



# PUBLIC NOTICE

**US Army Corps  
of Engineers®**  
New England District  
**696 Virginia Road  
Concord, MA 01742-2751**

**Comment Period Begins:** August 5, 2014  
**Comment Period Ends:** September 5, 2014  
**File Number:** NAE-2014-569  
**In Reply Refer To:** Lindsay Flieger  
**Phone:** (978) 318-8656  
**E-mail:** Lindsay.Flieger@usace.army.mil

The District Engineer has received a permit application from the applicant below to conduct work in waters of the United States as described below.

**APPLICANT** Melville Associates, LP

**ACTIVITY** To construct and maintain a commercial waterfront recreation facility consisting of 887 slips in Weaver Cove. A detailed description and plans of the activity are attached. This is an updated and modified plan for a project that was previously authorized on October 11, 1995.

## **WATERWAY AND LOCATION OF THE PROPOSED WORK**

This work is proposed in Weaver Cove (Narragansett Bay) off of Burma Road in Portsmouth, Rhode Island. The proposed location on the USGS Prudence Island quadrangle sheet is at Lat/Long 41.578 N and -71.284 W.

## **AUTHORITY**

Permits are required pursuant to:

Section 10 of the Rivers and Harbors Act of 1899

Section 404 of the Clean Water Act

Section 103 of the Marine Protection, Research and Sanctuaries Act.

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which may reasonably accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are: conservation, economics, aesthetics, general environmental concerns, wetlands, cultural value, fish and wildlife values, flood hazards, flood plain value, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Where the activity involves the discharge of dredged or fill material into waters of the United States or the transportation of dredged material for the purpose of disposing it in ocean waters, the evaluation of the impact of the activity in the public interest will also include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act, and/or Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 as amended.

**ESSENTIAL FISH HABITAT**

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires all federal agencies to consult with the National Marine Fisheries Service on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH).

The dredging portion of this project will impact approximately 26.2 acres of Essential Fish Habitat (EFH). Loss of this habitat may adversely affect those species listed on the attached table. However the District Engineer has made a preliminary determination that the site-specific adverse effect will not be substantial. Further consultation with the National Marine Fisheries Service regarding EFH conservation recommendations is being conducted and will be concluded prior to the final decision.

This project will also have an adverse effect on acres of Essential Fish Habitat (EFH). Loss of this habitat may adversely affect those species listed on the attached table. The shoreline and abutting intertidal habitat is dominated by a cobble-gravel substrate; the subtidal habitat consists of mostly sandy substrate. The District Engineer has made a preliminary determination that site-specific impacts may be substantial. Accordingly, the Corps of Engineers will submit an expanded EFH assessment to National Marine Fisheries Service, who in turn will provide conservation recommendations to the Corps. The Corps will coordinate with the applicant regarding implementation of these recommendations. The EFH consultation will be concluded prior to the final decision.

**SECTION 106 COORDINATION**

Based on his initial review, the District Engineer has determined that little likelihood exists for the proposed work to impinge upon properties with cultural or Native American significance, or listed in, or eligible for listing in, the National Register of Historic Places. Therefore, no further consideration of the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended, is necessary. This determination is based upon one or more of the following:

- a. The permit area has been extensively modified by previous work.
- b. The permit area has been recently created.
- c. The proposed activity is of limited nature and scope.
- d. Review of the latest published version of the National Register shows that no presence of registered properties listed as being eligible for inclusion therein are in the permit area or general vicinity.
- e. Coordination with the State Historic Preservation Officer and/or Tribal Historic Preservation Officer(s)

**ENDANGERED SPECIES CONSULTATION**

The New England District, Army Corps of Engineers has reviewed the list of species protected under the Endangered Species Act of 1973, as amended, which might occur at the project site. It is our preliminary determination that the proposed activity for which authorization is being sought is designed, situated or will be operated/used in such a manner that it is not likely to adversely affect any Federally listed endangered or

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**FILE NO. NAE-2014-569**

threatened species or their designated critical habitat. By this Public Notice, we are requesting that the appropriate Federal Agency concur with our determination.

The States of Connecticut, Maine, Massachusetts, New Hampshire and Rhode Island have approved **Coastal Zone Management Programs**. Where applicable the applicant states that any proposed activity will comply with and will be conducted in a manner that is consistent with the approved Coastal Zone Management Program. By this Public Notice, we are requesting the State concurrence or objection to the applicant's consistency statement.

The following authorizations have been applied for, or have been, or will be obtained:

- Permit, License or Assent from State.
- Permit from Local Wetland Agency or Conservation Commission.
- Water Quality Certification in accordance with Section 401 of the Clean Water Act.

In order to properly evaluate the proposal, we are seeking public comment. Anyone wishing to comment is encouraged to do so. **Comments should be submitted in writing by the above date.** If you have any questions, please contact Lindsay Flieger at (978) 318-8656.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for a public hearing shall specifically state the reasons for holding a public hearing. The Corps holds public hearings for the purpose of obtaining public comments when that is the best means for understanding a wide variety of concerns from a diverse segment of the public.

The initial determinations made herein will be reviewed in light of facts submitted in response to this notice. All comments will be considered a matter of public record. Copies of letters of objection will be forwarded to the applicant who will normally be requested to contact objectors directly in an effort to reach an understanding.

**THIS NOTICE IS NOT AN AUTHORIZATION TO DO ANY WORK.**



**Robert J. DeSista**  
**Chief, Permits and Enforcement Branch**  
**Regulatory Division**

If you would prefer not to continue receiving Public Notices, please contact Ms. Tina Chaisson at (978) 318-8058 or e-mail her at [bettina.m.chaisson@usace.army.mil](mailto:bettina.m.chaisson@usace.army.mil). You may also check here ( ) and return this portion of the Public Notice to: Bettina Chaisson, Regulatory Division, U.S. Army Corps of Engineers, 696 Virginia Road, Concord, MA 01742-2751.

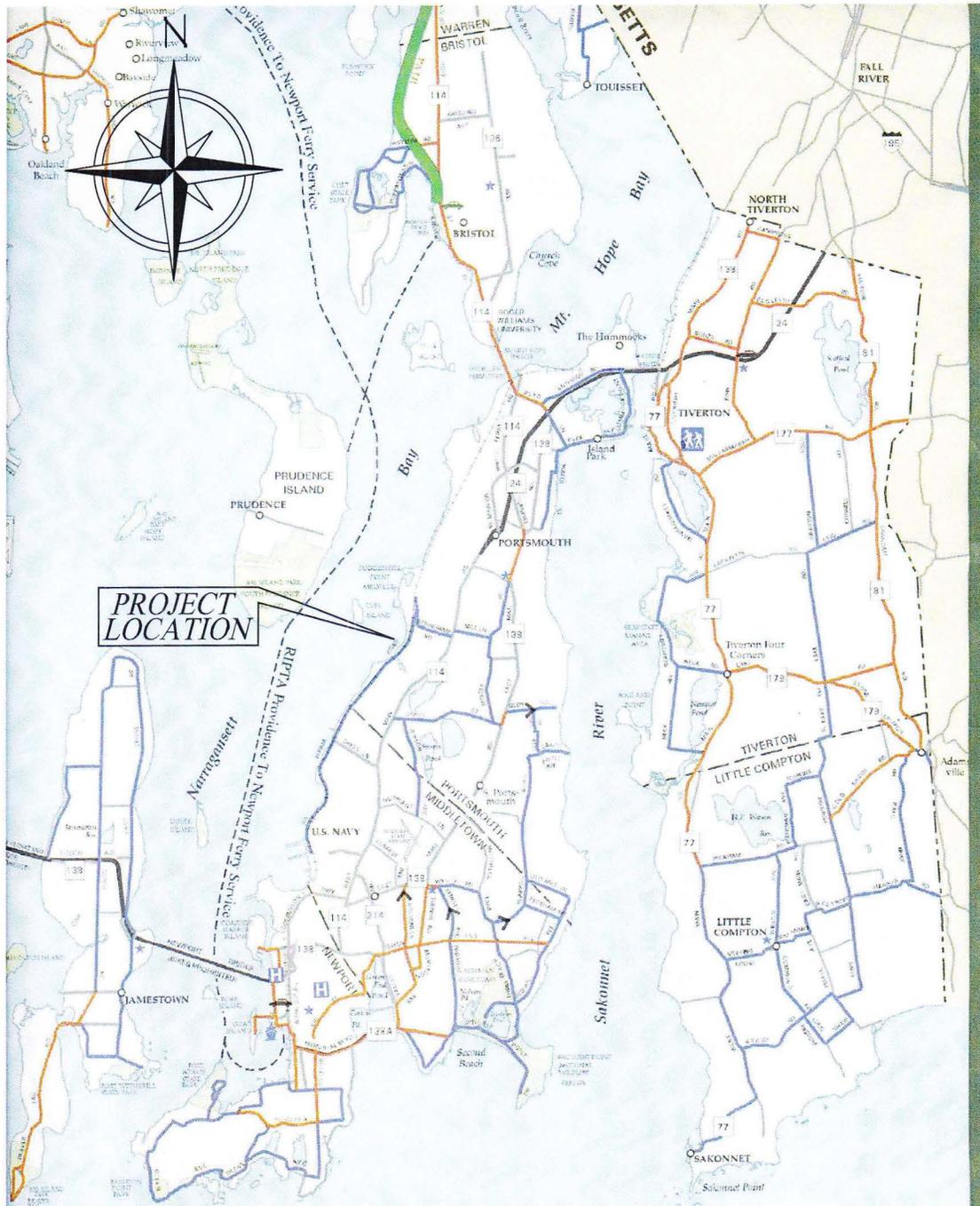
NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_

**PROPOSED WORK AND PURPOSE**

This project includes work in navigable waters to construct and maintain an 887 slip commercial marina with waterfront landside components in four phases on Weaver Cove in Portsmouth, Rhode Island. The work will require a total of 3.9 acres of fill to be placed waterward of the high tide line (HTL) on a coastal beach and approximately 4,000 square feet of fill to be placed in a coastal wetland. The applicant is proposing to construct this recreational waterfront area as follows:

- 1) Construct a marina with 887 slips varying in size from 20' long to 100' long in four (4) main sections as shown on sheet 10 of the plans;
- 2) Dredge approximately 146,000 cubic yards of material over 26.2 acres of area to a depth of -8' to -12' below MLW; the dredged material will be dewatered on a barge and used as fill to construct the landside components of the marina, which includes: parking areas, marina buildings, mixed-use space, residential multi-unit buildings, commercial retail space, and a coastal greenway. Portions of this landside development will require the placement of 1.95 acres of fill beyond the high tide line;
- 3) Install approximately 2,870 linear feet of a steel sheet-pile seawall with a 2 feet wide concrete cap that will begin at the coastal wetland at the northern edge of the proposed development and continue along the coastal beach to the southern end of the proposed site, as shown on pages 11, 12 and 13 of the plan set. A portion of the proposed seawall will be installed as a return and impact approximately 4,000 square feet of coastal wetland;
- 4) Install approximately 1,500 cubic yards of fill for a seawall revetment over 9,200 square feet of area along the southern shoreline of the project, as shown on sheets 10 and 12 of the plan set;
- 5) Establish a 25' wide living shoreline that will be constructed waterward of the proposed revetment and will require approximately 1.96 acres of fill;
- 6) Install 8,350 cubic yards of stone toe protection over 45,000 square feet of area to help support the living shoreline, as shown on sheets 11, 12, and 13 of the plan set;
- 7) Construct an 8' wide x 1,525' long timber walkway that will connect the northern and southern portions of the project, as shown on sheets 10 and 24 of the plans. This walkway will cross approximately 0.44 acres of coastal wetland and will be used for public recreation;
- 8) Construct and utilize a 24' wide x 560' long floating wave attenuator during the four phases of marina construction; after construction is complete, the wave attenuator will be permanently installed at the southern end of the property as shown on sheet 14 of the plans;
- 9) Install a 3,420' long wave fence, in two sections, along the outermost limits of the marina. There will be a 170' opening between the two sections of wave fence to allow for boat passage as shown on sheet 10 of the plans.

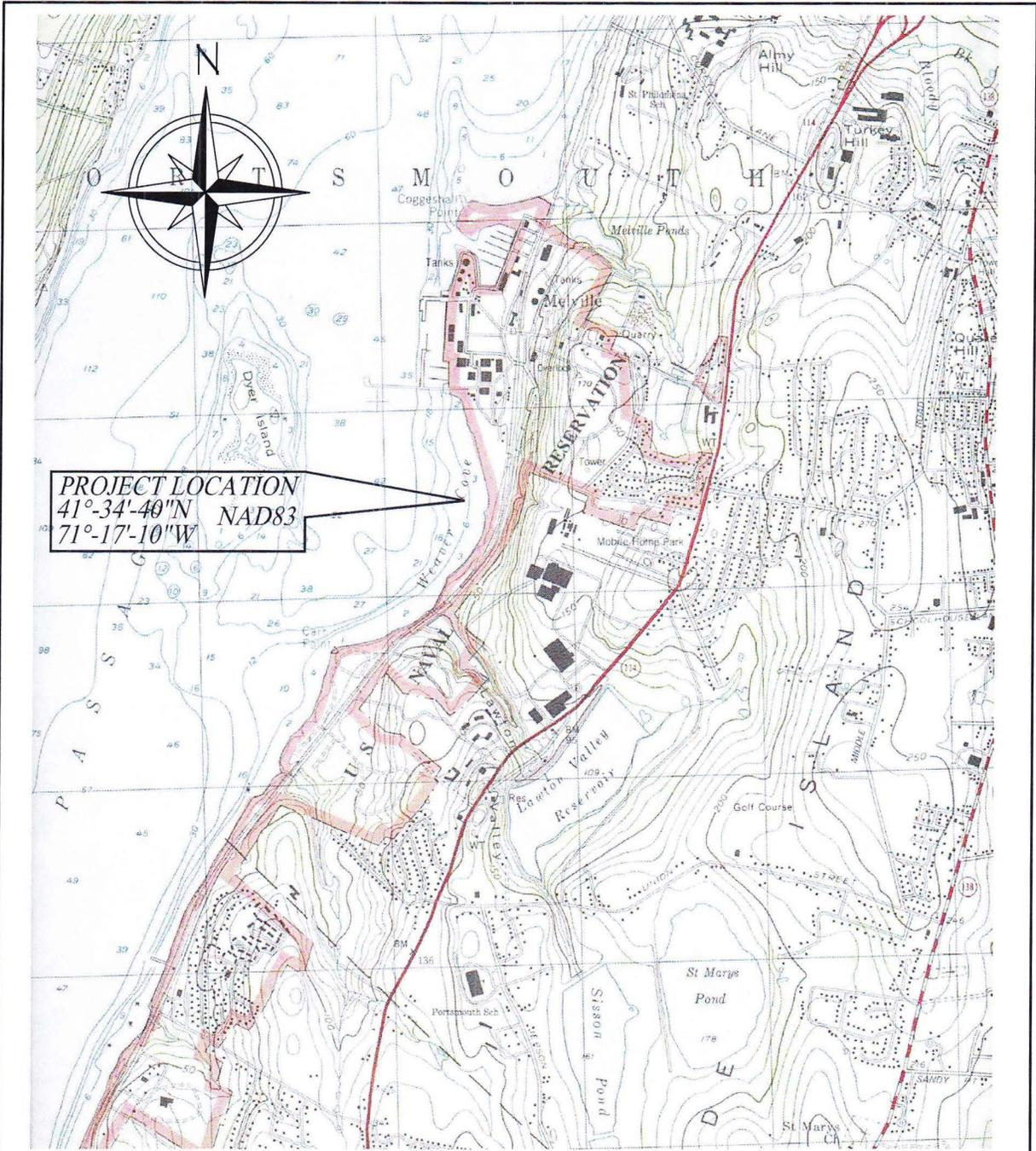
The work is described on the enclosed plans entitled "Weaver Cove Marina Complex," on 25 sheets, dated "February 19, 2014." The marina will occupy approximately 92.4 acres of area within the establish marina perimeter, as shown on sheet plan sheet 9 and 10.



