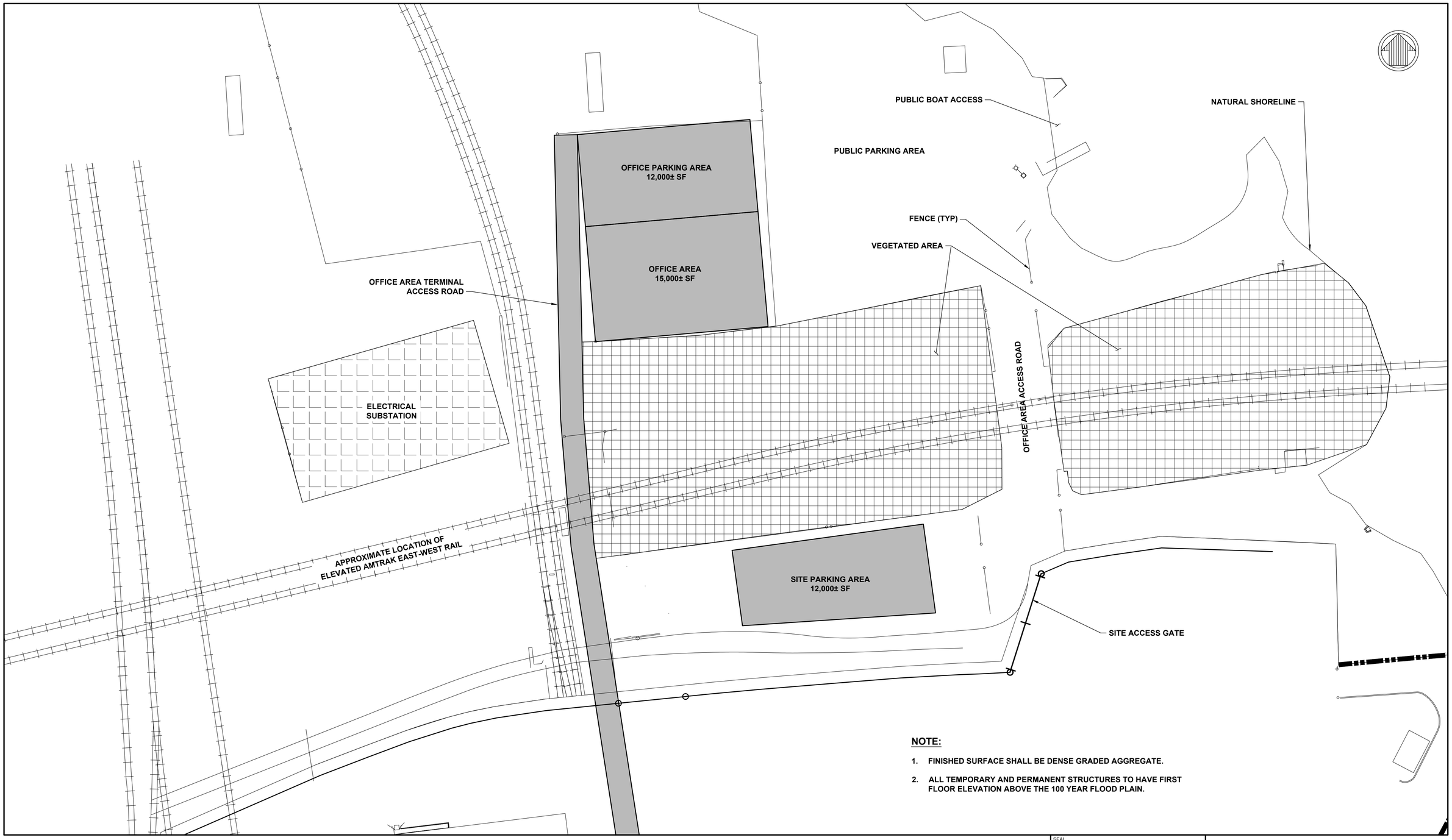
moffatt & nichol

WORK COVERED UNDER CERTIFICATE OF PERMISSION AND CT GP PERMITS

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

120' 0' 120' 240'
SCALE: 1"=120'



NOTE:

1. FINISHED SURFACE SHALL BE DENSE GRADED AGGREGATE.
2. ALL TEMPORARY AND PERMANENT STRUCTURES TO HAVE FIRST FLOOR ELEVATION ABOVE THE 100 YEAR FLOOD PLAIN.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

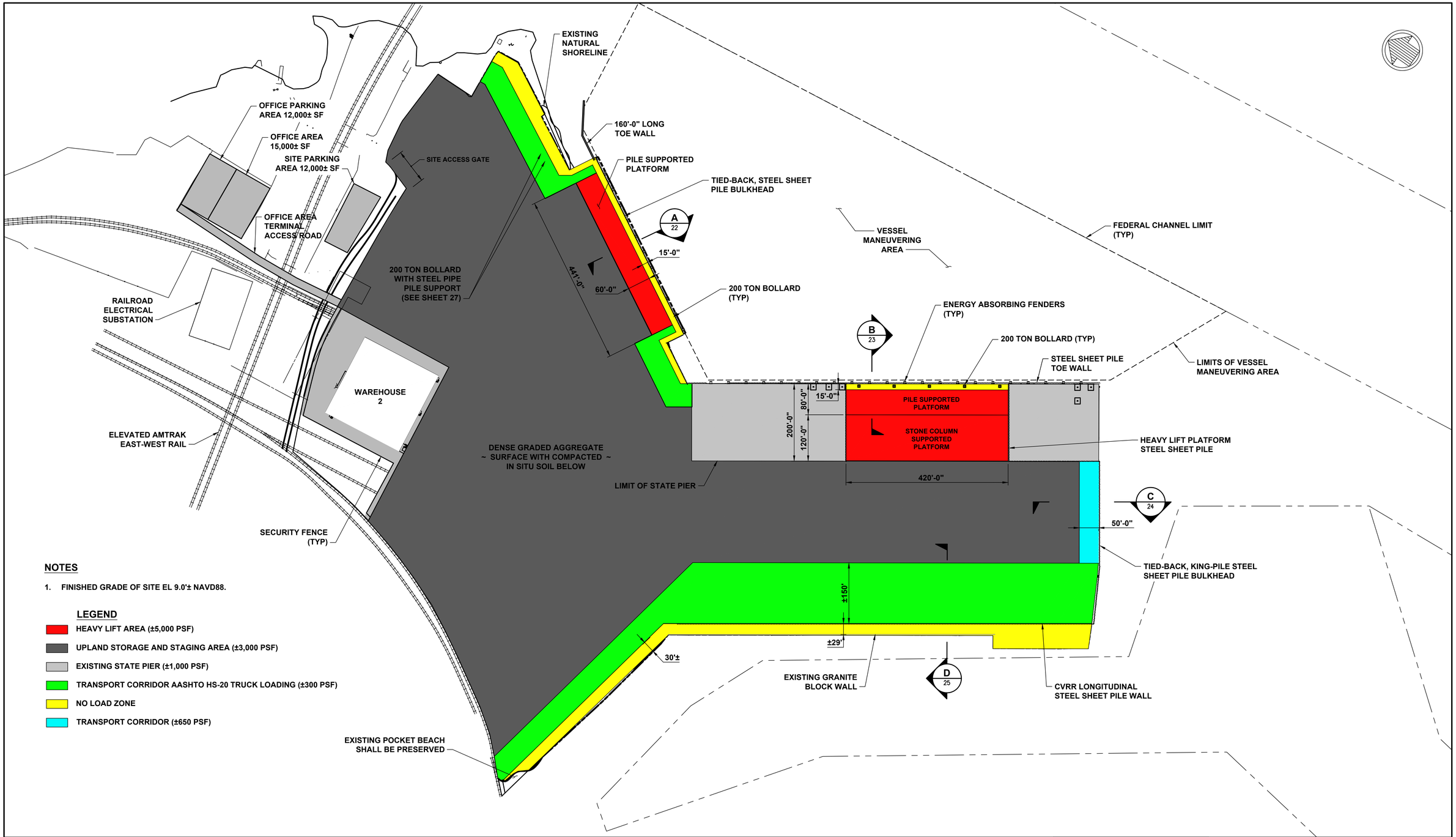
moffatt & nichol

OFFICE AND PARKING PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

40' 0' 40' 80'
SCALE: 1"=40'



NOTES

1. FINISHED GRADE OF SITE EL 9.0'± NAVD88.

LEGEND

- HEAVY LIFT AREA (±5,000 PSF)
- UPLAND STORAGE AND STAGING AREA (±3,000 PSF)
- EXISTING STATE PIER (±1,000 PSF)
- TRANSPORT CORRIDOR AASHTO HS-20 TRUCK LOADING (±300 PSF)
- NO LOAD ZONE
- TRANSPORT CORRIDOR (±650 PSF)

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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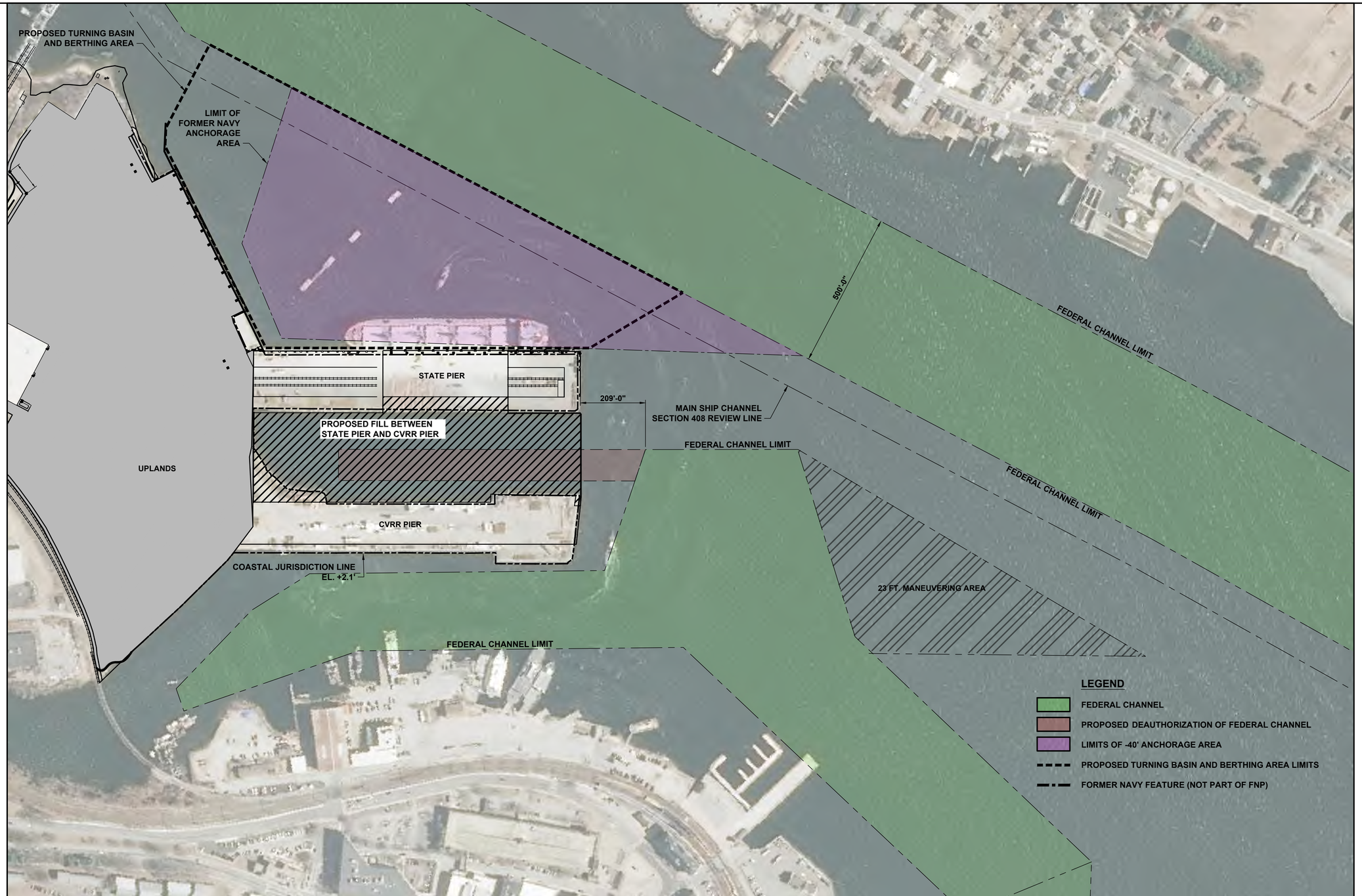
FACILITY USE AND LOGISTICS PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

120' 0' 120' 240'
SCALE: 1"=120'



PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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SEAL

FEDERAL CHANNEL MAP PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

150' 0' 150' 300'
SCALE: 1"=150'

PROPOSED TURNING BASIN AND BERTHING AREA

DELIVERY VESSEL
LOA: 608-FT
BEAM: 83-FT

LIMIT OF ANCHORAGE AREA

INSTALLATION VESSEL
LOA: 473-FT
BEAM: 184-FT

500'-0"

JACK-UP TURBINE INSTALLATION VESSEL IN TRANSIT

FEDERAL CHANNEL LIMIT

STATE PIER

PROPOSED FILL BETWEEN STATE PIER AND CVRR PIER

MAIN SHIP CHANNEL SECTION 408 REVIEW LINE

FEDERAL CHANNEL LIMIT

FEDERAL CHANNEL LIMIT

UPLANDS

CVRR PIER

COASTAL JURISDICTION LINE
EL +2.1

23 FT MANEUVERING AREA

FEDERAL CHANNEL LIMIT

① VESSEL TRANSITING FROM OPEN WATER

② VESSEL IN FEDERAL CHANNEL

③ VESSEL TURNING TO POSITION FOR BERTHING

④ VESSEL AT BERTH

VESSEL NOTES

1. DELIVERY AND INSTALL VESSELS SHOWN ARE REPRESENTATIVE. VESSEL SIZE MAY VARY.
2. DELIVERY VESSEL DELIVERS COMPONENTS (BLADES, TOWERS, NACELLES) TO PORT FROM FABRICATION FACILITIES.
3. INSTALL VESSEL IS USED TO TRANSPORT COMPONENTS (BLADES, TOWERS, NACELLES) FROM PORT TO INSTALLATION SITE. BLADES MAY OVERHANG PAST VESSEL DIMENSIONS SHOWN.
4. IT IS ASSUMED TUGBOAT ASSIST WILL BE PROVIDED DURING BERTHING PROCEDURES.

LEGEND

- FEDERAL CHANNEL
- PROPOSED DEAUTHORIZATION OF FEDERAL CHANNEL
- LIMITS OF -40' ANCHORAGE AREA
- PROPOSED TURNING BASIN AND BERTHING AREA LIMITS
- FORMER NAVY FEATURE (NOT PART OF FNP)

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

INSTALL VESSEL NAVIGATION PLAN (INBOUND)

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

150' 0' 150' 300'
SCALE: 1"=150'

PROPOSED TURNING BASIN AND BERTHING AREA

DELIVERY VESSEL
LOA: 608-FT
BEAM: 83-FT

LIMIT OF ANCHORAGE AREA

INSTALLATION VESSEL
LOA: 473-FT
BEAM: 184-FT

STATE PIER

PROPOSED FILL BETWEEN STATE PIER AND CVRR PIER

UPLANDS

CVRR PIER

COASTAL JURISDICTION LINE
EL +2.1

500'-0"

JACK-UP TURBINE INSTALLATION VESSEL IN TRANSIT

MAIN SHIP CHANNEL SECTION 408 REVIEW LINE

FEDERAL CHANNEL LIMIT

FEDERAL CHANNEL LIMIT

FEDERAL CHANNEL LIMIT

23 FT MANEUVERING AREA

FEDERAL CHANNEL LIMIT

① VESSEL AT BERTH

② VESSEL TRANSITING INTO FEDERAL CHANNEL

③ VESSEL IN FEDERAL CHANNEL HEADED TO OPEN WATER

VESSEL NOTES

1. DELIVERY AND INSTALL VESSELS SHOWN ARE REPRESENTATIVE. VESSEL SIZE MAY VARY.
2. DELIVERY VESSEL DELIVERS COMPONENTS (BLADES, TOWERS, NACELLES) TO PORT FROM FABRICATION FACILITIES.
3. INSTALL VESSEL IS USED TO TRANSPORT COMPONENTS (BLADES, TOWERS, NACELLES) FROM PORT TO INSTALLATION SITE. BLADES MAY OVERHANG PAST VESSEL DIMENSIONS SHOWN.
4. IT IS ASSUMED TUGBOAT ASSIST WILL BE PROVIDED DURING BERTHING PROCEDURES.

