IN THE MATTER OF : ***APPLICATION NO. 201909990-SDF, TW WQC***

DEPARTMENT OF TRANSPORTATION: (Norwalk, Walk Bridge) ***June 6, 2022***

PROPOSED FINAL DECISION

I. SUMMARY

The Connecticut Department of Transportation ("Applicant") has filed an application with the Department of Energy and Environmental Protection ("DEEP" or "Department") seeking a permit to conduct regulated activities in tidal, coastal or navigable waters and in tidal wetlands associated with the demolition and replacement of the existing New Haven Line Railroad Bridge ("the Walk Bridge Project"). This application was reviewed under the relevant statutory and regulatory provisions of the governing statutes and regulations found in General Statutes §§28 through 22a-35, §§ 22a-359 through 22a-363f, and the Regulations of Connecticut State Agencies §§22a-30-1 through 22a-30-17, §§ 22a-90 through 112.[1] The Department determined that the application was complete and following its sufficiency and technical review, determined that the proposed project complied with the relevant statutes and regulations. A Notice of Tentative Determination to approve the application was published on November 15, 2021, with the Draft

[1] The Applicant applied for a Water Quality Certification under Section 401 of the Federal Clean Water Act, as noted in the Notice of Tentative Determination. This hearing did not consider this application, as there was no right to a hearing on that decision at the time this matter was initiated.

Permit. A request for hearing was filed on December 3, 2021, and a second request was received on December 23, 2021.

The parties to this matter are the Applicant and DEEP Staff.[2] A Petition to Intervene was filed by counsel for Norwalk Power LLC on February 18, 2022. The Petition to Intervene was denied. Norwalk Power LLC did not file any subsequent motions and did not participate in the public comment hearing or submit a written public comment.

Following the evidentiary hearing, the Applicant and DEEP staff filed the attached Joint Proposed Findings of Facts and Conclusions of Law ("Joint Submission", Attachment I).

I have reviewed the entire administrative record in this proceeding, including the documents and testimony in the record as evidence. The parties' Joint Submission has been evaluated in light of the relevant statutes and regulations. I have considered public concerns, comments and questions made throughout this hearing process and the responses of the Applicant and DEEP Staff to that public input.

The factual findings and conclusions of law set out in the Joint Submission are comprehensive and fully supported by substantial evidence in the record and demonstrate that the proposed activity regarding the proposed project set forth in the application, and as conditioned by the Draft Permit. (Attachment II), comply with the relevant statutes and regulations. I therefore adopt the Joint Submission in full as my proposed final decision and recommend issuance of the Draft Permit. I also make the following supplemental findings of fact and conclusions of law.

[2]Bureau of Water Protection and Land Reuse, Land and Water Resources Division

II.
DECISION

A.
FINDINGS OF FACT

1. The Norwalk Harbor Management Commission (NHMC) submitted a request for hearing in this matter and raised public concerns related to vessel relocation, water quality impacts and navigational impacts.
2. The record contains public comments from members of the Norwalk community regarding the use of Manresa Island as a staging and storage yard for the proposed project. The comments do not contest the need for the proposed project, nor do they contend that the proposed project violates the statutory or regulatory requirements that are the subject of this hearing but expressed public concerns regarding the use of Manresa Island, specifically related to construction noise, traffic, impact to wildlife on the Island, including lone star ticks, historical coal ash on the site, and questions regarding the alternatives sites considered for this work. [3]
3. A primary goal of the design and construction approach of the Walk Bridge Replacement Project is to minimize disruptions to rail and river traffic. A corresponding goal of the project is to minimize community impacts during construction. These goals were two of the reasons that the Applicant decided to use the southern parcel at Manresa Island as a staging and storage yard ("Site 10") for the construction of the replacement bridge lift spans, as opposed to locations closer to the Walk Bridge. (Ex. APP-1.7).
4. Site 10 consists of an approximate 4.7-acre area, or five percent of the site, with docking facilities that will be used for the assembly of the replacement bridge lift spans. Work activities below the Coastal Jurisdiction Line ("CJL") consist of barge mooring at the existing dock. The existing dock will be used for the temporary berthing of construction vessels and barges, including a lift span assembly barge, work barge, and various material barges, and berthing of safety boat vessel(s) and emergency rescue operations that are associated with construction of the lift spans. The barges will be anchored by spud piles. No dredging will be required for use of the existing dock/wharf area at Site 10. (Ex. APP-1.2, Test. Bertoli, 5:29)
5. Site 10 will have a flood-proofing plan for the materials stored at Manresa Island. The materials and equipment will be properly secured or removed if flooding or coastal storms are anticipated. Flood-proof containers will be used on the site for secure storage and to provide weather protection. In the event of a forecasted storm, containerized materials will be moved off-site. (Ex. APP-1.2, Test. Bertoli 5:19)
6. There are no tidal wetlands that will be impacted at Manresa Island. (Ex. APP-1.4)
7. The Applicant completed a noise study related to the activities at Manresa Island. Five locations in surrounding neighborhoods were measured for ambient noise. The report indicates that a predictive methodology was used to compute the noise level at those locations based on certain construction equipment that is anticipated to be used at Site 10. In general, the results found that the levels currently ranged from 42-55 decibels

[3] Documents not listed as an exhibit in these findings are part of the docket file for this proceeding, which is part of the administrative record of this matter.

and the peak noise from the project would be 50-64 decibels. Based on this study's findings, the anticipated worse case noise levels would be allowable under the Norwalk Noise Ordinance. Additionally, the Applicant must follow state guidelines for construction, which includes monitoring of noise generated through the project. (Ex. APP-20, Test. Bertoli, 5:03-5:08).

8. The Applicant completed a traffic study related to the proposed use of Manresa Island. The study considered the entire travel route of trucks associated with the proposed project, and major intersections along that route, including Woodward Avenue. In 2012, the Norwalk Power plant was open and employed thirty-seven people, and also generated truck traffic. In comparison, the work at Manresa Island will require twenty employees and approximately three trucks per day. The traffic study concluded that the traffic generated from this project does not warrant improvements to Woodward Avenue. (Exs. APP-19, 58).
9. There are no plans to dismantle portions of the existing Walk Bridge and high towers at Manresa Island. (Ex. APP-58).
10. Several different commercial marine site locations were considered for this staging yard, including another location in Norwalk, as well as other sites such as Bridgeport Boatworks in Bridgeport, Mohawk Northeast Thames Yard in Groton, New London State Pier in New London and Bloom Industries Oyster Facility in New Haven. The Bridgeport and New London sites are not available due to the use of these sites for windfarm projects, the Groton site is not available due to the future Gold Star Bridge Construction and the channel is too narrow at the New Haven site to accommodate necessary construction activity. Further, sites were considered on the Hudson River in New York, as well as sites in Maryland and Mississippi. When considering these alternative sites, the Applicant considered control over the schedule of construction, certainty of the construction schedule, the need for additional contractors at different sites, and the risk and costs of transporting the lifts down large river ways or the ocean. When looking at another site in Norwalk, the Applicant ruled out the site because of the need for dredging that site would require, as well as the impact the barges would have on the navigational channel. (Ex. APP-58, Test. Bertoli, 5:20-23).

B.
CONCLUSIONS OF LAW

1.
SUMMARY

The activity proposed in the application is regulated by the Tidal Wetlands Act, General Statutes §§ 22a-28 through 22a-35, and its implementing regulations at Regs., Conn. State Agencies §§ 22a-30-1 through 30-17; what is commonly known as the "Structures Dredging and Fill Act," §§ 22a-359 through 22a-363; and the applicable portions of the Coastal Management Act, §§ 22a-90 through 22a-112. The overall regulatory framework requires a balancing of

interests and requires the Applicant to minimize impacts to coastal resources. Overall, the proposed project meets the requirements of the relevant statutes and implementing regulations. The evidence, including documents and testimony, support approving the application and issuing the proposed Draft Permit. The record supports the factual findings and conclusions based on those findings that the potential environmental impacts from the proposed project have been sufficiently minimized and the proposed project is consistent with the applicable policies regarding coastal resources management. There was no evidence to demonstrate the proposed activity would violate or is reasonably likely to violate the relevant statutory and regulatory scheme.

2.
PUBLIC COMMENTS

Throughout the hearing process, public comments were received regarding this matter, and the participation and concerns of the members of the public are noted. The public has raised concerns related to the use of Manresa Island. After hearing these concerns, both at the public hearing and through written comment, the parties were asked to address these concerns through the evidentiary hearing. Specifically, the parties were asked to address concerns related to traffic, potential noise generated from the work to be conducted at the site, environmental concerns related to historic site contamination, impact to wildlife and questions regarding the alternative options available for this portion of the project. While the Joint Submission appropriately addresses these concerns, I believe it is important to reiterate how this administrative process both considered and evaluated the public concerns.

It is important to emphasize that this is an administrative process to determine whether the application and Draft Permit meet the applicable statutory and regulatory requirements. In this case, they do. When DEEP reviewed the work to be conducted at Manresa Island, it did so pursuant to its jurisdiction of the coastal jurisdiction line, meaning any activity that is conducted

at or below or waterward of the coastal jurisdiction line is subject to state review and approval. Of the pending application, none of the activities that the Applicant is proposing at Manresa Island require any formal structures or dredging of the existing site, so this site was included in DEEP's review because of the temporary change in the use of the site to be used as a lay down area and material storage area, as well as use by water-based barges. Even though the scope of review related to Site 10 was limited based on the proposed work, the Draft Permit includes requirements related to the wildlife at Manresa Island, including the Peregrine falcon, Northern diamondback terrapin, and osprey. While concerns related to Lone Star ticks were raised through the public comments, the lone star tick was not raised as a concern through DEEP's Natural Diversity Database (NDDB), as either a species of concern or a nuisance species. Further, DOT expert witnesses testified that lone star ticks are prevalent throughout the Norwalk area and are not isolated to Manresa Island. Lastly, while the use of the site is changing, there will not be formal structures or dredging to the area, and therefore the impact to wildlife is anticipated to be minimized by the requirements of the Draft Permit.

The public comments also raised concerns related to prior contamination of the site and the presence of coal ash. DEEP's expert witness, Micheal Grzywinski, testified that the areas identified as a coal ash concern at Manresa Island are not located within Site 10. Further, prior to the start of work at Manresa Island, the Applicant will be placing a layer of geotextile fabric covered with six inches of crushed stone over the entire surface area of the staging and storage yard, to provide a layer of separation from any activities on the site and any potential areas of concern. Notably, this requirement is not included in the Draft Permit because it is subject to a pending flood management certification with DEEP, which is not the subject of this hearing.

The public raised significant concerns that alternative sites were not considered for this part of the project, and that other sites would have less impact to residential areas. Several sites throughout Connecticut and the country were evaluated as a staging and material yard. The Applicant considered several different factors when looking at these sites, including impacts to residential areas, navigation, and the schedule of the project, including the certainty of that schedule. Also considered was control over the site and the work being conducted, costs associated with each site, as well as risks associated with lengthy travel through river waterways or oceans of core pieces of this project. When evaluating all these factors together, Manresa Island was selected as the appropriate site, given the fact that its existing slip does not require dredging, that the barges can be placed here and will not impede navigation, that there is relative distance from residential areas compared to other options within Norwalk, and that use of Manresa Island can guarantee more control over the project schedule and work being conducted on the project. Therefore, while the use of Manresa Island is not preferred by some members of the public, this decision was not implemented without significant consideration of a myriad of factors.

Lastly, the Applicant did consider and evaluate both the noise and traffic that could potentially be associated with the work at Manresa Island. Detailed information on these issues is provided in the Joint Submission. The public should be assured that these concerns were heard, and additional information was provided through the evidentiary hearing, noting that the traffic study did look at Woodward Avenue, the street leading up to the site, and the study factored in the entire route which would be used by work trucks. Additionally, in regard to the noise concerns, the anticipated worse-case noise levels would be allowable under the Norwalk Noise Ordinance. DOT expert witness Richard Bertoli testified that because this is a state project, the DOT must follow state guidelines for construction, which will include monitoring of noise generated through

the project. Additionally, the Applicant voluntarily decided to limit construction activities at Manresa Island to 8AM-5PM, Monday – Saturday, after listening to public concerns through the application process.

The jurisdiction of this administrative body is limited to the statutes and regulations pertinent to a pending application, and in this matter, the Applicant has demonstrated that the proposed project complies with the applicable statues and regulations. Public comments on a pending draft permit are vital and important aspects of the hearing process. The Applicant and DEEP have demonstrated in the evidentiary record a commitment to addressing public concerns and an interest in working with members of the public throughout the application and permit process.

3.
NORWALK HARBOR MANAGEMENT COMMISSION

The Norwalk Harbor Management Commission ("NHMC") submitted a petition for Hearing in this matter, and public comments throughout this hearing process.[4] These comments focused largely on water quality, vessel relocation, future water dependent uses, and navigational issues. Notably, the Norwalk Harbor Management Plan does not have any specific conditions related to water quality regarding the proposed project. Further, the DEEP does not have jurisdiction over vessel relocation in this matter. While the NHMC raised concerns related to future water dependent uses, the proposed project would expand water dependent uses in the City of Norwalk. Lastly, navigational concerns were considered in all aspects of the proposed project, and are addressed through the Draft Permit, the Applicant's best management plans, and the supporting

[4] As was stated in a February 25, 2022, ruling, the Norwalk Harbor Management Commission does not have special standing in this matter. General Statutes 22a-113n does not provide a harbor management commission power to make binding recommendations on an individual permit. *Cohen v. DEEP*, No. HHDLNDCV19612076S, 2021 WL 761794 (Super. Jan 27, 2021).

documentation included within the application and construction plans. The Draft Permit appropriately addresses the concerns of the NHMC.

V.
CONCLUSION AND RECOMMENDATION

If conducted as proposed and in accordance with the terms and conditions of the Draft Permit, this proposed project to be regulated will be consistent with all relevant statutes and regulations. I recommend that the Commissioner finalize and issue the requested permit for the Walk Bridge so this project may proceed.

Kathleen W. Reiser
Hearing Officer

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

IN THE MATTER OF	:	APPLICATION NO. 201909990 -
CONNECTICUT DEPARTMENT OF	:	SDF TW WQC
TRANSPORTATION	:	
(Norwalk Walk Bridge)	:	MAY 20, 2022

CONNECTICUT DEPARTMENT OF TRANSPORTATION AND DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION'S JOINT PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

Pursuant to the Hearing Officer's March 16, 2022 Post Hearing Notice and Directive, the Connecticut Department of Transportation and the Connecticut Department of Energy and Environmental Protection jointly submit the following Proposed Findings of Fact and Conclusions of Law.

I. FINDINGS OF FACT

A. Summary

On September 3, 2019, the Connecticut Department of Transportation (the "Applicant" or DOT) submitted an application to the Connecticut Department of Energy and Environmental Protection (DEEP) 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 (R.C.S.A § 22a-30-1 *et seq*.), and the Coastal Management Act (Conn. Gen. Stat. § 22a-90 *et seq.*) associated with the demolition and replacement of the existing New Haven Line Railroad

Bridge (Walk Bridge, Bridge No. 04288R) over the Norwalk River ("the Project").[1] APP-1.1; DEEP-10; DEEP-11.

DOT published notice of the submission in *The Hour* on August 28, 2019 and provided notice of the submission to Harry Rilling, Mayor of the City of Norwalk; John Romano, Chairman of the City of Norwalk Harbor Management Commission (NHMC); Peter Johnson of the City of Norwalk Shellfish Commission (NSC); John Verel, Karen Destefanis and John Moeling of the City of Norwalk Conservation Commission; and to every land owner of record located within five hundred (500) feet from the Project's property line. APP-1.12; APP-1.13; DEEP-21. On March 24, 2021, the Applicant submitted the final revised application (the "Application") to DEEP adding Site 10, Manresa Island, as a staging and storage yard, and provided notice to abutting landowners. APP-1.13, SDF Application Landowner Information; DEEP-10; DEEP-11.

The Project is a significant, complex public works construction and engineering project that proposes to replace the existing circa 1896 four track movable swing span railroad bridge and replace it with a new four track movable lift span bridge consisting of two side-by-side, 240-foot vertical lift spans across the Norwalk River, a federal navigation channel. APP-1.1; D. Santa Testimony, Hearing Recording, 3/15/2022, starting at 04:27:43 (references to live testimony will be in the following format: "[Witness] Test., starting at [Time]")[2]. The existing Walk Bridge is outdated and has experienced mechanical issues in the past that necessitated emergency repairs. Also, the existing

[1] The Applicant also applied for a Water Quality Certificate under Section 401 of the Federal Clean Water Act, as amended. DEEP included the Water Quality Certificate application in the Notice of Tentative Determination to Approve (APP-1.58.1; DEEP-19) along with its recommendation for approval, but that application is not part of this proceeding. Additionally, on August 15, 2019, the Applicant applied for a Flood Management Certification from the DEEP, which is also not subject to and not part of this hearing.

[2] The evidentiary hearing took place on March 15, 2022. All references to oral testimony took place on this date.

Walk Bridge is vulnerable to storm surge. APP-27. The new Walk Bridge is designed to minimize disruptions to both railway and river traffic. APP-1.1; APP-45. The Walk Bridge, an integral component of what is known as the "Northeast Corridor" (NEC). The NEC provides both passenger and freight rail access from New England south through New York City and on to Washington D.C. Both Amtrak and MetroNorth, operating over the New Haven Line between New Haven and New York, provide passenger rail service over the Walk Bridge. APP-27; J. Hanifin Test., starting at 02:21:19

As set forth in detail in the Findings of Fact below, the proposed Project consists of the removal of the existing bridge, including the superstructure, substructure elements (abutments and piers), timber pier protection system, the removal of deactivated electrical and railroad submarine cables, channel improvements and the construction of the new bridge. APP-1.1, p. 1-7; DEEP-18A; DEEP-20. The Project would also include numerous improvements within the railroad right-of-way, such as the replacement of track, ballast and overhead catenary and supports, replacement and construction of retaining walls, demolition of the Maritime Aquarium's IMAX theater, temporary and permanent dock relocations and extensions, and the construction of a pedestrian/bicycle trail connected to the Norwalk River Valley's Harbor Loop Trail in East Norwalk. APP-1.1; APP-1.6, p. 12. The Project Application and Draft Proposed License identify ten (10) distinct sites ("Sites"), at each of which the Applicant proposes to conduct a variety of planned construction activities and regulated conduct under the SDF, the TWA, or the CMA. APP-1; DEEP-13; APP-30.3, p. 10-25; C. Brown Test., starting at 00:46:12.

Although the Revised Application is dated 2021, planning for the Project began years earlier in 2014. J. Hanifin Test., starting at 02:08:32. DOT selected HNTB

Corporation and WSP USA, Inc., who were integral in the planning and design process, as consultants to the Project. APP-38.3; J. Hanifin Test., starting at 02:09:31; APP-55, DOT Consultant Design Administration Manual. DOT also retained WSP USA Inc. to provide Project management services to the Walk Bridge Program. APP-37.7. DEEP staff from the Department's Land and Water Resources Division (LWRD) and staff from DEEP's Wildlife Division, Fisheries Division and Natural Diversity Data Base, were each involved in evaluating the Project. DEEP 26. The lead permit analyst for DEEP LWRD, Micheal Grzywinski, has been evaluating the Project since 2014. M. Grzywinski Test., starting at 06:14:12.

The Applicant also engaged in numerous coordination meetings with the Federal Transit Administration (FTA), National Oceanic and Atmospheric Administration/National Marine Fisheries Service/Greater Atlantic Regional Fisheries Office (NOAA/NMFS/GARFO), City of Norwalk, the Norwalk Harbor Management Commission (NHMC), the Norwalk Shellfish Commission (NSC), the Norwalk Harbor Master (NHM), local business owners, the US Coast Guard and US Army Corps of Engineers. APP-22; APP-24 through 24.9; APP-38.3, p. 2-3; APP-1.55; APP-1.56.1; APP-1.56.2; APP-1.57.1; APP1.57.2; APP-1.58.1; APP-1.58.2; APP-1.58.3; APP-1.59; APP-1.60; APP-1.61; J. Hanifin Test., 02:02:46, 02:12:23.

The revised Application as submitted on May 24, 2021 includes:

- The Application Form, dated March 5, 2021. APP-1.0; DEEP-11.
- Attachment A – "Executive Summary," dated March 2021. APP-1.10.
- Public notice, statutory notice, and landowner information. APP-1.12, App. 1.13.
- Narrative answers to questions in Application Form. DEEP-12; DEEP-15; APP-1.1; APP-1.11 Appendix A, APP-1.2, APP-1.3, APP-1.4, APP-1.5, APP-1.6, APP-1.7, APP-1.8, APP-1.9.
- DOT Permit plates. APP-1.14 – 1.45; APP-1.46, Site Photographs.

- DOT Specifications. APP-1.47 – 1.54.
- NOAA (National Oceanic and Atmospheric Administration) / GARFO (Greater Atlantic Regional Fisheries Office) Review and Approval. APP-1.57.1; APP-1.57.2.
- CT DEEP NDDB (Natural Diversity Data Base) Determination. APP-1.58.1.
- CT DEEP Marine Fisheries and Wildlife Coordination Correspondence. APP-1.58.2, APP-1.58.3.
- USFWS SEC7 ESA "No-Effect Determination" Memo. APP-1.59.
- USACE (U.S. Army Corps of Engineers) Consultation. APP-1.60.
- CT DOA, Bureau of Aquaculture Consultation Form. APP-1.61.

The Application packet also included reference to numerous documents demonstrating extensive coordination and consultation with the NSC and the NHMC, as well as other local officials. APP-22.1; APP-22.2; APP-23.1-23.3; APP-28.1-28.4; *see also* DEEP-2; DEEP-18A. DEEP determined that the Application contained all required information and was complete.[3] DEEP-18A; M. Grzywinski, Test., starting at 06:34:57. Thereafter, DEEP LWRD staff prepared a Draft License (the "Draft License"). DEEP-20.

B. Procedural History

On November 15, 2021, DEEP issued a notice of tentative determination to approve the Application and intent to waive a public hearing. DEEP-19. Because the Application's proposed activities include temporary and permanent impacts to coastal resources and tidal wetlands, Conn. Gen. Stat. § 22a-32 and R.C.S.A. § 22a-30-7(c)(4) required a 40-day comment period on the Application and that a public hearing be held upon request by twenty-five (25) individuals in a petition. On December 3, 2021, DEEP received a petition signed by twenty-five (25) or more persons from one Mr. Mark R.

[3] The Record reflects the extensive coordination between Norwalk Harbor Management Commission (NHMC) and Norwalk Shellfish Commission (NSC) starting in 2014. APP-1.55; APP-1.56.1; APP-1.56.2; APP-22; APP-23; DEEP-18A. As part of the permitting process, NHMC and NSC submitted detailed public comments and participated in many coordination meetings with DOT and DEEP staff from LWRD. NHMC and NSC did not submit signed consultation forms as part of the Application. However, these forms are not required by statute or regulation.

Smith, and on December 23, 2021, DEEP received a second petition signed by twenty-five (25) or more persons from Dr. John Pinto representing the NHMC and the NSC requesting a public hearing on DOT's Application. DEEP-22; DEEP 23.

An initial prehearing conference was held on January 5, 2021, which established a public comment hearing date of February 23, 2022, and evidentiary hearing date of February 28, 2022, with a second hearing date of March 2, 2022, if necessary. DEEP LWRD staff published a notice of public hearing on January 5, 2022. DEEP-25. A site visit was conducted for the benefit of the Hearing Officer on February 10, 2022. APP-56; APP-57. The site visit was attended by representatives of the parties and members of the public and consisted of a field walk of the proposed Project location, which included review of the ten (10) Sites listed in the Application. A prehearing conference was held on February 16, 2022 to review pre-hearing information, during which the Applicant entered fifty-seven (57) exhibits into evidence without objection[4] and DEEP staff entered twenty-five (25) exhibits into evidence without objection (collectively, the "Record").[5]

On February 18, 2022, Norwalk Power, LLC ("Norwalk Power") petitioned to intervene. On February 23, 2022, a public comment hearing was held via remote video conference. On February 24, 2022, the Applicant and DEEP filed a joint motion for continuance of the evidentiary hearing and motion for extension of the deadline to respond to the Petition to Intervene. On February 25, 2022, the Hearing Officer granted the joint motion, and the evidentiary hearing was continued to March 15, 2022, with[6]

[4] On March 14, 2022, DOT entered an additional exhibit into the Record APP-58. See Final List of Exhibits, attached to e-mail to DEEP Hearing Officer K. Reiser dated March 14, 2022. A Revised list of Exhibits was submitted to the Hearing Officer March 17, 2022 per direction during the evidentiary hearing.
[5] On April 12, 2022, DEEP staff withdrew exhibit DEEP-18 and replaced it with DEEP-18A.
[6] The written public comment deadline was extended to March 7, 2022 for the Norwalk Harbor Management Commission only. See e-mail from DEEP Hearing Officer K. Reiser dated February 22, 2022.

The Hearing Officer extended the deadline to respond to Norwalk Power's Petition to Intervene to March 8, 2022, and on that date, both the Applicant and DEEP filed a joint opposition to Norwalk Power's intervention. On March 11, 2022, the Hearing Officer denied Norwalk Power's Petition to Intervene. Ruling Re: Petition to Intervene (March 11, 2022). The evidentiary hearing was held and concluded on March 15, 2022, via remote video conference.