**Not to Scale**

Rev. 1: Add Dredge/Fill Areas 4-25-14  
 Rev. 2: Add Ref to HTL 7-14-14

<b>ST. JEAN ENGINEERING, LLC</b>	<b>Weaver Cove Marina Complex - Locus Map          Proposed Slip Layout</b>		DATE <b>FEB. 19, 2014</b>
Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: stjean.engineering@verizon.net	LOCATION: A.P. 50, Lot 7, A.P. 47, Lots 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	SHEET OF <b>1 25</b>



**PROJECT LOCATION**  
 41°-34'-40"N NAD83  
 71°-17'-10"W

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

**Not to Scale**

SCALE IN FEET

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**ST. JEAN ENGINEERING, LLC**

Civil, Marine & Structural Engineering  
 1145 Middle Rd., East Greenwich, RI 02818  
 Tel: (401)398-0999 email: st.jean.engineering@verizon.net

**Weaver Cove Marina Complex  
 Proposed Slip Layout**

USGS Map Section:

Prudence Island, RI Quadrangle

DATE  
 2/19/14

LOCATION:  
 A.P. 50, Lot 50, A.P. 47, Lot 7  
 Weaver Cove - Melville  
 Burma Road, Portsmouth, RI 02871

APPLICATION BY:  
**MELVILLE ASSOCIATES, LLP**  
 One Tower Drive  
 Portsmouth, Rhode Island 02871

SHEET OF  
 2 25

**GENERAL NOTES:**

1. LAND SIDE PHOTOGRAPHIC MAPPING WAS OBTAINED FROM PLAN REFERENCE NO. 3 AND CONVERTED FROM NGVD29 TO MLW USING THE TIDAL DATUM SHOWN ON THIS SHEET. PROPERTY LINE INFORMATION WAS OBTAINED FROM PLAN REFERENCE NO. 2. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO VERIFY INFORMATION SHOWN ON THE PLANS PRIOR TO THE START OF CONSTRUCTION.
2. BATHYMETRIC SURVEY REPRESENTS SOUNDINGS TAKEN BY ROBERGE ASSOCIATES, COASTAL ENGINEERS, LLC. ON AUGUST 30, 2006 AND SUPPLIED TO ST. JEAN ENGINEERING, LLC IN DIGITAL FORMAT.
3. UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATION AS OBTAINED FROM DRAWINGS SUPPLIED BY THE NORTHEAST ENGINEERS.. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES, GRADES AND DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AND VERIFY EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO START OF ANY CONSTRUCTION.
4. THE CONTRACTOR SHALL OBTAIN A COPY OF THE CRMC ASSENT, THE WATER QUALITY CERTIFICATION, AND THE ARMY CORPS PERMIT APPROVING THE PROPOSED WORK. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE PERMITS ON SITE AND ADHERE TO ALL PERMIT REQUIREMENTS AND STIPULATIONS WITH REGARD TO THE PROPOSED WORK AND TIME SCHEDULES WHEN WORK IS AUTHORIZED. THE CONTRACTOR SHALL ASSIGN A CONTRACTOR'S REPRESENTATIVE TO THE PROJECT WHO SHALL BE RESPONSIBLE FOR MAKING SURE ALL WORK IS PERFORMED IN ACCORDANCE WITH THE VARIOUS PERMIT REQUIREMENTS.
5. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AS THEY RELATE TO THE NEW WORK. REPORT TO THE ENGINEER ALL OBSERVATIONS AND DISCREPANCIES BEFORE PROCEEDING WITH ANY WORK.

**REFERENCE PLANS:**

1. "MELVILLE MARINA - 1495 BOAT SLIPS - PORTSMOUTH, RHODE ISLAND - MELVILLE MARINE INDUSTRIES", BY PARE ENGINEERING CORP. DATED 6-28-90.
2. "ALTA/ACSM SURVEY - MELVILLE MARINE/HOOD PROPERTY, AP 43, LOTS 3,4,7 & 8 AP 50, LOTS 6 & 7 - BURMA ROAD, STRINGHAM ROAD, LITTLE HARBOR DRIVE, & MARITIME DRIVE PORTSMOUTH, RHODE ISLAND", DATED AUGUST 14, 2006.
3. "TOPOGRAPHIC WORKSHEET OF THE WILLOW LANE AREA PORTSMOUTH, RI" FOR NORTHEAST ENGINEERS & CONSULTANTS, MIDDLETOWN, RI., BY EASTERN TOPOGRAPHICS, WOLFBORO, NH, DATED 30 MAR 05 (PHOTO), 21 APR 05 (COMPILATION DATE).
4. DIGITAL PLAN PROVIDED BY NORTHEAST ENGINEERS SHOWING FIELD LOCATED HIGH TIDE LINE (HTL) BY REGISTERED RI SURVEYORS, JUNE 2014.

Not to Scale

REVIEW OF THE FLOOD INSURANCE RATE MAP FOR NEWPORT COUNTY, RHODE ISLAND, PANEL NUMBER 83 OF 226, MAP NUMBER 44005C0083J, EFFECTIVE DATE SEPTEMBER 4, 2013 INDICATES THAT THE SITE IS LOCATED IN A VE FLOOD ZONE WITH A BASE FLOOD ELEVATION OF 14 and 16. THE FIRM MAP IS REFERENCED TO THE NATIONAL AMERICAN VERTICAL DATUM OF 1988. SEE PLAN FOR OTHER ZONE DESIGNATIONS.

Rev. 1: Add Dredge/Fill Areas 4-25-14  
Rev. 2: Add Ref to HTL 7-14-14

<b>ST. JEAN ENGINEERING, LLC</b>	<b>Weaver Cove Marina Complex - General Notes 1 Proposed Slip Layout</b>		DATE FEB. 19, 2014
Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: st.jean.engineering@verizon.net	LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	SHEET OF 3 25

## FLOATING DOCK PERFORMANCE STANDARDS:

1. FLOATING DOCKS SHALL BE CONSTRUCTED OF PRESSURE TREATED TIMBER FRAMING OR OTHER MATERIALS SUITABLE FOR SUBMERSION IN SALT WATER. FLOATATION SHALL BE PLASTIC ENCAPSULATED FOAM FILLED FLOAT DRUMS OR EQUIVALENT. THE FLOAT DRUMS SHALL HAVE A MINIMUM 15-YEAR WARRANTY. FLOATING DOCKS SHALL BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD OF 60 PSF OR A CONCENTRATED LOAD OF 500 LBS LOCATED ANYWHERE ON TOP OF THE FLOAT (NOT CONCURRENT). IF CONCRETE FLOATS ARE SPECIFIED THE CONCRETE SHALL BE A MIN. OF 5,000 PSI, MAX. WATER CEMENT RATION OF 0.40 AND CONCRETE MIX SHALL BE SUITABLE FOR SALT WATER SPLASH AND SUBMERSION IN ACCORDANCE WITH ACI 350.
2. FLOAT BUOYANCY SHALL BE ESTABLISHED TO PRODUCE A UNIFORMLY LEVEL (PORT AND STARBOARD / FORWARD AND AFT) FLOAT SURFACE FOR ALL DEAD LOADS. AS SUCH FLOAT BUOYANCY SHALL ACCOUNT FOR POINT LOADS AND LINE LOADS, ASSOCIATED WITH GANGWAYS, UTILITIES, AND EQUIPMENT PERMANENTLY MOUNTED ON THE DOCKS. FLOAT DRUMS SHALL BE A MINIMUM OF 16" HIGH.
3. FLOATS SHALL BE CONSTRUCTED WITH PROPER PLACED FLOATATION SO AS TO AVOID TIPPING (ROLLING OVER) WHEN A 500 LB LIVE LOADS IS APPLIED ALONG ANY EDGE. FLOATS THAT ARE TOP HEAVY SHALL BE CAUSE FOR REJECTION.
4. FLOATS SHALL BE ATTACHED TO GUIDE PILES IN SUCH A MANNER AS TO ALLOW FULL MOVEMENT THROUGH THE FULL HEIGHT OF THE GUIDE PILE (INCLUDING FLOOD CONDITIONS). GUIDES SHALL BE DESIGNED TO ELIMINATE BINDING THROUGHOUT THE RANGE OF MOVEMENT AND DAMAGE TO THE GUIDE PILES TO THE EXTENT POSSIBLE. ROLLER OR TEFLON GUIDES ARE REFEREED. ADDITIONALLY, GUIDES SHALL BE DESIGNED TO ALLOW REMOVAL OF THE FLOATS FOR MAINTENANCE AND WINTER STORAGE. THE MIN. TOP ELEVATION OF ALL DOCK GUIDE PILES SHALL BE ELEVATION 15 (NAVD88).
5. PROVISION SHALL BE MADE TO LIFT FLOATS OUT OF THE WATER FOR WINTER STORAGE.
6. ALL GANGWAYS SHALL BE MARINE GRADE ALUMINUM (6061-T6) AND CAPABLE OF WITHSTANDING A MINIMUM LIVE LOAD OF 60 PSF. THE GUARDRAILS ON THE GANGWAY SHALL BE CAPABLE OF WITHSTANDING A MINIMUM LATERAL POINT LOAD OF 200 LBS ANYWHERE ALONG THE TOP RAIL.

## TIMBER PILE NOTES:

1. ALL NEW PILES SHALL CONFORM WITH THE FOLLOWING :
  - TIMBER, TREATED WITH CHROMATED COPPER ARSENATE (2.5 CCA)
  - ALL HOLES OR CUTS MADE IN PILES SHALL BE DRESSED WITH CCA.
  - SOUTHERN YELLOW PINE OR DOUGLAS FIR CONFORMING TO THE FOLLOWING MINIMUM ALLOWABLE STRESSES AS DETERMINED IN ACCORDANCE WITH ASTM D-2899

COMPRESSION PARALLEL TO THE GRAIN,  $F_c$  - 1,250 PSI  
 EXTREME FIBER STRESS IN BENDING  $F_b$  - 2,450 PSI  
 HORIZONTAL SHEAR  $F_v$  - 115 PSI  
 COMPRESSION PERPENDICULAR TO THE GRAIN  $F_c$  - 230 PSI
2. PILES SHALL CONFORM TO THE PHYSICAL CHARACTERISTICS OF ROUND TIMBER PILES AS DESCRIBED IN ASTM D-25.
  - MINIMUM BUTT DIAMETER SHALL BE 12", MINIMUM TIP DIAMETER SHALL BE 10".
  - SEE PLANS FOR CUT OFF ELEVATIONS.
  - PILES SHALL BE CLEARLY AND PERMANENTLY BRANDED IN TWO PLACES APPROXIMATELY 5 AND 10 FEET FROM THE BUTT. THE BRAND SHALL IDENTIFY SPECIES, CLASS AND LENGTH, PRESERVATIVE, RETENTION, SUPPLIER, AND MONTH AND YEAR OF TREATMENT.
3. PILE TOLERANCES:
  - BUTT MUST BE WITHIN 2" OF HORIZONTAL LOCATION.
4. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO DRIVING PILES. CONTRACTOR SHALL STOP DRIVING PILE IF A LOSS OF DRIVING RESISTANCE IS NOTED WITHIN THE LAST 4 FEET OF DRIVING AND NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK ON THE PILE BEING DRIVEN.
5. PRIOR TO ORDERING PILES AND COMMENCING DRIVING THE CONTRACTOR SHALL DETERMINE BY PROBES OR TEST DRIVING IF PILES WILL REQUIRE SOCKETING INTO ROCK.

Not to Scale

Rev. 1: Add Dredge/Fill Areas 4-25-14  
 Rev. 2: Add Ref to HTL 7-14-14

<b>ST. JEAN ENGINEERING, LLC</b>	<b>Weaver Cove Marina Complex - General Notes 2 Proposed Slip Layout</b>		DATE FEB. 19, 2014
Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)393-0999 email: st.jean.engineering@verizon.net	LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	SHEET OF 4 25

## TIMBER FRAMING NOTES:

1. ALL TIMBER WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL FOREST PRODUCTS ASSOCIATION NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL TIMBER SIZES ARE NOMINAL UNLESS OTHERWISE NOTED.
2. ALL TIMBER FRAMING SHALL BE STRESS GRADED LUMBER HAVING THE FOLLOWING STRUCTURAL PROPERTIES (U.O.N.):
  - SOUTHERN YELLOW PINE: (#1 OR BETTER)
  - Fb = 1,400 PSI
  - Fv = 110 PSI

DECK PLANKS TO BE 2x8 - #1 GRADE
3. ALL FRAMING SHALL BE TREATED WITH WOOD PRESERVATIVE (PRESSURE TREATMENT): FS TT-W-571 AWPA TREATMENT C2 USING CHROMATED COPPER ARSENATE (0.6 CCA). ALL HOLES AND CUTS SHALL BE DRESSED WITH CCA. CROSS BRACING SHALL BE TREATED USING 2.5 CCA.
4. ALL THREADED FASTENERS AND ANCHORS SHALL BE HOT DIPPED GALVANIZED STEEL FOR EXTERIOR, HIGH HUMIDITY (MARINE ENVIRONMENT - 4 MILS THICKNESS), AND TREATED WOOD LOCATIONS. BOLTS SHALL CONFORM TO A307 GRADE A W/HEAVY HEX NUTS AND HOT DIPPED GALVANIZED (HDG) STEEL WASHERS. BOLT HOLES SHALL BE A MAXIMUM OF  $\frac{1}{16}$ " LARGER THAN BOLT DIAMETER SPECIFIED. CLIPS, HANGERS, ANGLES AND OTHER HARDWARE REQUIRING FABRICATION SHALL BE FABRICATED COMPLETE WITH HOLES AND WELDING PRIOR TO HOT DIP GALVANIZING - 4 MILS THICKNESS. FLOAT DRUMS SHALL BE SECURED WITH GRADE 316 STAINLESS STEEL LAG BOLTS AND WASHERS.
5. ALL NAILS SHALL BE 60D - 4 GAUGE GRADE 316 STAINLESS STEEL UNLESS OTHERWISE SPECIFIED. PRE-DRILL  $\frac{3}{16}$ " HOLES FOR 4 GAUGE NAILS THROUGH TOP PLY ONLY.
6. STAINLESS STEEL BOLTS, NUTS, WASHERS AND FABRICATIONS NOTED ON THE DRAWINGS SHALL BE GRADE A316.
7. DECKING SHALL BE FASTENED USING 4" LONG STAINLESS STEEL SQUARE DRIVE DECK SCREWS.
8. ALL TIMBER FRAMING USED IN THE PROJECT SHALL BE STRAIGHT IN BOTH LONGITUDINAL PLANES WITH NO OR MINIMAL TWIST. TIMBER FRAMING SHALL BE FREE OF TWIST, WANE, EXCESSIVE CUP, EXCESSIVE CROWN, BARK, SPLITS, KNOTS GREATER THAN  $\frac{1}{4}$  OF THE DEPTH OF THE MEMBER, LOOSE KNOTS, HOLES, AND OTHER DEFECTS. TIMBER SHALL BE INSPECTED FOR CROWN PRIOR TO INSTALLATION BY THE TIMBER CONSTRUCTION CONTRACTOR AND INSTALLED CROWN UP WHERE SLIGHT CROWN EXISTS. JOINTS SHALL BE SAW CUT AND ACCURATELY AND TIGHTLY FITTED. THE ENGINEER RESERVES THE RIGHT TO REJECT TIMBER MEMBERS AND FINISH CONSTRUCTION OF TIMBER ASSEMBLIES WHERE IN THE OPINION OF THE ENGINEER THE DESIGN INTENT OF THE STRUCTURE WOULD BE COMPROMISED DUE TO THE FAULTY TIMBER, JOINTING, AND OR CONSTRUCTION PRACTICES.

## STRUCTURAL STEEL NOTES:

DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE "MANUAL OF STEEL CONSTRUCTION - ASD", NINTH EDITION, AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).

ALL WELDING SHALL CONFORM TO THE "STRUCTURAL WELDING CODE FOR STEEL" LATEST EDITION, AS ADOPTED BY THE AMERICAN WELDING SOCIETY (AWS). ALL WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER IN ACCORDANCE WITH AWS STANDARDS.

ALL CONNECTIONS SHALL BE DESIGNED BY A STEEL FABRICATOR EXCEPT THOSE SPECIFICALLY DETAILED ON THE CONTRACT DOCUMENTS.

STRUCTURAL STEEL MATERIALS SHALL MEET THE FOLLOWING REQUIREMENTS:

STEEL SECTIONS AND MISC: ASTM A572 GRADE 50 UNLESS OTHERWISE NOTED - HOT DIPPED GALVANIZED FOR EXTREME SERVICE (4 MILS THICKNESS U.O.N.)