LEGEND

- FEDERAL CHANNEL
- PROPOSED DEAUTHORIZATION OF FEDERAL CHANNEL
- LIMITS OF -40' ANCHORAGE AREA
- PROPOSED TURNING BASIN AND BERTHING AREA LIMITS
- FORMER NAVY FEATURE (NOT PART OF FNP)

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

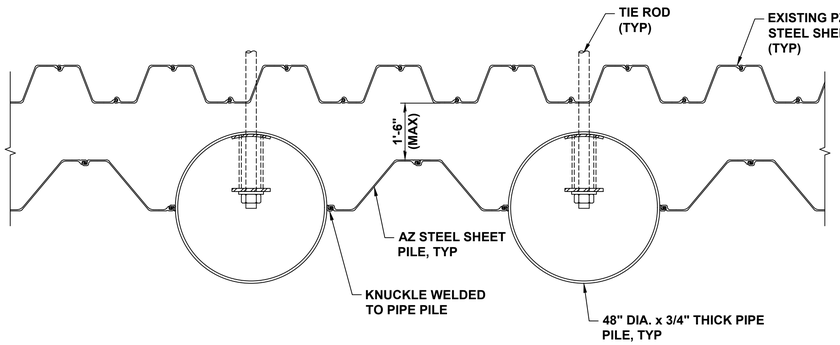
moffatt & nichol

INSTALL VESSEL NAVIGATION PLAN (OUTBOUND)

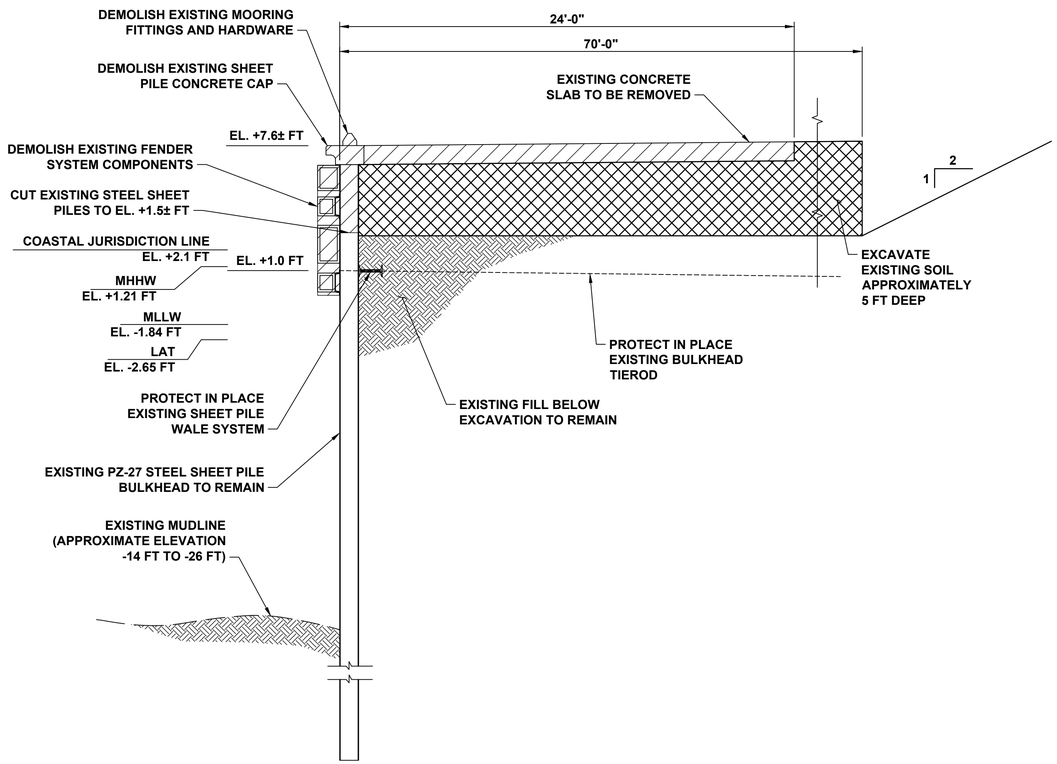
STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

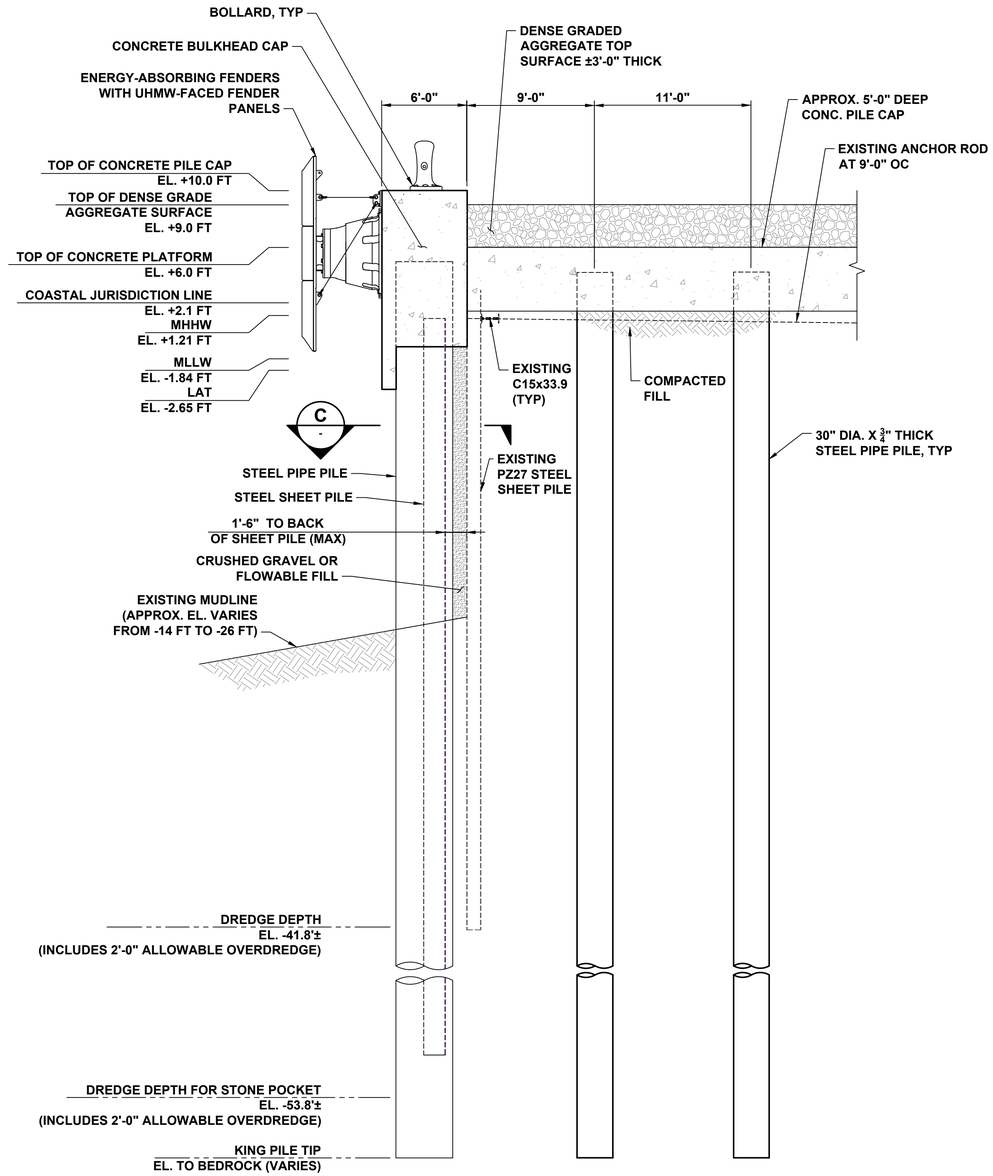
150' 0' 150' 300'
SCALE: 1"=150'



C — **KING PILE WALL**
SCALE: 1/2" = 1'-0"



EXISTING - STEEL SHEET PILE BULKHEAD
SCALE: 1/4" = 1'-0"



A / 12 — **SECTION**
SCALE: 3/16" = 1'-0"
18

NOTE:

1. MEMBER SIZE IS PRELIMINARY AND MAY CHANGE IN FINAL DESIGN STAGE.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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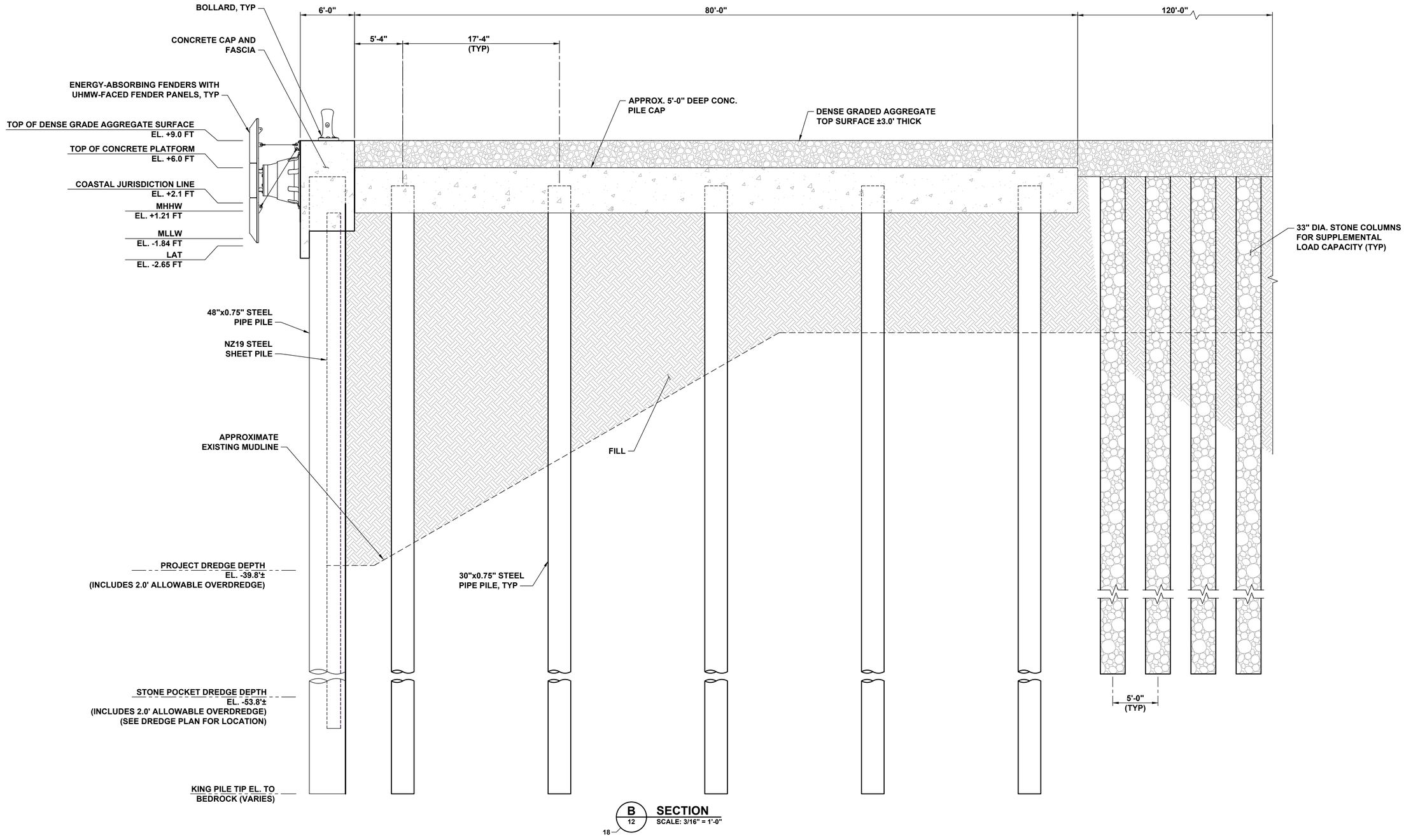
NORTHEAST BULKHEAD SECTIONS

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"
4'-0" 0'-0" 4'-0" 8'-0"
SCALE: 1/4"=1'-0"
8'-0" 0'-0" 4'-0" 8'-0"
SCALE: 3/16"=1'-0"



B / 12 — 18 **SECTION**
SCALE: 3/16" = 1'-0"

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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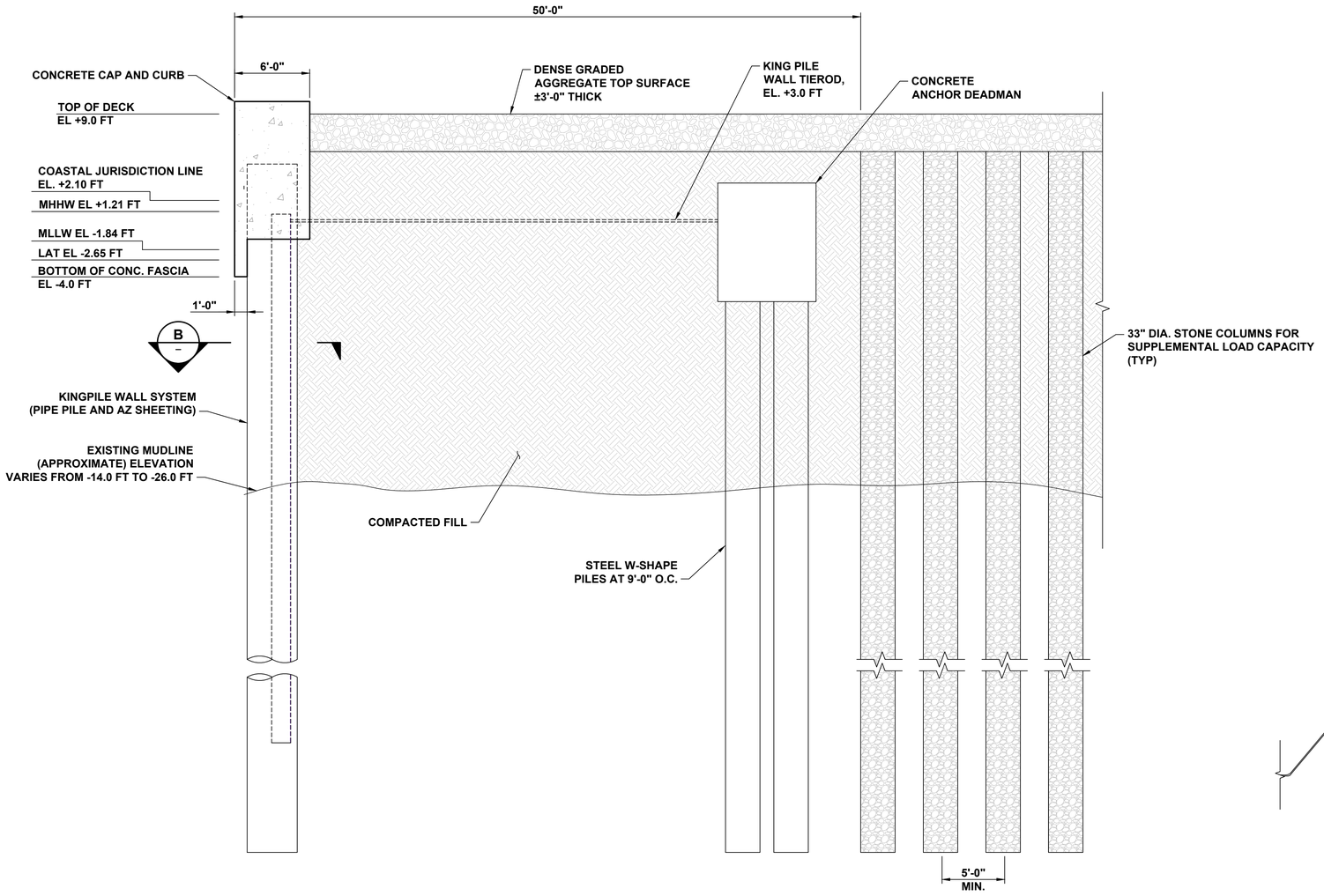
PROPOSED EAST STATE PIER PILE SUPPORTED PLATFORM

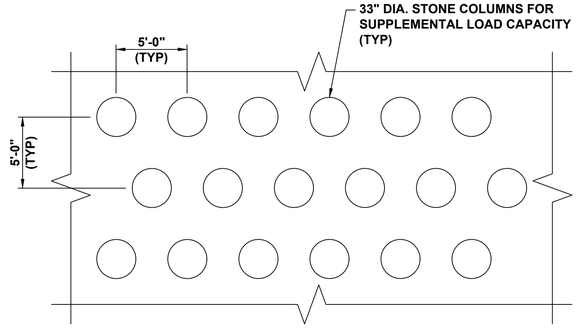
STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

8'-0" 0'-0" 4'-0" 8'-0"
SCALE: 3/16"=1'-0"

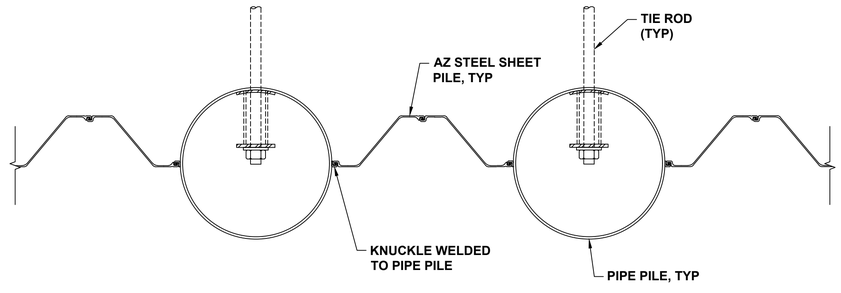


C 12 **SECTION**
18 SCALE: 3/16" = 1'-0"



PARTIAL PLAN OF STONE COLUMNS IN HEAVY LIFT AREA
SCALE: 3/16" = 1'-0"

A 12 **SECTION**
SCALE: 3/16" = 1'-0"



B - **KING PILE WALL**
NTS

NOTES:

1. STONE COLUMNS SHALL COVER APPROXIMATELY 25% OF HEAVY LIFT AREA FOOTPRINT. SPACING AND DIAMETER SHOWN FOR ALL STONE COLUMNS ARE APPROXIMATE AND MAY BE ALTERED BY CONTRACTOR BASED ON AVAILABLE EQUIPMENT AND PREFERRED MEANS AND METHODS.
2. ALTERNATIVE METHODS FOR GROUND IMPROVEMENT WITHIN THE NEW CENTRAL WHARF AREA SUCH AS PREFABRICATED VERTICAL DRAINS (WICK DRAINS) OR VIBRO-COMPACTION OF IMPORTED SOILS MAY BE UTILIZED IN LIEU OF OR IN COMBINATION WITH STONE COLUMNS TO ACHIEVE PROJECT SCHEDULE.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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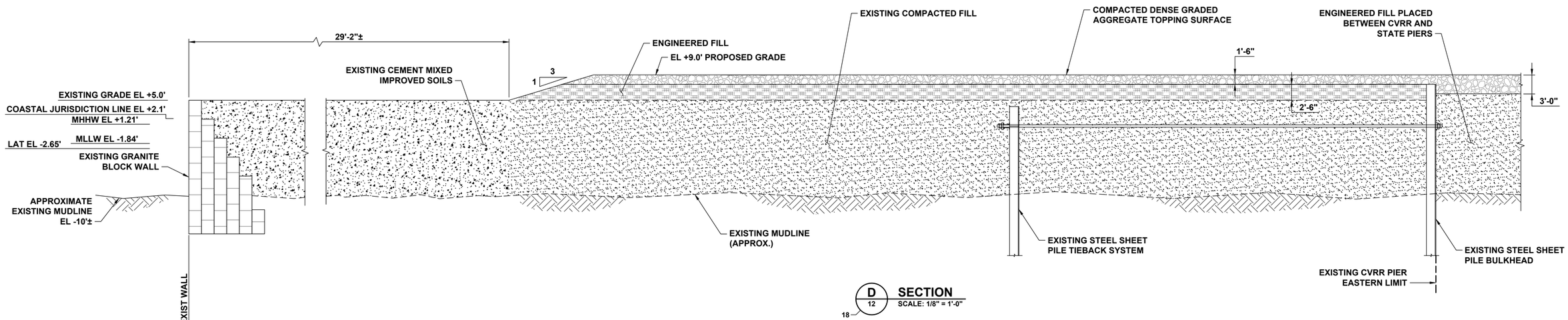
KING PILE WALL CLOSURE BETWEEN CVRR AND STATE PIER

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

8'-0" 0'-0" 4'-0" 8'-0"
SCALE: 3/16"=1'-0"
2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"



D/12 **SECTION**
SCALE: 1/8" = 1'-0"
18

NOTES:

1. EASTERN END OF INSTALLED FILL WILL BE RETAINED BY CENTRAL BERM OF EXISTING STATE PIER.
2. CONSTRUCTION OF GRANITE BLOCK WALL BELOW MUDLINE IS UNKNOWN. APPROXIMATE SECTION IS SHOWN.
3. SHEET SIZE IS APPROXIMATE AND MAY CHANGE IN DETAILED DESIGN.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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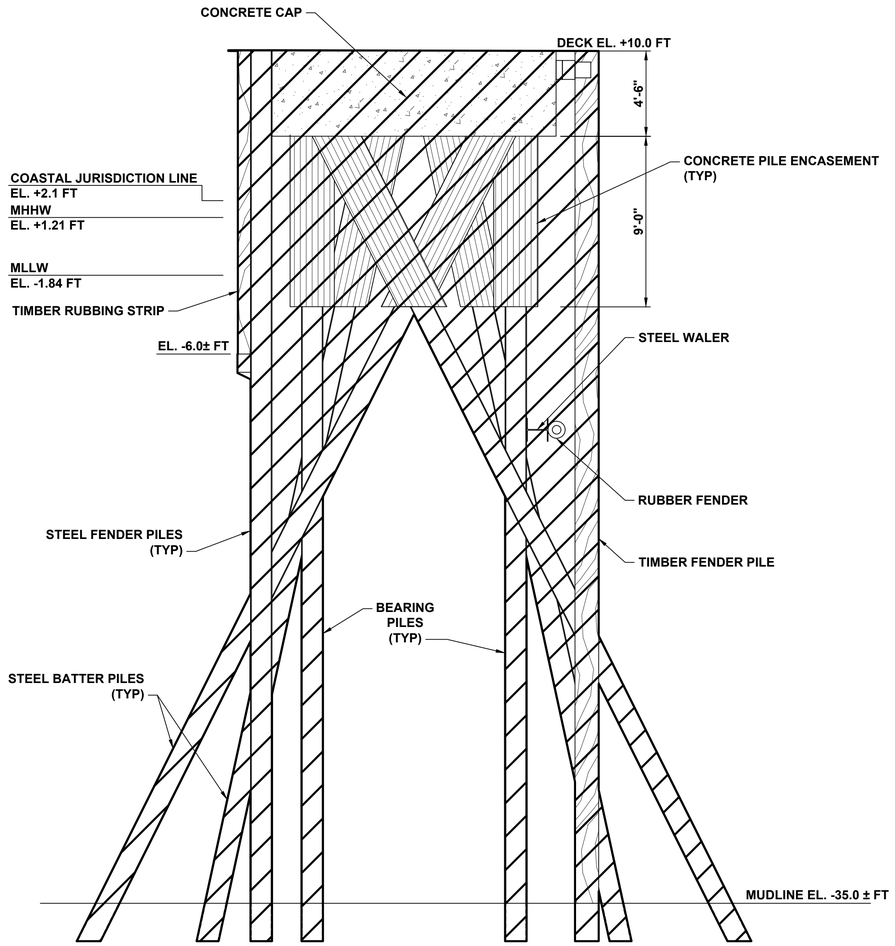
CVRR BULKHEAD SECTIONS

