

PORT OF TACOMA FILE: C:\Users\ilemonslap\data\local\temp\AcPublish_66121_G1.0-COVER

BINDING EDGE

PORT OF TACOMA

NORTHWEST SEAPORT ALLIANCE MANAGING MEMBERS:

Port of Tacoma
Commissioners:

CONNIE BACON
DON MEYER
DON JOHNSON
RICHARD MARZANO
CLARE PETRICH

Port of Seattle Commissioners:

TOM ALBRO
STEPHANIE BOWMAN
JOHN CREIGHTON
FRED FELLEMAN
COURTNEY GREGOIRE

PORT STAFF:

JOHN WOLFE
Chief Executive Officer

DAKOTA CHAMBERLAIN, PE
Chief Facilities Development Officer

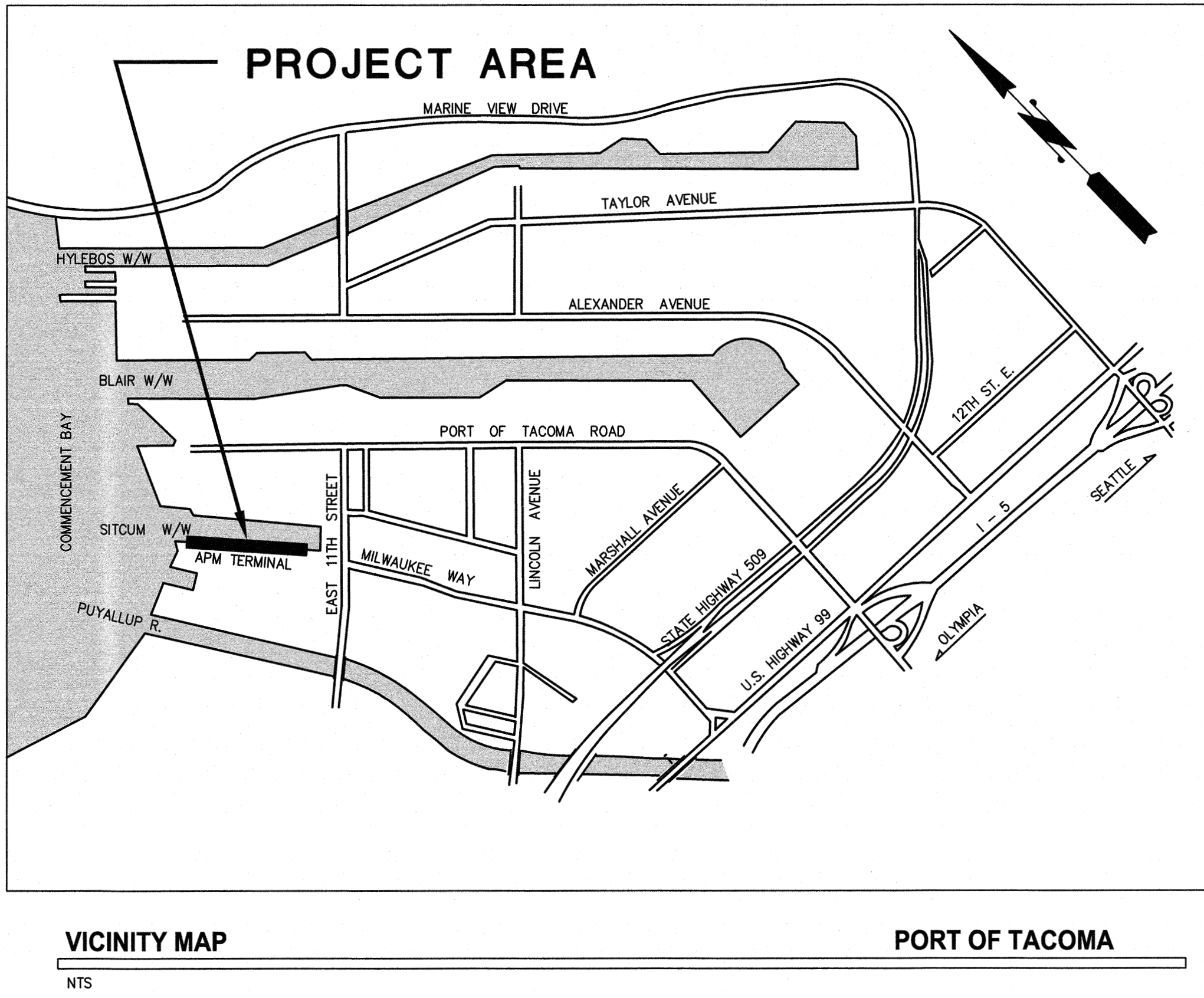
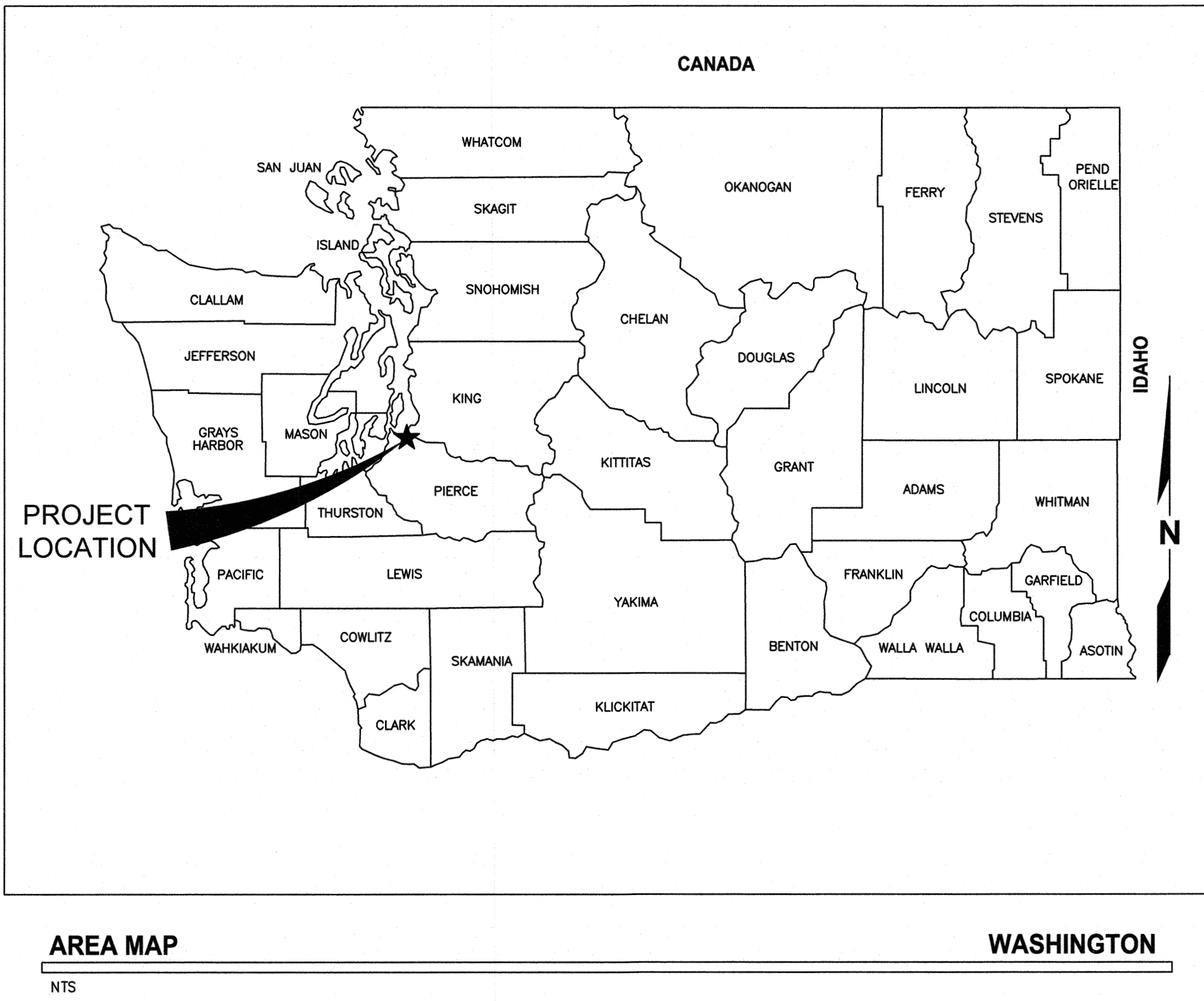
JAN SHAWYER
Project Manager