BOLTS: ASTM A325 WITH HEAVY HEXAGONAL HEADS

NUTS: ASTM A563 WITH HEAVY HEXAGONAL HEADS

WASHERS: ASTM F436

WELD RODS: ASTM A233, E70XX SERIES ELECTRODES AS REQ'D FOR CONDITIONS OF INTENDED USE

BOLTS, NUTS, & WASHERS: ALL BOLTS, NUTS, AND WASHERS SHALL BE HOT DIPPED GALVANIZED FOR EXTREME SERVICE (MIN. 4 MIL THICKNESS U.O.N.) IN ACCORDANCE WITH ASTM A153 AND MEET MINIMUM TESTS OF ASTM A239.

**Not to Scale**

Rev. 1: Add Dredge/Fill Areas 4-25-14  
Rev. 2: Add Ref to HTL 7-14-14

<b>ST. JEAN ENGINEERING, LLC</b>	<i>Weaver Cove Marina Complex - General Notes 3 Proposed Slip Layout</i>		DATE FEB. 19, 2014
Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: stjean.engineering@verizon.net	LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	SHEET OF 5 25

## STEEL PILE NOTES:

1. PIPE PILES SHALL BE MINIMUM ASTM A252 GR. 3 (Fy 45 KSI).
2. THE CONTRACTOR SHALL SUBMIT FOR EACH SHIPMENT CERTIFICATES AND IDENTIFICATION WITH SPECIFIC LOTS PRIOR TO INSTALLING PILING. IDENTIFICATION DATA SHALL INCLUDE PILING TYPE, DIMENSIONS, CHEMICAL COMPOSITION, MECHANICAL PROPERTIES, SECTION PROPERTIES, HEAT NUMBER, AND MILL IDENTIFICATION MARK.
3. THE CONTRACTOR SHALL SUBMIT DESCRIPTIONS OF PILE DRIVING EQUIPMENT TO BE EMPLOYED DURING THE PROJECT TO THE OWNER FOR REVIEW. DESCRIPTIVE INFORMATION TO INCLUDE MANUFACTURER'S NAME, MODEL NUMBERS, CAPACITY, RATED ENERGY, HAMMER DETAILS, CUSHION MATERIAL, HELMET, AND TEMPLATES.
4. A PILE HAMMER SHALL BE UTILIZED HAVING A DELIVERED FORCE OR ENERGY SUITABLE FOR THE TOTAL WEIGHT OF THE PILE AND THE CHARACTER OF THE SUBSURFACE MATERIAL TO BE ENCOUNTERED. USE A PROTECTING CAP DURING DRIVING TO PREVENT DAMAGE TO THE TOP OF THE PILE. ALL DAMAGE TO THE PILE CAUSED BY DRIVING SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL SUBMIT A WAVE EQUATION ANALYSIS OF PILE DRIVING (WEAP ANALYSIS) TO THE ENGINEER FOR REVIEW PRIOR TO THE START OF PIPE PILE INSTALLATION.
6. A PILE DRIVING RECORD OF ALL PILES SHALL BE MAINTAINED AND AS A MINIMUM CONTAIN THE FOLLOWING INFORMATION:
  - PILE REFERENCE NUMBER OR LOCATION
  - PILE LENGTH
  - DATE OF DRIVING
  - DEPTH DRIVEN
  - LENGTH OF EXTENSIONS
  - PILE TYPE AND GRADE OF STEEL
  - TYPE OF HAMMER
  - COMMENCING SURFACE LEVEL
  - LENGTH OF OFF CUTS
  - MEASUREMENT OF DRIVING RESISTANCE
 ALL INFORMATION REGARDING INTERRUPTIONS, UNEXPECTED CHANGES IN DRIVING CHARACTERISTICS, AND TIMES TAKEN TO OVERCOME THEM
7. PIPE PILES SHALL BE GUIDED AND HELD IN POSITION BY TEMPORARY GATES OR A TEMPLATE OR GUIDE SYSTEM TO INSURE PILES ARE DRIVEN TO LINE AND PLUMB OR PROPERLY BATTERED AS REQUIRED. IF THE PILE BECOMES UNALIGNED DURING DRIVING THE CONDITION SHALL BE CORRECTED IMMEDIATELY AND THE PILE RE-DRIVEN TO PROPER ALIGNMENT.
8. PILE TOLERANCES SHALL BE AS PROVIDED IN TECHNICAL SPECIFICATIONS SECTION 02363 - STEEL PIPE PILES
9. BORING LOGS INDICATE THAT BEDROCK OR HARD DRIVING MAY BE ENCOUNTERED. REFER TO SHEET 12 FOR SPECIFIC REQUIREMENTS RELATED TO PILE INSTALLATION.

Not to Scale

Rev. 1: Add Dredge/Fill Areas 4-25-14  
Rev. 2: Add Ref to HTL 7-14-14

<b>ST. JEAN ENGINEERING, LLC</b>	<b>Weaver Cove Marina Complex - General Notes 4 Proposed Slip Layout</b>	DATE FEB. 19, 2014
Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: st.jean.engineering@verizon.net	LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871
		SHEET OF 6 25

## STEEL COATING NOTES:

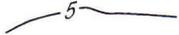
1. THE SURFACES OF THE STEEL FURNISHED AND ERECTED SHALL BE SHOP PRIMED WITH CARBOGUARD 888 OR APPROVED EQUAL AND COATED WITH BITUMASTIC 300 M COAL TAR EPOXY AS MANUFACTURED BY CARBOLINE. COATING SYSTEM SHALL BE BLACK IN COLOR.
2. ALL SURFACES SHALL BE CLEANED, AT A MINIMUM, TO STEEL STRUCTURES PAINTING COUNCIL SURFACE PREPARATION SPECIFICATIONS SSPC-SP3 PRIOR TO THE APPLICATION OF THE COATING SYSTEM. ALL WORK CLEANED IN ONE DAY MUST BE COATED ON THAT DAY AS SOON AS POSSIBLE AFTER BLASTING. THE EPOXY SHALL BE APPLIED WHEN THE SURFACE AND AIR TEMPERATURES ARE AT LEAST 50 DEGREES FAHRENHEIT. ALL SURFACES TO BE COATED SHALL BE COMPLETELY DRY, FREE OF MOISTURE, SOIL, DUST, SALT, AND GRIT AT THE TIME OF COATING.
3. THE COATING SHALL BE APPLIED WITH BRUSH OR SPRAY IN AT LEAST TWO COATS TO A MINIMUM DRY FILM THICKNESS OF 16 MILS. EACH COAT SHALL BE COMPLETELY CURED BEFORE SUCCEEDING COATS ARE APPLIED AS PER MANUFACTURER'S INSTRUCTIONS. PREPARATION AND APPLICATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND IN THE PRESENCE OF AN OWNER'S REPRESENTATIVE. COATED SURFACES, EXCEPT FOR SPLICED AREAS, SHALL NOT BE IMMERSERD FOR AT LEAST 14 DAYS AFTER THE APPLICATION OF THE COATING. AFTER DRIVING, ABRADED AND OTHERWISE DAMAGED AREAS OF COATING ABOVE LOW WATER SHALL BE GENEROUSLY COATED WITH THE MATERIAL SPECIFIED BELOW FOR THIS PURPOSE.
4. THE REPAIRING OF DAMAGED OR ABRADED SURFACES, INCLUDING COATING AREAS REMOVED FROM WELDING, OF THE COAL TAR EPOXY COATING SHALL BE DONE WITH THE COAL TAR EPOXY MATERIAL OF THE SAME TYPE USED FOR THE INITIAL APPLICATION; OR OTHER MATERIAL RECOMMENDED FOR THIS PURPOSE BY THE MANUFACTURER OF THE COATING MATERIALS AND APPROVED BY THE OWNER. REPAIR COATINGS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS AND DIRECTIONS.
5. THE COATING SHALL BE READILY APPLIED WITHOUT THINNING. IF THINNING IS DESIRED BY THE CONTRACTOR, ADDITIONAL COATS MAY BE REQUIRED TO ACHIEVE THE SPECIFIED FILM THICKNESS. THINNING SHALL NOT BE DONE WITHOUT THE PRIOR APPROVAL OF THE OWNER.
6. SATISFACTORY PERFORMANCE WILL BE THE BASIS OF ACCEPTANCE OF THE COMPLETED WORK BY THE OWNER. ACCEPTANCE OF THE COMPLETED WORK SHALL BE BASED UPON VISUAL INSPECTION BY THE OWNERS' REPRESENTATIVE FOR PINHOLES, FILM CONTINUITY, AND QUALITY OF APPLICATION. DETECTION OF INADEQUATELY COATED AREAS WILL BE INDICATED BY THE OWNER BY CIRCLING THESE AREAS IN CHALK. THESE AREAS SHALL BE REPAIRED BY THE CONTRACTOR. AT HIS OWN EXPENSE.
7. THE FINISHED COATING SHALL GENERALLY BE SMOOTH AND SEMI-GLOSSY. SAGS, DIMPLING, OR CURTAINING SHALL BE CAUSE FOR REJECTION.
8. THE CONTRACTOR SHALL SUBMIT A CERTIFIED STATEMENT BY THE RESPONSIBLE COATING SUPPLIER THAT THE WORK WAS DONE IN CONFORMANCE WITH THESE SPECIFICATIONS.

Not to Scale

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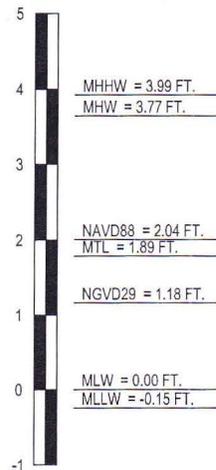
<p><b>ST. JEAN ENGINEERING, LLC</b></p>	<p><i>Weaver Cove Marina Complex - General Notes 5 Proposed Slip Layout</i></p>		<p>DATE FEB. 19, 2014</p>
<p>Civil, Marine &amp; Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: st.jean.engineering@verizon.net</p>	<p>LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871</p>	<p>APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871</p>	<p>SHEET OF 7 25</p>

## LEGEND

	PROPERTY LINE		EXISTING SPOT GRADE
	EXISTING CONTOUR		PROPOSED SPOT GRADE
	PROPOSED CONTOUR		PROPOSED BULKHEAD
	EXISTING SEWER		EXISTING STONE WALL
	PROPOSED SEWER		EXISTING FENCE LINE
	EXISTING WATER LINE		BORING
	PROPOSED WATER LINE		FLOOD ZONE BOUNDARY
	EXISTING DRAINAGE LINE		EXISTING HYDRANT
	PROPOSED DRAINAGE LINE		EXISTING POLE
	EXISTING SEWER MANHOLE		EXISTING SLOPE
	EXISTING DRAINAGE MANHOLE		SHORE LINE
	PROPOSED MANHOLE		IRON PIPE FOUND
	EXISTING TREE LINE		STONES/BOULDERS
	EXISTING BUILDING		
	PROPOSED BUILDING		

## ABBREVIATIONS

N. I. C.	NOT IN CONTRACT
U. O. N.	UNLESS OTHERWISE NOTED
N. T. S.	NOT TO SCALE
I. A. W.	IN ACCORDANCE WITH
TYP.	TYPICAL
R & D	REMOVE AND DISPOSE
BIT.	BITUMINOUS CONCRETE
N/F	NOW OR FORMERLY
F. F.	FINISH FLOOR
T. O. F.	TOP OF FOUNDATION
M. P. L.	MARINA PERIMETER LINE
S. J. E.	ST. JEAN ENGINEERING, LLC
S. F.	SQUARE FOOT
A. P.	ASSESSORS PLAT
EXTG.	EXISTING
SMH	SEWER MANHOLE
DMH	WATER MANHOLE
MIN.	MINIMUM
HTL	HIGH TIDE LINE (Rack Line)



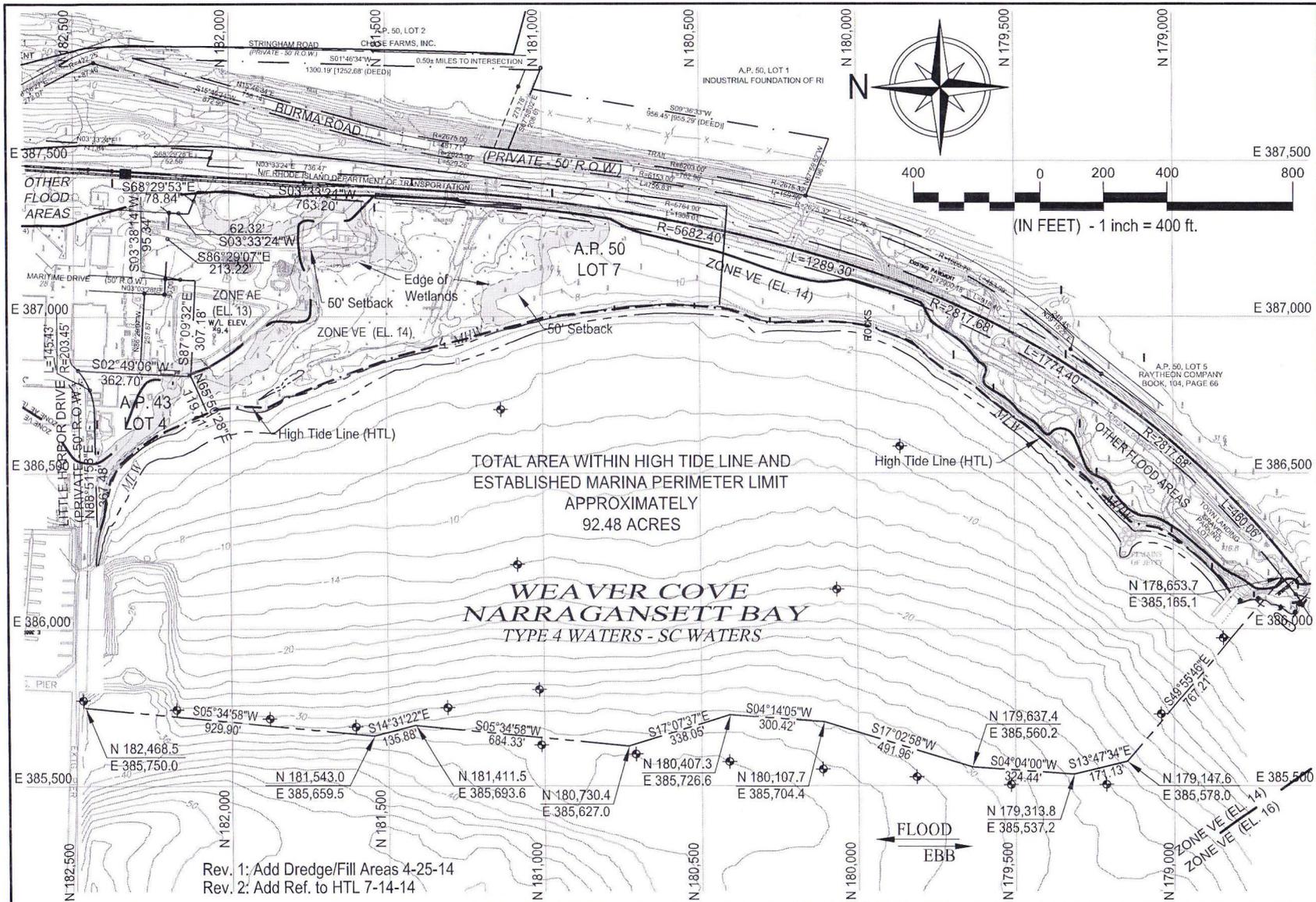
### DATUM INFORMATION

DATUM FOR THE PROJECT WAS DEVELOPED BY INTERPOLATION BETWEEN PID LW0571 JUST NORTH OF THE MOUNT HOPE BRIDGE AND PID LW0493 COASTERS ISLAND, NEWPORT

Rev. 1: Add Dredge/Fill Areas 4-25-14  
Rev. 2: Add Ref to HTL 7-14-14

Not to Scale

<b>ST. JEAN ENGINEERING, LLC</b> Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: stjean.engineering@verizon.net	<b>Weaver Cove Marina Complex - Legend</b> <b>Proposed Slip Layout</b>	DATE FEB. 19, 2014
LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	SHEET OF <div style="text-align: center; font-size: 24px; font-weight: bold;">8      25</div>



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**ST. JEAN ENGINEERING, LLC**  
 Civil, Marine & Structural Engineering  
 1145 Middle Rd., East Greenwich, RI 02818  
 Tel: (401)398-0999 email: st.jean.engineering@verizon.net