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

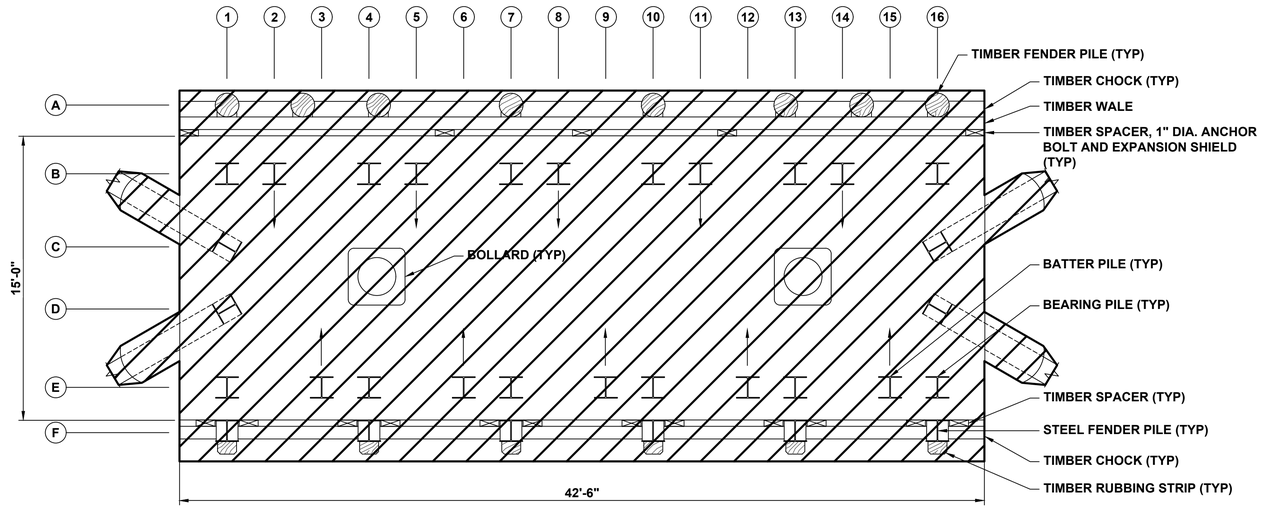
SEAL

8'-0" 0'-0" 8'-0" 16'-0"
SCALE: 1/8"=1'-0"



TYPICAL PLATFORM SECTION (LOOKING WEST)

SCALE: 1/4" = 1'-0"



TYPICAL PLATFORM PLAN

SCALE: 1/4" = 1'-0"

NOTES:

1. ELEVATIONS ARE IN NAVD88.
2. TOTAL OF 4 MOORING PLATFORMS - TYPICAL PLATFORM HAS 12 SUPPORT PILES, 14 BATTER PILES, AND 14 FENDER PILES TO BE DEMOLISHED. CATWALK CONTAINS 8 SUPPORT PILES.
3. ALL PILES SHALL BE REMOVED IN THEIR ENTIRETY. CONTRACTOR SHALL SUBMIT REMOVAL METHODS FOR REVIEW PRIOR TO COMMENCEMENT OF WORK.
4. WORK COVERED UNDER CERTIFICATE OF PERMISSION.

LEGEND

DEMOLISH

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

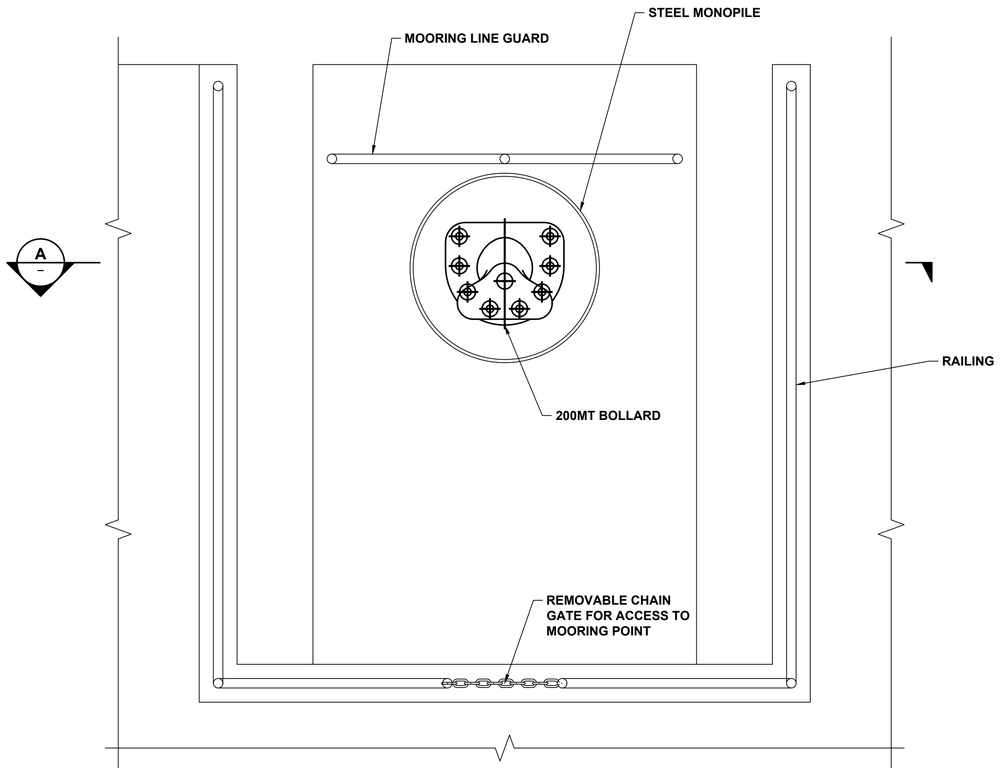
MOORING PLATFORM SECTION

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

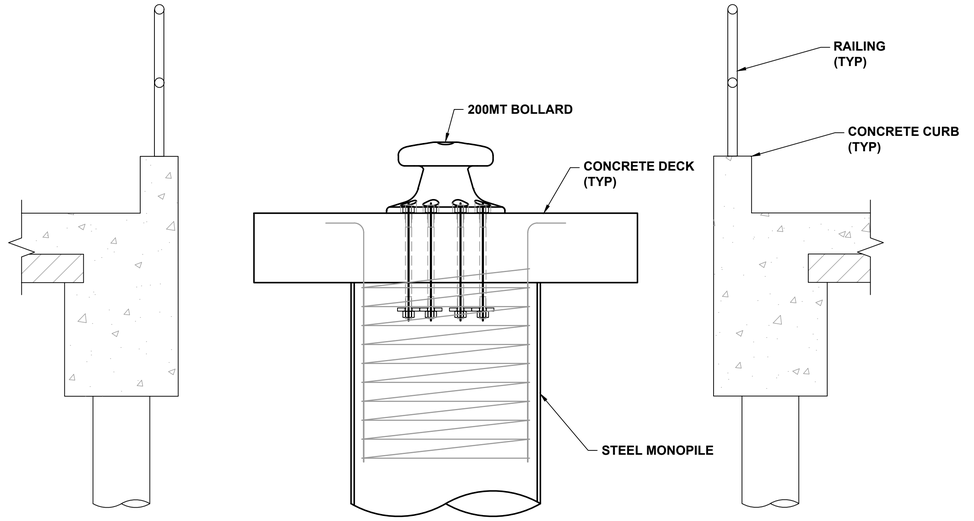
SEAL

4'-0" 0'-0" 4'-0" 8'-0"

SCALE: 1/4"=1'-0"



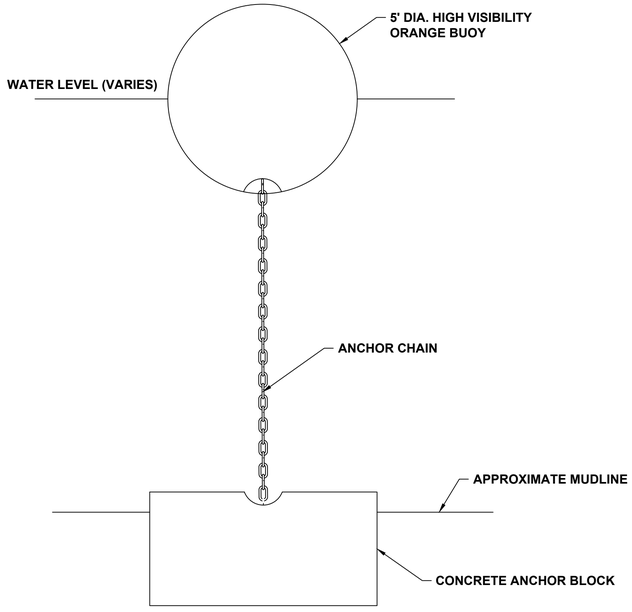
TYPICAL MOORING DOLPHIN PLAN AT STATE PIER
SCALE: 1/2"=1'-0"



A TYPICAL MOORING DOLPHIN ELEVATION AT STATE PIER
SCALE: 1/2"=1'-0"

BUOY NOTES:

1. LENGTH OF ANCHORAGE CHAIN SHALL ACCOMMODATE FULL TIDE CYCLE.
2. CONCRETE ANCHOR BLOCK SIZING SHALL PROHIBIT MOVEMENT OF BUOY.
3. BUOYS AND ANCHOR BLOCKS SHALL BE REMOVED UPON COMPLETION OF WORK.
4. BUOYS SHALL BE MARKED WITH THE FOLLOWING "STATE PIER WORK ZONE LIMITS".



BUOY ANCHORAGE DETAIL
SCALE: 1/2"=1'-0"

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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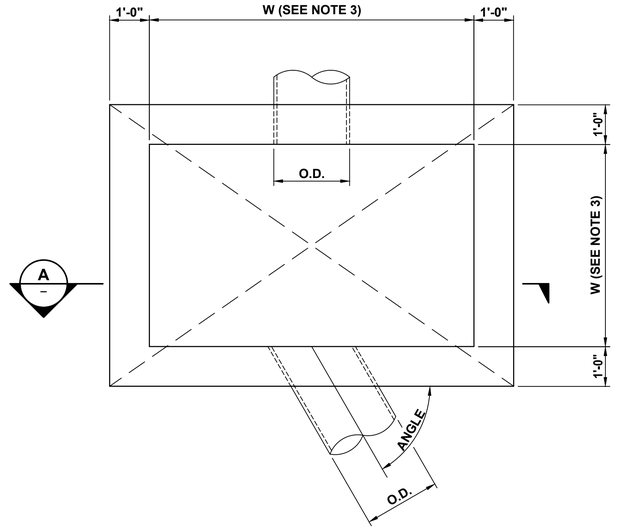
BUOY ANCHORAGE AND MOORING DOLPHIN DETAILS

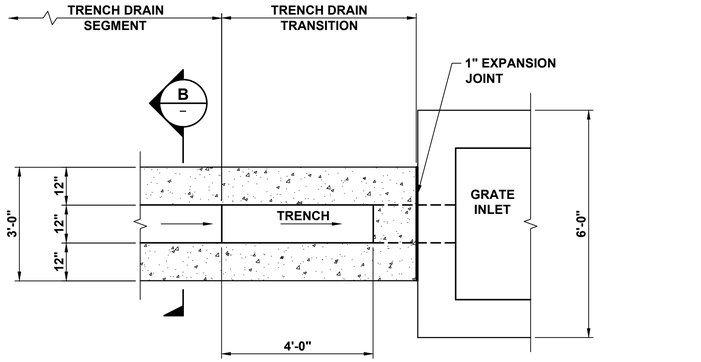
STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL



DRAINAGE STRUCTURE PLAN (MANHOLE AND GRATE INLET)

SCALE: 1/2" = 1'-0"



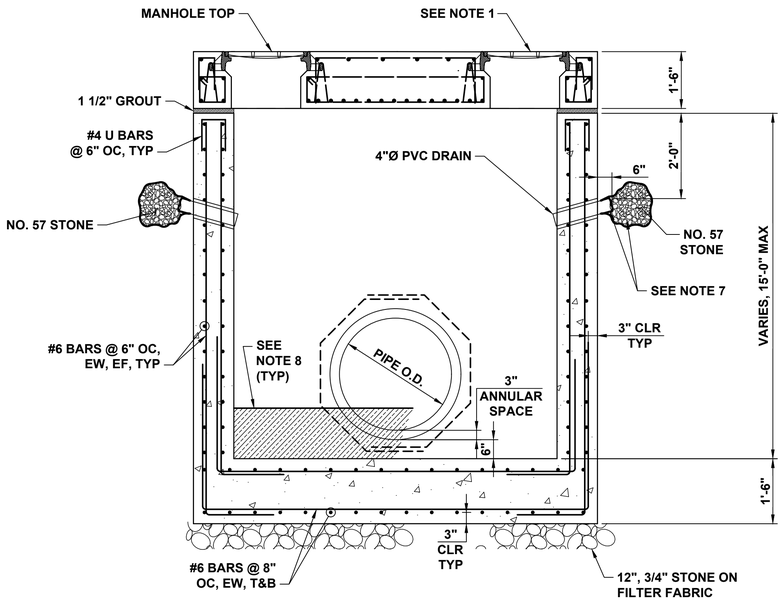
NOTE:
GRATE AND FRAMES NOT ILLUSTRATED.

TRENCH DRAIN PLAN

SCALE: 1/2" = 1'-0"

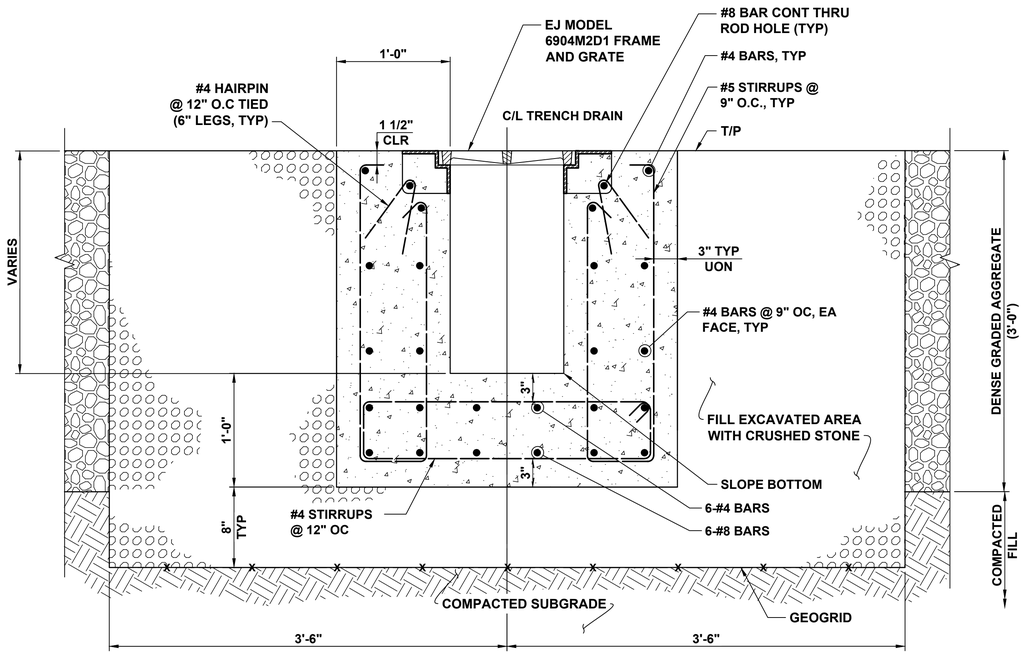
INLET NOTES

1. FRAME AND GRATES SHALL BE AS FOLLOWS (OR APPROVED EQUALS) :
   QUAD: NEENAH R-4994-HAB (TYPE A GRATE AND TYPE S FRAME)
2. GRATE SHALL BE BOLTED TO THE FRAME.
3. MINIMUM INSIDE WALL DIMENSION "W" SHALL BE DETERMINED BY THE FORMULA W=(O.D./SIN ANGLE)+2'-6", BUT IN NO CASE SHALL THE DIMENSION "W' BE LESS THAN 4 FEET NOR MORE THAN 8 FEET.
4. OPENINGS IN THE WALLS FOR PIPE SHALL BE CAST-IN OR CUT CLEANLY WITHOUT PERCUSSION TO A MAXIMUM DIAMETER OF O.D. ±3". THE SPACE BETWEEN PIPE AND WALL SHALL THEN BE FILLED WITH NON SHRINK GROUT, OR APPROVED JOINT INSERT ASSEMBLY.
5. PRECASTER SHALL BE RESPONSIBLE FOR DESIGNING LIFTING PROVISIONS.
6. FOR PRECAST CONCRETE SECTIONS, MINIMUM COVER IS 2". FOR CAST-IN-PLACE CONCRETE SECTIONS, MINIMUM COVER IS 3".
7. SECURELY TIE 1 CUBIC FOOT OF NO. 57 STONE IN BAG OF NON-WOVEN FILTER FABRIC. ENSURE POSITIVE CLOSURE AROUND PIPE TO PREVENT MATERIAL FROM MIGRATING OUT OF PIPE.
8. GROUT BOTTOM OF STRUCTURE TO INVERT OF PIPE. DEPTH VARIES.



A DRAINAGE STRUCTURE SECTION

SCALE: 1/2" = 1'-0"



NOTES: (THIS SECTION ONLY)
1. REBAR TO BE EPOXY COATED.
2. CONCRETE SHALL INCLUDE SYNTHETIC FIBERS AT A DOSAGE RATE OF 1.5 LBS/CY. FIBERS SHALL BE MASTERFIBER M 100 BY BASF, PSI FIBERSTRAND F BY EUCLID CHEMICAL, SIKAFIBER PPM 150 BY SIKA, OR APPROVED EQUAL.

