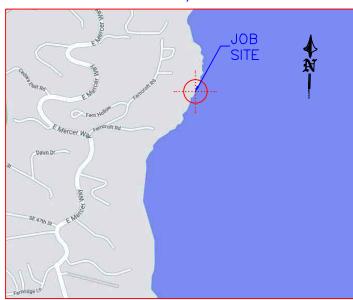
VICINITY MAP/NO SCALE



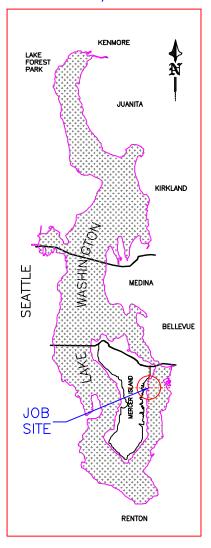
LEGAL DESCRIPTION

SECTION: SE-18-24-05 LAT: TAXLOT #: 004610-0453 LONG

LAT: 47.565560 (47° 33' 56.016" N) LONG: -122.208440 (122° 12' 30.384" W)

ADAMS LAKE WASHINGTON TRS POR OF N 22.12 FT OF 6 & OF S 17.88 FT OF 5 E OF LN RNNG N 00 DEG 43 MIN 30 SEC W FR PT ON S LN SD POR OF 6 314.41 FT E OF C/L OF PRIVATE RD & SH LDS ADJ & POR OF S 20 FT OF N 42.12 FT OF 6 E OF LN RNNG S 00 DEG 43 MIN 30 SEC E FR PT ON N LN SD S 20 FT 285.41 FT E OF C/L OF PRIVATE RD SH LDS ADJ

AREA MAP/NO SCALE



REVISED 09/08/2023

PER STRUCTURAL ENGINEERING BY PACIFIC ENGINEERING TECHNOLOGIES, INC.

PROJECT DESIGNED BY:

Waterfront Construction Inc.
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CONSTRUCTION INC., AND IS NOT TO BE USED, IN WHOLE OR IN
PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN
AUTHORIZATION OF WATERFRONT CONSTRUCTION INC.

ADJACENT OWNERS:

- 1 ERIKA ONEIL 4452 FERNCROFT ROAD MERCER ISLAND, WA 98040
- 2 LAWRENCE HILE 4508 FERNCROFT ROAD MERCER ISLAND, WA 98040

APPLICATION#

PROPOSED: PIER REPAIR

PURPOSE; RESTORE STRUCTURAL INTEGRITY

DATUM: C.O.E. MLLW=0.0'

DWG#: 21-32061-A6-1

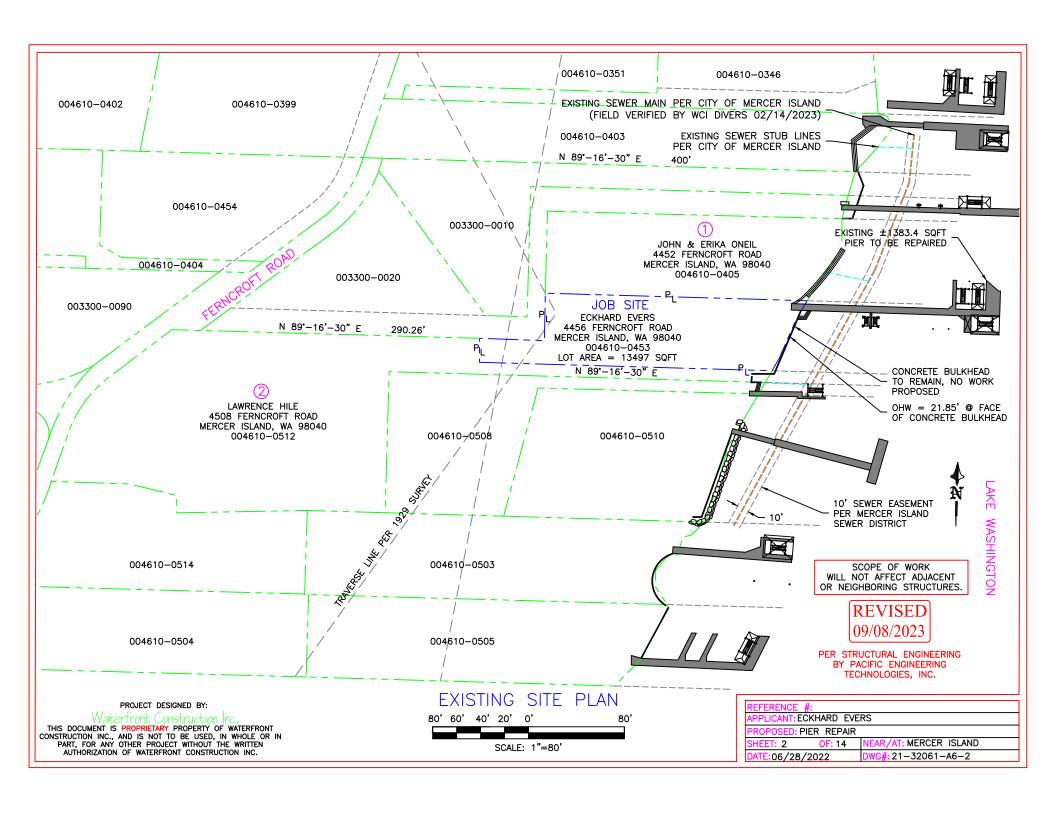
APPLICANT: ECKHARD EVERS

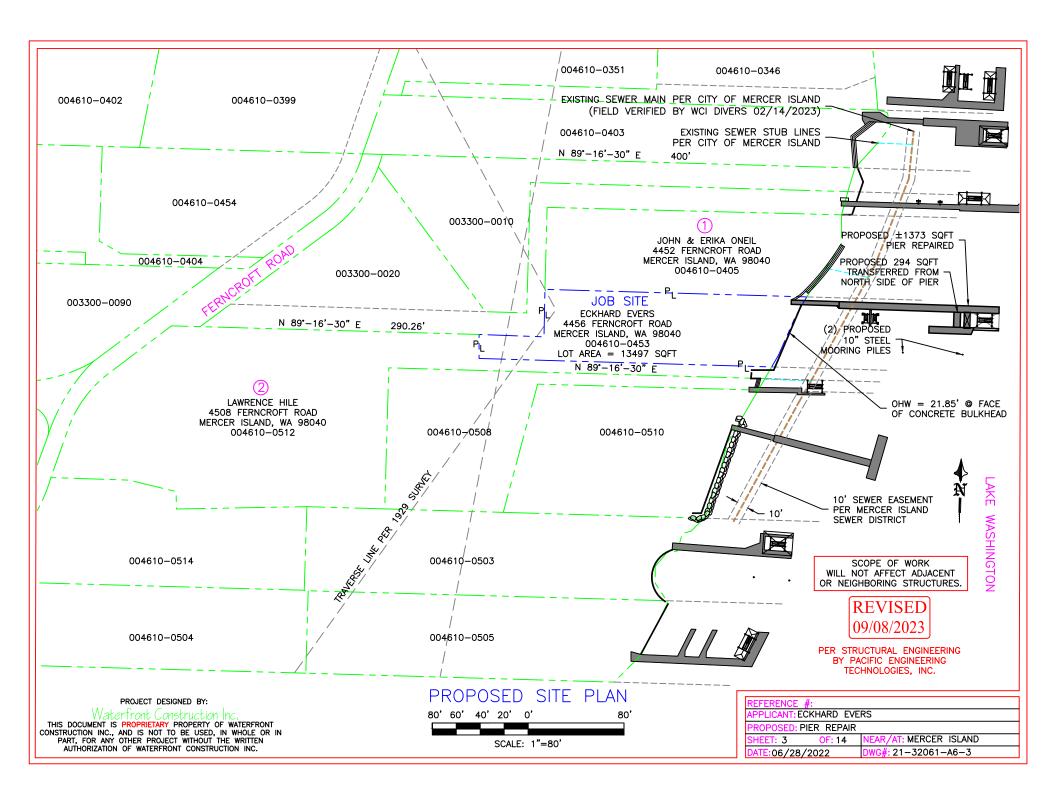
SITE ADD. 4456 FERNCROFT ROAD

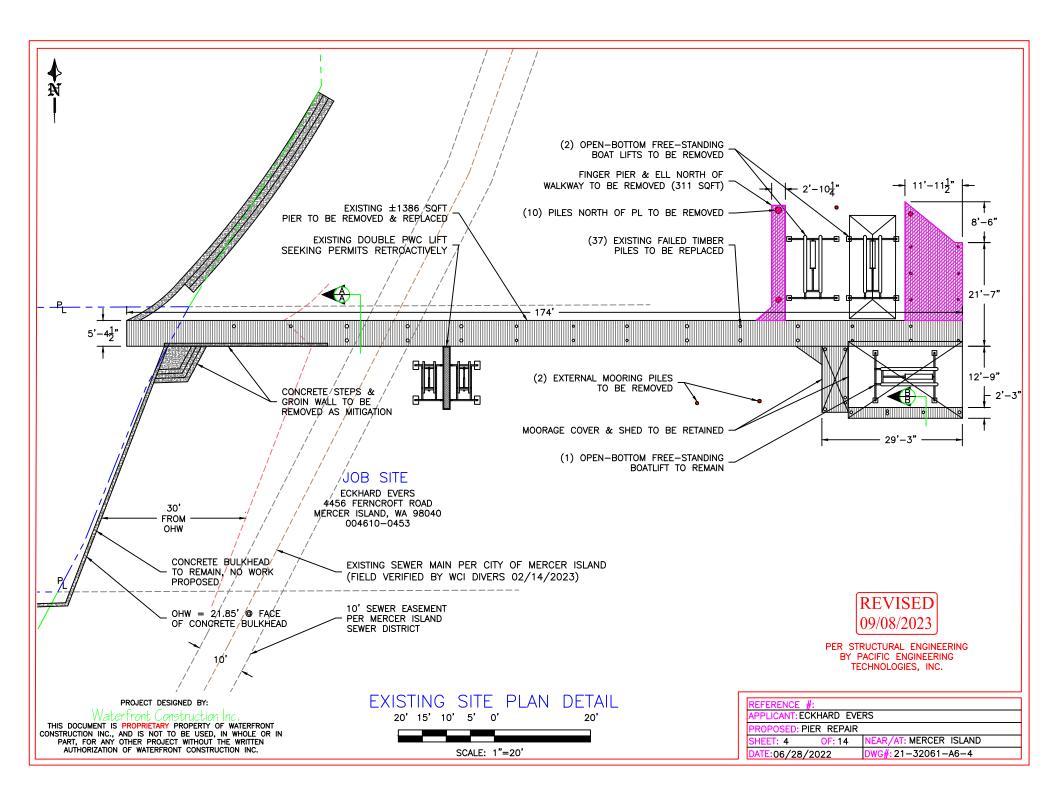
MERCER ISLAND, WA 98040

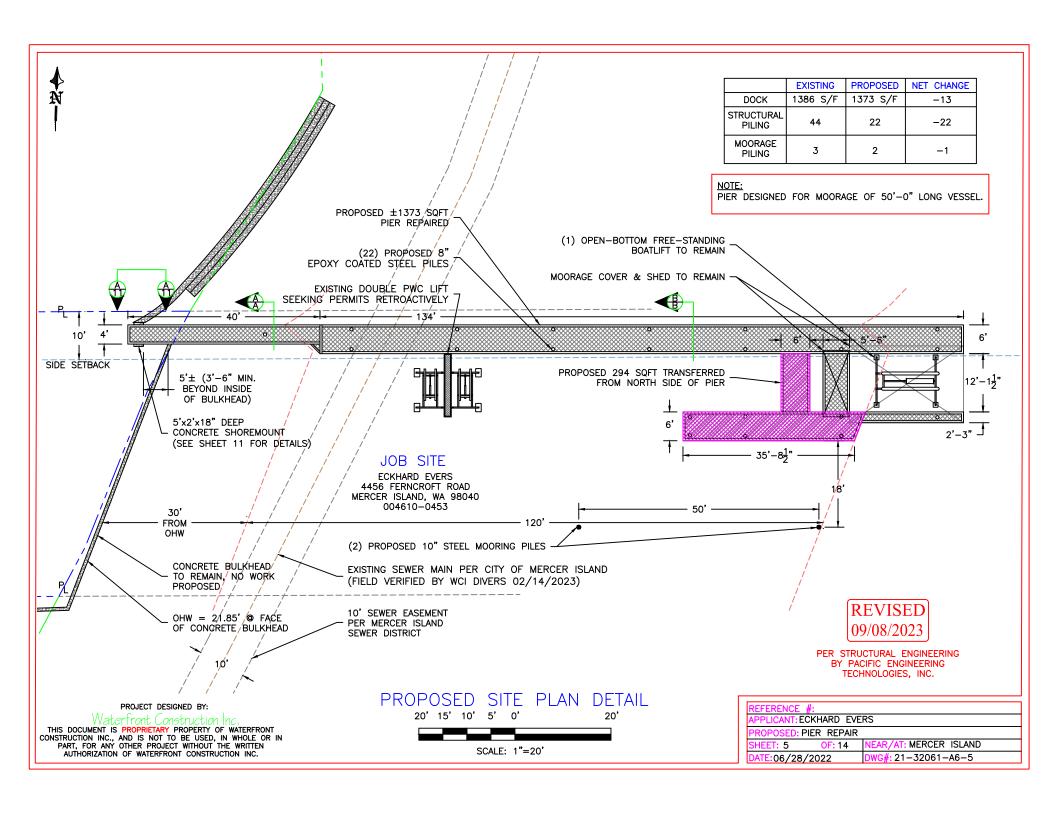
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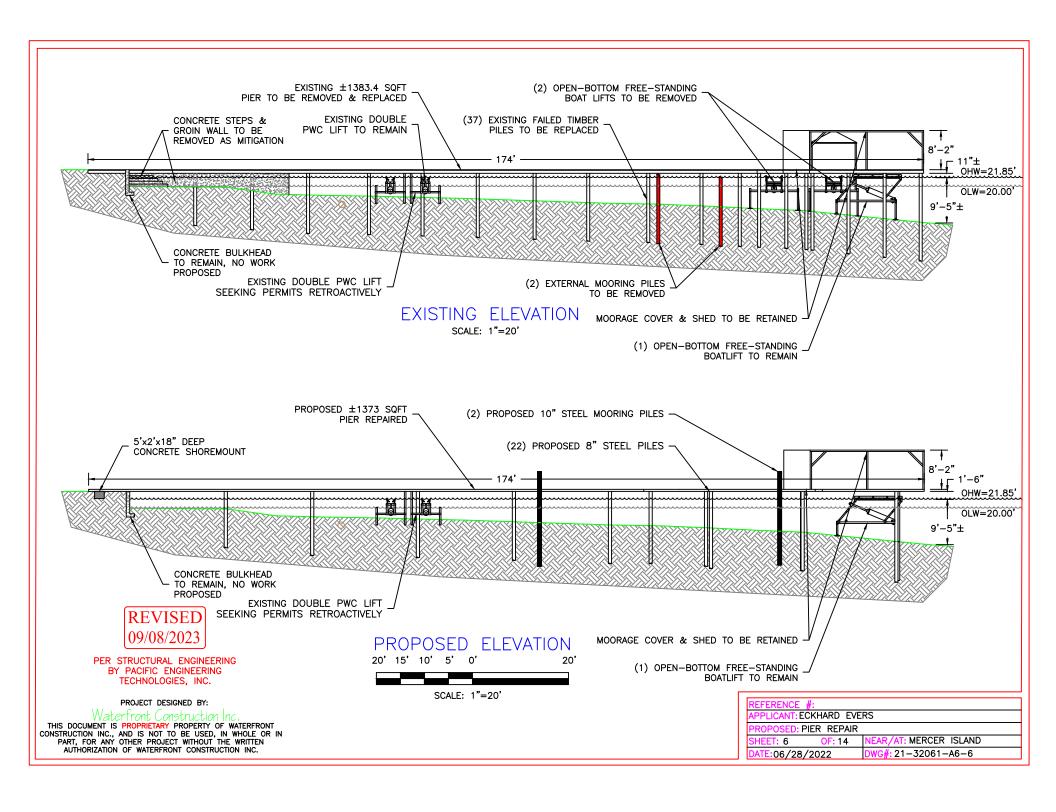
PAGE: 1 OF: 14 DATE: 06/28/2022

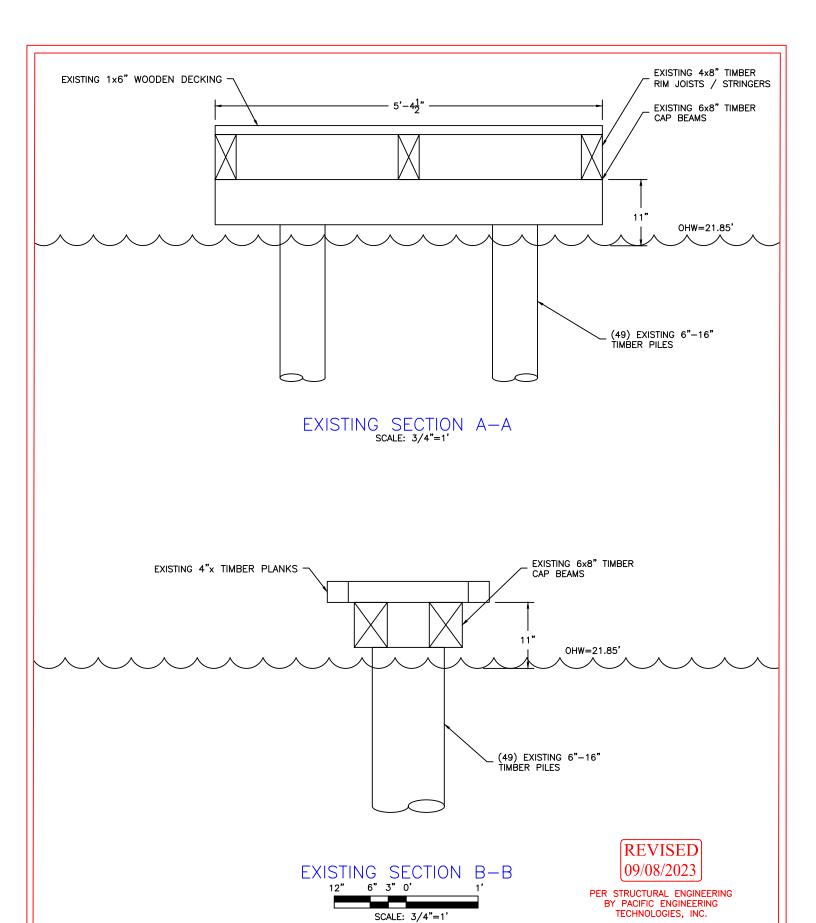








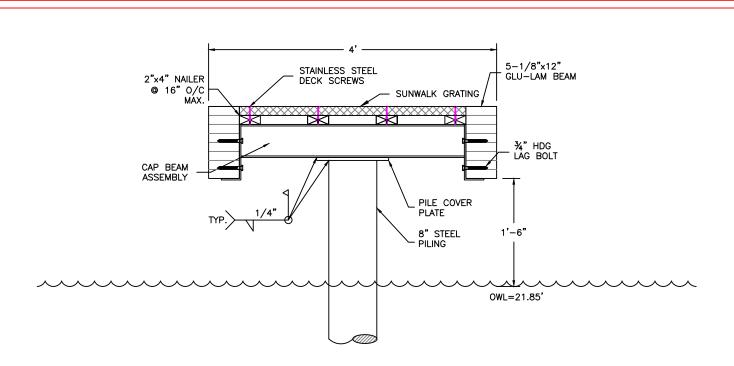




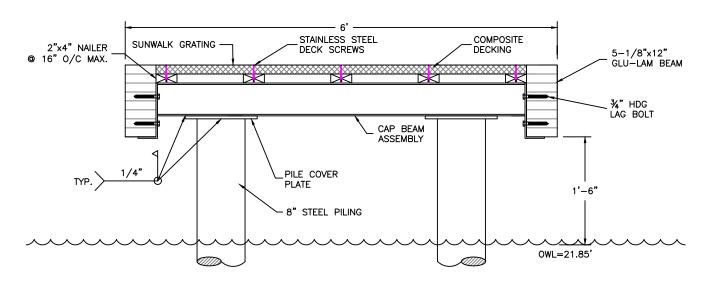
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REFERENCE #:
APPLICANT: ECKHARD EVERS
PROPOSED: PIER REPAIR
SHEET: 7 OF: 14 NEAR/AT: MERCER ISLAND
DATE: 06/28/2022 DWG#: 21-32061-A6-7



PROPOSED SECTION A—A SCALE: 3/4"=1'



PROPOSED SECTION B-B 12" 6" 3" 0' 1'

SCALE: 3/4"=1'

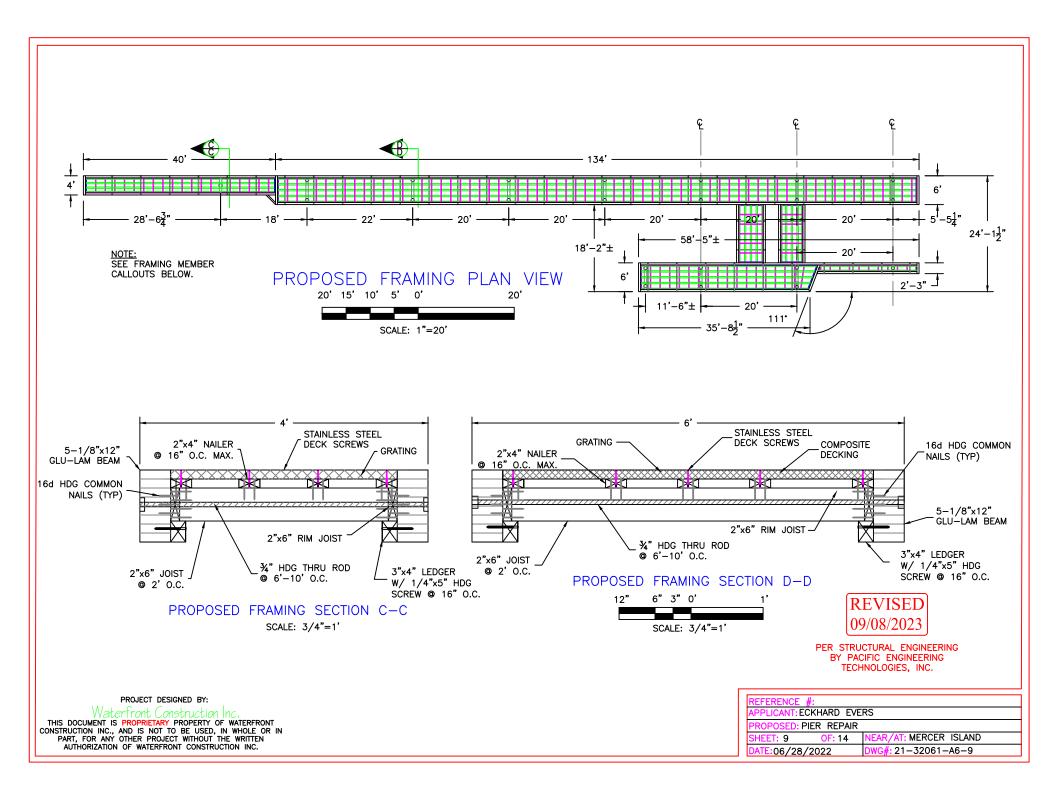
REVISED 09/08/2023

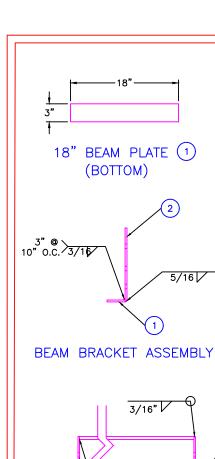
PER STRUCTURAL ENGINEERING BY PACIFIC ENGINEERING TECHNOLOGIES, INC.

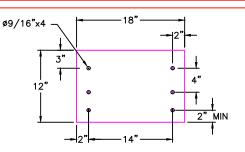
PROJECT DESIGNED BY:

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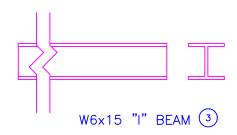
REFERENCE #:
APPLICANT: ECKHARD EVERS
PROPOSED: PIER REPAIR
SHEET: 8 OF: 14 NEAR/AT: MERCER ISLAND
DATE:06/28/2022 DWG#: 21-32061-A6-8

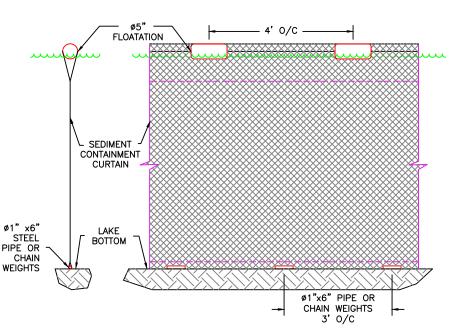




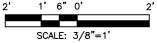


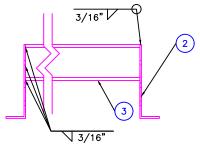
18" BEAM PLATE (BACK) (2)

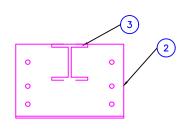




TEMP. FLOATING SILT CONTAINMENT FENCE







STEEL CAP ASSEMBLY
12" 6" 3" 0' 1'

SCALE: 3/4"=1'

REVISED 09/08/2023

PER STRUCTURAL ENGINEERING BY PACIFIC ENGINEERING TECHNOLOGIES, INC.

MATERIAL LIST

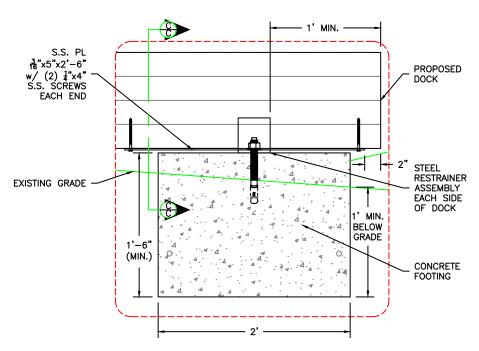
WALLEY CO.				
PART	SPECS	TREATMENT		
NAILERS	2"x4" DF #2 OR BTR	ACZA		
LEDGERS	3"x4" DF #2 OR BTR	ACZA		
GRATING	MOLDED PLASTIC	NONE		
HARDWARE	STEEL	STAINLESS OR HDG.		
PILING	X-STRONG 4", 8" & 10"	EPOXY-COATED		
CAPS	W6x15 "I" BEAM	GALVANIZED		
GLU-LAMS	5 1/8"x12" DF	ACZA		
JOIST	2"x6" DF #2 OR BTR	ACZA		
RIM JOIST	2"x6" DF #2 OR BTR	ACZA		

PART #	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	
3	W6x15 "I" BEAM	6" 15 LB PER FOOT I-BEAM	
2	18" BACK BEAM PLATE	18"x18"x5/16" STEEL PLATE	
1	18" BOTTOM BEAM PLATE	18"x3"x5/16" STEEL PLATE	

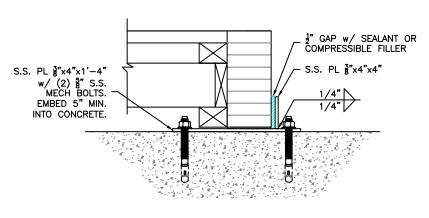
PROJECT DESIGNED BY:

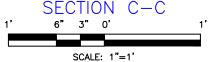
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REFERENCE #:				
APPLICANT: ECKHARD EVERS				
PROPOSED: PIER REPAIR				
SHEET: 10	OF: 14	NEAR/AT: MERCER ISLAND		
DATE:06/28/2022		DWG#: 21-32061-A6-10		



PIER TO CONC. SHOREMOUNT: A-11 scale: 1"=1'





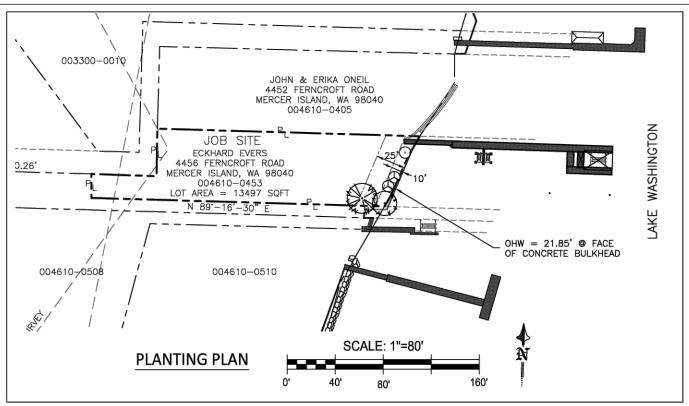
REVISED 09/08/2023

PER STRUCTURAL ENGINEERING BY PACIFIC ENGINEERING TECHNOLOGIES, INC.

PROJECT DESIGNED BY:

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REFERENCE #:			
APPLICANT: ECKHARD EVERS			
PROPOSED: PIER REPAIR			
SHEET: 11 OF: 14	NEAR/AT: MERCER ISLAND		
DATE: 06/28/2022	DWG#: 21-32061-A6-11		

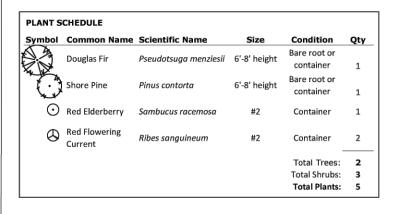


PLANTING NOTES:

- REMOVE ALL HIMALAYAN BLACKBERRY, JAPANESE KNOTWEED, BAMBOO, AND ENGLISH IVY FROM PLANTING AREA USING KING COUNTY RECOMMENDATIONS. RETAIN AND PROTECT ALL EXISTING NATIVE VEGETATION.
- PLANT MATERIAL SHALL BE LOCALLY GROWN (PUGET SOUND REGION) AND CONFORM TO THE MOST RECENT ANIA STANDARDS. THE OWNER RESERVES THE RIGHT TO REFUSE ANY AND ALL PLANT MATERIAL THAT DOES NOT MEET STANDARDS.
- PLANT LOCATIONS ARE SCHEMATIC AND MAY NEED
 ADJUSTMENT TO MEET ACTUAL FIELD CONDITIONS. WHEN A
 CONFLICT WITH FIELD CONDITIONS OCCURS CONSULT WITH
 THE PROJECT BIOLOGIST. MAINTAIN A MINIMUM OF 2 FEET
 FROM EXISTING SHRUBS, AND 3 FEET FROM EXISTING TREES.

REVISED 09/08/2023

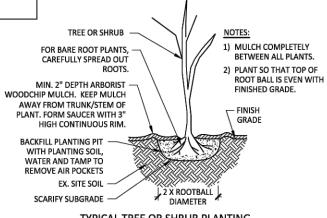
PER STRUCTURAL ENGINEERING BY PACIFIC ENGINEERING TECHNOLOGIES, INC.



PLANTING SEQUENCE:

1. PLANTING AREA SHALL BE PLANTED WITH THE SPECIES INDICATED IN THE PLANTING SCHEDULE, DIG A HOLE FOR EACH PLANT THAT IS TWICE THE SIZE OF THE ROOT BALL OR PLANT CONTAINER. REMOVE LARGE ROCKS AND OTHER DEBRIS INCLUDING ROOTS FROM PIT. SOAK PIT WITH WATER BEFORE PLANTING. BARK MULCH SHOULD NOT BE USED TO BACKFILL THE PLANTING HOLE.

- PULL BACK MULCH FROM PLANTINGS TO CREATE A MULCH RING AROUND PLANTS.
- 3. PLANTINGS SHOULD BE WATERED THROUGHOUT THE SUMMER MONTHS IF DROUGHT CONDITIONS OCCUR.
- 4. TWO 5-GALLON BUCKETS OF ARBORIST CHIPS OR MULCH SHALL BE PLACED AROUND EACH PLANTING.



TYPICAL TREE OR SHRUB PLANTING

NOT TO SCALE

Northwest
Environmental Consulting, LLC

PROJECT DESIGNED BY:

3639 PALATINE AVE N SEATTLE, WA 98103 206-634-9193 REFERENCE #:

APPLICANT: ECKHARD EVERS

PROPOSED: PIER REPAIR

SHEET: 12 OF: 14 NEAR/AT: MERCER ISLAND

DATE: 12/16/2022 DWG#

STRUCTURAL NOTES

CODE:

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

THE 2009 UNIFIED FACILITIES CRITERIA (UFC).

LIVE LOADS: RESIDENTIAL PIER 40 PSF

LATERAL LOADS (BASED ON ASCE 7): WIND DESIGN DATA:

WIND SPEED IMPORTANCE FACTOR 98 MPH RISK CATEGORY EXPOSURE TOPOGRAPHICAL FACTOR

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.

EXTEND FOOTINGS TO FIRM UNDISTURBED SOIL OF 1500 PSF BEARING CAPACITY.

STEEL PILING:

8" PILING SHALL BE X-STRONG ASTM A252, GRADE "3" Fy = 45,000 PSI 10" PILING SHALL BE STANDARD OR X-STRONG ASTM A252, GRADE "3" Fy = 45,000 PSI.

CORROSION PROTECTION TO BE PROVIDED BY OTHERS.

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 20 FEET THICK. THE PILES SHALL BE DRIVEN A MINIMUM OF SFEET 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 IS ACHIEVED. THE TOTAL EMBEDMENT DEPTH SHALL BE 16 FEET MINIMUM. IF THE MINIMUM EMBEDMENTS ARE NOT REACHED, THEN OVERDRIVING OF THE PILES WILL BE NECESSARY.

CONCRETE:
CONCRETE f'c = 3,000 PSI AT 28 DAYS. CONCRETE EXPOSED TO THE WEATHER IS TO BE AIR-ENTRAINED.

CONCRETE PROTECTION FOR REINFORCING SHALL BE AS FOLLOWS:

CONCRETE EXPOSED TO EARTH & WEATHER (#5 & SMALLER) 1 1/2'

ALL CONCRETE IN FOOTINGS SHALL BE PLACED IN A MONOLITHIC POUR UNLESS SHOWN OTHERWISE OR APPROVED BY THE ENGINEER PRIOR TO PLACING. ALUMINUM CONDUIT AND ACCESSORIES SHALL

NOT BE EMBEDDED IN CONCRETE.

DEFORMED BILLET STEEL CONFORMING TO ASTM A615 (STANDARD 04, 2013 CURRENT), GRADE 60

STRUCTURAL STEEL:
WIDE-FLANGE BEAMS ASTM A992 Fy = 50,000 PSI. CHANNELS, ANGLES, AND PLATES ASTM A36 Fy = 36,000 PSI. ALL FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF

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.

09/08/2023

PER STRUCTURAL ENGINEERING BY PACIFIC ENGINEERING TECHNOLOGIES, INC.

FCKHARD FVFRS PIFR REPAIR 13 MERCER ISLAND 21-32061-A6-13 06/28/2022

STRUCTURAL NOTES CONT:

STEEL BOLTS:
ALL BOLTS AND THREADED RODS SHALL BE ASTM A307 HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153-CLASSIC UNLESS NOTED OTHERWISE. GALVANIZED BOLTS SHOULD BE INSTALLED IN STANDARD SIZE HOLES UNLESS NOTED OTHERWISE.

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

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 & RAFTERS D.F.-L #1 Fb=1.000 PSI OR #2 Fb=900 PSI

GLUED LAMINATED LUMBER:
DOUGLAS FIR-LARCH GRADE 24F-V4 (Fb=2400 PSI) FOR SINGLE SPAN BEAMS AND 24F-V8 FOR BEAMS CONTINUOUS OVER SUPPORTS, COMBINATION 3 FOR COLUMNS Fc = 2,300 PSI. 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 EXPOSED 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 UC4C

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

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 SEALON THESE CALCULATIONS REPRESENTS THE FOLLOWING LIMITED SCOPE OF STRUCTURAL ENGINEERING DESIGN:

- DESIGN OF THE PIER FRAMING MEMBERS: GLULAM BEAMS AND JOISTS.
 DESIGN PILES FOR BOAT IMPACT LOADS AND WIND FORCES.

- DESIGN OF THE GLULAM CONNECTION.
 DESIGN OF FOOTING FOR THE CONNECTION OF THE PIER TO THE INSIDE OF THE BULKHEAD.

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 MOORAGE COVER, SHED, 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: 23191.00

PROJECT DESIGNED BY:

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09/08/2023

PER STRUCTURAL ENGINEERING BY PACIFIC ENGINEERING TECHNOLOGIES, INC.

T: ECKHARD EVERS D. PIFR REPAIR MERCER ISLAND 14 21-32061-A6-14 :06/28/2022