At the evidentiary hearing, the Applicant presented expert testimony from the following nine (9) witnesses. Christian Brown, P.E., Bridge Structural Engineer and Design Project Manager for the Walk Bridge Replacement Project from HNTB Corporation, testified regarding the engineering aspects of the Project, including the design and constructability of the Project elements; their associated impacts on wetlands, watercourses, and other natural resources; and measures instituted to minimize the degree of impact to these resources. APP-30.1 through APP-30.3; C. Brown Test., starting at 00:16:20. John Hanifin, the Design Project Manager of Walk Bridge Replacement Project from DOT, testified about program management and stake holder engagement aspects of the Project. APP-38.1 through APP-38.3; J. Hanifin, starting at 02:08:32. Andrew Davis, Transportation Supervising Planner from the DOT Natural Resources Planning (NRP) within the of Office of Environmental Planning (OEP) from DOT testified about overseeing and reviewing the tidal wetland delineation, DEEP Fisheries and DEEP Wildlife Coordination, National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS) Essential Fish Habitat and Endangered Species Coordination, U.S. Fish and Wildlife Endangered Species Coordination, Wetland Mitigation Plan Development, and State and Federal Permit

Application preparation and review. APP-34.1 through APP-34.3; A. Davis Test., starting at 02:44:50. Kevin Slattery, PWS, an environmental consultant member of the design team, testified about natural and social resource data collection, development of Project mitigation strategies, and early permitting coordination. APP-32.1 through APP-32.3; K. Slattery Test., 03:15:40. Adam Fox, P.E., Transportation Principal Engineer of the DOT Office of Environmental Compliance, testified about best management practices pertaining to contaminated soil, sediment and groundwater; hazardous materials; and water quality monitoring of the Walk Bridge Replacement Project. APP-35.1 through APP-35.3; A. Fox Test., 03:39:38. Steven Flormann, P.E., CFM, Water Resources Engineer from HNTB Corporation, testified about the hydrologic, hydraulic, scour, and stormwater management requirements, including the preparation and oversight of the Flood Management Certificate application. APP-31.1 through APP-31.3; S. Flormann Test., starting at 04:04:53. Devin Santa, P.E., PMP, U.S. Coast Guard Licensed Captain & Certified Hydrographer, testified regarding the interaction of existing marine operations with proposed construction activities, including existing marine traffic on the Norwalk River and construction impacts on marine operations and potential measures that may be instituted to minimize conflict. APP-33.1 through APP-33.3; D. Santa Test., starting at 04:23:57. Richard Bertoli, P.E., PMP, Principal Engineer & Walk Bridge Program Manager from WSP USA Inc., testified about the evaluation of alternative locations for the assembly of the lift spans. APP-37.1 through APP-37.3; R. Bertoli Test., starting at 04:44:44. Michael Mendick, P.E., CCM, DOT District Engineer, testified about contract documents, contract administration, oversight efforts to ensure compliance with regulatory requirements, and best management practices to minimize impacts on natural

resources and the community. APP-30.1 through 38.3; M. Mendick Test., starting at 05:43:55. The testimony of each of DOT's expert witnesses support the determination that DOT has incorporated measures to minimize and/or mitigate environmental and navigational impacts to the maximum extent practicable, and that the proposed Project, subject to the conditions of the Draft License, satisfies the relevant statutory and regulatory criteria.

DEEP staff presented expert testimony from one (1) expert witness: Micheal Grzywinski, a permit analyst from DEEP LWRD, who testified about his review of the Application, his experience on permitting similar bridge construction projects as a member of DEEP staff. Mr. Grzywinski offered his expert opinions that: the application was complete; the Project has been planned to minimize environmental and navigational impacts to the greatest extent possible; the proposed activity, subject to the conditions in the proposed Draft License, complies with all applicable statutory and regulatory policies, standards and criteria; and, therefore, the Commissioner of Energy and Environmental Protection ("DEEP Commissioner") should issue the Draft License. DEEP-18A; DEEP-26; M. Grzywinski Test., starting at 06:13:11.

Based on a review of the Record in this matter, including the documentary evidence, witness testimony, and public comment, the Applicant, through a 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 and Application, comply with the relevant standards in 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-20) should be issued as a Final License.

C. Project Description

1. The Project consists of the removal of the existing bridge, including the superstructure, substructure elements (abutments and piers), timber pier protection system, and deactivated electrical and railroad submarine cables; and construction of the replacement bridge. APP-1.2; DEEP-18A.

2. The purpose of the Project is to replace the existing deteriorated bridge with a resilient bridge structure which would enhance the safety and reliability of rail service, offer operational flexibility and ease of maintenance, and provide for increased capacity and efficiencies of rail transportation along the New Haven Line/Northeast Corridor, while maintaining or improving navigational capacity and dependability for marine traffic in the Norwalk River. Upgrades to the Walk Bridge, through replacement, are needed to increase bridge reliability, incorporate bridge redundancy, and provide a sustainable bridge for significant weather events, thereby accommodating current and future rail and marine traffic. APP-1.2; APP- J. Hanifin Test., starting at 02:21:19; DEEP-18A.

3. The existing Walk Bridge, constructed in 1896, is a four-track movable railroad bridge consisting of a 200-foot swing span, supported by a center pivot pier, and two fixed approach spans to the west of the swing span and one fixed approach span to the east of the swing span. The structure carries four tracks utilized by Metro-North Railroad (MNR) commuter rail, Amtrak, and two freight carriers. The fixed spans consist of eight 15-feet deep Warren trusses, two per track; and the swing span consists of three planes of double intersection Warren trusses with stringers and floor beams. APP-1.1; APP-38.3; DEEP-18A.

4. The existing bridge is approximately 120 years old and has deteriorated. Existing and projected deterioration and wear of mechanical systems are key elements which affect the reliability of the bridge. APP-1.1; APP-40, Existing and Proposed Bridge Photos and Images; D. Santa Test., starting at 04:27:00.

5. The four-span replacement bridge includes two side-by-side, 240-foot vertical lift spans across the Norwalk River, each with independently operated mechanical and electrical equipment. The vertical lift spans provide a horizonal clearance of 220 feet between the pier-mounted fenders. The project does not alter the 170-foot federal navigation channel. The lift spans provide 60.73 feet of vertical clearance above mean high water (MHW) when the span is fully raised, and 25.73 feet vertical clearance above MHW when the span is closed. APP-38.3. There are two western approach spans and one eastern approach span. The approach spans are side-by-side, two-track structures; the north structure carries Tracks 1 and 3 and the south structure carries Tracks 2 and 4. APP-1.1; APP-45, Project Construction Examples and Animation; DEEP-18A. The final waterway condition is a single channel that more than doubles the existing horizontal navigation clearances and improves vertical clearance by ten feet when the span is in the closed position. APP-30.3; C. Brown Test., starting at 1:09:41

6. Each structure is comprised of a precast concrete composite ballasted deck supported on four simply supported built-up welded plate girders. The lift spans are 40-feet deep through trusses, each with a double-intersection Warren truss configuration without verticals. Each lift span is an open-deck two-track structure made up of trusses with floor beams supporting track stringers. Tower structures at the end of the lift spans support the lifting mechanisms and counterweights for both lift spans (APP-12.9, High Tower Technical Special Provisions). Short deck-girder spans through the towers at each end provide continuity from the approach spans to the movable spans. APP-1.1.

7. In addition to the replacement of the Walk Bridge, the Project would include other improvements within the railroad right-of-way, including replacement of track and ballast and overhead catenary and supports from approximately the Washington Street Bridge to approximately 300 feet east of the Fort Point Street Bridge; replacement of retaining walls on both sides of the railroad corridor to the west of the Walk Bridge; construction of new support walls at the west abutment; construction of a new retaining wall to the southeast of the Walk Bridge; and construction of a pedestrian/bicycle trail connection to the Norwalk River Valley Trail's Harbor Loop Trail in East Norwalk.[7] APP-1.1; APP-12.1 through APP-12.21, Material Management-Related Specifications & Activities; APP-38.3.; J. Hanifin Test., starting at 02:26:02, 02:31:30.

8. A primary goal of the Walk Bridge design and construction is to minimize construction impacts and disruptions to rail and river traffic. The lift span was designed and configured to allow for four-track service to continue well into the construction period and for the existing swing span to remain operational for boat traffic until the first of the two lift spans is ready to be installed. For most of the Project duration, it is anticipated that the river would remain open to traffic by restricting construction activity to one existing channel and keeping the other channel open to marine traffic (partial channel closure). APP-1.1; J. Hanifin Test., starting at 02:31:30

9. The Walk Bridge Replacement Project is anticipated to begin after regulatory approval and is expected to have a construction duration of approximately 5 to 6 years. APP-2.1, p. 50.

10. The Application outlines 19 construction activities that occur within 10 project Sites. C. Brown Test., starting at 46:12, Exhibit APP-1.2, APP-1.14 – 1.45, APP-45. Initial construction activities include installation of construction work platforms in the four quadrants of the bridge site, installation of mooring piles and temporary fender systems, and demolition of the existing control house. Cranes and other construction equipment placed on the temporary work platforms would be used to build the new lift span piers and lift span towers. APP-1.1.

11. DOT conducted a Project siting alternatives assessment for the replacement bridge lift-span assembly location (APP-1.7). Based on the results of a Value Engineering Study (APP-18.1) and Assessment of Lift Span Assembly Locations 10-15-

[7] The proposed regulated activities to be authorized are all associated with the replacement of the existing Walk Bridge over the Norwalk River, Bridge No. 04288R.

2020 Study (APP-18.4), DOT determined that improved Project value would result from using a smaller, pre-existing staging and storage area for assembling the lift spans, as opposed to constructing a new permanent marine staging yard at the Water Street parcels near the bridge site. APP-30.3; C. Brown Test., starting at 01:25:14. The use of the existing slip at Site 10 Manresa Island would allow for the most control of the construction process. Additionally, Site 10 is approximately 2 nautical miles south of the bridge site, has an existing deep-water slip, and facilitates lift span assembly outside of the navigation channel. This type of access would allow DOT to maintain and control the construction schedule and place DOT in a better position to resolve external factors that may complicate installation of the trusses. M. Mendick Test., starting at 05:52:29.

12. The replacement bridge lift spans would be assembled at the Manresa Island Staging and Storage Yard (Site 10) and transported approximately 2 nautical miles upstream along the Norwalk River via barge to the bridge site where they would be prepared for final installation. Removal of the existing bridge swing span would be coordinated with the installation of the lift spans and other construction activities. APP-1.1. After removal, the lift spans and high towers of the existing bridge would be transported to an alternate location and would not be dismantled or demolished at Site 10. R. Bertoli Test., 05:17:04; APP-58.

13. Construction of the replacement bridge would include land-based activities and in-water work. In-water work would consist of, but not be limited to, the installation of permanent and temporary structures, removal of permanent and temporary structures, placement of fill, the placement of moorings buoys, and dredging below the Coastal Jurisdiction Line (CJL). Incidental activities such as, but not limited to, movement of construction vessels, and spudding (securing of) construction vessels is not considered in-water work. APP-1.1.

14. Construction of the in-water portions of the Project would be primarily completed with cranes and other equipment placed on construction work platforms in the four quadrants of the bridge site. The cranes would be accompanied by material barges and a collection of helper boats and work shuttle vessels. Barges would also be used for the installation of the new vertical lift spans and the removal of the existing swing span. APP-1.1 through APP-1.2.

15. Removal and disassembly of existing Walk Bridge includes the bridge superstructure and substructure. The existing bridge superstructure consists of the bridge approach spans, swing span, open deck track, control house, and seven overhead contact systems (OCS or “catenary”) structures (Structures 529A, 529B, 529C, 529D, 529E, 529F, and 529G). These elements would be removed in their entirety. The existing bridge substructure consists of the east and west abutments, Pier 1 (east of North Water Street), Pier 2 (west swing span rest pier), the pivot pier, and Pier 3 (east swing span rest pier). Pier 1 would be removed to approximately Elevation 4.0 to 6.0 (NAVD88), which is 2 feet below ground elevation, which varies between Elevation 6.0 and 8.0 (NAVD88). The existing bridge foundations in the river (Piers 2 and 3 and the pivot pier and their timber mats) would be removed to Elevation 14.98 (NAVD88), which is 1 foot below the

authorized dredge Elevation 13.98 (NAVD88), to accommodate an allowance for over-dredging. The existing bridge part substructure and superstructure would be loaded onto a barge and hauled to approved upland construction staging parcels, prior to off-site disposal. APP-1.1; APP-1.2, Sections 1.5, 2.3, 2.4, 3.5 and 9.3.

16. Initially, the eastern construction work platforms would be used for initial loading of the material from the barges. The Manresa Island Staging and Storage Yard (Parcel 5/86/1) and the construction yard at the bridge site (1 Goldstein Place; Parcel 3/1/25) would be used for off-loading of materials from the construction barges and temporary staging and storage prior to off-site disposal. APP-1.1.

17. Transmission towers (Structures 529 and 530) on the east and west would be removed in their entirety, along with the overhead lines that cross the navigation channel. APP-1.14; APP-1.23; APP-1.24. All open deck track on the existing bridge would be removed with the structure. Three existing submarine cables would be deactivated and removed in their entirety, including the cable providing electrical power and control to the existing swing span, a temporary railroad signal and communication cable installed as part of the CP-243 Interlocking Project (an advance construction project), and the signal express cable. APP-1.1; APP-1.38; APP-30.3; C. Brown Test., starting at 00:46:12.

18. The existing timber fender protection system includes timber protection for Piers 2 and 3 and the pivot pier. At each pier, the protection system, including the timber piles and accumulated sediment around the pier, would be completely removed. APP-1.1; APP-1.2; APP-1.40.

19. DOT conducted a thorough bridge design alternatives analysis for the Walk Bridge Replacement Project, which was presented in the Environmental Assessment and Section 4(f) Evaluation/Environmental Impact Evaluation (EA/EIE), August 2016; and the Finding of No Significant Impact/Record of Decision (FONSI/ROD), issued by FTA in July 2017. APP-1.7, p. 1. DOT identified a range of seventy (70) alternatives and grouped them into four (4) categories: No Build, Rehabilitation Alternative, Replacement Alternative—Movable Bridge, and Replacement Alternative—Fixed Bridge. DOT conducted early coordination meetings with public agencies and project stakeholders, including the USACE, USCG, the City of Norwalk, local boards and commissions, Metro-North Railroad, property owners, and waterway users to ascertain concerns and requirements for the replacement bridge design and to obtain public and agency input. APP-1.7, p. 2. DOT ultimately determined that the vertical lift span bridge replacement alternative, best satisfied the Project purpose and need. APP-1.7; APP-32.3; K. Slattery Test., starting at 03:21:09. A detailed outline of the decision-making process can be found in APP-1.7, p. 1-21.

20. The Walk Bridge Replacement Project was comprehensively evaluated in the joint NEPA Environmental Assessment/CEPA Environmental Impact Evaluation, which benefited from the extensive research and early data collection efforts. APP-32.3; K. Slattery Test., starting at 03:17:22.

D. Site Description

21. The Walk Bridge is a critical piece of public infrastructure on the New Haven Line/Northeast Corridor (NHL/NEC). The Northeast corridor connects Boston to Washington D.C., is the most heavily traveled rail corridor in the country and is an economic generator of money for the entire region. J. Hanifin Test., starting at 02:21:19. Walk Bridge carries Amtrak intercity and high-speed passenger service on the Northeast Corridor (NEC), is used for Metro-North Railroad (MNR) commuter rail service, and Providence and Worcester Railroad Company (P&W) through freight service. Replacement of the existing Walk Bridge would support Amtrak, MNR and freight service. APP-1.2; J. Hanifin Test., starting at 02:21:19; APP-1.46, Site Photographs; DEEP-18A.

22. Walk Bridge is the northern boundary of the Norwalk Harbor, rated as a small commercial port by the USACE, with over 2,300 moorings and berthing spaces, and between 2,000 to 3,000 commercial vessel trips per year to port facilities. The replacement bridge would support marine use and operations on the Norwalk River. APP-1.2;

23. The Walk Bridge Replacement Project would involve Project construction and related activities at Sites 1 through 10, including compensatory wetland mitigation at Site 6. For each activity within a site, resource impacts are identified according to temporary impacts and permanent impacts. Temporary impacts are construction impacts less than 24 months duration. Permanent impacts include temporary impacts of 24 or more months duration. Resource impacts are shown for vegetated tidal wetlands, intertidal flats, the intertidal zone, and below the Coastal Jurisdiction Line (CJL). Intertidal zone impacts represent areas that are in the intertidal zone but are not defined as either a vegetated tidal wetland or intertidal flat. Impacts below the CJL include areas below the CJL elevation, shore to shore, that are not included as vegetated tidal wetlands, intertidal flat, or intertidal zone impacts. APP-1.2, p.2.

24. DOT would take a multilayer approach to overseeing environmental compliance, including a dedicated environmental inspector responsible to enforce the Contract and environmental permit requirements, and best management practices. APP-36.3; M. Mendick Test., 06:05:30, 06:09:55; APP-1.8; APP-54, DOT Construction Manual.

25. Some of the proposed activities would take place in an area considered a "tidal wetland" as defined by Conn. Gen. Stat. §§ 22a-29 and 22a-93 (7)(E). DEEP 18 A.[8]

26. The activities are proposed in an area that is considered "coastal waters" as defined in Conn. Gen. Stat. § 22a-93 (5).

27. The Permit Application describes 19 construction activities (CAs) at ten (10) Project Sites. A description of each CA can be found in the detailed permit plates

[8] Twenty-two vegetated tidal wetlands exist near the bridge site on both sides of the Norwalk River, and two vegetated tidal wetlands and one freshwater wetland exist in the vicinity of the staging and storage yard at Manresa Island. APP-34.3; A. Davis, starting at 02:48:511.

accompanying the Application. C. Brown Test., starting at 42:25; APP-1.2; APP-1.14 through 1.45.

1. *Site 1*

28. Site 1 is at the bridge site west (outside) of the navigation channel and includes two parcels at 10 North Water Street (Parcel 2/19/3, the Maritime Aquarium; and Parcel 2/19/2, the IMAX Theater), encompassing the 100-year floodplain and extending waterward to include the Mean Low Water (MLW), but landward of (outside) the navigation channel. Ten (10) construction activities (CAs) are proposed to occur at Site 1. APP-1.2, p. 4-12; APP-1.21, Parcel Maps; DEEP-20.

29. IMAX Removal, Construction Activity 1 (CA1) at Site 1 includes removal of existing IMAX Theater, site improvements for construction staging, and site restoration upon project completion. It also includes realignment of existing stormwater outfall; demolition of the foundation and superstructure of the Pedestrian Link, the existing covered walkway connecting the IMAX Theater and the Maritime Aquarium; and removal of City of Norwalk diesel tank (Parcels 2/19/2 and 2/19/3; 10 North Water Street). APP-1.2, p. 5-6; APP-1.27, Permit Plates CA1-1 through CA1-7; APP-27, DOT-City of Norwalk IMAX Replacement Agreement; APP-30.3; APP-42, IMAX Site Photos.

a. Resource impacts at Site 1 due to CA1 include: 2,300 square feet (SF) permanent impacts to Vegetated Tidal wetlands; 100 SF temporary impacts and 2,900 SF permanent impacts to the Intertidal Zone[9]; and 100 SF permanent impacts below the limits of the Coastal Jurisdiction Line[10].
b. Time of year restrictions for CA1 at Site 1 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st, and would be used at the beginning of each shift that requires pile driving and extraction activities, and following cessation of activity for a period of 30 minutes or longer (APP-1.1; APP-1.2, pg. 5);
c. Demolition of IMAX Theater would be from land and the river, and would require excavators, front-end loaders, and disposal trucks. Superstructure demolition would be staged from the land. During superstructure demolition activities, protection measures would be used to prevent or minimize debris from falling into the waterway. IMAX superstructure is above the CJL, and with these precautions the demolition would not impact protected resources (APP-1.22, Building Demolition Plan).

[9] Represents areas in the Intertidal Zone that are not defined as a vegetated tidal wetland or intertidal flat.
[10] For each CA at Sites 1-10, impacts below the CJL include areas below the CJL elevation, shore to shore, that are not included as vegetated tidal wetlands, intertidal flat, or intertidal zone impacts. APP-1.2, p. 6.

30. Duct Bank Installation, Construction Activity 2 (CA2) at Site 1 includes installation of Metro-North Railroad (MNR) traction power and signal power, communication and signal, and bridge power and control cabling, crossing beneath the river via an approximate 4 foot wide by 490-foot-long micro-tunnel (APP-12.12, Micro-tunneling Dewatering). Also includes installation of the micro-tunneling pit for the receiving shaft on the west bank of the Norwalk River. APP-1.2, p. 6; APP-1.28, Permit Plates 2-1 through CA2-4; APP-25.25, Supplemental Investigation – Secant Pit Groundwater, West Side, Norwalk, CT; APP-30.3.

a. CA2 would not impact existing resources below the CJL;
b. MNR traction power and signal power, communication and signal, and bridge power and control cabling would be routed on the south side of the bridge;
c. Based on existing environmental investigations and field observations, contaminated groundwater would be managed in accordance with either the General permit for Discharge from Miscellaneous Industrial Users (MIU General Permit) or the General Permit for the Discharge of Groundwater Remediation Wastewater (Remediation General Permit). APP-12.10, Controlled Handling and transfer of Contaminated Groundwater; APP-12.5, Operation and Maintenance of the Central Groundwater Treatment Facility.

31. Northwest Trestle, Construction Activity 5 (CA5) (APP-1.2, p. 7-8; APP-1.31, Permit Plates CA5-1 through CA5-5) and Southwest Trestle, Construction Activity 6 (CA6) (APP-1.2, p. 7-8; APP 1.32, Permit Plates CA6-1 through CA6-5) at Site 1 includes installation and removal of construction work platforms. The trestles would be located on the west side of the Norwalk River at the bridge site to be used for primary access to the bridge throughout construction. APP-30.3.

a. Resource impacts at Site 1 due to Installation and Removal of Northwest (CA5) and Southwest (CA6) Trestles (Construction Work Platforms) include: 2,200 SF permanent impacts to Vegetated Tidal wetlands; 200 SF permanent impacts to the Intertidal Zone; and 400 SF permanent impacts below the limits of the Coastal Jurisdiction Line;
b. Time of year restrictions for CA5 and CA6 at Site 1 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st and would be used at the beginning of each shift that requires pile driving and extraction activities and following cessation of activity for a period of 30 minutes or longer (APP-1.1; APP-1.2, pg. 5).

32. Pier 2 Construction, Construction Activity 9 (CA9), at Site 1 includes construction of Pier 2 lift span tower foundation. APP-1.2, p. 8-9; APP-1.35, Permit Plates CA9-1 through CA9-7; APP-30.3.

a. Resource impacts due to CA9 at Site 1 include: 700 SF permanent impacts to Vegetated Tidal wetlands; 4,200 SF permanent impacts to the Intertidal Zone; and 3,900 SF permanent impacts below the limits of the Coastal Jurisdiction Line;
b. Time of year restrictions for CA9 at Site 1 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st and would be used at the beginning of each shift that requires pile driving and extraction activities and following cessation of activity for a period of 30 minutes or longer. APP-1.1; APP-1.2, p. 8.
c. Pier 2 construction would require the west channel to be closed at times to navigation. Prior to work start, a 65-foot-wide by 110-foot-long temporary marine enclosure/fender (APP-13.1, Environmental Protection- Related Specifications, Marine Enclosure) and turbidity curtain (APP-1.48, Delivery and Installation of Turbidity Control Curtains) would be installed around the work area (APP-30.3; C. Brown Test., starting at 01:01:43; APP-1.14, General Notes). The turbidity curtain would be deployed around the exterior perimeter of the marine enclosure to further prevent siltation outside of the enclosure (APP-1.2; APP-34.3; APP-45; C. Brown Test., starting at 00:46:12);
d. DOT conducted a Test Pile Program from November 2018 through January 2019 to review proposed construction techniques, including identifying potential impacts of the pile driving relative to location, acoustics and hydro-acoustics, and turbidity. The Test Pile Program Results (APP-10, Test Pile Program Report) helped establish the hydro-acoustic limits confirmed by the NMFS (APP-1.57.1 and 1.57.2). APP-30.0, p. 4;
e. Three water quality monitoring stations would be deployed within range of any sediment producing activity (APP-1.2);
f. Water quality monitoring would take place throughout each in-water activity and marine enclosure removal would only occur once turbidity readings reach equilibrium with the readings outside the turbidity curtain (APP-1.2);
g. Equipment for CA9 would include cranes, hydraulic oscillator, sedimentation tanks, backhoe, and excavator. The pile driving and drilled shaft and micropile drilling activities would be coordinated to ensure activities are only taking place on one half of the navigation channel at a time;
h. Any excavation within the marine enclosure would be backfilled with organic/backfill material to the original ground surfaces (APP-12.7, River Backfill).

33. Existing Pier Removal, Construction Activity 14 (CA14), at Site 1 includes removal of existing Pier 2 in the river after removal of the swing span, including removal of existing fender and excavation around the pier. APP-1.2, p. 9-10; APP-1.40, Permit Plates CA14-4 through CA14-6, CA14-8; APP-1.43, CA-17; APP-30.3.

a. Resource impacts due to CA14 at Site 1 include: 100 SF temporary impacts and 2,200 SF permanent impacts below the limits of the Coastal Jurisdiction Line;
b. Time of year restrictions for CA14 at Site 1 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st and would be used at the beginning of each shift that requires pile driving and extraction activities and following cessation of activity for a period of 30 minutes or longer (APP-1.1; APP-1.2, p. 5).
c. Removal of existing Pier 2 and fender would involve pile driving and removal, and pier demolition and removal using cranes, excavators, vibratory and impact hammers, clamshell and digging buckets, push/work boats and various barges;
d. Prior to pier removal, a marine enclosure/temporary fender and turbidity curtain would be installed around the work area. Existing Pier 2 and its timber mat would be removed to an elevation no higher than the authorized over dredge limit. The fender system timber piles would be fully removed;
e. When demolition is complete, and the pier has been removed, the marine enclosure would be removed using similar construction means and methods as required for installation (APP-1.2).