B TRENCH DRAIN SECTION

SCALE: 1 1/2" = 1'-0"

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

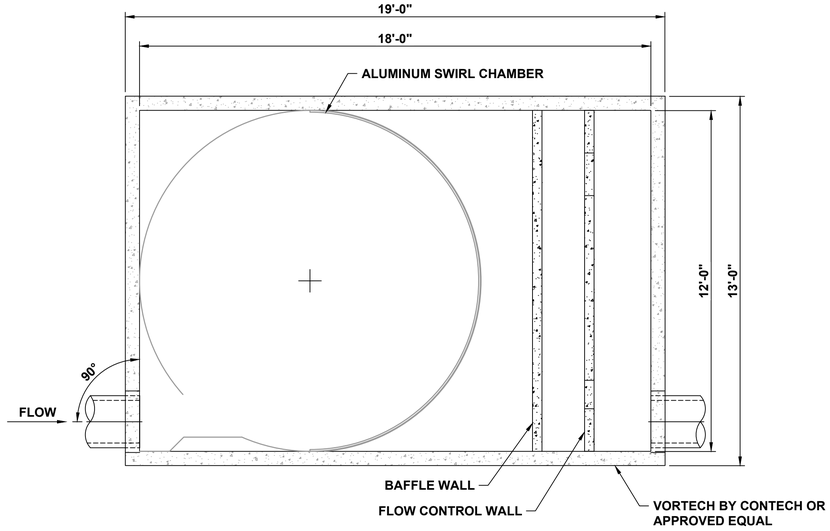
moffatt & nichol

DRAINAGE STRUCTURE DETAILS - 1 OF 2

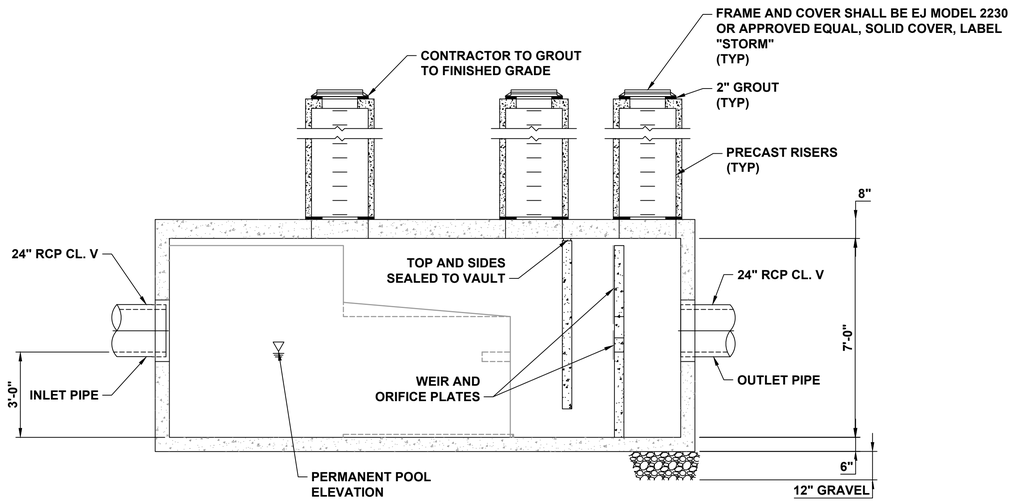
STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

1'-0" 0'-0" 6" 1'-0"
SCALE: 1 1/2"=1'-0"
2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"



WATER TREATMENT STRUCTURE PLAN
N.T.S.



WATER TREATMENT STRUCTURE ELEVATION
N.T.S.

NOTES:

1. STRUCTURES SHOWN ARE REPRESENTATIVE. FINAL SIZING WILL BE PROVIDED BY MANUFACTURER DURING DETAILED DESIGN.
2. SECTIONS ARE NOT TO SCALE.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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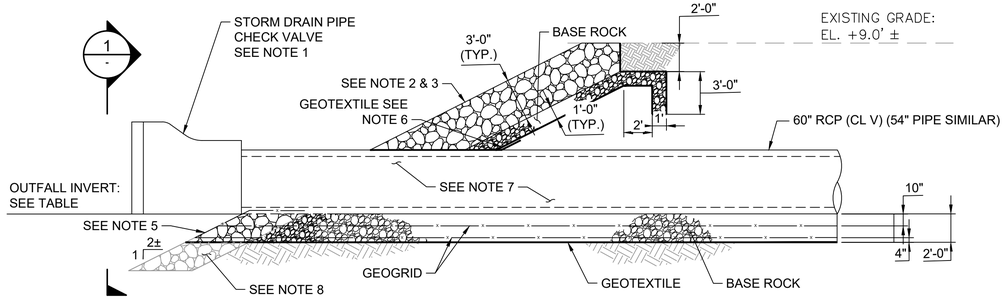
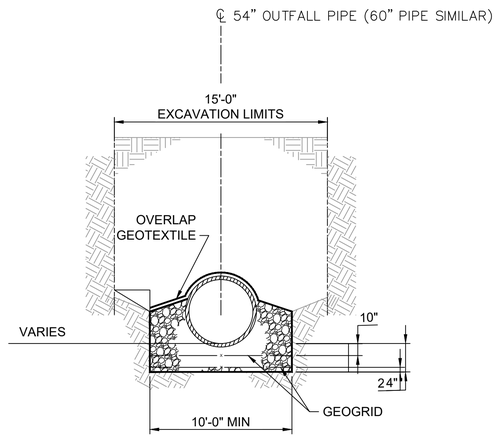
DRAINAGE STRUCTURE DETAILS - 2 OF 2

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL



A 14 OUTFALL THROUGH SLOPE (TYPE 1)
SCALE: 3/16" = 1'-0"

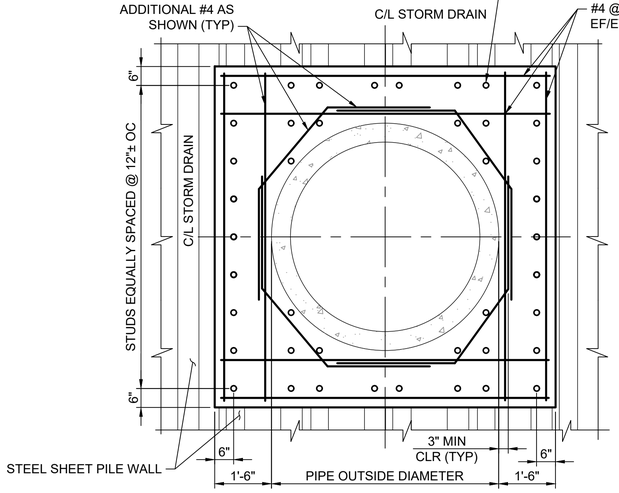


1 - SECTION
SCALE: 3/16" = 1'-0"

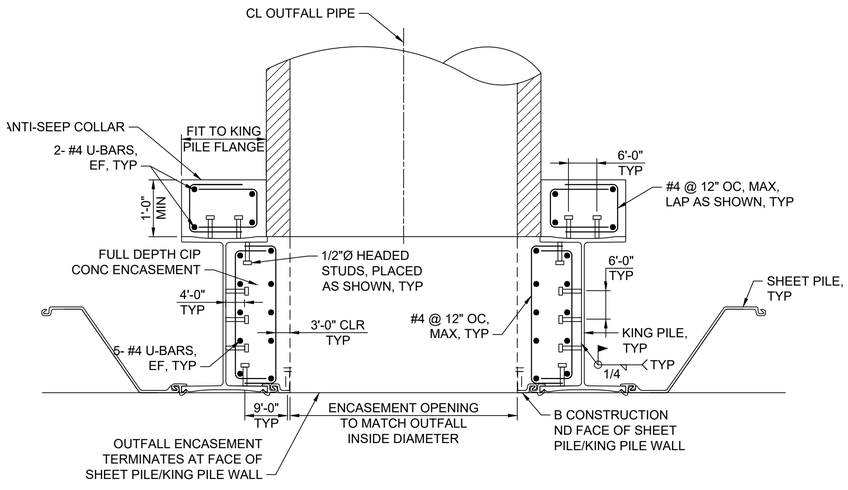
NOTES

1. STORM DRAIN PIPE CHECK VALVE TO BE RED VALVE TIDEFLEX SERIES TF-1 OR APPROVED EQUAL.
2. SALVAGE EXISTING RIPRAP FOR REUSE.
3. INSTALL ADDITIONAL RIPRAP (CT DEEP RIPRAP RR DETAIL) AS REQUIRED TO FORM DENSE ARMOR LAYER.
4. ALL RIPRAP SHALL BE CAREFULLY PLACED, NOT DUMPED.
5. WRAP LOWER GEOGRID ACROSS FACE OF BASE ROCK.
6. OVERLAP GEOTEXTILE AROUND PIPE AND SLOPE GEOTEXTILE.
7. USE FULL PIPE SEGMENT FOR CHECK VALVE MOUNTING.
8. ALLOW BASE ROCK TO FILL AROUND VOIDS OF EXISTING RIPRAP.
9. COASTAL JURISDICTION LINE IS AT EL. +2.1'
10. MHHW IS AT EL. +1.21'
11. MLLW IS AT EL. -1.84'

OUTFALL			
OF	INV. OUT	SIZE	TYPE
OF1	-4.20	60" Ø	1
OF2	-2.50	54" Ø	2
OF3	-3.10	60" Ø	1
OF4	-4.30	60" Ø	2



OUTFALL THROUGH STEEL SHEET PILE
SCALE: 1/2"=1'-0"



OUTFALL THROUGH STEEL SHEET PILE
SCALE: 1/16"=1'-0"

B 14 OUTFALL THROUGH STEEL SHEET PILE (TYPE 2)
SCALE: AS NOTED

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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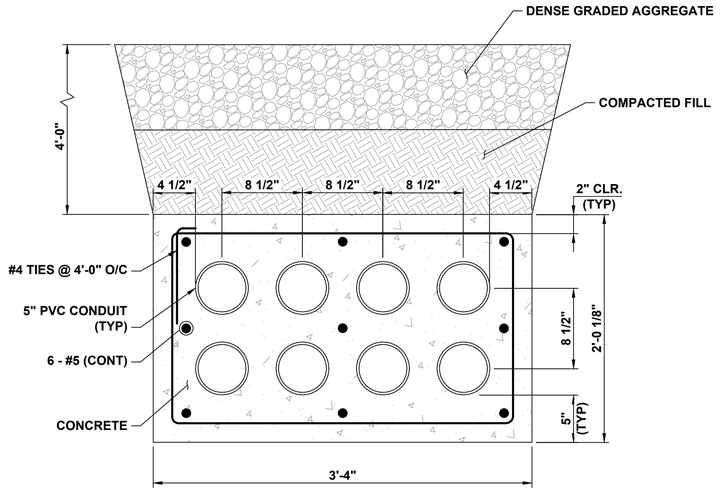
OUTFALL DETAILS

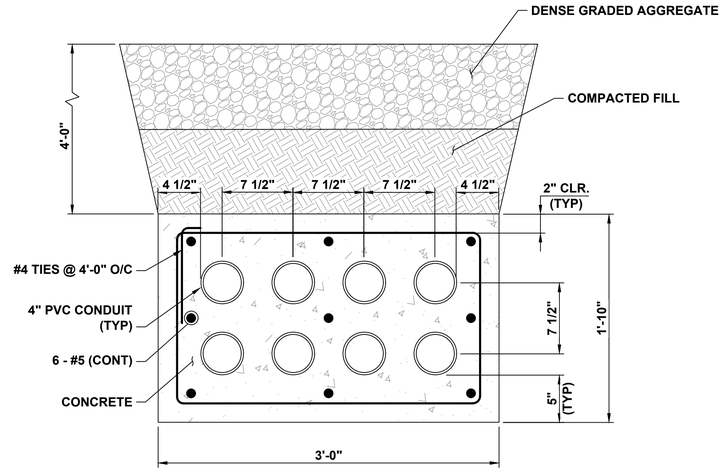
STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

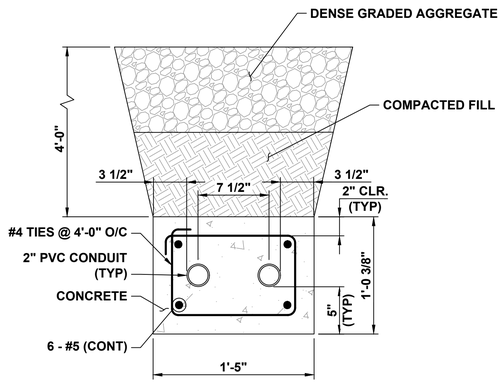
2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"



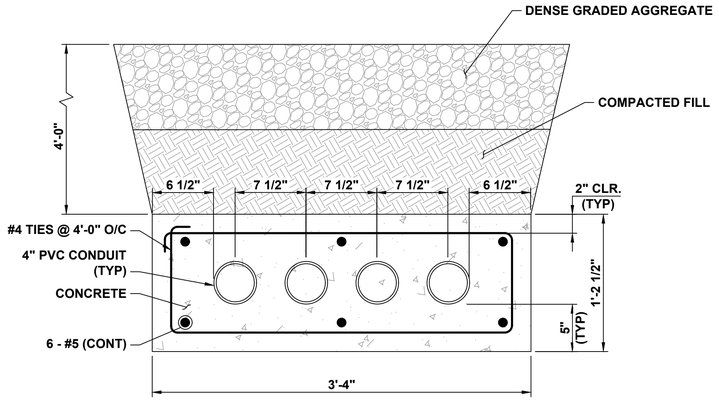
TYPICAL 5" 8-WAY CONCRETE ENCASED DUCTBANK
SCALE: 1 1/2"=1'-0"



TYPICAL 4" 8-WAY CONCRETE ENCASED DUCTBANK
SCALE: 1 1/2"=1'-0"



TYPICAL 2" 2-WAY CONCRETE ENCASED DUCTBANK
SCALE: 1 1/2"=1'-0"



TYPICAL 2" & 4" 4-WAY CONCRETE ENCASED DUCTBANK
SCALE: 1 1/2"=1'-0"

DUCTBANK NOTES:

1. ALL 5" SCHEDULE 40 PVC CONDUIT SHALL HAVE AN OUTER DIAMETER OF NO MORE THAN 5.5" AND THE ENDBELL OUTER DIAMETER OF NO MORE THAN 6.1".
2. ALL 4" SCHEDULE 40 PVC CONDUIT SHALL HAVE AN OUTER DIAMETER OF NO MORE THAN 4.5" AND THE ENDBELL OUTER DIAMETER OF NO MORE THAN 5".
3. ALL END BELLES SHALL BE STAGGERED AT NO LESS THAN 12" ACROSS THE ENTIRE DUCTBANK SECTION.
4. ALL DUCTBANK SPACINGS SHALL BE REDUCED TO ENTER THE OPENINGS IN THE EQUIPMENT.
5. THE TOP OF THE DUCTBANK SHALL NOT BE SHALLOWER THAN 48" BELOW FINISHED GRADE.
6. DEVIATIONS IN DUCTBANK SHALL BE REQUIRED FOR ROUTING AROUND UTILITIES AND OTHER DUCTBANKS.
7. THE SLOPE OF ALL DUCTBANKS SHALL BE TOWARDS MANHOLES. IN DUCTBANK LENGTHS THAT DO NOT HAVE MANHOLES, THE SLOPE SHALL BE TO THE EQUIPMENT NEAREST TO THE EDGE OF THE PIER.
8. CONCRETE COMPRESSIVE STRENGTH f'_c = 3,000 PSI.
9. REINFORCING STEEL - UNCOATED ASTM A615, GRADE 60.
10. CONTINUOUS REINFORCING STEEL SHALL BE LAPPED 36 X BAR DIAMETER AT SPLICES AND CORNERS, UNLESS OTHERWISE NOTED.
11. INTENTIONALLY LEFT BLANK
12. THE SPACING IN BETWEEN 4", 5" AND 2" MIXED CONDUITS IN A SINGLE DUCTBANK SHALL MAINTAIN THE OVERALL CENTERLINE OF THE LARGEST CONDUIT IN THE DUCTBANK SECTION. THIS REQUIRES 7-1/2" IN BETWEEN 2" AND 4" CONDUITS, AND 8-1/2" IN BETWEEN A 4" AND 5" CONDUIT. THE REBAR AND CONCRETE COVER OF THE DUCTBANK CONDUITS SHALL REMAIN AS INDICATED FOR THE LARGEST CONDUIT IN THE DUCTBANK RUN.

