LEASE AGREEMENT

This lease is made on this 13th day of October, 2016, by and between **THE TOWN OF JAMESTOWN**, a municipal corporation organized under the laws of the State of Rhode Island (the "Lessor" of "Town""), and **CONANICUT MARINE SERVICES, INC.**, a Rhode Island Business Corporation (the "Lessee"), upon the following **TERMS** and **CONDITIONS** (the "Lease").

DEMISED PREMISES

The subject property of this Lease is identified as Plat 9, Lots 355 & 356 located at an area in the center of Jamestown known as East Ferry, including certain piers, fixtures and improvements located thereon (the "Demised Premises"). The subject lots, which are part of the Demised Premises, are waterfront parcels that offer access to existing piers and associated slips associated with the purpose of this Lease. Lot 355 contains 11,575 square feet of land area and Lot 356 contains 10,300 square feet of land area. The Demised Premises includes the use of a 300' x 10' fixed wood pier ("Wood Pile Pier") located at the south side of the basin, and use of a steel and concrete pier ("Steel Pile Pier") at the north side of the basin. The Lessee currently owns approximately 1,859 linear feet of floating docks which are rented to boaters on a seasonal and daily basis. Access to the Lessee's floating docks is gained over the Demised Premises. The north basin, bracketed by the two fixed piers, is currently configured for forty-eight (48) boat slips.

Steel Pile Pier

Lessor will provide Lessee with that certain area and water rights bounded by the south face of the Town owned Steel Pile Pier, south to the north face of the Town owned Wood Pile Pier and Town-owned property on the East Ferry waterfront located in the Town of Jamestown, State of Rhode Island, as is more particularly shown on the attached Marine Perimeter Plan dated 12/05/1994, which is incorporated herein by reference, for the construction, maintenance and operation of a marina together with the right of the Lessee to place dockage attachments to the Steel Pile Pier and the right to use the basin for a marina. (See Figure 1).

Lessee shall have the right to use the Steel Pile Pier surface, subject to the right of the general public to have reasonable use of the same as may be regulated from time to time by Lessor. The Lessor in all such matters should coordinate and seek input from the Lessee regarding any proposed changes. Lessee shall also have the right to keep and maintain the "dock master" building, so-called, and the associated equipment in its current location. Any proposed changes in the historic use of the Steel Pile Pier, its equipment or building, will require prior written authorization from the Town.

Wood Pile Pier

Lessee shall also have the right to use the Town-owned Wood Pile Pier, subject to the right of the general public to have reasonable use of the same as may be regulated from time to time by Lessor, and the northern face of the Steel Pile Pier as it exists as of the date hereof for use as a rental for commercial vessels and pleasure vessels in concert, either on a seasonal rental or on a daily rental basis; provided, however, that the dockage fee rate for the Town Wood Pile Pier and the northern face of the Steel Pile Pier shall be set each year by the Jamestown Harbor Management Commission. (See Appendix C).

Marina Perimeter Plan

The marina perimeter plan for the Town's East Ferry Marina is depicted in Figure 2.

Dockage for Emergency and Harbor Patrol Services

Lessee must accommodate dockage at the East Ferry Marina at no cost to the Town for no less than two vessels of 20 ft. – 30 ft. in length each. At this time, the Fire Department and Harbor Master boats and related equipment will be located in the area designated on the map in (Figure 1). The dock floats provided by the Lessee shall be adequately sized to accommodate two vessels of 20 f.t – 30 f.t. in length, with floats that are a minimum of 5 ft. – 6 ft. in width, to provide adequate stability for emergency service activities. The Town retains to the right to use these two floats for whatever public purposes it may deem appropriate from time to time during the term of this Lease.

Town Floating Docks (storage, hauling/launching and emergency removal)

The Lessor maintains ownership of touch-and-go floating docks currently located on the south side of the Wood Pile Pier at East Ferry, the outer touch and go floating docks on the eastern end of the Wood Pile Pier at East Ferry, and the north-facing touch and go floating docks located on the north side of the Wood Pile Pier. Lessee shall perform and have the following rights and obligations concerning these several docks:

Inner Touch & Go Floating Docks

Disconnect, haul, inspect, and store each 20' X 5' wooden floating dock and adjoining aluminum gangways. Floating docks and associated gangways are to be disconnected and hauled during the month of November. Remove marine growth as practical, inspect condition, and suggest necessary repairs to the Town prior to March 1 of each year. Launch each 20' X 5' wooden floating dock, re-install each aluminum gangway and reconnect all units to their original location during the month of April.

Outer Touch & Go Floating Docks

Disconnect, haul, inspect, and store each 40' X 8' wooden floating dock and adjoining aluminum gangway. Floating docks and associated gangways are to be disconnected and hauled during the month of November. Remove marine

growth as practical, inspect condition, and suggest necessary repairs to the Town prior to March 1 of each year. Launch each 40' X 8' wooden floating dock, re-install each aluminum gangway and reconnect units to their original location during the month of April.

North-facing Touch & Go Floating Docks
Disconnect, haul, inspect, and store each 40' X 10' wooden floating dock, and each adjoining aluminum gangway. Floating docks and associated gangway are to be disconnected and hauled during the month of November. Remove marine growth as practical, inspect condition, and suggest necessary repairs to the Town prior to March 1 of each year. Launch each 40' X 10' wooden floating dock, re-install each aluminum gangway and reconnect units to their original location during the month of April.

All floating docks shall be stored at Lessee's property located elsewhere in Jamestown at Lessee's cost and not on the Demised Premises. All docks and associated equipment when placed in winter storage shall be placed on blocks, elevated, as follows: over gravel, asphalt, or concrete with a minimum of 1 ½" separation above the surface; if stored over vegetation with a minimum of 10" separation above the surface is required.

DEMISED PREMISES' USE, CARE AND MAINTENANCE

Lessee shall have the right to use the Demised Premises for the purpose of operating and maintaining a marina with slips, mooring, launch service and associated and ancillary support and repair services. Lessee's use of the Demised Premises, specifically the surfaces of the Wood and Steel Pile Piers, is subject to the right of the general public to have reasonable use and access of the same as may be regulated from time to time by Lessor.

Lessee acknowledges that the Demised Premises are in good order and repair. Lessee, shall, at its own expense and at all times, maintain the Demised Premises in good and safe condition, and shall surrender the same at termination of this Lease or as may otherwise occur, in as good condition as received, normal wear and tear excepted. Lessee shall be responsible for all maintenance and repairs required except for major capital repairs to the Wood Pile or Steel Pile Piers, as may be approved by the Jamestown Town Council and/or Jamestown Harbor Commission during the term of this Lease.

For the purpose of this Lease, a major capital repair is defined as any single item in excess of Five Thousand Dollars ($5,000.00) at Lessee's actual cost for such item, said Five Thousand Dollars ($5,000.00) value shall be fixed as of December 2015, in U.S. dollars and shall be adjusted annually in accordance with the Consumer Price Index published for Boston, Massachusetts

"Major Capital Repair"). The Lessee is responsible for any repairs, or capital expense with a value less than a Major Capital Repair.

Lessee shall also be responsible for all repairs, maintenance and, if necessary, removal or replacement of the in-ground fuel tanks and any related remediation required in their removal or due to contamination, located in a dedicated area within Veterans Memorial Square. This obligation is exempt from the Major Capital Repair provision provided herein. Lessee shall furnish performance and payment bonds in the amount of Two Hundred Fifty Thousand Dollars ($250,000.00) regarding the use of in-ground fuel storage tanks and fuel pumping system on the Demised Premises. These bonds shall remain in full force and effect until all such fuel tanks and systems have been removed from the Demised Premises and required testing has been completed with results meeting the satisfaction of the Town. The payment and performance bonds shall be in the form as prescribed by the Town, except as provided otherwise. If the surety of any bond furnished by the Lessee is declared bankrupt or becomes insolvent or its right to do business in the State is terminated, the Lessee shall promptly contact the Town and shall within twenty (20) days after giving rise to such notification, provide another bond and surety, both which shall comply with the requirements of this Lease. If any excavation work or alteration to the Demised Premises is required concerning the in-ground fuel tanks, the Lessee shall be responsible to fully restore the area to its original condition and suitable for public use.