34. Pier 2 Fender System Installation, Construction Activity 15 (CA15), at Site 1 includes installation of the fender system after removal of the existing fenders and rest of Pier 2. APP-1.2, p. 11; APP-1.41, Permit Plates CA15-1, CA15-3 through 15-4; APP-30.3.

a. Installation of pier-mounted fendering system at Pier 2 would not impact existing resources;
b. Time of year restrictions for CA15 include: no unconfined turbidity producing activities would be allowed between February 1st and September 30th;
c. The permanent fender for Pier 2 would be a pier-mounted fendering system;
d. Equipment would include a work barge with a crane, man-lift, compressor, and hand tools (APP-1.2).

35. Existing Submarine Cable Removal, Construction Activity 12 (CA12), at Site 1 includes removal of three existing submarine cables that would no longer be used upon completion of the replacement bridge. APP-1.2, p. 11-12; APP-1.38, Permit Plates CA12-1, CA12-3, CA12-4; APP-1.43, CA-17; APP-30.3.

a. Resource impacts due to CA12 at Site 1 include: 200 SF permanent impacts to Vegetated Tidal wetlands; 600 SF permanent impacts to the Intertidal Zone; and 4,600 SF permanent impacts below the limits of the Coastal Jurisdiction Line;
b. Time of year restrictions for CA12 at Site 1 include: dredging would be conducted within a turbidity curtain between December 1st and January 31st;
c. Three existing submarine cables would be deactivated and removed in their entirety, including the cable providing electrical power and control to the existing swing span, a temporary railroad signal and communication cable installed as part of the CP-243 Interlocking Project, and the signal express cable;
d. During removal of submarine cables, work would progress from one channel to another, with one channel remaining open for marine traffic;
e. Sediment spoils from the top four (4) feet of material can be reused as backfill into the river, and would be dewatered/decanted on barges or work platforms then treated as necessary prior to being discharged back into the river; All other excavated material would be managed per DEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and transfer) guidelines, including placement into watertight trucks for transport to the Waste Stockpile Areas (WSAs) for testing and management prior to off-site disposal (APP-12.21; APP-14.2.3; APP-30.3; APP-35.3);
f. With the exception of the removal of the submarine cable recently installed as part of the CP-243 Interlocking Project (a separate project), sediment excavated from the top four feet from the top of river sediment along the submarine cable routes would not be reused. Sediment excavated below the top four feet along the submarine cable routes may be reused to backfill the trench from which it came. APP-1.2.

36. Dredging Operations, Construction Activity 17 (CA17), at Site 1 includes maintenance dredging at the bridge site to match the existing authorized federal navigation channel depths. APP-1.2, p. 12; APP-1.43, Permit Plates CA17-1, CA17-2, CA 17-6; APP-12, Material Management-Related Specifications and Notices to Contractor; APP-14, LWRD Dredging Consultation Form and Attachments; APP-30.3; C. Brown Test., starting at 35:15, 01:58:15.

i. Resource impacts due to CA17 at Site 1 include: 4,900 SF or 330 cubic yards (CY) removal of dredged material;
ii. Time of year restrictions for CA17 at Site 1 include:
    1. Unconfined dredging would be conducted within a turbidity curtain between December 1st and January 31st (the winter excavation window);
    2. If unconfined dredging is needed outside of the winter excavation window (from February 1st through November 30th), the work would be performed within a marine enclosure/temporary fender enclosed by a turbidity curtain;

3. Maintenance dredging would be conducted at the bridge site to match existing federal navigation channel depths, using crane on a spudded crane barge, excavating with a clamshell bucket, and loading onto material barges;
4. Sediment spoils would be dewatered/decanted on barges or work platforms and the dewatered wastewater would be treated as necessary prior to being discharged back into the river;
5. Excavated material would be managed per DEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and Transfer) guidelines, including placement into watertight trucks for transport to the Waste Stockpile Areas (WSAs) for testing and management prior to off-site disposal (APP-12.21; APP-14.2.3; APP-30.3; APP-35.3);
6. WSAs also would be managed in accordance with the CTDEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and Transfer) guidelines. Wastewater generated during dewatering activities would be managed in accordance with CTDEEP requirements. All dredged material would not be reused on the Project site (APP-30.3; APP-14).

iii. Western portion of navigation channel would be dredged to a minimum depth of -13.98 feet NAVD88, or 10 feet below mean lower low water (MLLW). Most of existing navigational channel currently meets authorized depths, but additional dredging at and around existing Pier 2 after its removal would be required (APP-1.2, p. 9-10);
iv. During the dredging, the west channel may be partially restricted, but would otherwise remain open during this work.

37. Structure Demolition and Removal, Construction Activity GEN-14 at Site 1 includes structure demolition and removal of City of Norwalk Maritime Aquarium tent superstructure and foundation and State of Connecticut septic tank on Parcel 2/19/3 (10 North Water Street). APP-1.2, p. 4; APP-1.14, General Notes.

2. *Site 2*

38. Site 2 is at the bridge within the navigation channel, and resources include the 100-year floodplain and subtidal area. Six construction activities (CAs) are proposed to occur at Site 2. APP-1.2, p. 13-18; APP-30.3; DEEP-20.

39. Duct Bank Installation, Construction Activity 2 (CA2), at Site 2 includes duct bank installation for MNR traction power and signal power, communication and signal, and bridge power and control cabling, crossing beneath the river via an approximate 4 foot wide by 490-foot micro-tunnel. APP-1.2, p. 13; APP-1.28, Permit Plates CA2-1 through CA2-4; APP-12.12, Micro-tunneling Dewatering; APP-30.3.

a. Installation of the MNR traction power and signal power, communication and signal, and bridge power and control cabling cables is described in Site 1, Construction Activity 2. CA2 extends into Sites 1, 2 and 3, and would not impact existing resources below the CJL at any of the Sites;

b. There are no time of year restrictions for CA2 at Site 2.

40. Existing Submarine Cable Removal, Construction Activity 12 (CA12), at Site 2 includes removal of three existing submarine cables that would no longer be used upon completion of the replacement bridge. APP-1.2, p. 13-14; APP-1.38, Permit Plates CA12-1 through CA12-4; APP-1.43, CA-17 Dredging; APP-30.3.

a. Time of Year restrictions include: dredging would be conducted within a turbidity curtain between December 1st and January 31st;
b. Removal of the three existing submarine cables is described in Site 1, and extend to includes Sites 1, 2 and 3;
c. Resource impacts due to CA13 at Site 2 include: 16,500 SF permanent impacts below the limits of the Coastal Jurisdiction Line.

41. Existing Swing Span Removal, Construction Activity 13 (CA13), at Site 2 includes removal and disassembly of the existing swing span. APP-1.2, p. 14-15; APP-1.39, Permit Plates CA13-1 through CA13-7; APP-30.3.

a. Resource impacts due to CA13 at Site 2 include: 200 SF temporary impacts below the limits of the Coastal Jurisdiction Line;
b. Time of year restrictions for CA13 at Site 2 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st, and would be used at the beginning of each shift that requires pile driving and extraction activities, and following cessation of activity for a period of 30 minutes or longer (APP-1.1; APP-1.2, p. 14);
c. DOT developed two schemes to remove the existing swing span and as part of the Application requests authorization for both schemes to provide DOT flexibility during construction. APP-1.1; APP-1.2, p. 14.
    i. Scheme 1 would consist of moving the existing swing span from its current location to a temporary position approximately 60 to 100 feet north on a slide rail system to enable removal of swing span from the site. There would be an approximate 90-day full navigation channel closure, resulting from installation and removal of the slide rail system and removal of the swing span. These operations would be coordinated with removal of the pivot pier (CA14) and installation of the new south lift span (CA18). Resource impacts include: 200 SF temporary impacts below the limits of the Coastal Jurisdiction Line;
    ii. Scheme 2 would consist of the staged removal of the existing span, in place, prior to the installation of the south lift span (CA18). There would be intermittent partial channel closures and approximate 180-day vertical navigation restriction (16 feet from MHW);
    iii. For both schemes, barges would be positioned beneath the existing swing span in the navigation channel for working and catching

demolition debris. Manresa Island Staging and Storage Yard and the construction yard at the bridge site would be used for off-loading of materials from the construction barges prior to off-site disposal.

42. Existing Pivot Pier Removal, Construction Activity 14 (CA14), at Site 2 includes removal of existing Pier 2 in the river after removal of the swing span, including removal of existing fender and excavation around the pier. APP-1.2, p. 15-16; APP-1.40, Permit Plates CA14-1 through CA14-3, CA14-7; APP-1.43, CA-17 Dredging; APP-30.3.

a. Resource impacts due to CA14 at Site 2 include: 200 SF temporary impacts and 6,100 SF permanent impacts below the limits of the Coastal Jurisdiction Line.
b. Time of year restrictions for CA14 at Site 2 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st and would be used at the beginning of each shift that requires pile driving and extraction activities and following cessation of activity for a period of 30 minutes or longer. (APP-1.1; APP-1.2, p. 14);
c. Prior to work start, a marine enclosure/temporary fender and turbidity curtain would be installed around the pivot pier. The existing pivot pier and timber mat would be removed to an elevation no higher than the authorized over dredge limit. Following excavation, the area would be backfilled with organic/backfill material to the authorized dredge elevation, Elevation -14.98 (NAVD88) (APP-1.2, p.16). The fender system timber piles would be completely removed (APP-1.2, p. 17).
d. Removal of existing Pier 2 and fender would involve pile driving and removal, and pier demolition and removal using cranes, excavators, vibratory and impact hammers, clamshell and digging buckets, push/work boats and various barges;
e. Prior to pier removal, a marine enclosure/temporary fender and turbidity curtain would be installed around the work area. Existing Pier 2 and its timber mat would be removed to an elevation no higher than the authorized over dredge limit. The fender system timber piles would be fully removed.

43. Dredging Operations, Construction Activity 17 (CA17), at Site 2 includes maintenance dredging at the bridge site to match the existing authorized federal navigation channel depths, including removal of existing fender system and installation of temporary fender system at the pivot pier. APP-1.2, p. 12, 17-18; APP-1.43, Permit Plates CA17-1, CA17-2, CA17-6; APP-12, Material Management-Related Specifications and Notices to Contractor; APP-14, LWRD Dredging Consultation Form and Attachments; APP-30.3; C. Brown Test., starting at 35:15, 01:58:15.

a. Resource impacts due to CA17 at Site 2 include 40,800 SF removal of dredged material, net 4,210 cubic yards;

b. Time of year restrictions for CA17 at Site 2 include:
    1. Unconfined dredging would be conducted within a turbidity curtain between December 1st and January 31st (the winter excavation window);
    2. If unconfined dredging is needed outside of the winter excavation window (from February 1st through November 30th), the work would be performed within a marine enclosure/temporary fender enclosed by a turbidity curtain.
c. Maintenance dredging at Site 2 would be conducted immediately north and south of the pivot pier to match the existing federal navigation channel depths using a crane on a spudded crane barge, excavating with a clamshell bucket, and loading onto material barges. At Site 2, the navigation channel would be dredged to a minimum depth of -13.98 feet NAVD88, or 10 feet below MLLW;
d. Sediment spoils for the top four (4) feet of material can be reused as backfill into the river, and would be dewatered/decanted on barges or work platforms then treated as necessary prior to being discharged back into the river; All other excavated material would be managed per DEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and transfer) guidelines, including placement into watertight trucks for transport to the Waste Stockpile Areas (WSAs) for testing and management prior to off-site disposal (APP-14.2.3; APP-30.3; APP-35.3).

44. Lift Span Installation, Construction Activity 18 (CA18), at Site 2 includes slide-in and float-in operations for installation of the proposed lift spans. APP-1.2, p. 18; APP-1.44, Permit Plates CA18-1 through CA18-6; APP-30.3.

a. Lift span installations would require full navigation channel closure and channel restrictions. This activity would be coordinated with removal of the existing swing span and other construction activities;
b. The south lift span would be supported by a slide rail system which is built in place on the southwest and southeast construction work platforms. The north lift span would be floated into place;
c. New lift spans would be fully assembled, one at a time, at the Manresa Island Staging and Storage Yard (Site 10) and transported by barge to the Walk Bridge location for their final installation.

3. *Site 3*

45. Site 3 is at the bridge site east of the navigation channel and includes two parcels at 21 Goldstein Place (Parcel 3/2/6) and 1 Goldstein Place (Parcel 3/1/25), both of which are designated for construction staging. From the east, Site 3 encompasses the 100-year floodplain and extends west (waterward) to include the Mean Low Water (MLW) to a line landward (outside) of the navigation channel. Nine construction activities (CAs) are proposed to occur at Site 3. DEEP- 20.

46. Duct Bank Installation, Construction Activity 2 (CA2), at Site 3 includes installation of MNR traction power and signal power, communication and signal, and

bridge power and control cabling, crossing beneath the river via micro-tunneling. APP-1.2, p. 18; APP-1.28, Permit Plates CA2-1 through CA2-4; APP-12.12, Micro-tunneling Dewatering; APP-30.3.

a. Installation of the MNR traction power and signal power, communication and signal, and bridge power and control cabling cables is described in Site 1, Construction Activity 2. CA2 extends into Sites 1, 2 and 3, and would not impact existing resources below the CJL at any of the Sites;
b. There are no time of year restrictions for CA2 at Site 3.

47. Northeast Trestle, Construction Activity 7 (CA7) (APP-1.2, p. 20; APP-1.33, Permit Plates CA7-1 through CA7-6) and Southeast Trestle, Construction Activity 8 (CA8) (APP-1.2, p. 7-8; APP 1.34, Permit Plates CA8-1 through CA8-5) at Site 3 includes installation and removal of the construction work platforms (trestles) on the east side of the Norwalk River at the bridge site and would be used for primary access to the bridge throughout construction. APP-30.3.

a. Resource impacts at Site 3 due to CA7 and CA8 include: 3,700 SF permanent impacts to Vegetated Tidal wetlands; 100 SF permanent impacts to the Intertidal Flat; 100 SF temporary and 700 SF permanent impacts to the Intertidal Zone; and 800 SF permanent impacts below the limits of the Coastal Jurisdiction Line;
b. Time of year restrictions for CA7 and CA8 at Site 3 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st, and would be used at the beginning of each shift that requires pile driving and extraction activities, and following cessation of activity for a period of 30 minutes or longer (APP-1.1; APP-1.2, pg. 20);
    iv. The pile driving activities would be coordinated to ensure activities are only taking place on one half of the navigation channel at a time.
c. Prior to work start, a marine enclosure/temporary fender and turbidity curtain would be installed around each work area. APP-1.2, p. 20.

48. Pier 3 Construction, Construction Activity 10 (CA10), at Site 3 includes construction of Pier 3 lift span tower foundation. APP-1.2, p. 21-22; APP-1.36, Permit Plates, CA10-1 through CA10-7; APP-30.3.

a. Resource impacts due to CA10 at Site 3 include: 7,600 SF permanent impacts to the Intertidal Zone; and 7,700 SF permanent impacts below the limits of the Coastal Jurisdiction Line;
b. Time of year restrictions for CA10 at Site 3 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;

ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
iii. A soft start required between March 16th and October 31st and would be used at the beginning of each shift that requires pile driving and extraction activities and following cessation of activity for a period of 30 minutes or longer. APP-1.1; APP-1.2, pg. 21.

c. Pier 3 construction would require the east channel to be closed at times to navigation. Prior to work start, a marine enclosure/temporary fender within a turbidity curtain would be installed;
d. Equipment would include cranes, hydraulic oscillator, sedimentation tanks, backhoe, and excavator. Pile driving and drilled shaft and micropile drilling activities would be coordinated to ensure activities are only taking place on one half of the navigation channel at a time;
e. Any excavation within the marine enclosure would be backfilled with organic/backfill material to the original ground surfaces (APP-12.7, River Backfill).

49. Existing Submarine Cable Removal, Construction Activity 12 (CA12), at Site 3 includes removal of three existing submarine cables on the east bank of the river that would no longer be used upon completion of the replacement bridge. APP-1.2, p. 22; APP-1.38, Permit Plates CA12-2 through CA12-4; APP-1.43, CA-17 Dredging; APP-30.3.

a. Resource impacts due to CA12 at Site 3 include: 1,200 SF permanent impacts to the Vegetated Tidal Wetland, 100 SF permanent impacts to the Intertidal Flat, 2,000 SF permanent impacts to the Intertidal Zone, and 4,700 SF permanent impacts below the limits of the Coastal Jurisdiction Line.
b. Removal of the three existing submarine cables is described in Site 1, and extend to includes Sites 1, 2 and 3;
c. Time of Year restrictions include: dredging would be conducted within a turbidity curtain between December 1st and January 31st;
d. Sediment spoils for the top four (4) feet of material can be reused as backfill into the river, and would be dewatered/decanted on barges or work platforms and then treated as necessary prior to being discharged back into the river;
e. Excavated material would be managed per DEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and transfer) guidelines, including placement into watertight trucks for transport to the Waste Stockpile Areas (WSAs) for testing and management prior to off-site disposal (APP-12.21; APP-14.2.3; APP-30.3; APP-35.3).

50. Existing Pier Removal, Construction Activity 14 (CA14), at Site 3 includes removal of existing Pier 3 in the river after removal of the swing span, including removal of existing fender and excavation around the pier. APP-1.2, p. 9-10; APP-1.40, Permit Plates CA14-4 through CA14-6, CA14-8; APP-1.43, CA-17 Dredging; APP-30.3.

a. Resource impacts due to CA14 at Site 3 include: 100 SF temporary impacts and 2,200 SF permanent impacts below the limits of the Coastal Jurisdiction Line;

b. Time of year restrictions for CA14 at Site 3 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st and would be used at the beginning of each shift that requires pile driving and extraction activities and following cessation of activity for a period of 30 minutes or longer (APP-1.1; APP-1.2, p. 5).
c. Prior to pier removal, a marine enclosure and turbidity curtain would be installed around the work area. Existing Pier 3 and its timber mat would be removed to an elevation no higher than the authorized over dredge limit. The fender system timber piles would be fully removed (APP-1.2, p. 23);
d. Removal of existing pier 3 and fender would involve pile driving and removal, and pier demolition and removal using cranes, excavators, vibratory and impact hammers, clamshell and digging buckets, push/work boats and various barges;
e. When demolition is complete, and the pier has been removed, the marine enclosure would be removed using similar construction means and methods as required for installation.

51. Pier 3 Fender System Installation, Construction Activity 15 (CA15), at Site 3 includes installation of the fender system after removal of the existing fenders. APP-1.41, Permit Plates CA15-1 through CA15-6; APP-30.3.

a. Resource impacts due to CA15 at Site 3 include: 300 SF permanent impacts below the limits of the Coastal Jurisdiction Line;
b. Time of year restrictions for CA15 at Site 3 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st and would be used at the beginning of each shift that requires pile driving and extraction activities and following cessation of activity for a period of 30 minutes or longer. APP-1.1; APP-1.2, p. 24.
c. The permanent fender for Pier 3 would be a pier-mounted fendering system;
d. Equipment would include a work barge with a crane, man-lift, compressor, and hand tools;
e. Installation of the pier-mounted fendering system at Pier 3 would not impact existing resources;
f. In addition to the pier-mounted fendering system for Pier 3, a pile-supported fender system would be installed to protect the control house, situated on the norther end of Pier 3.

52. Dredging Operations, Construction Activity 17 (CA17), at Site 3 includes maintenance dredging at the bridge site to match the existing authorized federal navigation channel depths. APP-1.2, p. 12, 25; APP-1.43, Permit Plates CA17-2, CA17-3, CA17-6; APP-12, Material Management-Related Specifications and Notices to Contractor; APP-14, LWRD Dredging Consultation Form and Attachments; APP-30.3; C. Brown Test., starting at 35:15, 01:58:15.

a. Resource impacts due to CA17 at Site 3 include 7,500 SF or 770 CY removal of dredged material, net 770 CY;
b. Time of year restrictions for CA17 at Site 3 include:
    1. Unconfined dredging would be conducted within a turbidity curtain between December 1st and January 31st (the winter excavation window);
    2. If unconfined dredging is needed outside of the winter excavation window (from February 1st through November 30th), the work would be performed within a marine enclosure/temporary fender enclosed by a turbidity curtain.
c. Sediment spoils would be dewatered/decanted on barges or work platforms and the dewatered wastewater would be treated as necessary prior to being discharged back into the river;
d. Excavated material would be managed per DEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and transfer) guidelines, including placement into watertight trucks for transport to the Waste Stockpile Areas (WSAs) for testing and management prior to off-site disposal (APP-14.2.3; APP-30.3; APP-35.3);
e. At Site 3, the eastern portion of the navigation channel would be dredged to Elevation -13.98 NAVD88, or 10 feet below MLLW. Maintenance dredging is described in CA17 for Site 1 and will use a crane on a spudded crane barge, excavate with a clamshell bucket, and load onto material barges.

53. Structure Demolition and Removal at Site 3 includes removal of the SONO Wharf Marina buildings and tent on Parcel 3/1/25 (1 Goldstein Place). East of Site 3, removal of the City of Norwalk Water Pollution Control Authority's temporary Contaminated Groundwater Treatment facility, east of Parcel 3/2/6 (21 Goldstein Place); removal of a building on Parcel 3/1/29 (4 Goldstein Place); and removal of a building on Parcel 3/1/19 (6 Goldstein Place). APP-1.2, p. 19.

4. *Site 4*

54. Site 4 is located approximately 100 yards south of the bridge site, to the west of the navigation channel, is waterward of 4 North Water Street (Parcel 2/19/1) and includes activities waterward of the Coastal Jurisdiction Line (CJL) but landward of (outside) the navigation channel. Two construction activities (CAs) are proposed to occur at Site 4. DEEP-20.

55. Vessel dock relocation, Construction Activity 3 (CA3), includes permanent reconfiguration of the Maritime Aquarium and Sheffield Island Lighthouse Ferry vessel docks, including construction of an accessible gangway. APP-1.29, Permit Plates CA3-1 through CA3-4; APP-30.3.

a. Resource impacts due to CA3 at Site 4 include: 100 SF permanent impacts to Vegetated Tidal Wetland, 200 SF temporary impacts to the Intertidal Zone, and 6,400 SF temporary impacts and 4,800 SF permanent impacts below the limits of the Coastal Jurisdiction Line;
b. Time of year restrictions for CA3 at Site 4 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st and would be used at the beginning of each shift that requires pile driving and extraction activities and following cessation of activity for a period of 30 minutes or longer. APP-1.1; APP-1.2, p. 26.
c. To replace and reconfigure the berthing facility, existing pile removal (as needed), existing dock and gangway removal, new pile driving, new dock and gangway construction, dredging, and existing gangway installation would be required;
d. Equipment would include cranes, excavators, vibratory and impact hammers, push-work boats, and various barges;
e. Following the removal of the dock and gangway sections at Site 4, a turbidity curtain would be installed around the work area. Existing timber piles would be removed as needed. APP-1.2, p. 27.

56. Dredging Operations, Construction Activity 17 (CA17), at Site 4 includes new dredging to facilitate vessel access to and facilitate continuous use of the reconfigured dock during low tide periods. APP-1.43, CA17-4, CA17-7; APP-1.2, p.25-27; APP-44, Vessel Dock Location Photos; APP-12, Material Management-Related Specifications and Notices to Contractor; APP-14, LWRD Dredging Consultation Form and Attachments; C. Brown Test., starting at 35:15; APP-30.3.

a. Resource impacts due to CA17 at Site 4 include 4,600 SF or 300 CY removal of dredged would, net 300 CY;
b. Time of year restrictions for CA17 at Site 4 include:
    i. Dredging would be conducted within a turbidity curtain between December 1st and January 31st;
    ii. Dredging from February 1st through November 30th would be conducted within a marine enclosure enclosed by a turbidity curtain.
c. Dredging would be required in two areas at Site 4: at the southern end of the realigned dock, to facilitate access to the reconfigured docks by the Maritime Aquarium and Sheffield Island Ferry vessels; and at the norther end of the realigned dock, to facilitate continuous use of the dock during low tide periods;

d. Dredging would be performed to an elevation approximately 4.0 feet below mean lower low water (MLLW), or Elevation -8.0 NAVD88;
e. Sediment spoils for the top four (4) feet of material can be reused as backfill into the river, and would be dewatered/decanted on barges or work platforms then treated as necessary prior to being discharged back into the river; All other excavated material would be managed per DEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and transfer) guidelines, including placement into watertight trucks for transport to the Waste Stockpile Areas (WSAs) for testing and management prior to off-site disposal (APP-14.2.3; APP-30.3; APP-35.3);
f. The WSAs would be managed in accordance with the CTDEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and Transfer). Wastewater generated during dewatering activities would be managed in accordance with CTDEEP requirements (APP-14);
g. The construction yard at the bridge site would be used for initial off-loading of dredged material. The excavated material would be managed per DEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and Transfer) guidelines, including placement into watertight trucks for transport to the DOT-designated Waste Stockpile Areas (WSAs) for testing and management prior to off-site disposal (APP-14.2.3; APP-30.3; APP-35.3).

5. *Site 5*

57. Site 5 is south of the Route 136/Stroffolino Bridge, directly waterward of 68 and 90 Water Street (Parcel 2/84/19 (and Parcel 2/84/33), and west of the navigation channel, and is less than 0.2 miles from the bridge location. Site 5 also includes 70 Water Street (Parcel 2/84/33). Work at Site 5 includes activities waterward of the Coastal Jurisdiction Line (CJL), but landward of (outside) the navigation channel. Three construction activities (CAs) are proposed to occur at Site 5. DEEP-20.