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

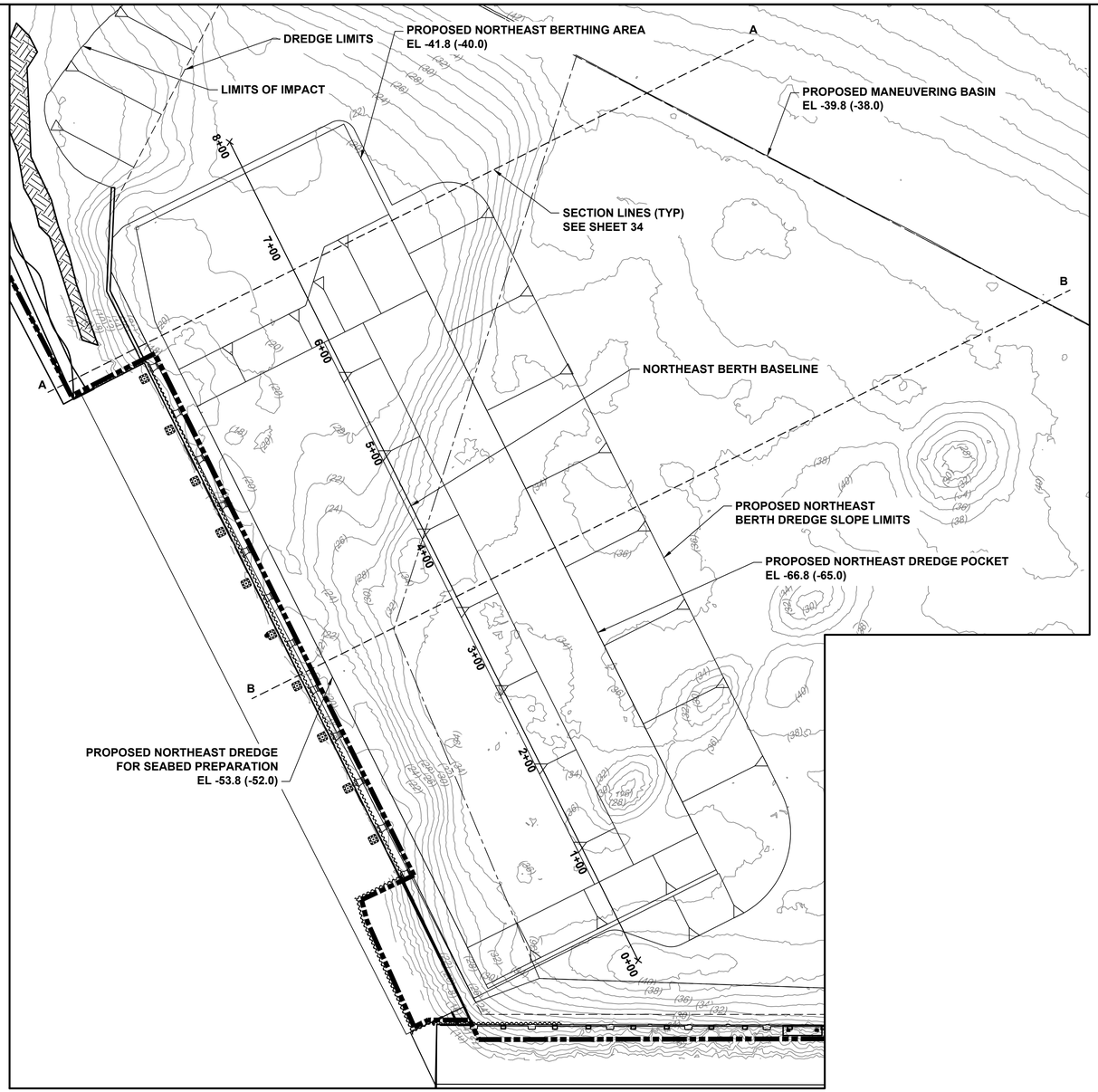
moffatt & nichol

DUCTBANK DETAILS

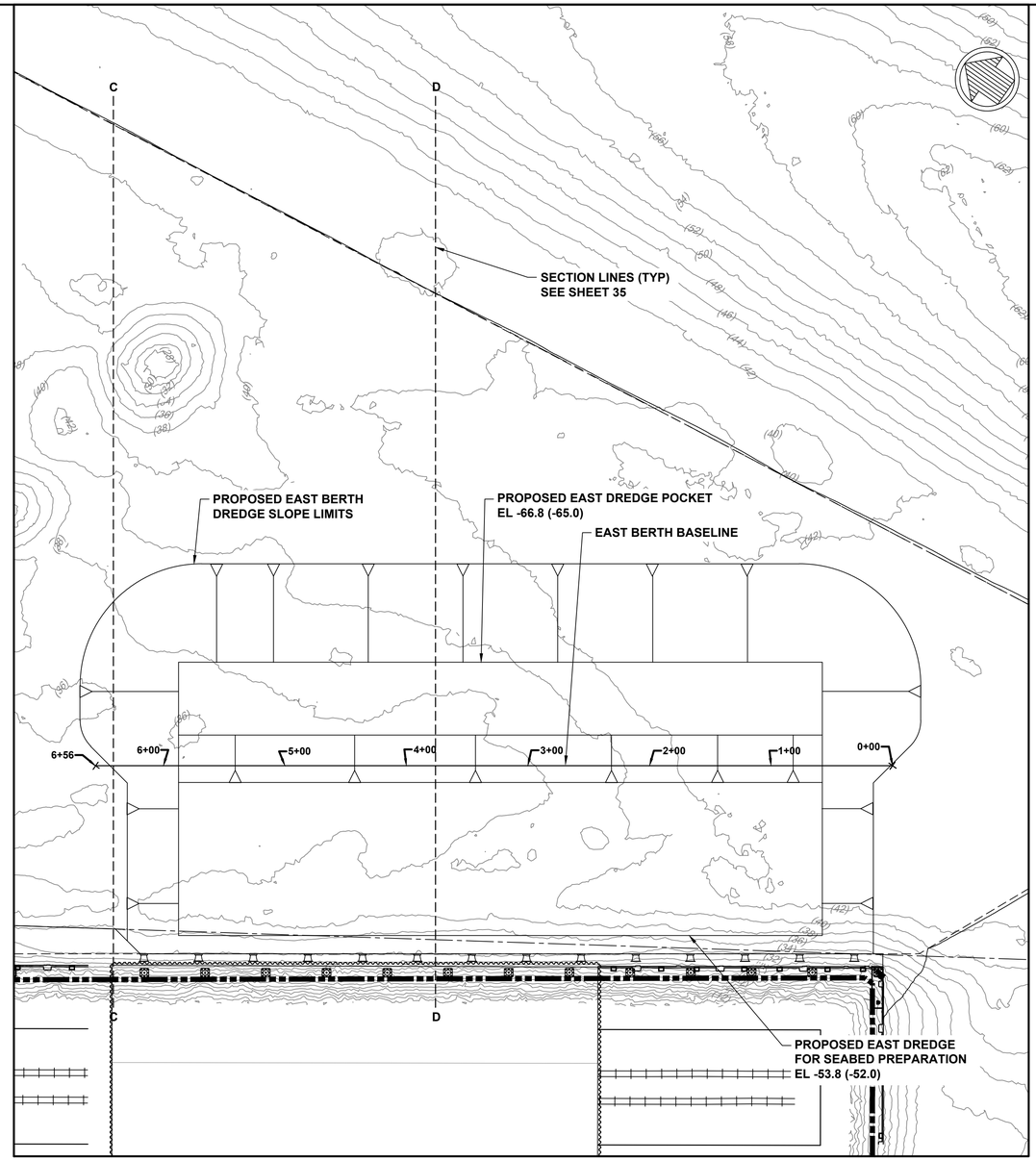
STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

1'-0" 0'-0" 6" 1'-0"
SCALE: 1 1/2"=1'-0"



NORTHEAST BERTH
SCALE: 1" = 60'



EAST BERTH
SCALE: 1" = 60'

NOTES:

1. ELEVATIONS SHOWN ARE IN NAVD88 DATUM WITH MLLW IN PARENTHESES

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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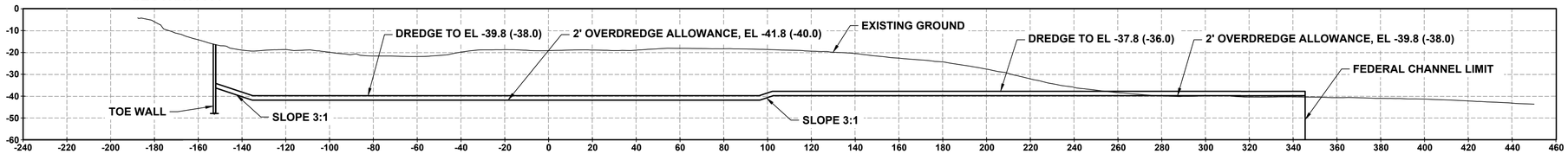
PROPOSED DREDGE ALIGNMENT PLAN

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

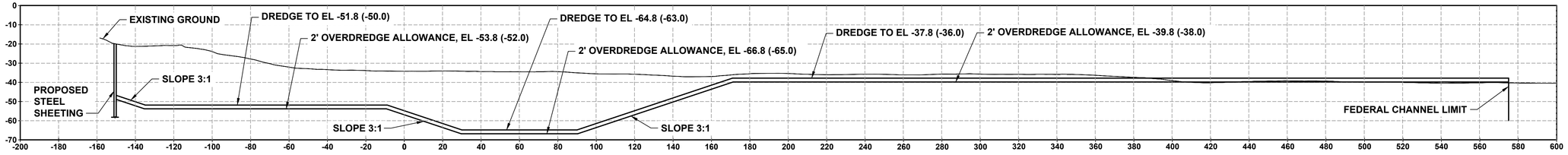
SEAL

60' 0' 60' 120'
SCALE: 1"=60'

SECTION A-A



SECTION B-B



NOTE:

1. ELEVATIONS SHOWN ARE IN NAVD88 DATUM WITH MLLW IN PARENTHESES

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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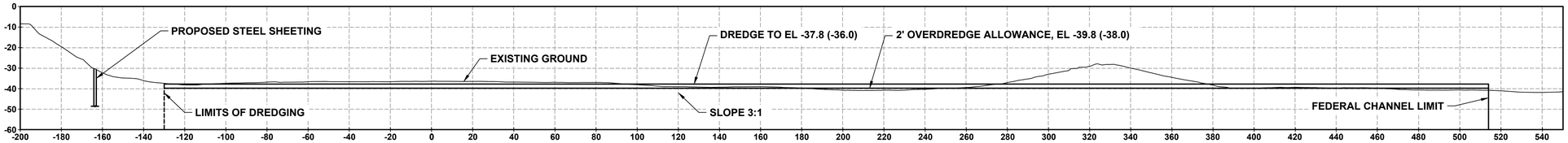
NORTHEAST BERTH DREDGE SECTIONS

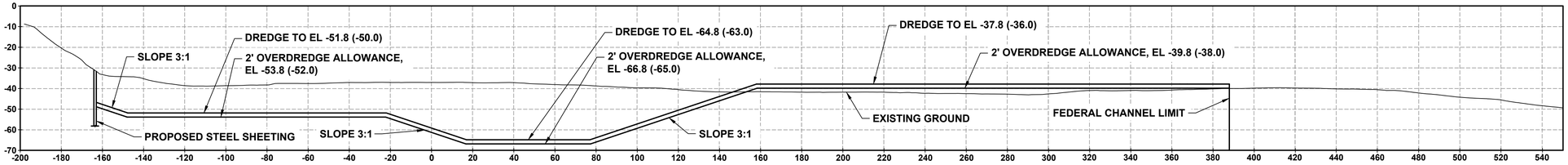
STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

SECTION C-C



SECTION D-D



NOTE:

1. ELEVATIONS SHOWN ARE IN NAVD88 DATUM WITH MLLW IN PARENTHESES

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

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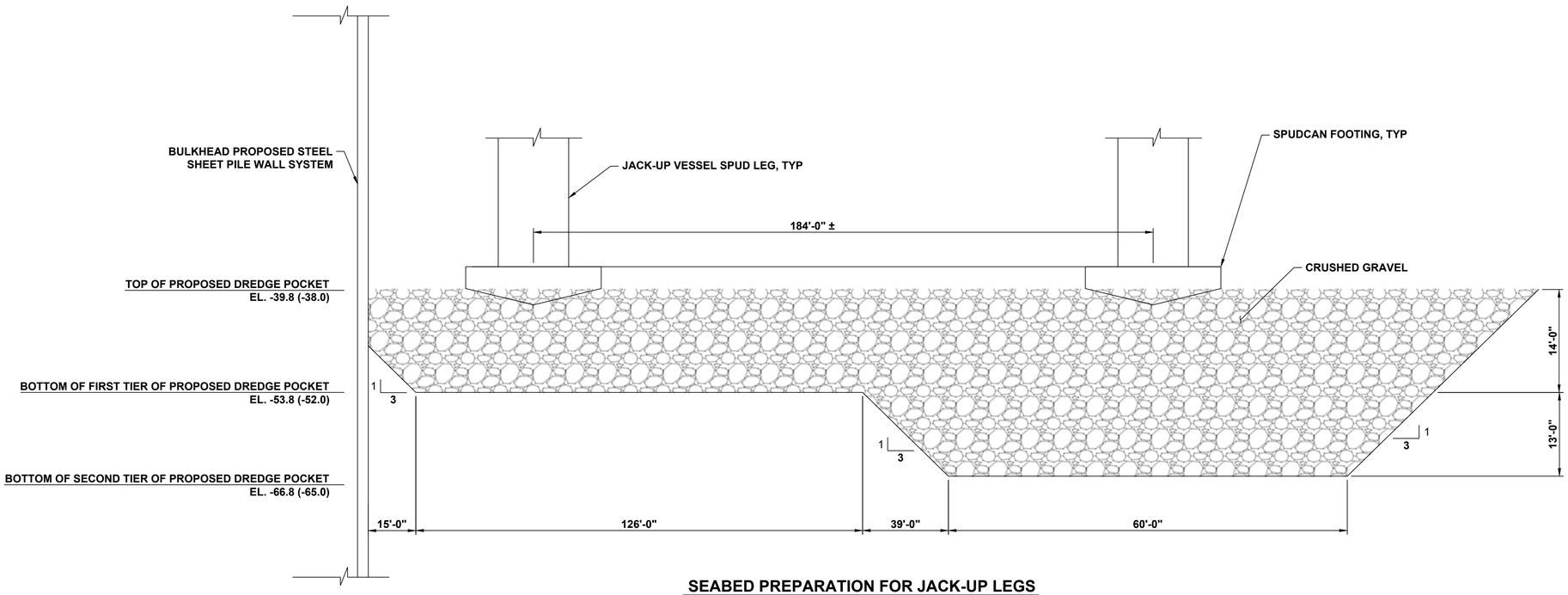
EAST BERTH DREDGE SECTIONS

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL



SEABED PREPARATION FOR JACK-UP LEGS

SCALE: N.T.S.

NOTES:

1. ELEVATIONS SHOWN ARE IN NAVD88 DATUM WITH MLLW IN PARENTHESES
2. SPUD LEG AND FOOTING ARE REPRESENTATIVE. ACTUAL SIZES OF THESE ELEMENTS ARE DEPENDENT ON THE SELECTED INSTALLATION VESSEL.
3. NORTHEAST BERTH CRUSHED GRAVEL= 99,400 CY
4. EAST BERTH CRUSHED GRAVEL = 99,400 CY

PERMITTING SET
ISSUED: 10/23/2020
NOT TO BE USED FOR CONSTRUCTION

moffatt & nichol

DREDGE SECTIONS FOR INSTALL VESSEL JACK-UP LEGS

STATE PIER INFRASTRUCTURE IMPROVEMENTS
STATE PIER FACILITY - NEW LONDON, CT

SEAL

Fisheries Management/Mitigation Plan Escrow Agreement

This Fisheries Management/Mitigation Plan Escrow Agreement ("Agreement") is made and entered into as of the _____ day of _____, 20__, by and among the Connecticut Port Authority ("CPA") and Selected Financial Institution ("AGENT"). CPA and the AGENT are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, CPA received a Structures, Dredge and Fill and Tidal Wetlands Permit and a Section 401 Water Quality Certification from the State of Connecticut Department of Energy & Environmental Protection ("DEEP") to construct certain improvements at the State Pier facility in New London, Connecticut (License # 201905859-SDF TW WQC dated _____ ["License"]), and as a condition of such License and as mitigation for resource impacts, agreed to fund fish habitat restoration projects acceptable to DEEP in accordance with the terms of the License;

WHEREAS, DEEP has advised CPA that the projects described in this Agreement to restore the passage of alewife, blueback herring, and other fish species to habitat currently unavailable to said species due to the presence of dams or other obstructions is acceptable to DEEP and will satisfy all conditions in the License relating to mitigation of resource impacts through fish habitat restoration;

WHEREAS, DEEP has entered into agreements with sponsors of fish habitat restoration projects (such agreements referred to individually as a "Project Sponsor Commitment") to sponsor the fish habitat restoration projects described below; and,

WHEREAS, the AGENT agrees to act as AGENT and hold the funds deposited by CPA and distribute them in accordance with the terms of this Agreement;

NOW THEREFORE, in consideration of the mutual promises, undertaking, and covenants hereinafter contained, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereto intending to be legally bound agree as follows:

I. Identification of Fish Habitat Restoration Projects

A. DEEP has identified fish habitat restoration projects (each referred to individually as the "Project", and collectively as the "Projects") that would provide adequate mitigation for resource impacts by reconnecting areas of fish habitat that are currently inaccessible and, therefore, not productive. DEEP has also established the maximum amount of funding each Project would receive from the CPA funding. The Projects have been categorized as Tier I, which are currently in active development and would be ready for implementation with approximately twelve (12) months from the date of this Agreement, and Tier II, which have been identified in the event that a Tier I Project cannot be implemented due to unresolvable issues, including, but not limited to, land ownership, design obstructions, time of year restrictions, and/or the failure to obtain all necessary regulatory permits.

B. Tier I Projects.

Project Name	Stream	Town	Project Sponsor[1]	Maximum Contribution to Project[2]
Post Office- R	Beaver Brook	Sprague	Town of Sprague	$150,000
Harrington Apt- R	Beaver Brook	Sprague	Town of Sprague	
Highland Pond- R	Sawmill Brook	Middletown	Middlesex Land Trust	$200,000
Shewville- F	Indiantown Brook	Ledyard	ECCD	$200,000
Bulkley Pond- R	Sasco Brook	Westport/Fairfield	TBD	$100,000
Long Pond- F	Whitford Brook	Ledyard	STS	$200,000
Bristol Brass- R	Pequabuck River	Bristol	TBD	$500,000
Winchell-Smith- F	Farmington River	Farmington	Conn. River Salmon Assoc.	$500,000
Upper Millpond- F	Indian River	Clinton	Town of Clinton	$500,000
Griswold #4- R	Pattaconk Brook	Chestser	Conn. River Conservancy	$425,000
Grannis Pond- F	Eightmile River	Southington	Save the Sound	$300,000
Roaring Brook- F	Roaring Brook	Lyme	Conn. River Salmon Assoc.	$200,000
R= removal F= fishway				

C. Tier II Projects.

Project Name	Stream	Town	Project Sponsor[1]	Maximum Contribution to Project[2]
Wards Mill	Branford River	Branford	TBD	TBD
Parke Pond	Shunnock River	Stonington	TBD	TBD
Merwin Meadows	Norwalk River	Wilton	Save the Sound	TBD
Roses Mill Pond	Indian River	Milford	Save the Sound	TBD
Indian Lake	Indian River	Milford	Save the Sound	TBD
Schwartz Pond	Stony Brook	Suffield	Connecticut River Salmon Assoc.	TBD
Starr Mill Dam	Coginchaug River	Middletown	Connecticut River Salmon Assoc.	TBD
Johnsonville	Moodus River	East Haddam	Connecticut River Salmon Assoc.	TBD
Witch Hazel	West River	Guilford	TBD	TBD
Deer Lake	Chatfield Hollow Br	Madison	TBD	TBD
Largo Drive	Noroton River	Stamford	Save the Sound	TBD
Nickson	Quinnipiac River	Plainville	Save the Sound	TBD
Chasmar	Fivemile River	Darien/Norwalk	Save the Sound	TBD
Haleys Brook dams	Haley's Brook	Groton	Save the Sound	TBD
Stillman Pond	Yellow Mill Channel	Bridgeport	Save the Sound	TBD
Mill River Tide Gates	Mill River	New Haven	Save the Sound	TBD
Millers Pond	Hunts Brook	Waterford	TBD	TBD
Tingue Dam Fishway	Naugatuck River	Seymour	Town of Seymour	TBD

(continued next page)

[1] Hereinafter, referred to individually as a "Project Sponsor," and collectively as "Project Sponsors," which includes sponsors of both Tier I and Tier II Projects. Project Sponsors may also be more specifically referred to as "Tier I Project Sponsors" or "Tier II Project Sponsors," or in the singular as a "Tier I Project Sponsor" or "Tier II Project Sponsor."

[2] Hereinafter, the amount identified in this column, or (if this column does not provide an amount) the amount later determined by DEEP as part of its review of a Project proposal to be the Maximum Contribution to Project, is referred to as the "Maximum Contribution to Project."

Project Name	Stream	Town	Project Sponsor[1]	Maximum Contribution to Project[2]
Tier II Projects (Continued)				
Last Pond	Pine Brook	North Haven	TBD	TBD
Bladen Brook	Bladen Brook	Seymour	TBD	TBD
Papermill Pond	Little River	Sprague	Town of Sprague	TBD
Whitford Pond	Whitford Brook	Ledyard	TBD	TBD

II. Effective Date

This Agreement shall be effective as of the date CPA deposits the sum of XXX,XXX Thousand Dollars ($XXX,000.00) (the "Funds") with the AGENT by delivering a certified check in that amount to: [insert instructions from Selected Financial Institution]

III. Obligations of CPA

A. CPA agrees to pay for the services of AGENT in accordance with Schedule A hereto.

B. CPA shall indemnify and hold harmless AGENT and each director, officer, employee and affiliate of AGENT (each, an "Indemnified Party") upon demand against any and all claims, actions and proceedings (whether asserted or commenced by CPA or any other person or entity and whether or not valid), losses, damages, liabilities, penalties, costs and expenses of any kind or nature (including without limitation reasonable attorneys' fees, costs and expenses (collectively, "Losses") arising from this Agreement or AGENT's performance of duties or enforcement of rights hereunder, except to the extent such Losses are finally determined by a court of competent jurisdiction, which determination is not subject to appeal, to have been directly caused solely by the gross negligence or willful misconduct of such Indemnified Party in connection with AGENT's material breach of this Agreement. CPA's obligations under this Section III.B shall survive any termination of this Agreement and the resignation or removal of AGENT.

IV. Obligations of AGENT

A. Hold Funds. The AGENT shall hold the Funds deposited by CPA pursuant to Section II, above, un-invested and separately from other monies held by AGENT. Funds shall be invested by the AGENT in the investment identified in Schedule B.

B. Disburse Funds. The AGENT shall only disburse the Funds to a Project Sponsor that has signed and submitted a Project Sponsor Commitment as confirmed by DEEP to the AGENT in writing. Promptly after receipt of such DEEP confirmation, the AGENT shall disburse to each of the Tier I Project Sponsors the applicable Maximum Contribution to Project amount identified in Section I.B, above.