**LOCATION:**  
 A.P. 50, Lot 7, A.P. 47, Lot 4  
 Weaver Cove - Melville  
 Burma Road, Portsmouth, RI 02871

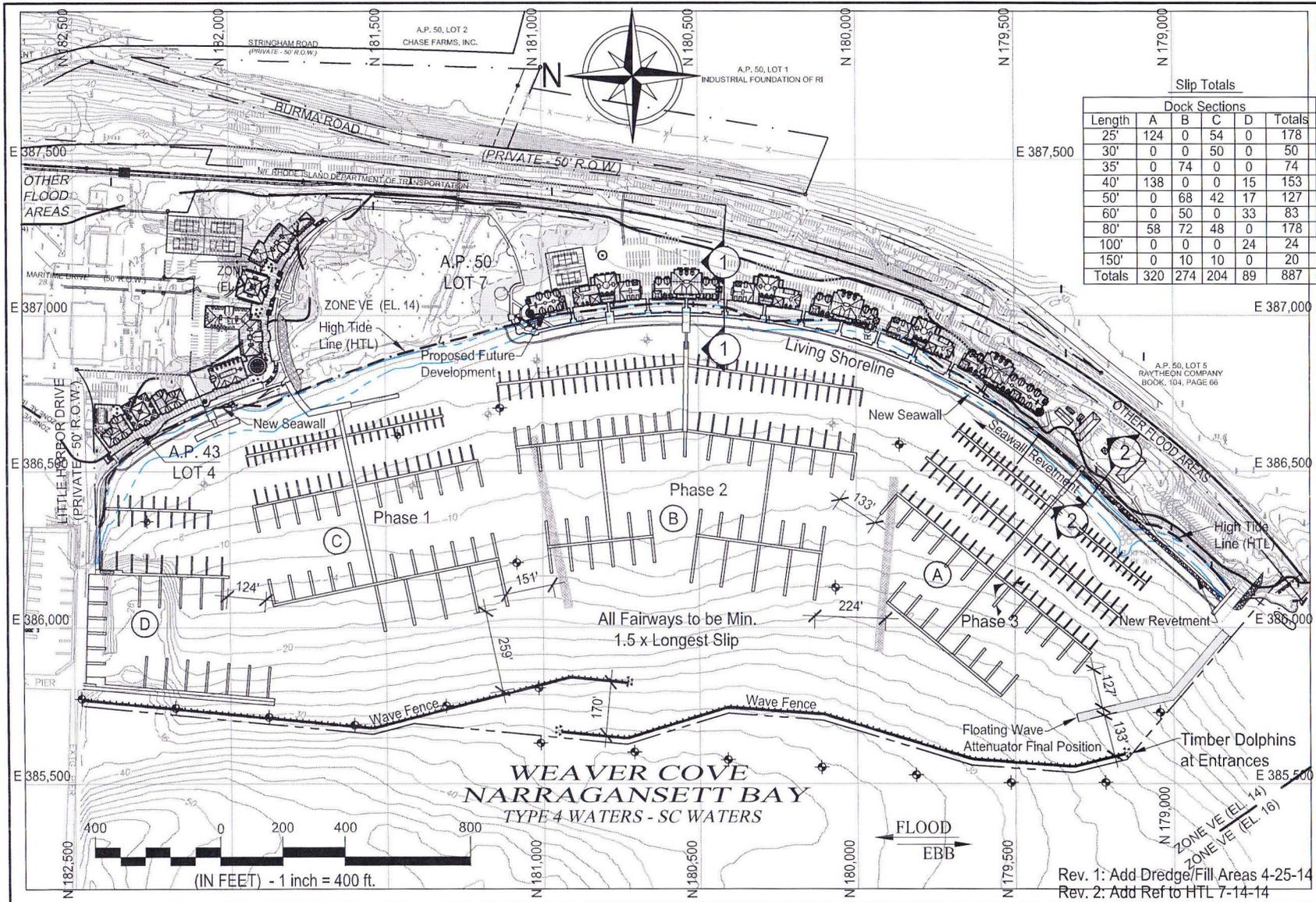
**Weaver Cove Marina Complex - Existing Conditions**

**APPLICATION BY:**  
**MELVILLE ASSOCIATES, LLP**  
 One Tower Drive  
 Portsmouth, Rhode Island 02871

**REVISIONS:**

NOT TO SCALE: ENLARGED TO 1:300

**DATE**  
 FEB. 19, 2014  
**SHEET** OF  
 9 25



**ST. JEAN  
ENGINEERING, LLC**

Civil, Marine & Structural Engineering  
1145 Middle Rd., East Greenwich, RI 02818  
Tel: (401) 398-6999 email: st.jean.engineering@verizon.net

**Weaver Cove Marina Complex - Proposed Marina Layout**

LOCATION:  
A.P. 50, Lot 7, A.P. Lots 4  
Weaver Cove - Melville  
Burma Road, Portsmouth, RI 02871

APPLICATION BY:  
**MELVILLE ASSOCIATES, LLP**  
One Tower Drive  
Portsmouth, Rhode Island 02871

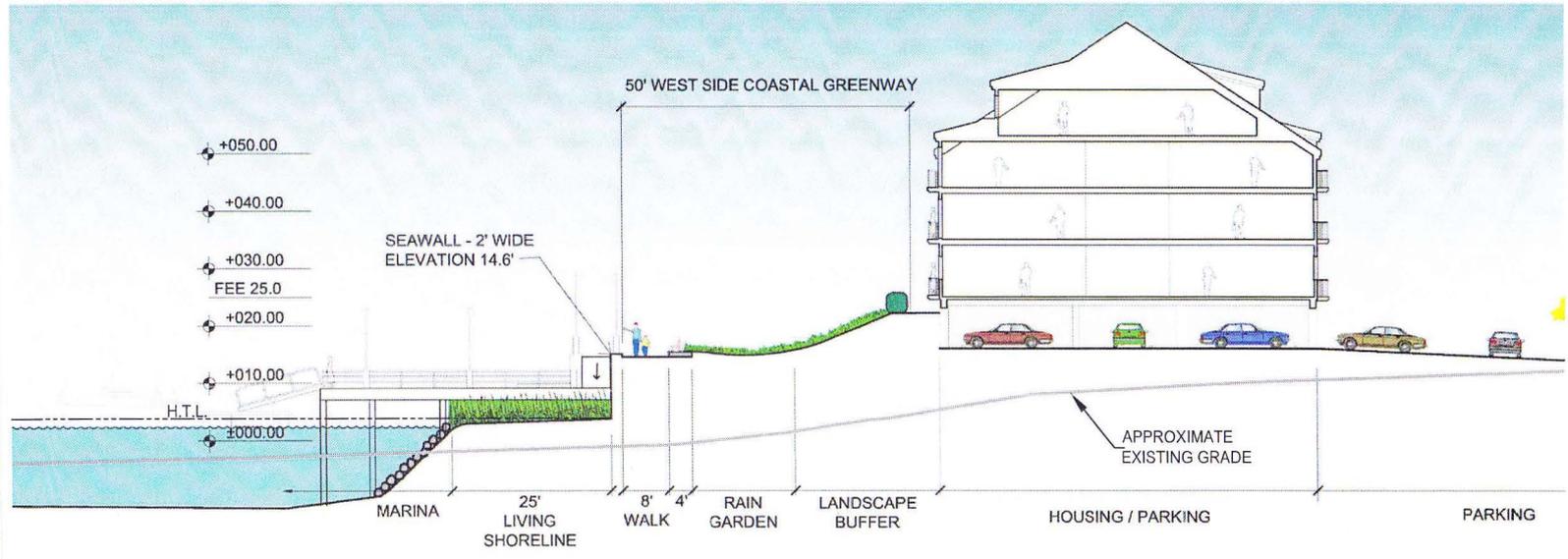
REVISIONS:

**NOT TO SCALE: ENLARGED TO 1:300**

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FEB. 19, 2014

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Rev. 1: Add Dredge/Fill Areas 4-25-14  
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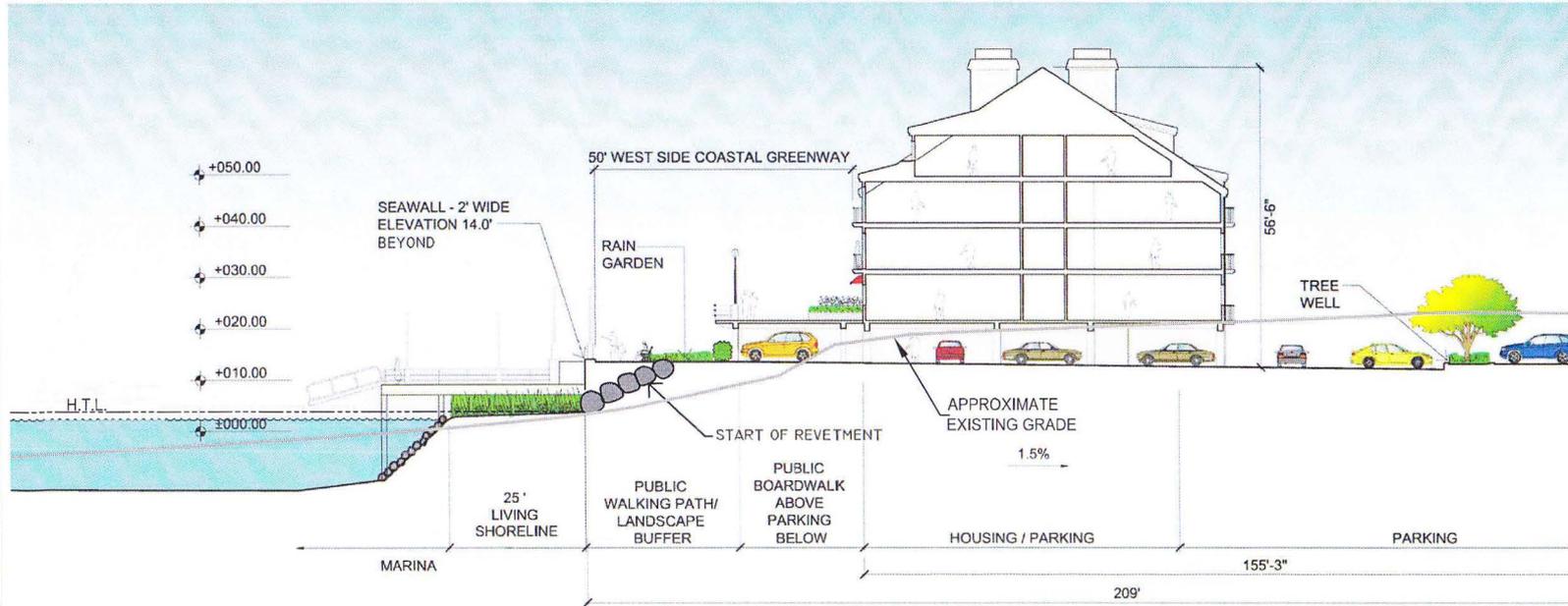


**Section 1-1**  
Scale: N.T.S.

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Rev. 2: Add Ref to HTL 7-14-14

<p><b>ST. JEAN ENGINEERING, LLC</b> Civil, Marine &amp; Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: st.jean.engineering@verizon.net</p>	<p><b>Weaver Cove Marina Complex - Cross Section</b></p> <p>PROJECT: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871</p> <p>ARCHITECT: MELVILLE ASSOCIATES, LLP One Tower Drive Portsmouth, Rhode Island 02871</p>	<p>DATE: FEB. 19, 2014 SHEET OF: 11 25</p>
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**Section 2-2**

Scale: N.T.S.

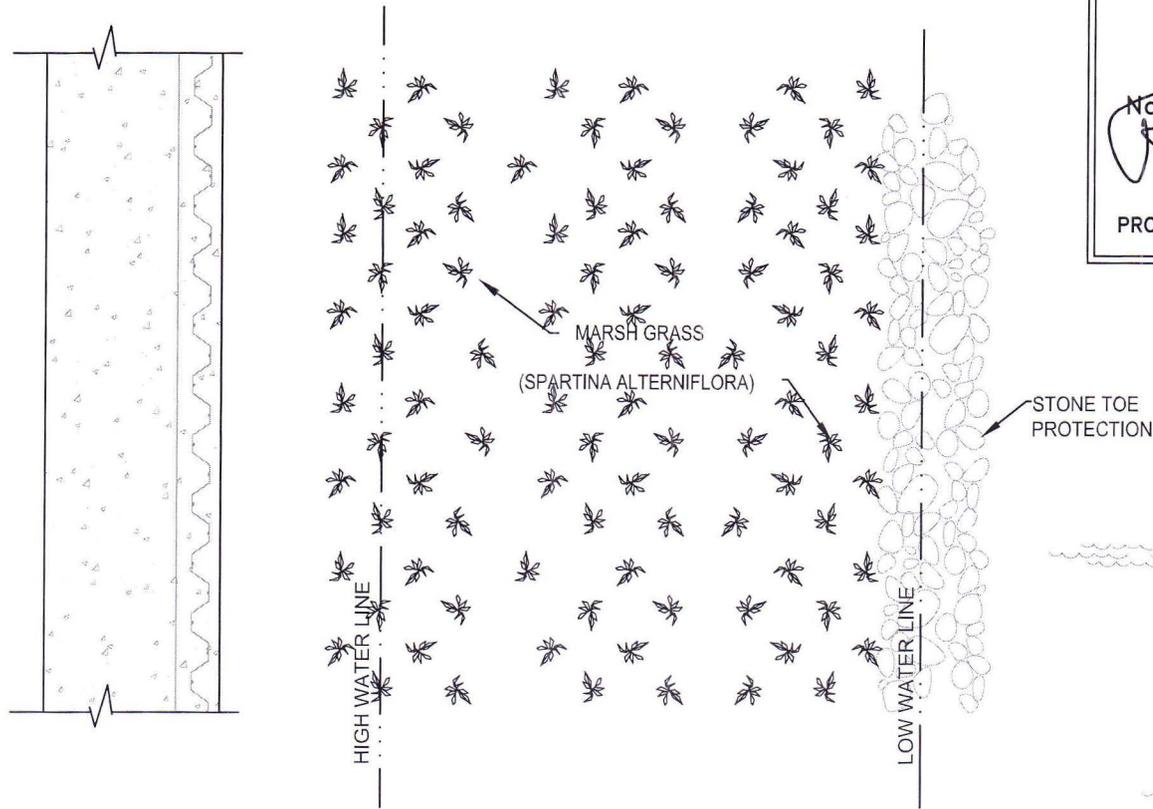
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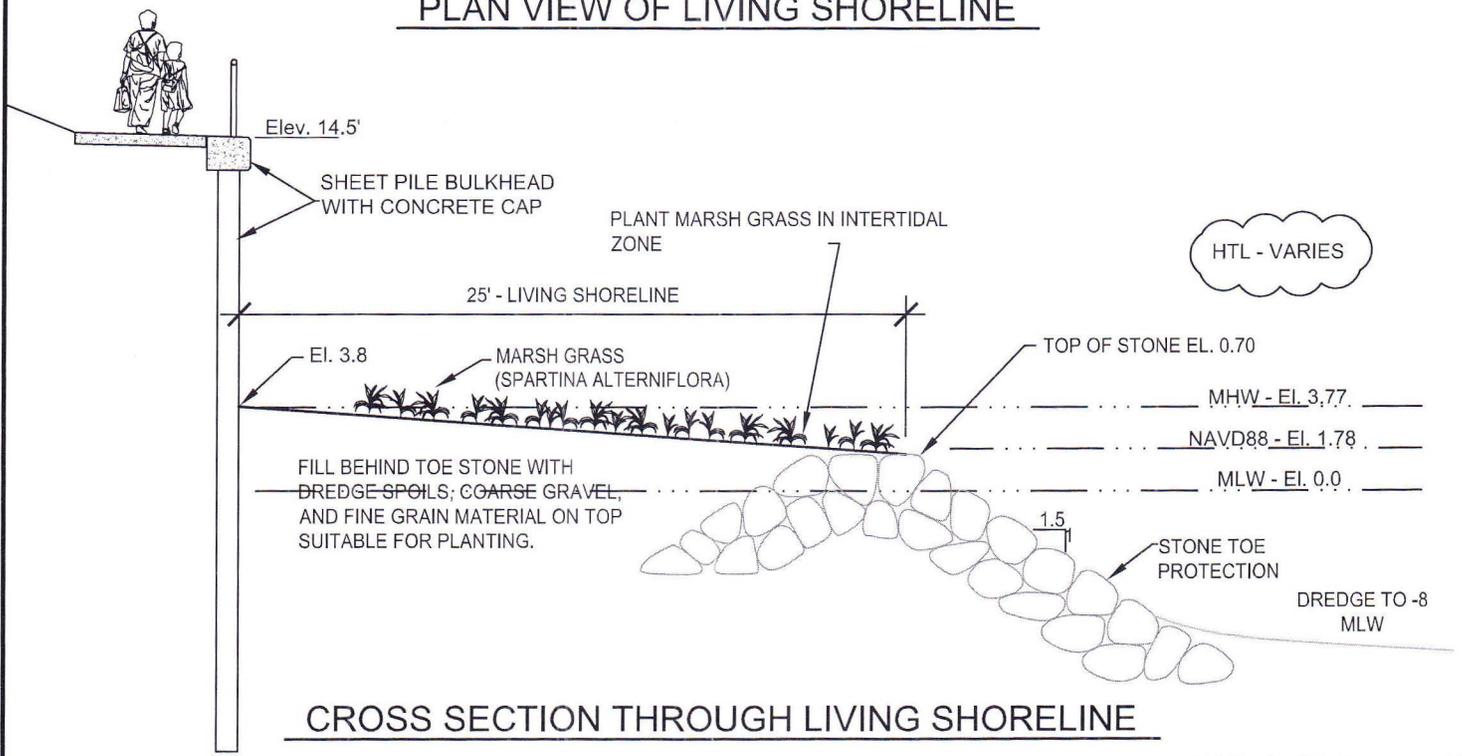
<p><b>ST. JEAN ENGINEERING, LLC</b>          Civil, Marine &amp; Structural Engineering          1145 Middle Rd., East Greenwich, RI 02818          Tel: (401)398-0999 email: st.jean.engineering@verizon.net</p>	<p><b>Weaver Cove Marina Complex - Cross Section</b></p> <p>DATE: A.P. 50, Lot 7, A.P. 47, Lot 4          Weaver Cove - Melville          Burma Road, Portsmouth, RI 02871</p> <p>DESIGNED BY: MELVILLE ASSOCIATES, LLP          One Tower Drive Portsmouth, Rhode Island 02871</p> <p>REVISIONS:</p>	<p>D-I-1          FEB. 19, 2014</p> <p>SHEET OF          12 25</p>
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RICHARD N. ST. JEAN