58. Marine Staging Yard Improvements, Construction Activity (CA4), includes construction of permanent improvements (bulkhead) to properties on the west bank of the river south of the Stroffolino Bridge (68 and 90 Water Street); development of a construction staging and storage yard (68, 70 and 90 Water Street, Parcels 2/84/19, 2/84/63, and 2/84/33), including demolition and removal of an existing warehouse at 70 Water Street (Parcel 2/84/63). APP-1.30, Permit Plates CA4-1 through CA4-4; APP-30.3.

a. Resource impacts due to CA4 at Site 5 include: 1,900 SF permanent impacts to Vegetated Tidal Wetland, 100 SF temporary impacts and 8,100 SF permanent impacts to the Intertidal Zone, and 200 SF temporary impacts and 9,900 SF permanent impacts below the limits of the Coastal Jurisdiction Line;
b. Time of year restrictions for CA4 at Site 5 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;

ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
iii. A soft start required between March 16th and October 31st and would be used at the beginning of each shift that requires pile driving and extraction activities and following cessation of activity for a period of 30 minutes or longer. APP-1.1; APP-1.2, p. 26.

c. CA4 provides a Project staging location close to the existing bridge for land-based storage of materials and equipment. Landward of the CJL, ground improvements at 90 Water Street would consist of 12-inches of crushed stone overlaying geotextile fabric. Waterward of the CJL by approximately 20 feet, existing piles in the waterway, including some from abandoned and deteriorated docks, would be removed or cut off 2-feet below the mudline;
d. To provide flexibility for potential marine access during project construction, DOT's Application requests authorization for the construction of a new bulkhead waterward of 68 and 90 Water Street. Construction of a new bulkhead requires work above and below the CJL, and is described in detail in APP-1.2, p. 29-30;
e. Resource impacts due to CA4 at Site 5 reflect the worst-case impacts, but DOT anticipates that construction of the bulkhead and dredging to Elevation -11.00 NAVD88 would not be required.

59. Dredging Operations, Construction Activity 17 (CA17), at Site 5 includes new dredging to facilitate vessel access to and facilitate continuous use of the reconfigured dock during low tide periods. APP-1.2, p.28-30; APP-1.43, Permit Plates CA17-5, CA17-7; APP-12, Material Management-Related Specifications and Notices to Contractor; APP-14, LWRD Dredging Consultation Form and Attachments; C. Brown Test., starting at 35:15.

a. Resource impacts due to CA17 at Site 5 include 21,600 SF or 6,400 CY removal of dredged material, net 6,400 CY. Resource impacts due to construction of the bulkhead and required dredging to Elevation -11.0 NAVD88 reflect the worse-case impacts to project resources;
b. Time of year restrictions for CA17 at Site 5 include:
    i. Dredging would be conducted within a turbidity curtain between December 1st and January 31st;
    ii. Dredging from February 1st through November 30th would be conducted within a marine enclosure enclosed by a turbidity curtain.
c. Sediment spoils would be dewatered/decanted on barges or work platforms and the dewatered wastewater would be treated as necessary prior to being discharged back into the river;
d. Excavated material would be managed per DEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and transfer) guidelines, including placement into watertight trucks for transport to the Waste Stockpile Areas (WSAs) for testing and management prior to off-site disposal (APP-14.2.3; APP-30.3; APP-35.3).

60. Temporary Storage Dock Construction and Removal, Construction Activity 4 (CA4), includes construction of temporary passenger loading and unloading facilities and dock facilities for the Maritime Aquarium and Sheffield Island Lighthouse Ferry vessels, including removal of these temporary facilities following Project completion. APP-1.2, p.30; APP-1.30, Permit Plates CA4-1 through CA4-4; APP-30.3.

a. Time of year restrictions for CA4 at Site 5 include:
    i. All pile driving and extraction (including sheet piles) activities conducted between April 1st and June 30th would only occur between one hour after sunrise to one hour before sunset;
    ii. No unconfined turbidity producing activities would be allowed between February 1st and September 30th;
    iii. A soft start required between March 16th and October 31st and would be used at the beginning of each shift that requires pile driving and extraction activities and following cessation of activity for a period of 30 minutes or longer. APP-1.1; APP-1.2, p. 26.
b. Following the dredging, temporary pipe piles, dock and two gangways would be installed. At completion of the Project, the site would be restored. Impacts due to the installation of the temporary pilings are described in Marine Staging Improvements, CA4 at Site 5.

6. *Site 6*

61. Site 6 consists of six (6) individual wetland mitigation sites in various locations along both riverbanks near the bridge. A portion of Site 6 would overlap with Site 3. One construction activity (CA), Wetland Mitigation, is proposed to occur at Site 6. APP-1.2, p. 31-36; APP-1.2, Table of Compensatory Wetland Mitigation Sites, p. 32; APP-1.42, Wetland Mitigation Permit Plates CA16-1 through 16-20; APP-2.0, Wetland Delineation Report; APP-2.1, Technical Memorandum in Support of the Tidal Wetlands and Intertidal Mitigation Strategy Approach, June 2018; APP-43, Wetland Mitigation Site Photos and Images; APP-48, USACE HEC-RAS User's Manual; APP-49, USACE 1987 Wetland Delineation Manual; APP-50, USACE 2012 Regional Supplemental to the USACE Wetland Delineation Manual; APP-30.3; DEEP-20; APP-1.49-1.54.

62. Wetland Mitigation, Construction Activity 16 (CA16), at Site 6 includes wetland restoration at six (6) areas in the vicinity of Walk Bridge, consisting of treatment and removal of invasive species, restoration of shoreline and salt marsh, including access requirements. APP-34.3; A. Davis Test., starting at 02:55:03; APP-5; APP-6; APP-6.1; APP-6.2.

a. Mitigation Areas 1, 3 & 6B, Invasive Species (Phragmites) Treatment;
b. Mitigation Area 2 – Phragmites Removal and Salt Marsh Restoration;
c. Mitigation Areas 4 & 5 – Invasive Species (Phragmites) Treatment and Shrub Planting;
d. Mitigation Area 6 – Riprap Removal and Salt Marsh Restoration.

63. Compensatory mitigation for permanent impacts to the vegetated tidal wetlands and intertidal mudflats due to the Project would be in the form of mitigating tidal wetland areas within the intertidal zone. The loss of vegetated tidal wetlands and intertidal

mudflats would be mitigated through treatment and removal of invasive common reed (Phragmites australis) in existing tidal wetlands, the restoration of degraded vegetated tidal wetlands dominated by Phragmites, and by restoration of a low-functioning intertidal flat previously impacted by riprap placement. K. Slattery Test., starting at 03:24:42. All tidal wetland mitigation areas are within the intertidal zone of the Norwalk River of adjacent to the High Tide Line. APP-1.2, p. 31.

64. Prior to work start, a turbidity curtain would be installed around the work area. Work would be timed to occur during periods of low tide to avoid increasing turbidity in the river. Vegetated tidal wetland mitigation activities would include the following (APP-1.2, pp. 31-36):

a. Invasive Phragmites Treatment (Mitigation Areas 1, 3, 6B);
b. Invasive Phragmites treatment with subsequent shrub planting (Mitigation Areas 4 & 5);
c. Tidal salt marsh restoration through invasive Phragmites removal, living shoreline riprap sill installation, grading and topsoil placement, salt marsh restoration through vegetation planting, and establishment of a northern diamondback terrapin (*Malaclemys terrapin*) habitat area in the buffer above the high tide (Mitigation Area 2);
d. Excavation and removal of in-water rock riprap, living shoreline riprap sill installation from reused existing riprap, regrading and topsoil placement, and salt marsh restoration through vegetation planting (Mitigation Area 6). A portion of Area 6A would be replanted vegetation as mitigation for shading under a construction trestle.

65. The proposed activities would have permanent and temporary impacts to existing tidal wetland vegetation and as such, the Draft License would require wetland mitigation (APP-5, Tidal Wetland Mitigation Strategy Memorandum – August 2017; APP-6, Wetlands Mitigation Pre-application Coordination). The Application proposes to conduct wetland mitigation in several areas both north and south of the existing bridge and on both the western and eastern banks of the Norwalk River. This proposed mitigation would result in approximately 61,990 SF of tidal wetland restoration and creation (APP-1.49, Tidal Wetland Creation; APP-1.51, Wetland Plantings), of which approximately 30% consists of newly created tidal wetland and the remaining 70% consisting of restoring existing impacted wetlands. Additionally, approximately 11,870 SF of adjacent upland would be restored. DEEP 18-A; DEEP-26; M. Grzywinski, Test., 06:30:19; APP-34.3; A. Davis Test., starting at 02:55:21.

66. DOT's Office of Environmental Planning (OEP), in close coordination with DEEP and local stakeholders from the City of Norwalk and the Maritime Aquarium, selected and developed the wetland mitigation sites. APP-34.3; A. Davis Test., starting at 02:55:39; K. Slattery Test., starting at 03:26:03.

67. The Applicant proposes and the Draft License requires wetlands mitigation for the unavoidable permanent impacts to tidal wetlands resulting from the bridge replacement. APP-1.2; APP-1.4; DEEP-18A; DEPP-20; DEEP-26.

68. Wetlands mitigation is a specific condition of the Draft License, which, if approved, would require the Applicant to remove invasive Phragmites and perform wetland creation in accordance with CT DOT Specification on Control and Removal of Invasive Vegetation. APP-1.53, Control and Removal of Invasive Vegetation; APP-1.54, Notice to Contractor (NTC) Invasive Plant Species, Specification on Tidal Wetland Creation, and Specification on Wetland Planting; APP-3, Identification of Invasive Species – Memorandum; APP-4, Sub-Aquatic Vegetation Research/Findings – Memorandum; APP-32.3.

69. In addition, the Draft License requires the Applicant to (1) remove any debris such as garbage, floatables, or excessive decayed plant material from the mitigation areas during the duration of the construction activities, (2) replace dead or missing plants up to one-year after their planting which have not already been compensated for by a suitable volunteer species, and (3) repair or reestablish stone sills. DEEP-20; M. Grzywinski Test., 6:30:06.

70. The wetland mitigation sites also would have a USACE permit condition for monitoring and evaluation of success standards. A. Davis Test., starting at 03:12:35. These sites would be monitored by DOT OEP in accordance with DEEP and USACE requirements, and would include assessments of planting success, presence of invasive species, natural establishment of native species, and any concerns regarding the success of the mitigation efforts. Monitoring reports would be required after each assessment and would include recommendations for corrective actions if the mitigation areas do not make acceptable progress within the first five years. APP-1.2, p.33.

71. All wetland mitigation areas would be constructed and treated for invasive species during the first growing season of bridge construction, which will allow for any corrections to be made during the 4-5 years (approx.) of active construction. APP-1.2, p. 33.

7. *Sites 7, 8, 9*

72. Sites 7, 8, and 9 are mooring locations for Project construction vessels. The mooring locations are outside the limits of the federal navigation channel for the Norwalk River. One construction activity, barge mooring (CA11), is proposed to occur at each site. DEEP-20.

73. Site 7 is a barge mooring location for small work boats south of the Stroffolino Bridge on the eastern shore of the Norwalk River. Site 7 is located south of the Stroffolino Bridge, on the eastern shore of the Norwalk River along the west side of Veteran's Memorial Park. APP-1.2, p.36-37; APP-1.37, Permit Plates CA11-4, CA11-5; APP-30.3; DEEP-20.

a. Resource impacts due to CA11 at Site 7 include: 100 SF permanent impacts below the limits of the Coastal Jurisdiction Line.

74. Site 8 is a barge mooring location for construction barges east of Norwalk Harbor. Site 8 is located within the south anchorage basin east of the Norwalk Harbor navigation channel. APP-1.37, Permit Plates CA11-3, CA11-5; APP-30.3; DEEP-20.

a. Resource impacts due to CA11 at Site 8 include: 300 SF permanent impacts below the limits of the Coastal Jurisdiction Line.

75. Site 9 is a barge mooring location for construction barges in Long Island Sound. Site 9 is located in Long Island South, just west of Sheffield Island. APP-1.37, Permit Plates CA11-2, CA11-5; DEEP-20.

a. Resource impacts due to CA11 at Site 9 include: 400 SF permanent impacts below the limits of the Coastal Jurisdiction Line.

76. Typical barge widths range from 30 feet to 54 feet, and typical barge lengths range from 72 feet to 280 feet (APP-1.20, Vessel Berthing Plan; GEN8-10). Each mooring would consist of a 60-inch diameter mooring buoy and a 5-ton anchor. No dredging would be required for installation of the moorings. The anchors would be lowered to the streambed or seabed from barges and properly secured to prevent migration. APP-1.2, p.36-37.

77. Temporary aids to navigation would be installed at each mooring location in coordination with the U.S. Coast Guard. APP-1.2, p. 37; DEEP-20, p.7.

78. In response to a request from the Norwalk Shellfish Commission (NSC), DOT adjusted the location of vessel mooring sites to avoid existing shellfish beds. APP-30-3; APP-22.1; C. Brown Test., starting at 01:25:14. None of the proposed construction boats/barges would be moored in areas where there is a potential for grounding. APP-1.2, p.37.

8. *Site 10*

79. Site 10 is located approximately 2.1 nautical miles south of Walk Bridge on the southern portion of Manresa Island and consists of approximately 4.7 acres on Parcel 5/86/1, the site of the de-commissioned NRG Energy power plant. The site is an existing industrial site with an existing slip and bulkhead. J. Hanifin Test., starting at 02:29:37. Work at Site 10 includes barge mooring waterward of the Coastal Jurisdiction Line (CJL), but landward and outside of the navigation channel and in the 100-year floodplain. One Construction Activity (CA) is proposed to occur at Site 10. APP-1.2; APP-4.19; APP-18.2; APP-30.3; DEEP-20.

80. Manresa Island Staging and Storage Yard Improvements, Construction Activity 19 (CA19), at Site 10 includes use of an existing dock at Parcel 5/86/1 for the assembly of the replacement bridge lift spans (APP-18.4, Assessment of Lift Span Assembly Locations) and transfer of materials to and from the existing bridge site via barge, including berthing of construction and material barges and safety vessels as needed. APP-1.2; APP-1.45; APP-4.19; APP-18.2; APP-30.3; DEEP-20.

a. Site 10 also would include staging and storage activities, described in Floodplain Impact Area FP-11. No dredging would be required for use of

the existing dock/wharf area (APP-1.2, p. 38). Site 10 activities would not impact existing resources below the CJL (APP-1.2, p. 38);

b. Prior to work start, a layer of geotextile fabric covered with six inches of crushed stone would be placed over the entire surface area of the Staging and Storage Yard, to provide a suitable storage surface and to provide a layer of separation from the Department's activities and the underlying soil in this existing Areas of Concern (AOC) associated with the de-commissioned energy plant. (APP-1.45; APP-30.3; APP-35.3; C. Brown Test., starting at 1:41:09; A. Fox Test., starting at 03:53:24.);
c. Site 10 would be used for approximately 60 months (APP 1.2 p. 38);
d. The entire Storage and Staging Yard would be surrounded with temporary construction fencing to segregate the site from pre-existing uses. APP-30.3.
e. Upon Project completion, DOT would restore all properties with construction easements, including Site 10, to pre-construction conditions or as coordinated with the property owner(s). APP-30.3.
f. Time of year restrictions include:
    i. No work would be conducted between April 1st and July 31st within 400 feet of any active peregrine falcon (*Falco peregrinus*) nest (APP-1.1; APP-13.6; APP-34.3; A. Davis., starting at 02:53:36);
    ii. Use of Manresa Island Staging and Storage Yard would be started before April 15th or after August 1st to allow for the nesting ospreys (*Pandion haliaetus*), to acclimate to this new activity within their nesting areas (APP-1.1; APP-13.6; APP-34.3; A. Davis., starting at 02:52:47); and
    . Special precautions would be implemented during the Northern diamondback terrapin's (*Malaclemys t. terrapin*), nesting season from April 1st through October 31st, in accordance with DOT Section 1.10 Environmental Compliance (APP-13.6). APP-1.1; APP-34.3. A. Davis., starting at 02:53:10.
g. DOT also would employ the following voluntary restrictions at Site 10 (APP-2.2, DOT OEP Site Walk of Manresa Island, March 2020, and Manresa Island Resource Coordination):
    . DOT would not perform activities that create the worst-case construction noise levels outside of 8:00 a.m. to 5:00 p.m., Monday through Saturday (R. Bertoli Test., starting at 05:09:18; APP-58);
    i. DOT would enact an 8:00 a.m. to 5:00 p.m., Monday through Saturday schedule for all operations at Site 10 (R. Bertoli Test., starting at 05:09:18; M. Mendick Test., starting at 05:59:42);
    ii. DOT's contractor would be proactive in communicating with vendors and subcontractors regarding all truck operations at Site 10 (M. Mendick Test., starting at 06:03:59);
    iii. DOT would post signs for "no Jake Braking" to ensure trucks are not creating excessive noise (R. Bertoli Test., starting at 05:02:15).

81. The staging and storage yard at Site 10, Manresa Island, would consist of two general areas: an approximate 120,000 SF work area and an approximate 87,500 SF

construction equipment and material laydown area. The work area would be used for pre-assembly of structural components (i.e. lift tower) and full assembly of both lift span trusses (south and north trusses) before float-in to the bridge site. The laydown area would be used for storage of construction materials for trestles (pipe piles, girders, etc.) and sheet piles for marine enclosures (if space is available). APP-1.2, p. 47; APP-41, Marine Staging Yard Photos.

82. The existing dock at Site 10 would be used for the temporary berthing of construction vessels and barges, including a lift span assembly barge, work barge, and various material barges, and berthing of safety boat vessels(s) and emergency rescue operations that are associated with construction of the lift spans. The barges would be anchored by spud piles (APP 1.2 p. 38).

83. The staging and storage yard at Site 10, Manresa Island was originally planned as a temporary storage and transfer site for components from the demolition of the existing bridge and Project site, however after receiving feedback from community stakeholders, the Applicant selected alternate locations to store and transfer the existing bridge materials and eliminated Manresa Island as a temporary storage and transfer site. No materials from the existing bridge would be stored or transferred on Manresa Island. APP-58.

a. Component handling would include off-loading and transfer of material from barges to trucks for off-site disposal. The barges would be anchored by spud piles (APP-30.3);
b. No dredged material would be transported to or stored on the site (APP-1.2, p. 47; APP-1.47, Disposal of Debris; APP-12.1 through APP-12.21, Material Management- Related Specifications & Activities);
c. Flood-proof containers would be used on the site for secure storage and to provide weather protection. APP-15.6; APP-30.3; S. Flormann Test., starting at 04:15:56.

E. 100-Year Floodplain Areas

84. In addition to the construction elements in Sites 1 through 10, the Project would include activities in the 100-year floodplain. Project construction activity impacts to the 100-year floodplain have been calculated for ten floodplain areas, identified as FP-2 through FP-11. APP-1.18, Flood Zone Maps; APP-1.26, Floodplain Impacts. Temporary floodplain impacts are construction impacts less than 24 months duration. Permanent floodplain impacts include temporary impacts of 24 or more months duration. APP-1.2, p. 39-47; APP-15.0 through APP-15.7, Flood Management Certification Application Form.

85. On May 20, 2021, DOT submitted the final revised Flood Management Certification Application Form to DEEP. APP-15.0 through APP-15.7.

86. Floodplain Impact Area FP-2 consists of 700 SF temporary and 19,500 permanent impacts to the 100-year floodplain associated with Wetland Mitigation Area 2, located northwest of the bridge site and south of Oyster Shell Park. Activities in FP-2

include wetland restoration activities along the west bank of the Norwalk River, in the river bend north of the bridge. APP-1.2, p. 39, 41 (Figure 4 – Project Floodplain Areas), 43.

87. Floodplain Impact Area FP-3 consists of 10,500 SF permanent impacts to the 100-year floodplain associated with Wetland Mitigation Area 6, located along the eastern bank of the Norwalk River fronting the Waste Water Treatment Facility. Activities in FP-3 include wetland restoration activities along the east bank of the Norwalk River, north of the bridge. APP-1.2, p. 39, 41 (Figure 4 – Project Floodplain Areas), 43.

88. Floodplain Impact Area FP-4 consists of 11,800 SF temporary and 200,500 SF permanent impacts to the 100-year floodplain associated with the west approach to east of the Navigation Channel. Activities include all construction activities identified in Site 1 (West of the Navigation Channel), Site 2 (Navigation Channel), and Site 3 (East of Navigation Channel). Additional floodplain impacts to the west include installation of MNR and bridge cabling receiving shaft; repaving of North Water Street; removal of existing Pier 1; construction of new Pier 1; development of MNR duct bank and vaults; and portions of the marine enclosure required for dredging in the northern portion of Site 4. Additional floodplain impacts to the east include construction of pedestrian/bicycle trail north of the bridge, trail and construction access road south of the railroad, and MNR duct bank; use of construction yard at 1 Goldstein Place (Parcel 3/1/25); and northern limit of Wetland Mitigation Area 6. APP-1.2, p. 39, 41 (Figure 4 – Project Floodplain Areas), 43-44; APP-38.3; J. Hanifin Test., starting at 02:31:30.

89. Floodplain Impact Area FP-5 consists of 61,400 SF permanent impacts to the 100-year floodplain associated with the east approach. Activities include installation of MNR and bridge cabling launching shaft; construction of pedestrian/bicycle trail and construction access road south of the railroad; development of MNR duct bank; and use of construction yards east and west of Goldstein Place. APP-1.2, p. 39, 41 (Figure 4 – Project Floodplain Areas), p. 44.

90. Floodplain Impact Area FP-6 consists of 57,400 SF temporary and 33,400 SF permanent impacts to the 100-year floodplain associated with the vessel dock area to Goldstein Place. Activities include all construction activities identified in Site 4 (Vessel Dock Relocation). Additional floodplain impacts to the west include repaving of parking lot (4 Water Street); installation of accessible gangway, and maintenance dredging in the navigation channel. Additional floodplain impacts to the east include use of construction yards east and west of Goldstein Place (multiple parcels); and repaving of Goldstein Place and Route 136. APP-1.2, p. 39, 41 (Figure 4 – Project Floodplain Areas), 45; APP-44, Vessel Dock Location Photos.

91. Floodplain Impact Area FP-7 consists of 200 SF temporary and 90,200 SF permanent impacts to the 100-year floodplain associated with the marine staging yard. Activities include all construction activities identified in Site 5 (Marine Staging Yard); and use of temporary construction yard for storage of construction equipment and material at 68, 70, and 90 Water Street. APP-1.2, p. 40, 41 (Figure 4 – Project Floodplain Areas), 46.

92. Floodplain Impact Area FP-8 consists of 100 SF permanent impacts to the 100-year floodplain associated with Site 7. Activities include all construction activities identified in Site 7 (Barge Mooring). APP-1.2, p. 40, 41 (Figure 4 – Project Floodplain Areas), 46.

93. Floodplain Impact Area FP-9 consists of 300 SF permanent impacts to the 100-year floodplain associated with Site 8. Activities include all construction activities identified in Site 8 (Barge Mooring). APP-1.2, p. 40, 41 (Figure 5 – Project Floodplain Areas), 46.

94. Floodplain Impact Area FP-10 consists of 400 SF permanent impacts to the 100-year floodplain associated with Site 9. Activities include all construction activities identified in Site 9 (Barge Mooring). APP-1.2, p. 40, 41 (Figure 5 – Project Floodplain Areas), 46.

95. Floodplain Impact Area FP-11 consists of 168,700 SF permanent impacts to the 100-year floodplain associated with Site 10, including the development of an approximate 4.7-acre staging and storage yard and the use of the existing docking facilities on Manresa Island. Activities include all construction activities identified in Site 10 (Manresa Island Staging and Storage Yard); development of and use of staging and storage yard for lift span construction; development of and use of construction staging and temporary storage activities. APP-1.2, p. 40, 41 (Figure 5 – Project Floodplain Areas), 47; APP-41, Marine Staging Yard Photos.

96. The Project was designed to minimize and avoid encroachment of its elements and construction activities into the tidally controlled 100-year and 500-year floodplains, shown in APP-15.7, FEMA Flood Insurance Rate Maps. APP-31.3; S. Flormann Test., starting at 04:08:42; APP-16.

97. The Norwalk River does not have a FEMA regulatory floodway within the project limits. APP-31.3; S. Flormann Test., starting at 04:07:03.

98. Due to the tidal nature of the Norwalk River, the Project would not adversely affect the hydrologic or hydraulic properties of the Norwalk River. Minor temporary increases in water surface elevations (WSELs) were calculated for the worst-case construction stages, including the placement of trestles and marine enclosures, but would not increase water levels beyond the top of stream bank or impact any buildings, parking lots or other developed areas as summarized in DOT's Walk Bridge Hydraulic Design Report. APP-16, Walk Bridge Hydraulic Design Report; APP-31.3; S. Flormann Test., starting at 04:08:42. As such, there would be no permanent impacts or increases to WSELs. S. Flormann Test., starting at 04:09:50.

99. Due to the tidal nature of the Long Island Sound, the Project would not adversely affect the hydrologic or hydraulic properties of the Sound or the hydrodynamic forces. APP-31.3, S. Flormann Written Testimony.

100. The Project would result in the permanent net placement of approximately 15,700 CY of fill materials due to bridge structures and long-term construction staging areas (APP-15.4, FMC Plan Sheets and Drawings). Long-term construction staging areas were conservatively included as permanent impacts, but DOT would remove the construction staging areas upon Project completion. APP-31.3; S. Flormann Test., starting at 04:11:01.

101. DOT would implement permanent and temporary features of the stormwater management system that would improve the quality of runoff prior to reaching the Norwalk River. APP-31.3; S. Flormann Test., starting at 04:18:13.

102. Prior to work start at Site 10, a layer of geotextile fabric covered with six inches of crushed stone that would be placed over the entire surface area of the staging and storage yard, to provide a suitable storage surface and to provide a layer of separation from the existing Areas of Concern (AOCs) associated with the de-commissioned energy plant. APP-1.2, p. 47; APP-30.3; C. Brown Test., starting at 01:25:14. This layer of separation from the existing AOCs would provide a betterment in the event of flooding because it is considered a less erodible surface. A. Fox Test., starting at 03:56:40.