CONSULTANT:



2407 North 31st Street, Suite 100
Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162

APMT FENDER REPAIR PROJECT NO. 101068.01 CONTRACT NO. 070444



ISSUED FOR BID

6562	G1.0	SH 01 OF 10	CONT/CONS: 070444	M. ID: 101068.01	PHASE: CONSTRUCTION	DRAWING SCALE: AS NOTED	TOWNSHIP: 21N	RANGE: 3E	SECTION: 27	VERT: 1-5	PARCEL:	APMT TERMINAL FENDER REPAIRS COVER SHEET	APPROVED:	SEK	5/16/17	CHECKED BY	DATE
														AWB	5/16/17	PROJ. ENGR	DATE
													PRINTED BY: ilemons May 17, 2017	5/16/17	5/16/17	DATE	DATE
													PORT ADDRESS: ONE SITCUM PLAZA	TACOMA WA 98401-1837			
													MARK:	REVISION:	BY:	APPR:	DATE:



THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

GENERAL NOTES:

GENERAL

3. ALL DIMENSIONS ARE REFERENCE DIMENSIONS AND DIMENSIONS AND DETAILS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION AND/OR CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE SPECIFIC ITEMS TO BE REPLACED WITH THE PORT'S INSPECTOR PRIOR TO COMMENCING REMOVAL OF ANY PART OF THE FENDER SYSTEM.
2. ALL ELEVATIONS ARE REFERENCED TO MEAN LOWER LOW WATER (MLLW) AND ARE FOR REFERENCE ONLY (REF).
3. ALL SUBMITTALS SHALL BE SUBMITTED TO, AND REVIEWED BY, THE PORT OF TACOMA PRIOR TO FABRICATION.
4. THE INTENT OF THE REPAIR WORK INDICATED IN THESE DRAWINGS IS TO RESTORE THE DAMAGED FENDER SYSTEM ON THE EXISTING APM TERMINAL. THE CONTRACTOR SHALL REMOVE ALL DAMAGED ELEMENTS AS INDICATED ON DRAWINGS, SALVAGE AND/OR MODIFY EXISTING MATERIALS FOR REUSE WHERE INDICATED, AND UTILIZE PORT SUPPLIED TIMBER AND UHMW MATERIALS AS REQUIRED FOR FULL AND COMPLETE RESTORATION OF THE FENDER SYSTEM.
5. THE CONTRACTOR IS ADVISED TO MAKE A THOROUGH FIELD INVESTIGATION TO ASCERTAIN THE EXTENT OF THE WORK PRIOR TO BID. PRE BID INVESTIGATIONS SHALL BE SCHEDULED BY THE PORT'S REPRESENTATIVE.
6. THE WORK AREA IS AN ACTIVE FACILITY AND WILL REMAIN ACTIVE DURING THE COURSE OF THIS WORK. THE WORK WILL NECESSARILY BE INTERMITTENT BETWEEN SHIPPING ACTIVITY. THE CONTRACTOR SHALL WORK OUT THE SEQUENCE AND SCHEDULE OF WORK IN CLOSE COOPERATION WITH THE PORT.
7. REPAIR WORK: THE FOLLOWING IS A GENERAL DESCRIPTION AND SUGGESTED PROCEDURE OF THE NECESSARY REPAIR WORK.

CHOCKS

CHOCKS "RPC": REMOVE AND DISPOSE OF EXISTING CHOCKS MARKED "RPC".
REPLACE WITH NEW PORT PROVIDED TREATED TIMBER CHOCK. SIZE AS REQUIRED
PER DRAWINGS (CONTRACTOR TO FIELD VERIFY). SEE S3.0 FOR DETAILS AND S4.0
FOR REPAIR STEPS.

WALES

WALERS "RPW": REMOVE AND DISPOSE OF EXISTING WALERS MARKED "RPW".
REPLACE WITH NEW PORT PROVIDED TREATED TIMBER WALER, SIZE AS REQUIRED
PER DRAWINGS (CONTRACTOR TO FIELD VERIFY), WALERS SHALL BE REPLACED
JOINT TO JOINT. SEE S3.0 FOR DETAILS AND S4.1 FOR REPAIR STEPS.

UHMW PROTECTION PANELS

1. UHMW PROTECTION PANELS "IPP": REMOVE AND DISPOSE OF EXISTING UHMW PROTECTION PANELS MARKED "IPP". REPLACE WITH NEW PORT PROVIDED PROTECTION PANELS. PANELS WILL BE PROVIDED WITH PRE-DRILLED HOLES. SEE S3.1 FOR DETAILS AND S4.0 FOR REPAIR STEPS.

PILES

1. PILES "FHP": PULL UP EXISTING PILE APPROXIMATELY TWO FEET AND FRESH HEAD. SEE S4.1 FOR REPAIR STEPS TO REMOVE DAMAGED PILE TOP. DAP AND TREAT NEW PILE HEAD PER DRAWINGS.
2. PILES "RPP": REMOVE EXISTING FENDER PILES. INSTALL NEW PORT PROVIDED TREATED TIMBER FENDER PILE. SEE S4.1 FOR REPAIR STEPS AND SPECIFICATIONS FOR INSTALLATION REQUIREMENTS.
3. ALL OTHER PILES SHALL REMAIN IN PLACE AND BE PULLED HORIZONTALLY TO FIT TIGHT AGAINST CHOCKS AND WALERS.