No. 4997  
 REGISTERED 7/14/14  
 PROFESSIONAL ENGINEER



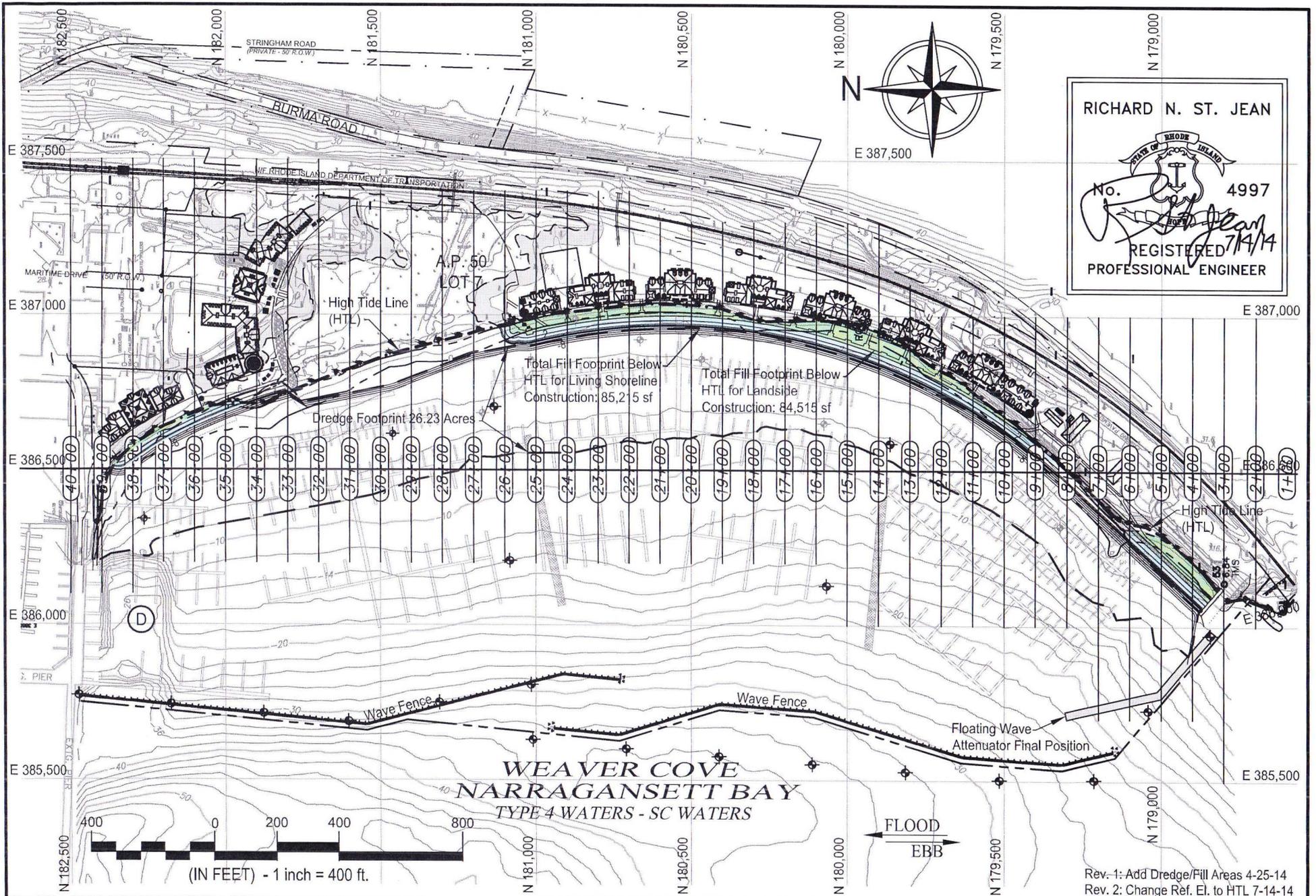
**PLAN VIEW OF LIVING SHORELINE**



**CROSS SECTION THROUGH LIVING SHORELINE**

Rev. 1: Add Dredge/Fill Areas 4-25-14  
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<b>ST. JEAN ENGINEERING, LLC</b> Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: st.jean.engineering@verizon.net	<b>Weaver Cove Marina Complex - Living Shoreline</b>		DATE FEB. 19, 2014
	LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	SHEET OF 13 25



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No. 4997  
REGISTERED 7/14/14  
PROFESSIONAL ENGINEER

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**Weaver Cove Marina Complex - Proposed Dredging**

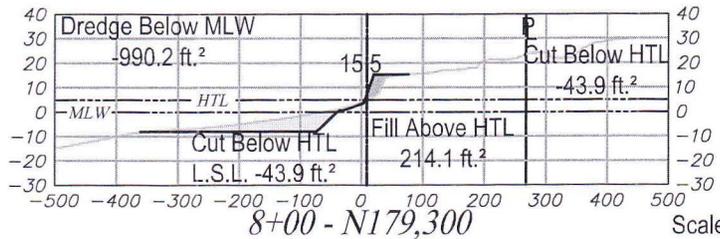
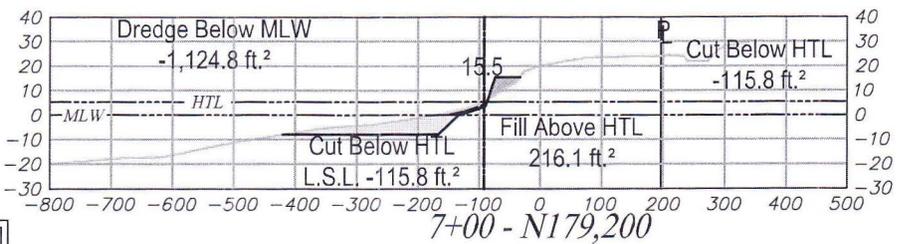
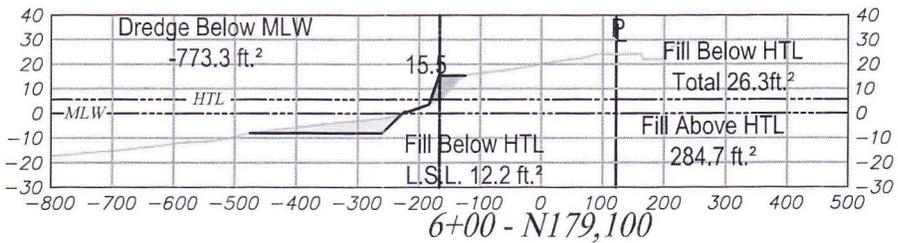
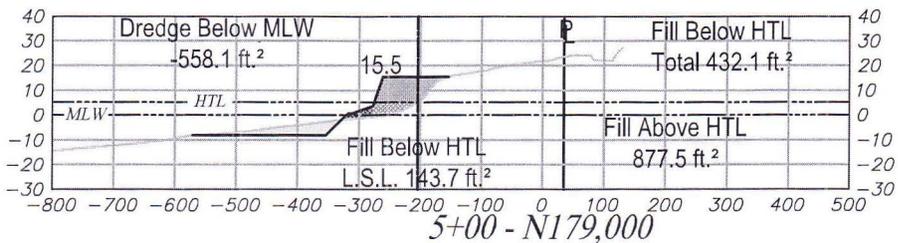
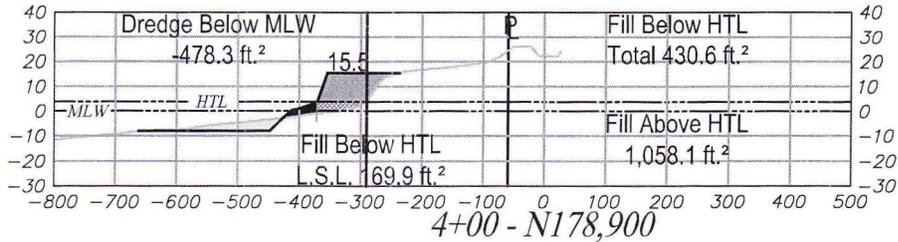
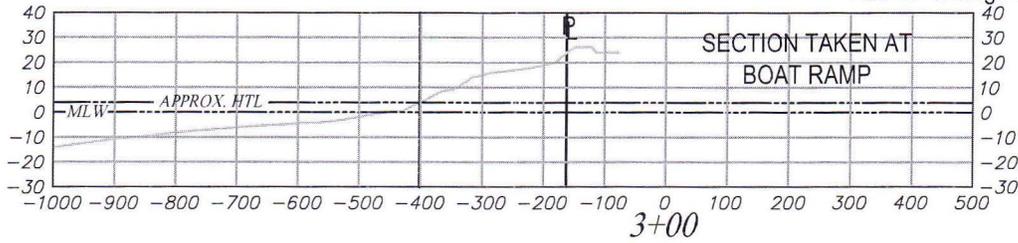
LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	REVISIONS:
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DATE  
FEB. 19, 2014

SHEET 14 OF 25

Rev. 1: Add Dredge/Fill Areas 4-25-14  
Rev. 2: Change Ref. El. to HTL 7-14-14

Rev. 1: Add Living Shoreline Fill 4-25-14  
 Rev. 2: Change Ref. El. To HTL 7-14-14



Scale: 1" = 300' Horizontal  
 1" = 75' Vertical

**RICHARD N. ST. JEAN**

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**Weaver Cove Marina Complex  
 X-Sections for Overall Cut and Fill**

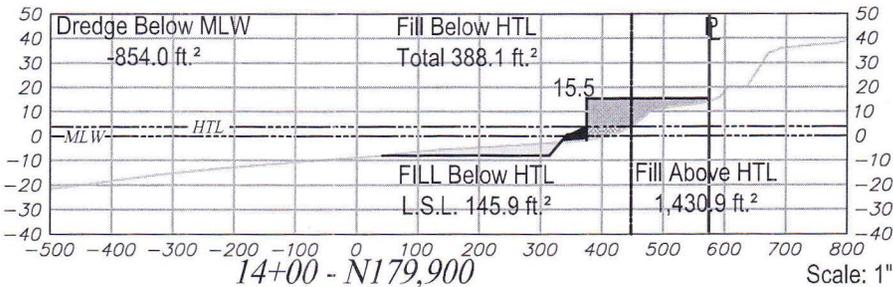
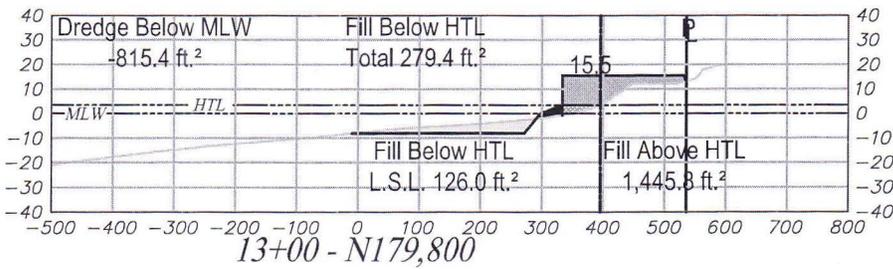
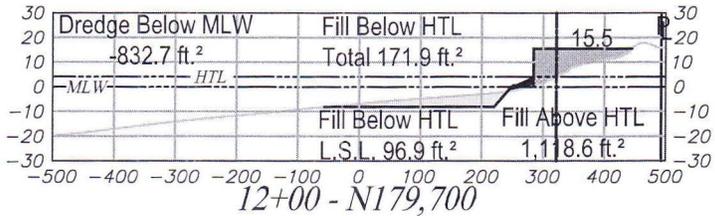
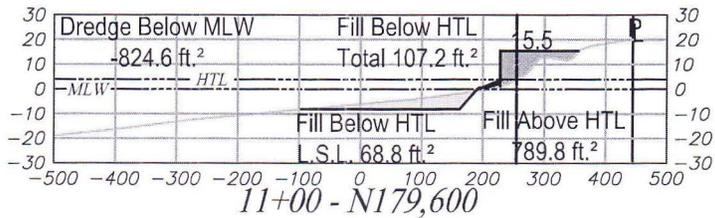
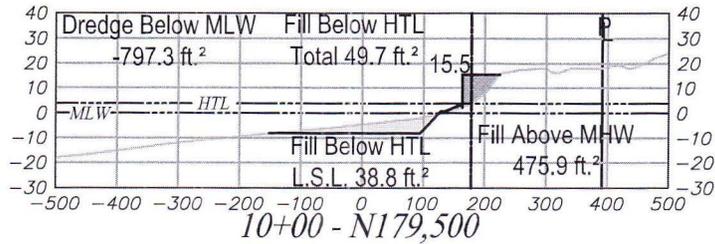
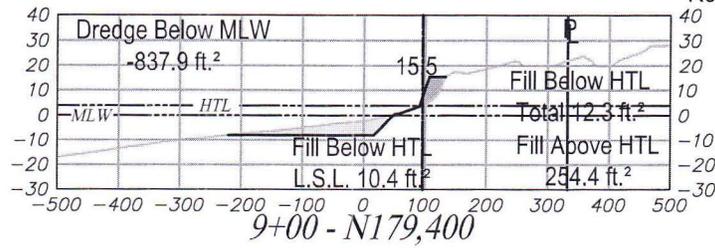
LOCATION:  
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 Weaver Cove - Melville  
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APPLICATION BY:  
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 One Tower Drive Portsmouth, Rhode Island 02871

DATE  
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SHEET OF  
 15 25

Rev. 1: Add Living Shoreline Fill 4-25-14  
 Rev. 2: Change Ref. El. To HTL 7-14-14