103. In the material laydown area at Site 10, a polyethylene covering would be placed directly beneath existing bridge components with potentially hazardous materials (e.g., lead paint creosote) as an additional layer of protection against contact with the ground surface. APP-1.2, p. 47; APP-30.3; C. Brown Test., starting at 01:25:14. Investigations were performed to identify the extent of hazardous building materials (asbestos, lead, light ballasts, etc.) in the Walk Bridge Replacement Project and to inform on the development of the Best Management Practices. Licensed inspector-performed inspections of each of the components of the Project for Hazardous Materials, including lead-based paint, asbestos, and ballasts and batteries to ensure that they would be managed in accordance with applicable codes and regulations by Consumer Protection and Public Health, and to ensure disposal at a licensed disposal facility. APP-12.3; APP-12.4; APP-12.8; APP-12.14; APP- 35.3; A. Fox Test., starting at 03:47:35. The Asbestos Abatement, Lead Compliance for Miscellaneous Exterior Tasks, Handling and Disposal of Regulated Items, and Disposal of Buildings construction specifications above are included in the Record. A. Fox Test., starting at 03:49:00; APP-12.8; APP-12.13; APP-12.14; APP-12.15.

104. The staging and storage yard at Site 10 also would incorporate flood proofing. Materials and equipment located within the 100-year floodplain would be properly secured or removed, if flooding or coastal storms are anticipated. Flood-proof containers would be used on the site for secure storage and to provide weather protection, and critical activities, such as petroleum fuels, oil tanks for site generators, and any other construction related hazardous or flammable materials, would be stored within double-walled and flood-proof containers, if located within the 500-year floodplain. In the event of a forecasted storm, containerized materials would be moved off-site. APP-13.5; APP-

15.6, Flood Contingency Plan; APP-30.3; S. Flormann Test., starting at 04:14:44; APP-1.2, p. 47; APP-1.4; APP-13.5; APP-13.6; APP-15.

105. The floodplain contingency plan would be enforced throughout the Project and would be enforced by DOT's District Staff, Office of Environmental Compliance inspectors, and the contractor's environmental compliance officer. S. Flormann Test., starting at 04:16:26; App-1.4; APP-13.5; APP-13.6; APP-15.

F. Water Quality

106. Project construction is designed to minimize impacts to the navigation channel. C. Brown Test., starting at 01:09:52; APP-13.6. See generally APP-1.2.

107. The Norwalk Harbor Management Plan does not have any specific conditions related to water quality regarding the proposed Project. M. Grzywinski Test., 6:19:35

108. Turbidity curtains and marine enclosures would be deployed to prevent sediment-producing activities during Project construction. APP-1.2; APP-1.48; APP-13.6; C. Brown Test., starting at 00:57:20.

109. Hay bales would be used along slopes and swales to control soil erosion, double rows of silt fencing would be placed near environmentally sensitive areas, such as wetlands and within the required buffer zones, and inlet filters would be placed on all catch basins within the project limits. APP-31.3. S. Flormann Test., starting at 04:20:17.

110. Any debris that inadvertently enters the waterway would be immediately removed. C. Brown Test., starting at 00:43:16.

111. The Applicant would use mitigation methods to control and abate siltation, sedimentation and pollution of all waters, including but not limited to under-ground water systems, inland wetlands, and tidal wetlands, and coastal or navigable waters. APP-13.6.

112. The Applicant would not allow barges or equipment to rest on the substrate. Any such barge would be required to move to deeper waters during periods of low water in the area of the proposed activity. C. Brown Test., starting at 00:42:25; APP-30.3; APP-1.2.

113. DOT would install and maintain the sedimentation and erosion controls and the debris shield in optimal condition during the Project. APP-30.3; APP-13.6.

114. Tidal wetlands would not be impacted at Manresa Island. A. Davis Test., starting at 03:10:16.

115. The Applicant performed baseline water quality monitoring testing at three (3) different sites: (1) Walk Bridge, (2) Stroffolino Bridge, and the (3) City of Norwalk Police

Dock. APP-11; APP-35.3. A. Fox Test., 03:49:41. This testing indicated that naturally occurring turbidity levels naturally fluctuate in the Norwalk River. “Action Level Exceedances” referenced in the APP-13.6, Section 1.10 (Environmental Compliance) were developed based upon pre-construction water quality monitoring that was conducted for one year in the vicinity of the Walk Bridge, and are defined as any time the in-water work monitoring location indicates that the current monitoring reading is higher than the previous 15-minute reading by (1) Five (5) NTUs when background turbidity is 0-15 NTUs; (2) 35% increase when background turbidity is greater than 15 NTUs. APP-11; APP-13.6; APP-35.3; A. Fox Test., starting at 03:51:52.

116. Based on testing results from a July2018 subsurface site investigation report (APP-25 through APP-25.25, Subsurface and Surface Site Investigation Reports) identified both the wetland mitigation areas and the Norwalk River in the vicinity of the existing bridge as preliminary Areas of Environmental Concern. Any sediment removed from these areas would be classified as contaminated material and handled as controlled material. APP-1.5, p.7.

117. The Project includes specifications for the proper management of controlled and contaminated materials, including removal, handling, transporting, and reuse on site or disposal off-site, as well as specifications for establishment of appropriate worker health and safety protocols (APP-12.6, Environmental Health and Safety). Excavated material would be managed in accordance with the DEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and Transfer). APP-1.5, p.7; APP-14.2.3, APP-14.2.5; APP-51.

118. Excavated materials from upland locations, such as the railroad embankment, may be reused on the Project site. Material removed from these locations would be transported to DOT-designated upland Reuse Stockpile Areas (RSAs) for testing. The RSAs would be used to stockpile excavated material and blend stone (if needed) until reuse of the material on the Project site. APP-30.3.

119. During construction, DOT would conduct water-quality monitoring (APP-12.16, Water Monitoring Equipment) for turbidity, specific conductivity, salinity, dissolved oxygen, pH, temperature, and water level (at one location) whenever in-water work is being performed, as directed by DOT Section 1.10 Environmental Compliance of the Project Specifications. APP-1.5, p. 7; APP-13.6, APP-35.3. DOT would conduct such testing within 100-feet of a marine enclosure/turbidity curtain, and within 200-feet of a turbidity curtain during dredging activities. APP-13.6; A. Fox Test., starting at 03:49:41. This information would be shared with the NHMC and NSC on a monthly basis. APP-2.1.

120. The water quality monitoring stations would record water quality parameters to measure effectiveness of best management practices. A. Fox Test., starting at 03:50:24.

121. DOT would utilize action levels that rely on changes in turbidity from an upstream source (based upon flow direction) to trigger the appropriate response actions. APP-35.3.

122. The Sediment Handling specification sets forth criteria for the safe handling and transport of all sediment excavated from Sediment Areas of Environmental Concern (SEDAOECs) to the Sediment Staging Area (SSA) for dewatering prior to transport to the Waste Stockpile Area (WSA) for off-site disposal. The contractor is required to develop proposed best management practices (BMPs) to minimize releases of contaminated sediment and wastewater during excavation activities such as schematics of the proposed swing path, system to collect and contain the wastewater on the barge, watertight containers, location of berms, and piping and probable locations of temporary containment tanks. Minimum required BMPs include: health & safety; transfer in sealed trucks or roll-offs directly to the SSA; diversion of run-on away from storage; temporary cover; material tracking & documentation; stabilization; dust control; erosion & sediment control; and dewatering. The contractor must also develop a contingency plan in the event of spillage or a release. APP-14.2.3; APP-35.3. A. Fox Test., starting at 03:42:32.

123. DOT would not conduct any tree or vegetative cutting and thus would not create an erodible surface that could impact water quality. A. Davis Test., starting at 03:03:37.

124. Disturbance to the benthic substrate at the bridge would be minor, and any bottom fauna that is displaced by dredging activity would repopulate. APP-1.11, p. 5; APP-1.4.

125. DOT would implement a stormwater management system (APP-17, Walk Bridge Drainage Report; APP-46, DOT Drainage Manual) which would improve the quality of runoff prior to reaching the Norwalk River. APP-31.3; S. Flormann Test., starting at 04:18:56; APP-17.

126. DOT would prepare a Stormwater Pollution Control Plan (SWPCP) for the Walk Bridge Program, which includes Walk Bridge and four nearby New Haven Line improvement projects. The SWPCP identifies soil erosion and control (SESC) measures to be installed prior to construction activities that would result in soil disturbance and would be consistent with DEEP's 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. The SWPCP also identifies post-construction stormwater management, including post-construction performance standards. The General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (Construction Stormwater General Permit) to be filed with DEEP would include these measures. APP-1.5, p.9.

127. A stormwater treatment system consisting of a hydrodynamic separator and underground infiltration basin at the southern abutment of the proposed bridge would capture and treat sediments and oils collected from the water quality volume (first one (1)

inch of rainfall) by the Walk Bridge drainage system along the southern side of the Norwalk River. APP-31.3; S. Flormann Test., starting at 04:18:49.

128. A hydrodynamic separator, located within the reconstructed DOT Office of Rails storage yard at the northeast quadrant of the Walk Bridge, would capture sediments and oils collected from the parking lot, driveway to South Smith Street, and parts of the reconstructed rail beds prior to discharging into the Norwalk River. S. Flormann Test., starting at 04:19:04.

129. DOT would remove a total of 2.2 acres of pavement which would reduce the total suspended solids and contributing impervious drainage area to the Norwalk River and establish more natural surfaces around the river. S. Flormann Test., starting at 04:18:31.

130. Preformed scour holes with riprap-lining would be used at the proposed and reconstructed stormwater outfalls for outlet protection. APP-31.3, S. Flormann Written Testimony.

131. Wastewater generated during dewatering activities would be managed in accordance with DEEP guidelines. APP-1.5, p.7.

132. For areas of the Project with contaminated groundwater and for dewatering activities of sediment, the Dewatering specification was developed to provide performance criteria for associated activities. APP-12.10; APP-35.3.

133. Water quality within the Norwalk River would improve due to the construction of wetland mitigation parcels. APP-1.5, p.7.

G. Water Circulation

134. No in-water work would be completed at the Manresa Island Staging and Storage Yard. APP-2.2.

135. The Applicant would remove the pivot pier of the existing bridge, which would result in a wider navigation channel. C. Brown Test., starting at 00:33:54; 00:37:57; APP-1.5, p. 6; APP-40, Existing and Proposed Bridge Photos and Images.

136. Dredging would slow erosive flow velocities. C. Brown Test., starting at 01:02:41; APP-1.2; APP-1.43.

137. The replacement bridge would be built upon two (2) piers supported by six piles each which would allow water to flow between the individual piles. APP-40, pp. 8-9; APP-45; C. Brown Test., starting at 00:30:53.

138. DOT's hydraulic modeling demonstrates that the Project would not adversely impact the 100-year floodplain. The proposed bridge exceeds the Applicant’s

Drainage Manual's under-clearance requirement of two (2) feet for large tidal structures, as it provides over 15-feet of under-clearance. APP-1.5, p.8; APP-16; APP-46.

139. DOT's hydraulic modeling demonstrates that the Project would not adversely impact the 500-year floodplain. The proposed bridge would provide over 15-feet of under-clearance during the 500-year storm event. APP-1.5, p.8; APP-16.

140. Because the Project is expected to take at least three (3) years to complete, the Applicant's Drainage Manual recommends the temporary conditions be designed for the 25-year storm event. The Project's first temporary condition (Temp 1) consists of the existing bridge, temporary work platforms, and the marine enclosures required to construct the lift piers. The second temporary condition (Temp 2) includes the existing pivot pier, existing rest piers, proposed bridge (foundation and superstructure), temporary work platforms and marine enclosures required to remove the swing span pier and rest piers. The 25-year WSELs for both temporary conditions are contained within the Norwalk River's main channel. Neither of the temporary conditions would result in adverse flooding of any commercial, residential, or industrial structures upstream of the Project; nor would they impact roadways or parking lots during the 25-year temporary design event. APP-1.5, p.8; APP-16; APP-46; APP-51.

141. Hydraulic modeling is not required for the Project's construction staging and storage yards at Manresa Island. While there would be fill within the FEMA floodplain at the construction and staging parcels, the parcels at the bridge site are located within the tidal floodplain with no riverine (fluvial) impacts. APP-1.5, pp.8-9.

142. The volume of fill at the sites is not substantial enough to result in adverse impacts to the depth, velocity, or flow patterns during a storm surge event. APP-1.5, p.9.

143. DOT would incorporate a total of six (6) wetland mitigation sites, which were developed in consultation with DEEP. C. Brown Test., starting at 01:21:25; APP-1.2.

144. The wetland mitigation efforts would provide long-term benefits including an equal or higher level of functional values in existing wetland areas, and improved quality of the waterborne resources which would provide enhanced suitable habitats for several fish and wildlife species. C. Brown Test., starting at 01:24:00; K. Slattery Test., starting at 03:27:12.

145. The Project would not adversely affect the hydrologic or hydraulic properties of the Norwalk River. APP-31.3; S. Flormann Test., starting at 04:08:42.

H. DEEP Findings of No Adverse Impact

146. The Draft License includes comments from the CT Dept. of Agriculture, Bureau of Aquaculture, including a specific condition that all unconfined in-water work shall be prohibited from between June 15th through September 30th inclusive of any

calendar year to protect spawning shellfish unless authorized in writing by the DEEP Commissioner. DEEP-20; M. Grzywinski Test., starting at 06:17:27:

147. The proposed regulated activity would not significantly impact any shellfish area. DEEP-18A.

148. The use of Manresa Island (Site 10) would further protect shellfish beds by reducing the number of barge moorings in Norwalk Harbor. DEEP-18A; APP-1.61.

149. The Applicant's use of Manresa Island will not have any adverse effects to Essential Fish Habitat. APP-1.57.1.

150. The Project will have no impact to any USFWS ESA-listed species in proximity to the Project. APP-1.59.

151. CT DEEP NDDB concurs that the protection protocols cited herein will lessen the adverse impact to the peregrine falcon and diamondback terrapin. APP-1.58.1, p.4.

152. Where demolition and removal activities do not take place over a barge, solid work platform, or within a marine enclosure, the Applicant would install debris shields prior to performing the removal operations to prevent debris from falling into the waterway. The installed debris shields would maintain at least 1 foot of freeboard above the 2-year tidal elevation, except above the navigation channel where the debris shields must be located as close to the low chord as practical. The contract specifications and specific conditions in the Draft License would require the immediate removal of any debris that accidentally falls into the waterway. APP-2.1, p. 48; DEEP-20.

153. Best management practices employed during construction and use of the marine enclosures and turbidity curtains would prevent sedimentation and debris from being released to the waterway. APP-12.1, Controlled Materials Handling; APP-12.2, Sediment Handling; APP-14.0 through APP-14.5, LWRD License Application Dredging Consultation Form and attachments.

154. Type 3 permeable turbidity barriers (DOT Specification Item #0210306A, Turbidity Control Curtains) would be installed prior to the start of the following activities: marine enclosure installation, pier construction (with marine enclosure), pier removal (with marine enclosure), existing submarine cable removal, slide rail installation and removal for swing span removal, control house independent fender system installation and existing fender removal, navigation/maintenance dredging, construction platform pile driving, pile installation and removal at the temporary vessel dock relocation/storage site, new dredging at the temporary vessel dock relocation site and at the permanent vessel dock location site, bulkhead installation Marine Staging Yard, sheet pile installation and outfall reconstruction at the IMAX, IMAX Theater foundation removal, wetland restoration. APP-2.1, p. 48; APP-1.48 Delivery and Installation of Turbidity Control Curtains; APP-41,

Marine Staging Yard Photos; APP-42, IMAX Photos; APP-44, Vessel Dock Location Photos; APP-30.3; DEEP-20.

155. The Project area would incorporate soil erosion and sediment control (SESC) measures consistent with the DEEP 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (APP-51). Standard erosion control measures such as hay bales, silt fence, turbidity curtains and inlet filters would be implemented during construction. The Draft License requires that all debris shields, and turbidity curtains be in optimal working condition, and that turbidity curtains be "Type 3." APP-2.1, p. 49; DEEP-20.

156. The proposed activities are not anticipated to adversely impact shoreline erosion or accretion in the vicinity of the Project site. DEEP-18A.

157. DOT proposes to install and maintain the sedimentation and erosion controls and the debris shields in optimal condition during construction. APP-30.3. Confined in-water work would occur within turbidity curtains and marine enclosures/temporary fenders are proposed to isolate the sediment-generating work zones from the river. APP-2.1, p. 49; APP-13.6, DOT Section 1.20 Environmental Compliance; APP-30.3; APP-1.48, Delivery and Installation of Turbidity Control Curtains; DEEP-20.

158. The use of temporary marine enclosures (cofferdams) is not expected to have permanent adverse impacts to the water circulation within the Norwalk River. DEEP-18A.

159. Barge movements would take place such that there would be no impact to the river bottom or increase in ambient turbidity beyond that allowed by permit conditions. The Draft License has a condition that prevents barges from resting on the substrate. APP-2.1, p. 49; DEEP-20.

160. Whenever performing in-water work, DOT would implement water quality monitoring for turbidity on a continuous basis in the vicinity of each turbidity producing activity. DOT also would monitor for specific conductivity, salinity, dissolved oxygen, pH, temperature and water level (at one location) to determine if marine life and other natural conditions may be contributing to turbidity levels. APP-2.1, p. 49; APP-30.3.

161. Monitoring would be conducted for turbidity as required by DEEP. DOT completed baseline monitoring at three locations within the proposed project area (Walk Bridge, Stroffolino Bridge, and the City of Norwalk Police Dock) to establish baseline conditions. The baseline monitoring would be utilized to establish trends and background levels that would assist in the exceedance reporting and investigations during construction monitoring. The results of the investigations and the corrective actions implemented would be transmitted to the Norwalk Shellfish Commission and the Norwalk Harbor management Commission on a monthly basis. APP-2.1, p. 49.

162. The Draft License includes a condition requiring the Applicant to obtain any other approvals required by applicable federal, state, and local law. DEEP-20.

163. DEEP staff recognize DOT's unique statutory process to gain access and use of real property. DEEP staff had all of the information it needed to evaluate the permit application and deemed the application complete. Micheal Grzywinski, Test., 6:14:01, 6:34:20; DEEP-18 A; DEEP-19.

164. The Project would improve the Norwalk River's water dependent development activities and opportunities in the vicinity of Walk Bridge. The Maritime Rowing Club has been relocated, maintaining this water-dependent activity. The Project would create opportunities for expanding water-dependent uses in the City of Norwalk. In East Norwalk, DOT would provide a pedestrian/bicycle path along the Norwalk River, extending south from the eastern bridge abutment to a connection at Goldstein Place and north to the Harbor Loop Trail. In South Norwalk, the new permanent dock reconfiguration for the Sheffield Island Lighthouse Ferry and the Maritime Aquarium's research vessel, waterward of 4 North Water Street (Parcel 2/19/1), would improve waterfront facilities for these operators and the new dock's accessible gangway will enhance this water-dependent use in downtown Norwalk. APP-1.0

165. DOT commits to the disposition of excess property for water-dependent uses. Water-dependent uses include, but are not limited to; marinas, recreational and commercial fishing and boating facilities, finfish and shellfish processing plants, waterfront dock and port facilities, shipyard and boat building facilities, water-based recreational uses, and any use which provides general public access to the Norwalk River. APP-1.5; APP-30.3. DOT would review all bids and proposals from potential buyers and, with advice and guidance from the DEEP Commissioner and select the highest bid that demonstrates an integrated, quality, water-dependent use. APP-30.3; Brown Test., starting at 00:35:15.

I. Wildlife Impacts & Mitigation

166. The proposed activity is not expected to adversely impact wildlife or finfish. The Draft License contains conditions incorporating a Peregrine Protection Plan and northern diamondback terrapin protocol as well as "soft start" procedures to protect finfish. APP-1.58.1; DEEP-18 A.

167. The Project would have no significant impact to wildlife species. APP-1.58.1.

168. The Application included coordination with multiple agencies regarding wildlife in the Project area, including NOAA NMFS GARFO (APP-1.57- APP-1.58), U.S. Fish and Wildlife Service ("USFWS") (APP-2.2; APP-1.59, USFWS Section 7 ESA Determinations), DEEP Wildlife (APP-1.58.3), DEEP Marine Fisheries (APP-1.58.2), DEEP NDDB (APP-1.58.1), and USACE (APP-1.60).

169. The Project was submitted to the USFWS under the Final 4(d) Rule consultation process for the northern long-eared bat (*Myotis septentrionalis*) (APP-1.4) within the Project area, however USFWS concluded that the Project would have no adverse impact to the species. APP-2.2.

170. DOT OEP biologists determined that there would be no effect on the threatened red knot (*Calidris canutus rufa*) and the endangered roseate tern (*Sterna dougalli dougalli*). APP-1.4, APP-2.2, p. 22.

171. There are two (2) state-protected species within the Project limits, all concentrated on or around Manresa Island: peregrine falcons (*Falco peregrinus*) and northern diamondback terrapins (*Malaclemys t. terrapin*). Ospreys (*Pandion haliaetus*) are also found on or around Manresa Island, and while they are no longer a state-protected species, disturbance of ospreys is prohibited under the Federal Migratory Bird Treaty Act of 1918 and Conn. Gen. Stat. §26-92. M. Grzywinski Test., starting at 06:16:35; APP-1.58.

172. Forested area on Manresa Island would not be impacted as the Applicant would not be conducting any tree or vegetation cutting on Manresa Island. APP-2.2; A. Davis Test., starting at 03:03:58, 03:09:17.

173. Peregrine falcon are known to nest within the Project area, however the Applicant may assume that no nests are present within the Project area at the time of letting. APP-13.6. No confirmed peregrine falcon nesting has occurred since 2015 in the immediate vicinity of Walk Bridge. APP-1.4, p. 25. Nonetheless, DEEP NDDB concurs with the protection protocols in place to protect peregrine falcons during construction. APP-1.28.1.

174. No construction activities may occur within 400-feet of a nesting peregrine falcon between April 1 and July 31. A. Davis Test., starting at 02:53:36, APP-34.3. APP-13.6. Upon discovery of a peregrine falcon nest, DOT would arrange for an Environmental Inspector from the Office of Environmental Planning (OEP) to review the nest location and discuss proper protocol. APP-2.2, APP-13.6.

175. During the northern diamondback terrapin's dormant period, between November and May, construction would be permitted in upland areas once the Project area is inspected and cleared of any terrapin nesting sites. APP-2.2; APP-13.6.

176. Construction in wetland/watercourse and sandy borders of tidal creeks and salt marshes is prohibited unless these areas were in active construction prior to November 1 and do not host any terrapin habitat at the time of construction. APP-13.6.

177. During the terrapin's active period, from April 1 through October 31, a silt fence barrier would be installed on the waterward side of the access road to prevent terrapin from accessing construction areas. A. Davis Test., starting at 02:23:18; APP-

34.3. Slow speeds across all access roads on Manresa Island would also be enforced during this time period. APP-2.2; APP-34.4.

178. All on-site personnel would be made familiar with the terrapin for identification purposes. APP-2.2; APP-13.6.

179. On-site personnel would inspect the Project area prior to the start of construction each morning for the presence of terrapin. Any terrapin found within the immediate work area would be carefully relocated to an adjacent area outside of the Project limits, and the engineer on-site would inform OEP of any such relocation(s). APP-2.2; APP-13.6.

180. All staging and storage areas within the vicinity of terrapin habitat (excluding previously paved locations) must be pre-approved by OEP. APP-2.2; APP-13.6.

181. No heavy machinery or vehicles may be parked in any identified terrapin habitat. APP-2.2; APP-13.6.

182. If a safety boat or barge is required for the Project, DOT would be required to use special caution and slow speeds when navigating within tidal creeks to avoid disruption to the terrapin which tend to congregate close to the water's surface during their active period. APP-2.2; APP-13.6.

183. At least ten (10) days prior to the start of construction, DOT would arrange for an Environmental Inspector from OEP to discuss protocol for moving forward within applicable parameters while protecting the terrapin and its habitat. APP-13.6, Environmental Compliance; M. Mendick Test., starting at 06:05:04.

184. Work would begin either before April 15 or after August 1 to allow nesting ospreys to acclimate to the construction activities. This effort was coordinated with DEEP Wildlife. A. Davis Test., starting at 02:52:47; APP-13.6; APP-34.3.

185. Wildlife on Manresa Island would have only a temporary disturbance as a result of the Project. A. Davis Test., starting at 03:04:42.

J. Fisheries/Shellfisheries Impacts & Mitigation

186. Minor, short-term adverse impacts are expected to indigenous fish species during Project construction. APP-1.4. These impacts may include increased turbidity, increased sounds pressure levels, and hinderance from using habitat in the Walk Bridge area during dredging, excavation, and shaft and micropile drilling. APP-1.4; APP-1.10.

187. The Applicant has coordinated with National Oceanic and Atmospheric Administration/National Marine Fisheries Service/Greater Atlantic Regional Fisheries Office (NOAA/NMFS/GARFO) (1.57.1, 1.57.2), U.S. Army Corps of Engineers (USACE) (APP-1.60), National Marine Fisheries Essential Fish Habitat and Endangered Species Coordination (APP-1.57.1, 1.57.2), DEEP Division of Fisheries-Marine Fisheries

Program(APP-1.58.2), DEEP Division of Wildlife (APP-1.58.3), DEEP Natural Diversity Data Base (NDDB) (APP-1.58.1), CT Department of Agriculture, Bureau of Aquaculture (APP-1.61), Norwalk Harbor Management Commission (NHMC) (APP-1.56, 23, and Norwalk Shellfish Commission (NSC) (APP-1.55, APP-22.1, APP-22.2) in developing environmental protection measures for the Project. A. Davis Test., starting at 02:46:05; C. Brown Test., starting at 00:23:49.