The Lessee on an annual basis shall invest a minimum of Three Thousand Dollars ($3,000.00) in maintenance repairs to the Steel and Wood Pile Piers. The Lessee is required to provide the Lessor with a record of any and all said improvements with estimated costs within thirty (30) days of the end of the lease year, which is the 31st day of December.

The Lessor at the conclusion or termination of this lease will retain ownership of all permanent fixtures and permanently fixed assets, such as, but not limited to, dock pilings, permanent docks, buildings, fencing, and walkways installed by the Lessee during the term of this agreement. However, this provision specifically excludes the existing in-ground fuel tanks and related equipment which are the property and responsibility of the Lessee. These in-ground fuel tanks are required to be removed after a fixed period of time, at the termination of this lease, or due to the failure of the system. This asset may be included in this asset list (should a list be required based on the number of assets), if mutually agreed upon by both parties.

TERM OF LEASE

The initial term of this Lease shall be Ten (10) Years from the date hereof. The Lessee shall have the right to renew this lease for a maximum of two (2) Five Year renewal periods; provided that Lessor and Lessee shall mutually agree on the rent and other terms for the renewal term, and that any such agreement is completed by August 1st of the last year of the controlling lease. It is recommended that any such negotiations not be delayed in commencing past June 1st date of the last year of the lease. Should the terms of a lease extension not be agreeable to both parties, during the period June 1 – August 1 of the last year of the agreement in place, the Town retains the option of publicly re-bidding the service. The first 5-year renewal option will commence on January 1, 2026, ending on December 31, 2030 with the second renewal period commencing on January 1, 2031 and ending on December 31, 2035.

RENT

The Lessee covenants and agrees to pay rent as follows:

(a) To pay rent of Forty Four Thousand Dollars ($44,000.00) in year one of this Agreement for the Demised Premises. This fixed rent shall be subject to increase each year in years two (2) through ten (10) of this Lease on the annual renewal date of this Lease, based upon Appendix B, Offer to Perform, attached hereto as Exhibit 2, incorporated herein by reference.

(b) Lessee shall continue to pay all real estate taxes, personal property taxes and other charges assessed by the Town of Jamestown, the State of Rhode Island and the United States of America and shall maintain proper insurance as required by the Town from year to year upon its properties and the Demised Premises with the Town of Jamestown being named as an additional named insured.

CHANGES TO DEMISED PREMISES

If the Lessor changes the Marina Perimeter Plan or the leased area, so as to make available to the Lessee more or less linear feet of floating slips from the current amount, which is approximately 1,879 linear feet, the fixed rental shall be adjusted based upon the percentage increase or decrease in such linear feet, as the case may be. The Lessor reserves the right to change or modify said Marina Perimeter Plan or leased area, although will include the lessee in the planning process associated with any such change.

If Lessor changes the Demised Premises in such a way as to significantly increase the protection of the basin, so-called, from wave action, this will be deemed a major lease change and the rent shall be renegotiated by the parties.

PUBLIC AMENITIES

PUMP OUT STATION

Lessee shall be responsible to maintain and manage the sewage pump-out stations on the Demised Premises. Lessee is responsible for the routine maintenance and management of the public sewage pump-out station(s) on the leased premises. Lessor will be responsible for the opening (activation) and closing (winterization) of the system each season. The Lessor will facilitate replacement of the units, when needed, through available grant programs offered by RIDEM.

EMERGENCY AND HARBOR PATROL DOCKAGE

Lessee must accommodate dockage at the East Ferry Marina at no cost to the Town for no less than two vessels of 20 ft. – 30 ft. in length each. At this time, the Fire Department and Harbor Master boats and related equipment will be located in the area designated on the map in (Figure 1). The dock floats provided by the Lessee shall be adequately sized to accommodate two vessels of 20 f.t – 30 f.t. in length, with floats that are a minimum of 5 ft. – 6 ft. in width, to provide adequate stability for emergency service activities. The Town retains to the right to use these two floats for whatever public purposes it may deem appropriate from time to time during the term of this Lease.

TOWN FLOATING DOCKS

The Lessor maintains ownership of touch-and-go floating docks currently located on the south side of the Wood Pile Pier at East Ferry, the outer touch and go floating docks on the eastern end of the Wood Pile Pier at East Ferry, and the north-facing touch and go floating docks located on the north side of the Wood Pile Pier. Lessee shall perform and have the following rights and obligations concerning these several docks:

Inner Touch & Go Floating Docks

Disconnect, haul, inspect, and store each 20' X 5' wooden floating dock and adjoining aluminum gangways. Floating docks and associated gangways are to be

disconnected and hauled during the month of November. Remove marine growth as practical, inspect condition, and suggest necessary repairs to the Town prior to March 1 of each year. Launch each 20' X 5' wooden floating dock, re-install each aluminum gangway and reconnect all units to their original location during the month of April.

Outer Touch & Go Floating Docks
Disconnect, haul, inspect, and store each 40' X 8' wooden floating dock and adjoining aluminum gangway. Floating docks and associated gangways are to be disconnected and hauled during the month of November. Remove marine growth as practical, inspect condition, and suggest necessary repairs to the Town prior to March 1 of each year. Launch each 40' X 8' wooden floating dock, re-install each aluminum gangway and reconnect units to their original location during the month of April.

North-facing Touch & Go Floating Docks
Disconnect, haul, inspect, and store each 40' X 10' wooden floating dock, and each adjoining aluminum gangway. Floating docks and associated gangway are to be disconnected and hauled during the month of November. Remove marine growth as practical, inspect condition, and suggest necessary repairs to the Town prior to March 1 of each year. Launch each 40' X 10' wooden floating dock, re-install each aluminum gangway and reconnect units to their original location during the month of April.

All floating docks shall be stored at Lessee's property located elsewhere in Jamestown at Lessee's cost and not on the Demised Premises. All docks and associated equipment when placed ion winter storage shall be placed on blocks, elevated, as follows: over gravel, asphalt, or concrete with a minimum of 1 ½" separation above the surface; if stored over vegetation with a minimum of 10" separation above the surface is required.

ALTERATIONS

Lessee shall not, without first obtaining the written consent of Lessor, make any alterations, additions, or improvements, in, to or about the Demised Premises.

ORDINANCES AND STATUTES

Lessee shall comply with all statutes, ordinances and requirements of all municipal, state and federal authorities now in force, or which may hereafter be in force, pertaining to the Demised Premises, occasioned by or affecting the use thereof by Lessee.

ASSIGNMENT AND SUBLETTING

Lessee shall not assign or sublet any portion of this Lease or the Demised Premises without the prior written consent of the Lessor. Any such assignment or subletting without the prior written consent of the Lessor shall be void and, at the option of the Lessor, may terminate this Lease. Assignment or sublet as used in this Lease shall be deemed to include any transfer of stock of **CONANICUT MARINE SERVICES, INC.** which results in William S. Munger and Marilyn Munger, and/or their children or grandchildren, owning less than 51 percent of the issued stock of the corporation.

UTILITIES

All applications and connections for necessary utility services on the Demised Premises shall be made in the name of the Lessee only, and Lessee shall be solely liable for all utility charges for the Demised Premises, including both the Steel and the Wood Pile Piers, as they become due, including those for water, sewer, gas, and/or electricity. Should the Lessor seek an expansion of public utilities of any kind on the Wood Pile or Streel Piers, the details of any such agreement, inclusive of design, maintenance, capital investment, fee considerations and user access, must be mutually agreed upon by the parties.

ENTRY AND INSPECTION

Lessee shall be required to permit Lessor or Lessor's agents to enter upon the Demised Premises at reasonable times and upon reasonable notice, for the purpose of inspecting the same, and will permit Lessor at any time within sixty (60) days prior to the expiration of this Lease, if not renewed, to place upon the Demised Premises any usual "For Lease" signs, and permit persons desiring to lease the same to inspect the Demised Premises thereafter and to make any other routine changes, improvements, and repairs associated with the re-letting of the Demised Premises.