DEMOLITION

1. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTION TO CONTAIN THE DEMOLITION STRICTLY WITHIN THE LIMITS DESIGNATED, AND AVOID ANY DAMAGE TO EXISTING STRUCTURES. DEMOLITION DEBRIS SHALL NOT, UNDER ANY CIRCUMSTANCES ENTER THE SITCUM WATERWAY.
2. ANY DAMAGE, INCURRED DURING THE EXECUTION OF THIS CONTRACT, TO ANY PART OF THE PROPERTY/STRUCTURE, NOT SPECIFICALLY DESIGNATED FOR DEMOLITION, SHALL BE REPAIRED, REPLACED AND/OR RECONSTRUCTED BY THE CONTRACTOR, TO ITS ORIGINAL CONDITION WITHOUT COST TO THE PORT.
3. ALL DEMOLITION MATERIAL, EXCEPT AS NOTED, SHALL BE COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR.

MATERIALS

TIMBER FENDER PILES:

1. PORT SUPPLIED FENDER PILES ARE PACIFIC COAST DOUGLAS FIR CONFORMING TO ASTM D25, LATEST EDITION. PILES HAVE A MINIMUM DIAMETER OF 18-INCHES, MEASURED 3 FEET FROM THE BUTT END.
2. FENDER PILES ARE PRESSURE TREATED IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVER ASSOCIATION (AWPA) STANDARD U1 LATEST EDITION, WITH A MINIMUM RETENTION OF 1.9 lbs OF ACZA PER CUBIC FOOT. FIELD TREATMENT OF FENDER PILES WHERE FABRICATED CONNECTIONS ARE REQUIRED OR FOR ACCIDENTAL DAMAGE, SHALL BE IN ACCORDANCE WITH AWPA STANDARD M4, LATEST EDITION.
3. FENDER PILES SHALL BE DRIVEN TO THE MINIMUM TIP ELEVATIONS INDICATED ON THE DRAWINGS.

MISCELLANEOUS STEEL

1. ALL MISCELLANEOUS STEEL SHAPES AND PLATES SHALL BE REUSED AS PRACTICABLE. IF ITEMS ARE TOO DAMAGED, IN THE OPINION OF THE PORT'S INSPECTOR, TO BE REUSED, NEW ITEMS SHALL BE PROVIDED WHICH CONFORM TO ASTM A36.
2. ALL BOLTS AND NUTS SHALL CONFORM TO ASTM A307, UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. THE CONTRACTOR SHALL REPLACE ALL HARDWARE THAT IS REMOVED FROM THE EXISTING ELEMENTS WITH CONTRACTOR SUPPLIED HARDWARE WHEN REPLACING OR REINSTALLING THE ELEMENTS WHETHER THE ELEMENTS ARE NEW OR REINSTALLED.
3. ALL MISCELLANEOUS STEEL, INCLUDING ALL FASTENERS, SHALL BE HOT DIP GALVANIZED PER ASTM A153. GALVANIZE ITEMS AFTER FABRICATION AS FAR AS PRACTICABLE. GALVANIZING DAMAGED ACCIDENTALLY SHALL BE RESTORED WITH FIELD GALVANIZING COMPOUND.

STRUCTURAL TIMBER

1. ALL NEW PORT PROVIDED TIMBER IS PACIFIC COAST DOUGLAS FIR, GRADE NO. 1 AND CONFORMS TO THE LATEST SPECIFICATIONS OF THE WEST COAST LUMBER INSPECTION BUREAU (WCLBI) STANDARD GRADING RULES FOR WEST COAST LUMBER – NO 16.
2. ALL NEW PORT PROVIDED TIMBER IS SURFACED FOUR SIDES (S4S), UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
3. ALL NEW PORT PROVIDED TIMBER IS PRESSURE TREATED IN ACCORDANCE WITH AWP A STANDARD U1, LATEST EDITION, WITH A MINIMUM RETENTION OF 1.5 LBS. OF ACZA PER CUBIC FOOT. STORAGE, HANDLING, CARE, AND FIELD TREATMENT OF TREATED TIMBER SHALL BE IN ACCORDANCE WITH AWP A STANDARD M4, LATEST EDITION.
4. FABRICATION: HOLES FOR BOLTS SHALL BE 1/16 INCH LARGER THAN THE BOLT. LEAD HOLES FOR DOWELS AND LAG BOLTS SHALL BE PREBORED TO 65% OF SHANK DIAMETER.
5. HARDWARE: BOLTS AND MISCELLANEOUS HARDWARE NECESSARY FOR THE COMPLETE INSTALLATION SHALL BE HOT DIP GALVANIZED. GALVANIZED MALLEABLE IRON WASHERS SHALL BE USED UNDER ALL NUT AND BOLT HEADS BEARING ON TIMBER, EXCEPT UNDER THE HEADS OF ECONOMY BOLTS. BOLTS SHALL BE TIGHTENED WHEN INSTALLED AND SHALL BE RETIGHTENED BEFORE FINAL ACCEPTANCE OF THE WORK.

REFERENCE DRAWINGS

THE FOLLOWING REFERENCE DRAWINGS WERE UTILIZED IN THE DEVELOPMENT OF THESE DOCUMENTS AND ARE AVAILABLE FOR THE CONTRACTOR'S USE AT THE PORT'S BID DESK:

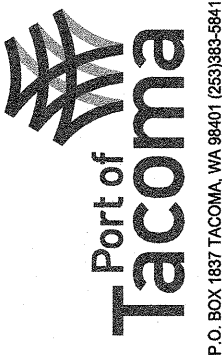
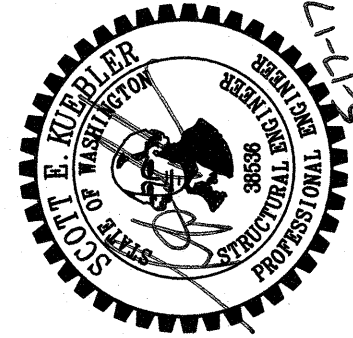
TACOMA TERMINALS, INC. PIER (CONTRACT NO. 542, PROJECT NO. EP-3846-23)
SHEETS 22 THROUGH 28, 40 AND 41

ABBREVIATIONS:

CL	CENTERLINE
DP	DEEP
EA	EACH
EX	EXISTING
FHP	FRESH HEAD EXISTING PILE
IPP	INSTALL NEW UHMW
	PROTECTION PANEL
MB	MACHINE BOLT
NOM	NOMINAL
PL	PLATE
REF	REFERENCE
RPC	REPLACE CHOCK WITH NEW
RPP	REMOVE EXISTING PILE AND
	REPLACE WITH NEW
RPW	REPLACE WALER WITH NEW
SPA	SPACE
SYMM	SYMMETRY
T/	TOP OF
THRU	THROUGH
TYP	TYPICAL
W/	WITH
W/W	WATERWAY