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**RICHARD N. ST. JEAN**

No. 4997  
 REGISTERED 7/14/14  
 PROFESSIONAL ENGINEER

**ST. JEAN ENGINEERING, LLC**

**Weaver Cove Marina Complex  
 X-Sections for Overall Cut and Fill**

DATE  
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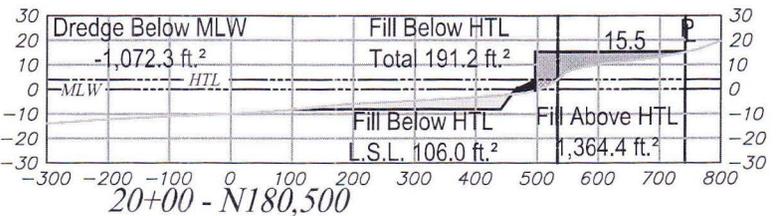
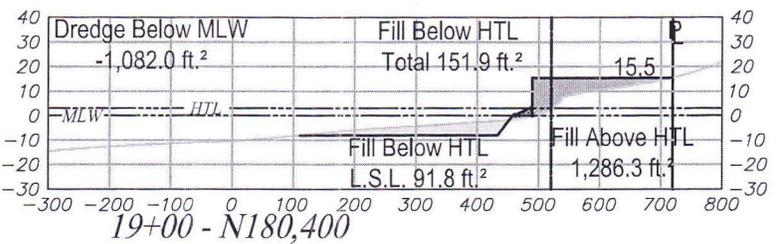
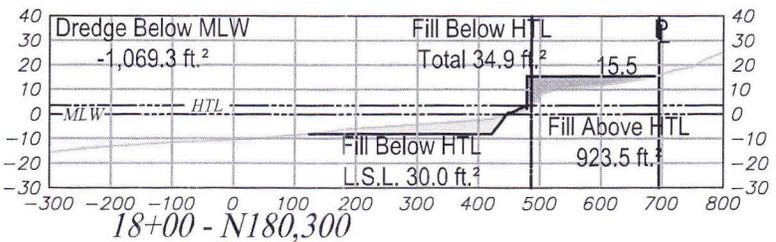
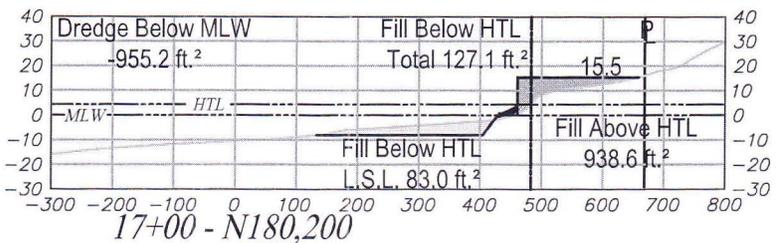
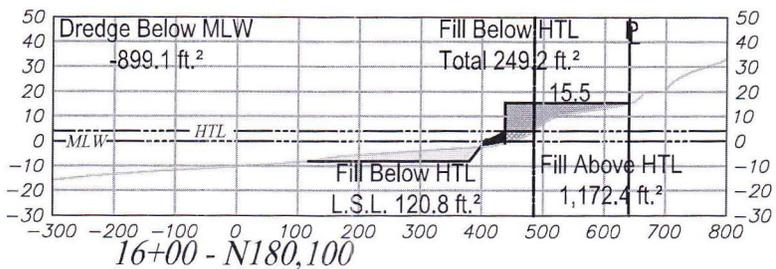
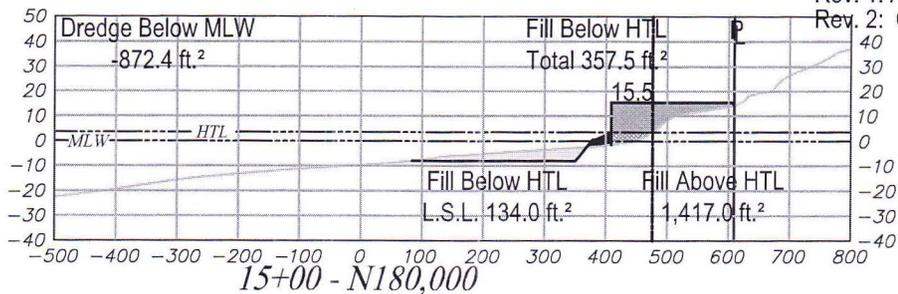
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APPLICATION BY:  
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SHEET OF  
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Rev. 1: Add Living Shoreline Fill 4-25-14  
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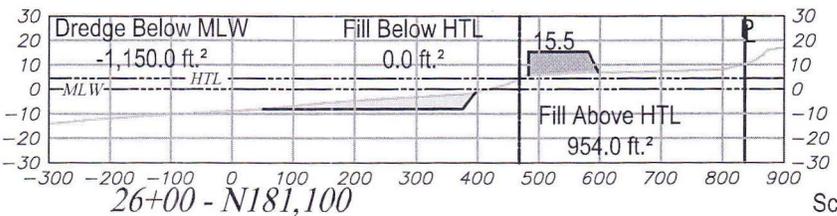
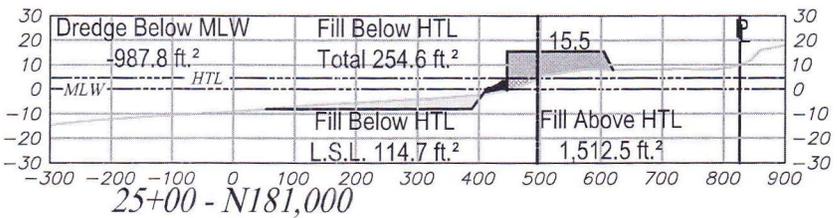
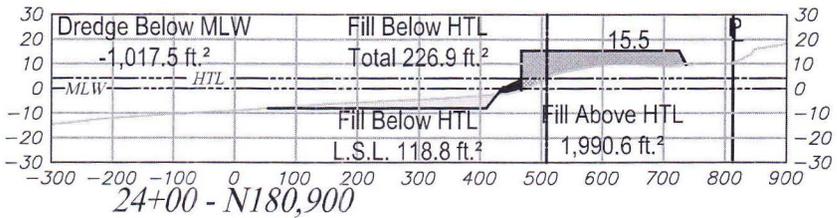
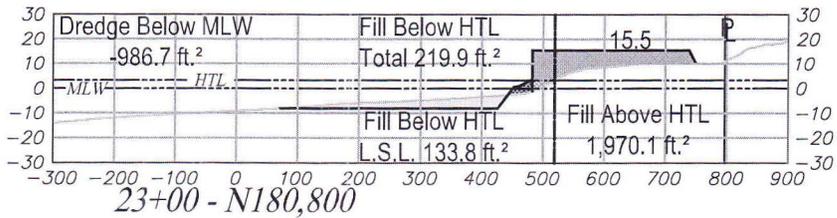
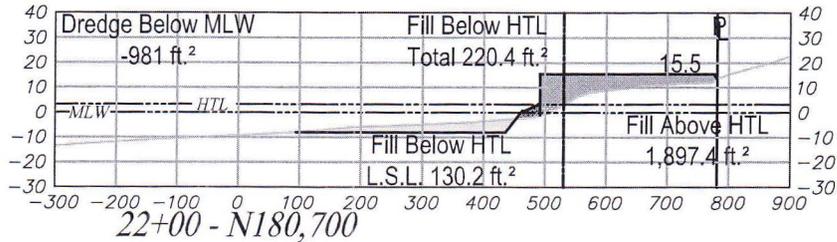
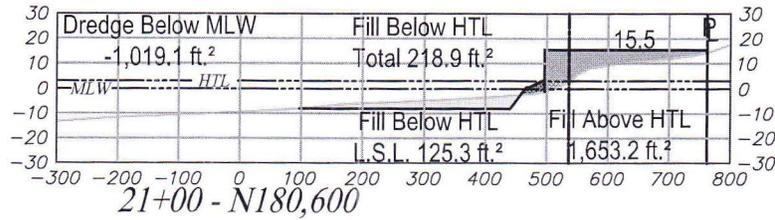
Weaver Cove Marina Complex  
 X-Sections for Overall Cut and Fill

LOCATION:  
 A.P. 50, Lot 7, A.P. 47, Lot 4  
 Weaver Cove - Melville  
 Burma Road, Portsmouth, RI 02871

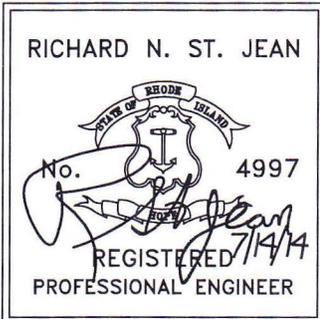
APPLICATION BY:  
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 One Tower Drive  
 Portsmouth, Rhode Island 02871

DATE  
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SHEET OF  
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ST. JEAN  
 ENGINEERING, LLC

Weaver Cove Marina Complex  
 X-Sections for Overall Cut and Fill

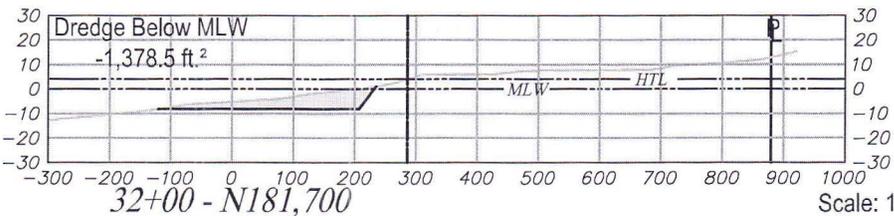
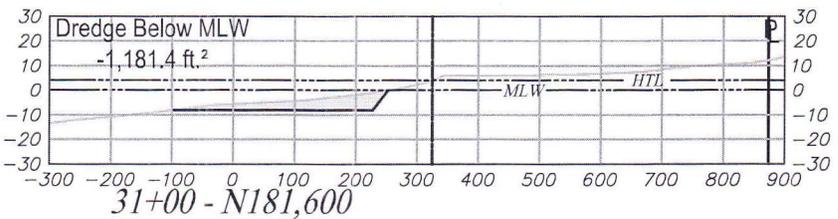
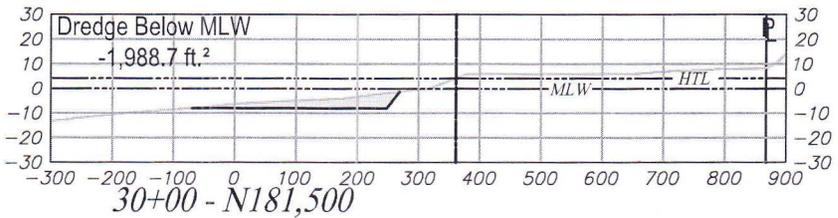
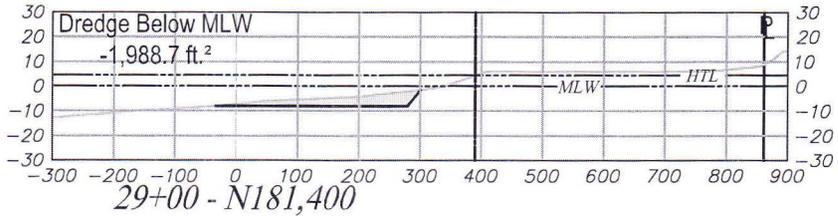
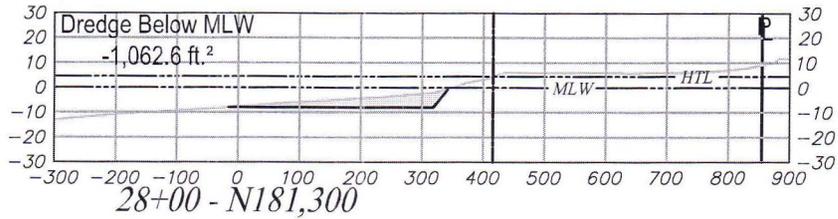
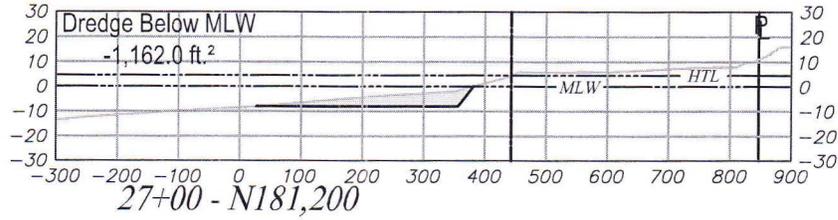
DATE  
 FEB. 19, 2014

Civil, Marine & Structural Engineering  
 1145 Middle Rd., East Greenwich, RI 02818  
 Tel: (401)398-0999 email: st.jean.engineering@verizon.net

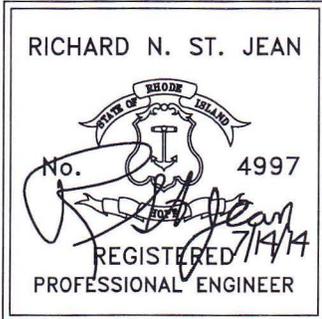
LOCATION:  
 A.P. 50, Lot 7, A.P. 47, Lot 4  
 Weaver Cove - Melville  
 Burma Road, Portsmouth, RI 02871

APPLICATION BY:  
 MELVILLE ASSOCIATES, LLP  
 One Tower Drive Portsmouth, Rhode Island 02871

SHEET OF  
 18 25



Scale: 1" = 300' Horizontal  
 1" = 75' Vertical



ST. JEAN  
 ENGINEERING, LLC

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 1145 Middle Rd., East Greenwich, RI 02818  
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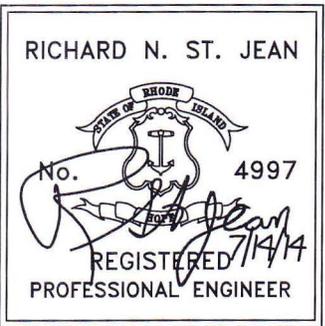
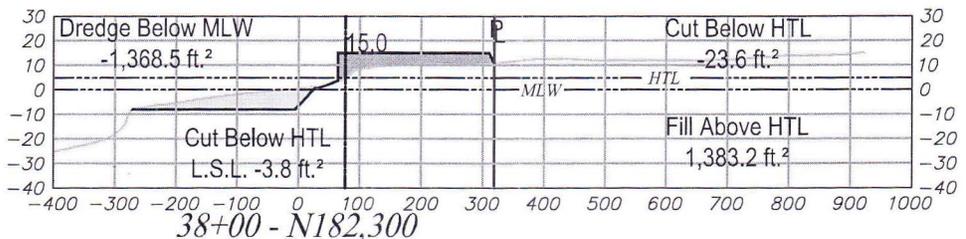
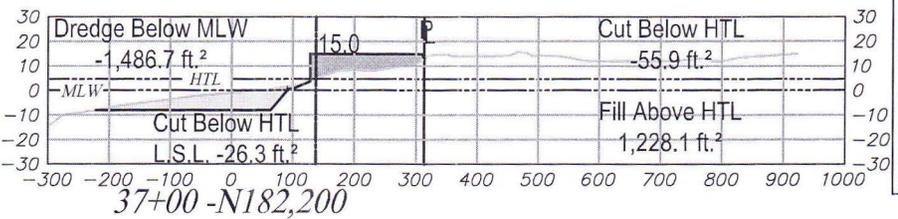
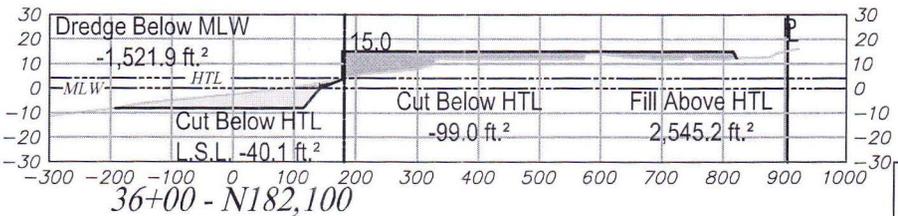
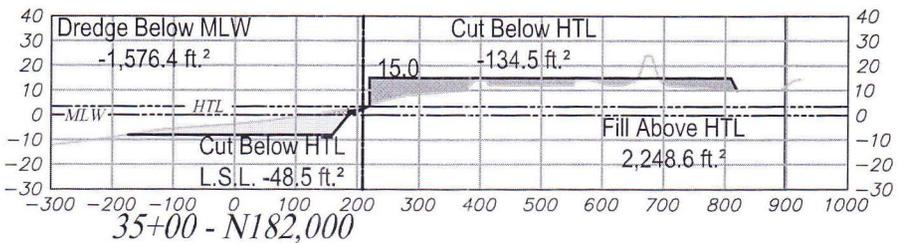
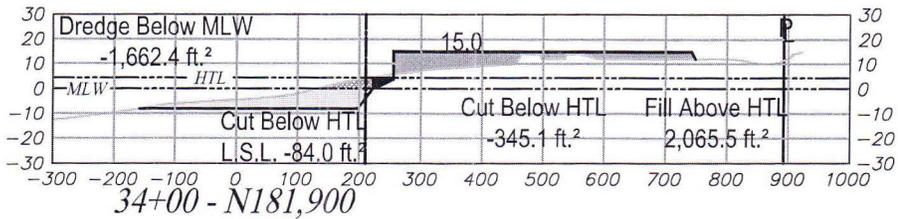
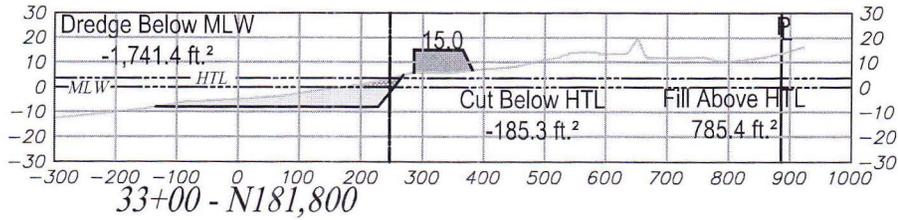
Weaver Cove Marina Complex  
 X-Sections for Overall Cut and Fill