188. Through this extensive coordination, DOT has agreed to implement various environmental protection measures, including time of year restrictions, approved protocols, compensatory wetland mitigation, and resource protection measures, during construction of the Project. APP-1.1; APP-2.1, p. 50; APP-30.3; C. Brown Test., starting at 00:35:15; DEEP-18A, DEEP-20. Environmental Protection measures were developed with the National Marine Fisheries – National Marine Fisheries Endangered Species Act and Essential Fish Habitat Coordination. DOT also coordinated with DEEP Marine Fisheries and DEEP NDDB. A. Davis., starting at 02:50:29.

189. The Application included a CT DEEP Marine Fisheries consultation which confirmed that the Project would have no significant impact to fisheries. APP-1.58.2.

190. The Applicant's Section 7 Informal Consultation Approval with NOAA NMFS GARFO's Protected Resources Division ("PRD") and Habitat and Ecosystem Services Division ("HESD") confirmed the presence of Endangered Species Act-listed species and critical habitat within the action area, including loggerhead turtles (*Caretta caretta*), Kemp's ridley turtles (*Lepidochelys kempii*), leatherback turtles (*Dermochelys coriacea*), green turtles (Chelonia mydas), shortnose sturgeon (*Acipenser breviostrum*), and Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*). This consultation determined that there are no expected adverse impacts to federally listed marine mammals or fish species. APP-1.57.2.

191. The use of hoe rams above the High Tide Line (HTL) was coordinated with and authorized by NOAA NMFS GARFO. APP-1.57.2.

192. The Applicant has incorporated all of the recommendations of NOAA NMFS GARFO into the Project through contract specifications and Notices to Contractor. APP-30.3, p. 4.

193. The Applicant's consultation with CT Department of Agriculture, Bureau of Aquaculture consultation concluded that the Project would have no significant impact on any shellfish area. APP-1.61.

194. There would be no impact to fisheries for the Manresa Island portion of the Project, as no in-water work would be conducted at Manresa Island. APP-2.2; APP-30-3.

195. DOT has coordinated its efforts with the Norwalk Shellfish Commission (NSC) since 2018. A. Davis Test., starting at 03:02:42; APP-38.3; J. Hanifin Test., starting at 02:12:23; APP-1.55, Norwalk Shellfish Consultation; APP-22.1 and APP-22.2, Norwalk

Shellfish Commission Coordination Documentation. DOT has apprised the NSC of its progress throughout the design stage and its protection protocols and considered the NSC's input throughout the permitting and plate preparation process. A. Davis Test., starting at 03:02:48; C. Brown Test., starting at 01:25:14. These efforts exceeded the requirements imposed by NMFS. A. Davis Test., starting at 03.03.13.

196. There are no commercial shellfish beds within Project limits. APP-1.4.

197. Shellfishing is currently prohibited in Norwalk River and Harbor, so the Project would have no adverse impact on harvestable shellfish beds. APP-1.4; APP-1.10.

198. The Norwalk River, extending south to the Norwalk Outer Harbor, is a State-designated natural shellfish bed. Shellfish of economic importance are not expected to occur along the bottom of the Norwalk River Federal Navigation Channel in the soft unconsolidated sediment, however, shellfish resources do occur in the intertidal and subtidal zones adjacent to the channel. APP-1.10, p. 12.

199. The Draft License includes a standard dredging seasonal closure period between July 15th and September 30th to protect any spawning shellfish, unless otherwise authorized by the DEEP Commissioner in writing. DEEP-20.

200. Permanent impacts to essential fish habitat would be minimal due to the Applicant's best management practices and mitigation methods. APP-1.57.1, pp. 42-43, 50-54; APP-18.1, Value Engineering Report.

201. Type III heavyweight turbidity control curtains, held in place by pin piles, would be installed to protect marine resources from sediment-producing activities during Project construction. The Type III heavyweight turbidity control curtains would be installed prior to the start of the following activities: Marine enclosure installation, Pier construction (with marine enclosure), Pier removal (with marine enclosure), Existing submarine cable removal, Slide rail installation and removal for swing span removal, Control house independent fender system installation and existing fender removal, Navigational/maintenance dredging, Construction platform pile driving, Pile installation and removal at the temporary vessel dock relocation site, New dredging (with marine enclosure if outside the dredging work window) at the temporary vessel dock relocation site [waterward of 68 and 90 Water Street and at the permanent vessel dock location site [waterward of 4 North Water Street], Sheet pile installation and outfall reconstruction at the IMAX, IMAX Theater removal (with marine enclosure), and the wetland mitigation sites. APP-1.2; APP-1.48; APP-13.3; APP-1.57.1, p.53; APP-34.3. Use of the turbidity curtains was also coordinated with the NSC. APP-34.3.

202. All pile-driving, sheet piling, and extraction activity would be enclosed within the turbidity curtains. APP-13.1, 34.3.

203. The Applicant would not use explosives or hydraulic breakers below the HTL. APP-30.3, p.7.

204. A turbidity curtain would also be deployed around the exterior perimeter of the marine enclosure to further prevent siltation outside of the marine enclosure. APP-34.3.

205. All activities that may produce elevated noise would be coordinated to take place on one half of the river at a time and only during predetermined daily time windows to ensure a portion of the river remains accessible to fish passage. APP-1.57.1-p.53; APP-34.3. A. Davis., starting at 02:53:56.

206. Open water dredging, which would occur between December 1 and January 31, would be surrounded by a turbidity curtain. Dredging at all other times of year would be conducted behind a marine enclosure which would also be surrounded by a turbidity curtain. A. Davis Test., starting at 02:51:26. APP-13.3, APP-13.1, APP-34.3.

207. The Project would utilize a "soft start" method between March 16 and October 31 of each construction year in order to protect fish migration that occurs between April 1 and June 30. APP-34.3 A. Davis Test., starting at 02:51:26, APP-13.3, Notice to Contractor- Maintenance & Protection of Fish Migration through Work Area; APP-13.6, Section 1.10 Environmental Compliance. The Applicant would use the same method after cessation of activity for a period of thirty (30) minutes or longer. APP-13.3.

208. Pile driving/extraction and drilled shaft and micropile drilling activities would be coordinated to ensure that the navigation channel remains open and available for fish passage. A. Davis Test., starting at 02:54:46; APP-30.3; C. Brown Test., starting at 00:42:25. Activities would occupy less than 50% of the navigation channel when working in the middle of the channel. APP-1.1; APP-30.3, p.7.

209. All pile driving, socket drilling, and other vibratory actions conducted between April 1 and June 30 of each construction year would be confined to occur between one hour after sunrise and one hour before sunset to protect anadromous fish migration. A. Davis Test., starting at 02:51:57, APP-1.1; APP-13.3, APP-34.3.

210. No unconfined turbidity-causing activities would be permitted between February 1 and September 30. A. Davis Test., starting at 02:52:08, APP-13.3[; APP-34.3.

211. At least one of the Norwalk River's two navigation channels at the Walk Bridge would remain open at all times to enable fish migration (APP-13.3) except to remove the pivot piers and to install the lift spans which would require full channel closure for a temporary period of time. APP-30.0; A. Davis Test., starting at 02:54:46; C. Brown Test., starting at 01:04:59, 01:28:38.

K. Navigation Impacts & Mitigation

212. The Project would improve marine traffic conditions in the Norwalk River. A primary goal of the Walk Bridge Replacement Project design is to minimize disruptions to rail and river traffic during construction. APP-1.5, p. 6, 10; APP-30-3, p. 13.

213. A Port and Waterway Safety Assessment (PAWSA) Workshop Report, conducted on May 3-4, 2005 for Long Island Sound by the U.S. Coast Guard, identified the Norwalk Channel as a concern due to its congestion. The PAWSA Workshop Report also noted that the orientation and dimensions of older railroad bridges are impediments to safe navigation and recommended mitigation including more appropriate clearance dimensions for safe navigation. APP-33.3. The replacement of the Walk Bridge would improve congestion with wider clear access in the navigational channel following completion of construction. APP-33.3. D. Santa Test., starting at 4:28:02. J. Hanifin Test., starting at 02:25:08.

214. The lift span was designed and configured to allow for a minimum of two-track service to continue throughout the construction period, and for the swing span to remain operational for boat traffic until the demolition of the existing swing span. APP-1.5, p. 6.

215. For most of the Project duration, DOT plans to keep the Norwalk River open to traffic by restricting construction activity to one existing channel and keeping the other channel open to marine traffic (partial channel closure). APP-1.5, p. 6; C. Brown Test., starting at 01:33:29; A. Davis Test., starting at 02:53:56; APP-13.4, NTC Waterway Restrictions and Protection of Marina Operations.

216. There are several commercial operations and recreational operations that currently exist north of the bridges that will likely be impacted by the construction activities. These include 20' – 40' pleasure craft accessing marinas located north of Walk Bridge, barges ranging in length from 70' to 280' delivering earth products to Devine and O&G, and rowing activities on crew shells with attendant coach launches. APP-33.3.

217. The Project is designed to keep the navigation channel open for majority of construction activity. For public safety reasons, however, during the removal of the pivot pier and installation of the lift spans, there would be brief full channel closure. C. Brown Test., starting at 01:33:29; APP-1.5, p. 6; APP-30.3.

218. The inclusion of Site 5 in the Project design provides an alternative berthing location for the Sheffield Island Lighthouse Ferry and Maritime Aquarium vessels south of the Stroffolino Bridge in order to maintain safe vessel operations during certain construction activities. APP-33.3; DEEP-17; M. Grzywinski Test., starting at 6:24:58.

219. The primary goals of the Project design and construction approach are twofold: (1) to minimize disruptions to rail and river traffic, and (2) to minimize community impacts during construction. To achieve these goals, this Project is utilizing accelerated bridge construction, which uses materials, specialized equipment, and methods to minimize disruptions. Assembling the north and south lift spans outside of railroad property without impacting the navigation channel was selected as the accelerated bridge construction method. Achieving these goals are among the reasons that the Department selected the southern parcel at Manresa Island (Parcel 5/86/1) as a Staging and Storage

Yard to construct the replacement bridge lift spans (CA 19) as opposed to locations closer to downtown Norwalk and the existing Walk Bridge. APP-37.3. R. Bertoli Test., starting at 04:46:52.

220. A temporary fender system would be installed around any marine enclosure, work areas, and work platforms to protect vessels. A. Davis Test., starting at 02:54:20.

221. A vertical height restriction of 16 feet from mean high water (MHW) would be introduced when a construction activity prevents the safe movement of the existing swing span. APP-1.5, p. 6, 10. A horizontal restriction would be introduced when temporary work being implemented for new bridge constructions are temporarily placed within the limits of the navigation channel, thereby reducing the horizontal clearance. APP-1.5, p. 10. In a complete channel closure, the channel would be closed to all navigation due to construction equipment or temporary work in the channel preventing safe vessel passage. APP-1.5, p. 6.

222. With the new vertical lift bridge, the reliability of bridge operations would be substantially improved. The proposed increased bridge height would reduce the frequency of bridge openings, which would benefit commercial and recreational marine users. APP-1.5, p. 5.

223. In the open position, the vertical clearance would match the clearance of the upriver governing bridge (the Yankee Doodle Bridge carrying I-95 vehicular traffic over the Norwalk River). APP-1.5, p. 10.

224. The elimination of the center pivot pier that divided the navigation channel at the existing Walk Bridge would result in an effective increase in the width of the navigation channel of the replacement bridge, improving passage through the replacement bridge. APP-1.5, p. 6, 10.

225. The widened channel at Walk Bridge via the removal of the pivot pier and fender system also would improve rowing conditions and rower and other small boat safety by providing more visibility for rowers and boaters. APP-1.5, p. 6, 10; APP-8, Walk Bridge Navigation Safety Risk Assessment.

226. The required channel maintenance dredging to the authorized dredge depth would straighten the alignment between Walk Bridge and the Stroffolino Bridge and improve the navigability of the river between and through the two bridges, improving overall conditions for large and small vessel users. APP-1.5, p. 6, 10.

227. The vertical and horizontal clearances of the replacement bridge would provide for the safe, efficient passage of vessels through the Walk Bridge. APP-1.5, p. 10.

228. DOT has coordinated with the City of Norwalk, the Norwalk Harbor Management Commission, the Norwalk Harbor Master, and waterway users regarding construction work in the water and potential impacts on navigation and water-dependent uses. APP-1.5, p. 6, 10. The extensive documentation of meetings with the Norwalk Harbor Management Commission, the Norwalk Harbor Master, and marine users is set forth in Attachment E to the Permit Application. APP-1.5, p. 6, 10; APP-1.56.1, Norwalk Harbor Management Consultation; APP-1.56.2, Marine Use Stakeholder Coordination Consultation; APP-23, Norwalk Harbor Management Commission Coordination Documentation; APP-28.1, Summary of Local Coordination Meetings May 2021.

229. Impacts to navigation would occur during construction activities, however DOT would mitigate these impacts with strategies developed based on constructability review, coordination with stakeholders, and the findings in the Navigation Safety Risk Assessment performed by RACE Coastal Engineering on January 18, 2021. APP-8; APP-33.3; D. Santa Test., starting at 4:38:59.

230. DOT's mitigation strategies, developed in coordination with key stakeholders, are outlined in detail in the Marine Use Plan and specifications. APP-9; D. Santa Test., starting at 4:39:47. The strategies include, but are not limited to:

a. DOT would post a Notice to Mariners identifying closures of the Norwalk River federal navigation channel in coordination with the United States Coast Guard (APP-9; APP-13.4; C. Brown Test., starting at 42:25);
b. DOT would install temporary aids to navigation at each barge mooring location authorized herein in coordination with the United States Coast Guard. APP-1.2; APP-1.37; C. Brown Test., 3/15/22, starting at 42:25.

231. In consultation with water-dependent users of the Norwalk River, including rowing clubs, marinas, and other commercial interests (APP-28, Local Coordination; APP-29, Maritime Rowing Club Relocation Documentation), DOT has developed a Marine Use Plan to minimize the adverse impacts of construction on marine transportation and to develop water-dependent user/waterfront access strategies to mitigate impacts that cannot be avoided. APP-1.5, p. 6; APP-9, Marine Use Plan; J. Hanifin Test., starting at 02:12:23. A Notice to Contractor, included in the contract specifications, would require contractors to maintain the minimum channel openings during construction for protection of marine operations. APP-13.4; C. Brown Test., starting at 00:42:25.

232. Norwalk Police Marine Unit watercraft would be present at the construction sites daily and may assist in communication and coordination with small marine craft, such as rowers and recreational vessels. They would be available to provide marine traffic control and construction site safety. APP-9, p 27.

233. Temporary aids to navigation, including navigation lighting, notices to mariners, channel closure signs, stop/slow signs, advance warning signs and lateral guidance may be used and would be coordinated with the USCG Sector Long Island Sound to assist vessels traversing through or near construction sites. APP-9, p 27.

234. DOT would coordinate the existing bridge removal and new bridge construction activities with the USCG Sector Long Island Sound to limit channel restrictions and outages. APP-1.5, p. 6. Aids to navigation would include Notices to Mariners, on-site signs, and lighting. APP-1.5, p. 6; APP-30.3; C. Brown Test., starting at 00:42:25. DOT would continue coordination with the USCG Sector Long Island Sound and the Norwalk Harbor Master during construction and pre-operational phases of the project. APP-1.5, p. 6. The construction contractor would be required to prepare a Marine Safety Plan for approval by the DOT, developed in consultation with the Norwalk Harbor Master and the USCG Long Island Sector. APP-1.5, p. 6.

235. The Walk Bridge Replacement Project would improve coastal navigation and water-dependent uses, particularly for upriver commercial marine users, vessels with restricted maneuverability and recreational marine users. APP-1.5, p. 6; APP-1.6, p. 12; APP-28, Local Coordination; APP-29, Maritime Rowing Club Relocation Documentation. This positive impact would help to mitigate the short-term effects of constrained marine passage during construction. APP-1.5, p. 6; APP-1.6, p. 12.

236. Removal of existing piles, including some from abandoned and deteriorated docks, waterward of 68 and 90 Water Street (Parcels 2/84/19 and 2/84/33) would improve the waterfront area and small craft navigation, including opportunities for future waterfront development. APP-1.5, p. 6.

237. The Draft License contains a specific condition that, upon completion of the Project, the Applicant shall market excess property pursuant to advice and guidance from the DEEP Commissioner and that the Applicant shall sell such properties to the highest bidder who demonstrates a future integrated, quality, water dependent use. DEEP-20; M. Grzywinski Test., beginning at 6:25:34.

238. City of Norwalk zoning and waterfront use and development policies have strong coastal use protections to provide for access to the coast and some water-dependent uses in riverfront parcels in the Inner Harbor. APP-1.6, p. 12; APP-26.1, Coastal Zone Management Act Policies.

239. Walk Bridge Replacement Project would improve public access to and use of public trust lands near the bridge and facilitate expansion of the coastal access network (APP-53, DEEP Coastal Access Guide) along the east side of the Norwalk River, providing waterfront access mitigation. APP-1.6, p. 12. DOT would construct an eastern path connection of the Norwalk Harbor Loop Trial via the existing and partially lowered eastern abutment of the existing bridge. APP-1.1, p.2; APP-38.3; J. Hanifin Test., starting at 02:26:02. The pedestrian and bicycle connection would facilitate the goals and vision of the Norwalk Master Plan of Conservation and Development, the Norwalk Pedestrian and Bikeway transportation Plan (2012), the Norwalk Trail Study – Maritime Link (2014), and the Mid-Harbor Planning Study (2005). APP-1.6, p. 12; APP-53, DEEP Coastal Access Guide.

II. CONCLUSIONS OF LAW

A. Introduction

The purposes and policies for the preservation of tidal wetlands and limitations on activities conducted waterward of the Coastal Jurisdiction Line are met through the process and criteria outlined in Conn. Gen. Stat. §§ 22a-33, 22a-359, and 22a-361. Section 22a-33 provides that where a permit application has been the subject of a hearing, the DEEP Commissioner or designated Hearing Officer shall consider the effects of the proposed work on public health and welfare, marine fisheries, shellfisheries, wildlife, the protection of life and property from flood, hurricane, and other natural disasters, and the public policy regarding the preservation of tidal wetlands set forth in Conn. Gen. Stat. §§ 22a-29 to 22a-35 inclusive.

The preservation of tidal wetlands is announced in Conn. Gen. Stat. § 22a-28 as the policy of the State because the loss or despoliation of tidal wetlands would adversely impact the value of tidal wetlands as sources of nutrients to finfish, crustacea, and shellfish; would destroy habitat for plants and animals of significant economic value and would eliminate or substantially reduce marine commerce, recreation, and aesthetic enjoyment; would disturb the natural ability of tidal wetlands to reduce flood damage and adversely affect the public health and welfare; and would substantially reduce the capacity of such wetlands to absorb silt and result in the increased silting of channels and harbor areas to the detriment of free navigation.

Conn. Gen. Stat. § 22a-359 requires any decisions regarding work waterward of the Coastal Jurisdiction Line to be made with due regard for indigenous 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 recreational 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 for the rights and interest of all persons concerned. In addition, any activity conducted within the coastal boundary must be consistent with the applicable policies articulated in the Coastal Management Act, Conn. Gen. Stat. § 22a-92, *et seq*.

B. Burden of Proof

At the hearing, the Applicant:

> … shall have the burden of going forward with evidence and the burden of persuasion with respect to each issue which the Commissioner [of DEEP] is required by law to consider in deciding whether to grant or deny the application. Each factual issue in controversy shall be determined upon a preponderance of the evidence.

R.C.S.A. § 22a-3a-6(f). The Applicant must demonstrate, by a preponderance of the evidence, that it has satisfied the statutory and regulatory criteria relevant to the requested permit.

C. Expert Testimony

The findings of fact set out above, and the conclusions of law set out below, are made in consideration of expert testimony offered by witnesses testifying on behalf of the Applicant and DEEP staff. When considering technically complex issues, administrative agencies typically rely on expert testimony. *See River Bend Associates, Inc. v. Conservation & Inland Wetlands Commission*, 269 Conn. 57, 78 (2004). In technically complex matters such as this one, DEEP staff 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 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").

Both the Applicant and DEEP offered expert testimony. "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 when the commission members lack their own expertise or knowledge." *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). The expert testimony presented by the Applicant's witnesses was largely uncontradicted and credible, and reliance on the conclusion of these experts, as well as DEEP staff's expert, is both necessary and appropriate when making a determination on this matter. As discussed below, the expert testimony provided in this matter, together with the documentary evidence received, provides a sufficient basis to determine that the Applicant has satisfied the relevant statutory and regulatory criteria and that the requested Draft License should be issued.

At the evidentiary hearing, the Applicant offered pre-filed written and verbal testimony from nine expert witnesses:

- Christian Brown, P.E. (C. Brown Test., starting at 16:20; APP-30.1 through APP-30.3),
- John Hanifin (J. Hanifin Test., starting at 02:08; APP-38.1 through APP-38.3),
- Andrew Davis, Transportation Supervising Planner (A. Davis Test., starting at 02:44; APP-34.1 through APP-34.3),

- Kevin Slattery, PWS (K. Slattery Test., starting at 03:15; APP-32.1 through APP-32.3),
- Adam Fox, P.E. (A. Fox Test., starting at 03:38; APP-35.1 through APP-35.3),
- Steven Flormann, P.E., CPM (S. Flormann Test., starting at 04:04; APP-31.1 through APP-31.3),
- Devin Santa, P.E., PMP, USCG Licensed Captain & Certified Hydrographer (D. Santa Test., starting at 04:23; APP-33.1 through APP-33.3),
- Richard Bertoli, P.E., PMP (R. Bertoli Test., starting at 04:44; APP-37.1 through APP-37.3),
- Michael Mendick, P.E., CCM (M. Mendick Test., starting at 05:43; APP-36.1 through APP-36.3). APP-30.1 through 38.3.

As set forth in detail herein, the testimony of each of DOT's expert witnesses support the determination that DOT has incorporated more than sufficient measures to minimize and/or mitigate environmental and navigational impacts to the maximum extent practicable and, therefore, has satisfied the statutory and regulatory criteria relevant to the Draft License.

DEEP staff offered pre-filed written and verbal expert testimony from Micheal Grzywinski, a permit analyst from DEEP Land & Water Resources Division:

- Micheal Grzywinski (M. Grzywinski Test., starting at 06:13:19; DEEP-26).

Both the Applicant's and DEEP's expert witnesses testified that, in their expert opinions, the Project complied with the relevant statutory criteria. These expert opinions were credible and provide a substantial basis in fact upon which the Hearing Officer may base her recommendation. No expert evidence was offered to refute their opinions. *See Feinson v. Conservation Comm'n*, 180 Conn. 421, 429 (lay commission acts arbitrarily and without substantial evidence when relies on own knowledge of technically complex environmental issues and rejects contrary expert testimony). The analysis that follows is intended to amplify and support 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.

D. Tidal Wetlands Act

The criteria for review of permit applications for work in tidal wetlands are established in R.C.S.A. § 22a-30-1, *et seq*. These criteria are consistent with the provisions of the Tidal Wetlands Act and the policies announced in Conn. Gen. Stat. § 22a-28.

1. Preservation of wetlands

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

> (1) There is no alternative for accomplishing the applicant's objectives which is technically feasible and would further minimize adverse impacts;
> (2) Any structure or fill will be no greater in length, width and height than necessary to accomplish its intended function;
> (3) Pile supported construction will be used to the fullest extent practicable;
> (4) 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.

R.C.S.A. § 22a-30-10(b)[11].

The proposed activity would preserve the wetlands of the State and not lead to their despoliation or destruction. Although the proposed construction activities will have impacts to existing tidal vegetation located within the immediate vicinity of the existing bridge for the duration of the construction activities, the record demonstrates that these impacts have been minimized to the greatest extent possible, and, furthermore, were

[11] The requirement in R.C.S.A. § 22a -30-10(b) to evaluate technically feasible alternatives applies only to alternatives which would reduce tidal wetlands impacts.

determined by DEEP staff to be acceptable.[12] DEEP-26. The Project scope includes significant wetland enhancement and creation along both shorelines of the Norwalk River, and such mitigation is an express condition of the Draft License. DEEP-26; DEEP-18 A; DEEP-20; M. Grzywinski, Test., 6:30:06; APP-52, Living Shorelines Engineering Guidelines.

At the bridge site, federal wetland resources were delineated in the field according to the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual (USACE, 1987) and the USACE 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (USACE, 2012). APP-34.3. A Wetland Delineation Report was prepared that includes delineation of all the wetlands in the Project area. APP-2; A. Davis., starting at 02:47:50; APP-2.0. Additionally, selection and development of the wetland mitigation sites was coordinated by OEP with DEEP LWRD U.S. Army Corps of Engineers, National Marine Fisheries, and local stakeholder representatives from the City of Norwalk and the Maritime Aquarium. APP 34.3; A. Davis., starting at 02:55:39. Based on DOT's research and findings, DOT developed a comprehensive tidal wetland mitigation strategy. APP-5; APP-6; APP-6.1; APP-6.2; APP-34.3. The wetland mitigation will include treatment to reduce or eliminate invasive Phragmites, shrub planting, tidal salt marsh restoration through invasive Phragmites removal, establishment of a northern diamondback terrapin habitat area in the buffer above the high tide line, removal of in-water rip rap, living shoreline rip rap sill installation, and grading and topsoil placement, and salt marsh restoration through vegetation planting. APP-1-2; APP-32.3; K. Slattery Test., starting at 03:24:53. The

[12] No wetlands will be impacted by the temporary Staging and Storage Yard at Manresa Island (Site 10). APP-1.4.

proposed tidal wetland mitigation will result in approximately 61,990 square feet of tidal wetland restoration and creation. DEEP-18A; APP-1.4. Thus, the Applicant proposes measures which will minimize wetland impacts to the greatest extent practicable. To the extent there are unavoidable impacts, those will be balanced with the required mitigation by means of wetland creation and restoration. APP-32.3; K. Slattery Test., starting at 03:24:42. The proposed mitigation exceeds the minimum required to mitigate for the proposed tidal wetland impacts. APP-30.3; C. Brown Test., starting at 00:46:12; APP-34.3; A. Davis Test., starting at 03:05:03; APP-32.3; K. Slattery Test., starting at 03:26:59; APP-6.1; APP-6.2; APP-45.