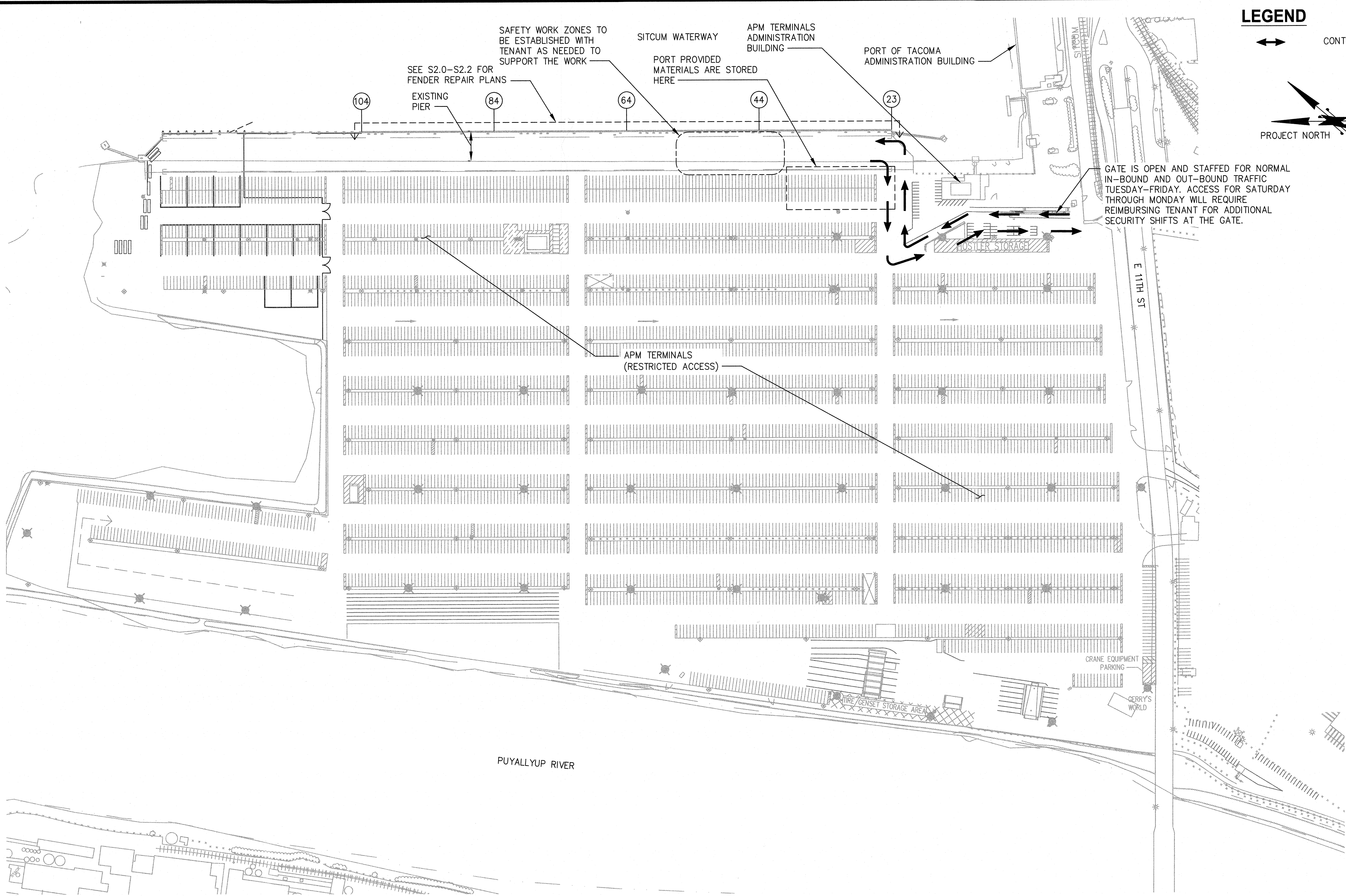
SHEET NO.	DRAWING LIST
G1.0	COVER SHEET
S1.0	GENERAL NOTES
S1.1	SITE PLAN
S2.0	FENDER REPAIR PLAN – 1 OF 3
S2.1	FENDER REPAIR PLAN – 2 OF 3
S2.2	FENDER REPAIR PLAN – 3 OF 3
S3.0	TYPICAL FENDER SYSTEM CONFIGURATION DETAILS – 1 OF 2
S3.1	TYPICAL FENDER SYSTEM CONFIGURATION DETAILS – 2 OF 2
S4.0	FENDER SYSTEM REPAIR NOTES – 1 OF 2
S4.1	FENDER SYSTEM REPAIR NOTES – 2 OF 2

<div> <div>6562</div> <div>SH 02 OF 10</div> </div>		<div> <div>APM TERMINAL FENDER REPAIRS</div> <div>GENERAL NOTES</div> </div>				<div> <div>APPROVED:</div> <div> <div> <div> <div>5/16/17</div> <div>SEK</div> </div> <div> <div>CHECKED BY</div> <div>DATE</div> </div> </div> </div> </div>	
<div> <div>CONTRACT/CONS: 070444</div> <div>M. ID: 101068.01</div> </div>		<div> <div>TOWNSHIP: 21N</div> <div>RANGE: 3E</div> </div>		<div> <div>SECTION: 27</div> </div>		<div> <div> <div>5/16/17</div> <div>AWB</div> </div> <div> <div>DIRECTOR ENG. DATE</div> <div>PROJ. ENGR. DATE</div> </div> </div>	
<div> <div>DATE: 10/08/21</div> <div>PHASE: CONSTRUCTION</div> </div>		<div> <div>VER1:</div> </div>		<div> <div>PRINTED BY: tlemonts</div> <div>May 17, 2017</div> </div>		<div> <div> <div>5/16/17</div> <div>SEK</div> </div> <div> <div>CHECKED BY</div> <div>DATE</div> </div> </div>	
<div> <div>PARCEL: CONSTRUCTION</div> </div>		<div> <div>DRAWING SCALE: AS NOTED</div> </div>		<div> <div>PORT ADDRESS: ONE SITCUM PLAZA</div> </div>		<div> <div>TACOMA WA 98401-1837</div> </div>	




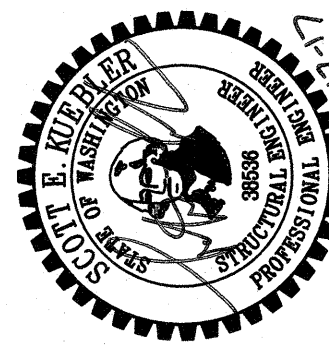


THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

ISSUED FOR BID



SITE PLAN
SCALE: 1"=150'