LOCATION:  
 A.P. 50, Lot 7, A.P. 47, Lot 4  
 Weaver Cove - Melville  
 Burma Road, Portsmouth, RI 02871

APPLICATION BY:  
 MELVILLE ASSOCIATES, LLP  
 One Tower Drive Portsmouth, Rhode Island 02871

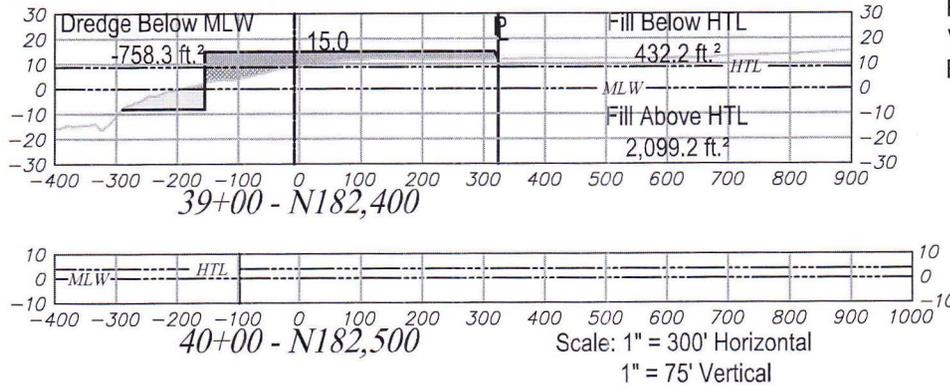
DATE  
 FEB. 19, 2014

SHEET OF  
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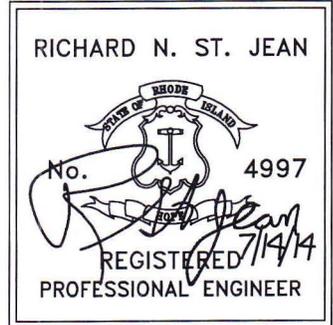


Scale: 1" = 300' Horizontal  
 1" = 75' Vertical

<b>ST. JEAN ENGINEERING, LLC</b>	<b>Weaver Cove Marina Complex X-Sections for Overall Cut and Fill</b>	DATE FEB. 19, 2014
Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: st.jean.engineering@verizon.net	LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871
		SHEET OF 20 25



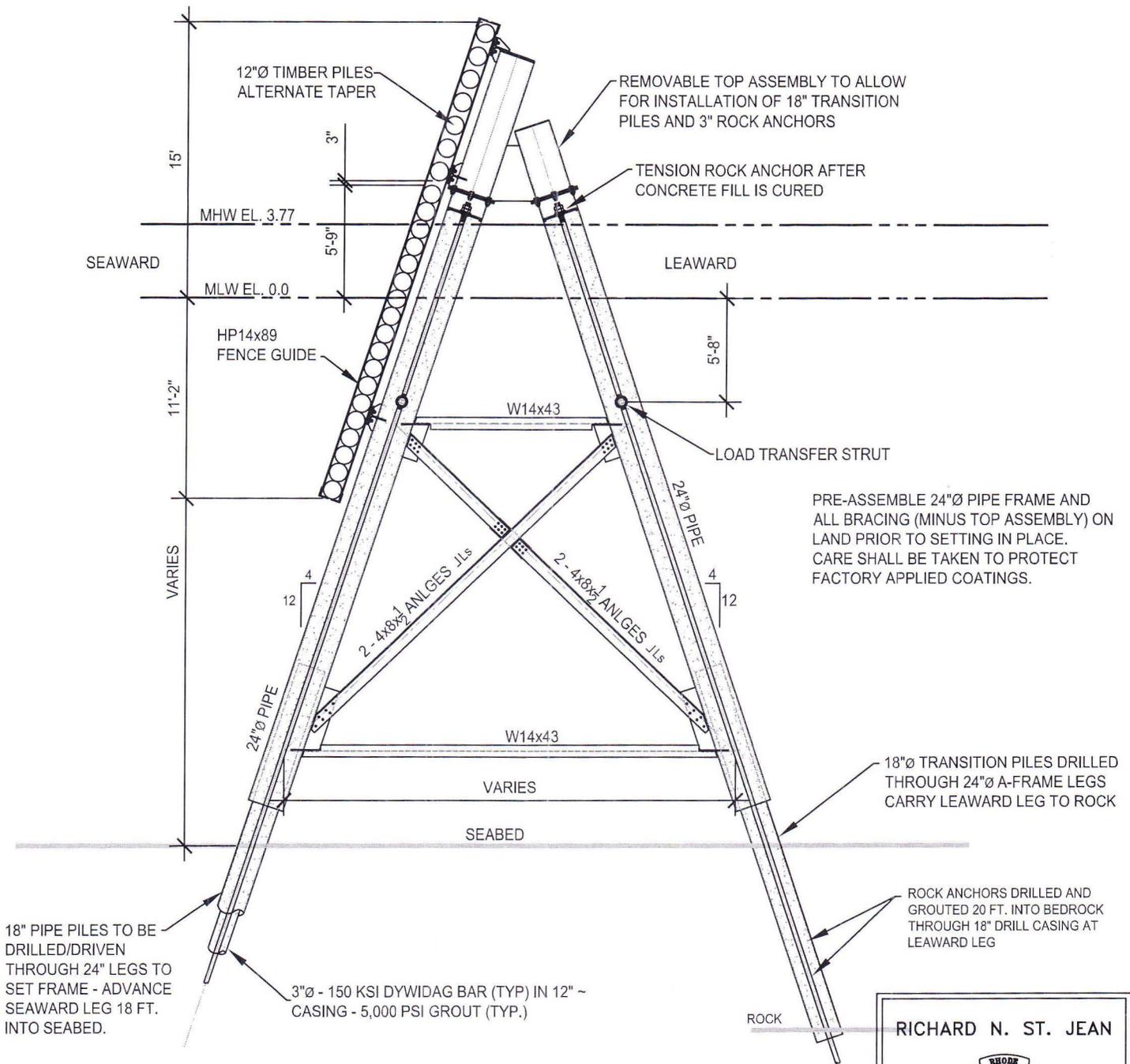
Rev. 1: Add Living Shoreline Fill, Adjust Volumes. 4-25-14  
 Rev. 2: Change Ref. El. To HTL 7-14-14



Station	Dredge Area sf	Total Fill Area Below HTL sf	L.S.L.Fill Area Below HTL sf	Fill Area Above HTL sf	Dredge Volume Below MLW(cy)		Total Fill Volume Below HTL (cy)		Fill Volume Above HTL (cy)		Fill Volume Below HTL For Living Shoreline (cy)	
					Individual	Cumulative	Individual	Cumulative	Individual	Cumulative	Individual	Cumulative
3 +00	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0
4 +00	478.3	430.6	169.9	1,058.1	886	886	797	797	1,959	1,959	315	315
5 +00	558.1	432.1	143.7	877.5	1,919	2,805	1,598	2,395	3,584	5,544	581	895
6 +00	773.3	26.3	12.2	284.7	2,466	5,271	849	3,244	2,152	7,696	289	1,184
7 +00	1,124.8	-115.8	-115.8	216.1	3,515	8,786	-166	3,078	927	8,624	-192	992
8 +00	990.2	-43.9	-43.9	214.1	3,917	12,702	-296	2,782	797	9,420	-296	696
9 +00	837.9	12.3	10.4	254.4	3,385	16,088	-59	2,724	868	10,288	-62	634
10 +00	797.3	49.7	38.8	475.9	3,028	19,116	115	2,839	1,352	11,640	91	726
11 +00	824.6	107.2	68.8	789.8	3,004	22,119	291	3,129	2,344	13,984	199	925
12 +00	832.7	171.9	96.9	1,118.6	3,069	25,188	517	3,646	3,534	17,518	307	1,232
13 +00	815.4	279.4	126.0	1,445.8	3,052	28,240	836	4,482	4,749	22,267	413	1,644
14 +00	854.0	388.1	145.9	1,430.9	3,091	31,332	1,236	5,718	5,327	27,594	504	2,148
15 +00	872.4	357.5	134.0	1,417.0	3,197	34,529	1,381	7,099	5,274	32,868	518	2,666
16 +00	899.1	249.2	120.8	1,172.4	3,281	37,809	1,124	8,222	4,795	37,663	472	3,138
17 +00	955.2	127.1	83.0	938.6	3,434	41,243	697	8,919	3,909	41,573	377	3,516
18 +00	1,069.3	34.9	30.0	923.5	3,749	44,992	300	9,219	3,448	45,021	209	3,725
19 +00	1,082.0	151.9	91.8	1,286.3	3,984	48,976	346	9,565	4,092	49,113	226	3,950
20 +00	1,072.3	191.2	106.0	1,364.4	3,989	52,966	635	10,200	4,909	54,022	366	4,317
21 +00	1,019.1	218.9	125.3	1,653.2	3,873	56,839	759	10,960	5,588	59,610	428	4,745
22 +00	981.0	220.4	130.2	1,897.4	3,704	60,543	814	11,773	6,575	66,185	473	5,218
23 +00	986.7	219.9	133.8	1,970.1	3,644	64,186	815	12,589	7,162	73,347	489	5,707
24 +00	1,017.5	226.9	118.8	1,990.6	3,711	67,898	827	13,416	7,335	80,682	468	6,175
25 +00	987.8	254.6	114.7	1,512.5	3,714	71,611	892	14,308	6,487	87,169	432	6,607
26 +00	1,150.0	0.0	0.0	954.0	3,959	75,570	471	14,779	4,568	91,737	212	6,820
27 +00	1,162.0	0.0	0.0	0.0	4,281	79,852	0	14,779	1,767	93,503	0	6,820
28 +00	1,062.6	0.0	0.0	0.0	4,120	83,971	0	14,779	0	93,503	0	6,820
29 +00	1,988.7	0.0	0.0	0.0	5,651	89,622	0	14,779	0	93,503	0	6,820
30 +00	1,988.7	0.0	0.0	0.0	7,366	96,988	0	14,779	0	93,503	0	6,820
31 +00	1,181.4	0.0	0.0	0.0	5,871	102,858	0	14,779	0	93,503	0	6,820
32 +00	1,378.5	0.0	0.0	0.0	4,741	107,599	0	14,779	0	93,503	0	6,820
33 +00	1,741.4	-185.3	0.0	785.4	5,778	113,376	-343	14,436	1,454	94,958	0	6,820
34 +00	1,662.4	-345.1	-84.0	2,065.6	6,303	119,680	-982	13,454	5,280	100,237	-156	6,664
35 +00	1,576.4	-134.5	-48.5	2,248.6	5,998	125,677	-888	12,566	7,989	108,227	-245	6,419
36 +00	1,521.9	-99.0	-40.1	2,545.2	5,738	131,415	-432	12,133	8,877	117,104	-164	6,255
37 +00	1,486.7	-55.9	-26.3	1,228.1	5,571	136,986	-287	11,846	6,988	124,092	-123	6,132
38 +00	1,368.5	-23.6	-3.8	1,383.2	5,287	142,274	-147	11,699	4,836	128,927	-56	6,076
39 +00	758.3	432.2	0.0	2,099.2	3,939	146,212	757	12,456	6,449	135,376	-7	6,069
					Total:	146,212	Total:	12,456	Total:	135,376	Total:	6,069

TOTAL ESTIMATED VOLUME TO BE DREDGE: 146,212 cy  
 TOTAL ESTIMATED VOLUME OF FILL: 147,832 cy  
 ESTIMATED FILL VOLUME BELOW HTL TO CREATE LIVING SHORELINE: 6,069 cy  
 ESTIMATED FILL VOLUME OF FILL BELOW HTL FOR SITE DEVELOPMENT: 6,387 cy  
 TOTAL FILL VOLUME BELOW HTL: 12,456 cy

<b>ST. JEAN</b> <b>ENGINEERING, LLC</b>  Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: st.jean.engineering@verizon.net	<b>Weaver Cove Marina Complex</b> <b>X-Sections for Overall Cut and Fill</b>		DATE FEB. 19, 2014
	LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	SHEET OF 21 25



### WAVE FENCE SECTION

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

RICHARD N. ST. JEAN

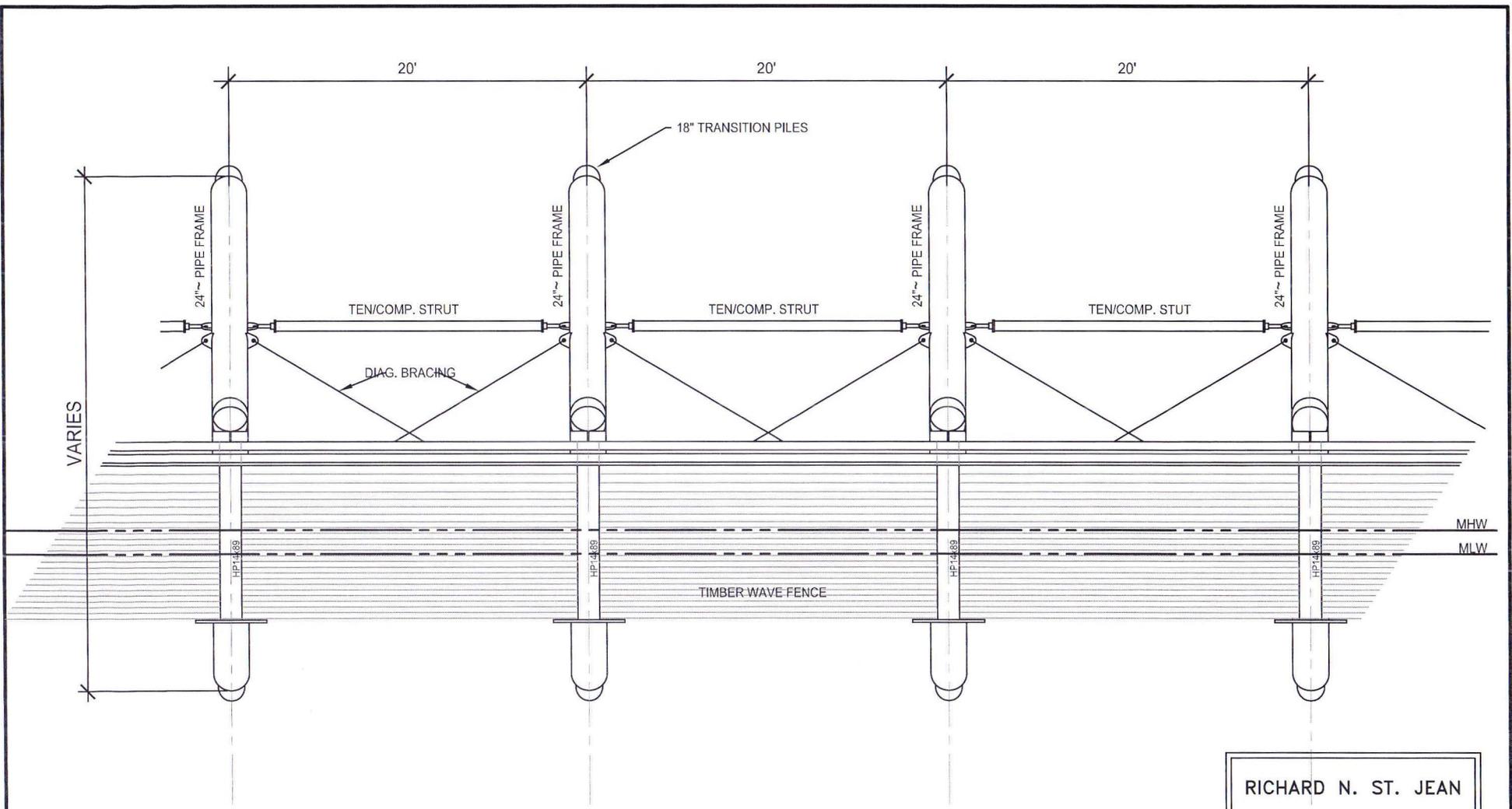
No. 4997

REGISTERED 7/14/14

PROFESSIONAL ENGINEER

Rev. 1: Add Dredge/Fill Areas 4-25-14  
 Rev. 2: Add Ref. to HTL 7-14-14

<b>ST. JEAN ENGINEERING, LLC</b> Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: st.jean.engineering@verizon.net	<b>Weaver Cove Marina Complex - Wave Fence Proposed Slip Layout</b>		DATE
	LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	FEB. 19, 2014



**WAVE FENCE PLAN VIEW**

SCALE:  $\frac{1}{8}'' = 1'-0''$

RICHARD N. ST. JEAN

No. 4997  
 REGISTERED 7/14/14  
 PROFESSIONAL ENGINEER

Rev. 1: Add Dredge/Fill Areas 4-25-14  
 Rev. 2: Add Ref to HTL 7-14-14

<b>ST. JEAN ENGINEERING, LLC</b> Civil, Marine & Structural Engineering 1145 Middle Rd., East Greenwich, RI 02818 Tel: (401)398-0999 email: st.jean.engineering@verizon.net	<b>Weaver Cove Marina Complex - Wave Fence Plan</b>		DATE FEB. 19, 2014
	LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	REVISIONS:

PERFORMANCE REQUIREMENTS:

SERVICE:

INCIDENT WAVE HEIGHT: 4 FT. (Hs33)  
 WAVE PERIOD: 3.6 SEC.