C. Accounting of Funds. The AGENT will provide DEEP and CPA an annual report on the status of the Funds until such Funds are fully expended or transferred pursuant to Section VI.C, below, the escrow account is closed, and this Agreement is terminated pursuant to Section XI, below. Such annual report will list each payment from the Funds, and disclose the recipient of the Funds, the Project to which the Funds were disbursed, the amount disbursed, and the date disbursed. The AGENT will also provide to DEEP and CPA the report required by Section VI.B, below, when so requested by DEEP. DEEP and CPA may

also request that the AGENT provide a status report regarding the Funds at any time, containing the same information as the annual report, and the AGENT will have thirty (30) days to provide such a report.

D. Final Report. After all Funds are fully expended or transferred pursuant to Section VI.C, below, the escrow account is closed, and this Agreement is terminated pursuant to Section XI, below, the AGENT will provide DEEP and CPA a final report on the disbursement of the Funds. Such report will list each payment from the Funds, and disclose the recipient of the Funds, the Project to which the Funds were disbursed, the amount disbursed, and the date disbursed.

V. Replacement of Sponsor

If the original Project Sponsor is unable to complete a Project to which Funds have been disbursed, DEEP may attempt to recruit another organization to manage the same Project using the disbursed Funds. If a replacement Project Sponsor is not selected and the AGENT does not receive a Project Sponsor Commitment as confirmed by DEEP in writing within six (6) months, the Project will be deemed terminated and Section VI, below, shall apply to any Funds returned by a Project Sponsor to the AGENT.

VI. Disposition of Unspent Funds

A. Transfer of Unspent Funds from a Tier I Project. If a Tier I Project Sponsor does not spend the Maximum Contribution to Project Amount, for any reason, including termination of the Project or completion of the Project for less than the Maximum Contribution to Project Amount, the Tier I Project Sponsor shall return the unspent portion of the Maximum Contribution to Project Amount to the AGENT and such Funds, to the extent so returned and notwithstanding the provision in Section IV.B, above, that Project Sponsor shall only receive the Maximum Contribution to Project Amount, shall be available to be transferred to another Tier I Project pursuant to direction in writing from DEEP to the AGENT.

B. Transfer of Unspent Funds to Tier II Project. Within thirty (30) days of being notified by DEEP that the Tier I projects have been completed or otherwise terminated, the AGENT shall submit an accounting of the Funds to DEEP. If all Funds have been disbursed, this accounting shall be the Final Report required by Section IV.D, above. If there are unspent Funds returned to AGENT pursuant to Section VI.A remaining in the account, DEEP shall thereafter identify Tier II Projects to which the Funds may be applied and alert the sponsors of such projects of the availability of the unspent Funds. Tier II Project Sponsors must submit a Project Sponsor Commitment as approved by DEEP in writing in order to receive any portion of the unspent Funds pursuant to direction in writing from DEEP to the AGENT. This process shall be repeated until all of the Funds are expended or transferred pursuant to Section VI.C, below.

C. Transfer of Unspent Funds from Escrow Account. If no new Project Sponsor commits to use the unspent Funds for a period of five (5) years after the last payment by the AGENT to a Project Sponsor, the unspent Funds shall be disbursed by AGENT, pursuant to DEEP's written direction, to a private tax-exempt entity selected by DEEP, in its sole discretion and judgment, whose purpose is environmental conservation and restoration.

VII. AGENT's Standard of Care

The AGENT may act in reliance upon any writing or instrument or signature which it in good faith believes to be genuine, may assume the validity and accuracy of any statement or assertion contained in such a writing or instrument, and may assume that any person purporting to give any writing, notice, advice or instructions in connection with the provisions hereof has been duly authorized to do so. The AGENT shall not be liable in any manner for the sufficiency or correctness as to form, manner and execution, or validity of any instrument deposited in this escrow account, nor as to the identity, authority, or right of any person executing the same. AGENT undertakes to perform only such duties as are expressly set forth herein and no duties will be implied. AGENT has no fiduciary or discretionary duties of any kind. AGENT's permissive rights will not be construed as duties. AGENT has no liability under and no duty to inquire as to the provisions of the License, any Project Sponsor Commitment, or any document other than this Agreement, including without limitation any other agreement between any or all of the parties hereto or any other persons even though reference thereto may be made herein and whether or not a copy of such document has been provided to AGENT. AGENT will not be liable for any action taken or omitted by it in good faith except to the extent that a court of competent jurisdiction determines, which determination is not subject to appeal, that AGENT's gross negligence of willful misconduct in connection with its material breach of this Agreement was the sole cause of any loss to CPA. In no event will AGENT be liable for (i) acting in accordance with or conclusively relying upon any instruction, notice, demand, certificate or document believed by AGENT to have been created by or on behalf of CPA or DEEP, (ii) incidental, indirect, special, consequential or punitive damages or penalties of any kind (including, but not limited to lost profits), even if AGENT has been advised of the likelihood of such damages or penalty and regardless of the form of action AGENT may consult, at CPA's cost, legal counsel selected by it in the event of any dispute or question as to the construction of any of the provisions hereof or of any other agreement or of its duties hereunder, or relating to any dispute involving this Agreement, and will incur no liability and must be fully indemnified by CPA from any liability whatsoever in acting in accordance with the advice of such counsel. AGENT will not be obligated to take any legal action in connection with the Funds, this Agreement or any other agreement or to appear in, prosecute or defend any such legal action or to take any other action that in AGENT's sole judgment may expose it to potential expense or liability.

VIII. Resignation of AGENT

The AGENT may at any time resign upon thirty (30) days written notice to CPA and DEEP and CPA may remove AGENT as AGENT under this Agreement upon thirty (30) days notice to AGENT. CPA shall appoint a successor AGENT, with the advice and consent of DEEP, which consent shall not be unreasonably withheld, within this thirty (30) day period.

IX. Representations and Warranties

Each of the Parties represents and warrants to each other that such Party has full power and authority to enter into and perform its obligations under this Agreement, and all action necessary to authorize the execution and delivery of this Agreement and the performance by such Party of its obligations hereunder has been taken. This Agreement has been duly executed by such Party and constitutes the legal, valid, binding and enforceable obligation of such Party, enforceable against such Party in accordance with its terms subject to bankruptcy laws affecting creditors' rights generally.

X. Submission of Materials

All notices, reports, consents, approvals and requests or permitted hereunder shall be in writing, and shall be either hand delivered or sent, by (a) certified or registered U.S. Mail, Return Receipt Requested, first class postage prepaid, or (b) expedited prepaid delivery service, either commercial (e.g., Federal Express or comparable national courier) or U.S. Postal Service, with proof of attempted delivery. All notices shall be addressed to the following:

If to CPA:

Connecticut Port Authority
Attn: Joseph Salvatore
455 Boston Post Rd
Old Saybrook, CT 06475

If to DEEP:

Dept. of Energy and Environmental Protection
Land & Water Resources Division
Attn: Micheal Grzywinski
79 Elm Street
Hartford, CT 06106

and

Dept. of Energy and Environmental Protection
Attn: Peter Aarrestad
Director, Fisheries Division
79 Elm Street
Hartford, CT 06106

If to AGENT:

Selected Financial Institution
Attn: _____
Street
City, State, Zip

The Parties and DEEP may change the recipient of its notices at any time by sending notice of the change pursuant to this Section.

XI. Termination of Agreement

A. This Agreement shall terminate upon the occurrence of any of the following events:

(1) The payment of all Funds by the AGENT to Project Sponsors.

(2) The transfer of any unspent Funds pursuant to Section VI.C, above.

B. Upon termination of this Agreement, the AGENT will close the escrow account and submit the Final Report required by Section IV.D, above.

XII. General Provisions

A. Entire Agreement. This Agreement constitutes the entire agreement between the Parties pertaining to its subject matter, and it supersedes any and all written or oral agreements previously existing between the Parties with respect to such subject matter.

B. Amendment. No amendment of any provision of this Agreement shall be valid unless the same shall be in writing and signed by each of the Parties.

C. No Agency or Partnership. Nothing contained in this Agreement shall constitute CPA as a joint venture, partner or agent of the Project Sponsors or any recipient of the Funds, or render CPA liable for any interests, obligations, acts, omissions, representations or contracts of the Project Sponsors or any recipient of the Funds.

D. Waiver. Any Party's failure to insist on strict performance of this Agreement shall not be deemed a waiver of any of its rights or remedies, nor shall it relieve any other Party from performing any subsequent obligation strictly in accordance with the terms of this Agreement. No waiver shall be effective unless it is in writing and signed by the Party against whom enforcement is sought. Such waiver shall be limited to provisions of this Agreement specifically referred to therein and shall not be deemed a waiver of any other provision. No waiver shall constitute a continuing waiver unless the writing states otherwise.

E. Assignment; Successors and Assigns. This Agreement shall be binding upon and insure to the benefit of the Parties named herein and their respective successors and permitted assigns. No Party may assign either this Agreement or any of its rights, interests, or obligations hereunder without the prior written approval of the other Parties.

F. Miscellaneous. The Section headings of this Agreement are for convenience of reference only and do not form a part hereof and do not in any way modify, interpret, or construe the intentions of the Parties. This Agreement may be executed in two or more counterparts and all such counterparts shall constitute one and the same instrument. Delivery of an executed signature page to this Agreement by facsimile transmission shall be as effective as delivery of a manually signed counterpart of this Agreement. The term "including" is by way of example and not limitation.

G. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Connecticut, without giving effect to the conflict of laws principles thereof.

H. Severability. If any term or provision of this Agreement shall be held to be invalid or unenforceable for any reason by a court of competent jurisdiction, such term or provision shall be ineffective to the extent of such invalidity or unenforceability without invalidating the remaining

terms and provisions hereof, and this Agreement shall be construed as if such invalid or unenforceable term or provisions had not been contained herein.

I. Parties in Interest. Except as specifically contemplated hereby, nothing in this Agreement is intended to confer any rights or remedies on any persons other than the Parties. For the avoidance of doubt, this Agreement confers no rights or remedies to any Project Sponsor or DEEP. This Agreement shall not be construed to relieve or discharge any obligations or liabilities of third persons, nor shall it be construed to give third persons any right of subrogation or action over or against any Party.

J. Identifying Information. To help the government fight the funding of terrorism and money laundering activities, federal law requires all financial institutions to obtain, verify and record information that identifies each person who opens an account. For a non-individual person such as a business entity, a charity, a trust or other legal entity, AGENT requires documentation to verify its formation and existence as a legal entity. AGENT may require financial statements, licenses or identification and authorization documents from individuals claiming authority to represent the entity or other relevant documentation. CPA agrees to provide all information requested by AGENT in connection with any legislation or regulation to which AGENT is subject, in a timely manner.

Connecticut Port Authority

By: _____

_____

Its _____
Duly Authorized

Selected Financial Institution

By: _____

_____

Its _____
Duly Authorized

Approved

The State of Connecticut Department of Energy and Environmental Protection

By: _____

Its _____
Duly Authorized

SCHEDULE A

Selected Financial Institution

Schedule of Fees for Services

DRAFT

SAMPLE SCHEDULE B

Selected Financial Institution
Investment Authorization Form

Selected Financial Institution MONEY MARKET DEPOSIT ACCOUNT

Description and Terms

The Selected Financial Institution Money Market Deposit Account is a Selected Financial Institution ("XXXX") interest-bearing money market deposit account designed to meet the needs of Selected Financial Institution Corporate Trust Services Escrow Group and other corporate trust customers of Selected Financial Institution. Selection of this investment includes authorization to place funds on deposit and invest with Selected Financial Institution.

Selected Financial Institution uses the daily balance method to calculate interest on this account (actual/365 or 366). This method applies a daily periodic rate to the principal balance in the account each day. Interest is accrued daily and credited monthly to the account. Interest rates are determined at Selected Financial Institution discretion and may be tiered by customer deposit amount.

The owner of the account is Selected Financial Institution as agent for its corporate trust customers. Selected Financial Institution Corporate Trust Services Escrow Group performs all account deposits and withdrawals. Deposits accounts are FDIC insured per depositor, as determined under FDIC Regulations, up to applicable FDIC limits.

Selected Financial Institution **IS NOT REQUIRED TO REGISTER AS A MUNICIPAL ADVISOR WITH THE SECURITIES AND EXCHANGE COMMISSION FOR PURPOSES OF COMPLYING WITH THE DODD-FRANK WALL STREET REFORM & CONSUMER PROTECTION ACT. INVESTMENT ADVICE, IF NEEDED, SHOULD BE OBTAINED FROM YOUR FINANCIAL ADVISOR.**

Automatic Authorization

In the absence of specific written direction to the contrary to the extent and as authorized in the applicable escrow agreement, Selected Financial Institution is hereby directed to invest and reinvest proceeds and other available moneys in the Selected Financial Institution Money Market Deposit Account. The customer(s) confirm that the Selected Financial Institution Money Market Deposit Account is a permitted investment under the operative documents and this authorization is the permanent direction or investment of the moneys until notified in writing of permissible alternate instructions.

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

July 22, 2019

Richard E. Couch
Martinez Couch & Associates, LLC
1084 Cromwell Avenue
Rocky Hill, CT 06067
couchre@martinezcouch.com

Project: Proposed Demolition of Various Upland Buildings, Installation of New Structures Including Storm Water Retention & Treatment System, Addition of Administrative Offices with Parking and Maintenance Dredging at the State Pier at 200 State Pier Road in New London, Connecticut
NDDB Determination No.: 201901490 (REVISED)

Dear Richard Couch,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map provided for the Proposed Demolition of Various Upland Buildings, Installation of New Structures Including Storm Water Retention & Treatment System, Addition of Administrative Offices with Parking and Maintenance Dredging at the State Pier at 200 State Pier Road in New London, Connecticut. We have known extant records for State Threatened *Falco Peregrinus* (peregrine falcon) and State Special Concern blueback herring that occur in close proximity to your project boundaries.

Please be advised that a DEEP Fisheries Biologist will review the permit applications you may submit to DEEP regulatory programs to determine if your project could adversely affect blueback herring. DEEP Fisheries Biologists are routinely involved in pre-application consultations with regulatory staff and applicants in order to identify potential fisheries issues and work with applicants to mitigate negative effects, including to endangered species. If you have not already talked with a Fisheries Biologist about your project, you may contact the Permit Analyst assigned to process your application for further information, including the contact information for the Fisheries Biologist assigned to review your application

Peregrine Falcon (*Falco peregrinus*) Protection Status: Threatened Species

The peregrine falcon is a state threatened species which has adapted to life in urban settings. The peregrine falcon is associated with bridges for nesting and brood rearing purposes. Peregrines will actively and aggressively defend the nest, whether a nest box or natural nest, up to and sometimes past 75 yards. The peregrine will attack anyone or anything that comes within the area of its nest. Peregrine falcons are Connecticut's largest falcon and can measure up to 20 inches. Adults are slate gray above and pale underneath with fine bars and spots of black; they have long pointed wings with a narrow tail. Young falcons have the same composite but are darker underneath and browner all over. The peregrine falcon nesting season occurs between the months of April and June. For this reason, special conditions regarding the timing of work on the structure must be applied. In order to protect this species, the proposed construction activities should be completed during non-nesting season months (July – March). No construction activities should occur between April 1st and June 30th.

Protection Recommendation:
In order to protect this species, the proposed construction activities should be completed during non-nesting season months (July – March). No construction activities should occur between April 1st and June 30th. If work needs to be conducted during the breeding season (April 1st to June 30th) then I recommend hiring an ornithologist (bird expert) to evaluate and prepare a protection plan for the birds. All work on this project must maintain a minimum buffer of 300' from the nest. If a nest is identified by workers all work should stop immediately and this information should be reported to our program for further assistance and guidance to complete the work safely. I concur with the Peregrine Falcon Protection Plan that was submitted to our program on July 2, 2019 by Timothy O'Sullivan of

AECOM. If the Peregrine Falcon Protection Plan is followed it will minimize adverse impacts on the Peregrine Falcon.

Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by July 22, 2021.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3

AECOM Imagine it. Delivered.



Peregrine Falcon Protection Plan

State Pier Infrastructure Improvements
New London, Connecticut

July 2, 2019

Quality information

Prepared by	Checked by	Verified by	Approved by
Timothy O'Sullivan Wetland and Wildlife Biologist	Patrick Fellion Environmental Scientist		

Revision History

Revision	Revision date	Details	Authorized	Name	Position

Distribution List

# Hard Copies	PDF Required	Association / Company Name

Prepared for:

Connecticut Port Authority
State Pier Facility
New London, Connecticut

Prepared by:

Timothy O'Sullivan
Wetland and Wildlife Biologist
T: 978-621-6756
E: tim.osullivan@aecom.com

AECOM
500 Enterprise Drive
Rocky Hill, CT 06067
aecom.com

Photos by NYS Thruway Authority

Table of Contents

1.0 Introduction and Project Description

The existing State Pier Facility in New London Connecticut (Attachment A) encompasses nearly 30 acres and has three general operational areas: the piers (State Pier and Central Vermont Railroad), near dock shoreline areas, and offsite areas. The offsite areas comprise about one-fourth of the overall acreage and are situated north of and separated from the main port facility by State Pier Road and Amtrak's rail corridor embankment. The property generally consists of unpaved, gravel surfaces that are uneven or contain small depressions that pond water during storm events. The offsite areas are segmented by the rail siding to State Pier and bisected by the bridge piers for I-95's Gold Star Memorial Bridge. The property is bounded to the west by the New England Central Railroad (NECR) tracks and to the east by the Thames River.

The near-dock shoreline areas are south of State Pier Road and accommodate most of the port's cargo intermodal activity. This area contains two heavy load warehouse buildings totaling 102,000 square feet with railcar and truck loading docks, two 3,200-square-foot equipment/forklift maintenance buildings and an administration building. The area located at the head of the two piers is largely paved to facilitate forklift and tractor trailer movements. The shore edge consists of a combination of sheet piling, pile-supported docks, and stone block quay walls. The western portion of the site adjoining the NECR siding yard is largely unpaved areas, with irregular topography.

The work currently proposed by the Connecticut Port Authority (CPA), known as the State Pier Infrastructure Improvements (SPII or the Project), is anticipated to occur in two phases. Phase One “Upland Area” will occur primarily within upland portions of the site and will include the following actions:

- Demolition of various buildings and roads and rails,
- Site grading and installation of stormwater collection and treatment systems,
- Installation of potable and fire suppression water systems,
- Installation of perimeter fencing and associated lighting and security systems,
- Installation of electrical infrastructure to meet site requirements,
- Installation of dense graded aggregate top surface,
- Demolition of existing pile supported platform at western end of Northeast Bulkhead (NE BH),
- Installation of anchored combination wall bulkhead directly outshore of existing NE BH,
- Installation of energy absorbing fenders and bollards at NE BH,
- Demolition of four existing mooring dolphins in Thames River, and
- Installation of steel sheet pile wall directly outshore of existing Northwest Bulkhead granite block retaining wall.

Phase Two, “Waterfront Works” will consist of water based work, accomplished either from onshore or from barges, depending on the location and requirements of the task. This work will occur outshore of the upland NE BH, bulkheads on the State and CVRR Piers and the area between these two piers and will consist of the following actions:

- Dredging at NE BH to accommodate import and installation vessels,
- Selective demolition of SW corner of State Pier and SE corner of CVRR pier to accommodate the king pile wall,

- Installation of anchored king pile combination bulkhead between State and CVRR Piers,
- Placement of seven acres of fill between the CVRR and State Piers to match elevation of State Pier,
- Raising elevation of remaining horizontal surface of the CVRR Pier to match that of the State Pier,
- Installation of dense graded aggregate top surface,
- Installation of energy absorbing fenders and bollards,
- Dredging to south of king pile wall between State and CVRR Piers for jack-up installation vessel, and
- Seabed preparation for jack-up installation vessel.