INDEMNIFICATION OF LESSOR

Lessor shall not be liable for any damage or injury to Lessee, or any other person, or to any other property, occurring on the Demised Premises or any part thereof, unless any damage or injury occurs as a direct result of an act or omission of Lessor, and Lessee agrees to hold Lessor harmless from any and all claims for damages and/or personal injuries, no matter how caused.

PUBLIC LIABILITY INSURANCE

The Lessee agrees to defend, indemnify, protect, save and keep harmless the Town of Jamestown from any and all loss, cost, damage or exposure arising from the negligent acts or omissions of the Lessee in undertaking this Lease.

The Lessee will maintain in full force at all times workers' compensation insurance for all labor employed at the site. Workers' Compensation coverage must meet the statutory obligations of the State and supply evidence of the same to the Town.

The Lessee will maintain in full force at all times during this engagement general liability insurance in the minimum amount of $2,000,000 per occurrence for all damages on account of personal injuries and/or property damage arising out of an occurrence. The Lessee will provide evidence of its general liability policy to the Town, naming the Town of Jamestown as an additional insured to the policy.

The Lessee will maintain in full force at all times during this engagement auto/watercraft liability insurance covering all owned vehicles, hired vehicles, non-owned vehicles or watercraft in the minimum amount of $2,000,000 per occurrence for all damages on account of personal injuries and/or property damage. The Lessee will provide evidence of its auto/watercraft liability policy to the Town, naming the Town of Jamestown as an additional insured to the policy.

DESTRUCTION OF DEMISED PREMISES

In the event of a partial destruction of the Demised Premises during the term of this Lease, from any cause, Lessor may elect to repair the same, provided that such repairs can be made within sixty (60) days under existing governmental laws and regulations, but such partial destruction shall not terminate this Lease, except that Lessee shall be entitled to a proportionate reduction of rent while such repairs are being made, based upon the extent to which the making of such repairs shall interfere with the business of Lessee on the Demised Premises. In the event that repairs cannot be made with sixty (60) days, Lessor, may, at its option, either make the repairs within a reasonable time, this Lease continuing in effect with the rent proportionately abated as aforesaid, or terminate the Lease.

LESSOR'S REMEDIES ON DEFAULT

If Lessee defaults in the payment of rent, or any additional rent, or defaults in the performance of any of the other covenants or conditions hereof, Lessor may give Lessee notice of

such default and, if Lessee does not cure any such default within ten (10) days, after giving of such notice (or if such other default is of such nature that it cannot be completely cured within that period, if Lessee does not commence such curing within such 10 days and thereafter proceed with reasonable diligence and in good faith to cure such default), then Lessor may terminate this lease on the date specified in such notice the term of this Lease shall terminate, and Lessee shall then quit and surrender the Demised Premises to Lessor. If this Lease shall have been so terminated by Lessor, Lessor may at any time thereafter resume possession of the Demised Premises by any lawful means and remove Lessee or other occupants and their effects. If the Lessee shall be declared insolvent according to law, or if a receiver or other similar officer shall be appointed to take charge of the Lessee's property, or a substantial part thereof, then, and in each of the said cases, the Lessor lawfully may (notwithstanding any license of any former breach of covenant or waiver of the benefit hereof or consent in a former instance) immediately or at any time thereafter while such default or other situation as aforesaid continues, and without further demand or notice, enter into and upon the Demised Premises or any part thereof in the name of the whole and repossess the same and expel the Lessee and those claiming through or under the Lessee and remove its effects, at Lessee's expense, without being deemed guilty of any manner of trespass, and without prejudice to any remedies which might otherwise be used for arrears of rent or preceding breach of covenant; and, upon entry as aforesaid, this Lease shall terminate, and the Lessee shall remain obligated for all rental monies due for the remainder of the term. No failure to enforce any term of this Lease shall be deemed a waiver. Lessee agrees that Lessor shall have a security interest in, and a lien upon all docks and personal property of Lessee for any and all monies due to Lessor, which are, from time to time during the time hereof, outstanding, which lien and/or security interest may be enforced by the sale of said property in accordance with the provisions and procedures set forth in Title 6A, Chapter 9 of the General Laws of Rhode Island 1956, as amended.

ATTORNEY'S FEES

In case suit should be brought for the recovery of the Demised Premises, or for any sum due hereunder, or because of any act which may arise out of the possession of the Demised Premises, by either party, each party shall be responsible for their own costs incurred in connection with such action, including their own attorney's fee.

ENTIRE AGREEMENT

The foregoing constitutes the entire agreement between the parties and may be modified only by a writing signed by both parties.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED THIS LEASE IN DUPLICATE ON THE DATE FIRST ABOVE WRITTEN.

Witness

KAREN MONTOYA
NOTARY PUBLIC-RHODE ISLAND
ID #43174
MY COMMISSION EXPIRES 07-01-2018

TOWN OF JAMESTOWN

BY: _____
Town Administrator
(Duly Authorized)

Date: 10/13/16

Witness

KAREN MONTOYA
NOTARY PUBLIC-RHODE ISLAND
ID #43174
MY COMMISSION EXPIRES 07-01-2018

CONANICUT MARINE SERVICES, INC.

BY: _____ Pres
President
(Duly Authorized)

Date: 13 Oct 2016

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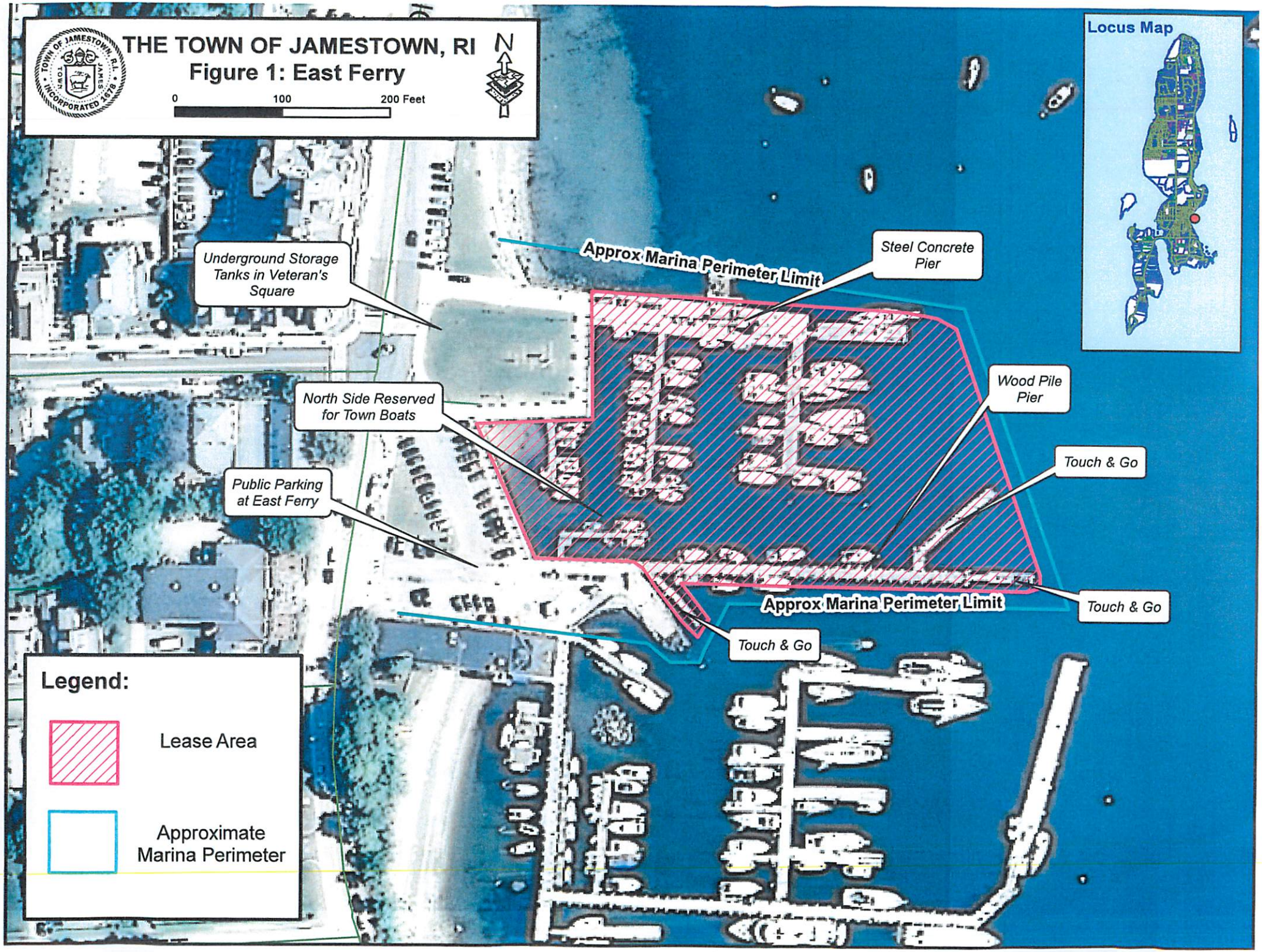
THE TOWN OF JAMESTOWN, RI
Figure 1: East Ferry
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100
200 Feet
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Locus Map
Underground Storage Tanks in Veteran's Square
Approx Marina Perimeter Limit
Steel Concrete Pier
North Side Reserved for Town Boats
Wood Pile Pier
Touch & Go
Public Parking at East Ferry
Approx Marina Perimeter Limit
Touch & Go
Touch & Go
Legend:
Lease Area
Approximate Marina Perimeter

