

September 21, 2021

Village of Mamaroneck Harbor & Coastal Zone Management Commission 169 Mt. Pleasant Avenue Mamaroneck, NY 10543

Attention: Mr. Thomas Burt, Chairman

Reference: Applications for Floating Dock Goodman, 4 Shore Road

Dear Chairman Burt and Commission Members:

RACE COASTAL ENGINEERING ("**RACE**"), on behalf of the Applicant / Owner, Robert Goodman, are pleased to submit responses to questions and comments presented by the Commission during the meeting on September 1, 2021. The questions / comments are reiterated below followed by our response.

1. The Commission requested more information about the ownership of Lands Underwater as indicated on the site survey.

The copy of the recorded property deed is attached. Page 7 of the document provides the metes and bounds of the water lots running "under the waters Long Island Sound" adjoining lots 4 and 5.

2. The Commission requested to confirm the top elevation of the proposed timber anchor piles and discuss the elevation in context of other nearby pile heights as well as the elevation of the approved pier and dock at 1 Shore Road.

The proposed piles are proposed to cut-off elevation +17' NAVD 88 datum. The rationale for this elevation is to prevent the floating dock from coming off the piles in a storm event. The FEMA Base Flood Elevation at the site is +15'. The top of the floating dock will have approximately 19" of freeboard above the water line, to the elevation of the pile guide. The elevation of 17' was set to be just above the water level plus the height of the dock. $15' + (19''/12'') = 16.6' \rightarrow 17'$.

The pile cut-off elevation of 17' is consistent with the recent approvals for 1 Shore Road. There are few docks in the area anchored by piles to adequately compare elevations.

As noted previously, NYSDEC and USACE no longer prefer chain and anchors to secure floating docks due to potential benthic habitat impacts from chains dragging the bottom when they are slacked at low tide. These agencies have moved toward piles since they present a one-time impact during construction and do not pose the twice daily impact of chains dragging the bottom at low tide over the life of the dock.

3. The Commission inquired whether the exposed (from water side) face of the concrete gangway platform could be covered with stone veneer to maintain the look of the historic stone seawall.

The plans have been revised to add stone veneer to the outside face of the concrete gangway platform. See sheet 7 of 7 of the enclosed drawing set.

4. The Commission requested an aerial photo exhibit showing the proposed dock structure in relation to the existing dock structures in the vicinity as well as distances from the mill pond weir, Crane Island and the local channel in order to put the proposal into context with the neighborhood. Additional information regarding water depths was also requested.

See attached aerial photo which shows the proposed dock structures at 4 Shore Road in context with the surrounding structures in the Harbor area. The proposed structure is generally smaller (measured length from the shoreline) than most of the nearby piers and docks. The structure is located approximately 455 feet and 656 feet from Crane Island and the mill pond weir, respectively. While there is no formal navigation channel in the area, the proposed dock will be located approximately 40 feet from the natural channel leading to the pond. The NOAA navigation chart is also incorporated into the exhibit. The water depth in the area of the dock is approximately 3 feet relative to mean lower low water (MLLW) based on NOAA which is consistent with the measured depths by RACE as shown on our project plans.

We look forward to your review of the enclosed information and discussions at the next meeting on October 20th. In the meantime, please do not hesitate to contact me if there are any further questions or comments about the project.

Very truly yours,

RACE COASTAL ENGINEERING

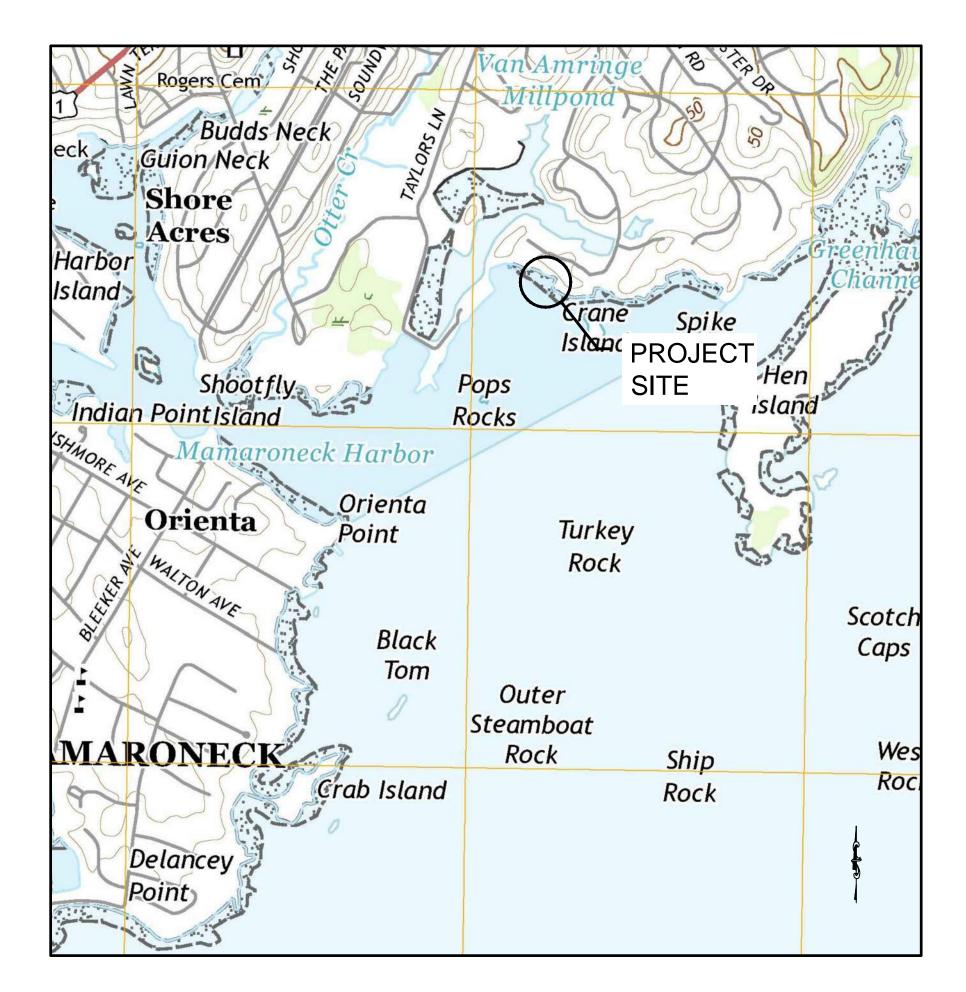
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Azure Dee Sleicher, PE Vice President, Coastal Engineering

- Copy: Robert Goodman Barbara Ritter, Village of Mamaroneck Frank Tavolacci, Building Inspector
- Enclosures: Revised Project Plans (7 Sheets) Copy of Property Deed Aerial Photo Exhibit of Proposed Project Extents

RESIDENTIAL DOCK ROBERT GOODMAN 4 SHORE ROAD MAMARONECK, NY 10580

SEPTEMBER 1, 2021



VICINITY MAP

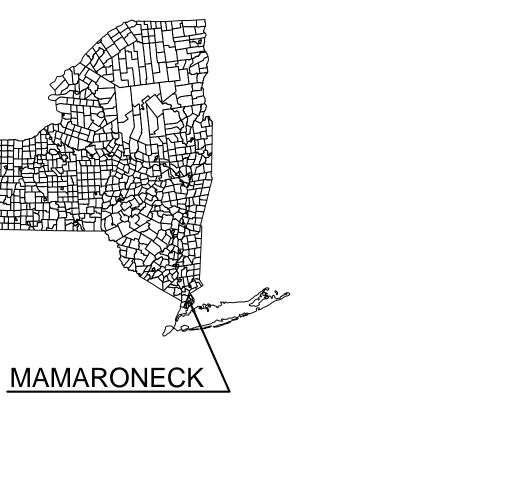


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AERIAL PHOTO

LIST OF DRAWINGS

DRAWING TITLE

- TITLE SHEET, DRAWING LIST & VICINITY MAP
- PROJECT NOTES 1 of 2
- PROJECT NOTES 2 of 2
- EXISTING SITE PLANS & EXISTING SECTION
- PARTIAL SITE PLAN & SECTION
- FLOAT STOP FRAMING AND FOUNDATION PLAN
- SECTIONS & DETAILS

	REV DATE		DESCRIPTI	ON					
	FOR VILLAGE OF MAMARONECK REVIEW								
	COASTA			611 Access Road Stratford, CT 06615 Tel.: 203-377-0663 racecoastal.com					
	Drawings and Sp remain the prope used, in whole or those authorized I Engineering, P.C Coastal Enginee	ecification rty of RAC in part, for by contract . The use ring, P.C. the ing, P.C. the	SHIP AND CONDITIONS s, as instruments of profess E Coastal Engineering, P.C r other projects or purposes without the specific written au of this document is continge for services rendered. Non the authority to bar document DRAWING IS COPYRIGE	tional service, are and shall c. Documents are not to be or by any other parties than uthorization of RACE Coastal ent upon payment to RACE i-payment shall give RACE t use by any and all parties.					
	Prepared for								
		ROBERT GOODMAN 1013 COVE ROAD MAMARONECK, NY 10543							
	Project RESIDENTIAL DOCK 4 SHORE ROAD MAMARONECK, NY 10580								
Drawing TITLE SHEET, DRAWING LIST & VICINITY MAP									
1	Designed	MJW	Drawn MJW	Checked MRR					
GINEER'S SEAL	Job No. 20	20131	Date 09/01/2021	Drawing No. 1 of 7					

NOT VALID WITHOUT ENGINEER'S SEAL

PROJECT NOTES

DESCRIPTION OF WORK

- THE WORK COVERED UNDER THESE CONTRACT DOCUMENTS, INCLUDING THE DRAWINGS, PROJECT NOTES, AND ALL AMENDMENTS, CONSISTS OF PROVIDING ALL PLANT, LABOR, SUPERVISION, EQUIPMENT APPLIANCES AND MATERIALS AND IN PERFORMING ALL OPERATIONS IN CONNECTION WITH AT LEAST. BUT NOT NECESSARILY LIMITED TO, THE FOLLOWING ITEMS:
 - DEMOLITION OF PORTION OF EXISTING SEAWALL
 - INSTALL CONCRETE LANDING FURNISH AND INSTALL ROCK SOCKET PILES
 - FURNISH AND INSTALL FLOATING DOCK
 - FURNISH AND INSTALL GANGWAY COORDINATE WORK WITH OWNER AND PROTECT UTILITIES
- 2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS AND ACCESSORIES REQUIRED TO COMPLETE ALL ASPECTS OF THE WORK NEEDED FOR A COMPLETE AND PROPER INSTALLATION, ALL IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS.

DESIGN CRITERIA:

- PIER STRUCTURE DESIGNED IN ACCORDANCE WITH THE NY STATE BUILDING CODE.
- 2. THE FLOATING DOCK AND GANGWAY SUPPORT STRUCTURES HAVE BEEN DESIGNED ACCORDANCE WITH THE APPROPRIATE LOADS AS FOLLOWS:
- a. ASSOCIATED DEAD LOADS b. UNIFORM LIVE LOAD OF 40 PSF
- c. WIND/WAVE LOAD: 100-YEAR FREQUENCY TIDAL FLOOD ELEVATIONS AS
- DEFINED BY FEMA WITH 100-YEAR FREQUENCY WIND GENERATED WAVE LOADING ADJUSTED FOR LOCAL BATHYMETRY AS FOLLOWS:
- LATERAL DOCK LOAD = 115 POUNDS PER FOOT
- PILE LOAD = 146 POUNDS APPLIED AT EL. +6.5'

GENERAL NOTES:

- ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
- PROPERTY LINES AND UPLAND STRUCTURES TAKEN FROM A DRAWING TITLED "4 SHORE ROAD LANDSCAPE DEVELOPMENT_REVISED GRADING", PREPARED FOR ROBERT GOODMAN, BY JANICE PARKER LANDSCAPE ARCHITECTS, DATED 3/30/2020.
- ADDITIONAL SITE INFORMATION OBTAINED BY RACE COASTAL ENGINEERING ON 12/09/2020 AND CAN ONLY REPRESENT CONDITIONS AT THE TIME OF THE SURVEY.
- WORK SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL LAWS AND STATUTES AND THE REQUIREMENTS AND CONDITIONS OF ALL REGULATORY PERMITS ISSUED FOR THE WORK.
- THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE PROJECT REGULATORY PERMITS. THE CONTRACTOR SHALL COMPLY TO ALL CONDITIONS OF THOSE PERMITS. THE CONTRACTOR IS ADVISED THAT THE REGULATORY PERMITS FOR THIS PROJECT MAY CONTAIN ADDITIONAL REQUIREMENTS THAT, AFTER ANY ADDENDUM, SUPERSEDE THE DRAWING NOTES. THE CONTRACTOR IS FURTHER ADVISED THAT IN THE CASE OF ANY DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS FOUND BEFORE CONSTRUCTION, THE FINAL DECISION AS TO WHAT INFORMATION TAKES PRECEDENCE WILL BE MADE BY THE ENGINEER OF RECORD ON THE BASIS OF THAT INTENT.
- EXISTING CONDITIONS AND DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND FABRICATION OR ORDERING OF ANY CONSTRUCTION MATERIALS.
- SECTIONS AND DETAILS APPLY TO SAME AND SIMILAR CONDITIONS UNLESS SPECIFICALLY NOTED OTHERWISE HEREIN.
- DURING THE CONSTRUCTION BY THE CONTRACTOR, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER. COMPENSATION TO THE CONTRACTOR WILL NOT BE CONSIDERED.
- 9. THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS.
- 10. THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED WORK.
- 11. THE CONTRACTOR SHALL USE EQUIPMENT ADEQUATE IN SIZE, CAPACITY, AND NUMBERS, AND MAINTAINED TO THE REQUIREMENTS OF ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS TO ACCOMPLISH THE WORK.
- 12. THE CONTRACTOR SHALL PROTECT ALL WETLANDS AND COASTAL RESOURCES FROM INTRUSION BY TURBID WATERS, CONSTRUCTION DEBRIS, CONSTRUCTION EQUIPMENT, OR PERSONNEL DURING ALL WORK ACTIVITIES.
- 13. THE CONTRACTOR SHALL OBTAIN AND INCLUDE IN ITS FEE, THE COST FOR NECESSARY PERMITS, LICENSES, CERTIFICATES OF INSPECTION, AND LEGAL EXPENSES IN CONNECTION WITH THE WORK OF THIS CONTRACT. THE OWNER HAS OBTAINED NECESSARY REGULATORY PERMITS REQUIRED FOR THE WORK IN REGULATED AREAS. THE CONTRACTOR SHALL REQUEST COPIES OF THOSE REGULATORY PERMITS AND MAKE PROVISION IN THIS WORK AND IN THE COST OF THE WORK FOR ALL APPLICABLE CONDITIONS OF THOSE PERMITS. FAILURE TO CONSIDER ANY CONDITION OF THE REGULATORY PERMITS AS A PART OF THE BID SHALL NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO APPLY THOSE CONDITIONS TO HIS WORK AND SHALL BE INCLUDED IN THE CONTRACT SUM.
- 14. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PROTECT FROM DAMAGE ALL UTILITIES, UTILITY STRUCTURES, FUEL LINES & TANKS OR ANY UNKNOWN UTILITIES OR STRUCTURES PRIOR TO ANY WORK.
- 15. LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK THAT UPON COMPLETION, ARE NOT A PART OF THE WORK, SHALL BE FURNISHED, INSTALLED, AND SUBSEQUENTLY REMOVED FROM THE SITE BY THE CONTRACTOR.
- 16. TEMPORARY WORK SHALL BE SUBJECT TO THE REQUIREMENTS OF THE STATE AND APPLICABLE LOCAL BUILDING CODES.

PROJECT LAYOUT

- THE CONTRACTOR SHALL HAVE A PROFESSIONAL LAND SURVEYOR, LICENSED IN THE STATE OF NEW YORK, TO LAYOUT THE PROPOSED STRUCTURE. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH AN "AS-BUILT" DRAWING OF THE WORK CONFORMING TO AN A-2 AND T-2 STANDARDS FOLLOWING THE COMPLETION OF THE WORK AT THE SITE. THE COST FOR SUCH ITEMS SHALL BE INCLUDED IN THE CONTRACT SUM FOR THE WORK.
- ANY STRUCTURES NOT CONSTRUCTED IN THE POSITIONS DEPICTED ON THE PROJECT PLANS SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

SELECTIVE DEMOLITION AND DISPOSAL

SELECTIVE DEMOLITION AND DISPOSAL SHALL BE PERFORMED IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL PERMIT AND BUILDING CODE REQUIREMENTS.

- 2. THE CONTRACTOR SHALL TAKE REASONABLE CARE IN REMOVING ELEMENTS SELECTED TO BE DEMOLISHED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. DAMAGE OR DESTRUCTION BY THE CONTRACTOR TO EXISTING ELEMENTS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REPLACED IN-KIND AT THE DISCRETION OF THE OWNER AT NO ADDITIONAL COST.
- 3. PRIOR TO COMMENCEMENT OF SELECTIVE DEMOLITION, THE CONTRACTOR SHALL SUBMIT A DISPOSAL PLAN FOR ITEMS TO BE DEMOLISHED. DEMOLITION MATERIAL DESIGNATED BY THE OWNER TO BE REMOVED FROM THE SITE SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE DEBRIS DISPOSAL PLAN SHALL ACKNOWLEDGE THIS OWNERSHIP AND SHALL IDENTIFY THE MEANS AND METHODS AND FINAL DISPOSITION FOR DISPOSAL MATERIALS.
- 4. COMPLETELY REMOVE ITEMS DESIGNATED LEAVING SURFACES CLEAN, SOUND, AND READY TO RECEIVE NEW MATERIALS AS SPECIFIED IN THE CONTRACT DOCUMENTS.

TIMBER PILES:

- 1. TIMBER PILES SHALL BE GREENHEART (CHLOROCARDIUM RODIEI)
- 2. GREENHEART (CHLOROCARDIUM RODIEI) PILES SHALL BE UNTREATED W/ MIN. 12" BUTT DIAMETER, AND MEET THE REQUIREMENTS OF PRIME GRADING PER THE GUYANA TIMBER GRADING RULES FOR HARDWOOD, 3RD EDITION, 2002, PUBLISHED BY THE GUYANA FORESTRY COMMISSION, REVISED 2016.
- 3. GREENHEART (CHLOROCARDIUM RODIEI) PILES PILES SHALL ORIGINATE FROM A SUSTAINABLE SOURCE IN GUYANA. NO LATER THAN THE TIME OF DELIVERY OF MATERIALS TO THE SITE, A CERTIFICATION LETTER FROM THE GREENHEART SUPPLIER SHALL BE PROVIDED TO THE ENGINEER, WHICH SHALL VERIFY: PILE SPECIFICATIONS, VERIFICATION OF SPECIES, LEGAL IMPORTATION, AND SUSTAINABLE HARVEST.
- TIMBER PILES SHALL BE CUT FROM SOUND LIVE TREES; FREE OF ANY DEFECTS WHICH WILL IMPAIR THEIR STRENGTH, OR USEFULNESS FOR THE PURPOSE INTENDED OR THAT WILL PREVENT PROPER INSTALLATION. ALL TIMBERS SHALL BE DEBARKED AND CLEANLY CUT.
- TIMBER PILES WILL BE SUBJECT TO INSPECTION BEFORE AND/OR AFTER SHIPMENT TO THE SITE AT THE OPTION OF THE ENGINEER. ANY TIMBER WHICH DOES NOT CONFORM TO ALL THE REQUIREMENTS WILL BE REJECTED.
- 6. TIMBER PILES TO BE CAPPED WITH CONICAL PILE CAP.
- PILE INSTALLATION DRILLED INTO ROCK
- INSTALLATION EQUIPMENT AND METHODS ARE SUBJECT TO ACCEPTANCE OF THE ENGINEER. ALL MEANS OF DRILLING AND PILE INSTALLATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO MOBILIZATION TO THE SITE.
- EQUIPMENT AND METHODS FOR DRILLING PILES SHALL BE SUCH THAT PILES ARE INSTALLED IN THEIR PROPER POSITION AND ALIGNMENT.
- PILES SHALL BE SET IN MIN. FÎ Ä HOLES TO A MIN. DEPTH OF 5' EMBEDMENT INTO COMPETENT NATIVE MATERIAL AT EACH POSITION.
- 4. PILES SHALL BE CENTERED IN EACH HOLE AND GROUTED IN PLACE.
- PILES SHALL BE SECURED IN POSITION AND PROTECTED FROM MOVEMENT FOR A MINIMUM OF TWO (2) DAYS OR AS APPROVED BY THE ENGINEER.
- PILES WHICH ARE DAMAGED DURING HANDLING OR DRILLING SHALL BE REMOVED AND DISPOSED OFF-SITE AND REPLACED WITH NEW PILES.
- THE CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF EACH PILE DRILLED. THE RECORDS SHALL CLEARLY STATE THE FINAL PILE EMBEDMENT INTO ROCK.
- B. DAMAGE TO ANY PROPERTY, PRIVATE OR OF PUBLIC TRUST, OCCURRING 8. PILES SHALL BE DRILLED NO LESS THAN DEPTH INDICATED INTO COMPETENT ROCK AND SHALL BE INSTALLED TO THE FULL DEPTH OF THE DRILLED HOLE. DRILLING OPERATION AND PILE INSTALLATION SHALL BE WITNESSED BY THE ENGINEER.
 - 9. CONTRACTOR SHALL SUBMIT TO THE ENGINEER MEANS AND METHODS OF PILE INSTALLATION INCLUDING DRILLING EQUIPMENT FOR REVIEW.
 - 10. SOIL AND ROCK CUTTINGS SHALL BE COLLECTED AND REMOVED FROM THE SITE.
- REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE 11. GROUT SHALL BE INSTALLED WITH A TREMIE TUBE EXTENDED TO THE BOTTOM OF THE DRILLED HOLE AND SHALL BE PERFORMED IN A CONTINUOUS OPERATION. AT NO TIME SHALL THE TREMIE TUBE BE ALLOWED TO BREECH THE TOP OF GROUT SURFACE.
 - 12. GROUT SHALL BE FIVE STAR CEMENTITIOUS "UNDER-WATER HIGH STRENGTH GROUT" AS MANUFACTURED BY FIVE STAR PRODUCTS SHELTON, CT OR EQUAL AS APPROVED BY ENGINEER.

TIMBER PILE INSTALLATION (ALTERNATE):

- DRIVEN TIMBER PILES SHALL HAVE A "SAFE LOAD" AS NOTED BELOW, AS DETERMINED BY THE ENGINEERING NEWS FORMULA EVALUATION. AN IMPACT HAMMER WITH A KNOWN RATING WILL BE REQUIRED TO VERIFY THE CAPACITY. IMPACT HAMMER SPECIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO PILE INSTALLATION. PILES SHALL BE DRIVEN TO A MINIMUM PILE CAPACITY OR MINIMUM EMBEDMENT AS NOTED IN NOTE 2 BELOW, WHICHEVER IS DEEPER.
 - TIMBER FOUNDATION PILES 10 TONS
- 2. PILES SHALL BE DRIVEN TO A MINIMUM EMBEDMENT BELOW FINISHED GRADE AS NOTED BELOW. EMBEDMENT AND METHODS FOR INSTALLING PILES SHALL BE SUCH THAT PILES ARE INSTALLED IN THEIR PROPER POSITION AND ALIGNMENT.
 - <u>TIMBER PILE EMBEDMENT</u> 15 FT
- CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF THE ABOVE CRITERIA IS NOT ABLE TO BE MET DUE TO FIELD CONDITIONS.
- PILES SHALL BE DRIVEN WITHIN 3 INCHES OF THE POSITIONS INDICATED ON THE DRAWINGS. PILES SHALL BE DRIVEN STRAIGHT AND TRUE WITH DEVIATION FROM LONGITUDINAL AXIS OF NOT MORE THAN 2%.
- 5. CONTRACTOR SHALL PROVIDE A TEST PILE AND PERFORM A TEST AT (2) PILE LOCATIONS. TEST PILE SHALL BE USED TO DETERMINE DRIVEABILITY AND EMBEDMENT DEPTH. CONTRACTOR MAY USE TEST PILE(S) AS PRODUCTION PILES IF THEY MEET THE REQUIREMENTS SPECIFIED HEREIN.
- PILES SHALL BE INSTALLED WITH CONSIDERATION FOR STABILITY OF ADJACENT STRUCTURES. PILE DRIVING TECHNIQUE SHALL LEAVE THE STRENGTH OF THE PILES UNIMPAIRED AND IN A STATE WHERE LOAD BEARING RESISTANCE FULLY DEVELOPS AND IS RETAINED. IF CONDITIONS AT THE SITE ARE SUCH THAT THE TIP, THE BODY, OR THE BUTT OF THE PILE IS LIKELY TO SUFFER DAMAGE DURING INSTALLATION, SPECIAL PRECAUTIONS SUCH AS PRE-DRILLING OR SPUDDING MUST BE TAKEN BY THE CONTRACTOR TO AVOID SUCH DAMAGE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE PLACEMENT OF UNDAMAGED PILES TO THE LOADING CAPACITY, REQUIRED TIP ELEVATION, AND EMBEDMENT IN SOUND MATERIAL
- ALL PILES SHOWING SIGNS OF HEAVING OR LIFTING OR PILES INSTALLED IN THE WRONG LOCATION SHALL BE EXTRACTED AND REINSTALLED TO THE EMBEDMENT DEPTH AND LOCATION AS SPECIFIED, AT NO ADDITIONAL COST TO THE OWNER.

- 8. THE PILE DRIVING HAMMER SHALL BE OF SUITABLE SIZE FOR THE PROPER INSTALLATION OF THE PILE AND SHALL BE CAPABLE, IN ANY CASE, OF DELIVERING AN ENERGY PER BLOW AS REQUIRED BY APPROPRIATE DRIVING RESISTANCE METHODS.
- SUITABLE ANVILS OR CUSHIONS SHALL BE USED TO PREVENT DAMAGE TO THE PILES, AS REQUIRED. ANVIL OR CUSHION TYPES SHALL BE CHOSEN BASED UPON THE PILE SIZE AND MATERIAL TYPE. THE CUSHIONS TO BE USED SHALL PROVIDE SUFFICIENT PROTECTION TO PREVENT DAMAGE TO THE PILE, BUT SHALL NOT ABSORB A SIGNIFICANT AMOUNT OF ENERGY FROM THE HAMMER BLOW. IF NECESSARY, STEEL BANDS OR CAPS SHALL BE USED WHILE DRIVING TO PREVENT PILE DAMAGE.
- 10. THE BUTT ENDS OF THE PILES SHALL BE CUT SQUARE WITH THE AXIS AND THE EDGES CHAMFERED.
- 11. PILES WHICH ARE DAMAGED AND HAVE HEADS WHICH SPLIT, BROOM, CRACK, OR CRUSH DURING DRIVING SHALL BE REMOVED AND DISPOSED OFF-SITE AND REPLACED WITH NEW PILES. NO ADDITIONAL PAYMENT WILL BE MADE BY THE OWNER FOR REPLACEMENT PILES OR INSTALLATION.
- 12. PILES SHALL BE DRIVEN TO A STRATUM OF SATISFACTORY MATERIAL AND SHALL BE ACCURATE AS TO LOCATION AND ALIGNMENT. PILE DRIVING SHALL BE CONTINUOUS FOR EACH PILE UNTIL THE REQUIRED RESISTANCE TO DEVELOP THE CAPACITY OF THE PILE IS ACHIEVED OR UNTIL THE MINIMUM EMBEDMENT IS REACHED, WHICHEVER IS DEEPER.
- 13. THE CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF EACH PILE DRIVEN. THE RECORDS SHALL INCLUDE THE BUTT AND TIP DIAMETERS, PILE LENGTH, DESIGN CAPACITY, PENETRATION DURING DRIVING, CUT-OFF LENGTHS, RESULTS OF ANY TESTS, DRILLING OR PROBING INFORMATION, IF ANY, AND ALL OTHER INFORMATION REGARDING EACH PILE DRIVEN. THESE RECORDS SHALL BE SUBMITTED TO THE ENGINEER ON A DAILY BASIS.

FOUNDATION

- THE STRUCTURE HAS BEEN DESIGNED TO REST ON SOIL HAVING A PRESUMPTIVE BEARING VALUE OF 3,000 PSF. AN ENGINEER SHALL REVIEW THE BEARING STRATA PRIOR TO CASTING CONCRETE IN ORDER TO VERIFY THE PRESUMPTIVE BEARING VALUE.
- 2. FOOTINGS SHALL BE PLACED ON UNDISTURBED VIRGIN SOIL, FREE OF FROST, MUD, OR ICE, OR CONTROLLED FILL.
- 3. FOOTING SUB-GRADE SHALL BE COMPACTED USING A VIBRATORY TAMPER OR A JUMPING SOIL RAMMER AFTER THE SOIL HAS BEEN INSPECTED AND APPROVED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEWATERING, SHORING, SHEETING, OR BRACING REQUIRED TO MAINTAIN A SAFE, DRY, AND STABLE EXCAVATION.
- 5. NO FOOTINGS SHALL BE PLACED IN WATER.
- SOIL ADJACENT TO AND BELOW FOOTINGS SHALL BE KEPT FROM FREEZING AT 6. ALL TIMES.
- 7. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES, SEWERS, AND FUEL STORAGE TANKS TO AVOID ANY DAMAGE TO THESE. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" PRIOR TO ANY EXCAVATION.

BACKFILL:

- BACKFILL OF EXCAVATIONS PERFORMED BY THE CONTRACTOR AS A PART OF THE WORK OR TO ACCOMMODATE THE WORK. SHALL CONSIST OF FREE-DRAINING MATERIAL CONFORMING TO THE FOLLOWING REQUIREMENTS:
- E. FREE-DRAINING MATERIAL SHALL CONSIST OF A MIXTURE OF SAND,
- GRAVEL, ROCK FRAGMENTS, QUARRY RUN STONE, AND SHALL NOT HAVE MORE THAN 70%, BY WEIGHT, PASSING THE NO. 40 F. SIEVE.
- G. AND NOT MORE THAN 10%, BY WEIGHT, PASSING THE NO. 200 MESH SIEVE.
- 2. BACKFILL MATERIAL SHALL BE INSTALLED IN 12" LIFTS AND EACH LAYER SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR TEST ASTM D1557/AASHTO T180.
- 3. BACKFILL FOR FOUNDATION WALLS AND RETAINING WALLS SHALL BE COMPACTED GRANULAR SOIL WITH NOT MORE THAN 10% PASSING THE #200 SIEVE. IF ON-SITE SOIL DOES NOT MEET THIS SPECIFICATION, THE CONTRACTOR SHALL BRING IN SOIL FROM OFF-SITE AT HIS OWN EXPENSE.
- WHERE FOOTINGS ARE BELOW THE GROUNDWATER ELEVATION, PLACE 6 INCHES OF CRUSHED STONE UNDER FOOTINGS. CRUSHED STONE SHALL BE PLACED AFTER THE SUBSOIL HAS BEEN INSPECTED, APPROVED, AND TAMPED.

CAST-IN-PLACE CONCRETE

- CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS.
- CAST-IN-PLACE CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301 - LATEST EDITION, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."
- 3. CONFORM TO THE RECOMMENDATIONS OF ACI 304 LATEST EDITION, "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE."
- CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-LATEST EDITION, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
- 5. READY MIX PLANT EQUIPMENT AND FACILITIES SHALL CONFORM TO THE "CHECK LIST FOR CERTIFICATION OF READY MIXED CONCRETE PRODUCTION FACILITIES" OF THE NRMCA.
- SUBMIT CONCRETE MIX DESIGN, WITH KNOWN TEST RESULTS, TO THE 6. ENGINEER FOR REVIEW. THE CONCRETE MIX DESIGN SUBMITTAL SHALL CONSIST OF AT LEAST THE FOLLOWING:
- A. TYPE OF CEMENT.
- B. DRY WEIGHT OF CEMENT.
- C. SATURATED SURFACE-DRY WEIGHTS OF FINE AND COARSE AGGREGATES.
- D. SPECIFIC GRAVITY OF FINE AND COARSE AGGREGATES.
- QUANTITIES, TYPE, NAME AND PRODUCER OF ADMIXTURES, AS APPLICABLE.
- TOTAL WEIGHT OF WATER, INCLUDING THE WATER WHICH IS ABSORBED BY AND ON THE SURFACE OF THE AGGREGATES.
- G. WATER TO CEMENT RATIO.
- H. SLUMP: MAXIMUM SLUMP, TAKEN AT THE TRUCK, WILL BE DETERMINED BASED ON THE PUMP HOSE LENGTH. THE MIX DESIGNS SHALL INCLUDE THE ANTICIPATED LOSS OF SLUMP PER 100 FOOT LENGTH OF SPECIFIED HOSE SIZE.
- STRENGTH TEST DATA OF THE PROPOSED MIX DESIGN AS SPECIFIED HEREIN.

- SUBMIT CONCRETE BATCH TICKETS FOR EACH TRUCK DELIVERED TO SITE. EACH TICKET SHALL NOTE AT LEAST THE FOLLOWING DATA: DESIGN MIX STRENGTH: BATCH PROPORTIONS INCLUDING ACTUAL WATER AND AGGREGATE MOISTURE CONTENTS: DATE AND BATCH TIME: ARRIVAL TIME AT SITE: DISCHARGE TIME; CONCRETE VOLUME; AND ANY CHANGE TO CONCRETE MADE AT THE SITE.
- 8. CONCRETE SHALL CONSIST OF THE FOLLOWING MATERIALS:
- A. PORTLAND CEMENT: TYPE II LOW ALKALI CONFORMING TO ASTM C 150, "STANDARD SPECIFICATION FOR PORTLAND CEMENT."
- B. COARSE AND FINE AGGREGATE SHALL BE NORMAL WEIGHT AND UNIFORMLY GRADED AND CLEAN CONFORMING TO ASTM C33, "STANDARD SPECIFICATION FOR CONCRETE AGGREGATES." DO NOT USE AGGREGATE KNOWN TO CAUSE EXCESSIVE SHRINKAGE.
- COARSE AGGREGATE SHALL BE CRUSHED ROCK OR WASHED GRAVEL WITH A MAXIMUM SIZE OF 3/4".
- FINE AGGREGATE SHALL BE NATURAL WASHED SAND OF HARD AND DURABLE PARTICLES VARYING FROM FINE TO PARTICLES PASSING A 3/8" SCREEN, OF WHICH AT LEAST 12% SHALL PASS A 50-MESH SCREEN.
- E. WATER SHALL BE CLEAN AND POTABLE.
- AIR ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260, "STANDARD SPECIFICATION FOR AIR ENTRAINING ADMIXTURE FOR CONCRETE." THE AIR ENTRAINING AGENT SHALL BE A NON-TOXIC CONCENTRATED SOLUTION OF NEUTRALIZED VINSOL RESIN, SUCH AS "DARAVAIR" AS MANUFACTURED BY W.R. GRACE COMPANY OR EQUIVALENT ACCEPTED BY THE ENGINEER.
- G. WATER REDUCING ADMIXTURE SHALL CONFORM TO ASTM C494 "STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE." WATER REDUCING AGENT SHALL BE OF TYPE A, B, C, D, E, F, OR G (AS NOTED IN CONCRETE MIX DESIGN) SUCH AS DARACEM-100" OR WRDA-19" AS MANUFACTURED BY W.R. GRACE COMPANY OR EQUIVALENT ACCEPTED BY THE ENGINEER.
- 9. CURING MATERIALS SHALL CONFORM TO ASTM C309, "STANDARD SPECIFICATION FOR LIQUID MEMBRANE-FORMING COMPOUNDS FOR CURING CONCRETE", WET BURLAP, OR PLASTIC MEMBRANE.
- 10. CONCRETE SHALL HAVE A MAXIMUM WATER TO CEMENT RATIO OF 0.40.
- 11. CONCRETE SHALL BE PROPORTIONED TO HAVE A SLUMP OF 4 INCHES, + 1 INCH, AT THE DISCHARGE END OF THE PUMP HOSE. USE WATER REDUCING AGENT AS REQUIRED TO ACHIEVE DESIRED SLUMP RANGE. ADDITION OF WATER AT SITE WILL NOT BE PERMITTED.
- 12. CONCRETE SHALL CONTAIN 5% +/- 1.5% ENTRAINED AIR.
- 13. DESIGN, ERECT, SUPPORT, BRACE, AND MAINTAIN FORMWORK SO IT WILL SAFELY SUPPORT VERTICAL AND LATERAL LOADS WHICH MIGHT BE APPLIED UNTIL SUCH LOADS CAN BE SUPPORTED SAFELY BY THE CONCRETE STRUCTURE IN ACCORDANCE WITH ACI 347 - LATEST EDITION.
- FORM COATING OR WATER SHALL BE APPLIED TO ALL FORMS. IF COATING IS USED, IT SHALL BE APPLIED PRIOR TO PLACEMENT OF REINFORCING STEEL.
- 15. FORM TIES AND SPREADERS SHALL BE OF SUCH TYPE AS TO LEAVE NO METAL CLOSER THAN 3 INCHES FROM ANY EXPOSED CONCRETE SURFACE.
- 16. SLEEVES, INSERTS, ANCHORS, AND EMBEDDED ITEMS REQUIRED FOR ADJOINING WORK OR FOR ITS SUPPORT SHALL BE PLACED PRIOR TO CASTING CONCRETE. ALL EMBEDDED ITEMS SHALL BE POSITIONED ACCURATELY AND SUPPORTED AGAINST DISPLACEMENT
- 17. TRANSIT MIX THE CONCRETE IN ACCORDANCE WITH PROVISIONS OF ASTM C94 LATEST EDITION.
- 18. DO NOT USE CONCRETE AFTER 90 MINUTES FROM TIME OF INTRODUCTION OF WATER TO THE MIX.
- 19. REMOVE FOREIGN MATTER ACCUMULATED IN THE FORMS.
- 20. RIGIDLY CLOSE OPENINGS LEFT IN THE FORMWORK.
- 21. WET WOOD FORMS IMMEDIATELY PRIOR TO CONCRETE PLACEMENT. WET WOOD FORMS SUFFICIENTLY TO TIGHTEN UP CRACKS. WET OTHER MATERIAL SUFFICIENTLY TO MAINTAIN WORKABILITY OF THE CONCRETE.
- 22. USE ONLY CLEAN TOOLS.
- 23. PERFORM CONCRETE PLACING AT SUCH A RATE THAT CONCRETE WHICH IS BEING INTEGRATED WITH FRESH CONCRETE IS STILL PLASTIC.
- 24. DEPOSIT CONCRETE AS NEARLY AS PRACTICABLE IN ITS FINAL LOCATION SO AS TO AVOID SEPARATION DUE TO REHANDLING AND FLOWING.
- 25. DO NOT USE CONCRETE WHICH BECOMES NON-PLASTIC AND UNWORKABLE, OR DOES NOT MEET REQUIRED QUALITY CONTROL LIMITS, OR HAS BEEN CONTAMINATED BY FOREIGN MATERIALS.
- 26. REMOVE REJECTED AND EXCESS CONCRETE FROM THE JOB SITE.
- 27. FREE-FALL OF CONCRETE DURING PLACEMENT GREATER THAN EIGHT FEET IS PROHIBITED. THE CONTRACTOR SHALL PLACE CONCRETE WITH A TREMIE TUBE FOR DROPS GREATER THAN EIGHT FEET.
- 28. DEPOSIT CONCRETE IN HORIZONTAL LAYERS NOT DEEPER THAN 24 INCHES, AND AVOID INCLINED CONSTRUCTION JOINTS.
- 29. REMOVE TEMPORARY SPREADERS IN FORMS WHEN CONCRETE HAS REACHED THE ELEVATION OF THE SPREADERS.
- 30. CONSOLIDATE EACH LAYER OF CONCRETE IMMEDIATELY AFTER PLACING, BY USE OF INTERNAL CONCRETE VIBRATORS SUPPLEMENTED BY HAND SPADING, RODDING, OR TAMPING.
- 31. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE INSIDE THE FORMS.
- 32. DO NOT USE HORIZONTAL CONSTRUCTION JOINTS, UNLESS SPECIFICIALLY SHOWN ON THE DRAWINGS.
- 33. BEGINNING IMMEDIATELY AFTER PLACEMENT, CONCRETE SHALL BE PROTECTED FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES, AND MECHANICAL DAMAGE AND SHALL BE MAINTAINED WITH MINIMAL MOISTURE LOSS AT A RELATIVE CONSTANT TEMPERATURE FOR THE PERIOD NECESSARY FOR HYDRATION OF THE CEMENT AND HARDENING OF THE CONCRETE.



- PRACTICES."
- REINFORCEMENT".

- STEEL.

34. IF COLD-WEATHER CONCRETING IS ANTICIPATED, A PRECONSTRUCTION MEETING SHOULD BE HELD TO DEFINE HOW COLD WEATHER CONCRETING METHODS WILL BE USED. WHEN THE MEAN DAILY AMBIENT TEMPERATURE IS AT OR BELOW 40 DEGREES F OR 45 DEGREES F AND FALLING, THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF ACI 306.1 - LATEST EDITION, WVODOCEÜÖ ŬÚÒÔØXÔŒ/QUÞÁ2UÜÁÔUŠÖÁY ÒŒ/PÒÜÁÔUÞÔÜÒVQeÕ+K

A. SET UP PROPER ENCLOSURE AND HEAT TO 50 DEGREES F FOR AT LEAST TWO (2) HOURS BEFORE STARTING ANY POUR. SET UP INDIVIDUAL THERMOMETERS WITHIN ENCLOSURE TO MONITOR AMBIENT TEMPERATURES NEAR THE FACE OF FRESH CONCRETE. THERMOMETERS SHALL BE PLACED AT A MAXIMUM OF 50-FOOT CENTERS, AT MAJOR CORNERS OR RETURNS, AND AT ENDS OF CONCRETE SECTIONS. MONITOR AND RECORD TEMPERATURES IN A LOG AT EARLY MORNING. NOON, AND EARLY EVENING.

B. USE A WATER-REDUCING ADMIXTURE WITH AN ACCELERATED SET, BUT DO NOT USE OR RELY UPON ANY MATERIAL AS AN ANTI-FREEZE. USE OF CALCIUM CHLORIDE IS PROHIBITED.

USE VENTED HEATERS WITH BLOWERS SO PLACED THAT THEY DO NOT PRODUCE LOCALIZED HOT SPOTS WHICH MAY DRY OUT THE CONCRETE. EXPOSURE TO EXHAUST GASES FROM COMBUSTION HEATERS IS PROHIBITED FOR THE FIRST 24 HOURS OF THE CURING PERIOD.

D. MAINTAIN THE TEMPERATURE OF THE FORMWORK AT NOT LESS THAN 50 DEGREES F BUT NOT GREATER THAN 70 DEGREES F FOR 48 HOURS AFTER COMPLETION OF POUR: FORMWORK MAY BE STRIPPED AFTER 72 HOURS AFTER COMPLETION OF POUR. AFTER 48 HOURS OF MAINTAINING AT LEAST 50 DEGREES F, THE TEMPERATURE MAY BE ALLOWED TO DROP GRADUALLY AND SHALL BE KEPT ABOVE 32 DEGREES F FOR A PERIOD OF SEVEN (7) DAYS AFTER COMPLETION OF POUR. PROTECTION DURING THIS PERIOD MAY BE PROVIDED BY EXISTING ENCLOSURE OR BY MEANS INDICATED IN NOTE 5 BELOW.

PROTECTION MAY BE PROVIDED BY USE OF INSULATION METHODS. ADEQUATE INSULATION SHALL CONSIST OF AT LEAST ONE OF THE FOLLOWING:

• 12" OF DRY EARTH; PROVIDE MOISTURE COVER IF OVER SLAB CONCRETE.

• 4" OF HAY UNDER ADEQUATE MOISTURE COVER.

F

1" OF INSULATION BLANKETS WITH VAPOR BARRIER SEAL.

• OTHER INSULATING MATERIAL ACCEPTABLE TO THE ENGINEER.

NOTE: EXTREME CONDITIONS OF TEMPERATURE OR WIND MAY REQUIRE MORE PROTECTION.

F. CONCRETE SHALL NOT BE PLACED ON FROZEN GROUND.

G. FROZEN CONCRETE SHALL BE REMOVED FROM THE JOB AND REPLACED AT A NO ADDITIONAL COST TO THE OWNER.

35. WHEN THE MEAN DAILY AMBIENT AND SUBSTRATE TEMPERATURE IS ABOVE 80 DEGREES F. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF ACI 305.1 - LATEST EDITION, STANDARD SPECIFICATION FOR HOT WEATHER CONCRETING. CONCRETE SHALL BE PROTECTED FROM THERMAL DAMAGE. PROVISIONS FOR WINDBREAKS. SHADING. FOG SPRAYING. SPRINKLING. PONDING, OR WET COVERING WITH A LIGHT COLORED MATERIAL SHALL BE MADE IN ADVANCE OF PLACEMENT AND SUCH PROTECTIVE MEASURES SHALL BE TAKEN AS QUICKLY AS CONCRETE HARDENING AND FINISHING OPERATIONS WILL ALLOW.

> NO CONCRETE SHALL BE PLACED WHEN THE AIR TEMPERATURE IS ABOVE 90 DEGREES F UNLESS THE AIR IS STILL AND RELATIVE HUMIDITY IS ABOVE 80%.

SET UP PROPER WINDBREAKERS FOR CONCRETE SURFACES WHENEVER THE RELATIVE HUMIDITY IS LESS THAN 70% FOR SLIGHT AIR MOTION OR 80% FOR LIGHT BREEZES.

C. PROVIDE SHADE FOR POURS OTHERWISE EXPOSED TO THE SUN.

D. CONCRETE IS TO BE AT A TEMPERATURE OF 80 DEGREES F OR LESS WHEN PLACED. IF NECESSARY, THE BATCHING PLANT SHALL COOL AGGREGATES BY SPRAYING OR BY USING CHILLED WATER OR ICE. ALL SUCH WATER SHALL BE ACCOUNTED FOR AS PART OF THE MIXING WATER.

E. USE AN ADMIXTURE WITH A RETARDED SET.

FORMS SHALL BE THOROUGHLY WETTED AT LEAST DAILY AND MORE OFTEN WHEN THE RELATIVE HUMIDITY IS LOW.

FOR SLABS, MAINTAIN THE REQUIRED MATERIALS FOR CURING ON HAND. SO THEY MAY BE PLACED IMMEDIATELY UPON FINISHING. ALL CONCRETE PLACED IN AMBIENT TEMPERATURES OVER 80 DEGREES F SHALL BE KEPT WET FOR A MINIMUM OF 24 HOURS. INTERMITTENT SPRAYING WILL NOT BE PERMITTED. NO WATER SHALL BE APPLIED BEFORE CONCRETE HAS ACQUIRED ITS INITIAL SET. WHEN THE CONCRETE TEMPERATURE OF ANY SLAB GOES ABOVE 100 DEGREES F, PLACE A LAYER OF SAND ON IT AND KEEP IT CONTINUOUSLY WET UNTIL THE TEMPERATURE IS BELOW 80 DEGREES F

36. REMOVE ALL FINS, BLEMISHES, AND DEFECTIVE CONCRETE AREAS AND PATCH WHERE REQUIRED WITH REWORKED CEMENT MORTAR OF THE SAME PROPORTIONS AS THAT USED IN THE CONCRETE.

37. FORM TIE HOLES SHALL BE PLUGGED SOLID WITH REWORKED CEMENT MORTAR OF THE SAME PROPORTIONS AS THAT USED IN THE CONCRETE.

38. PROVIDE A BROOM FINISH ON WALKING SURFACES AND A GROUT RUB ON VERTICAL SURFACES.

REINFORCING STEEL

1. DETAILING, FABRICATION, AND ERECTION OF REINFORCING STEEL SHALL CONFORM WITH ACI-318 AND ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING, REINFORCED CONCRETE STRUCTURES."

2. FABRICATE REINFORCEMENT TO THE REQUIRED SHAPES AND DIMENSIONS, WITHIN FABRICATION TOLERANCES STATED IN THE CRSI "MANUAL OF STANDARD

3. REINFORCING STEEL SHALL CONFORM TO ASTM 615 GRADE 60, "SPECIFICATION FOR DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE

4. REINFORCING STEEL COATING SHALL CONFORM A767, "STANDARD SPECIFICATION FOR ZINC-COATED STEEL BARS FOR CONCRETE REINFORCEMENT". REINFORCING STEEL SHALL BE CLASS 1 COATING WEIGHT AND SHALL BE FABRICATED PRIOR TO GALVANIZING.

5. REINFORCING STEEL SHALL BE ADEQUATELY TIED WITH TIE WIRE AND SUPPORTED WITH CHAIRS THAT HOLD THE BARS TO THE SPECIFIED CLEARANCE. ONE CHAIR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. NO CLAY OR CONCRETE BRICKS OR ANY OTHER MATERIAL OTHER THAN APPROVED CHAIRS SHALL BE PERMITTED TO SUPPORT REINFORCING

6. FORM COATING OR WATER SHALL BE APPLIED TO ALL FORMS. IF COATING IS USED, IT SHALL BE APPLIED PRIOR TO PLACEMENT OF REINFORCING STEEL.

7. FORM TIES AND SPREADERS SHALL BE OF SUCH TYPE AS TO LEAVE NO METAL CLOSER THAN 3 INCHES FROM ANY EXPOSED CONCRETE SURFACE.

- 8. PLACE REINFORCEMENT TO OBTAIN THE REQUIRED COVERAGE FOR CONCRETE PROTECTION. MINIMUM CONCRETE COVER FOR ALL REINFORCING SHALL BE 3 INCHES EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
- 9. CLEAN REINFORCEMENT AND REMOVE LOOSE DUST, EARTH, AND OTHER MATERIALS WHICH REDUCE BOND OR DESTROY BOND WITH CONCRETE.
- 10. POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT BY FORMS, CONSTRUCTION, AND THE CONCRETE PLACEMENT OPERATIONS.
- 11. REINFORCING STEEL SHALL BE CONTINUOUS UNLESS SPECIFICALLY DETAILED OTHERWISE ON THE CONTRACT DRAWINGS. PROVIDE DOWELS OR LAP SPLICES OF THE APPROPRIATE CLASS TO MAINTAIN CONTINUITY. UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS LAP BARS 40 BAR DIAMETERS MINIMUM. DOWELS OR SPLICES SHALL BE SHOWN ON THE SHOP DRAWINGS AND SHALL BE SUBJECT TO THE FIELD REVIEW OF THE ENGINEER. NO MORE THAN 60% OF THE TOTAL NUMBER OF BARS SHALL BE SPLICED AT ONE LOCATION.

GROUT:

- BEARING GROUT SHALL BE NON-SHRINK, NON-METALLIC, HIGH PERFORMANCE 1. CEMENT BASED GROUT WITH A MINIMUM FLOWABLE WITH A 28 DAY COMPRESSION STRENGTH OF 6500 PSI CONFORMING TO ASTM C827 SUCH AS FIVE STAR GROUT AS MANUFACTURED BY FIVE STAR PRODUCTS, INC OR EQUIVALENT ACCEPTED BY THE ENGINEER.
- ROCK SOCKET GROUT SHALL BE AN UNDERWATER PUMP GRADE. CEMENT-BASED, NON-SHRINK GROUT WITH A MINIMUM PUMPABLE 28 DAY COMPRESSION STRENGTH OF 5000 PSI SUCH AS FIVE STAR CEMENTITIOUS UNDERWATER HIGH-STRENGTH GROUT AS MANUFACTURED BY FIVE STAR PRODUCTS, INC OR EQUIVALENT ACCEPTED BY THE ENGINEER.

TIMBER CONSTRUCTION (ALTERNATE 1)

- 1. THE WORK COVERED UNDER THIS SECTION INCLUDES, BUT IS NOT NECESSARILY LIMITED TO FLOAT SUPPORT FRAMING.
- 2. ALL VISUALLY GRADED STRUCTURAL LUMBER AND WOOD CONSTRUCTION SHALL CONFORM TO THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" (ANSI/NFPA NDS - LATEST EDITION), ITS SUPPLEMENT, AND COMMENTARY BY THE AMERICAN FOREST & PAPER ASSOCIATION / AMERICAN WOOD COUNCIL.
- 3. TIMBER SHALL MEET THE REQUIREMENTS OF THE SOUTHERN PINE INSPECTION BUREAU INSPECTION RULES, LATEST EDITION FOR SOUTHERN YELLOW PINE NO. 1 GRADE MINIMUM.
- NO LATER THAN THE TIME OF DELIVERY OF MATERIALS TO THE SITE, CONTRACTOR SHALL SUBMIT CERTIFICATES AS TO CONFORMANCE WITH THE SPECIFIED SPECIES, GRADE, AND TREATMENT PRIOR TO INSTALLATION OF ANY VISUALLY GRADED STRUCTURAL LUMBER.
- TIMBER SHALL BE HANDLED CAREFULLY, WITHOUT SUDDEN DROPPING, BREAKING OF OUTER FIBERS, BRUISING OR PENETRATING THE SURFACE WITH TOOLS.
- ALL TIMBER SHALL BE CUT AND FRAMED TO A CLOSE FIT IN SUCH A MANNER THAT THE JOINTS SHALL HAVE FULL CONTACT BETWEEN PLIES OR MEMBERS. NO SHIMMING WILL BE PERMITTED IN MAKING JOINTS NOR WILL OPEN JOINTS BE ACCEPTED.
- NAILER, BLOCKING, AND FLOAT STOPS SHALL BE PRESSURE TREATED IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVER'S ASSOCIATION (AWPA) CATEGORY C3 WITH A CCA PRESERVATIVE TO A RETENTION OF THE AMOUNT OF 2.5 LBS/FT3.
- ALL CUT ENDS SHALL BE COATED WITH TENINO COPPER NAPTHANATE SOLUTION MANUFACTURED BY COPPER CARE WPPD PRESERVATIVES, INC. OR APPROVED EQUAL. WITH NO LESS THAN 2% COPPER METAL CONTENT. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW PRIOR TO USE.
- 9. ALL MATERIAL SHALL BE SOUND, WELL SEASONED, AND STRAIGHT GRAINED, FREE FROM SHAKES AND LARGE OR LOOSE KNOTS, AND SHALL HAVE NO DECAYED WOOD, WORM HOLES, OR ANY OTHER DEFECTS WHICH THE OWNER DETERMINES WILL IMPAIR ITS STRENGTH OR DURABILITY
- 10. PIECES OF EXCEPTIONALLY LIGHT WEIGHT WILL NOT BE ACCEPTED.
- 11. ALL MATERIAL SHALL BE STORED OFF OF THE GROUND IN MANNER TO PREVENT DAMAGE AND TO PERMIT EASY INSPECTION.

12. TIMBER SHALL BE SURFACED FOUR SIDES (S4S) UNLESS OTHERWISE NOTED.

FOR CONTINUATION, SEE DRAWING 3

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PROJECT NOTES (continued)

GANGWAY:

- THE ALUMINUM GANGWAY SHALL BE MANUFACTURED BY AN APPROVED MANUFACTURER HAVING A MINIMUM OF TEN YEARS EXPERIENCE IN THE MANUFACTURING AND INSTALLATION OF GANGWAYS, THAT ARE THE SAME TYPE AS PROPOSED FOR THIS PROJECT, ON AT LEAST THREE OTHER INSTALLATIONS.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE GANGWAY TO ENGINEER FOR REVIEW PRIOR TO ORDERING. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NY. SHOP DRAWINGS SHALL INCLUDE PIANO HINGE, ROLLER, AND TRANSITION PLATE DATA. ALL GANGWAY PARTS ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE ENGINEER
- THE CONTRACTOR SHALL COORDINATE THE GANGWAY SYSTEM DESIGN WITH THE FLOATING DOCK SYSTEM DESIGN SUCH THAT THERE IS SUFFICIENT FLOTATION PROVIDED AT THE GANGWAY LOCATIONS.
- METAL FOR ALUMINUM STRUCTURES SHALL BE 6061-T6 ALUMINUM ALLOY. METAL FOR DECKING AND HANDRAILS SHALL BE 6063-T6 ALUMINUM ALLOY. BOTH 6061-T6 AND 6063-T6 SHALL BE EXTRUDED IN ACCORDANCE WITH THE REQUIREMENTS OF APPLICABLE SECTIONS OF FEDERAL SPECIFICATIONS QQ-A-200. EXTRUDED PIPE FOR HANDRAILS AND STRUCTURES SHALL BE 1-1/2" DIAMETER MINIMUM PIPE. ALUMINUM SHALL BE COMPATIBLE WITH A MARINE ENVIRONMENT. HINGES AND FASTENERS SHALL BE STAINLESS STEEL OR OTHER MATERIALS COMPATIBLE WITH ALUMINUM IN A MARINE ENVIRONMENT.
- 5. GANGWAY FASTENERS SHALL BE OF TYPE 316 STAINLESS STEEL.
- 6. ANY INSTALLATION OF DISSIMILAR MATERIALS SHALL BE PROPERLY INSULATED TO AVOID CONTACT OF DISSIMILAR METALS AND TO MINIMIZE OR ELIMINATE CORROSION IN A MARINE ENVIRONMENT.
- 7. WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH AWS D1.2.
- 8. THE GANGWAY SHALL HAVE A MINIMUM CLEARANCE WIDTH BETWEEN RAILINGS OF 2'-6" UNLESS NOTED OTHERWISE.
- . THE GANGWAY TO FIXED STRUCTURE HINGE MOUNT EXTRUSIONS SHALL BE WELDED TO THE FRAME OF THE GANGWAY WITH A CONTINUOUS FILLET WELD UNLESS OTHERWISE NOTED.
- 10. THE GANGWAY PIN CONNECTION SHALL BE ABLE TO BE REMOVED AT THE FIXED STRUCTURE WITHOUT INTERFERING WITH THE STRUCTURE.
- 11. ROLLERS SHALL BE FABRICATED FROM UHMW POLYETHYLENE CONFORMING TO ASTM D4976 WITH BLACK ULTRAVIOLET INHIBITOR ADDED.
- 12. GANGWAYS SHALL BE DESIGNED TO WITHSTAND A DISTRIBUTED VERTICAL LIVE LOAD OF 40 PSF AND A CONCENTRATED LIVE LOAD OF 400 LBS AT ANY LOCATION.
- 13. DEFLECTION OF THE GANGWAY UNDER LIVE LOAD CONDITIONS SHALL NOT EXCEED L/360 WHERE "L" IS THE LENGTH OF THE GANGWAY IN INCHES.
- 14. GANGWAYS SHALL BE DESIGNED FOR A LATERAL WIND LOAD OF 30 PSF ON EXPOSED SURFACES.
- 15. GANGWAY HANDRAILS AND GUARDS SHALL BE SMOOTH, SNAG-FREE, AND DESIGNED TO WITHSTAND A 200 LB. CONCENTRATED LOAD OR A 50LB./FT. LOAD, WHICHEVER IS GREATER, ACTING ON THE TOP OF RAILING, IN ANY DIRECTION, NOT SIMULTANEOUSLY.
- TRANSVERSE NON-SKID PROPERTIES, WITHOUT AFFIXED CROSS CLEATS OR OTHER MECHANICAL DEVICES TO ACHIEVE NON-SKID CAPABILITY.
- 17. GANGWAYS SHALL REST ON HDPE PLASTIC SKID PLATE ON THE FLOATING DOCK SIDE THAT WILL ALLOW FOR FREE AND SILENT MOVEMENT OF THE GANGWAY WITH CHANGING WATER LEVELS.
- 18. THE GANGWAY SHALL BE FITTED WITH AN ALUMINUM TRANSITION PLATE TO MAKE A SMOOTH, GAP-FREE TRANSITION FROM THE GANGWAY TO THE FLOATING DOCK. THE TRANSITION PLATE SHALL ALSO HAVE A NON-SKID SURFACE AND BE CONNECTED TO THE GANGWAY.

FLOATING DOCK AND HARDWARE:

- THE FLOATING DOCK SYSTEM SHALL BE MANUFACTURED BY AN APPROVED MANUFACTURER HAVING A MINIMUM OF TEN YEARS EXPERIENCE IN THE MANUFACTURING AND INSTALLATION OF FLOATING DOCK SYSTEMS, THAT ARE THE SAME TYPE AS PROPOSED FOR THIS PROJECT, ON AT LEAST THREE OTHER INSTALLATIONS.
- DOCKS SHALL BE COMPLETELY FABRICATED IN THE MANUFACTURERS FACILITY AND SHIPPED TO THE SITE COMPLETED WITH DECKING AND FLOTATION ATTACHED, READY FOR OFF-LOAD DIRECT INTO WATER. KNOCKED DOWN FRAMING SYSTEMS ASSEMBLED AT SITE WILL NOT BE ALLOWED. PANELIZED DECKING SYSTEMS WILL NOT BE ALLOWED.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE DOCK SYSTEM TO ENGINEER FOR REVIEW PRIOR TO ORDERING. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NY.
- . THE CONTRACTOR SHALL FURNISH ALL TOOLS, EQUIPMENT, MATERIALS, AND SUPPLIES AND SHALL PERFORM ALL LABOR, SUPERVISION, ASSEMBLY, AND INSTALLATION OF THE COMPLETE FLOATING DOCK SYSTEMS.
- DESIGNED TO WITHSTAND A UNIFORMLY DISTRIBUTED VERTICAL LIVE LOAD OF 50 PSF AND A CONCENTRATED VERTICAL LOAD OF 400 LBS APPLIED OVER 1 SQUARE FOOT, HOWEVER LOAD CASES SHALL NOT NEED TO BE ANALYZED SIMULTANEOUSLY.
- FLOTATION SHALL BE DESIGNED TO SUPPORT THE DEAD LOAD PLUS A UNIFORMLY DISTRIBUTED VERTICAL LIVE LOAD OF 30 PSF APPLIED TO THE FULL AREA OF THE DECK SURFACE.
- . FLOATING DOCK SHALL BE DESIGNED TO WITHSTAND THE FORCES OF NON-MOVING ICE.
- 3. FLOATING DOCK SHALL BE DESIGNED TO WITHSTAND A MINIMUM ALLOWABLE LATERAL WAVE LOAD OF 115 #/FT.
- 9. ØÜÒÒÓU ŒÜÖÁNÞÖÒÜÁÖÒŒÐÁŠU ŒÐÁÙP ŒŠŠÁÒÛ WOĽŠÁFJ ÄÁ ÁFÄÈ
- 10. FREEBOARD UNDER DEAD LOAD PLUS THE 30 PSF LIVE LOAD SHALL BE NO LESS THAN 12".
- 11. DEAD LOADS SHALL CONSISTS OF THE ENTIRE WEIGHT OF THE FLOATING STRUCTURE, INCLUDING THE GANGWAY AND OTHER ACCESSORIES AND APPURTENANCES.
- 12. THE LOSS OF FREEBOARD AFTER ONE YEAR OF SERVICE FROM THE TIME OF ACCEPTANCE SHALL NOT EXCEED 1" AND SHALL NOT EXCEED 2" AFTER FIVE YEARS.
- 13. THE BOTTOM OF THE DOCK STRUCTURAL FRAMING SHALL NOT BE WITHIN 8" OF THE WATER SURFACE DURING DEAD LOAD CONDITIONS.
- 14. FLOATING DOCK SURFACES SHALL NOT SLOPE MORE THAN 1/2 INCH PER 6 FEET OF DOCK WIDTH OR LENGTH AT THE TIME OF ACCEPTANCE AND NO MORE THAN 3/4 INCH PER 6 FEET AT THE END OF FIVE YEARS OF SERVICE.

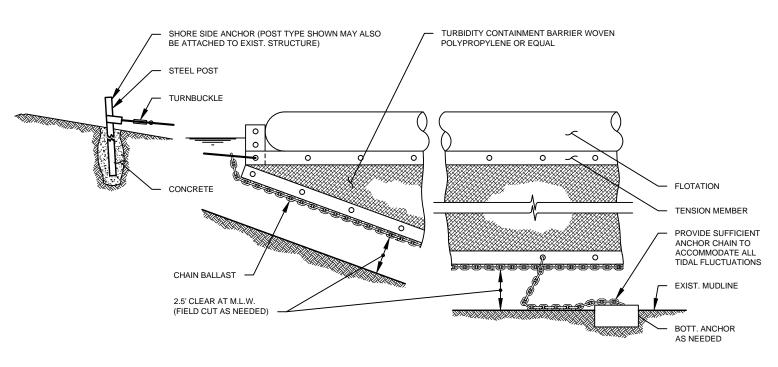
- 15. DOCK UNITS UNDER GANGWAY LOCATIONS SHALL BE NO MORE THAN 2" HIGHER THAN THE FREEBOARD OF THE REST OF THE FLOATING DOCK SYSTEM DURING DEAD LOAD CONDITIONS.
- 16. FLOTATION SHALL BE HIGH STRENGTH, HIGH DENSITY, POLYETHYLENE, CORE SHALL BE EXPANDED POLYSTYRENE, FACTORY PRE-MOLDED TO ENSURE COMPLETE EXPANSION TO MINIMUM OF 1.0 LB/CF DENSITY. FLOTATION UNITS SHALL BE DESIGNED TO MAINTAIN THE DESIRED BUOYANCY AND FREEBOARD EVEN IF PUNCTURED OR CRACKED. FLOTATION ATTACHMENT TO STRUCTURAL FRAME SHALL BE POSITIVELY ATTACHED BY MEANS OF A THRU BOLT AND NUT. FLOTATION UNIT AND FRAME TO ACT AS ONE INTEGRAL SECTION.
- 17. DOCK FRAMING TIMBER SHALL BE VISUALLY GRADED STRUCTURAL LUMBER AND SHALL BE SOUTHERN YELLOW PINE (SYP) NO. 1 GRADE MINIMUM, SPIB GRADING RULES. ALL LUMBER SHALL BE SAWN 4 SIDES (S4S) AND CHROMATED COPPER ARSENATE (CCA) PRESSURE TREATED TO A MINIMUM RETENTION OF 0.6 PCF.
- 18. DOCK FRAMING TIMBER SHALL BE KILN DRIED AFTER TREATMENT.
- 19. DOCK FRAMING TIMBER SHALL BE SOUND, WELL SEASONED, AND STRAIGHT GRAINED, FREE FROM SHAKES AND LARGE OR LOOSE KNOTS AND SHALL HAVE NO DEFECTS WHICH WILL IMPAIR ITS STRENGTH OR DURABILITY FOR THE INTENDED PURPOSE.
- 20. DECKING FOR FLOATING DOCK SHALL BE 2X6 SYP. NO.1, COPPER QUAT (ACQ) PRESSURE TREATED TO A MINIMUM RETENTION OF .060 PCF, OR COMPOSITE. COORDINATE DECKING TYPE WITH OWNER.
- 21. DECKING SHALL BE FASTENED TO STRUCTURAL FRAMING W/ TWO (2) 3-1/2" LONG #12 - 316 S.S. DECK SCREWS SPACED 1" FROM EACH EDGE OF DECKING.
- 22. DECKING SCREW HOLES SHALL BE PRE-DRILLED W/ A 5/32" LEAD HOLE. LEAD HOLE SHALL BE NO LONGER THAN THE SCREW EMBEDMENT.
- 23. GAP BETWEEN DECKING SHALL BE 1/8".
- 24. STRUCTURAL STEEL CONNECTORS, BRACKETS AND MISCELLANEOUS PARTS TO BE FABRICATED FROM ASTM A 36 GRADE STEEL.
- 25. STRUCTURAL STEEL, BOLTS, NUTS, AND WASHERS SHALL BE FABRICATED TO ASTM A307 AND HOT DIPPED GALVANIZED IN ACCORDANCE TO ASTM A 123. A MINIMUM COATING OF 2 OUNCES PER SQUARE FOOT SHALL BE APPLIED. FASTENERS SHALL BE A MINIMUM 1/2" DIAMETER.
- 26. CLEATS SHALL BE 10" MALLEABLE CAST IRON, CONFORMING TO ASTM A47. CLEATS SHALL BE FASTENED TO INTERIOR STEEL ANGLES WITH (2) - 3/8" DIAMETER THRU BOLTS. CLEATS SHALL BE PLACED AT LOCATIONS SPECIFIED ON THE CONTRACT DRAWINGS.
- 27. FLOATING DOCKS SHALL BE FITTED WITH HIGH DENSITY POLYETHYLENE (HDPE) WEAR PADS AT GANGWAY LOCATIONS. COORDINATE HDPE COLOR W/ OWNER.
- 28. DOCK BUMPERS & CORNER BUMPERS SHALL BE NON-MARRING WHITE EXTRUDED MARINE GRADE VINYL 3-1/2" WIDE MINIMUM. DOCK BUMPERS SHALL MEET OR EXCEED THE FOLLOWING:
- DUROMETER HARDNESS 89
- SPECIFIC GRAVITY 1.368 ÓÜQ/VŠÒŠŸÁ/ÒT ÚÒÜŒ/WÜÒÁËG€»ÁØÁŒÙVT Ä I Î €Í G/D
- 29. DOCK BUMPERS & CORNER BUMPERS SHALL BE FASTENED TO THE DOCK FRAME WITH 316 STAINLESS STEEL SCREWS AT 6" O.C.
- 16. THE WALKWAY SURFACE SHALL BE OPEN TYPE GRATING WITH INTEGRAL 30. DOCK BUMPER AND CORNER BUMPER SAMPLES SHALL BE PROVIDED TO OWNER FOR APPROVAL PRIOR TO INSTALLATION.

PILE GUIDES:

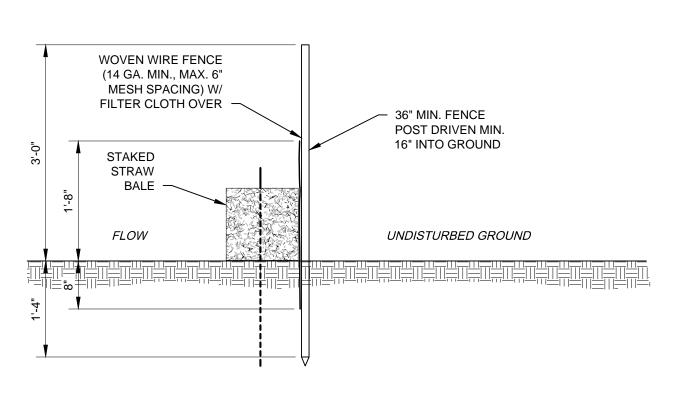
- 1. PILE GUIDES SHALL BE CONSTRUCTED OF STRUCTURAL STEEL CONFORMING TO ASTM A 36/A 36M, ASTM A 572/A 572M, OR ASTM A 500 AND GALVANIZED IN ACCORDANCE WITH ASTM A 123/A 123M. PILE GUIDE ROLLERS AND WEARING PADS SHALL BE LOW FRICTION, ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE (ASTM D 4020) ON STAINLESS STEEL AXLES.
- 2. THE CONTRACTOR SHALL FURNISH ALL TOOLS, EQUIPMENT, MEASUREMENTS, MATERIALS, AND SUPPLIES AND SHALL PERFORM ALL LABOR, SUPERVISION, FABRICATION, ASSEMBLY, AND INSTALLATION OF PILE GUIDES.
- PILE GUIDE ASSEMBLY SHALL INCLUDE FOUR (4) UHMW ROLLERS PER GUIDE.
- CONTRACTOR TO SUBMIT PILE GUIDE ASSEMBLY SHOP DRAWINGS TO THE ENGINEER 4. FOR REVIEW PRIO9R TO ORDERING. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NY.
- PILE GUIDE ASSEMBLIES SHALL HAVE A MEANS TO EASILY CONNECT & DISCONNECT TO ALLOW FOR RAPID REMOVAL OF DOCKS IN CASE OF STORMS.
- 6. PILE GUIDE ASSEMBLIES SHALL BE DESIGNED FOR A 2 KIP MINIMUM FORCE.
- 7. ISOLATION BARRIERS SHALL BE PROVIDED BETWEEN DISSIMILAR METALS.

EROSION & SEDIMENTATION CONTROLS

- 1. CONTRACTOR SHALL PROTECT FROM DISTURBING OR DAMAGE WETLAND AREAS ADJACENT TO WORK AREA.
- 2. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM.
- FLOATING DOCK DECK SURFACE AND STRUCTURAL FRAMING SHALL BE 3. WHENEVER POSSIBLE, EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
 - 4. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2016 NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS.
 - ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
 - ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD AS NECESSARY AND REQUIRED.
 - THE GENERAL CONTRACTOR SHALL UTILIZE APPROVED METHODS/MATERIALS FOR PREVENTING THE BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES ONTO ADJACENT PROPERTIES AND SITE AREAS.
 - 8. THE GENERAL CONTRACTOR SHALL MAINTAIN A SUPPLY OF SILT FENCE (100' MIN.) ON SITE FOR EMERGENCY PURPOSES.
 - 9. ALL DISTURBED LAWN AREAS OUT OF THE MAJOR CONSTRUCTION AREA THAT ARE TO BE LEFT EXPOSED FOR MORE THAN 30 DAYS SHALL BE PROTECTED WITH A TEMPORARY VEGETATIVE COVER, SEED THESE AREAS WITH PERENNIAL RYE GRASS AT THE RATE OF 40 LBS, PER ACRE (1 LB PER 1,000 SQ. FT.).
 - 10. THE GENERAL CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THE RESPONSIBILITY INCLUDES SUPERVISING THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE CONSERVATION STAFF PERSON OF ANY TRANSFER OF THIS RESPONSIBILITY AND CONVEYING A COPY OF THE CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.



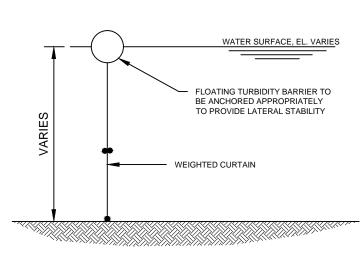
SCALE: 1/4" = 1'-0"



CURTAIN AND ANCHOR MUST RESIST EXPECTED WIND, WAVE AND CURRENT ENVIRONMENT AT SITE. CONTRACTOR TO SUBMIT WEIGHTED TURBIDITY CURTAIN SPECIFICATIONS FOR REVIE

WEIGHTED TURBIDITY CURTAIN DETAIL





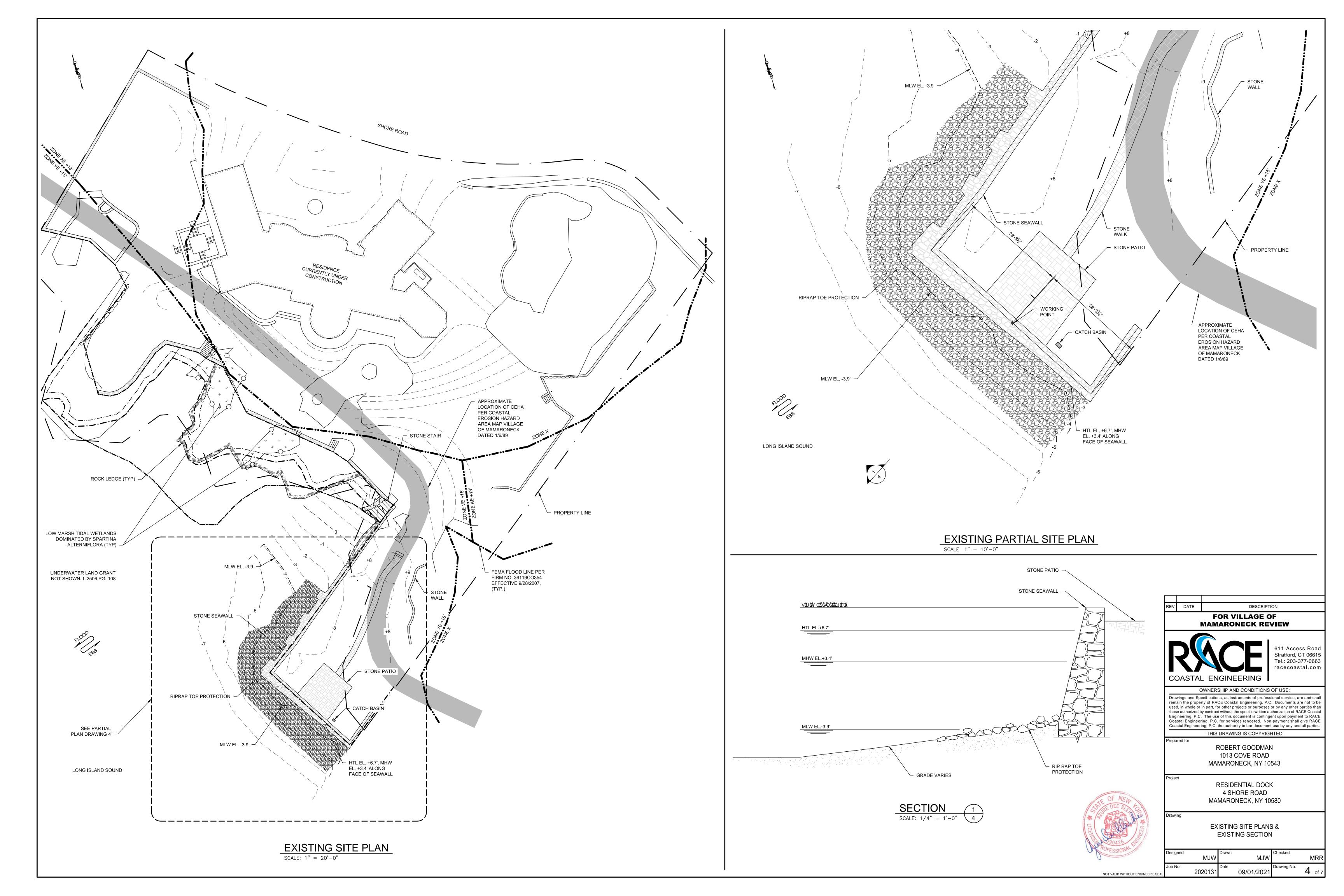
WEIGHTED TURBIDITY CURTAIN DETAIL SCALE: 1/2" = 1'-0"

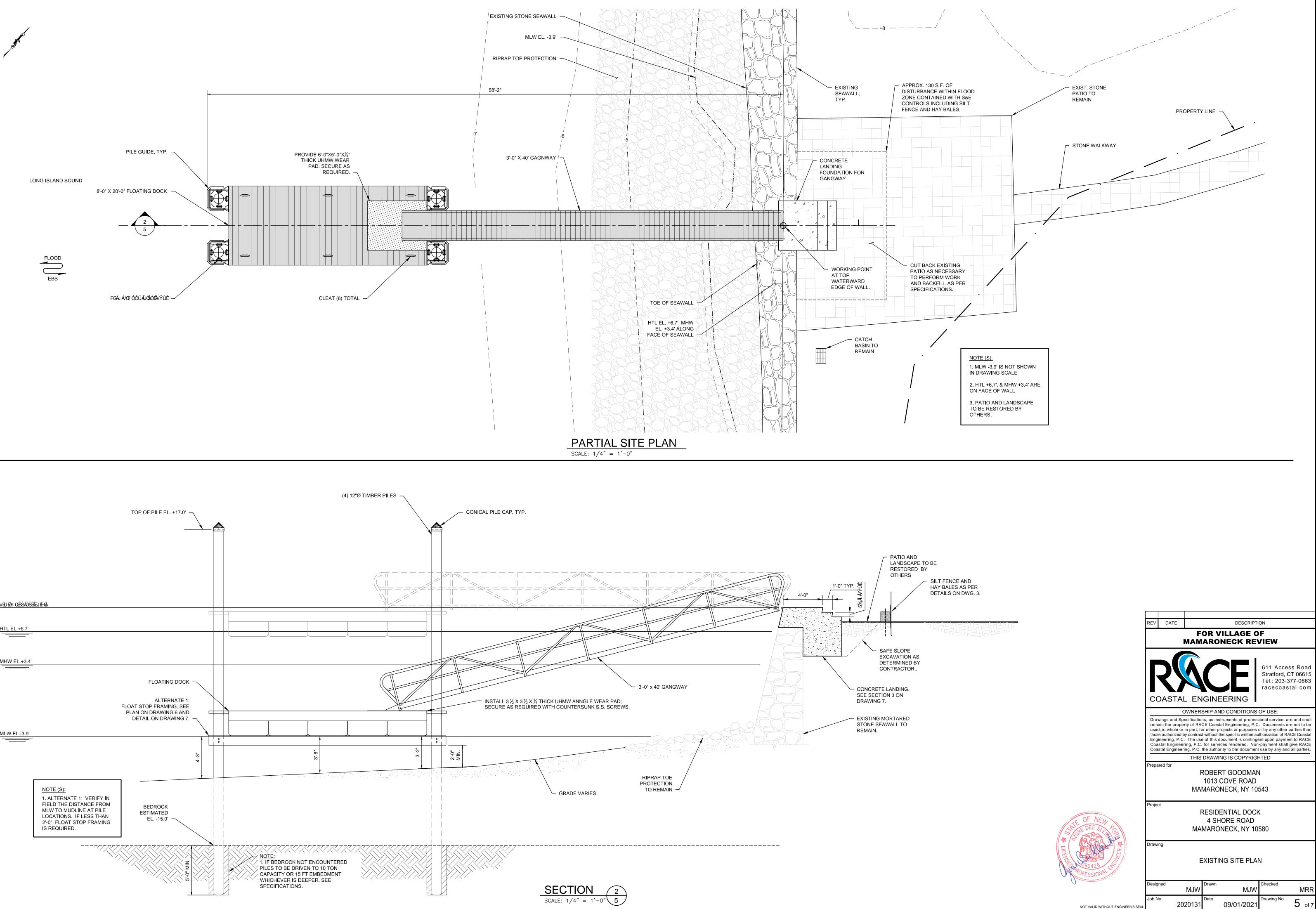
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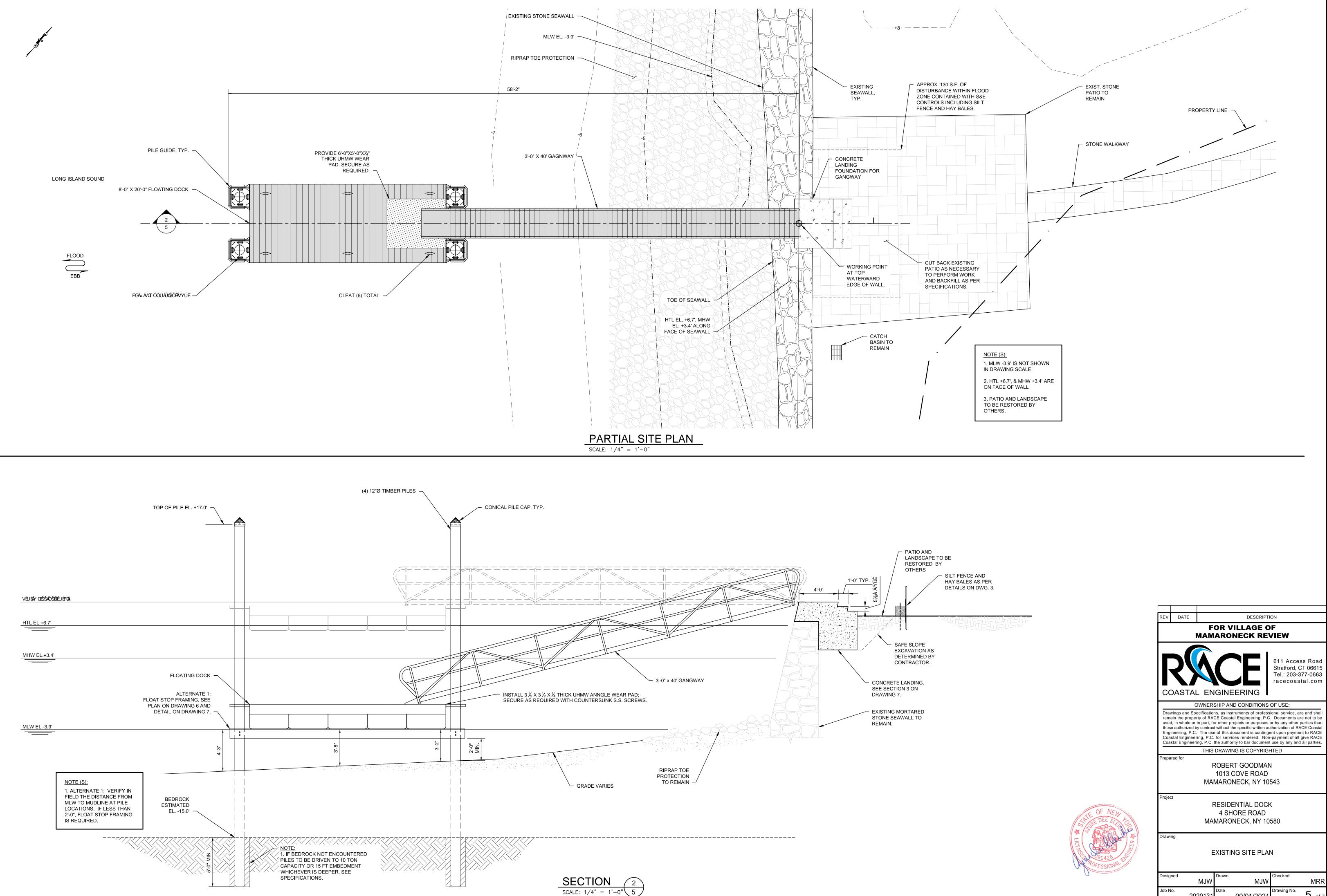
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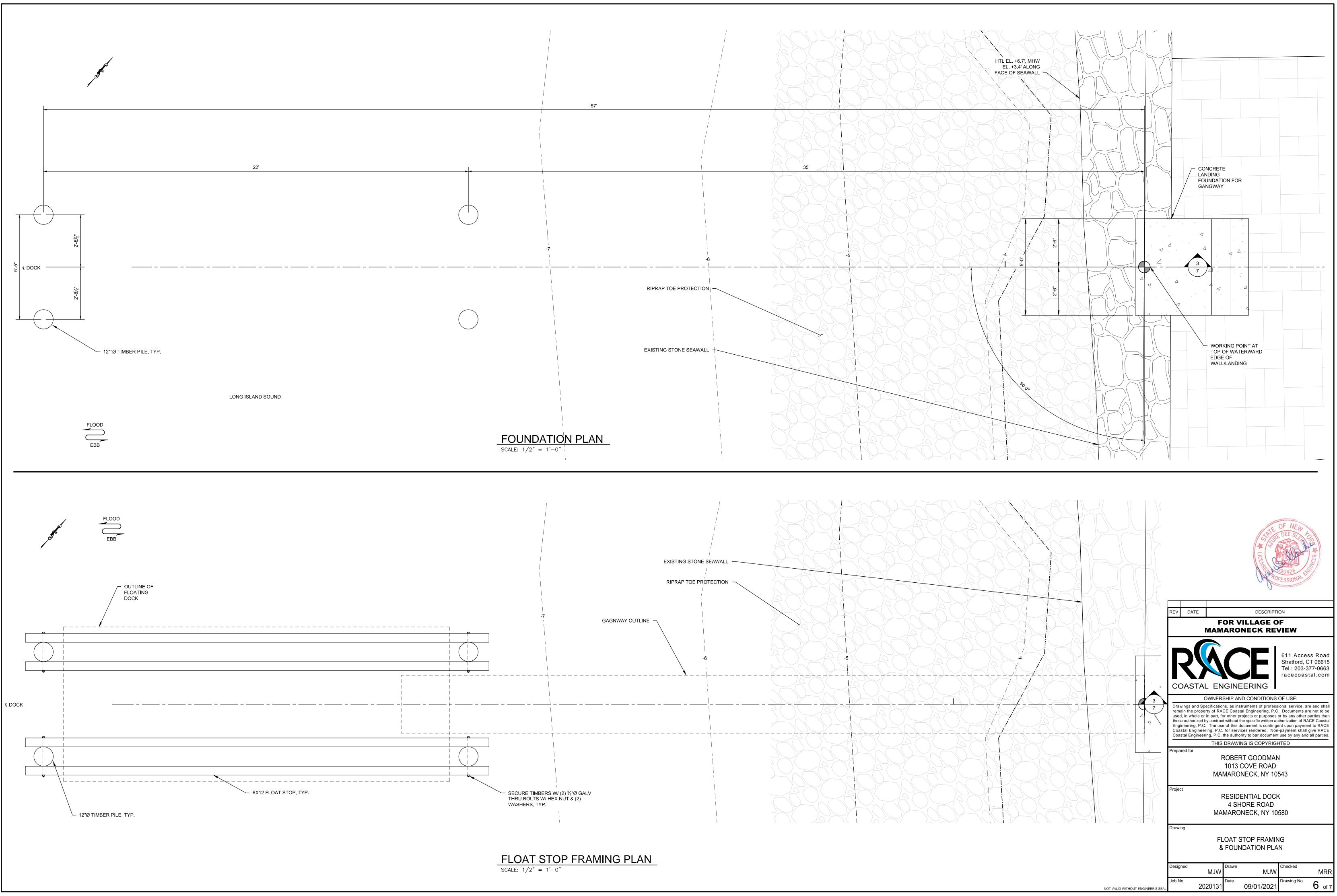
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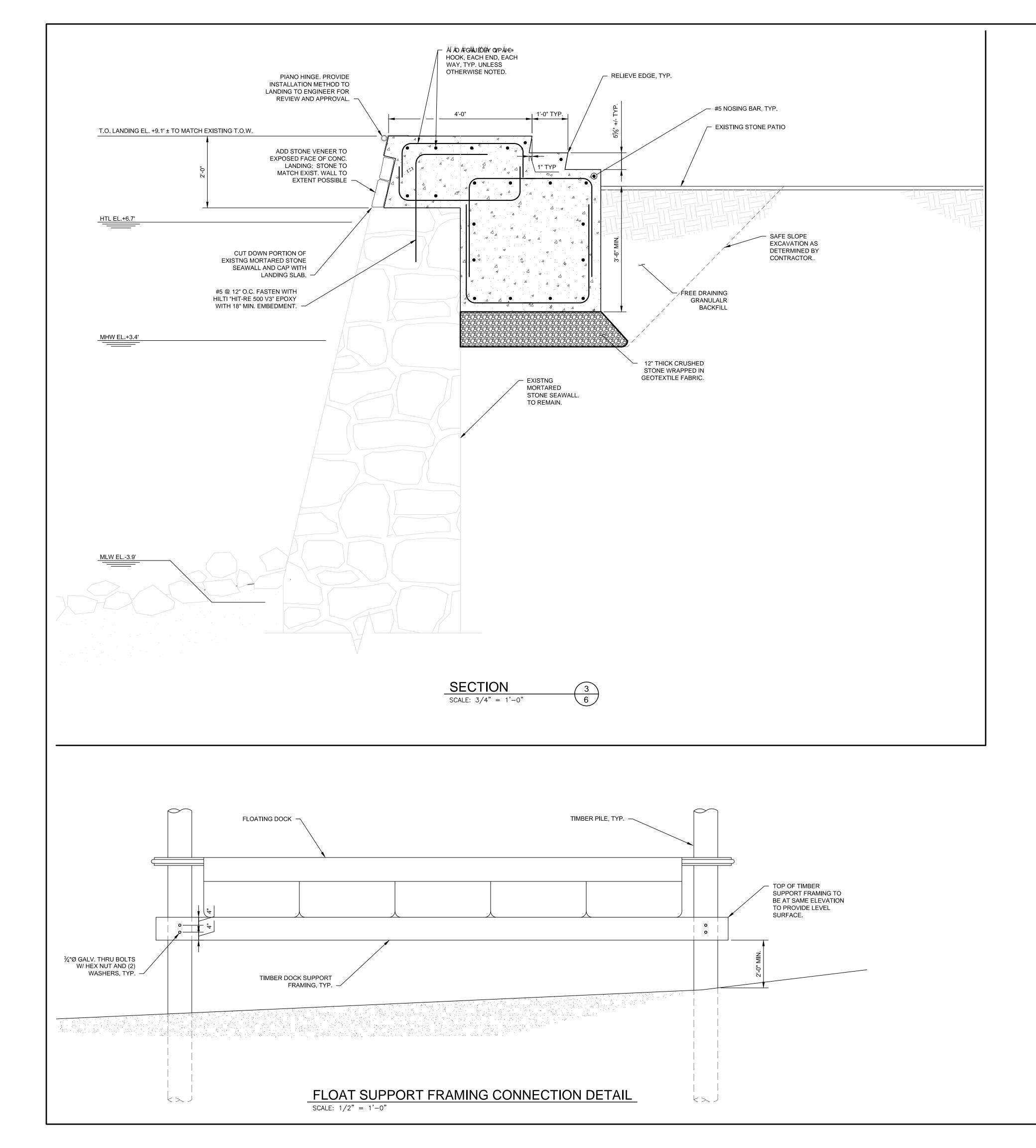
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	CC						Stratford Tel.: 203	ess Road CT 06615 -377-0663 istal.com	
		(OWNER	SHIP AN		TIONS	OF USE:		
	Drawings and Specifications, as instruments of professional service, are and shall remain the property of RACE Coastal Engineering, P.C. Documents are not to be used, in whole or in part, for other projects or purposes or by any other parties than those authorized by contract without the specific written authorization of RACE Coastal Engineering, P.C. The use of this document is contingent upon payment to RACE Coastal Engineering, P.C. for services rendered. Non-payment shall give RACE Coastal Engineering, P.C. the authority to bar document use by any and all parties.								
	_		THIS	DRAWI	NG IS COF	PYRIGH	HTED		
	Prepared for ROBERT GOODMAN 1013 COVE ROAD MAMARONECK, NY 10543								
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The Office of the Westchester County Clerk: This page is part of the instrument; the County Clerk will rely on the information provided on this page for purposes of indexing this instrument. To the best of submitter's knowledge, the information contained on this Recording and Endorsement Cover Page is consistent with the information contained in the attached document.



582763069DED004A

Westchester County Recording & Endorsement Page							
Submitter	Information						
Name: CATIC Title Insurance Company	Phone: 914-418-9847						
Address 1: 660 White Plains Road, Suite 570	Fax: 833-329-2228						
Address 2: City/State/Zip: Tarrtytown NY 10591	Email: jmcspedon@CaticTitle.com Reference for Submitter: 1214 LS						
	nt Details						
	Type: Deed (DED)						
	t Page Count: 5 Total Page Count: 7						
Par							
1st PARTY	2nd PARTY						
1: AMES STEVEN - Individual	1: GOODMAN ROBERT - Individual						
2:	2: LIPMAN JAYNE - Individual						
Street Address: 4 SHORE ROAD	Derty Additional Properties on Continuation page Tax Designation: 155.61-1-6						
City/Town: RYE TOWN	Village: MAMARONECK						
	eferences						
1: 2:	3: 4:						
Supporting	Documents						
1: RP-5217 2: TP-584							
Recording Fees	Mortgage Taxes						
Statutory Recording Fee: \$40.50	Document Date:						
Page Fee: \$30.00	Mortgage Amount:						
Cross-Reference Fee: \$0.00	Basic: \$0.00						
Mortgage Affidavit Filing Fee: \$0.00	Westchester: \$0.00						
RP-5217 Filing Fee: \$125.00	Additional: \$0.00						
TP-584 Filing Fee: \$5.00	MTA: \$0.00						
Total Recording Fees Paid: \$200.50	Special: \$0.00						
Transfer Taxes	Yonkers: \$0.00						
Consideration: \$4,500,000.00	Total Mortgage Tax: \$0.00						
Transfer Tax: \$18,000.00 Mansion Tax: \$45,000,00	Dwelling Type: Exempt:						
Mansion Lax: \$45,000.00 Transfer Tax Number: 5167	Serial #:						
	Becord and Beturn To						
RECORDED IN THE OFFICE OF THE WESTCHESTER COUNTY CLERK	Pick-up at County Clerk's office						
Control Number: 582763069							
Control Number: 582763069 Witness my hand and official seal							
SEAL TurtyCheri	CATIC Title Insurance Company						
the Kyllen	660 White Plains Road, Suite 570						
Timothy C.Idoni	Town MV 10501						
Westchester County Clerk	Tarrtytown, NY 10591 Attn: Robert Picone						

The Office of the Westchester County Clerk: This page is part of the instrument; the County Clerk will rely on the information provided on this page for purposes of indexing this instrument. To the best of submitter's knowledge, the information contained on this Recording and Endorsement Cover Page is consistent with the information contained in the attached document.

582763069DED004A

Westchester County Recording & Endorsement Page

		Document Details			
Control Number: 582763069 Document Type: Deed (DED)					
Package ID: 20	018100300041001004	Document Page Count: 5	Total Page Count: 7		
		Properties Addendum			
4 SHORE ROAD 10580	RYE CITY	152.20 1 33			

4 SHORE ROAD 10580

RYE TOWN

MAMARONECK

155.69 1 3

stewart title

Executor's Deed-Individual or Corporation CONSULT YOUR LAWYER BEFORE SIGNING THIS INSTRUMENT – THIS INSTRUMENT SHOULD BE USED BY LAWYERS ONLY $\Omega^{S} = \Omega^{S} + \Omega^{S}$

THIS INDENTURE, made the 21 day of October, 2018

BETWEEN

Ann Ames, residing at 930 Park Avenue, New York, N.Y. 10028 and Adam Paul Ames, residing at 41 Warren Street, 2nd Floor, New York, N.Y. 10007 and Joseph W. Seidle, residing at 2 Woodstream Drive, Wayne, PA 19087

as executors of the last will and testament of Steven Ames, late of Westchester County, New York, who died on the 12th day of March 2016, party of the first part, and

Robert Goodman and Jayne Lipman, residing at 1013 Cove Road, Mamaroneck, N.Y. 10543, party of the second part,

WITNESSETH, that whereas letters testamentary were issued October 18, 2016 to the party of the first part by the Surrogate's Court, Westchester County, New York, on and by virtue of the power and authority given in and by said last will and testament, and/or by Article 11 of the Estates, Powers and Trusts Law, and in consideration of **Four Million Five Hundred Thousand** (\$4,500,000.00) **Dollars** paid by the party of the second part, does hereby grant and release unto the party of the second part, the distributees or successors and assigns of the party of the second part forever,

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the City of Rye, *County of Westchester, and State of New York with a street address of 4 Shore Road, Rye, N.Y.* 10580.

See Schedule A, attached.

TOGETHER with all right, title and interest, if any, of the party of the first part, in and to any streets and roads abutting the above-described premises to the center lines thereof; TOGETHER with the appurtenances and also all the estate therein, which the party of the first part has or has power to convey or dispose of, whether individually, or by virtue of said will or otherwise; TO HAVE AND TO HOLD the premises herein granted unto the party of the second part, the distributees or successors and assigns of the party of the second part forever.

AND the party of the first part covenants that the party of the first part has not done or suffered anything whereby the said premises have been incumbered in any way whatever, except as aforesaid.

Subject to the trust fund provisions of section thirteen of the Lien Law.

The word "party" shall be construed as if it read "parties" whenever the sense of this indenture so requires.

IN WITNESS WHEREOF, the party of the first part has duly executed this deed the day and year first above written.

IN PRESENCE OF

Grantor(s):

Ann Ames, Executrix

stewart title Adam Paul Ames, Executor

Alle

Joseph W. Seidle, Executor

STATE OF NEW YORK

: ss.:

: ss.:

: ss.:

COUNTY OF NEW YORK

On the <u>//</u>[#] day of October, 2018 before me, the undersigned, personally appeared **Ann Ames**, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted executed the instrument.

Notary Public

STATE OF NEW YORK

COUNTY OF NEW YORK

On the <u>12</u> day of October, 2018 before me, the undersigned, personally appeared **Adam Paul Ames**, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted executed the instrument. DONDRE STEVEN PERRY DONDRE STEVEN PERRY

Notary Public

North cordina STATE OF PENNSYLVANIA

COUNTY OF BELAWARE FORSYTH

NOTARY PUBLIC-STATE OF NEW YORK NOTARY PUBLIC-STATEOF NO. 01PEG368561 Qualified in New York County My Commission Expires 12.18.2021 Qualified in New York County Commission Expires 12/18/2021

On the 26^{44} day of October, 2018 before me, the undersigned, personally appeared **Joseph W. Seidle**, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted executed the instrument.

Vayalice Sullip

MARY ALICE PHILLIPS Notary Public - North Carolina Forsyth County ly Commission Expires

WHARLIES CHARLIES STATE OF NEW YORK Oualified in r WSTON EXPIRE AND EXT

stewart title

Notary Public

EXECUTOR'S DEED Title # CATIC – CAT18-1214-W

Grantor: Ann Ames, Adam Paul Ames & Joseph W. Seidle, Executors TO Grantee: Robert Goodman and Jayne Lipman

ADDRESS: 4 Shore Road, Rye, N.Y. 10580 SECTION: 155.61 BLOCK: 1 LOT: 6 AND SECTION: 152.20 BLOCK: 1 LOT: 33 AND SECTION: 155.69 BLOCK: 1 LOT: 3 COUNTY: Westchester

Record and Return to:

Dana S. Montone, Esq. The Law Office of Dana S. Montone, PLLC 23 Latonia Road Rye Brook, N.Y. 10573

> CATIC Title Insurance Company 660 White Plains Road Suite 570 Tarrytown, NY 10591

Title Number: CAT18-1214-W

SCHEDULE A DESCRIPTION

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon, situate, lying and being in the Village of Mamaroneck, Town of Rye and the City of Rye, County of Westchester and State of New York, known and designated as part of Lot Numbers 4 and 5 in Block A, on a certain map entitled, "Map showing subdivision of Blocks A and B, amended Map of Greenhaven, in the Town of Rye, Westchester County, N. Y." made by Charles A. Hollister, Surveyor, dated January 13, 1925 and filed in the Register's Office of Westchester County June 10, 1925 as Map Number 2844; and bounded and described as follows:

BEGINNING in the center line of a lane or road shown on said map running approximately East and West, where the same is intersected by the dividing line between Lot Numbers 5 and 6. in Block A and which said point of beginning is also 300.25 feet more or less westerly from the westerly side of Brevoort Lane as measured along the center line of said Shore Road;

RUNNING THENCE along the said dividing line between Lot numbers 5 and 6, South 45 degrees 09' 40" west 316.38 feet to the high water mark of Long Island Sound;

RUNNING THENCE along the line of the high water mark of Long Island Sound the following courses and distances; North 29 degrees 42' West 15 feet; North 3 degrees 44' 20"East 23 feet; North 29 degrees 08' East 44.28 feet; North 53 degrees 01' 10" West 11.45 feet; North 00 degrees 45' 40" East 12.8 feet; North 31 degrees 44' East 37.34 feet; North 50 degrees 34' West 5 feet; South 84 degrees 25' 40" West 21.22 feet; North 62 degrees 32' West 33.73 feet; South 87 degrees 08' 50" West 29.74 feet; North 9 degrees 56' West 18.44 feet; North 25 degrees 57' 20" West 26.39 feet; North 86 degrees 04' West 8.60 feet; South 62 degrees 56' West 25.08 feet; North 77 degrees 22' 40" West 37.09 feet;

RUNNING THENCE North 12 degrees 19' West 18.19 feet; North 23 degrees 23' 30" East 55.76 feet; North 34 degrees 03' West 24 feet and North 69 degrees 15' 30" West 10.20 feet to land conveyed by Florence M. Sinclair to Graymar Realty Corporation by deed dated November 24, 1924 and recorded in the Register's Office of Westchester County November 28, 1924, in Liber 2537 Cp. 261;

RUNNING THENCE along the premises so conveyed, North 39 degrees 51' 40" East 136.97 feet to the center line of the road or lane first mentioned;

RUNNING THENCE along the same the following courses and distances; in an easterly direction on a curve to the left with a radius of 629.53 feet a distance of 134.61 feet; THENCE continuing in an easterly direction on a curve to the left with a radius of 247.50 feet a distance of 102.66 feet; THENCE still in an easterly direction on a curve to the right with a radius of 48.47 feet a distance of 44.44 feet; THENCE South 35 degrees 54' East 50.73 feet to the point or place of BEGINNING.

CONTINUED ON NEXT PAGE

Title Number: CAT18-1214-W

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TOGETHER with all right, title and interest of, in and to the water lot adjoining Lot 5 as shown on the above mentioned map, bounded and described as follows:

BEGINNING at a point on the high water line of Long Island Sound where the same is intersected by the dividing line between Lot Numbers 5 and 6, Block A, as shown on said map;

RUNNING THENCE under the waters of Long Island Sound South 30 degrees 35' 40" West 402.73 feet to a corner; RUNNING THENCE North 37 degrees 02' West 168 feet to another corner;

RUNNING THENCE North 37 degrees 47' 50" East 449.58 feet to a point on the high water line of Long Island Sound where the sane is intersected by the dividing line between Lot Numbers 4 and 5. Block A, as shown on said-map;

RUNNING THENCE along the high water line of Long Island Sound the following courses and distances; North 87 degrees 08' 50" East 2 feet; South 62 degrees 32' East 33.73 feet; South 00 degrees 45' 40" West 12.8 feet; South 53 degrees 01' 10" East 11.45 feet; South 29 degrees 08' West 44.28 feet; South 3 degrees 44' 20" West 23 feet; South 29 degrees 42' East 15 feet to the point and place of BEGINNING.

TOGETHER with all right, title and interest of, in and to the water lot adjoining Lot 4 on the above mentioned map conveyed by Richard Riker Son Corporation and others to the Graymar Realty Corporation and conveyed by said Graymar Realty Corporation to Florence M. Sinclair by deed recorded in the Register's Office of Westchester County in Liber 2506 Cp. 108.

FOR INFORMATION PURPOSES ONLY: 4 Shore Road, Village of Mamaroneck, Town of Rye. 155.61-1-6. Greenhouse Circle, Village of Mamaroneck, Town of Rye 155.69-1-3. Shore Road, City of Rye, 152.20-1-33



4 SHORE ROAD PROJECT EXTENTS SCALE: 1" = 60'-0"

<u>NOTE:</u>

SOUNDING ARE TAKEN FROM THE NOAA NATIONAL OCEAN SCIENCE COAST SURVEY OF THE NORTH SHORE OF LONG ISLAND SOUND - GREENWICH POINT TO NEW ROCHELLE (NO. 12367). SOUNDINGS ARE IN FEET AT MEAN LOWER LOW WATER.

DESCRIPTION FOR CONSULTATION

NOT FOR CONSTRUCTION



611 Access Road Stratford, CT 06615 Tel.: 203-377-0663 racecoastal.com

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OWNERSHIP AND CONDITIONS OF USE:

ROBERT GOODMAN 1013 COVE ROAD MAMARONECK, NY 10543

RESIDENTIAL DOCK 4 SHORE ROAD MAMARONECK, NY 10580

PROPOSED PROJECT EXTENTS

	Designed		Drawn		Checked	
	-	HNS		HNS		ADS
	Job No.		Date		Drawing No.	
NOT VALID WITHOUT ENGINEER'S SEAL		2020131		09/08/2021		1 of 1