Upland Area construction is anticipated to start in November 2019, and Waterfront Works construction is anticipated to start in October 2020. The entire project is expected to be completed over a 3 year period and construction is anticipated to be finished by April 2022.

A request for a Natural Diversity Database (NDDB) state-listed species review was initiated for the Project in January 2019. In a response dated March 19, 2019 (Attachment B), NDDB indicated the Connecticut Department of Energy and Environmental Protection (CT DEEP) had records for the state-threatened Peregrine Falcon [(*Falco peregrinus*) or (falcon)] nesting on the Gold Star Memorial Bridge. To protect nesting falcons, the CT DEEP recommended construction be completed outside of the nesting season from July 1 through March 31 and that no construction activities should occur during the nesting season between April 1 and June 30. In this same letter, CT DEEP indicated that if construction needs to be completed during the stated nesting period of April 1 through June 30, CPA should hire an ornithologist to evaluate proposed activities and prepare a Peregrine Falcon Protection Plan. CT DEEP has further directed that all work associated with the Project maintain a minimum buffer of 600’ from an active falcon nest site and that should a falcon nest be observed proximal to active Project construction work, all work should cease and the nest site should be reported to CT DEEP/NDDB for further assistance and guidance.

2.0 Peregrine Falcon Physical Description and Habitat

Weighing up to 3.5 pounds, measuring up to 20 inches in length and with a wingspan of up to 43 inches, the Peregrine Falcon is Connecticut's largest falcon species. Adults are slate blue/gray above and pale underneath with barred underparts and a dark head with thick sideburns. As with all falcons, peregrines exhibit long pointed wings and a long, rounded tail with narrow, black bands ending with a broad, dark band tipped with white narrow fringe. The feet are yellow.

Peregrine Falcons will utilize a wide variety of habitats, from open country, such as coastal lowlands, as well as along rivers, to highly developed urban locations. In Connecticut, this species has adapted to life in urban settings and often nests on manmade structures such as high rise buildings and bridges. Such structures provide protection from land-based predators and a vantage point from which to hunt for prey such as pigeons, waterfowl and other small to medium sized birds, while expending minimal energy.

2.1 Life History

Nest sites, known as eyries, are a hollow, unlined scrape on a cliff, ledge, or rocky outcrop. Abandoned raven or hawk nests in suitable locations are also occasionally used. The most publicized nesting areas have been on roofs and ledges of city buildings, as well as bridges. Pairs mate for life and may use the same nest site for many years. Male peregrines arrive at the nest site first (as early as February/March) to reestablish territories and to attract the females to the site utilizing aerial displays.

According to the CT DEEP, typically three to four cream or buff-colored eggs, covered with red-brown markings, are laid in late April and into May at intervals of two to three days. Incubation, primarily done by the female but with some help from the male, begins with the second or third egg and lasts 28 to 29 days for each egg. The hatchlings are closely brooded by the female for the first 14 days. The male typically brings food for all to the nest and the female feeds the young. The young begin to fledge at 35 to 42 days but remain dependent on the adults for another two months. For additional information on the species, please refer to the Peregrine Falcon Fact Sheet located in Attachment C.

3.0 Peregrine Falcon Protection Provisions

During the construction period for the Project, the following measures are proposed:

- Construction Phase Contractor Awareness Program;
- Construction Phase Survey and Monitoring Plan;
- Coordination with CT DEEP; and,
- Reporting.

The measures are described separately below.

3.1 Construction Phase Contractor Awareness Program

A contractor awareness program will be implemented to ensure all personnel working on the Project are aware of the potential presence of an active Peregrine Falcon nest site on or proximal to the site. As part of site specific training, all personnel will be given a copy of the Peregrine Falcon fact sheet, produced by the CT DEEP (Attachment C of this document) and will be directed to stop work if activity is occurring within 600 feet of any suspected falcon nest site. Construction personnel would be further instructed to notify CPA's on-site environmental personnel of the suspected observation. Work would not resume until a determination has been made by a qualified wildlife biologist/ornithologist regarding the reported observation.

3.2 Construction Phase Survey and Monitoring Plan

In all years with active construction scheduled to occur within the identified nesting period (April 1 through June 30), CPA will make reasonable efforts, through on-site surveys by a qualified wildlife biologist/ornithologist and in coordination with CT DEEP, to determine if falcons are nesting on or proximal to the site and/or within 600 feet of planned and/or active construction. For the purposes of this plan, "pass through" construction vehicle traffic shall not be considered active construction.

Peregrine Falcons nesting in urban settings and/or areas with significant human presence/activities have become habituated and acclimated to theses disturbances. The exposure and habituation of the falcons nesting on the Gold Star Bridge to high levels of baseline noise consisting of I-95 vehicular traffic, periodic maintenance activities on the bridge, high noise levels associated with wind passing through and around the bridge, passage of trains on the adjacent active railroad track and vessel traffic on the Thames River below has likely resulted in a high disturbance threshold for the individuals nesting on the bridge. Additionally, the difference in elevation between a potential bridge nest site and the elevation of the work itself is significant, further reducing the potential impact of construction related noise disturbance.

Peregrine Falcon studies conducted for the Hudson River Crossing Project have determined that bridge nesting Peregrine Falcons have a very high tolerance of human disturbance and are not easily impacted by human activity, including construction activity associated with heavy equipment in a maritime environment (Attachment D). Behavioral observations of the resident Peregrine Falcons on the Tappan Zee Bridge crossing of the Hudson River, carried out before and during implementation of a Pile Installation Demonstration Program, determined there was no observable difference in falcon behavior as a result of construction activity and anecdotally, there was no evidence to suggest the breeding pair was in any way disturbed.

Therefore, in the event an active falcon nest is confirmed proximal to active construction, under the full time supervision of a qualified wildlife biologist/ornithologist, CPA proposes to allow construction activities to proceed to within 300 feet of any active Peregrine Falcon nest site. If it is determined by the biologist,

through observation of falcon behavior, that construction activity may be negatively impacting the birds in any way, the full 600 feet of buffer will automatically go into effect, with the previously noted exception of “pass through” construction vehicle traffic.

3.3 Coordination with CT DEEP

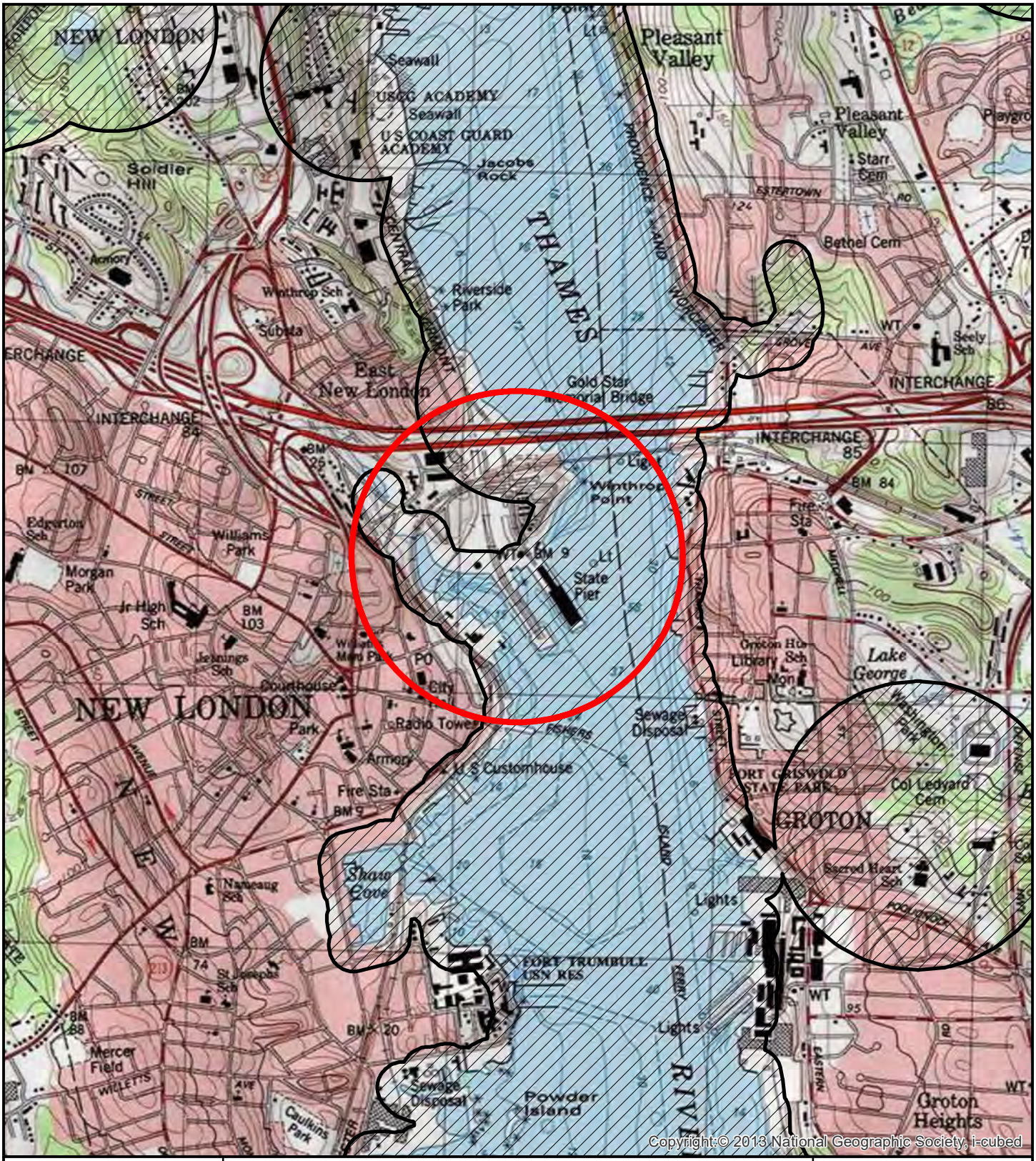
In the event that an active peregrine falcon nest site is discovered proximal to the Project, CPA will immediately contact the CT DEEP NDDB Program. The NDDB will be provided with relevant nest site details such as location, distance to active and/or proposed construction, observed falcon behavior/activity, and photographic evidence, if possible. CPA will coordinate closely with the CT DEEP in order to seek guidance to perform the work safely and specify monitoring requirements.

3.4 Reporting Requirements

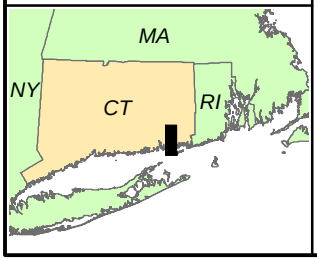
Immediately after conducting daily falcon monitoring, the monitor shall complete a Daily Construction Monitoring Report (Attachment E). After completion, the report shall be placed in a designated area. All Daily Construction Monitoring Reports shall be compiled and included in a final Peregrine Falcon Monitoring Report and submitted to the CT DEEP/NDDB before the end of the calendar year. Since CPA does not anticipate the need to handle falcons at any time, no Scientific Collection Permit is anticipated for the monitoring work.

Attachment A

State Pier Facility, Site Locus



Map Location



N

Site Locus Map and CTDEEP Natural Diversity Area (December 2018)

0 1,000 2,000 4,000 6,000 Feet

0 0.125 0.25 0.5 0.75 Miles

Map Projection: State Plane, NAD 83, feet.
Image Source: USGS Topographic Quadrangle New London and Uncasville, CT.

Figure 1-1

3/6/2019

Proj. #: 60548556.3.3

Attachment B

CT DEEP/NDDB March 19, 2019 Response Letter

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

March 19, 2019

Richard E. Couch
Martinez Couch & Associates, LLC
1084 Cromwell Avenue
Rocky Hill, CT 06067
couchre@martinezcouch.com

Project: Proposed Demolition of Various Upland Buildings, Installation of New Structures Including Storm Water Retention & Treatment System, Addition of Administrative Offices with Parking and Maintenance Dredging at the State Pier at 200 State Pier Road in New London, Connecticut
NDDB Determination No.: 201901490

Dear Richard Couch,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map provided for the Proposed Demolition of Various Upland Buildings, Installation of New Structures Including Storm Water Retention & Treatment System, Addition of Administrative Offices with Parking and Maintenance Dredging at the State Pier at 200 State Pier Road in New London, Connecticut. We have known extant records for State Threatened *Falco Peregrinus* (peregrine falcon) and State Special Concern blueback herring that occur in close proximity to your project boundaries.

Please be advised that a DEEP Fisheries Biologist will review the permit applications you may submit to DEEP regulatory programs to determine if your project could adversely affect blueback herring. DEEP Fisheries Biologists are routinely involved in pre-application consultations with regulatory staff and applicants in order to identify potential fisheries issues and work with applicants to mitigate negative effects, including to endangered species. If you have not already talked with a Fisheries Biologist about your project, you may contact the Permit Analyst assigned to process your application for further information, including the contact information for the Fisheries Biologist assigned to review your application

Peregrine Falcon (*Falco peregrinus*) Protection Status: Threatened Species

The peregrine falcon is a state threatened species which has adapted to life in urban settings. The peregrine falcon is associated with bridges for nesting and brood rearing purposes. Peregrines will actively and aggressively defend the nest, whether a nest box or natural nest, up to and sometimes past 75 yards. The peregrine will attack anyone or anything that comes within the area of its nest. Peregrine falcons are Connecticut's largest falcon and can measure up to 20 inches. Adults are slate gray above and pale underneath with fine bars and spots of black; they

have long pointed wings with a narrow tail. Young falcons have the same composite but are darker underneath and browner all over. The peregrine falcon nesting season occurs between the months of April and June. For this reason, special conditions regarding the timing of work on the structure must be applied. In order to protect this species, the proposed construction activities should be completed during non-nesting season months (July – March). No construction activities should occur between April 1st and June 30th.

Protection Recommendation:
In order to protect this species, the proposed construction activities should be completed during non-nesting season months (July – March). No construction activities should occur between April 1st and June 30th. If work needs to be conducted during the breeding season (April 1st to June 30th) then I recommend hiring an ornithologist (bird expert) to evaluate and prepare a protection plan for the birds. All work on this project must maintain a minimum buffer of 600' from the nest. If a nest is identified by workers all work should stop immediately and this information should be reported to our program for further assistance and guidance to complete the work safely.

Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by March 19, 2021.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov .
Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3

Attachment C

Peregrine Falcon Fact Sheet

Connecticut Department of Energy & Environmental Protection

Peregrine Falcon

Falco peregrinus

State Threatened Species

Background: The peregrine falcon was a regular nester in Connecticut from the 1860s through the early 1900s. Prior to the Migratory Bird Treaty Act of 1918 and the strengthening of collection regulations, hundreds of peregrine eggs and many adult specimens were collected in Connecticut and Massachusetts. Some live birds and eggs were collected for use in falconry. Many more eggs and specimens were added to private collections as part of a popular late 19th century hobby. Peregrine nesting activity in Connecticut declined through the 1920s and 1930s, and the last documented nesting occurred on the Travelers Tower in Hartford in the late 1940s. Peregrines remained absent from Connecticut until 1997 when a pair successfully nested once again on the Travelers Tower. The peregrine falcon was listed in 1992 as an endangered species on Connecticut's Endangered Species List. It was reclassified as a threatened species in 2010.

Peregrine falcon populations declined rapidly between 1950 and 1965 throughout the United States and parts of Europe. By 1975, the entire population of peregrines in the eastern United States was considered to be extirpated (disappeared from that region). This decline is directly attributed to the effect of organochlorine pesticides, such as DDT, on breeding populations. The speed and global scale of this species' decline makes it one of the most remarkable events in recent environmental history.

Due to the population crash, the peregrine falcon was declared a federally endangered species, and extensive efforts were made to reestablish birds in the eastern United States. Successful reintroduction programs, using captive-bred birds, helped restore

small breeding populations along the East Coast. The Peregrine Fund, a non-profit organization dedicated to restoring peregrine populations, conducted the large captive breeding program. The reestablishment effort, coupled with restrictions placed on the use of organochlorine pesticides in the United States (DDT was banned in 1972), resulted in the recovery of the peregrine falcon population. The peregrine was removed from the federal endangered species list in 1999.

While Connecticut did not participate in any reintroduction programs, the state benefited from our neighboring states' efforts. In 1997, a peregrine pair successfully produced 3 chicks on the Travelers Tower. Leg bands revealed that the female of the pair had come from a 1994 reintroduction project in Greece, New York, sponsored by Rochester Gas & Electric, in cooperation with the New York Department of Environmental Conservation. In the years since peregrine falcons began nesting again in Connecticut, additional pairs have successfully produced young at locations in several towns. Every year, a number of dedicated volunteers and Wildlife Division staff monitor the nests throughout the nesting and fledging seasons. Division biologists also attempt to visit the nests (if they are accessible) to place identifying leg bands on the young before they fledge. This is an important management tool for monitoring this state threatened species.

Description: The peregrine falcon is a long-winged, medium-sized bird of prey. Adults have long, pointed wings and a long, rounded tail with narrow, black bands ending with a broad, dark band tipped with white. The barred upper parts are blue-gray, while the underparts are white to light buff and cross-barred with brown. The black crown and nape extend to the cheeks, forming a distinct black helmet. The feet are yellow.

Immature peregrines are similar, but the back and underparts are brown and the throat is heavily streaked with brown. Both adult and immature peregrines have a bold, dark, vertical whisker-like mark (mustache mark) on the sides of the head.

Range: The peregrine falcon is one of the most widespread birds in the world. It is found on all continents except Antarctica, and on many oceanic islands. Although widely distributed, the peregrine is common in only a few places.

Habitat and Diet: A wide variety of habitats are used by peregrine falcons. The birds are found in open country, such as coastal lowlands, as well as along rivers and in urban locations.

Pigeons, waterfowl, crows, jays, starlings, shorebirds, and other medium to small birds are the main prey items of the peregrine. In urban areas, pigeons and starlings comprise most of the diet. Beetles, dragonflies, and migrating monarch butterflies are eaten occasionally.

Life History: Nest sites, known as eyries, are located above an open area so the falcons can launch their aerodynamic hunts. The nest is a hollow, unlined scrape on a cliff, ledge, or rocky outcrop. Abandoned raven or hawk nests in similarly high locations are occasionally used. The most publicized nesting areas have been on roofs and ledges of city buildings. Pairs may use the same nest site for many years. Male peregrines arrive at the nest site first and go through a series

of aerial displays to attract the
females to the site. Territories are usually reestablished by late March.

Three to 4 cream or buff-colored eggs, covered with red-brown markings, are laid in late April and May at intervals of 2 to 3 days. Incubation, primarily done by the female, begins with the second or third egg and lasts 28 to 29 days for each egg. The hatchlings are closely brooded by the female for the first 14 days. The male typically brings food for all to the nest and the female feeds the young. The young begin flying at 35 to 42 days but remain dependent on the adults for another 2 months.

Peregrine falcons reach sexual maturity at age 3, and they may reach 17-20 years of age.

Interesting Facts: The peregrine falcon is probably best known for its spectacular method of capturing prey in mid-air. It flies faster than most other birds and, when hunting, it increases its speed by making aerial dives with the wings partially or fully pulled in. The peregrine plunges at speeds up to 175 miles per hour (mph) to attack its prey, which is killed instantly. This hunting dive is called a "stoop." Normal flight speed can range between 28 to 60 mph.

Because of its habit of preying on waterfowl, the peregrine falcon has historically been referred to as the duck hawk.