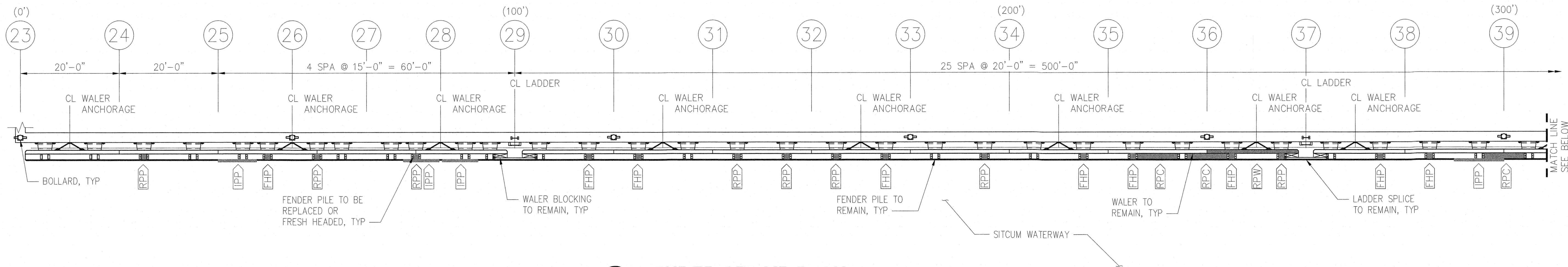
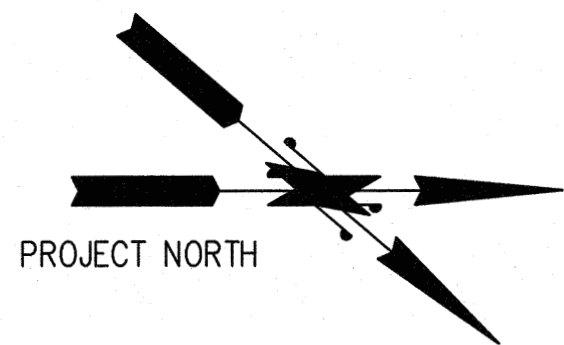
ISSUED FOR BID

6562 S1.1 SH 03 OF 10	APM TERMINAL FENDER REPAIRS SITE PLAN				APPROVED:  5/16/17 DIRECTOR ENG. DATE	SEK 5/16/17 CHECKED BY DATE		 4407 North 31st Street, Suite 100 Tacoma, WA 98401 (253) 396-0150 FAX (253) 396-0162	 P.O. BOX 1887 TACOMA, WA 98401 (206) 385-8941
	CONTRACT/CONS: 070444 M. ID: 101068.01 PHASE: CONSTRUCTION	TOWNSHIP: 21N RANGE: 3E SECTION: 27 DAT-HRZ: VERT:	PRINTED BY: temons May 17, 2017 PORT ADDRESS: ONE SITCUM PLAZA TACOMA WA 98401-1837	AWB 5/16/17 PROJ. ENGR DATE	MARK: REVISION: BY: DATE: APPR:				

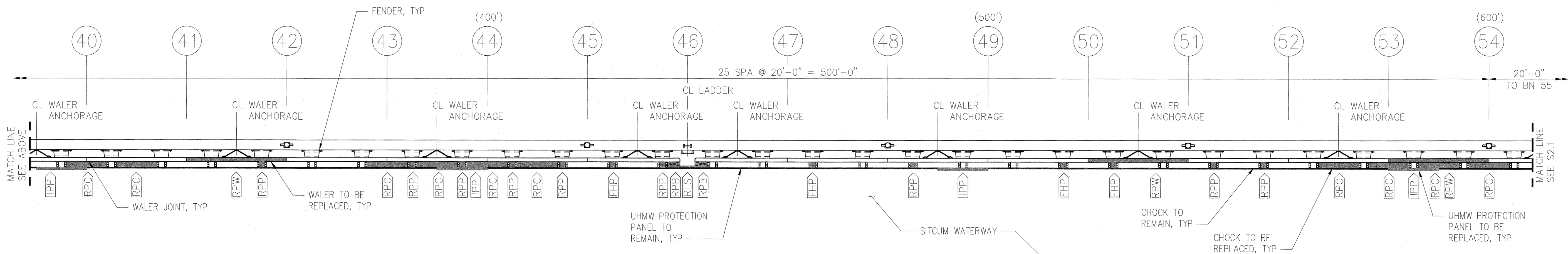
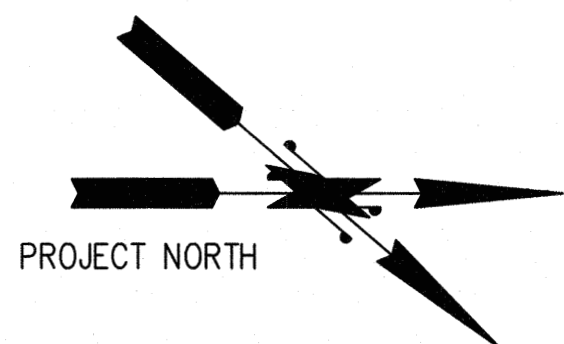
THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

PORT OF TACOMA FILE: N:\2016\1600125 POT APM Fender Repair\Drawings\current\4_S2.0-FENDER PLAN 1

BINDING EDGE



1 FENDER REPAIR PLAN
SCALE: 3/32" = 1'-0"



2 FENDER REPAIR PLAN
SCALE: 3/32" = 1'-0"

LEGEND

	BENT NUMBER (BN)		REPLACE WALER, SEE SHEET S4.1		REATTACH CHAIN ANCHOR, SEE
	PULL UP AND FRESH HEAD PILE, SEE SHEET S4.1		INSTALL NEW UHMW PROTECTION PANEL, SEE SHEET S4.0		COMPONENT TO BE REPLACED, OR FRESH HEADED
	REPLACE PILE, SEE SHEET S4.1		REPLACE WALER BLOCKING, SEE SHEET S4.1		STATION AS MARKED ON THE BULL-RAIL
	REPLACE CHOCK, SEE SHEET S4.0		REPLACE LADDER SPICE, SEE SHEET S4.1		

NOTES:

1. T/PILE ELEVATION FOR NEW PILES SHALL MATCH EXISTING PILES AT ±18.19 FT. CONTRACTOR TO VERIFY.
2. NEW PILE SHALL BE DRIVEN TO TIP ELEVATION OF -65.0 FT. PILES MAY BE DRIVEN DEEPER TO REDUCE CUT OFF, PROVIDED A SUFFICIENT CUT-OFF AMOUNT IS PROVIDED FOR A CLEAN AND UNDAMAGED DAPPED PILE HEAD. THE PILE CUT-OFF SHALL NOT BE LESS THAN 1'-0".
3. ALL DIMENSIONS ARE REFERENCE DIMENSIONS.

ISSUED FOR BID

6562 S2.0 SH 04 OF 10	APM TERMINAL FENDER REPAIRS FENDER REPAIR PLAN 1 OF 3				Port of Tacoma P.O. BOX 1837 TACOMA, WA 98401 (206)355-9641	
	CONTRACT/CONS: 070444	TOWNSHIP: 21N	RANGE: 3E	SECTION: 27	2407 North 31st Street, Suite 100 Tacoma, Washington 98407 (253) 396-0150 Fax (253) 396-0162	APPROVED: DATE:
	M. ID: 101068.01	DAT-HRZ:	VERT:	PARCEL:	BY:	REVISION:
	PHASE: CONSTRUCTION	DRAWING SCALE: AS NOTED			MARK:	REVISION:

APPROVED:

SEK 5/16/17
CHECKED BY: DATE

AWB 5/16/17
PROJ. ENGR DATE

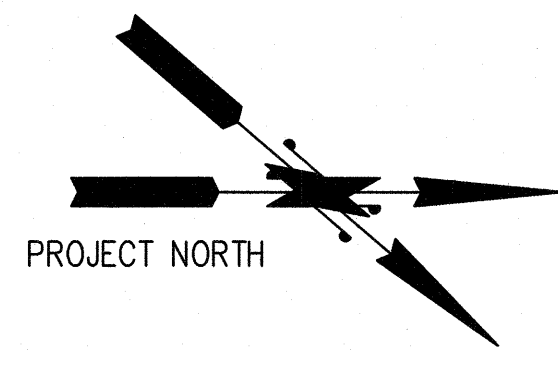
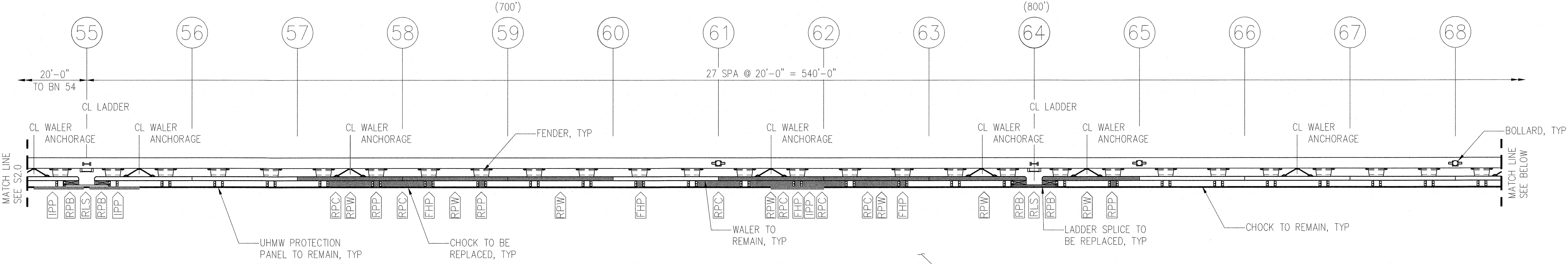
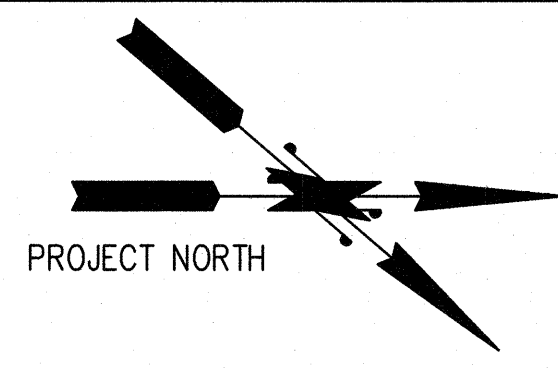
DIRECTOR ENG. DATE: 5/16/17

PRINTED BY: tlemmons May 17, 2017

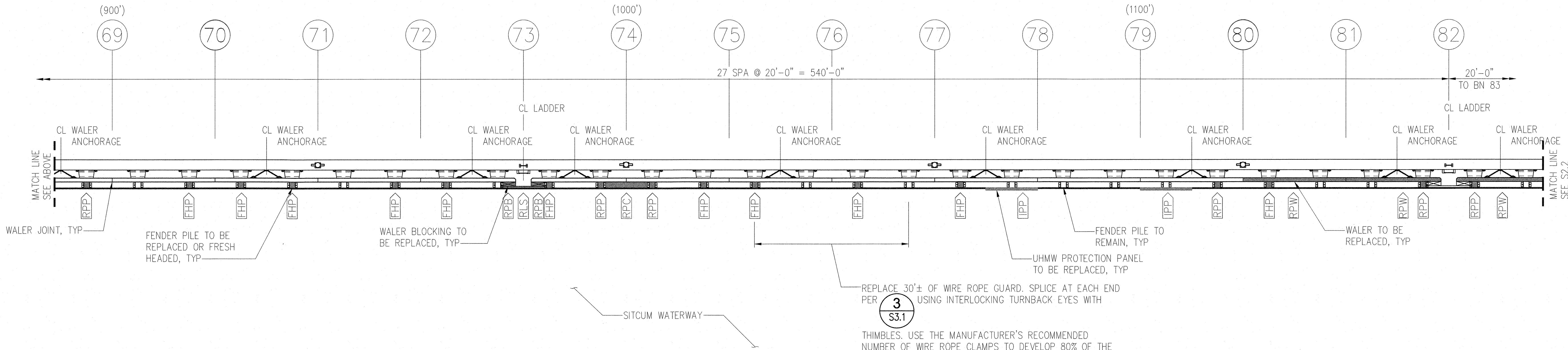
PORT ADDRESS: ONE SITCUM PLAZA

TACOMA WA 98401-1837

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION



1 FENDER REPAIR PLAN
SCALE: 3/32" = 1'-0"



3
S3.1
THIMBLES. USE THE MANUFACTURER'S RECOMMENDED NUMBER OF WIRE ROPE CLAMPS TO DEVELOP 80% OF THE ROPE'S CAPACITY. ACTUAL SPLICE LENGTH WILL DEPEND ON THE LENGTH OF THE TURNBACK EYES. CONTRACTOR SHALL DETERMINE WIRE ROPE DIAMETER IN THE FIELD. FOR DETAILS SEE **A** S3.0 AND **2** S3.1

2 FENDER REPAIR PLAN
SCALE: 3/32" = 1'-0"

LEGEND

- | | | | | | |
|--|---|--|---|--|---|
| | BENT NUMBER (BN) | | REPLACE WALER, SEE SHEET S4.1 | | REATTACH CHAIN ANCHOR, SEE |
| | PULL UP AND FRESH HEAD PILE, SEE SHEET S4.1 | | INSTALL NEW UHMW PROTECTION PANEL, SEE SHEET S4.0 | | COMPONENT TO BE REPLACED, OR FRESH HEADED |
| | REPLACE PILE, SEE SHEET S4.1 | | REPLACE WALER BLOCKING, SEE SHEET S4.1 | | STATION AS MARKED ON THE BULL-RAIL |
| | REPLACE CHOCK, SEE SHEET S4.0 | | REPLACE LADDER SPLICE, SEE SHEET S4.1 | | |

NOTES:

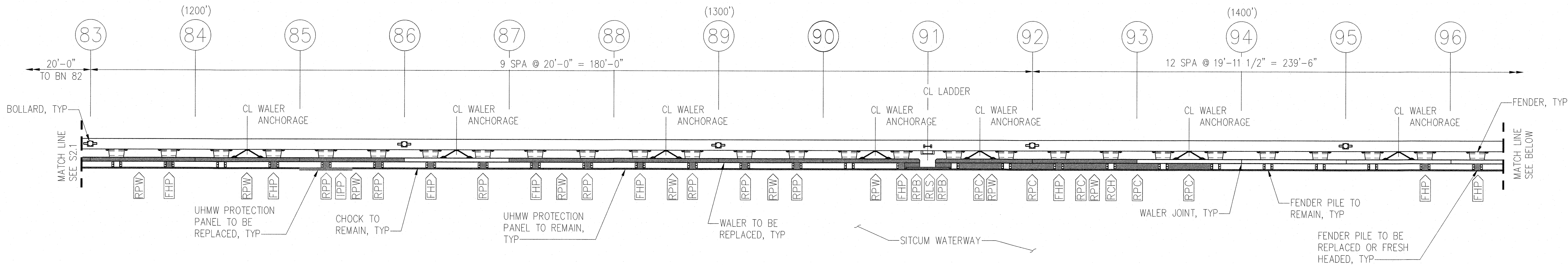
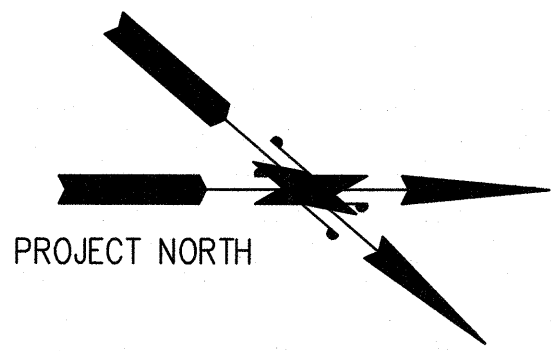
1. T/PILE ELEVATION FOR NEW PILES SHALL MATCH EXISTING PILES AT ±18.19 FT. CONTRACTOR TO VERIFY.
2. NEW PILE SHALL BE DRIVEN TO TIP ELEVATION OF -65.0 FT. PILES MAY BE DRIVEN DEEPER TO REDUCE CUT OFF, PROVIDED A SUFFICIENT CUT-OFF AMOUNT IS PROVIDED FOR A CLEAN AND UNDAMAGED DAPPED PILE HEAD. THE PILE CUT-OFF SHALL NOT BE LESS THAN 1'-0".
3. ALL DIMENSIONS ARE REFERENCE DIMENSIONS.

ISSUED FOR BID

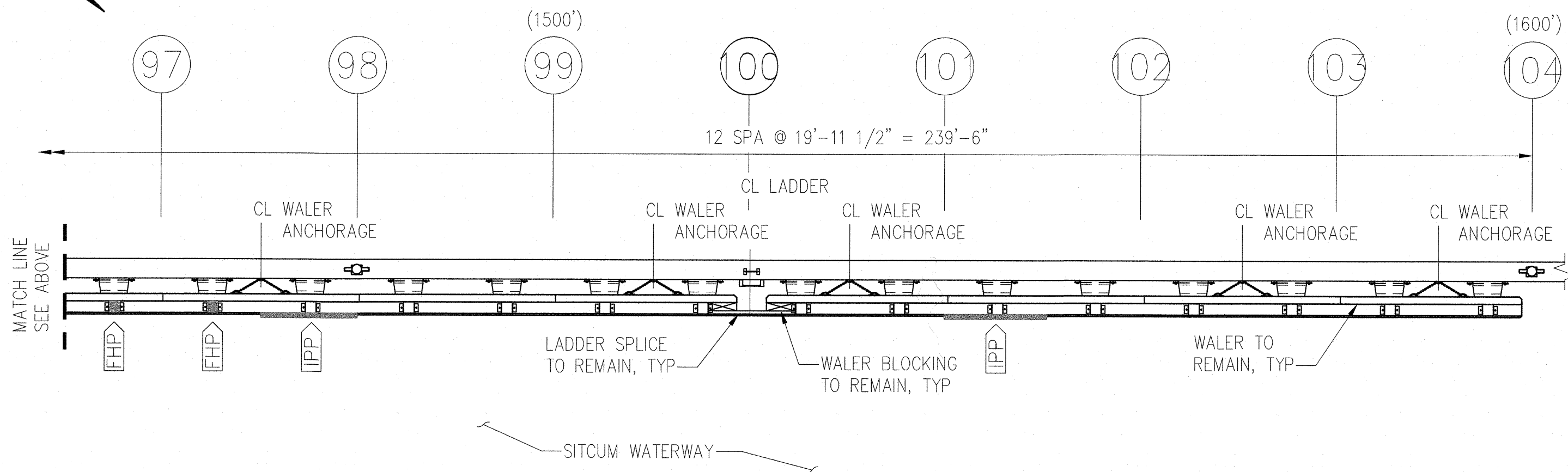
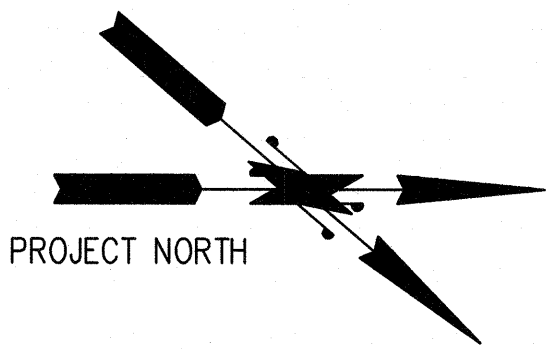
6562 S2.1 SH 05 OF 10	APM TERMINAL FENDER REPAIRS FENDER REPAIR PLAN 2 OF 3				APPROVED: DIRECTOR 5/16/17		SEK 5/16/17
	CONT/CONS: 070444	TOWNSHIP: 21N	RANGE: 3E	SECTION: 27	DATE: 5/16/17	CHECKED BY: AWB	DATE: 5/16/17
M. ID: 107088.01	DAT-HRZ:	VERT:	PARCEL:	PRINTED BY: tlemons May 17, 2017	PROJ. ENGR. DATE	BY:	DATE:
PHASE: CONSTRUCTION	DRAWING SCALE: AS NOTED			PORT ADDRESS: ONE SITCUM PLAZA TACOMA WA 98401-1837		MARK:	REVISION:
Port of Tacoma P.O. BOX 1837 TACOMA, WA 98401 (206)383-5841				kpff 2407 North 31st Street, Suite 100 (253) 396-0150 Fax (253) 396-0162			

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

PORT OF TACOMA FILE: N:\2016\1600125 POT APM Fender Repair\Drawings\current\6_S2.2-FENDER PLAN 3



1 FENDER REPAIR PLAN
SCALE: 3/32" = 1'-0"



2 FENDER REPAIR PLAN
SCALE: 3/32" = 1'-0"

LEGEND

- | | | | | | | |
|--|---|--|---|--|---|--|
| | BENT NUMBER (BN) | | REPLACE WALER, SEE SHEET S4.1 | | REATTACH CHAIN ANCHOR, SEE | |
| | PULL UP AND FRESH HEAD PILE, SEE SHEET S4.1 | | INSTALL NEW UHMW PROTECTION PANEL, SEE SHEET S4.0 | | COMPONENT TO BE REPLACED, OR FRESH HEADED | |
| | REPLACE PILE, SEE SHEET S4.1 | | REPLACE WALER BLOCKING, SEE SHEET S4.1 | | STATION AS MARKED ON THE BULL-RAIL | |
| | REPLACE CHOCK, SEE SHEET S4.0 | | REPLACE LADDER SPLICE, SEE SHEET S4.1 | | | |

NOTES:

1. T/PILE ELEVATION FOR NEW PILES SHALL MATCH EXISTING PILES AT ± 18.19 FT. CONTRACTOR TO VERIFY.
2. NEW PILE SHALL BE DRIVEN TO TIP ELEVATION OF -65.0 FT. PILES MAY BE DRIVEN DEEPER TO REDUCE CUT OFF, PROVIDED A SUFFICIENT CUT-OFF AMOUNT IS PROVIDED FOR A CLEAN AND UNDamaged DAPPED PILE HEAD. THE PILE CUT-OFF SHALL NOT BE LESS THAN 1'-0".
3. ALL DIMENSIONS ARE REFERENCE DIMENSIONS.