RESULTING WAVE: 1.5 FT.

SURVIVABILITY:

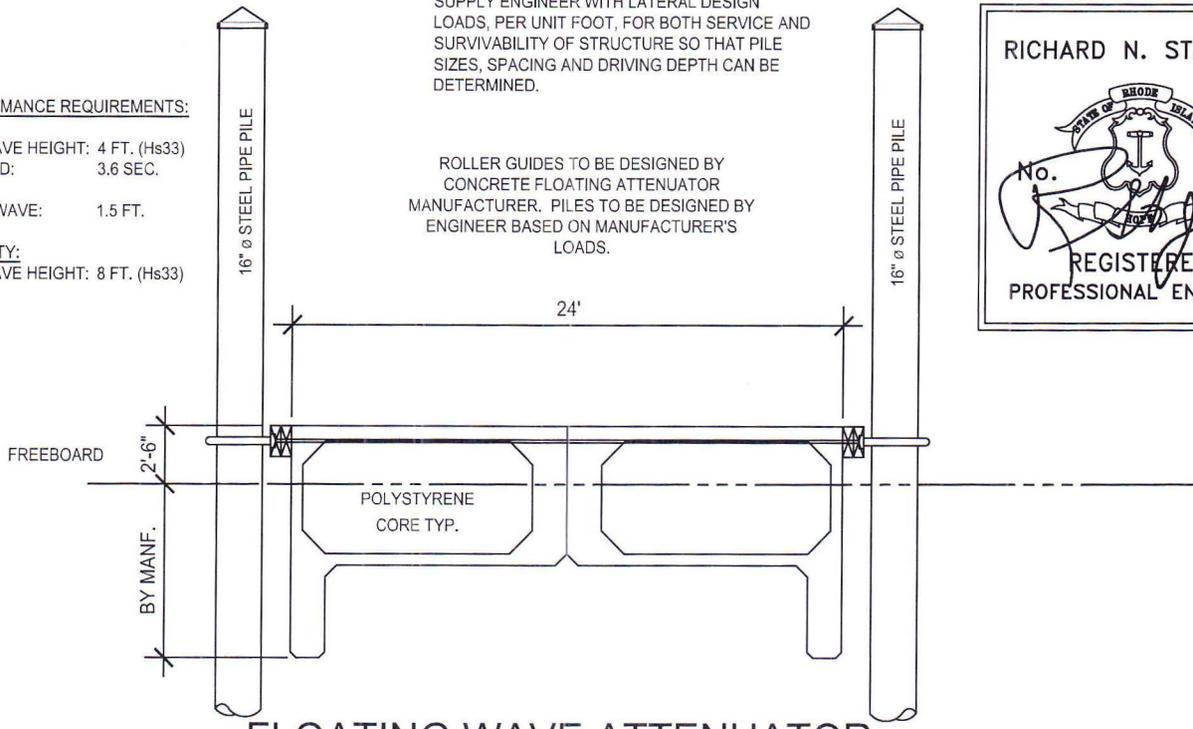
INCIDENT WAVE HEIGHT: 8 FT. (Hs33)

NOTE:  
 MANUFACTURER OF FLOATING ATTENUATOR TO  
 SUPPLY ENGINEER WITH LATERAL DESIGN  
 LOADS, PER UNIT FOOT, FOR BOTH SERVICE AND  
 SURVIVABILITY OF STRUCTURE SO THAT PILE  
 SIZES, SPACING AND DRIVING DEPTH CAN BE  
 DETERMINED.

ROLLER GUIDES TO BE DESIGNED BY  
 CONCRETE FLOATING ATTENUATOR  
 MANUFACTURER. PILES TO BE DESIGNED BY  
 ENGINEER BASED ON MANUFACTURER'S  
 LOADS.

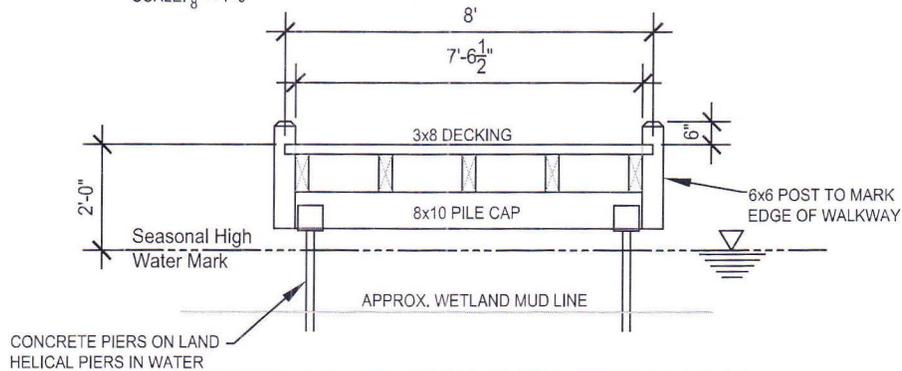
RICHARD N. ST. JEAN

No. 4997  
 REGISTERED 7/30/14  
 PROFESSIONAL ENGINEER



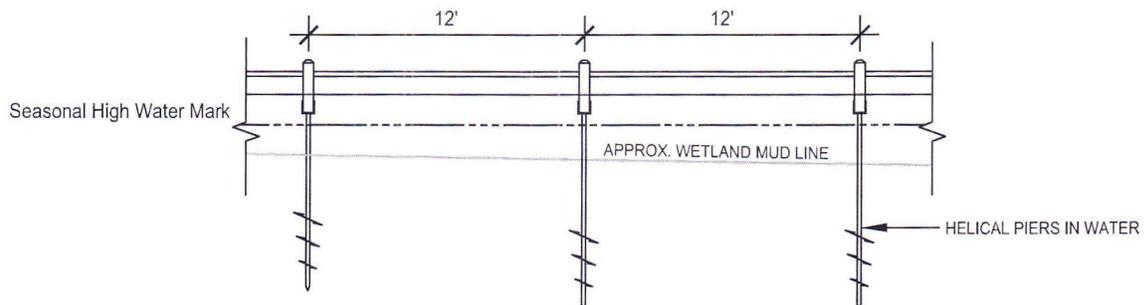
**FLOATING WAVE ATTENUATOR**

SCALE:  $\frac{1}{8}'' = 1'-0''$



**SECTION THRU BOARDWALK**

Scale:  $\frac{1}{4}'' = 1'-0''$



**TYPICAL BOARDWALK PROFILE**

Scale:  $\frac{1}{8}'' = 1'-0''$

Rev. 1: Add Dredge/Fill Areas 4-25-14  
 Rev. 2: Add Ref. to HTL 7-14-14  
 Rev. 3: Add Walk-Over Detail 7-30-14

**ST. JEAN  
 ENGINEERING, LLC**

Civil, Marine & Structural Engineering  
 1145 Middle Rd., East Greenwich, RI 02818  
 Tel: (401)398-0999 email: stjean.engineering@verizon.net

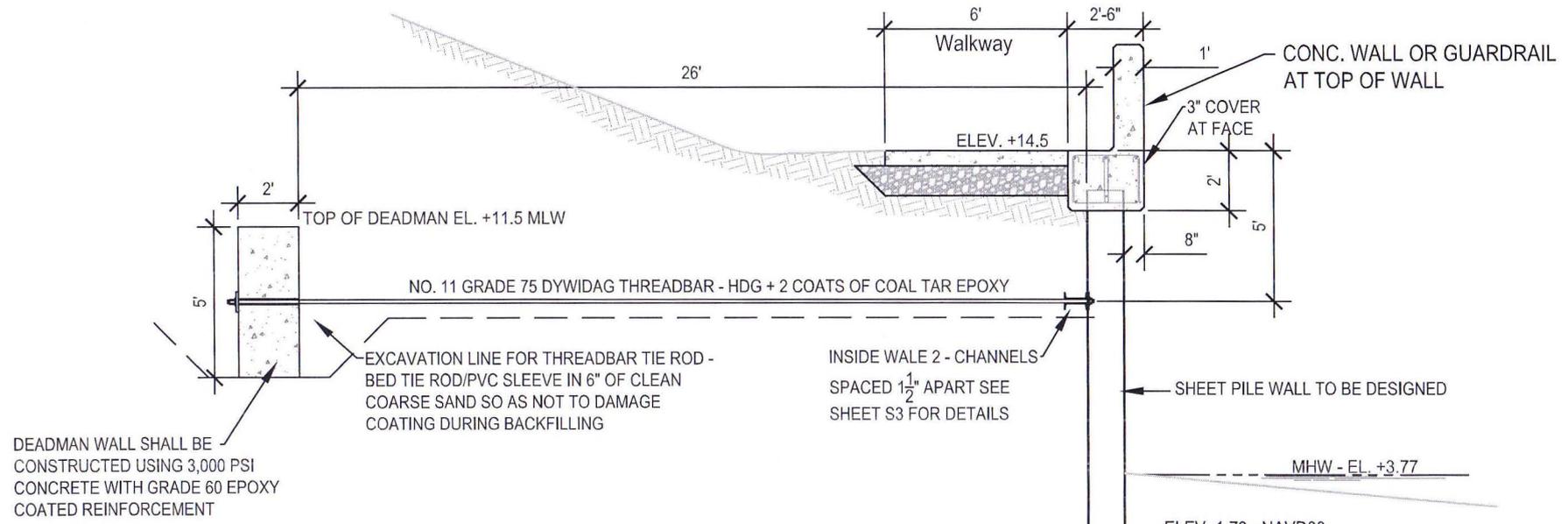
*Weaver Cove Marina Complex  
 Floating Wave Attenuator - Wetland Walk-Over*

LOCATION:  
 A.P. 50, Lot 7, A.P. 47, Lot 4  
 Weaver Cove - Melville  
 Burma Road, Portsmouth, RI 02871

APPLICATION BY:  
**MELVILLE ASSOCIATES, LLP**  
 One Tower Drive Portsmouth, Rhode Island 02871

DATE  
 FEB. 19, 2014

SHEET OF  
 24 25



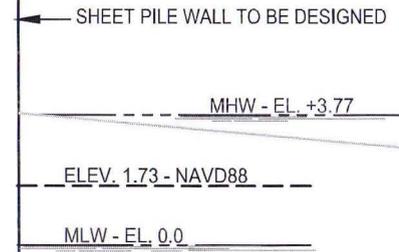
DEADMAN WALL SHALL BE CONSTRUCTED USING 3,000 PSI CONCRETE WITH GRADE 60 EPOXY COATED REINFORCEMENT

EXCAVATION LINE FOR THREADBAR TIE ROD - BED TIE ROD/PVC SLEEVE IN 6" OF CLEAN COARSE SAND SO AS NOT TO DAMAGE COATING DURING BACKFILLING

INSIDE WALE 2 - CHANNELS SPACED 1 1/2" APART SEE SHEET S3 FOR DETAILS

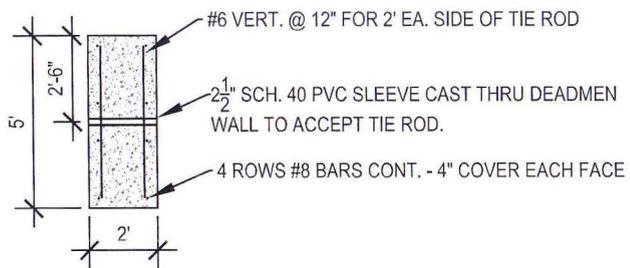
### TYPICAL CROSS SECTION THRU SEAWALL AT WALKWAY

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



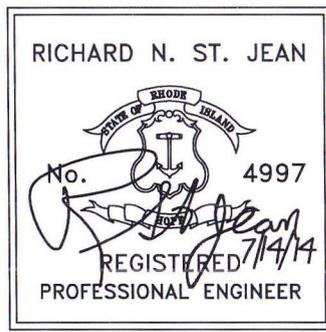
NOT FOR CONSTRUCTION

Rev. 1: Add Dredge/Fill Areas 4-25-14  
Rev. 2: Add Ref. to HTL 7-14-14



### TYP. DEADMAN CROSS SECTION

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



**ST. JEAN ENGINEERING, LLC**  
Civil, Marine & Structural Engineering  
1145 Middle Rd., East Greenwich, RI 02818  
Tel: (401)398-0999 email: st.jean.engineering@verizon.net

<b>Weaver Cove Marina Complex - Typical Seawall Section</b>			DATE FEB. 19, 2014
LOCATION: A.P. 50, Lot 7, A.P. 47, Lot 4 Weaver Cove - Melville Burma Road, Portsmouth, RI 02871	APPLICATION BY: <b>MELVILLE ASSOCIATES, LLP</b> One Tower Drive Portsmouth, Rhode Island 02871	REVISIONS:	SHEET OF 25 25

**SUMMARY OF ESSENTIAL FISH HABITAT (EFH)**  
**DESIGNATION**

Species	Eggs	Larvae	Juveniles	Adults
haddock ( <i>Melanogrammus aeglefinus</i> )		X		
red hake ( <i>Urophycis chuss</i> )		X	X	X
winter flounder ( <i>Pseudopleuronectes americanus</i> )	X	X	X	X
windowpane flounder ( <i>Scophthalmus aquosus</i> )	X	X	X	X
American plaice ( <i>Hippoglossoides platessoides</i> )		X	X	X
Atlantic sea herring ( <i>Clupea harengus</i> )		X	X	X
bluefish ( <i>Pomatomus saltatrix</i> )			X	X
Atlantic mackerel ( <i>Scomber scombrus</i> )	X	X	X	X
summer flounder ( <i>Paralichthys dentatus</i> )		X	X	X
scup ( <i>Stenotomus chrysops</i> )	X	X	X	X
black sea bass ( <i>Centropristis striata</i> )			X	X
king mackerel ( <i>Scomberomorus cavalla</i> )	X	X	X	X
Spanish mackerel ( <i>Scomberomorus maculatus</i> )	X	X	X	X
cobia ( <i>Rachycentron canadum</i> )	X	X	X	X
sand tiger shark ( <i>Carcharias taurus</i> )		X		
sandbar shark ( <i>Carcharhinus plumbeus</i> )				X
bluefin tuna ( <i>Thunnus thynnus</i> )			X	