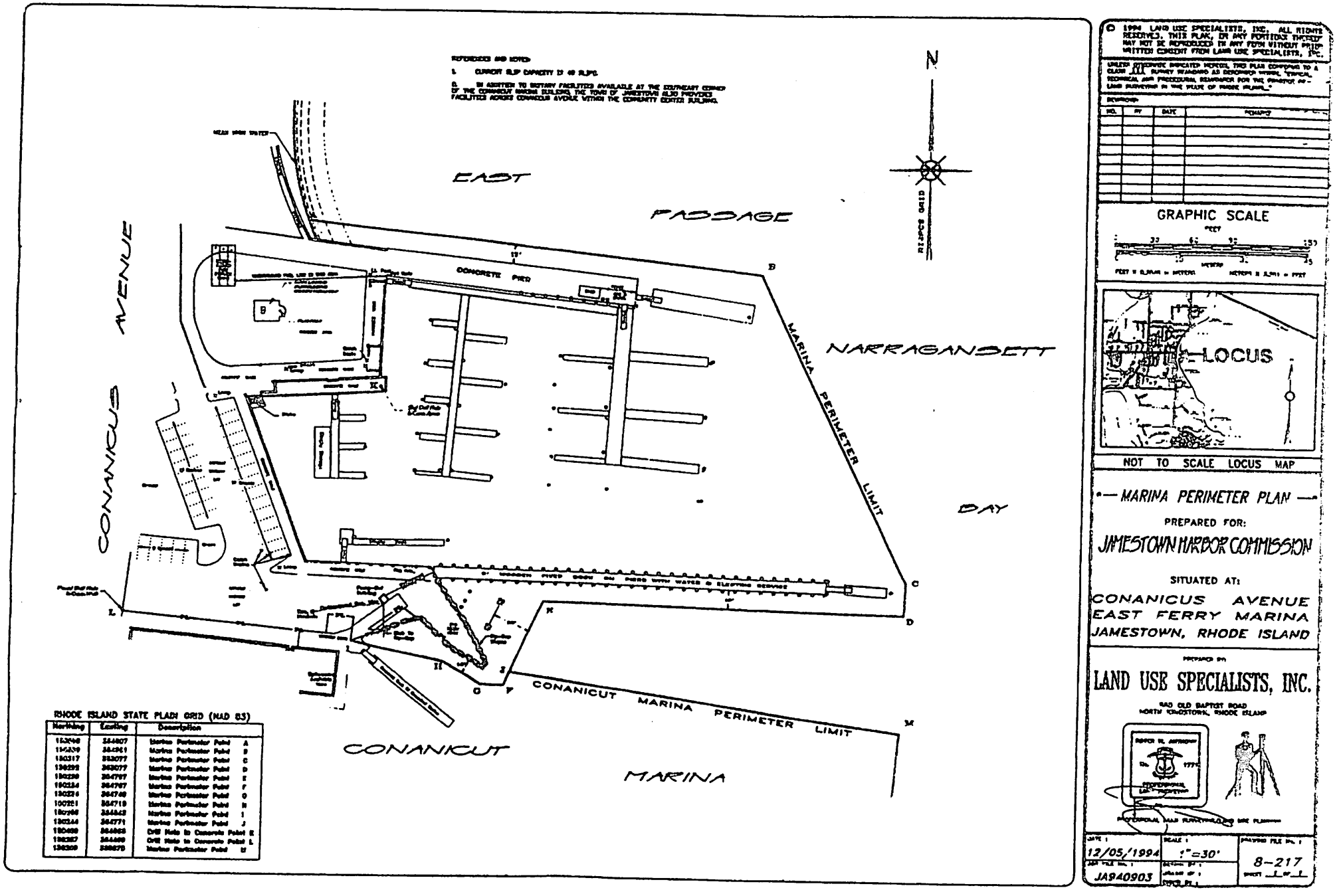


Figure 2: Marina Perimeter

FIGURE 2 –

CMS PROPOSED

IMPROVEMENTS TO NORTH BASIN

FACILITIES

CONANICUT MARINE SERVICES, INC. PROPOSED IMPROVEMENTS TO NORTH BASIN FACILITIES: (See attached Figure 2. Marina Perimeter layout for corresponding letters and locations).

A. Relocate existing gangway & fuel dock 15 feet north within the existing perimeter. Currently the slip spacing between the existing 60 ft. slips is too narrow to accommodate today's beamier boats. The proposed relocation will enable 3 ft. or so more room in slip spacing.

B. Install a 16 x 100 ft. wave attenuator to add much needed wave protection benefiting all of the boats located to the south including the Harbor Master and Fire boats. *This work will require a modification to the marina perimeter.

C. + D. Construct 60 ft. of additional access to the two existing finger slips within the existing perimeter.

E. Construct removable gangway and floating docks to the south side of the timber pier to enable a more boat friendly docking environment for all boats. This would be within the existing perimeter.

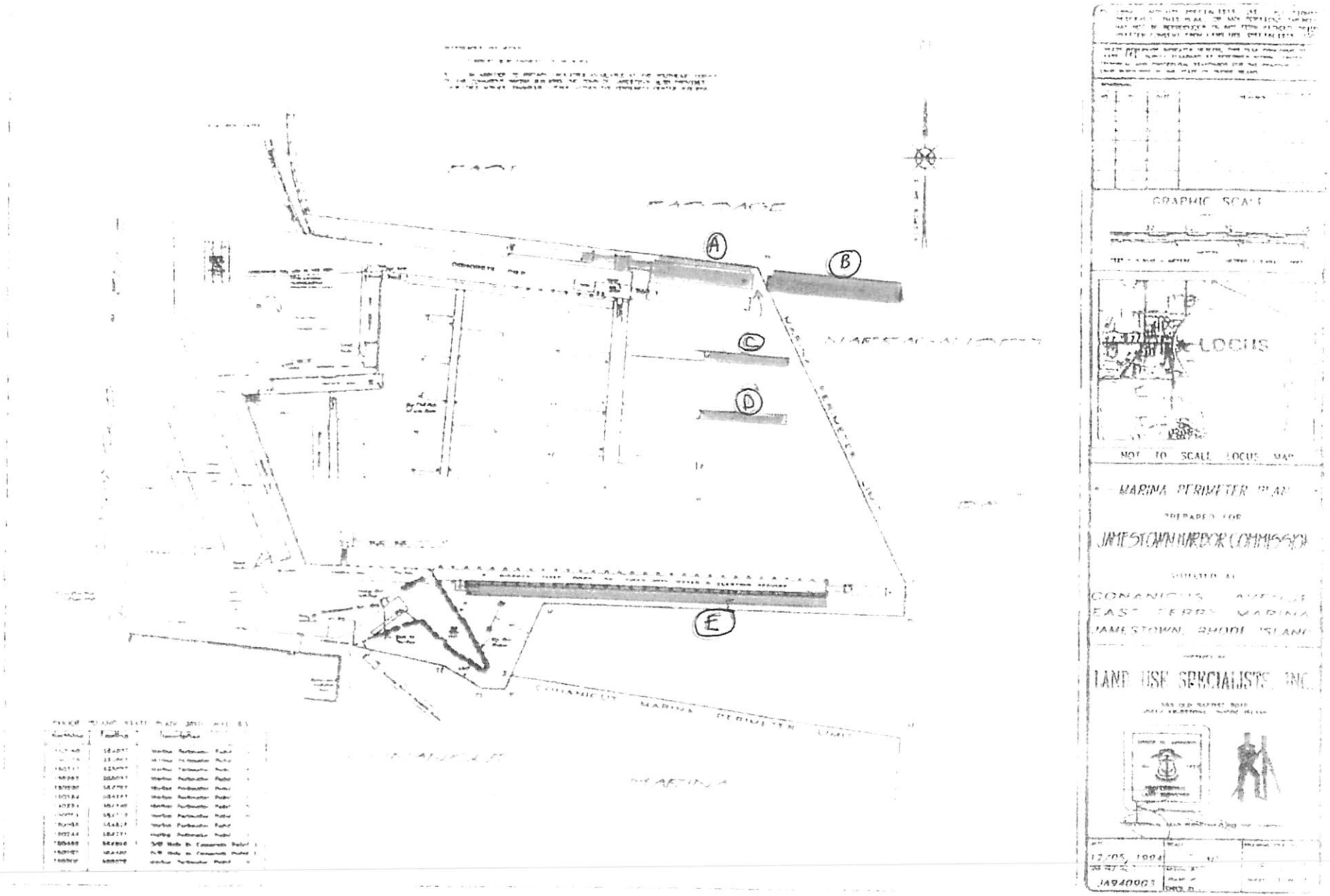


Figure 2: Marina Perimeter

APPENDIX A

Load Evaluation Report for
The Existing Steel Pier

East Ferry Marina
Jamestown, Rhode Island

Steel Pier, Looking South, Photo Taken by RTG on January 20,2006

Submitted: July 19, 2006

Prepared By:
RT Group, Inc.
197 Taunton Avenue, Suite 202
East Providence, RI 02914

RTG Project No. 06102.00

Prepared For:
Town of Jamestown
44 Southwest Avenue
Jamestown, RI 02835-1120

JAMES B. RUSSELL
No. 9352
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

7/19/06

Contents

Section

Figures

Attachments

1. Introduction

This report was prepared by RT Group, Inc. (RTG) in order to evaluate the safe load carrying capacity of the East Ferry Steel Pier (the Pier) located in Jamestown, Rhode Island (Figure 1-1). This pier supports both pedestrian and vehicular traffic, and is utilized for raising and lowering boats from the water. The boats are lifted using a Link-Belt HSP-8028S rubber tire mounted crane that is stationed at the Pier. The maximum boat pick is reportedly about 16 kips.

1.1 Purpose and Scope

The purpose of this report is to provide the Town of Jamestown (the Town) and the Conanicut Marina (the Marina) a quantitative evaluation of the load carrying capacity of the Pier. It is our understanding that this information does not currently exist, and it is considered critical, especially if the Town and/or Marina should consider making heavier picks than they historically have or if the existing Link-Belt crane is ever replaced.

1.2 Background

The original Pier was constructed of interlocking MZ-27 (equivalent to a PZ-27) steel sheet piles that form the north, south, and east sides of the pier. The steel sheet piles were anchored to each other using a steel wale on the inboard side of the sheets and steel tie rods buried about 2 to 3 feet below the top of the Pier. We speculate that a pair of steel channels was used to construct the wale, but there is no information available on this structural component. Likewise, no information on the tie rods exists, except that the tie rod spacing is reportedly about 6 feet on center.

Based on the available data, it is assumed that the steel sheet piles were driven to practical refusal within the shale and/or the hard packed silt/clay, gravel, and shale fragments immediately above it. After the sheet pile wall was completed, earth fill (assumed granular) was placed between the sheet pile wall, and a 6-inch-thick concrete slab was placed over the earth fill to provide a clean working/driving surface (Figure 1-2). We are assuming that the concrete slab was reinforced with welded wire fabric (WWF), but that no other structural reinforcing was installed (e.g., rebar).

In the 1990s, the Town and Jamestown Harbor Commission began to evaluate repair options for the Pier. Repair options were considered based on the deteriorated condition of the steel sheet piles and to prevent the loss of earth fill that supports the Pier. By the late 1990s, the steel sheet piles reportedly had small holes (from one to several inches) at the water line. While we were not able to obtain a copy of any inspection reports that were completed in the past, we assumed that the steel sheet piles had experienced extensive corrosion within the tidal zone.

In the late 1990s, the north and south sides of the Pier were "reconstructed" by driving new galvanized WT12x52 soldier piles along the north and south sides of the pier, directly in front of the steel sheet pile wall. The soldier piles were driven about 6 feet below the existing mudline per the plans prepared by Siegmund & Associates, Inc. (SAI). Based on the available data, it is assumed that the WT12x52 soldier piles were driven to practical refusal, similar to the MZ-27 steel sheet piles.

After the soldier piles were installed, they were anchored to each other using #9 epoxy coated steel tie rods which are located about 1.5 feet below the top of the Pier. Pre-cast reinforced concrete panels were then placed between the individual solider piles from about 2 feet below the existing mudline to the top of the Pier. Tremie concrete fill was then placed in 4-foot-lifts between the existing steel sheet pile wall and the soldier pile panel wall. Rebar hooks cast directly into the back of the pre-cast panels "locked" the panels and tremie pour together.

In 2003, vinyl sheets were installed directly in front of the existing steel sheet pile wall on the east end of the Pier. The vinyl sheets were reportedly about 28-feet-long and were driven to practical refusal per our discussions with the Contractor that installed them, Specialty Diving Services, Inc. (SDS). At the time the vinyl sheets were installed, the steel sheet piles on this end of the pier had reportedly experienced about 80 percent section loss within the tidal zone due to corrosion. Reportedly, there were also several holes in the sheet piles, some large enough to put a persons arm through.

1.3 Authorization

This report was prepared by RTG in accordance with the Agreement between the Town and RTG.

1.4 Report Organization

This report is organized into three (3) sections as follows:

1. This Introduction
2. Load Capacity Evaluation
3. Conclusions and Recommendations

1.5 Limitations

Interpretations summarized in this report are based on subsurface information obtained from existing borings that reflect subsurface conditions only at specific locations; thus, variations in subsurface conditions may not be reflected. In addition, time may alter the conditions observed during the exploration.

This report was prepared in accordance with generally accepted geotechnical and structural engineering practice as an aid to the users of the Pier. No other warranties either express or implied are made. Interpretations contained herein were based on the applicable standards of the consulting profession at the time this report was prepared.

Information from previous investigations, reports, and/or designs that is presented within this report was obtained by RTG from the Town/Marina. No responsibility is assumed by RTG for the correctness or accuracy of information provided by or obtained under the direction of others.

2. Load Capacity Evaluation

2.1 Earth and Small Equipment Surcharge Load

The soldier pile and concrete panel wall act to prevent earth backfill material from migrating through the deteriorated steel sheet pile wall and protect the steel sheet pile wall from corrosion by encapsulating its face within concrete (which was poured between the steel sheet pile wall and soldier pile panel wall). However, based on our analyses the solider pile and concrete panel wall is not capable of independently supporting the existing earth load in combination with even a modest equipment surcharge load (e.g., air compressor, tools, men and materials) of 200 pounds per square foot (psf) (Table 1).

The soldier pile and concrete panel wall acts as a "patch", and it was not intended to independently support heavy surcharge loads, such as those induced by a crane. Therefore, the existing steel sheet pile wall must be relied on to carry much of the load at the Pier. Unfortunately, and as mentioned previously, we were not able to obtain a copy of any inspection reports that were completed in the past, and we can only speculate as to the amount of corrosion that existed at the time the soldier pile and concrete panel wall was constructed. While we believe it is reasonable to assume that minimal corrosion would have occurred after the tremie concrete was placed between the panel wall and sheet pile wall (Figure 1-2), we are unable to definitively quantify the structural capacity of the existing sheet pile wall.

Based on the above, we have assumed that the steel sheet pile wall has experienced about 70 percent section loss (steel thickness reduction taken from front face only) and that it and the soldier pile panel wall act together (additive versus compositely) to support the existing earth and equipment surcharge loads. Based on our analyses, the two (2) systems working together are capable of safely supporting the existing earth and a small equipment surcharge load (Table 1).

Table 1
Summary of Load Capacity Evaluation Results
Earth and 200 psf Equipment Surcharge Load

Case	Maximum Bending Moment	Allowable Bending Moment	Comments
Independent Panel Wall	85 ft-kips (per soldier pile)	40 ft-kips (per soldier pile)	Soldier piles fail in bending and Panel Wall tie rods fail in tension
Panel Wall and Sheet Pile Wall Acting Together	14 ft-kips/ft	31 ft-kips/ft	Assumes wale load transferred through concrete panels to Panel Wall tie rods

While we did not rely on the steel sheet pile wale and tie rod system to support the estimated wale load of 2.6 kips per foot, we are assuming that this system was not disconnected when the soldier pile and panel wall was constructed, and we are assuming that this system is in fair condition since it is buried and located above mean high water (i.e., the system provides some cushion in terms of capacity).

2.2 Earth, Equipment Surcharge, and Crane Load

As mentioned, the maximum estimated pick load is about 16 kips, and occurs when the crane outriggers are fully extended. We assumed that the maximum operating radius during this pick is about 25 feet (see attached crane capacity chart). Under this scenario, the maximum estimated outrigger load is about 35 kips (Figure 2-1).

The outrigger pads are about 17-3/8 inches by 17-3/8 inches in dimension and are typically placed on steel plates during a pick. We conservatively assumed that the existing steel plates are about ¼-inch-thick and that the maximum estimated outrigger load was distributed through the 6-inch-thick concrete pavement (assumed to be reinforced with WWF only) at a 45 degree angle. Based on this, and assuming that the relatively thin steel plates assumed are not very effective at distributing the load, the maximum estimated ground pressure is about 5.8 kips per square foot (ksf).

Based on our analyses, the maximum allowable outrigger load that can be applied directly behind the existing and combined structure is about 3.0 ksf. The maximum estimated surcharge during a pick (5.8 ksf) is greater than the allowable outrigger load (3.0 ksf) and heavier steel plate and/or timber cribbing is required to distribute the maximum estimated outrigger load over a greater area. We estimate that one ½-inch-thick steel plate (or two stacked ¼-inch-thick plates) each measuring about 3-feet by 3-feet would be effective.

If steel plates are placed under the outriggers as recommended above, the two (2) systems working together are capable of safely supporting the existing earth, a small equipment surcharge load, and the crane load (Table 2).

Table 2
Summary of Load Capacity Evaluation Results
Earth, Equipment and Crane Load

Case	Maximum Bending Moment (ft-kips/ft)	Allowable Bending Moment (ft-kips/ft)	Comments
Panel Wall and Sheet Pile Wall Acting Together	28	31	Assumes wale load transferred through concrete panels to Panel Wall tie rods

While we did not rely on the steel sheet pile wale and tie rod system to support the estimated wale load of 4 kips per foot, we are assuming that this system was not disconnected when the soldier pile and panel wall was constructed, and we are assuming that this system is in fair condition since it is buried and located above mean high water (i.e., the system provides some cushion in terms of capacity). Based on this, we are allowing for a slight overstress of the panel wall tie rod allowable load (40 kips/36 kips = 1.15), which we believe is reasonable for a short-term loading condition.

Other load cases considered included the crane trafficking the pier without a load and a wheeled boathandler carrying the maximum pick load. These additional load cases did not control. In the case where the crane is trafficking the pier without a load, the estimated surcharge load from the rubber tires is less than the maximum outrigger pressure during a pick. In addition, the tire loads are applied further inboard of the steel sheet pile wall, and this causes the surcharge pressures to attenuate before they are applied to the sheet

pile wall. Likewise, the maximum pick load is distributed across several axles of the wheeled boathandler and the axle tire loads are applied further inboard compared to the crane outriggers.

One other load condition considered was a mooring line load from a boat or vessel tied directly to the W12x52 soldier piles. It was assumed that the line load was applied at the mid-point of the W12x52 soldier pile as shown in Figure 2-2. Under this condition, the estimated allowable line load is conservatively estimated at about 5,000 pounds. We do not believe that the estimated allowable load will be exceeded for the boats/vessels that typically use the Pier during normal weather conditions.

3. Conclusions and Recommendations

The soldier pile and concrete panel wall repair acts as a "patch", and it was not intended to independently support heavy surcharge loads, such as those induced by a crane. Therefore, the original steel sheet pile wall must be relied on to carry much of the load at the Pier. Unfortunately, we were not able to obtain a copy of any inspection reports that were completed in the past, and we can only speculate as to the amount of corrosion that existed at the time the soldier pile and concrete panel wall was constructed.

Based on the above, we have assumed that the steel sheet pile wall has experienced about 70 percent section loss and that it and the soldier pile panel wall act together (additive versus compositely) to support the existing earth and surcharge loads. Based on our analyses, the two (2) systems working together are capable of safely supporting the existing earth and assumed surcharge loads (Tables 1 and 2).

It is important to note that our analyses are based on an assumed amount of section loss within the existing steel sheet pile wall. If the actual section loss is greater, or if there are large sections of the existing sheet pile wall that are completely missing, the allowable capacity of the two systems (panel wall and steel sheet pile wall) will be less than what is presented herein. Therefore, the Town and Marina must recognize that there is some risk associated with crane operations at the Pier, and this risk can only be mitigated by verifying the actual section loss within the steel sheet piles (e.g., completing test pits on the back side of the sheet pile wall) or by independently supporting the crane outriggers (e.g., pile supported concrete pads).

We believe that the Town and Marina can help reduce its risk by performing periodic inspections of the Pier (to look for distress and other signs of movement) and maintaining its condition (repairing damaged concrete pavement and panels). Other recommendations include the following:

3.1 Crane Trafficking the Pier without Making a Pick

- Operate the Crane within the center of the Steel Pier
- Operate within acceptable speed limits to minimize the likelihood of impact damage to the proposed curbing and railing

3.2 Crane Supported by Outriggers and making a Pick

- Operate the crane within the proper operating parameters and radius for the load (see attached crane capacity chart)
- Set outriggers behind the existing steel sheet pile wall (i.e., do not load the panel wall by itself)
- Place ½-inch-thick steel plates measuring 3-feet by 3-feet (min) beneath the outriggers to distribute the outrigger loads to allowable limits and help protect the concrete pavement
- Inspect the concrete pavement under the outriggers and do not place the steel plates on cracked or deteriorated concrete
- Avoid making picks in windy conditions which could increase the outrigger loads

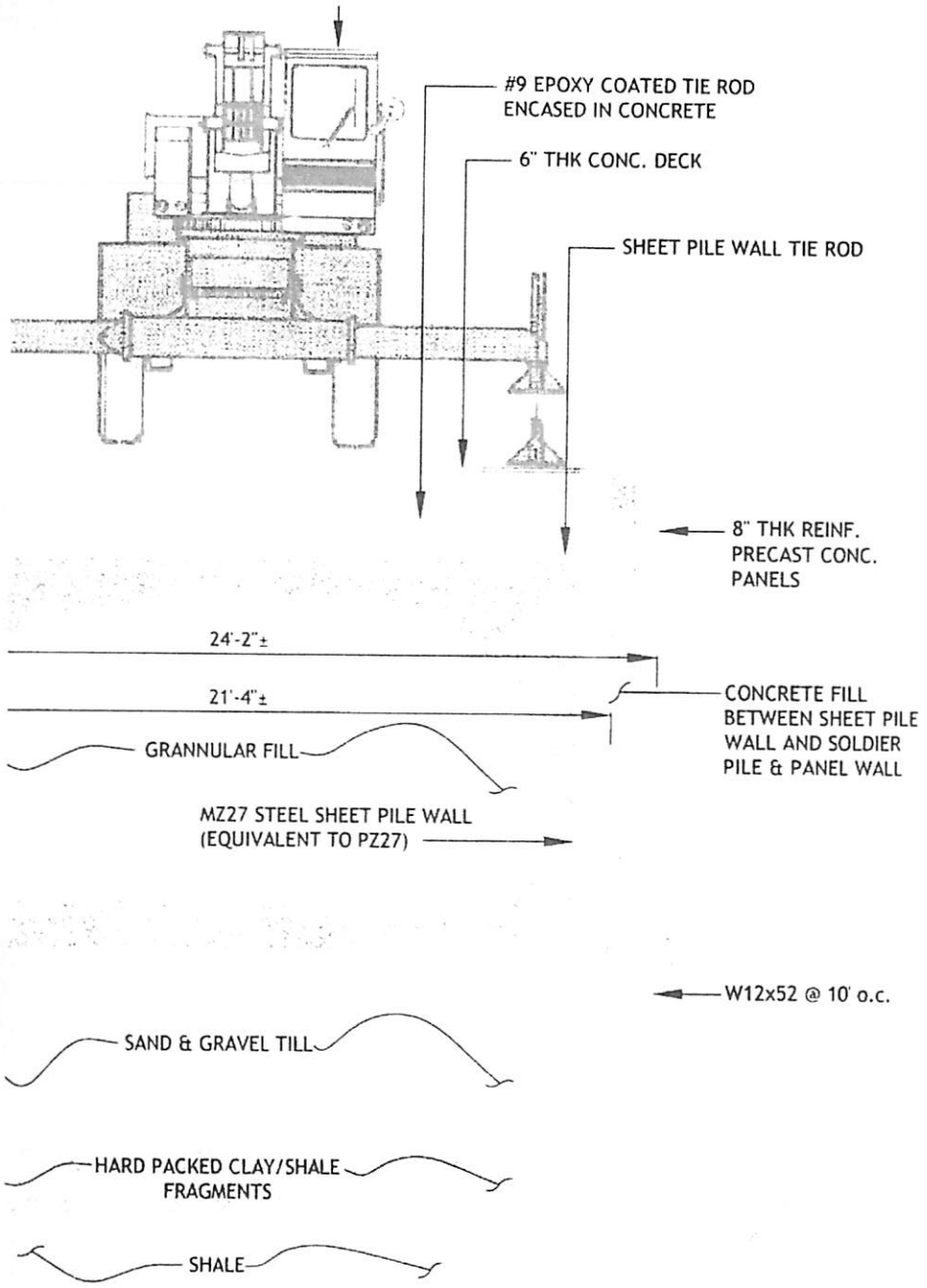
- Avoid setting the outriggers/tires directly on the panel wall tie rods, which are encapsulated in concrete (locations are visible from grade), to minimize the likelihood that the panel wall tie rods are overstressed

3.3 Loaded Boathandler with maximum Pick Load

- Operate the boathandler within the center of the Steel Pier
- Operate within acceptable speed limits to minimize the likelihood of impact damage to the proposed curbing and railing

We recommend that a copy of the above be provided to the users of the Steel Pier and that a laminated copy be kept in the crane.

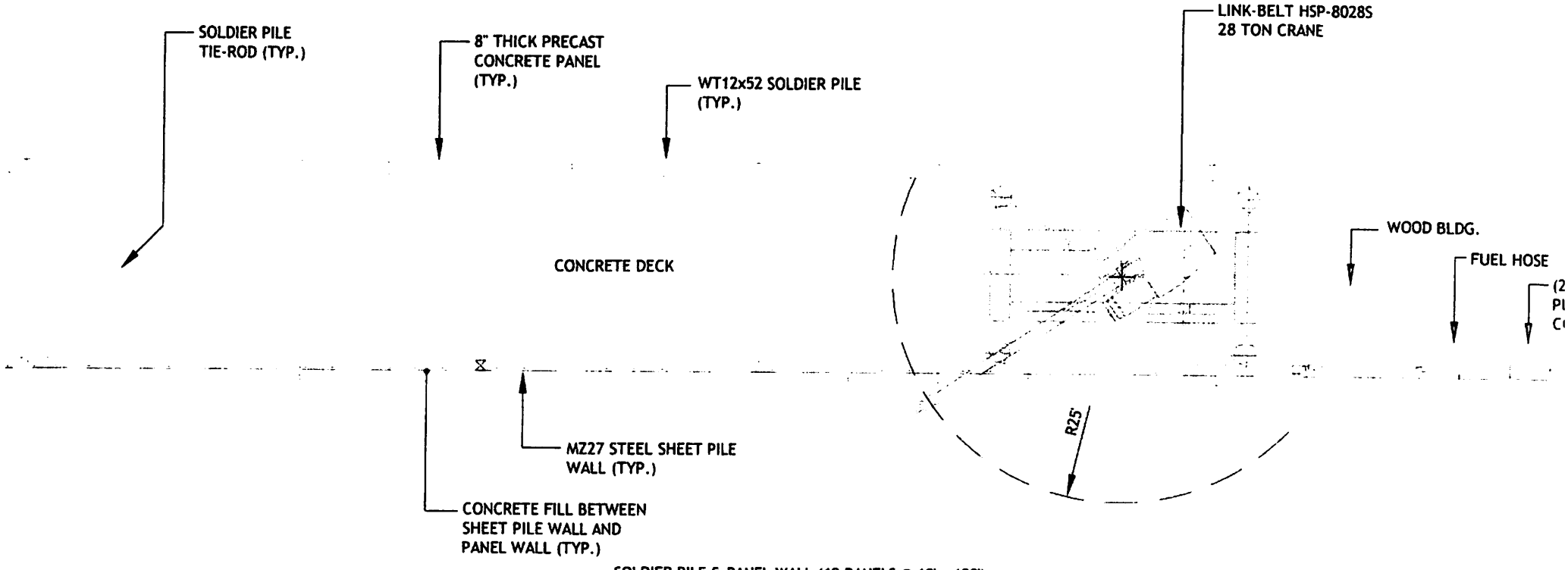
Figures



PER SAMPLE HOLE #1 AND @2 COMPLETED BY RHODE
NG SERVICES FOR THE MEMORIAL SQUARE BULKHEAD
3).

TYPICAL SECTION

SOLDIER PILE & PANEL WALL (19 PANELS @ 10' = 190')



SOLDIER PILE & PANEL WALL (19 PANELS @ 10' = 190')

NOTE:

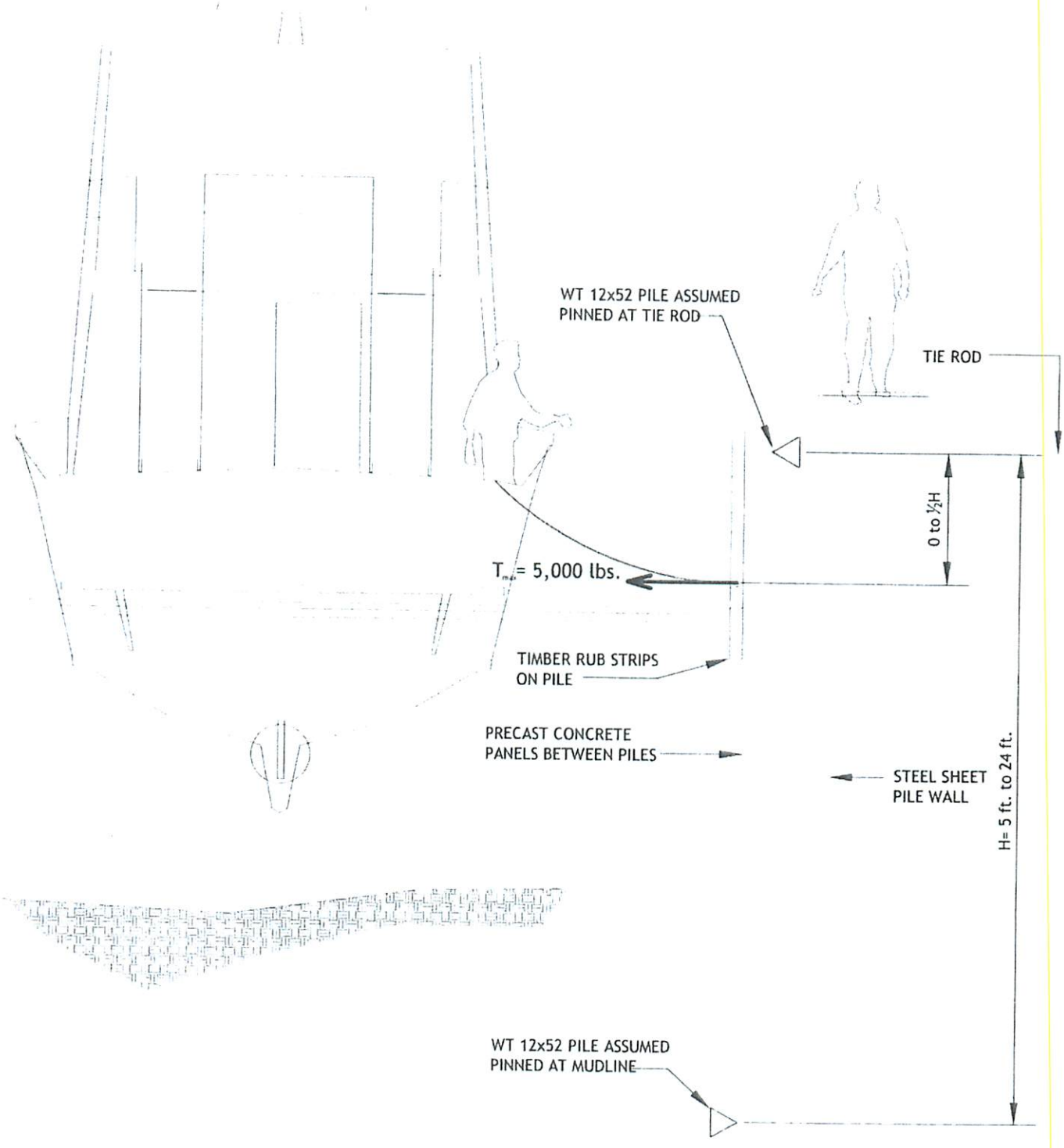
STEEL SHEET PILE WALL WALE AND TIE RODS NOT SHOWN FOR CLARITY.

EAST FERRY MARINA

STONE SEAWALL

PIER PLAN

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



MOORING LINE ORIENTATION SECTION

SCALE: ⅜"= 1'-0"

RT Group, Inc.
Engineered from the Ground Up
197 Taunton Avenue, Suite 202
East Providence, Rhode Island 02914
T 401 438 3100 F 401 438 5275
Geotechnical Waterfront Structural Civil Environmental

LOAD EVALUATION REPORT
East Ferry Marina

TOWN of JAMESTOWN
Jamestown, Rhode Island

FIGURE 2-2
MOORING LINE ORIENTATION USED TO ESTIMATE ALLOWABLE LINE LOAD

SHEET 4 of 4
DATE: JAN-28-06
PROJ No. 06102.00

Attachment A
Crane Capacity Chart

ink-Belt HSP-8028S maximum allowable lifting capacities

Rated Lifting Capacities In Pounds
On Outriggers - Fully Extended

28.75 Ft 70.25 Ft Main Boom

40 Ft			46 Ft.			52 Ft			58 Ft.			64 Ft			70.25 Ft		
Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front
73.5	43,500	43,500	75.5	43,000	43,000	77.5	42,700	42,700	79.5	42,500	42,500						
71.5	43,500	43,500	73.0	43,000	43,000	75.5	41,700	41,700	77.5	39,400	39,400	79.5	37,300	37,300			
69.5	35,900	35,900	69.0	35,900	35,900	72.0	35,600	35,600	74.5	33,700	33,700	76.5	32,100	32,100	78.5	27,500	27,500
57.0	25,800	25,800	62.0	25,800	25,800	66.0	25,800	25,800	69.0	25,800	25,800	71.5	25,800	25,800	74.5	25,800	25,800
48.5	18,300	18,600	55.0	18,300	18,600	59.5	18,300	18,600	63.5	18,300	18,600	66.5	18,300	18,600	69.5	18,300	18,600
37.5	13,400	15,700	46.5	13,400	15,700	53.0	13,400	15,700	58.0	13,400	15,700	61.5	13,400	15,700	65.5	13,400	15,700
22.5	10,200	12,200	37.0	10,200	12,200	45.5	10,200	12,200	51.5	10,200	12,200	56.5	10,200	12,200	60.5	10,200	12,200
			24.5	8,000	9,600	37.0	8,000	9,600	44.5	8,000	9,600	50.5	8,000	9,600	55.0	8,000	9,600
						26.5	6,500	7,800	37.0	6,500	7,800	43.5	6,500	7,800	49.5	6,500	7,800
									27.0	5,300	6,300	35.5	5,300	6,300	43.5	5,300	6,300
									17.0	4,300	5,400	27.5	4,300	5,400	35.5	4,300	5,400
												17.5	3,500	4,500	29.5	3,500	4,500
															17.5	2,900	3,800

(Appendix B)

OFFER TO PERFORM

NAME OF BIDDER: Conanicut Marine Services, Inc. PHONE NO 423-7156

ADDRESS OF BIDDER: 20 Narragansett Ave. Jamestown, RI 02835

AUTHORIZED SIGNATURE: [signature] Pres

Sealed bids must be received on this form by this office by **2:00 PM. September 2. 2015** at which time all bids will be opened and read publicly

ALL BIDS DELIVERED TO:

Town of Jamestown
Christina D. Collins. Finance Director
Jamestown Town Hall
93 Narragansett Avenue
Jamestown. RI 02835

Bid document is to be rendered in a sealed envelope clearly marked as: **East Ferry Marina RFP**

BID DETAIL:	**Base**		**Escalator** (3% minimum)	**Total** * Before In-kind Services
Base Year (1)	44,000.00			44,000.00
Year Two (2)	44,000.00	4%	1,760.00	45,760.00
Year Three (3)	45,760.00	4.75%	2,173.60	47,933.60
Year Four (4)	47,933.60	6.75%	3,235.52	51,169.12
Year Five (5)	51,169.12	6.75%	3,453.92	54,623.03
Year Six (6)	54,623.03	8.75%	4,779.52	59,402.55
Year Seven (7)	59,402.55	8.75%	5,197.72	64,600.27
Year Eight (8)	64,600.27	10%	6,460.03	71,060.30
Year Nine (9)	71,060.30	10%	7,106.03	78,166.33
Year Ten (10)	78,166.33	10%	7,816.63	85,982.96

The Town reserves the right to accept or reject any or all bids, portions, thereof and to waive informalities.

** See attached documentation supporting our Bid Detail

Town of Jamestown
Request for Proposals
Town Marina at East Ferry, Jamestown, RI
Appendix C

PERMIT TYPE	RATE
Mooring - Resident	$4.60/ft
Mooring - Non-Resident	$9.20/ft
Mooring-Commercial	$9.20/ft
Mooring - Yacht Club	$1,365
Outhaul- Recreational	$500
Outhaul- Commercial	$430
Pier- Recreation	$80/ft of length
Pier-Commercial	$40/ft of length
Beach 11' and under	$63
Beach 12' and over	$25/ ft of beam
DHBY dinghy dock	$450