As to technically feasible alternatives, the evidence in the Record demonstrates that the Applicant comprehensively analyzed alternatives to the proposed Project and design. Each alternative was rejected by DOT as technically infeasible considering the Project goals and needs, engineering, constructability, potential impacts to rail and navigation traffic, and potential environmental impacts. APP- 1.7. The no-build alternative is not an option because it will not accomplish the objective of replacing the current 126-year-old bridge, which is in "poor" condition and serves as an important travel route of the eastern corridor. Closing the bridge permanently due to further deterioration would have substantial impacts to rail and marine traffic, the local community and emergency services. Rehabilitation of the existing 126-year-old bridge’s structure is also not a feasible option due to the condition and age of the existing bridge. The proposed activity is necessary to meet the Project goals to restore or replace the existing deteriorated bridge with a resilient bridge structure which will enhance safety and reliability of rail service, offer operational flexibility, and ease of maintenance, and provide for increased

capacity and efficiencies of rail transportation along the New Haven Line/Northeast Corridor, while maintaining or improving navigational capacity and dependability for marine traffic in the Norwalk River. J. Hanifin Test., starting at 02:24:17. Upgrades to the Walk Bridge, through replacement, are needed to increase bridge reliability, incorporate bridge redundancy, and provide a sustainable bridge for significant weather events, thereby accommodating current and future rail and marine traffic. APP-38.3; J. Hanifin Test., starting at 02:24:17.

DOT analyzed three (3) different construction methods for the new pier foundation of the proposed bridge including: 1) use of drilled shafts installed within individual permanent steel casings, 2) use of pile-supported piers constructed with marine enclosures (cofferdams), and 3) use of spread footings supported on rock. DOT selected the drilled shaft construction method based on its alignment with Project goals and its ability to meet the structural design, span length, and constructability considerations associated with the proposed bridge. This construction technique will minimize the extent of in-water work, reduce the amount of sediment dredging/excavation, and reduce schedule risks by eliminating the time-consuming and risky process of constructing and dewatering sheet-pile cofferdams necessary for the pile-supported foundation. APP-1.7; APP-30.3. As a result, the structure and fill associated with the Project is no greater than necessary to accomplish its intended function and there is no technically feasible alternative for accomplishing the Applicant’s objectives that would further minimize adverse impacts to the surrounding area. Due to the proposed removal of the existing bridge's center swing support pier, the replacement bridge results in a betterment of the navigation channel by providing a wider horizontal clearance. The final condition is a

single channel that more than doubles existing horizontal navigational clearances and improves vertical clearance by ten feet. C. Brown Test., 00:33:57, 00:37:57, 01:09:41; APP-1.5, p. 6.

The Draft License requires the Applicant to take reasonable measures to minimize and limit the impacts of the proposed activities both generally and to specific resources. APP-34.3; A. Davis Test., starting at 02:59:00. In addition to specific construction methods identified in the proposed Findings of Fact above, the Project includes: installation and maintenance of sedimentation and erosion controls; compensatory wetlands mitigation; utilization of marine enclosures and turbidity curtains; seasonal limitations on in-water work and in-water excavation; and compliance with best management practices, strategies and restrictions. APP-1.2; APP-30.3; C. Brown Test., starting at 00:42:25, 00:46:12; APP-32.3; K. Slattery Test., starting at 03:27:12; APP-45. All of these conditions ensure that the proposed activity will be conducted in a manner that will minimize the temporary and permanent impacts from the bridge replacement and all associated activities.

As such, DOT has established measures which will minimize wetland impacts to the greatest extent practicable. Any unavoidable impacts will be balanced with mitigation that exceeds the minimum requirements imposed by regulatory agencies and will actually enhance the wetland habitat of the Norwalk Harbor. APP-30.3; C. Brown Test., starting at 00:46:12.; APP-32.3; K. Slattery Test., starting at 03:26:59.

2. Recreational and navigational uses

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

> (1) 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;
> (2) The proposed activity will not be located in a way which unreasonably interferes with a navigable channel or small craft navigation;
> (3) The proposed activity will not cause or contribute to sedimentation problems in adjacent or nearby navigable waters, navigation channels, anchorages or turning basins.

R.C.S.A. § 22a-30-10(c).

The proposed bridge will not impede navigation on the Norwalk River, but instead will improve marine traffic conditions. The Project may temporarily affect adjacent navigational uses by recreational watercraft, but the Project's complex construction schedule has been proposed to minimize disruptions to both river and rail traffic during construction. APP-1.5, p. 6, 10. For most of the Project duration, DOT plans to keep Norwalk River open to traffic by restricting construction activity to one channel while keeping the other channel open to marine traffic. APP-1.5, p. 6; C. Brown Test., starting at 01:33:29; A. Davis Test., starting at 02:53:56; APP-13.4, NTC Waterway Restrictions and Protection of Marina Operations. Further, using Manresa Island as a water-based construction staging and storage yard would eliminate encroachment into the Norwalk River, as the existing slip is outside the navigation channel. APP-37.3; R. Bertoli Test., 3/15/22, starting at 04:50:08. There will be no adverse permanent impacts to navigation as the replacement bridge will improve reliability of bridge operations, the increased height will reduce the frequency of bridge openings, and the widened channel will improve safety for rowing and other small boats.

The Walk Bridge Replacement Project would improve public access to and use of public trust lands near the bridge and facilitate expansion of the coastal access network

(APP-53, DEEP Coastal Access Guide) along the east side of the Norwalk River, providing waterfront access mitigation. APP-1.6, p. 12. DOT also will construct an eastern path connection of the Norwalk Harbor Loop Trial via the existing and partially lowered eastern abutment of the existing bridge. APP-1.1, p.2; APP-38.3; J. Hanifin Test., starting at 02:26:02. The pedestrian and bicycle connection would facilitate the goals and vision of the Norwalk Master Plan of Conservation and Development, the Norwalk Pedestrian and Bikeway transportation Plan (2012), the Norwalk Trail Study – Maritime Link (2014), and the Mid-Harbor Planning Study (2005). APP-1.6, p. 12; APP-53, DEEP Coastal Access Guide.

After construction, the replacement bridge will improve coastal navigation and water-dependent uses, including for upriver commercial marine users. It is reasonable to conclude that the temporary impacts will be minimal and post-construction conditions will be substantially improved from the pre-construction deteriorated conditions. The temporary interference with recreational activities is reasonable given the necessity of the Project.

3. Erosion and sedimentation

In order to make a determination that a proposed activity will preserve the wetlands of the State and not lead to their despoliation and destruction the DEEP Commissioner shall, as applicable, find that:

> (1) 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;
> (2) Temporary erosion control measures will be utilized on the project site both during and after construction;
> (3) When permanent erosion control measures are proposed, nonstructural alternatives are utilized unless structural alternatives are demonstrated to

be unavoidable and necessary to protect infrastructural facilities, water-dependent uses and existing inhabited structures;

(4) Any structure or fill shall:

(A) Not cause a significant adverse impact on the movement of sediments on or along the shoreline;

(B) Not cause erosion of adjacent or downdrift areas;

(C) If necessary, include provision for the transfer of sediment to downdrift areas to prevent those areas from being deprived of sediments;

(5) 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;

(6) When areas are proposed to be dredged:

(A) They are laid out so as to make the best practical use of existing water depths;

(B) They are designed to avoid siltation of any existing natural or established navigation channel;

(C) The best available methods are used to reduce sedimentation.

R.C.S.A. § 22a-30-10(d).

Due to the tidal nature of the Norwalk River, the proposed Project would not adversely affect the hydrologic or hydraulic properties of the river. Minor temporary increases in water surface elevations were calculated for the worst-case construction stages, including the placement of trestles and marine enclosures, but will not increase water levels beyond the top of stream bank or impact any buildings, parking lots or other developed areas as summarized in DOT's Walk Bridge Hydraulic Design Report. APP-16, Walk Bridge Hydraulic Design Report; S. Flormann Test., starting at 04:08:42. The Project was designed to avoid, minimize, or mitigate adverse impacts to the floodplains associated with the Norwalk River and Long Island Sound while also providing stormwater treatment. APP-31.3; S. Flormann Test., starting at 04:21:00. DOT analyzed the Project's temporary impacts and confirmed that no adverse impacts are anticipated to adjacent properties or developed areas.

Additionally, the sedimentation control system required in the Draft License's terms and conditions will adequately prevent erosion and sedimentation from construction activities from entering the Norwalk River and affecting navigation. APP-36.3; M. Mendick Test., starting at 06:05:30; APP-12.1, Controlled Materials Handling; APP-12.2, Sediment Handling; APP-14.0 through APP-14.5, LWRD License Application Dredging Consultation Form and attachments. The contract documents require DOT's contractor to comply fully with all applicable permits, laws, and regulations, as well as required best management practices prescribed by DOT. Limits on noise pollution and vibration and monitoring and reporting requirements are clearly defined in the contract documents. Appropriate specifications for routine environmental controls, including sedimentation control fence, haybales, turbidity curtains, check dams, also have been included. APP-36.3; M. Mendick Test., starting at 06:05:30. DOT will take a multilayer approach to overseeing environmental compliance, including a dedicated environmental inspector responsible to enforce the contract and environmental permit requirements, and best management practices. APP-36.3; M. Mendick Test., 06:05:30 and 06:09:55; APP-54, DOT Construction Manual.

4. Marine fisheries, shellfisheries, and wildlife

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

> (1) The existing biological productivity of any wetland will not be unreasonably affected;
> (2) Habitat areas, such as habitat of rare and endangered wildlife and fish species, will not be destroyed, filled, or otherwise unreasonably affected;
> (3) Wildlife and their nesting, breeding or feeding habitats will not be unreasonably reduced or altered;

(4) Erosion from the proposed activity will not result in the formation of deposits harmful to any fish, shellfish or wildlife habitat;
(5) Shellfish beds will not be adversely affected by changes in:
(A) Water circulation and depth patterns around and over the shellfish beds;
(B) Natural relief of shellfish beds;
(C) Grain size and distribution of sediment in shellfish beds;
(6) The timing of construction activities takes into consideration the movement and life stages of fish, shellfish, and wildlife;
(7) The proposed activity will not unreasonably interfere with the harvesting or maintenance of leased, franchised or natural shellfish beds.

R.C.S.A. § 22a-30-10(e).

There will be no significant adverse impacts to marine fisheries, shellfisheries, and wildlife as a result of the proposed activity. Protection protocols, including best management practices and time of year restrictions, will ensure that any impacts to wildlife and marine resources in the Project area are mitigated to the greatest extent possible.

The Applicant consulted with multiple stakeholders throughout the course of the Project, described herein, as it considered best management practices and mitigation methods for wildlife, fisheries, and shellfisheries. Those stakeholders include CT DEEP Fisheries, CT DEEP Wildlife, CT Dept. of Agriculture Bureau of Agriculture, NOAA NMFS GARFO, National Marine Fisheries Essential Fish Habitat and Endangered Species Coordination, and U.S. Fish and Wildlife Endangered Species Coordination. DOT extensively documented each coordination with regulatory agencies and other interested stakeholders starting in 2014, and it is clear that DOT exceeded the standard practices for this type of complex project to avoid adverse impacts and fully consider the concerns of stakeholders. APP-34.3; A. Davis., starting at 02:45:36; APP-1.57.1; APP-1.57.2; APP-

1.58.3; APP-1.58.2; APP-1.58.1; APP-22 – 22.2; APP-1.60. K. Slattery Test., starting at 03:36:50.

The Application was analyzed for impacts to protected wildlife species – three (3) of which were identified at Site 10: peregrine falcon, northern diamondback terrapin, and osprey.[13] The Draft License sets forth protocols that the Applicant must follow during Project construction to ensure that the feeding, nesting, breeding patterns and habitats of these species will not be adversely affected. Generally, no construction and/or inspection activities may occur within 400-feet of a nesting peregrine falcon between April 1 and July 31. Special precautions will be implemented during the terrapin's active period, from April through October, including the installation of a protective silt barrier fence and daily inspections for terrapin presence in the Project area. During the terrapin's dormant period, construction in wetlands/watercourse and sandy borders of tidal creeks and salt marshes is prohibited unless those areas are in active construction prior to November 1 and do not host any terrapin habitat. Vehicles on both land and water will be required to use extra caution and reduced speeds on and around Manresa Island to protect terrapin activity. Additionally, to allow for nesting ospreys to acclimate to the construction activities, any work at Manresa Island's Staging and Storage Yard will begin either before April 15 or after August 1. DEEP Wildlife and NDDB concur that the Project will have no adverse impacts to wildlife. APP-1.4, p 25, 26; APP-1.58.1; APP-1.58.3.

The Project will also have no significant impact on marine fisheries and shellfish. APP-1.4, p 25, 26. No in-water work will be performed at Manresa Island's staging and storage yard, so no marine resources in that area of the Project will be affected.

[13] Osprey are not a state protected species but are protected by federal law. M. Grzywinski Test., starting at 06:16:35.

Additionally, no commercial shellfish beds exist within Project limits. Turbidity curtains, the use of which has been coordinated with the Norwalk Shellfish Commission, and marine enclosures will be installed around turbidity-producing construction activities to minimize or prevent harmful sedimentation deposits to fish and shellfish habitat. APP-1.4 p. 19; APP-34.3; A. Davis Test., starting at 02:51:29; C. Brown Test., starting at 00:46:12, 00:53:33; APP-1.2; APP-45. All vibratory actions conducted between April 1 and June 30 of each construction year will be confined to occur between one (1) hour after sunrise and one (1) hour before sunset to protect fish migration. The Applicant will implement a "soft start" method for construction to mitigate adverse noise impacts to fisheries. APP-1.14, General Notes. A. Davis., starting at 02:51:46. One of the Norwalk River channels will remain open at all times to allow free fish passage, except for a temporary time period to install the lift spans and remove the pivot piers. The federal and state stakeholders that the Applicant consulted with, cited above, all concur that the Project will not have any significant impact on marine resources.

Wildlife and marine resources in the Project area currently coexist with the inherent activity of an urban environment, however adverse impacts will be mitigated to the greatest extent possible by the best management practices, strategies, and restrictions described herein. APP-34.3; A. Davis Test., starting at 03:05:03.

5. Circulation and quality of coastal or tidal waters

To make a determination that a proposed activity will not result in a significant adverse impact to the circulation and quality of coastal or tidal waters, the DEEP Commissioner shall, as applicable, find that:

(1) 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;
(2) Water stagnation will neither be caused nor contributed to, and the ability of wetlands and adjacent water bodies to flush themselves will not be adversely affected;
(3) Pile-supported construction will be utilized to the fullest extent practicable;
(4) The proposed activity will not result in water pollution which unduly affects:
(A) The bottom fauna;
(B) The physical or chemical nature of the bottom;
(C) The propagation and habitats of shellfish, finfish and wildlife.

R.C.S.A. § 22a-30-10(f).

The proposed activity will not have a significant adverse impact on the circulation and quality of tidal waters. Any impacts to water quality will be temporary and minimized through best management practices and permit conditions which will prevent sedimentation and debris from entering and affecting the resources.

Specifically, the Project will not adversely affect water circulation in the Norwalk River. DEEP-18A. The Applicant's hydraulic modeling demonstrates that the Project will not have any significant impact on the 25, 100, or 500-year storm events. APP-16. Through the removal of the existing pivot pier and the widening of the navigation channel, the Project will improve passage of water under the structure rather than cause or contribute to water stagnation. D. Santa Test., starting at 04:28:02. The proposed bridge will be supported by piles which will allow water to flow freely through and around those structures. APP-40. Additionally, because no in-water work will be conducted at Manresa Island (APP-2.2), the proposed activity will not adversely affect alterations of patterns of tidal exchange or flushing rates, freshwater input or existing basin characteristics and channel contours in that area. APP-16, Walk Bridge Hydraulic Design Report; APP-31.3;

S. Flormann Test., starting at 04:08:42. The Applicant's mitigation protocols will ensure that the Project does not adversely alter the pre-Project water circulation of the Norwalk River.

Similarly, the Project will not adversely impact the current water quality of the Norwalk River. Turbidity curtains and marine enclosures will be deployed around all construction activities, and the monitoring of water quality stations whenever in-water work is being performed will allow the Applicant to remedy harmful sedimentation deposits into Norwalk River and prevent adverse impacts to marine resources in the area. APP-13.6; APP-35.3. Three in-situ baseline water quality monitoring stations were installed at the 1) Walk Bridge, 2) Stroffolino Bridge, and 3) City of Norwalk Police Dock. The pre-construction monitoring indicated that the naturally occurring turbidity levels naturally fluctuate in the Norwalk River. To account for these variations, the Department is utilizing action levels that rely on changes in turbidity from an upstream (based upon flow direction) to trigger the following response actions. This strategy has been utilized in other projects within the State. APP-35.3. The Applicant will not conduct any tree or vegetation cutting at Site 10, and thus will not provide an erodible surface that could impact water quality. Any contaminated sediment or materials will be properly handled and removed from the Project site in accordance with established protocols cited herein. The Applicant will also implement a stormwater management system to improve the quality of runoff before it reaches the Norwalk River. The water quality of the river will improve due to the construction of the wetland mitigation parcels. These mitigation efforts will ensure that the Project does not adversely affect water circulation or quality of the Norwalk River.

6. Protection of life and property from hurricanes or natural disaster

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

> (1) The proposed activity will not increase the potential for flood or hurricane damage on adjacent or adjoining properties;
> (2) The proposed activity will not increase the exposure of any property, land or structures to damage from storm waves and erosion produced thereby;
> (3) The proposed activity will not result in significant increase in the velocity or volume of flood water flow both in streams and estuaries;
> (4) 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.

R.C.S.A. § 22a-30-10(g).

The proposed activity is consistent with the need to protect life and property from hurricane or flooding. The Applicant conducted a hydraulic analysis to assess the impact of the construction activities and post-construction conditions on the floodplain. S. Flormann Test., starting at 04:08:42; APP-16. As discussed above, the Project was designed to minimize and avoid encroachment of its elements and construction activities into the tidally controlled 100-year and 500-year floodplains, shown in APP-15.7, FEMA Flood Insurance Rate Maps. APP-31.3; S. Flormann Test., starting at 04:08:42; APP-16. The Norwalk River does not have a FEMA regulatory floodway within Project limits. APP-31.3; S. Flormann Test., starting at 04:07:03. Due to the tidal nature of Long Island Sound, the Project will not adversely affect the hydrologic or hydraulic properties of the Sound or the hydrodynamic forces. APP-16; S. Flormann Test. starting at 04:14:11. There would

also be no permanent water surface elevation impacts or increases as a result of the Project. APP-16; S. Flormann Test., starting at 04:09:50.

In sum, the Applicant's hydraulic modeling demonstrates that the Project will not have any significant impact on the 25, 100, or 500-year storm events. APP-16. As such, the proposed activities will not increase the potential for flood or hurricane damage on adjacent or adjoining properties, and will not increase exposure of any property, land, or structures to damage from storm waves and erosion. APP-31.3.

7. Criteria for water dependent use of tidal wetlands

To make a determination that a proposed activity within the coastal boundary, as defined and mapped in accordance with Conn. Gen. Stat. § 22a-94 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 the highest priority and preference, the DEEP Commissioner shall, as applicable, find that:

> (1) When the proposed activity is not a water-dependent use:
>
> (A) The wetland is unsuitable for or incapable of supporting a water-dependent use;
>
> (B) There is little or no demonstrable demand for water-dependent uses suitable for or capable of being supported by the wetland;
>
> (C) A non-water-dependent use has substantially fewer adverse impacts than all water dependent uses suitable for or capable of being supported by the wetland;
>
> (2) All reasonable measures which would minimize adverse impacts on future water dependent uses are incorporated as limitations on or conditions to the permit;
>
> (3) 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 wetland.

R.C.S.A. § 22a-30-10(h).

The proposed activity is consistent with policies favoring water-dependent uses in these resource areas. The Project area supports an essential piece of transportation infrastructure, and there was no other alternative but to design a replacement structure that minimizes encroachment into regulated areas. APP-1.7.

The goal of the Project is to maintain rail service and the use of the waterway to the greatest extent practicable. C. Brown Test., starting at 00:27:17. The replacement bridge is within the footprint of the existing bridge and was designed to ensure that the activities for removal and replacement result in minimal impacts to the natural environment. APP-30.3, p. 6-7; C. Brown Test., starting at 00:35:15. The Draft License conditions that DOT market excess property from the acquisition of SoNo Wharf, LLC, George Dixon, Sr., 3 Goldstein Place, LLC, and 68 and 90 Water Street. DEEP-20; M. Grzywinski Test., 06:25:34. The Draft License conditions DOT to review all bids and proposals from potential buyers and, with advice and guidance from the DEEP Commissioner, select the highest bid that demonstrates an integrated, quality and water-dependent use. APP-30.3; C. Brown Test., starting at 00:35:15; APP-26.2, Sale of Excess Property; DEEP-20. Water dependent uses include, but are not limited to, marinas, recreational and commercial fishing and boating facilities, water-based recreational uses, and any use which provides general public access to the Norwalk River. APP-30.3, p.7; APP-1.5; DEEP-20.

The Project's navigation improvements will be beneficial for water-dependent uses of adjacent properties— particularly for upriver commercial users. APP-1.6, p. 12. This positive impact helps to mitigate the short-term effects of constrained marine passage during construction. APP-1.6, p. 12. The replacement of the Walk Bridge would aid in

improving congestion with wider clear access in the navigational channel following completion of construction. APP-33.3. D. Santa Test., starting at 4:28:02. J. Hanifin Test., starting at 02:25:08. The widened channel at Walk Bridge via the removal of the pivot pier and fender system also would improve rowing conditions and rower and other small boat safety, by providing more visibility for rowers and boaters. APP-1.5, p.6, 10; APP-8, Walk Bridge Navigation Safety Risk Assessment. The required channel maintenance dredging to the authorized dredge depth would straighten the alignment between Walk Bridge and the Stroffolino Bridge and improve the navigability of the river between and through the two bridges, improving overall conditions for large and small vessel users. APP-1.5, p. 6, 10. Additionally, the Project would improve public access to and use of public trust lands near the bridge and facilitate expansion of the coastal access network (APP-53, DEEP Coastal Access Guide) along the east side of the Norwalk River, providing waterfront access mitigation. APP-1.6, p. 12. Site 5 was identified and proposed for relocation and installation of a 10-foot-wide by 165-foot-long floating dock, two associated access ramps and associated float restraint piles for use by the Maritime Aquarium and the Sheffield Island Lighthouse ferry vessels for uninterrupted operations through the duration of the Project. APP-30.3; C. Brown Test., starting at 01:02:41; APP-1.30. As such, the proposed activity will not permanently reduce the potential for water-dependent use of adjacent properties. Temporary impacts to navigation, access, and use of the Norwalk River are necessary due to safety considerations, and both will be restored to their current uses—with improved navigability—as soon as possible after construction ceases. C. Brown Test., starting at 01:02:41; APP-1.2; APP-1.43.

E. Structures, Dredging & Fill Act

The inquiry to issue a permit for work waterward of the coastal jurisdiction line required by Conn. Gen. Stat. § 22a-359(a) encompasses similar criteria to that evaluated above for work in tidal wetlands articulated in R.C.S.A. § 22a-30-10. The DEEP Commissioner shall 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 recreational 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. Conn. Gen. Stat. § 22a-359(a).

As indicated above, the Applicant will take the necessary steps to minimize impacts as required by the Draft License. The Applicant has adequately analyzed potential impacts in the resource areas as well as impacts on navigation, public access, and recreation. Those temporary impacts will be addressed by the chosen construction methods and best management practices, and the proposed mitigation efforts described herein. APP-36.3; M. Mendick Test., starting at 06:05:30; APP-38.3; J. Hanifin Test., starting at 02:31:30.

Indigenous fish and wildlife will be protected by the sediment control measures to be implemented during the aforementioned construction activities. APP-51, DEEP 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. Any temporary impacts will be minimized through the use of best management practices and permit conditions, including the use of the marine enclosures and turbidity curtains, which will prevent

sedimentation and debris from entering the resources. The proposed activities will not contribute to shore erosion or coastal flooding both during and after construction.

Coastal access and navigation will be impacted by temporary, partial closures of the channel during construction. Full channel closure will be kept to a minimum. The temporary impacts, however, will be minimal and post-construction conditions will be substantially improved from the pre-construction conditions. Although there may be increased congestion and temporary limitations of access associated with the bridge replacement during construction, the replacement Walk Bridge will aid in improving congestion with more than doubling the existing horizontal navigation clearance and improving the vertical clearance by ten (10) feet completion of construction. APP-30.3; C. Brown Test., starting at 01:09:41; APP-33.3; D. Santa Test., starting at 04:28:02.

The interest of the State in preventing water pollution and maintaining water quality will be addressed by the sedimentation control plan, water quality monitoring, above-described construction methods, and mitigations including best management practices and specifications. The Applicant will take sufficient steps, as demonstrated by the proposed mitigation methods herein, during and after construction to protect the interests of the State and its wetland resources.

F. Coastal Management Act

The proposed activity is also consistent with the relevant policies articulated in the Coastal Management Act, Conn. Gen. Stat. §§ 22a-90 through 113.[14] The Project and

[14] The proposed activity has been designed to meet the legislative goals and policies set forth in the Connecticut Coastal Management Act by avoiding long-term disruptions of existing water-dependent uses within the Norwalk River, enhancing coastal resources, improving navigational access and safety within the Norwalk River, enhancing an existing transportation facility and utilizing existing developed areas. *See* Conn. Gen. Stat. § 22a-92.

Draft License requirements adequately address the following policies of the Coastal Management Act applicable to this Application and Draft License:

(1) To require that structures in tidal wetlands and coastal waters be designed, constructed, and maintained to minimize adverse impacts on coastal resources 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. Conn. Gen. Stat. § 22a-92(b)(1)(D).

As discussed above, the bridge design, construction methods, and permit requirement for sedimentation and debris controls will collectively minimize any adverse impacts to resource areas. Those impacts that are unavoidable will be mitigated through the use of best management practices and Draft License conditions, including the use of the marine enclosures, turbidity curtains, and debris shields which will prevent sedimentation and debris from entering the resources.

(2) To encourage recreational boating. Conn. Gen. Stat. § 22a-92(b)(1)(G).

Although the proposed activity would temporarily affect adjacent navigational uses by recreational watercraft, the Project's complex construction schedule has been proposed to minimize disruptions to rail and river traffic during construction. APP-1.5, p. 6, 10. The proposed activities will have no permanent negative impact to navigation and access to and use of the Norwalk River.

(3) To encourage the enhancement of degraded intertidal flats. Conn. Gen. Stat. § 22a-92(b)(2)(D).

There are no degraded intertidal flats within the Project limits.

(4) To preserve tidal wetlands and prevent the destruction and despoliation thereof to maintain their vital natural functions and enhance degraded tidal wetlands and create tidal wetlands where possible for habitat creation. Conn. Gen. Stat. § 22a-92(b)(2)(E).

The Project will not cause the destruction or despoliation of tidal wetlands. During construction, the Applicant will avoid and minimize impacts associated with the replacement of the bridge. DOT will conduct the activities identified in the Compensatory Wetland Mitigation Areas authorized by the Draft License, including removal of Phragmites and wetland creation in accordance with detailed DOT specifications, including Specification on Control and Removal of Invasive Vegetation (APP-1.53); Specification on Tidal Wetland Creation (APP-1.49); Specification on Wetland Planting (APP-1.51); Disposal of Debris (APP-1.47); Fiber Roll (APP-1.52; Shoreline Grass Establishment (APP-1.52), and Notice to Contractor – Invasive Plan Species (APP-1.54). In addition, for the duration of the Project following completion of the tidal wetland planting work descried in the Authorized Activities, DOT will conduct the following maintenance procedures: (1) remove any debris such as garbage, floatables or excessive decayed plant material from the mitigation areas during the duration of the construction activities; (2) replace dead or missing plants up to one-year after their planting which have not already been compensated for by a suitable volunteer species; (3) repair or reestablish the stone sills. DOT will submit to the DEEP Commissioner no later than December 15th of each year following such procedures, documentation that indicates that such work has been completed. APP-30.3; C. Brown Test., starting at 01:18:52. The improvements represent adequate mitigation for the unavoidable impacts. DEEP-18A; DEEP-26; M. Grzywinski Test., starting at 06:30:06.

(5) To require that coastal highway improvements, including bridges, be designed and constructed so as to minimize adverse impacts on coastal resources and where possible enhance and in no case decrease coastal access and recreational opportunities. Conn. Gen. Stat. § 22a-92(c)(1)(G).

The bridge design, construction methods and the Draft License requirement for sedimentation and debris controls will collectively minimize any adverse impacts to resource areas. Based on the results of a Value Engineering Study (APP-18.1), DOT determined that improved Project value will result from using a smaller, pre-existing staging and storage area for assembling the lift spans, as opposed to constructing a new permanent marine staging yard at the Water Street parcels at the bridge site. APP-30.3; C. Brown Test., starting at 01:25:14. DOT will administer, oversee and inspect the Project in accordance with DOT's Construction Manual (APP-54, DOT Construction Manual) and in conjunction with the contract documents. APP-38.3; J. Hanifin Test., starting at 02:16:50; APP-36.3; M. Mendick Test., starting at 06:05:30. The proposed activities will have no permanent impact or have been designed to sufficiently minimize impacts on recreational activities, including navigation and access to and use of the Norwalk River. APP-33.3; APP-53, DEEP Coastal Access Guide; DEEP-26.

Further, DOT complied with the policy goals set forth in Conn. Gen. Stat. § 22a-92(b)(2)(G) to promote 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. APP-1.6. In consultation with water-dependent users of the Norwalk River, including rowing clubs, marinas, and other commercial interests (APP-28, Local Coordination; APP-29, Maritime Rowing Club Relocation Documentation), DOT has developed a Marine Use Plan to minimize the adverse impacts of construction on marine transportation and to develop water-dependent user/waterfront access strategies to mitigate impacts that cannot be avoided. APP-1.5, p. 6; APP-9, Marine Use Plan; J. Hanifin Test., starting at 02:12:23. As explained

in detail above, the Walk Bridge Replacement Project would improve coastal navigation and water-dependent uses, particularly for upriver commercial marine users and recreational boaters.

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 expert testimony in the record.

G. Reasonableness/balancing/public comments

Though outside of the scope of the Permit, some of the concerns raised at the public hearing warrant brief acknowledgement here. First, the Project will not adversely impact deer habitat and the expulsion of lone star ticks into communities surrounding Manresa Island. APP-58. The Applicant will not be cutting trees or vegetation on the island and will only be using an access road and staging area on the south portion of the island so the Applicant's activities will not drive deer off the island. Currently, at low tide, deer walk along the beach area into the nearby neighborhoods, and lone star ticks are not exclusive to Manresa Island as they are found throughout Fairfield and New Haven counties. A. Davis Test., starting at 03:09:17.

Though coal ash is present in the lay-down area on Manresa Island, the Applicant will lay separation fabric between the Applicant's six-inch stone base and the coal ash so there is no direct exposure or mixing of the materials during the Project's temporary use of this area and when the stone layer is eventually removed. APP-58; A. Fox Test., 03:53:39. The proposed activities would not significantly impact

the property owner's coal ash remediation efforts. J. Hanifin Test., starting at 02:37:39; R. Bertoli Test., starting at 05:27:47.

In response to concerns about high noise levels from construction, the Applicant procured a noise study which concluded that the Project will fully comply with both the City of Norwalk's Noise Ordinance and the Applicant's own noise limits. M. Mendick Test., starting at 06:01:37; R. Bertoli Test., starting at 05:02:38. The contract documents require the contractor to comply fully with all applicable permits, laws, and regulations, as well as required best management practices prescribed by DOT, including limits on noise pollution. APP-13.6; APP-36.3. Per these standards, the maximum allowable level of noise at the residence or occupied building nearest to the Project site is 90 dBA. APP-20 The Applicant also procured a traffic study which concluded that traffic in the areas of concern near Manresa Island will only increase during Project construction by approximately 1% daily and possibly 2% during peak hours. APP-19, Manresa Island Traffic Study; APP-58; R. Bertoli Test., starting at 04:56:42, 05:01:08. The Applicant would encourage safe driving through an extra layer of communication with vendors and subcontractors, law enforcement oversight, and the installation of "no Jake Brake" signage. APP-58. M. Mendick Test., starting at 06:03:59. The impact to waterborne traffic in the vicinity of Manresa Island will be comparable to the past use of the slip at Manresa Island when the plant was in operation. DOT also anticipates nominal light pollution from activities on Manresa Island, as it would be using downward-facing security lighting to illuminate a walking path and the lay down and slip areas. M. Mendick Test., starting at 06:02:55.

The Applicant ultimately chose Manresa Island as the location for staging and assembling the lift spans due to its existing infrastructure, proximity to the construction site for oversight and quality control purposes and reduced environmental impacts. APP-37.3; APP-58. R. Bertoli Test., starting at 04:50:08; C. Brown Test., starting at 01:27:13. Alternative sites were not recommended by the Project team due to additional costs for offsite construction, risks inherent to open-water transport, less control over the assembly process, and less flexibility with schedule changes. APP-58. R. Bertoli Test., starting at 05:19:21; APP-18.4; M. Mendick Test., starting at 05:52:29; C. Brown Test., starting at 01:27:13. Fencing, staging, and time-of-day limitations will ensure that the proposed activities will not permanently alter Manresa Island in any way. APP-1.45; APP-58. This is further supported in the Application because Manresa Island is listed as a construction easement site area. J. Hanifin Test., starting at 02:32:29, 02:42:59. A flood contingency plan will also be enforced throughout the Project which restricts the types of equipment and materials stored below the FEMA regulatory floodplain and how they can be stored. APP-58; APP-1.2. S. Flormann Test. starting at 04:15:06; APP-1.4; APP-13.5; APP-13.6; APP-15.

III. RECOMMENDATION

The preponderance of the evidence in the Record supports the issuance of the Draft License. DOT has demonstrated that the Application and its subsequent review conducted by DEEP complied with all the applicable statutory and regulatory requirements of Conn. Gen. Stat. §§ 22a-33, 22a-359, and 22a-361. Based on the factors outlined in the applicable statutory and regulatory framework, there is no prudent and

feasible alternative to the proposed regulated activity that meets the purpose of the Project and that would cause substantially fewer impacts to tidal wetlands.

The replacement of Bridge No. 04288R will result in a more resilient bridge structure that will enhance the safety and reliability of rail service, offer operational flexibility and ease of maintenance, and provide for increased capacity and efficiencies of rail transportation along the New Haven Line/Northeast Corridor, while maintaining or improving navigational capacity and dependability for marine traffic in the Norwalk River. Upgrades to the Walk Bridge, through replacement, are needed to increase bridge reliability, incorporate bridge redundance, and provide a sustainable bridge for significant weather events, thereby accommodating current and future rail and marine traffic. The Project strikes an appropriate balance between the obligation of the DOT to replace the bridge which, if not replaced in the relative short term, will present a risk to human health and safety, and DEEP's mission to protect the environment. As such, the Applicant respectfully submits and DEEP concurs that the preponderance of the evidence in the Record demonstrates that the Draft License that is the subject of this Application should be issued by the DEEP Commissioner as a Final License.

CONNECTICUT DEPARTMENT OF TRANSPORTATION

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CERTIFICATION

I hereby certify that on this 20th day of May, 2022, a copy of the foregoing was delivered electronically, by agreement, to the following service list:

Dept. of Energy & Environmental Protection:

Hearing Officer Kathleen Reiser, Kathleen.Reiser@ct.gov
Michael Lynch, Michael.Lynch@ct.gov
Micheal Grzywinski, Micheal.Grzywinski@ct.govGrzywinski@ct.gov

Courtesy Copies:

Mark Smith, marksmith1@gmail.com
John Pinto, pintoj@optonline.net

/s/ 438894
Cara C. Tonucci
Commissioner of the Superior Court

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

Attachment II

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 Department of Transportation, c/o Kevin Carifa
Licensee Address(s):	2800 Berlin Turnpike Newington, CT 06131
License Number(s):	201909990-SDF TW WQC
Municipality:	City of Norwalk
Project Description:	Remove the existing Metro-North railroad bridge and construct a new railroad bridge and other improvements for infrastructure.
Project Address/Location:	New Haven Line Railroad Bridge ("Walk Bridge"), Bridge No. 04288R, State Project No. 0301-0176
Waters:	Norwalk River
Authorizing CT Statute(s) and/or Federal Law:	CGS Section 22a-28 to 35; CGS Section 22a-359 to 363g; CGS Section 22a-90 to 112; Section 401 CWA (33 USC 1341)
Applicable Regulations of CT State Agencies:	22a-30-1 to 17, 22a-426-1 to 9
Agency Contact:	Land & Water Resources Division, Bureau of Water Protection & Land Reuse, 860-424-3019
License Expiration:	Ten (10) years from the date of issuance of this license.
Project Site Plan Set:	Two hundred (200) sheets of plans prepared by HNTB dated May 21, 2021.
License Enclosures:	LWRD Dredging and General Conditions ; LWRD Dredging Report ; LWRD Work Commencement Form ; LWRD Compliance Certification Form ; Site Plan Set

*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 # 201909990-SDF TW WQC and as depicted on any site plan sheets / sets cited herein:

Remove an existing moveable bridge, Bridge No. 04288R, including the superstructure, substructure elements, overhead contact systems, timber pier protection system and de-activated electrical and railroad submarine cables and railroad submarine cables and construct a new four-span replacement bridge structure, including a 240-foot vertical lift span consisting of the following activities:

Site 1 Construction Activities – West of Navigation Channel

a. Installation of a temporary marine enclosure around the existing IMAX Theater, and removal of the existing IMAX Theater, including the foundation, conduct regrading and placement of stone riprap along the shoreline for construction staging and access;

b. Removal of an existing stormwater outfall and installation of a 24” diameter reinforced concrete pipe (“RCP”), construction of a new end wall and placement of modified riprap;

c. Removal of existing Transmission tower (Structure 529) located on the west side of the existing bridge in its entirety along with the existing overhead transmission lines;

d. Installation of the Metro-North Railroad (“MNR”) traction power and signal, communication and signal and bridge power and control cabling, crossing the river via an approximately 5’ wide by 490’ long micro-tunneling located beneath the Norwalk River on the southern side of the existing and proposed bridge;

e. Installation and removal of temporary timber work trestles, with an approximate top of deck elevation of +10.5’ NAVD88 located on the northwest side of the Norwalk River and with an approximate top of deck elevation of +10.66’ NAVD88 on the southwest side of the Norwalk River, including a temporary fender system and navigational lighting for each work trestle;

f. Construction of Pier 2 lift span tower foundation within an approximately 65’ wide by 110’ long temporary marine enclosure;

g. Installation of a temporary marina enclosure around the existing stone block Pier 2 and removal of existing stone pier, including the pier masonry and timber matting at approximately elevation -20.0’ NAVD88, and the removal of the existing timber fender system and accumulated sediment around the pier;

h. Installation of a new pier-mounted fender system to the Pier 2 lift span tower foundation identified above;

i. Removal of three (3) existing deactivated submarine cables, either by lifting them or mechanical excavation and removal;

j. Backfill the excavated trench using soils of similar structural and organic characteristics;

k. Using water-based equipment and mechanical means, maintenance dredge approximately 330 cubic yards of sediment from an approximately 4,900 square foot area at the bridge site to a depth of -13.98’ NAVD88 (-10 MLLW);

Site 2 Construction Activities - Navigation Channel

a. As described in **Site 1 Construction Activities**, above, install the MNR traction power and signal communication and signal and bridge power and control cabling, crossing the river via micro-tunneling;

b. As described in **Site 1 Construction Activities**, above, removal of three (3) existing submarine cables;

c. Installation of the slide rail system and removal and disassembly of the existing swing span;

d. Installation of a temporary marine enclosure around the existing pivot pier;

e. Removal of the existing central stone pivot pier and timber matting, including the removal of the existing timber fender system, installation of a temporary floating fender system and excavation of sediment from around the pier;

f. Using water-based equipment and mechanical means, maintenance dredge approximately 4,210 cubic yards of sediment from an approximately 40,800 square foot area at the bridge site to a depth of -13.98' NAVD88 (-10 MLLW);

g. removal of the existing fender system and installation of a temporary fender system at the pivot pier;

h. Slide-in and float-in operations for the installation of the proposed lift spans consisting of a temporary slide rail system supported on the southwest and southeast construction work platforms will be used to install the south lift span into its final position;

Site 3 Construction Activities - East of Navigation Channel

a. As described in **Site 1 Construction Activities**, above, install the MNR traction power and signal communication and signal and bridge power and control cabling, crossing the river via micro-tunneling;

b. Installation and removal of temporary timber work trestles, with an approximate top of deck elevation of +10.5' NAVD88 located on the northeast side of the Norwalk River and with an approximate top of deck elevation of +10.66' NAVD88 located on the southeast side of the Norwalk River, including a temporary fender system and navigational lighting for each work trestle;

c. Construction of Pier 3 lift span tower foundation within an approximately 107' wide by 110' long temporary marine enclosure;

d. As described in **Site 1 Construction Activities**, above, removal of three (3) existing deactivated submarine cables, either by lifting them or mechanical excavation and removal;

e. Installation of a temporary marina enclosure around the existing stone block Pier 3 and removal of existing stone pier, including the pier masonry and timber matting at approximately elevation -20.0' NAVD88, and the removal of the existing timber fender system and accumulated sediment around the pier;

f. Installation of a new pier-mounted fender system to the Pier 3 lift span tower foundation identified above and installation of a pile-supported fender system to protect the new control house located on the northern end of Pier 3;

g. Using water-based equipment and mechanical means, maintenance dredge approximately 770 cubic yards of sediment from an approximately 7,500 square foot area at the bridge site to a depth of -13.98' NAVD88 (-10 MLLW);

h. Removal of upland buildings located at 1, 4, 6 and 21 Goldstein Place;

i. Removal of existing Transmission tower (Structure 530) located on the east side of the existing bridge in its entirety along with the existing overhead transmission lines;

Site 4 Construction Activities – Vessel Dock Relocation

a. Remove an existing 10' wide by 50' long floating dock and a 10' wide by 80' long floating dock, associated access ramps and float restraint piles which are utilized by the Maritime Aquarium and Sheffield Island Lighthouse Ferry vessel docks;

b. Install a 10' wide by 213' long floating dock with the two access ramps identified above and an associated 4' wide by 80' long access ramp and associated timber float restraint piles;

c. Conduct new dredging of approximately 300 cubic yards of sediment from an approximately 4,600 square foot area to facilitate vessel access;

Site 5 Construction Activities – Marine Staging Yard

a. Install approximately 300 linear feet of steel sheets or H-piles bulkhead with a top elevation of +8.0' NAVD88 located landward of the existing coastal jurisdiction line ("CJL") at properties identified as 68 and 90 Water Street;

b. Develop an upland construction staging and storage yard located at 68, 70 and 90 Water Street (identified as Parcels 2/84/19, 2/84/63 and 2/84/33, respectively), including the demolition and removal of an existing warehouse located at 70 Water Street;

c. Remove existing piles or cut them 2-feet below the existing mudline, existing bulkhead components,

d. Conduct new dredging consisting of removal of approximately 6,400 cubic yards of sediment from an approximately 21,600 square foot area to a depth of -11.0' NAVD88;

e. Install a temporary 10' wide by 165' long floating dock, two (2) associated access ramps and associated float restraint piles for use by the Maritime Aquarium and the Sheffield Island Lighthouse Ferry vessels;

f. Removal of the temporary in-water structures and upland facilities following the completion of the project;

Site 6 Construction Activities – Compensatory Wetland Mitigation Areas

a. Conduct wetland restoration at six (6) areas in the vicinity of the Walk Bridge, consisting of the treatment and removal of invasive species, restoration of shoreline and salt marsh consisting of:

1. Invasive Species (Phragmites) Treatment – Areas 1, 3 and 6B: annual cutting and herbicide spraying of the Phragmites located in these areas throughout the construction period until the project is completed;

2. Invasive Species (Phragmites) Treatment and Shrub Planting – Areas 4, 5 and 6A: annual cutting and herbicide spraying of the Phragmites located in these areas and

planting of Eastern baccharis (*Baccharis Halimifolia*) and marsh elder (high-tide bush) (*Iva frutescens*). DOT Office of Environmental Planning ("DOT OEP") staff will determine the last year of construction if the wetland plantings are needed;

3. Phragmites Removal and Salt Marsh Restoration – Area 2 (Oyster Shell Park): removal of Phragmites and other invasive plant species; over-excavation of these areas to a minimum depth of 3' to remove Phragmites rhizomes; placement of suitable topsoil with organic matter and regrading area to an elevation suitable for tidal wetland vegetation growth, including salt pannes; construction of living shoreline with a stone sill consisting of 24" to 30" diameter stones buried 6" to 12" within the substrate, placement of organic material and oyster cultch on the stone sills;
4. Riprap Removal and Salt Marsh restoration – Area 6: the proposed restoration activities include the excavation of existing stone riprap, placing topsoil with organic content, construction of a shoreline with a stone sill and placement of organic material and oyster cultch on the stone sills, and placing native tidal wetland vegetation;

Sites 7, 8, and 9 Construction Activities – Barge Mooring

a. Mooring location for small work support boats located south of the Route 136 (Washington Street) Stroffolino Bridge and south of the Norwalk Visitor's Dock (Site 7);

b. Mooring location for construction barges located on the east side of Norwalk Harbor (Site 8);

c. Mooring location for construction barges located in Long Island Sound (Site 9);

Site 10 Construction Activities – Manresa Island Staging and Storage Yard

a. Use an existing dock facility located at Manresa Island for the assembly of the replacement bridge lift spans and transfer of materials to and from the existing bridge site via barge, including berthing of construction and material barges and safety vessels, as needed.

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. Upon completion of State Project No. 301-176, Walk Railroad Bridge Replacement, the Department of Transportation ("DOT") shall identify any excess property from the acquisition of SoNo Wharf, LLC (DOT 301-176-001), George Dixon, Sr. (301-176-002), and 3 Goldstein Place, LLC (301-176-003), 68 and 90 Water Street (Parcels 2/84/19 and 2/84/33). DOT shall market said excess property and solicit bids for the sale of the property. DOT shall review all bids and proposals from potential buyers and, with advice

and guidance from the Commissioner of the Department of Energy & Environmental Protection, select the highest bid that demonstrates an integrated, quality, water-dependent use. Water-dependent uses include, but are not limited to; marinas, recreational and commercial fishing and boating facilities, finfish and shellfish processing plants, waterfront dock and port facilities, shipyard and boat building facilities, water-based recreational uses, and any use which provides general public access to the Norwalk River.

3. The Licensee shall dispose of the dredged material authorized herein in accordance with all applicable requirements of Chapter 446k Water Pollution Control, Chapter 445 Hazardous Waste, and Chapter 446d Solid Waste of the Connecticut General Statutes.
4. All piling driving and extraction authorized herein conducted between April 1st and June 30th, inclusive, of any calendar year shall only occur between one hour after sunrise to one hour before sunset. Shaft drilling and micro-pile drilling conducted within a caisson and marine enclosure are not subject to this restriction.
5. A soft start shall be required for all pile driving and extraction, including the installation of sheet piles, conducted between March 16th through October 31st, inclusive, of any calendar year.
6. All dredging authorized herein shall be conducted within a turbidity curtain between December 1st through January 31st, inclusive, of any calendar year and dredging conducted from February 1st through November 30th shall be conducted within a marine enclosure enclosed by a turbidity curtain.
7. No construction and/or inspection activities which are located within 400 feet of an identified Peregrine Falcon (*Falco peregrinus*) nest shall be conducted between April 1st through July 31st, inclusive, of any calendar year to protect nesting peregrine falcons.
8. Use of Manresa Island Staging and Storage Yard shall begin prior to April 15th or after August 1st, inclusive, of any calendar year to allow for the nesting ospreys (*Pandion haliaetus*) to acclimate to the existing construction activities.
9. The Licensee shall follow the approved protocols to protect Northern diamondback terrapin (*Malaclemys t. terrapin*) during the active nesting season from April 1st through October 31st, inclusive of any calendar year in accordance with CT DOT Section 1.1 Environmental Compliance.
10. All unconfined in-water work shall be prohibited between July 15th through September 30th, inclusive, of any calendar year in order to protect spawning shellfish unless otherwise authorized in writing from the Commissioner.
11. The issuance of this License does not relieve the Licensee of their obligations to obtain any other approvals required by applicable federal, State and local law, including discharge permits for water handling.
12. The Licensee shall ensure that no debris enters the Norwalk River during the work authorized herein and shall immediately remove any debris that enters the water.
13. Upon completion of the work authorized herein, the Licensee shall remove the four (4) temporary work platforms in their entirety and restore the shoreline to pre-existing conditions.
14. The Licensee shall remove the central pivot pier and timber matting authorized herein to the depth of the existing federal navigation channel, -13.98’ NAVD88 or -10 MLLW.

15. The Licensee shall install and maintain the sedimentation and erosion controls and the debris shield in optimal condition during the work authorized herein. The turbidity curtains authorized herein shall be Type 3 as noted in Attachment M6 – Turbidity Control Curtains of the application materials.
16. The Licensee shall conduct the activities identified in the Compensatory Wetland Mitigation Areas authorized herein, including the removal of Phragmites and wetland creation in accordance with CT DOT Specification on Control and Removal of Invasive Vegetation (Item No. 0952051A), Specification on Tidal Wetland Creation (Item No. 0948013A), Specification on Wetland Plantings (Item No. 0949875A) and other applicable specifications. In addition, the Licensee shall for the duration of the construction project following completion of the tidal wetland planting work described in the **Authorized Activities**, above, conduct the following maintenance procedures: 1) remove any debris such as garbage, floatables or excessive decayed plant material from the mitigation areas during the duration of the construction activities; 2) replace dead or missing plants up to one-year after their planting which have not already been compensated for by a suitable volunteer species; 3) repair or reestablish the stone sills. The Licensee shall submit to the Commissioner no later than December 15th of each year following such procedures, documentation that indicates that such work has been completed.
17. The Licensee shall post a Notice to Mariners identifying closures of the Norwalk River federal navigation channel in coordination with the United States Coast Guard.
18. The Licensee shall install temporary aids to navigation at each barge mooring location authorized herein in coordination with the United States Coast Guard.
19. At no time shall the Licensee allow the barge or equipment to rest on the substrate. Any such barge must move to deeper waters during periods of low water in the area of the proposed activity. It shall not be a defense to this provision for the Licensee to assert that it has no control over the operation of the barge.

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

_____ _____

Date

Betsey Wingfield
Deputy Commissioner
Department of Energy & Environmental Protection

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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

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): 201909990-SDF TW WQC

   Municipality in which project is occurring: City of Norwalk

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

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

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LWRD 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: 201909990-SDF TW WQC
DEEP License No(s): City of Norwalk

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)