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Affirmative Action/Equal Opportunity Employer

Date September 3, 2021

Robert Murphy, Chairman Town of Old Saybrook Harbor Management Commission 302 Main Street Old Saybrook, CT 06475

SUBJECT:

Certificate of Permission #202108248-COP Town Dock located at Ferry Place, Old Saybrook

Dear Mr. Murphy:

Please find attached a copy of your subject license and relevant enclosures which are being issued pursuant to your application. Your attention is directed to the conditions of the license. All work must conform to that which is specifically authorized. Please do not hesitate to contact me at micheal.grzywinski@ct.gov or 860-424-3674 should you have further questions.

Any work in regulated areas of the State which has not been authorized by a valid license is a violation of state law and subject to enforcement action by the Department of Energy & Environmental Protection and the Office of the Attorney General.

Your initiation of authorized activities will be relied upon as your agreement to comply with the terms and conditions of the license.

If you have not already done so, you should contact your local Planning and Zoning Office and the U. S. Army Corps of Engineers to determine local and federal permit requirements on your project, if any. Write the Corps' New England District, Regulatory Branch, 696 Virginia Road, Concord, MA 01742-2751; http://www.nae.usace.army.mil/ or call 1-800-343-4789.

Sincerely,

Micheal P. Grzywinski, Senior Environmental Analyst

Land & Water Resources Division

Bureau of Water Protection & Land Reuse

Attached: License, LWRD General Conditions, Work Commencement Form, Compliance Certification Form, Site Plans

cc: File #202108248-COP, Old Saybrook

Robert Murphy, Old Saybrook HMC, rlmurphy249@gmail.com

Carl Fortuna, Jr., Old Saybrook First Selectwoman, carl.fortuna@oldsaybrookct.gov

Keith Neilson, Docko, Inc., office@docko.com

Diane Ray, ACOE, Diane.M.Ray@usace.army.mil

Scott Mitchell, Old Saybrook Harbormaster, ncdockmaster@hotmail.com

Karen Michaels, CT DEEP LWRD, karen.michaels@ct.gov

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

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Connecticut Department of Energy and Environmental Protection License*

Certificate of Permission

Licensee(s): Town of Old Saybrook, c/o

Robert Murphy, Chairman

Harbor Management

Commission

Licensee Address(s): 302 Main Street

Old Saybrook, CT 06475

License Number(s): 202108248-COP

Municipality: Town of Old Saybrook

Project Description: Relocate existing tie-off piles and install ramps and floating docks

for a municipally owned boating facility.

Project Address/Location: Town Dock located at Ferry Place identified as Map 043 Block

001 on the Town of Old Saybrook Assessor's Map

Waters: Connecticut River

Authorizing CT Statute(s) CGS Section 22a-359 to 363g; CGS Section 22a-90 to 112

and/or Federal Law:

Applicable Regulations of 22a-426-1 to 9

CT State Agencies:

Agency Contact: Land & Water Resources Division,

Bureau of Water Protection & Land Reuse, 860-424-3019

License Expiration: Five (5) years from the date of issuance of this license.

Project Site Plan Set: Four (4) sheets of plans prepared by Docko, Inc. dated May 10,

2021, Sheet 1, 3 and 4 of 4 revised August 26, 2021.

License Enclosures: LWRD General Conditions; LWRD Work Commencement Form;

Site Plan Set; LWRD Compliance Certification Form

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

Authorized Activities:

The Licensee is hereby authorized to conduct the following work as described in application # 202108248-COP and as depicted on any site plan sheets / sets cited herein:

- 1. remove and relocate five (5) existing tie-off piles; and
- 2. install a 4' wide by 22' long hinged access ramp to a 10' wide by 50' long floating dock located on the north side of an existing fixed pier secured with five (5) float restraint piles and a 3-pile dolphin cluster, a 4' wide by 22' long hinged access ramp to a 10' wide by 40' long floating dock located on the south side of the fixed pier secured with four (4) float restraint piles and a 3-pile dolphin cluster and electric and water utilities.

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.
- This License shall supersede the work identified in Certificate of Permission (COP) #COP-201703863 SCOPE OF AUTHORIZATION paragraph #3, issued to the Town of Old Saybrook on May 15, 2017 in its entirety. All other authorized activities and terms and conditions of that authorization are in full force and effect.
- 3. The work authorized herein shall be conducted using land-based equipment. 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.
- 4. All waste material generated by the performance of the work authorized herein shall be disposed of by the Licensee at an upland site approved for the disposal of such waste material, as applicable. The Licensee shall not allow any waste to enter the Connecticut River.
- 5. 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.

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

September 3, 2021

Date

Brian P. Thompson

Division Director

Land & Water Resources Division

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

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LWRD General Conditions

- 1. Land Record Filing (for Structures Dredging & Fill, Tidal Wetlands, Certificate of Permission, and Long Island Sound General Permit Licenses only). The Licensee shall file the Land Record Filing on the land records of the municipality in which the subject property is located not later than thirty (30) days after license issuance pursuant to Connecticut General Statutes (CGS) Section 22a-363g. A copy of the Notice with a stamp or other such proof of filing with the municipality shall be submitted to the Commissioner no later than sixty (60) days after license issuance. If a Land Record Filing form is not enclosed and the work site is not associated with an upland property, no filing is required.
- 2. Contractor Notification. The Licensee shall give a copy of the license and its attachments to the contractor(s) who will be carrying out the authorized activities prior to the start of construction and shall receive a written receipt for such copy, signed and dated by such contractor(s). The Licensee's contractor(s) shall conduct all operations at the site in full compliance with the license and, to the extent provided by law, may be held liable for any violation of the terms and conditions of the license. At the work site, the contractor(s) shall, whenever work is being performed, have on site and make available for inspection a copy of the license and the authorized plans.
- 3. Work Commencement¹. Not later than two (2) weeks prior to the commencement of any work authorized herein, the Licensee shall submit to the Commissioner, on the Work Commencement Form attached hereto, the name(s) and address(es) of all contractor(s) employed to conduct such work and the expected date for commencement and completion of such work, if any.
 - For water diversion activities authorized pursuant to 22a-377(c)-1 of the Regulations of Connecticut State Agencies, the Licensee shall also notify the Commissioner in writing two weeks prior to initiating the authorized diversion.
 - For emergency activities authorized pursuant Connecticut General Statutes Section 22a-6k, the Licensee shall notify the Commissioner, in writing, of activity commencement at least one (1) day prior to construction and of activity completion no later than five (5) days after conclusion.
- 4. For Coastal Licenses Only License Notice. The Licensee shall post the first page of the License in a conspicuous place at the work area while the work authorized therein is undertaken.
- 5. Unauthorized Activities. Except as specifically authorized, no equipment or material, including but not limited to, fill, construction materials, excavated material or debris, shall be

Revised: October, 2017

¹ The Work Commencement condition and the need for a Work Commencement Form is not applicable to Flood Management Certification approvals.

deposited, placed or stored in any wetland or watercourse on or off-site. The Licensee may not conduct work within wetlands or watercourses other than as specifically authorized, unless otherwise authorized in writing by the Commissioner. Tidal wetlands means "wetland" as defined by section 22a-29 and "freshwater wetlands and watercourses" means "wetlands" and "watercourses" as defined by section 22a-38.

- **6.** Unconfined Instream Work. Unless otherwise noted in a condition of the license, the following conditions apply to projects in non-coastal waters:
 - Unconfined instream work is limited to the period June 1 through September 30.
 - Confinement of a work area by cofferdam techniques using sand bag placement, sheet
 pile installation (vibratory method only), portadam, or similar confinement devices is
 allowed any time of the year. The removal of such confinement devices is allowed any
 time of the year.
 - Once a work area has been confined, in-water work within the confined area is allowed any time of the year.
 - The confinement technique used shall completely isolate and protect the confined area from all flowing water. The use of silt boom/curtain or similar technique as a means for confinement is prohibited.
- 7. For State Actions Only Material or Equipment Storage in the Floodplain. Unless approved by a Flood Management Exemption, the storage of any materials at the site which are buoyant, hazardous, flammable, explosive, soluble, expansive, radioactive, or which could in the event of a flood be injurious to human, animal or plant life, below the elevation of the five-hundred (500) year flood is prohibited. Any other material or equipment stored at the site below said elevation by the Licensee or the Licensee's contractor must be firmly anchored, restrained or enclosed to prevent flotation. The quantity of fuel stored below such elevation for equipment used at the site shall not exceed the quantity of fuel that is expected to be used by such equipment in one day. In accordance with the licensee's Flood Contingency Plan, the Licensee shall remove equipment and materials from the floodplain during periods when flood warnings have been issued or are anticipated by a responsible federal, state or local agency. It shall be the Licensee's responsibility to obtain such warnings when flooding is anticipated.
- 8. Temporary Hydraulic Facilities for Water Handling. If not reviewed and approved as a part of the license application, temporary hydraulic facilities shall be designed by a qualified professional and in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control, the 2004 Connecticut Stormwater Quality Manual, or the Department of Transportation's ConnDOT Drainage Manual, as applicable. Temporary hydraulic facilities may include channels, culverts or bridges which are required for haul roads, channel relocations, culvert installations, bridge construction, temporary roads, or detours.
- 9. Excavated Materials. Unless otherwise authorized, all excavated material shall be staged and managed in a manner which prevents additional impacts to wetlands and watercourses.
- 10. Best Management Practices. The Licensee shall not cause or allow pollution of any wetlands or watercourses, including pollution resulting from sedimentation and erosion. In constructing

or maintaining any authorized structure or facility or conducting any authorized activity, or in removing any such structure or facility, the Licensee shall employ best management practices to control storm water discharges, to prevent erosion and sedimentation, and to otherwise prevent pollution of wetlands and other waters of the State. For purposes of the license, "pollution" means "pollution" as that term is defined by CGS section 22a-423. Best Management Practices include, but are not limited, to practices identified in the Connecticut Guidelines for Soil Erosion and Sediment Control as revised, 2004 Connecticut Stormwater Quality Manual, Department of Transportation's ConnDOT Drainage Manual as revised, and the Department of Transportation Standard Specifications as revised.

- 11. Work Site Restoration. Upon completion of any authorized work, the Licensee shall restore all areas impacted by construction, or used as a staging area or accessway in connection with such work, to their condition prior to the commencement of such work.
- 12. Inspection. The Licensee shall allow any representative of the Commissioner to inspect the project location at reasonable times to ensure that work is being or has been conducted in accordance with the terms and conditions of this license.

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

- a. The work specified in the license is authorized solely for the purpose set forth in the license. No change in purpose or use of the authorized work or facilities as set forth in the license may occur without the prior written approval of the Commissioner. The Licensee shall, prior to undertaking or allowing any change in use or purpose from that which is authorized by this license, request permission from the Commissioner for such change. Said request shall be in writing and shall describe the proposed change and the reason for the change.
- b. A change in the form of ownership of any structure authorized herein from a rental/lease commercial marina to a wholly-owned common interest community or dockominium may constitute a change in purpose as specified in paragraph (a) above.
- 14. De Minimis Alteration. The Licensee shall not deviate from the authorized activity without prior written approval from the Commissioner. The Licensee may request a de minimis change to any authorized structure, facility, or activity. A de minimis alteration means a change in the authorized design, construction or operation that individually and cumulatively has minimal additional environmental impact and does not substantively alter the project as authorized.
 - For diversion activities authorized pursuant to 22a-377(c)-2 of the Regulations of Connecticut State Agencies, a de minimis alteration means an alteration which does not significantly increase the quantity of water diverted or significantly change the capacity to divert water.
- 15. Extension Request. The Licensee may request an extension of the license expiration date. Such request shall be in writing and shall be submitted to the Commissioner at least thirty (30) days prior to the license expiration. Such request shall describe the work done to date, what work still needs to be completed, and the reason for such extension. It shall be the Commissioner's sole discretion to grant or deny such request.

- 16. Compliance Certification. Not later than 90 days after completion of the authorized work, the Licensee shall prepare and submit to the Commissioner the attached Compliance Certification Form. Such Compliance Certification shall be completed, signed, and sealed by the Licensee and a Connecticut Licensed Design Professional. If non-compliance is indicated on the form, or the Commissioner has reason to believe the activities and/or structures were conducted in non-compliance with the license, the Commissioner may require the Licensee to submit as-built plans as a condition of this license.
- 17. Maintenance. The Licensee shall maintain all authorized structures or work in optimal condition or shall remove such structures or facility and restore the affected waters to their prework condition. Any such maintenance or removal activity shall be conducted in accordance with applicable law and any additional approvals required by law.
- 18. No Work After License Expiration. Work conducted after the license expiration date is a violation of the license and may subject the licensee to enforcement action, including penalties, as provided by law.
- 19. License Transfer. The license is not transferable without prior written authorization of the Commissioner. A request to transfer a license shall be submitted in writing and shall describe the proposed transfer and the reason for such transfer. The Licensee's obligations under the license shall not be affected by the passage of title to the license site to any other person or municipality until such time as a transfer is approved by the Commissioner.
- 20. Document Submission. Any document required to be submitted to the Commissioner under the license or any contact required to be made with the Commissioner shall, unless otherwise specified in writing by the Commissioner, be directed to:

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

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

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

- 23. Accuracy of Documentation. In evaluating the application for the license, the Commissioner has relied on information and data provided by the Licensee and on the Licensee's representations concerning site conditions, design specifications and the proposed work, including but not limited to representations concerning the commercial, public or private nature of the work or structures, the water-dependency of said work or structures, its availability for access by the general public, and the ownership of regulated structures or filled areas. If such information proves to be false, deceptive, incomplete or inaccurate, the license may be modified, suspended or revoked, and any unauthorized activities may be subject to enforcement action.
- 24. Limits of Liability. In granting the license, the Commissioner has relied on all representations of the Licensee, including information and data provided in support of the Licensee's application. Neither the Licensee's representations nor the issuance of the license shall constitute an assurance by the Commissioner as to the structural integrity, the engineering feasibility or the efficacy of such design.
- 25. Reporting of Violations. In the event that the Licensee becomes aware that they did not or may not comply, or did not or may not comply on time, with any provision of this license or of any document incorporated into the license, the Licensee shall immediately notify the agency contact specified within the license and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the agency contact, the Licensee shall provide, for the agency's review and written approval, a report including the following information:
 - a. the provision(s) of the license that has been violated;
 - b. the date and time the violation(s) was first observed and by whom;
 - c. the cause of the violation(s), if known;
 - d. if the violation(s) has ceased, the duration of the violation(s) and the exact date(s) and times(s) it was corrected;
 - e. if the violation(s) has not ceased, the anticipated date when it will be corrected;
 - f. steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented; and
 - g. the signatures of the Licensee and of the individual(s) responsible for actually preparing such report.

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

Commissioner.

- **26.** Revocation/Suspension/Modification. The license may be revoked, suspended, or modified in accordance with applicable law.
- 27. Other Required Approvals. License issuance does not relieve the Licensee of their obligations to obtain any other approvals required by applicable federal, state and local law.
- 28. Rights. The license is subject to and does not derogate any present or future property rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.
- 29. Condition Conflicts. In the case where a project specific special condition listed on the license differs from, or conflicts with, one of the general conditions listed herein, the project specific special condition language shall prevail. It is the licensee's responsibility to contact the agency contact person listed on the license for clarification if needed prior to conducting any further regulated activities.



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

79 Elm Street • Hartford, CT 06106-5127

To: Regulatory Section

LICENSEE:

(Signature)

portal.ct.gov/DEEP

Department of Energy and Environmental Protection

Land & Water Resources Division

Affirmative Action/Equal Opportunity Employer

LWRD Work Commencement Form

79 Elm Street Hartford, CT 06106-5127 Town of Old Saybrook Licensee Name: Municipality in which the project is occurring: Town of Old Saybrook DEEP License No(s): 202108248-COP **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:

(Date)



79 Elm Street • Hartford, CT 06106-5127

portal.ct.gov/DEEP

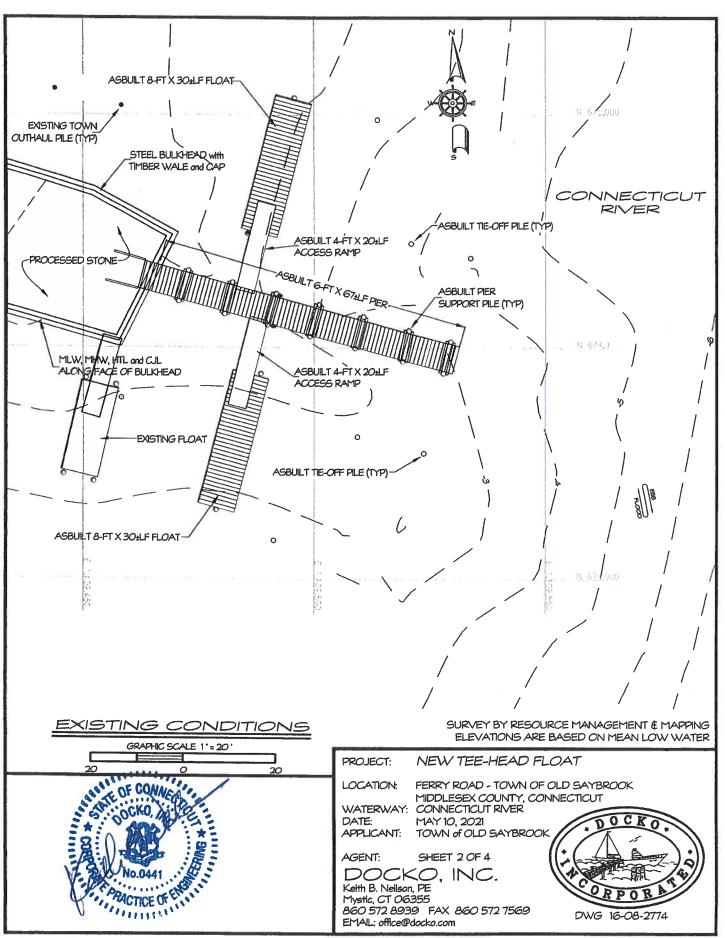
Affirmative Action/Equal Opportunity Employer

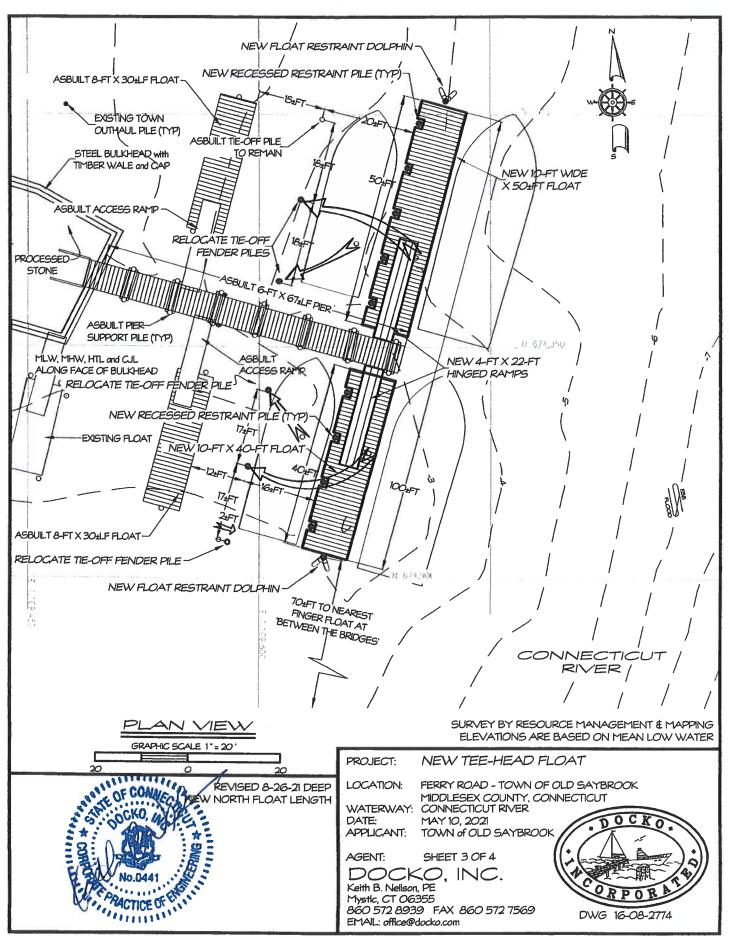
Compliance Certification Form

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: Town of Old Saybrook		8	
	DEEP License Number(s): 202108248-COP			
	Municipality in which project is occurring: Town of C	Old Saybrook		
2.	Check one:			
	(a) If 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."				
Sig	nature of Licensee	Date		
Na	me of Licensee (print or type)			
Sig	nature of CT-Licensed Design Professional	Date		
Na	me of CT-Licensed Design Professional (print or type)			
_				
Pro	ofessional License Number (if applicable)	Affix St	amp 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				







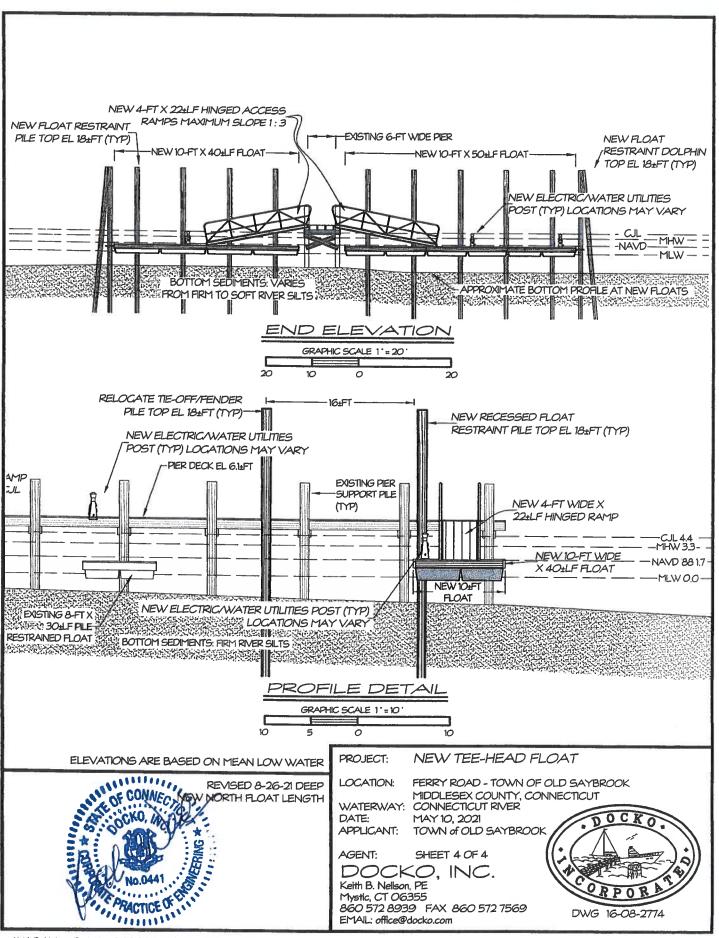


EXHIBIT B - FLOATING MARINA PIER SPECIFICATIONS

PART 1: GENERAL

1.1 WORK INCLUDED

A. Complete pre-engineered floating dock system, access ramps and pile locations.

1.2 APPLICABLE STANDARDS

- A. National Forest Products Association (NFPA) "National Design Specifications for Wood Construction"
- B. West Coast Lumber Inspection Bureau: Grading and dressing rules for lumber
- C. American Wood Preservers' Associations Standards C1 and C18
- D. American Institute of Steel Construction
- E. American Society for Testing Materials:
 - -A36 Specifications for structural steel
 - -A123 Specification for zinc coatings on iron and steel products
 - -A153 Specification for zinc coatings on iron and steel hardware

1.3 EXPERIENCE

The floating dock system manufacturer and access ramps shall have a minimum of ten years' experience in the manufacture of floating dock systems, that are the same type as proposed for this project, on at least three other installations.

Docks shall be completely fabricated in the manufacturers facility and shipped to site complete with decking and flotation attached, ready for off-load. Knocked down framing systems assembled at site will not be allowed, panelized decking systems will not be allowed.

1.4 SUBMITTALS

- A. A general layout drawing of the proposed floating structures giving all dimensions, clearances and anchorage locations.
- B. Detailed fabrication drawings showing details of dock units to be supplied

PART II: PRODUCTS:

2.1 DESIGN AND LOAD CONDITIONS

A. Vertical Loads:

- 1) Dead loads shall consist of the entire weight of the floating structure, including utilities, ramps, dock boxes and other accessories and appurtenances.
- 2) Deck surface and structural frame live load shall be equal to 50 PSF applied to the full surface area of the deck.
- 3) Bridges and ramps four feet (4') in width or less shall be designed for 40 PSF applied to the full surface area and 80 PSF for widths over four feet. Bridge and ramp handrails shall be designed for a 200 pound load applied in any direction and at any point along the handrail.
- 4) Flotation shall be designed to support the dead load plus 30 PSF live load applied to the full area of the deck surface.
- 5) Concentrated live load: 400 lbs at any one point on the deck shall not tilt the dock more than six degrees from horizontal.
- 6) All docks complete with accessories shall float level.

Note: Higher live loads may be specified depending on conditions and traffic.

B. Horizontal loads

- 1) A uniform horizontal wind loading from any direction shall be calculated at 15 PSF on all projected surfaces, assuming 100% boat occupancy. Craft profile heights shall be determined from Figure 4-9, page 106, ASCE Report No. 50 revised. Full wind load is to be applied to all unshielded dock and boat profiles and 10% of the wind load is to be applied to each shielded boat profile.
- 2) A horizontal load due to impact on a finger dock shall be the result of the largest berthed craft normally using the adjacent slip striking the end of the finger dock 10 degrees (10) off center line. For purposes of calculations, the weight of the craft shall be 12 times the finger length squared (12L). The craft shall be considered moving at a speed of 3 FPS.
- C. Ice: Structures are to be designed to withstand the forces of non-moving ice.
- D. Waves: This structure and system shall be designed to withstand storm conditions of up to 1.5' waves on a periodic, but not continual basis.

2.2 MATERIALS AND CONSTRUCTION

A. Wood Framing:

1) All structural beams, bracing and deck supports to be Southern Yellow Pine, Grade #1 or better exterior, and grade #2 or better interior, in accordance with the rules of the West Coast Bureau of Timber Grade and Inspection for Southern Yellow Pine. Individual

members shall be minimum 2" \times 6" for horizontal members and 2" \times 8" for vertical members.

- 2) All decking to be Southern Yellow Pine, 2" x 6" Grade # 1 or better. Pressure treatment for use category 4B. 4C in accordance with AWPA use category system. Decking options could include IPE or Composite.
- 3) All framing lumber to be pressure treated to 0.6 PCF retention with chromated copper arsenate (CCA). Treatment shall be full length under pressure by the empty-cell or full-cell process in accordance with AWPA Standards C1 and C18 decking
- 4) All lumber to be kiln dried after treatment.
- 5) All lumber shall be sound, well seasoned, and straight grained, free from shakes and large or loose knots and shall have no defects which will impair its strength or durability for the purpose intended.
- 6) All structural side beams to be of mechanical laminated construction, minimum 3 members, minimum size of each member to be 2" x 8" with a 2" x 10" outer member.
- 7) All lumber to be surfaced four sides.

B. Flotation:

- 1) All units will be rotationally molded for seamless one piece construction.
- 2) Encasement shall be manufactured from linear virgin polyethylene resin containing UV ray inhibitors and carbon black pigment. Nominal wall thickness shall be .150".
- 3) Foam Core shall be expanded polystyrene foam with a minimum of 1.0 #per cubic foot density.

C. Flotation Performance:

Flotation units shall be designed to maintain the desired buoyancy and freeboard even if punctured or cracked. Flotation unit and frame to act as one integral unit.

D. Steel Components:

All structural steel connectors, brackets and miscellaneous parts to be fabricated from ASTM A 36 grade steel, installed and fastened in factory before shipping.

E. Bolts, Nuts and Washers:

All bolts, nuts and washers shall be fabricated according to ASTM A 307 and shall be of sufficient size, shape and length for their intended use. Flotation fasteners to be minimum 1/2" diameter.

F. Finish of Steel and Bolts:

All structural steel, all bolts, nuts and washers shall be hot dipped galvanized in accordance to ASTM A 123. A minimum coating of 2 ounces per square foot shall be applied.

G. Deck:

All deck shall be Southern Yellow Pine, grade #1, surfaced four sides and shall conform to Southern Yellow Pine Inspection Bureau rules. No opening in the deck surface shall exceed 3/16" in width. All decking planks shall be fastened individually with #10 stainless steel torx drive screws, two per joist, for structural integrity, length varies based on decking but 2.5" minimum length is required on decking. Full width utility deck access panels (4 planks) shall be provided every 10' – 12' of main dock length.

H. Cleats:

All cleats shall be 10" or 12" malleable cast iron, conforming to ASTM A 47. Cleats shall be fastened to interior steel angle with 2 - 3/8" diameter through bolts.

Note: Other sizes and styles available.

I. Dock Bumper:

Dock bumper shall be non-marring gray extruded vinyl 3.5" wide minimum. Dock bumper shall meet or exceed the following:

Durometer Hardness - 89

Specific Gravity - 1.368

Brittlely Temperature- -20F

(ASTM 746052T)

Dock bumper shall be fastened to dock frame with 1" x 7/8" stainless steel staples6" on center. Optional stainless steel screw fasteners available.

Exhibit C Ramps and Gangways

PART 1- General

1.01 - DESCRIPTION

A. Furnish and install hinged gangways, and associated appurtenances of any design complying with the requirements listed herein and as shown on the Contract Drawings.

1.04 - SUBMITTALS:

- A. Shop Drawings of the gangways, installation and operating equipment
- B. The manufacturer shall submit a warrantee against defects in workmanship for a five-year duration from the date of acceptance. The gangway manufacturer shall submit proof of continuous production of ramps for at least 10 years.

PART 2 - MATERIALS

- 2.01 THE GANGWAY AND ASSOCIATED APPURTENANCES, except as otherwise indicated, shall be manufactured from aluminum alloy, alloy stock, and sections conforming to Federal Specification QQ-A-371. Aluminum Alloy Products shall conform to ASTM B 209 for sheet plate, ASTM B 308 for extrusions and ASTM B 26/B 26M or ASTM B 108 for castings, as applicable, Provide aluminum extrusions at least 1/8 inch thick and aluminum plate or sheet at least 0.050 inch thick. All ends shall be closed I capped and all welds continuous using MIG and ground smooth. Splices shall be kept to a minimum.
- 2.02 THE GANGWAY DECKING shall be non-skid FS RR-G-1602, open-type grating aluminum ASTM B 209, 6061-T6. Clear width of decking shall be a minium 4 feet to the inside of the safety rail. Maximum slot interval shall be determined by the supplier and decking shall be perpendicular to the ramp width and welded to each supporting member, threaded at the ends with nuts and cotter pins with stainless steel pins.
- 2.03 RAILINGS: Railings shall consists of nominal schedule 40 pipe ASTM B 429 of the minimum sizes indicated. Railings shall be mill finish aluminum color. All fasteners shall be Series 316 stainless steel.

2.04 - HINGE BAR FLANGES, PIPE SLEEVES, WASHERS AND ACCESSORIES

A. Hinges shall be continuous for the full ramp width.

- B. AISI Type 316 stainless steel conforming to AISI SHRS.
- C. Ramp guide tracks shall not be used on the floating pier deck.
- D. Dual gangway rollers shall be 2 1/2 inch, outer diameter, 10 inch long made of nylon or UHMW Polyethylene with stainless steel through rods, nut, washers and other pins.

2.06 - DISSIMILAR MATERIALS

Where dissimilar metals are in contact, protect surfaces with a coat conforming to FS TI-P-664 to prevent galvanic or corrosive action. Where aluminum is in contact with concrete, mortar, masonry, wood, or absorptive materials subject to wetting, protect with ASTM D 1187, asphalt-base emulsion.

2.07 DESIGN LOADS

- A. Deck Vertical Live Load The decking and support system for the ramp shall be designed and constructed for a live load of 100 psf applied to the full deck surface with a maximum deflection of L/180 where "L" is the gangway length.
- B. Safety Rail 2 1/2 inch outer diameter minimum Schedule 40 pipe. Minimum 42 inches above deck.
 - I. Safety rails shall be designed and constructed for a concentrated load of 200 pounds applied at any point and in any direction along the rail system.
 - 2. The safety rail shall be designed and constructed to simultaneously handle a uniform horizontal live load of 50 pounds per linear foot and uniform vertical live load of 100 pounds per linear foot, both applied perpendicular to the rail.
 - 3. The concentrated 200 pound force does not have to be accommodated simultaneously with the uniform live loads.
 - 4. Top safety rail shall return down to the ramp frame.
- C. Hand Rail 1 1/4 to 1 1/2 inch outer diameter pipe, top of rail height, 34 inches.
 - The hand rails shall be designed and constructed to handle a 200-pound concentrated load applied at any point and in any direction.
 - 2. The hand rail shall be designed and constructed to handle a 50=pound uniform live load in any direction.
 - 3. The concentrated 200 pound force does not have to be accommodated simultaneously with the uniform live loads.
 - 4. Top safety rail shall return down to the tube frame and rigidly mounted by bolts or welding to the safety rail frame and again 12 inches beyond the decking.

PART 3 EXECUTION

- 3.01 The gangway shall be provided complete with stanchions, railings, hinge attachment plates, connection/hinges, connection / hinge covers as necessary and transition plates on the float.
 - A. The gangway shall be installed by others after the floating pier is installed.

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B. ¼"-inch maximum thickness aluminum or stainless steel wearing plate with beveled edges shall be fastened to floating pier by others but supplied by the supplier. Locate plate to be centered in the full range of gangway travel.