Peregrines can be preyed upon by great horned owls, gyrfalcons, and other peregrines.

Peregrine falcons have adapted to living in cities. Cities offer tall buildings with ledges for nesting, water sources, large populations of pigeons and starlings for food, and have few natural predators.

The scientific name comes from the Latin words *falco*, meaning "hook-shaped," possibly referring to the beak or claws, and *peregrinus*, meaning "to wander."

As part of the reintroduction effort, The Peregrine Fund released more than 4,000 captive-reared peregrines in 28 states over a 25-year period.

What You Can Do: Respect locations of peregrine nest sites and do not disturb nesting birds.

North American peregrine falcon populations continue to be threatened by the use of DDT in the tropics where some spend the winter. Support for the advancement of alternative methods of pest control in developing nations will help not only the peregrine, but ospreys and countless species of songbirds that nest in the United States and Canada and winter in Central and South America.

The production of this Endangered and Threatened Species Fact Sheet Series is made possible by donations to the Endangered Species/Wildlife Income Tax Checkoff Fund.

Content last updated on March 27, 2012.

Attachment D

Peregrine Falcon Monitoring Report, Hudson River Crossing Project

1-1 EXECUTIVE SUMMARY

A monitoring plan approved by the New York State Department of Environmental Conservation (NYSDEC) was implemented to document any disturbance from the Pile Installation and Demonstration Program (PIDP) to the resident pair of peregrine falcons on the Tappan Zee Hudson River Crossing. Scan sampling was used to measure and compare peregrine falcon time budgets before and during a range of PIDP activities that were categorized by their expected potential to cause disturbance. Low disturbance activities included preliminary set-up work, such as towing cranes and other heavy equipment to the test pile locations, assembling vibration and impact hammers, installing bubble curtains, and similar in-water actions leading up to the driving of test piles. Activities of moderate disturbance potential included the construction of falsework and framing (temporary wooden or metal framework built to support a structure under construction) and the vibration of lower pile segments. Impact hammering, which was the loudest PIDP activity, was categorized as having high potential for disturbance. A total of 45 hours of observation on 15 separate days provided no indication that the birds' behavior was altered by the PIDP activities occurring at the time. The falcons were most often observed perched, and usually in the same distinct locations, independent of the PIDP work simultaneously occurring in the river below. There was no observation of any PIDP activity, including impact hammering, causing the birds to flush or otherwise respond. The birds were observed engaging in typical behaviors such as sharing food, provisioning young, and preening, which also suggests the birds were not in duress. The exposure and habituation of the peregrine falcons to extensive baseline levels of noise and other activity on the bridge under normal conditions has likely led to a high disturbance threshold in these individuals, possibly explaining why they did not appear to have any negative reaction to the PIDP. Further, the high noise levels on the bridge from traffic, maintenance operations, and wind likely masked much of the noise produced by PIDP work in the river below, including impact hammering. Impact hammering could not be heard by the peregrine falcon monitors from the observation point on the main span, and it is possible the impact hammering was inaudible to the birds as well. Bridge-nesting peregrine falcons inherently have a high tolerance of human disturbances, and on the basis of the monitoring summarized in this report, the resident pair on the Tappan Zee Hudson River Crossing does not appear to be sensitive to in-water construction activities such as those undertaken for the PIDP.

1-2 INTRODUCTION

Behavioral observations of the Tappan Zee Hudson River Crossing's resident pair of peregrine falcons were made before and during the Pile Installation Demonstration Program (PIDP) to investigate potential disturbance caused by the in-water construction

activity. The methodology and schedule for the peregrine falcon monitoring were reviewed and approved by NYSDEC in advance. The PIDP took place at four locations within the river, referred to as PLT1-PLT4, during the spring of 2012. A total of seven test piles were driven among these four locations (two piles in each of three locations and one pile in the fourth location). PLT1 and PLT2 were located within the Rockland County side of the project area, well west of the peregrine falcon nest box on the existing bridge's main span, whereas PLT3 and PLT4 were in closer proximity to the nest box location on the Westchester County side of the project area (**Figure 1**).

Initial site preparation included activities such as towing cranes and other heavy equipment to the test pile locations, assembling vibration and impact hammers, installing bubble curtains, and similar in-water actions leading up to the driving of test piles. Subsequent work included the installation of falsework piles (ancillary piles to support load frames) and framing (temporary wooden or metal framework built to support a structure under construction). Next, a low-noise, vibratory hammer was used to install the lower segment of each test pile. The upper segment was welded to the bottom segment, and then driven deeper into the riverbed by hydraulic impact hammering. Peregrine falcon monitoring spanned the range of these different PIDP activities, and included pre-PIDP observations as well as observations after all test piles had been installed. This report quantifies and compares the peregrine falcon behaviors observed during these periods.

1-3 METHODS

Observations were made from a closed lane on the bridge's main span road deck, which offered the best accessible vantage point. Lane closure schedules, however, greatly constrained the dates and times during which monitoring could occur. Generally, peregrine falcon monitoring was limited to weekdays, between approximately 9:30am and 12:00pm. For this reason, the peregrine falcons could not be comprehensively monitored throughout the full range of PIDP activities. However, dates and times of peregrine falcon monitoring were able to coincide with pile driving and other significant PIDP activities on at least one occasion. Observation dates and times, and the corresponding PIDP activities, are shown in **Table 1**.

Behavioral data were collected using an instantaneous scan sampling method (Gaibani and Csermely 2007), whereby the location and behavior of the birds were recorded at five minute intervals during the observation period and coded according to the ethogram in **Table 2** (adapted from Walter 1983). The sex of the birds could not be directly determined because peregrine falcons are not sexually dimorphic, aside from subtle differences in body size. Birds were seldom in close enough proximity to each other for size differences to be apparent. Instead, sex was presumed on the basis of the birds' behavior and all behavioral data are herein analyzed as such. For example, one bird often remained perched in front of the nest while the other bird flew long distances up- or down-river, or was otherwise out of view for extended periods of time. The bird that remained near the nest box was presumed to be female and the bird that would be absent for long periods was presumed to be male. Similarly, one bird often remained in (or near) the nest box while the other was perched on the top of the main span's north tower. The former was presumed to be female and the latter was presumed to be male. Even though male peregrine falcons contribute to incubation and nest attendance, the female performs these duties the majority of the time (White et al. 2002).

Often the birds (particularly the male) were not observable due to the limited range of visibility from the road deck. The male frequently perched somewhere out of view on or below the bridge, and often flew long distances down-river from the bridge until it could no longer be seen. Consequently, bird behaviors often had to be recorded as "unknown" during scan sampling. Also, the inside of the nest box could not be seen from the observation point, and a bird was only recorded as being inside the nest box if it had been seen entering or exiting the box at some point during the observation period.

Table #1
Peregrine Falcon Monitoring Schedule

Date	Monitoring time (EST)	Major PIDP activity	Location	Estimated breeding stage
5-Mar	10:00-11:40	None	N/A	Courtship
7-Mar	9:45-11:55	None	N/A	Courtship
8-Mar	10:10-12:10	None	N/A	Courtship
13-Mar	9:55-13:55	Equipment set-up	N/A	Courtship
19-Mar	9:50-11:50	Falsework / framing	PLT2	Courtship
2-Apr*	9:30-11:00	Falsework / framing	PLT3	Incubation
24-Apr	9:40-11:40	Equipment set-up	PLT4	Incubation
25-Apr	10:35-12:35	Equipment set-up	PLT3	Incubation
26-Apr	9:50-13:50	Equipment set-up	PLT3	Incubation
7-May	9:30-14:30	None- postponed	N/A	Chick rearing
8-May	9:35-12:45	Impact	PLT3	Chick rearing
14-May	10:00-13:00	Impact	PLT4	Chick rearing
16-May*	11:05-13:25	Impact*	PLT2	Chick rearing
18-May	9:40-13:20	Vibration & impact**	PLT3	Chick rearing
30-May	9:30-11:30	None***	N/A	Chick rearing

Notes:

*No birds were seen during Apr 2 and May 16 monitoring.

**Impact hammering occurred after the monitoring period ended.

***Re-driving of piles 2A and 2B occurred over a span of approximately 8 minutes at 9:00; otherwise no major PIDP activity with potential to disturb the peregrine falcons occurred. The May 30 monitoring period is therefore considered a post-impact-hammering follow-up visit.

Table #2
Peregrine Falcon Ethogram[1]

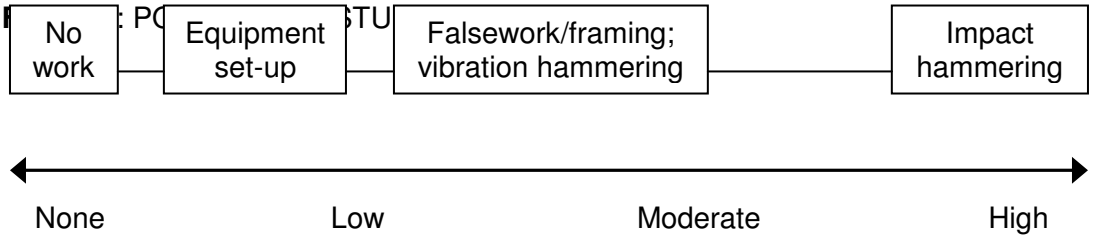
Behavioral Classification	Identification	Defining Action
Physical Status	P1	perched
	P2	in flight, but not in pursuit of prey or sexual display
	P3	lying down
	P4	hopping, walking
	P5	other
Feeding and Body Care	F1	feeding self
	F2	drinking
	F3	asleep
	F4	panting
	F5	preening, cleaning
	F6	scratching
	F7	shaking feathers, sunning
	F8	pellet extraction/defecating
	F9	other
Hunting	H1	prey chase, pursuit , stoop flight
	H2	prey capture, in possession of prey
	H3	prey transport
	H4	other
Agnostic Behavior and Human Impact	A1	physically harassing, attacking bird or other animal
	A2	physically harassing, attacking human
	A3	threat display towards animal (e.g., gaping, wings open)
	A4	threat display towards human
	A5	fleeing from human disturbance
	A6	other
Sexual Behavior	S1	display from perch (e.g., bowing)
	S2	aerial display
	S3	allopreening, billing, other contact
	S4	offering food
	S5	receiving food
	S6	copulation
	S7	other
Nest-Related Behavior	N1	inside nest box
	N2	feeding young
Vocalization	V1	vocalizing directed at mate
	V2	vocalizing at other conspecific
	V3	undirected vocalization
	V4	other
	-	(threat vocalization under a3 and a4)

Notes: [1] a descriptive list of the known behaviors of a given species that is used to study animal behavior.

The behavioral data collected from instantaneous scan sampling were used to calculate time budgets of the birds (i.e., proportion of the observation time that birds were

engaged in a given behavior). Time budgets were then compared among different phases of the PIDP that were categorized by their expected potential to cause disturbance to peregrine falcons (**Figure 2**). “No disturbance” periods include the pre-PIDP monitoring conducted on March 5, 7, and 8, and monitoring conducted on May 7 when equipment failure caused a suspension of the scheduled work. “Low disturbance potential” events include heavy equipment mobilization, set-up, and assembly at test pile locations during monitoring periods on March 13, April 24, 25, 26, and May 16. “Moderate disturbance potential” periods include the falsework and framing work performed on March 19 and the vibration hammering on May 18. “High disturbance potential” includes impact hammering on May 8 (at PLT3, the closest test location to the falcons’ nest site). On May 14, impact hammering (at PLT4) began prior to the morning lane closure and was completed approximately 0.5 hr after peregrine falcon monitoring was able to begin. Observation data collected during the 0.5 hr overlap of impact hammering at PLT4 and peregrine falcon monitoring were included in the analysis of “high disturbance potential” data. Observation data from the hour after impact hammering on May 14 had ended were also included to capture the birds’ behavior following the potential disturbance of impact hammering. All other impact hammering occurred on dates and at times when no lane was closed on the bridge and peregrine falcon monitoring was not feasible.

No birds were seen during the peregrine falcon monitoring conducted on April 2, and on May 16, only one bird was observed briefly (flying east from the bridge). On March 5 and May 18, only the female was seen. Overall, the male was not seen nearly as often as the female, and as such, sample sizes of behavioral data for the male are small.



PIDP work activities were categorized by their expected potential to cause disturbance to peregrine falcons. “Equipment set-up” included activities such as towing cranes and other heavy equipment to the test pile locations, assembling vibration and impact hammers, installing bubble curtains, and similar in-water actions leading up to the driving of test piles that were considered to have low potential to cause disturbance. Constructing falsework and framing, and vibrating lower pile segments were considered to have moderate potential to disturb peregrine falcons. Impact hammering was the loudest PIDP activity and considered to have the highest potential to cause disturbance.

1-4 RESULTS

Peregrine falcon monitoring was conducted for a total of approximately 45 hours over 15 different days. Behaviors of the female that were recorded by scan sampling included perching, nest attendance, receiving food, and feeding young (i.e., entering the next box with food at a time when the nest was expected to contain nestlings). Male

behaviors included perching, nest attendance, flying, offering food, and preening (**Table 3**).

In March and April, prior to egg laying, one bird (presumably female) would often be seen for the majority of the monitoring period, usually near the nest box, whereas the other bird (presumably male) would only be seen intermittently and would be absent for extended periods of time. Later in the season, when the pair was expected to have eggs, the presumed female was often in the nest box while the presumed male was often either perched on the top of the main span's north tower or was out of view for long periods of time.

As discussed above, monitoring effort differed among different phases of the PIDP and often could not be conducted during primary PIDP activities because of lane closure schedules, construction delays, and other logistical constraints. Further, birds were often unseen during the monitoring periods and their behavior could not be recorded. Sample sizes of behavioral data were particularly small for the male. Because of these disparities, the unevenness of the monitoring effort across PIDP phases, and the small sample sizes, data were not analyzed statistically. Qualitatively, there were no noticeable trends in the birds' behaviors during phases of the PIDP with different expected levels of potential disturbance (**Table 3**). Time budgets in the days preceding initiation of the PIDP were similar to those measured during the PIDP, including periods of impact hammering. Anecdotally, there was also no evidence to suggest that the peregrine falcons were in any way disturbed by the PIDP.

Table #3

Time budgets (expressed as percentages) of peregrine falcons on the Tappan Zee Hudson River Crossing before and during PIDP stages categorized by their potential to cause disturbance

Expected Disturbance Level	Number*	Behavior (% of scan samples)						
		Perched	In Nest Box	In Flight	Offering Food	Receiving Food	Feeding Young	Preening
Female								
None	108	19	79				2	
Low	124	20	78			2		
Medium	38	97	3					
High	47	11	87			2		
Follow-up**	24	100						
Male								
None	22	86	9	5				
Low	19	68	5	16				11
Medium	17	94		6				
High	3	1 of 3		1 of 3	1 of 3			
Follow-up**	14	86						14

Notes: See Table 1 and Figure 1 for corresponding dates and PIDP activities.

*Number of scan samples during which the bird was seen and behavior could be determined.

**Follow-up monitoring on May 30 after driving of all test piles had concluded.

1-5 DISCUSSION

In New York City and many other metropolitan areas, peregrine falcons nest on bridges, high-rise buildings, and other tall artificial structures amidst the high levels of noise and human activity associated with an urban environment, thus demonstrating a high tolerance of disturbance and an ability to exploit resources in human-dominated landscapes (Cade et al. 1996, White et al. 2002). Peregrine falcons began nesting on the Tappan Zee Bridge in the 1980's (Mildner 1988, Frank 1994) and continue to do so to this day.

Existing conditions for peregrine falcons nesting on the Tappan Zee Bridge are characterized by consistent and extensive levels of human activity. Vehicular traffic and strong winds create a remarkably noisy environment. The resident pair of peregrine falcons' selection of the nest site inherently indicates a tolerance of these conditions, and based on the direct observations of the birds throughout the monitoring program, it is apparent that the birds are indifferent to the human activity around them. In addition to the high traffic volume passing below their nest site, painters and other bridge maintenance/repair crews were highly active in close proximity to the nest location throughout the monitoring period. At no point did the birds appear to react to the crews or work vehicles operating below them.

A comparison of the peregrine falcons' time budgets before and during PIDP activities indicates that the birds' behavior was unaffected. Birds were most often observed perched, and usually in the same distinct locations, independent of the concomitant PIDP work occurring in the river below. The presumed female was almost always inside the nest box or perched on the supporting cross beam within approximately 20 feet of the nest. The male most commonly perched on the top of the main span's north tower, over the southbound traffic lanes. For both sexes, the proportion of time perched was comparable between the periods with no in-water work and the PIDP activities that ranged from low to high disturbance potential. There was no indication that any PIDP activity, including impact hammering, caused the birds to flush or otherwise respond. The birds engaged in other typical behaviors during the PIDP as well, including sharing food, provisioning young, and preening, which also suggests the birds were not in duress. On May 8, the female remained inside the nest box throughout the impact hammering of test pile 3A (the closest test pile location to the nest) that occurred from 10:05am to 11:30am. Birds usually flush from their nest when approached or otherwise disturbed. At no point did the female peregrine falcon appear to flush from the nest box or otherwise flee the area in panic flight.

The exposure and habituation of the peregrine falcons to the extensive baseline levels of noise and other activity on the bridge has likely led to a high disturbance threshold in these individuals and likely explains why they did not appear to have any negative reaction to the PIDP. Further, the high noise levels on the bridge from traffic, maintenance operations, and wind likely masked the majority of the noise produced by the PIDP work in the river below, including impact hammering. Neither of the two peregrine falcon monitors that were on the bridge on May 8 and 14 heard the impact hammering of test piles 3A and 4A that took place during the monitoring period. Both monitors were unaware that the impact hammering had occurred until they were later informed by the engineer in charge. The impact hammering (and other PIDP activities) may have been inaudible to the peregrine falcons above the high ambient noise levels around their nest site and other areas of frequent occurrence on the bridge.

In conclusion, 45 hours of observations provided no evidence that peregrine falcons nesting on the Tappan Zee Hudson River Crossing were affected by the PIDP, including the impact hammering of test piles in close proximity to the nest site. No signs of disturbance or altered behavior, such as avoidance of the nest site, repeated displacement from typical areas of occurrence, threat displays (erect feathers on head, back, and/or breast), or open-mouth breathing, were observed. The birds, particularly the female, continued to engage in typical behaviors throughout the various stages of in-water activity. Nest attendance did not appear to be altered in any way. As impact hammering of test pile 4A was in progress relatively close to the nest, the male was observed delivering prey to the female at the nest, which suggests both birds were indifferent to any noise or visual disturbance generated by the pile driving. These overall findings are consistent with observations of peregrine falcons successfully nesting on the San Francisco-Oakland Bay Bridge during the bridge's earthquake retrofitting project in the early 2000's and the current, ongoing construction of its replacement bridge (Stewart 2011). Bridge-nesting peregrine falcons inherently have a high tolerance of human disturbances, and on the basis of the monitoring summarized in this report, the resident pair on the Tappan Zee Hudson River Crossing is not sensitive to in-water construction activities such as those undertaken for the PIDP. Similarly, future construction of a replacement bridge is not expected to cause nest-site abandonment or otherwise negatively impact peregrine falcons nesting on the existing bridge.

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Attachment E

Construction Monitoring Report Form

DAILY CONSTRUCTION MONITORING REPORT

State Pier Infrastructure Improvements
New London, CT

Project Number: _____

Project Manager: Date:

On-Site personnel:

WEATHER CONDITIONS:

WORK COMPLETED:

OBSERVATIONS / RECOMMENDATIONS:

SAFETY ISSUES:

OTHER COMMENTS: