# VICINITY MAP/NO SCALE

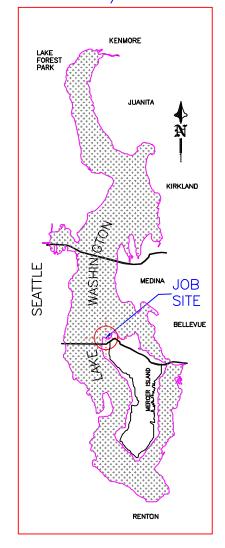


## LEGAL DESCRIPTION

47.592649 (47° 35' 33.5364" N) SE-02-24-04 LAT: SECTION: TAXLOT #: 243970-0110 LONG: -122.251115 (122° 15' 4.014" W)

FABENS POINT WATERFRONT TRS E 1/2 OF 18 ALL 19 TGW POR VAC ELIZABETH WAY LY BET C/L OF TR 18 & E LN OF TR 19 PROD SLY & W 1/2 VAC MERCER ST PROD NLY FR S LN OF TR 20 TO OUTER BDRY OF SH LDS & TGW SH LDS ADJ TGW POR OF TR 20 ELY OF LN BAAP ON S LN SD TR 20 N 89-55-45 W 92.06 FT FR SE COR THOF TH N 00-01-54 E PLT E LN SD TR 20 A DIST OF 268.52 FT TH S 89-55-45 E 2.06 FT TH N 00-01-54 E 44.50 FT TO N LN SD TR 20 LESS S 100 FT SD TR 20 TGW POR OF SD S 100 OF TR 20 & LESS POR SD VAC 62ND SE AS BOTH ARE SHOWN ON PLAT OF MI LLA 83-04-12 REC NO 8306299004 ALL OF SD ABOVE DESC BEING POR OF MI LLA 83-04-12 REC NO 8306299004

# AREA MAP/NO SCALE



REVISED 01/03/2024

PER MI PLANNING REVIEW COMMENTS DATED 01/03/2024.

PROJECT DESIGNED BY:

Waterfront Construction Inc.

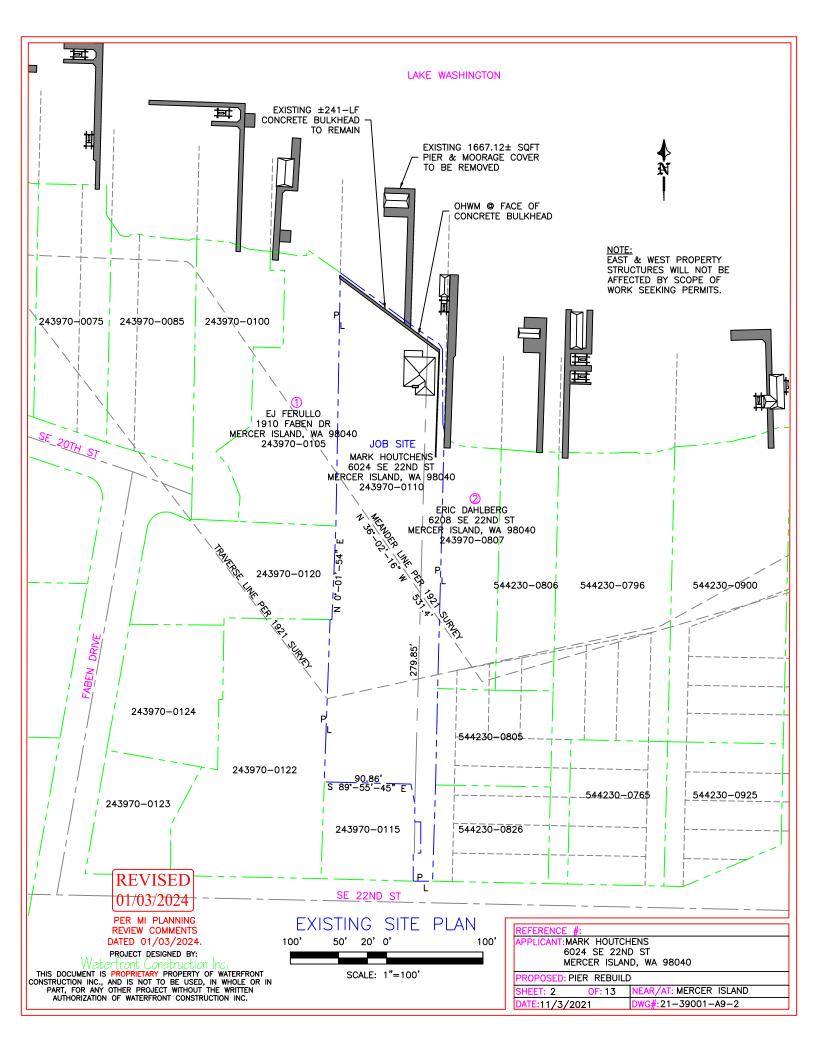
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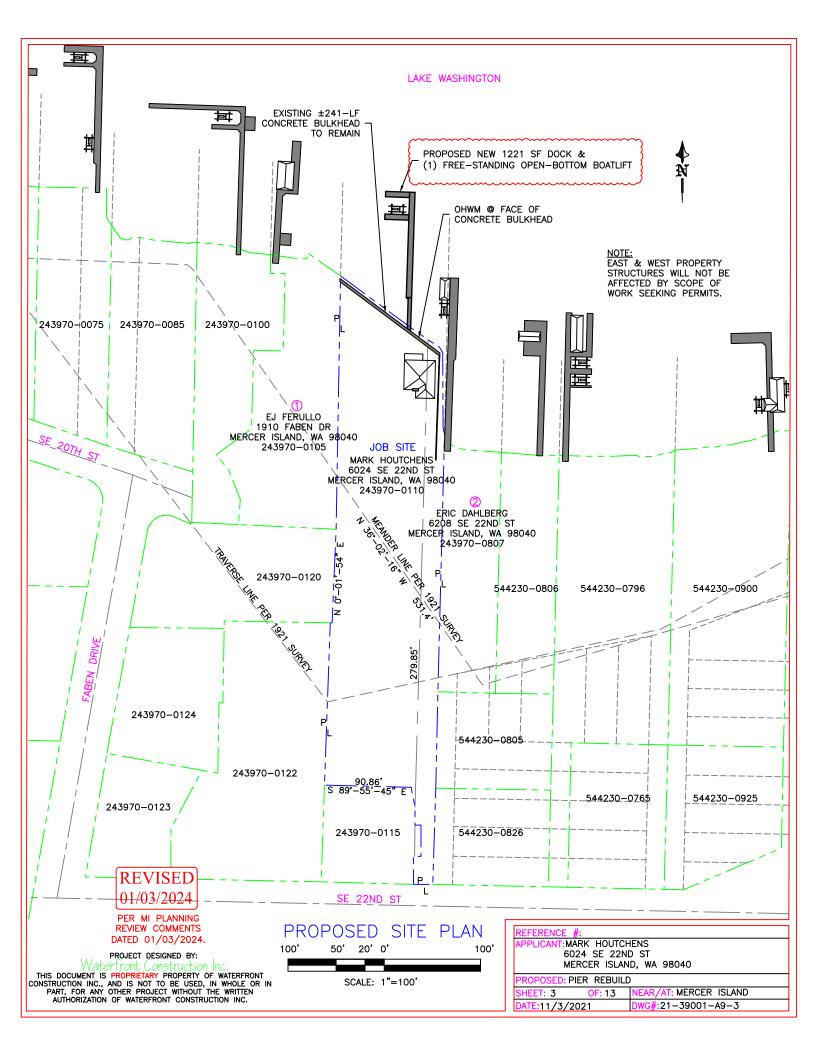
EJ FERULLO 1910 FABEN DR MERCER ISLAND, WA 98040

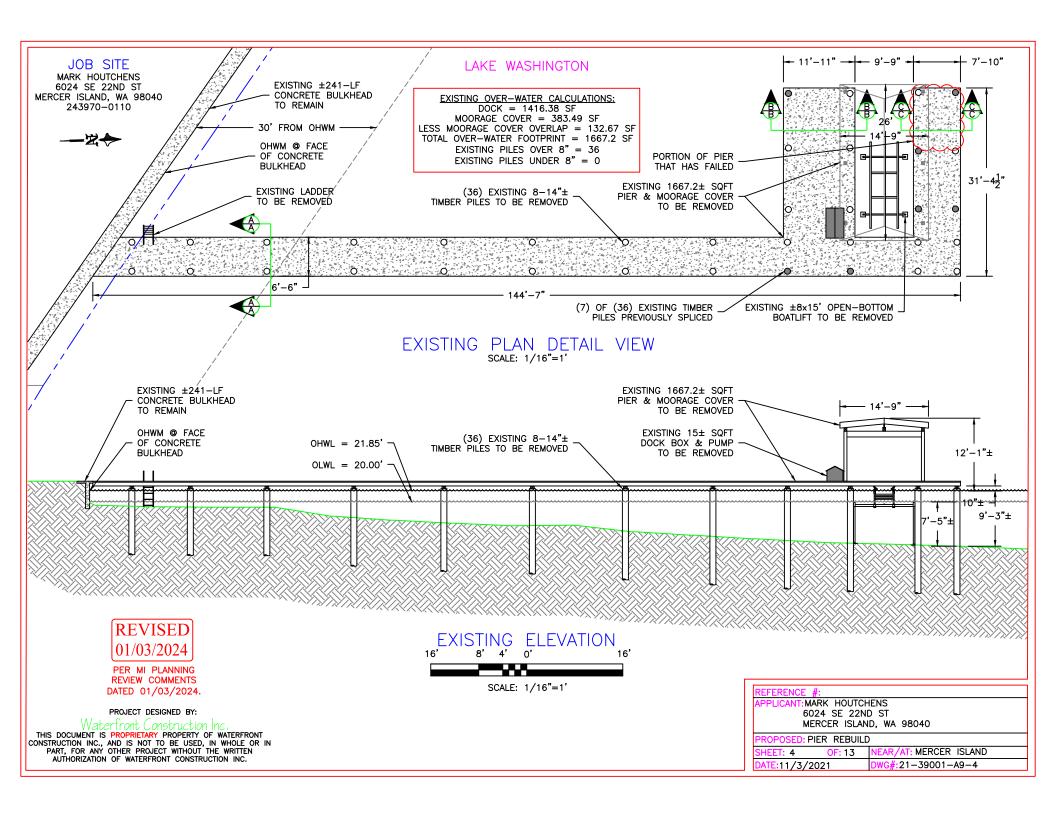
ERIC DAHLBERG 6208 SE 22ND ST MERCER ISLAND, WA 98040

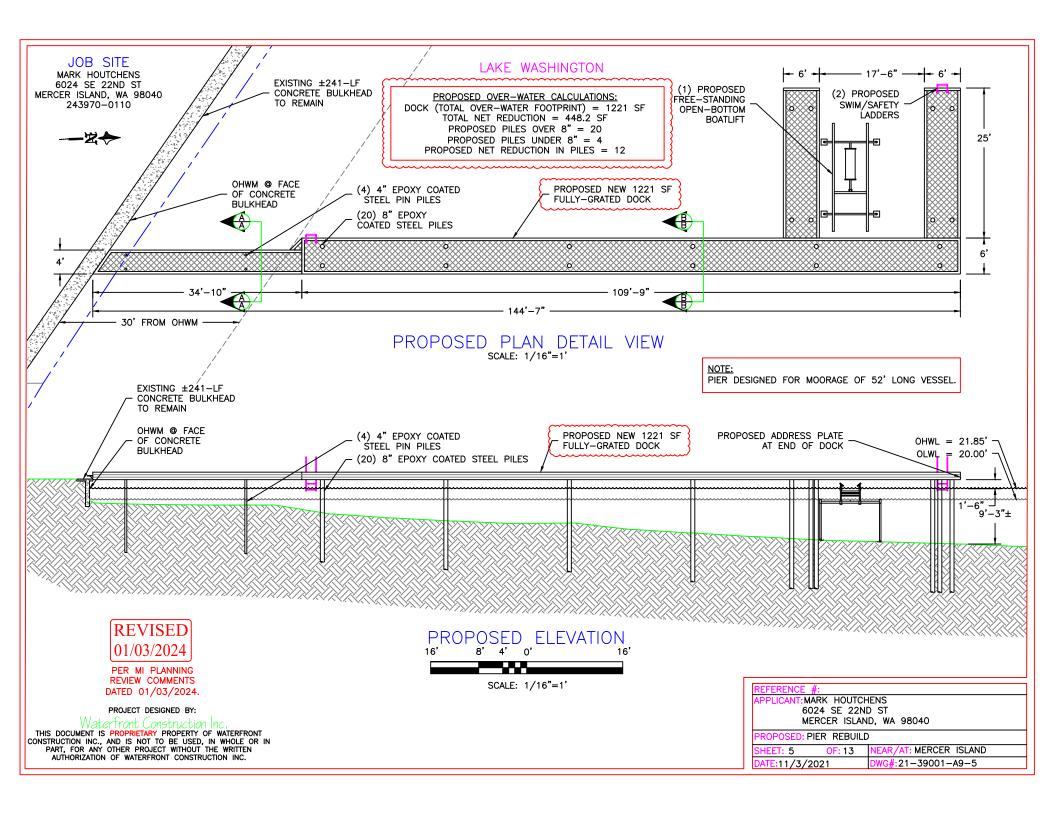
PROPOSED: PIER REBUILD PURPOSE: REPLACE FAILED PIER DATUM: C.O.E. MLLW=0.0' 21-39001-A9-1

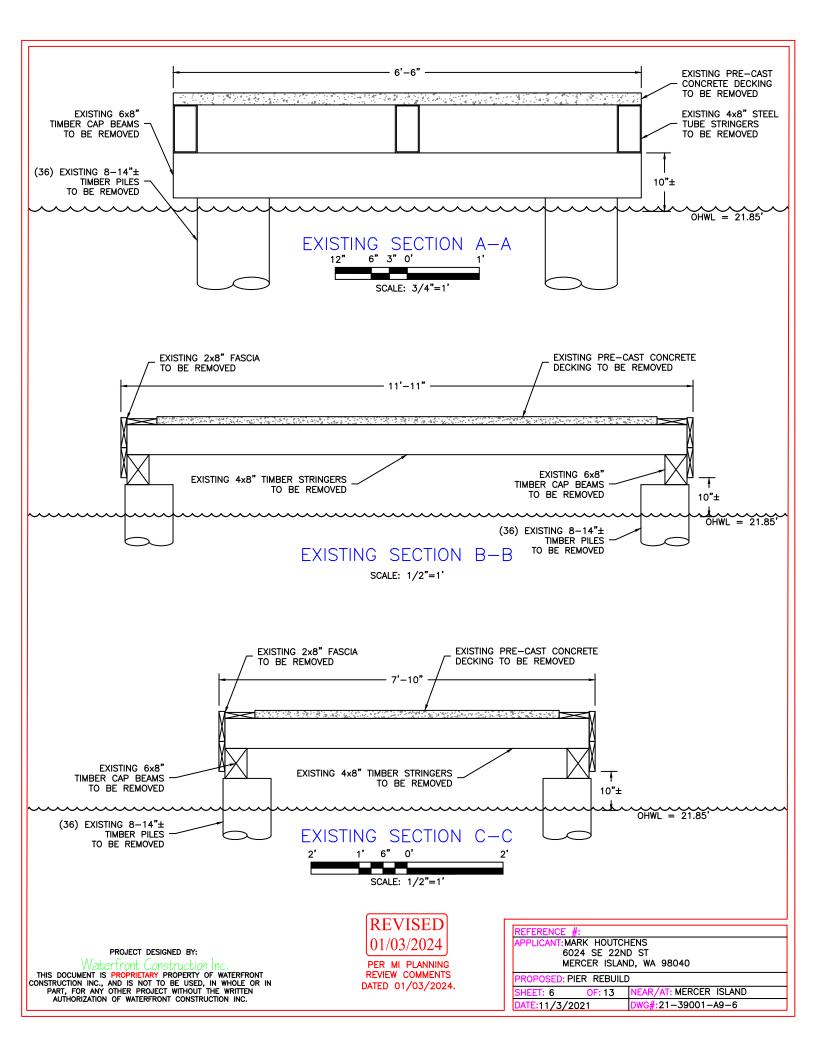
MARK HOUTCHENS 6024 SE 22ND ST SITE ADD. MERCER ISLAND, WA 98040 6024 SE 22ND ST MAIL ADD. MERCER ISLAND, WA 98040 PAGE: 1 OF: 13 DATE: 11/3/2021

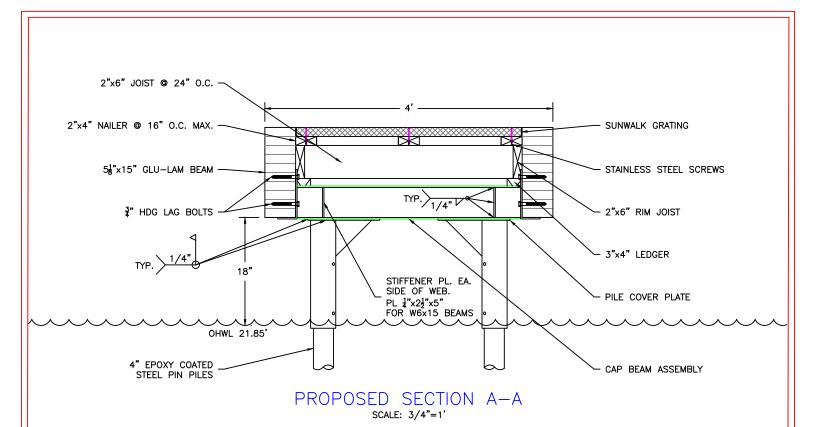


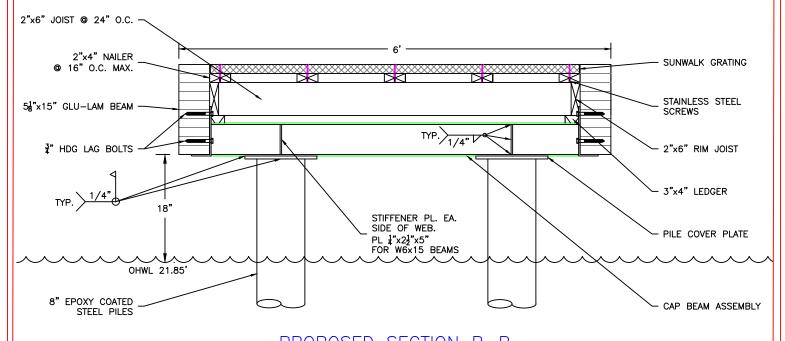












# PROPOSED SECTION B-B 12" 6" 3" 0' 1' SCALE: 3/4"=1'

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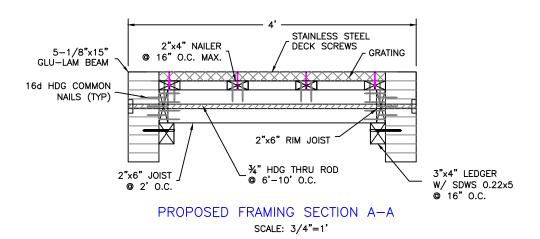
PPLICANT:MARK HOUTCHENS 6024 SE 22ND ST MERCER ISLAND, WA 98040

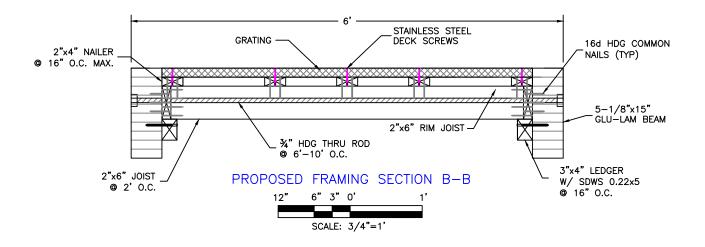
PROPOSED: PIER REBUILD

SHEET: 7 OF: 13 NEAR/AT: MERCER ISLAND DATE: 11/3/2021 DWG#: 21-39001-A9-7

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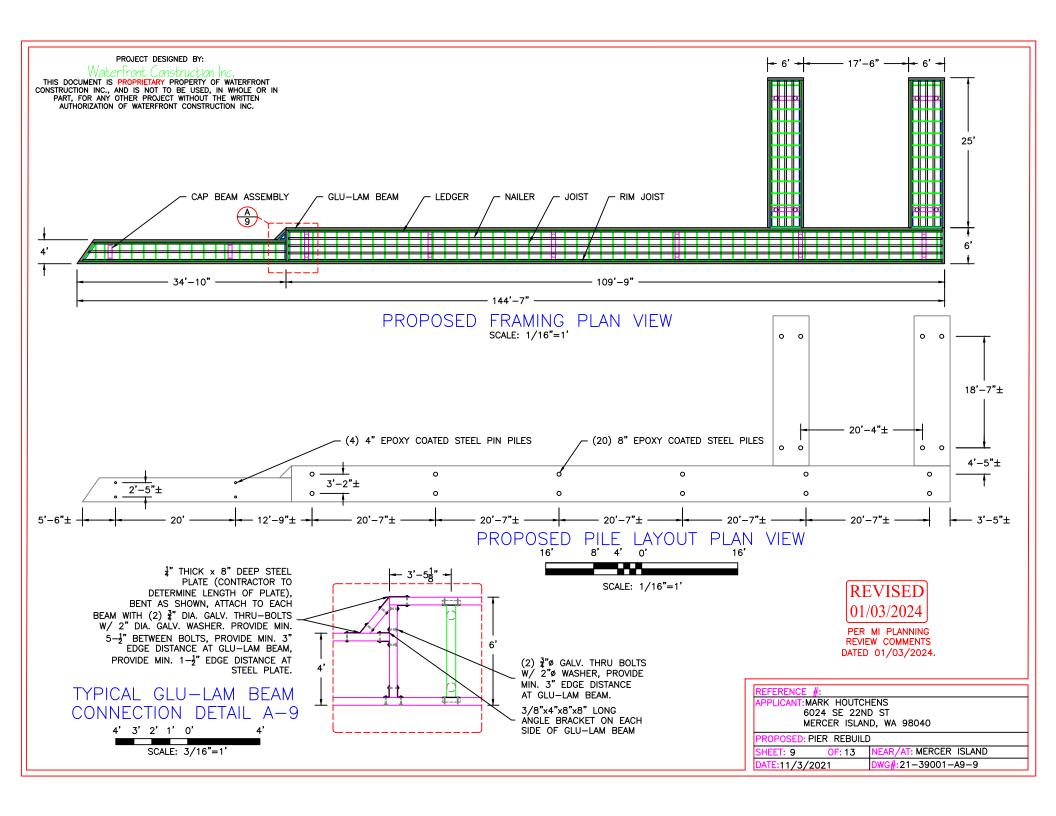
PER MI PLANNING REVIEW COMMENTS DATED 01/03/2024. REFERENCE #

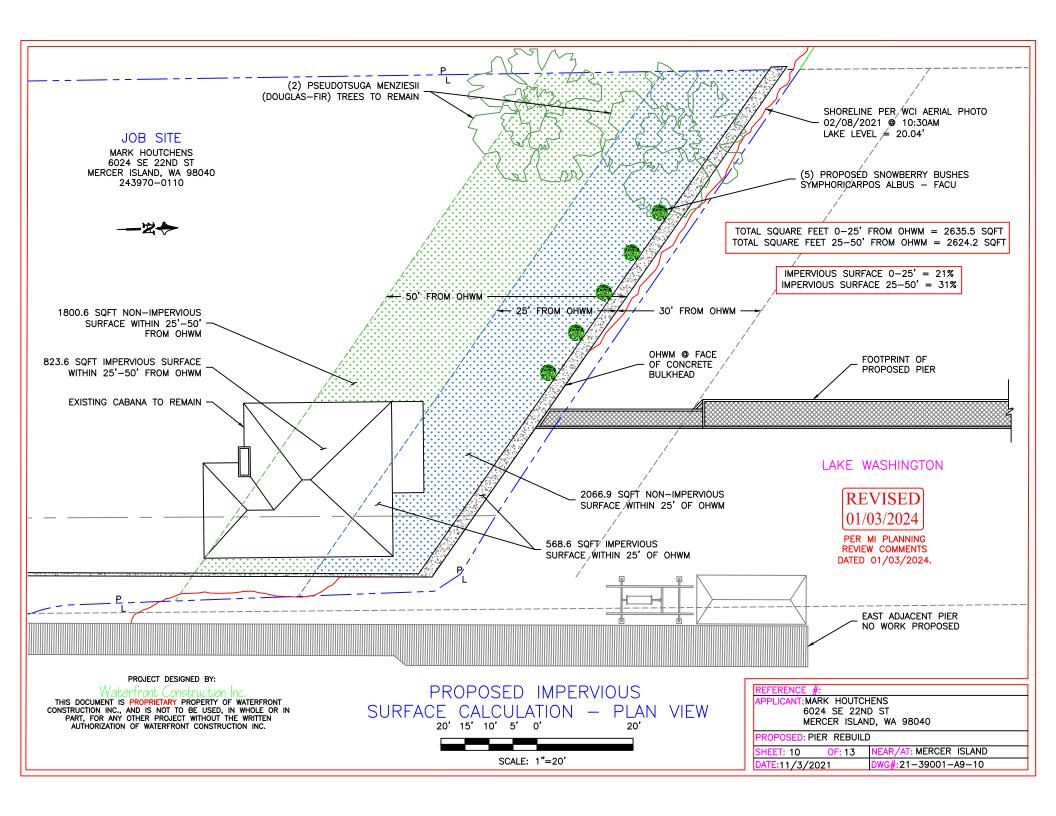
PPLICANT: MARK HOUTCHENS 6024 SE 22ND ST

6024 SE 22ND ST MERCER ISLAND, WA 98040

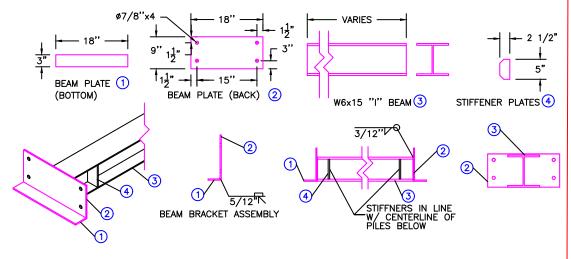
PROPOSED: PIER REBUILD

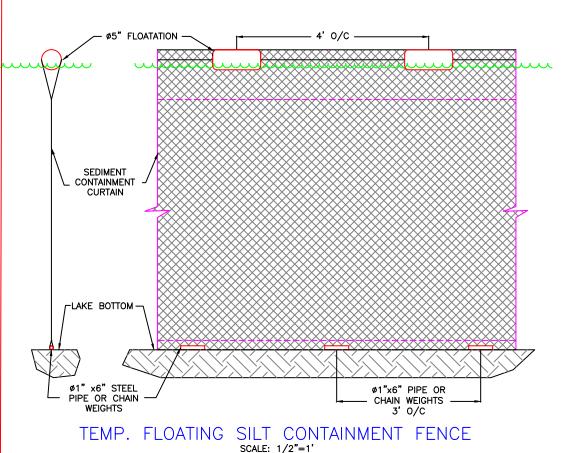
SHEET: 8 OF: 13 NEAR/AT: MERCER ISLAND
DATE: 11/3/2021 DWG#: 21-39001-A9-8











2'	1' 6" 0'	2'	
SCALE: 1/2"=1'			

STEEL CAP ASSEMBLY

PART #	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
4	STIFFENER PLATES	5"x2-1/2"x1/4" STEEL PLATE
3	W6x15 "I" BEAM	6" 15 LB PER FOOT I-BEAM
2	BACK BEAM PLATE	18"x9"x5/12" STEEL PLATE
1	BOTTOM BEAM PLATE	18"x3"x5/12" STEEL PLATE

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REVISED 01/03/2024

PER MI PLANNING REVIEW COMMENTS DATED 01/03/2024.

#### REFERENCE ;

PPLICANT:MÄRK HOUTCHENS 6024 SE 22ND ST MERCER ISLAND, WA 98040

ROPOSED: PIER REBUILD

SHEET: 11 OF: 13 NEAR/AT: MERCER ISLAND
DATE:11/3/2021 DWG#: 21-39001-A9-11

### STRUCTURAL NOTES

#### CODE:

THE INTERNATIONAL BUILDING CODE (IBC) 2018 EDITION AND THE 2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC), WITH THE STATE OF WASHINGTON AMENDMENTS.

#### LIVE LOADS:

RESIDENTIAL PIER (NEW) 60 PSF

#### LATERAL LOADS (BASED ON ASCE 7):

WIND DESIGN DATA:

 WIND SPEED
 97 MPH

 IMPORTANCE FACTOR
 1

 RISK CATEGORY
 II

 EXPOSURE
 C

 TOPOGRAPHICAL FACTOR
 1

#### PILE INSTALLATION:

THE PILES SHALL BE DRIVEN TO REFUSAL USING A VIBRATOR OR DIESEL HAMMER. OUR DESIGN ASSUMES THAT THERE IS A LAYER OF SOFT SOIL BELOW THE MUDLINE THAT IS UP TO 20 FEET DEEP THAT IS UNDERLAIN BY DENSE SOIL THAT IS SUFFICIENT FOR BEARING. THE DEPTH OF THIS SOFT SOIL LAYER SHOULD BE MONITORED AND RECORDED TO CONFIRM THAT IT IS NOT MORE THAN 20 FEET THICK. NOTIFY ENGINEER IF THE SOFT SOIL LAYER IS MORE THAN EVEN FEET INTO THE DENSE BEARING SOIL. THE DIEDES HALL BE DRIVEN A MINIMUM OF 5 FEET INTO THE DENSE BEARING SOIL. THE DEPTH OF EMBEDMENT INTO THE DENSE BEARING SOIL SHOULD BE MONITORED AND RECORDED TO CONFIRM THAT THE MINIMUM EMBEDMENT INTO THE DENSE BEARING SOIL IS NOT REACHED, THEN OVERDRIVING OF THE PILES WILL BE NECESSARY.

#### STEEL PILING

BEFORE WORK BEGINS, LOCATE ALL UNDERGROUND UTILITIES BY CONTACTING "CALL BEFORE YOU DIG" AT 1-800-424-5555 OR 811. HOWEVER, THIS SERVICE DOES NOT HAVE A COMPLETE DATABASE OF ALL OBSTRUCTIONS, THEREFORE OTHER LOCATING SERVICES MAY ALSO BE NECESSARY.

4" PILING SHALL BE X-STRONG ASTM A53, GRADE B Fy = 35,000 PSI.

8" PILING SHALL BE X-STRONG ASTM A252, GRADE "3" Fy = 45,000 PSI.

CORROSION PROTECTION FOR PILES TO BE DETERMINED BY CONTRACTOR.

#### STRUCTURAL & MISCELLANEOUS STEEL:

WIDE-FLANGE BEAMS ASTM A992 Fy = 50,000 PSI. CHANNELS, ANGLES, AND PLATES ASTM A36 Fy = 36,000 PSI. PIPE COLUMNS ASTM A53 GRADE "B" Fy = 35,000 PSI. STEEL TUBES ASTM A500, GRADE "C" Fy = 50,000 PSI. ALL FABRICATION & ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AISC "STEEL CONSTRUCTION MANUAL."

ALL WELDS SHALL BE 3/16" MINIMUM CONTINUOUS FILLET WELDS USING AWS D1.1 CLASS E70 ELECTRODES UNLESS NOTED OTHERWISE. ALL WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED BY WABO.

ALL STEEL SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123. REPAIR ALL SCRAPES, DINGS, WELDS, ETC., IN ACCORDANCE WITH ASTM A780.

#### STEEL BOLTS:

ALL BOLTS AND THREADED RODS SHALL BE ASTM A307 HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153-CLASS C UNLESS NOTED OTHERWISE. GALVANIZED BOLTS SHOULD BE INSTALLED IN STANDARD SIZE HOLES UNLESS NOTED OTHERWISE. OVERSIZED HOLES ARE PERMITTED FOR ANCHOR BOLTS IN COLUMN BASE PLATES.

ALL BOLTS NOT SPECIFIED AS SLIP CRITICAL ARE TO BE ASSEMBLED "SNUG TIGHT" MEANING FULL EFFORT USING A STANDARD HAND-HELD WRENCH OR A FEW IMPACTS OF AN IMPACT WRENCH AFTER FINGER TIGHTENING.

#### SCREWS INSTALLED IN WOOD

SCREWS FOR INSTALLATION IN WOOD SHALL BE MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, IN ACCORDANCE WITH ICC-ES REPORT ESR-2236 AND IAPMO UES REPORT #192. THE SCREW DIAMETERS AND LENGTHS ARE AS FOLLOWS:

SDWS22 (0.22" DIAMETER, LENGTHS: 3" TO 10")

SDWS22 SCREWS HAVE PROPRIETARY CORROSION-RESISTANT COATINGS EQUIVALENT TO ASTM A153-CLASS D AND ARE INTENDED TO BE USED WHERE EXPOSED TO WEATHER OR IN CONTACT WITH MOST PRESSURE TREATED WOOD. EQUIVALENT SCREWS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL LOAD CAPACITIES AND CORROSION RESISTANCE.

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REVISED 01/03/2024

PER MI PLANNING REVIEW COMMENTS DATED 01/03/2024. REFERENCE #

APPLICANT:MÄRK HOUTCHENS 6024 SE 22ND ST MERCER ISLAND, WA 98040

PROPOSED: PIER REBUILD

HEET: 12 OF: 13 NEAR/AT: MERCER ISLAND ATE:11/3/2021 DWG#:21-39001-A9-12

# STRUCTURAL NOTES, CONTINUED

#### STRUCTURAL LUMBER:

ALL LUMBER SHALL BE GRADED IN ACCORDANCE WITH CURRENT WWPA STANDARD GRADING RULES FOR WESTERN LUMBER. USE THE FOLLOWING SPECIES AND MINIMUM GRADE:

JOISTS, LEDGERS, AND NAILERS D.F.-L #1 Fb=1,000 PSI

#### GLUED LAMINATED LUMBER:

DOUGLAS FIR-LARCH GRADE 24F-V4 (Fb=2400 PSI) FOR SINGLE SPAN BEAMS. ALL GLULAM MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AITC A190.1 AND BE STAMPED WITH AN AITC QUALITY MARK OR AN APA-EWS TRADEMARK. ADHESIVES USED IN THE GLULAM MANUFACTURING PROCESS SHALL CONFORM TO AITC 405 FOR WET USE ADHESIVES. GLULAM MEMBERS SHALL BE MANUFACTURED FROM DOUGLAS FIR LAMINATING LUMBER. ALL BEAMS SHALL HAVE ZERO CAMBER UNLESS NOTED OTHERWISE. MEMBERS NOT EXPOSED TO VIEW IN THE COMPLETED WORK SHALL BE INDUSTRIAL APPEARANCE GRADE. MEMBERS SEXPOSED TO VIEW IN THE COMPLETED WORK SHALL BE ARCHITECTURAL APPEARANCE GRADE.

#### WOOD FOR OVER-WATER AND IN-WATER:

ALL WOOD PARTIALLY OR FULLY SUBMERGED IN WATER SHALL BE TREATED WITH AMMONIACAL COPPER ZINC ARSENATE (ACZA), EXCEPT WHEN WOOD IS IN STATE-OWNED AQUATIC LANDS (SOAL) MANAGED BY THE DEPARTMENT OF NATURAL RESOURCES (DNR) WHERE TREATMENT TO WOOD IN WATER/IN SPLASH ZONE IS PROHIBITED. ALL WOOD INSTALLED ABOVE WATER (WHERE CLEARLY OUT OF THE SPLASH ZONE) SHALL BE TREATED WITH AMMONIACAL COPPER ZINC ARSENATE (ACZA). WOOD TREATED WITH PENTACHLOROPHENOL, CREOSOTE, CHROMATE COPPER ARSENATE (CCA), OR COMPARABLY TOXIC COMPOUNDS IS PROHIBITED FOR PIERS, DOCKS, AND PILING.

WOOD SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARD U1. USE THE FOLLOWING MINIMUM AWPA USE CATEGORIES:

WOOD OVER WATER: UC4B WOOD IN WATER: UC4C

TREAT CUT ENDS OF AND HOLES IN TREATED WOOD WITH SAFECOAT'S DYNOSEAL OR SEAL-IT-GREEN XTREME PLANT BASED STAIN.

#### MISCELLANEOUS

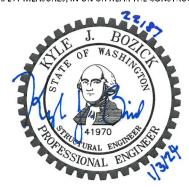
CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD. REPETITIVE FEATURES MAY BE DRAWN OR CALLED OUT ONCE, BUT SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND INDUSTRY STANDARDS. PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS AND STIFFENINGS HAVE BEEN INSTALLED.

#### SAFETY

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION, TEMPORARY BRACING, SHORING, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES IN CONNECTION WITH THE WORK

THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITION ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

THE REQUIRED AND/OR IMPLIED DUTY OF THE ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF CONTRACTOR'S PERFORMANCE DOES NOT, AND IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN ON OR NEAR THE CONSTRUCTION SITE.



THE ENGINEERING SEAL ON THESE DRAWINGS REPRESENTS THE FOLLOWING LIMITED SCOPE OF STRUCTURAL ENGINEERING DESIGN:

- THE PIER'S FRAMING MEMBERS; GLUE-LAMINATED BEAMS AND JOIST.
- PILES FOR LATERAL LOADS DUE TO ANTICIPATED MOORAGE OF 52' LONG VESSEL.

DESIGN IS IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE WITH WASHINGTON STATE AMENDMENTS. OUR SCOPE OF WORK DOES NOT INCLUDE THE DESIGN OF THE CONNECTIONS, GRATING, BULKHEAD, UPLAND STRUCTURES, ETC.

THE SITE INFORMATION, DIMENSIONS, AND PLAN LAYOUT HAVE BEEN PROVIDED TO US BY WATERFRONT CONSTRUCTION, INC.

PACIFIC ENGINEERING JOB NUMBER: 22187.00

REVISED 01/03/2024

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REFERENCE #:

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PROPOSED: PIER REBUILD

HEET: 13 OF: 13 NEAR/AT:

DWG#:21-39001-A9-13