ISSUED FOR BID

Port of Tacoma

2407 North 51st Street, Suite 100
Tacoma, WA 98401
(253) 396-0159 Fax (253) 396-0162



SEK	5/16/17	CHECKED BY	DATE
AMB	5/16/17	DIRECTOR	DATE
PRINTED BY:	11pm05 May 17, 2017	PROJ. ENGR	DATE
PORT ADDRESS: ONE SITCUM PLAZA			
TACOMA WA 98401-1837			

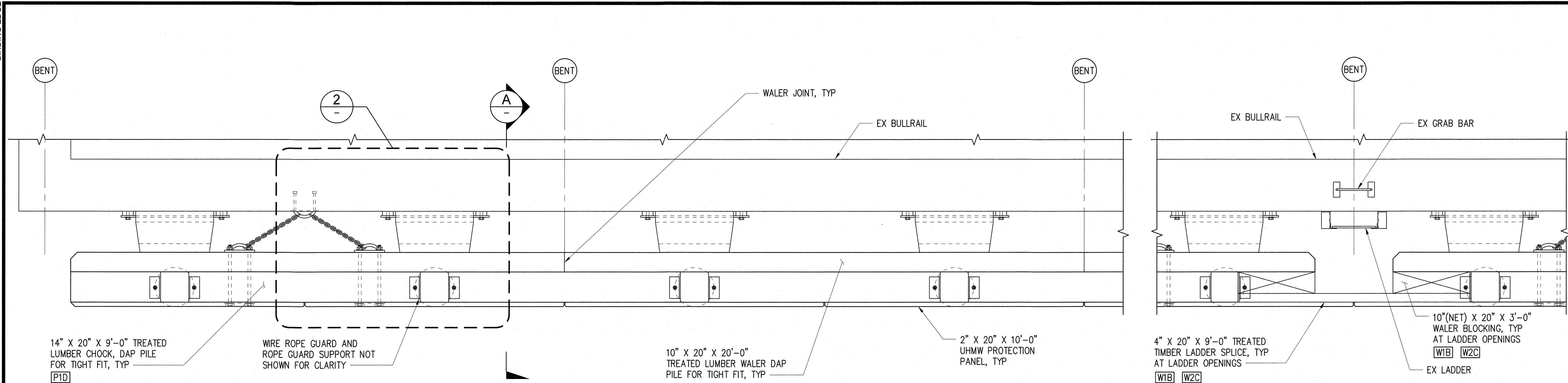
APM TERMINAL FENDER REPAIRS
FENDER REPAIR PLAN
3 OF 3

6562
S2.2
SH 06 OF 10

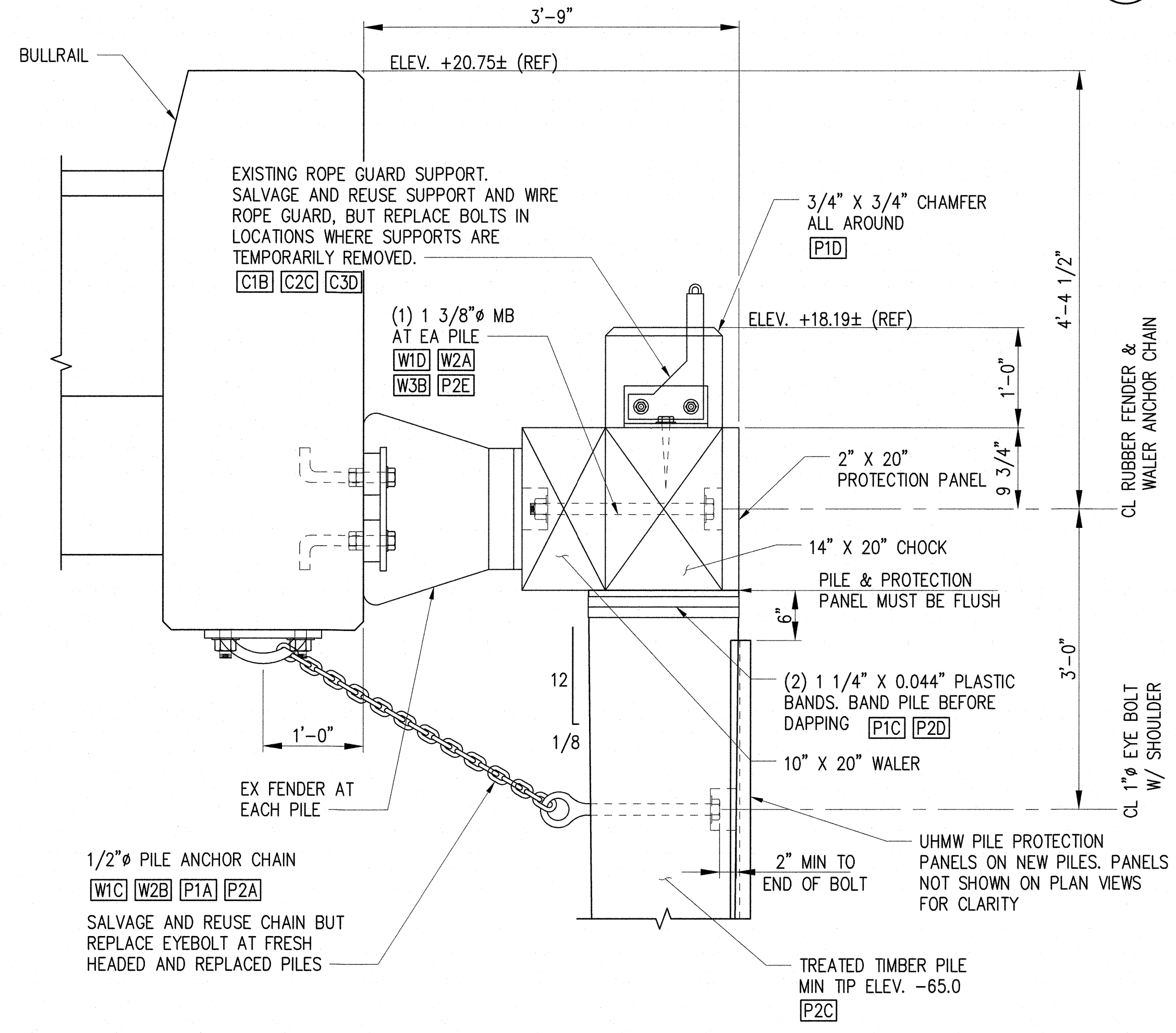
CONT/CONS: 070444
M. ID: 101068.01
PHASE: CONSTRUCTION

TOWNSHIP: 21N
RANGE: 3E
SECTION: 27
VERT: 1
DRAWING SCALE: AS NOTED

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

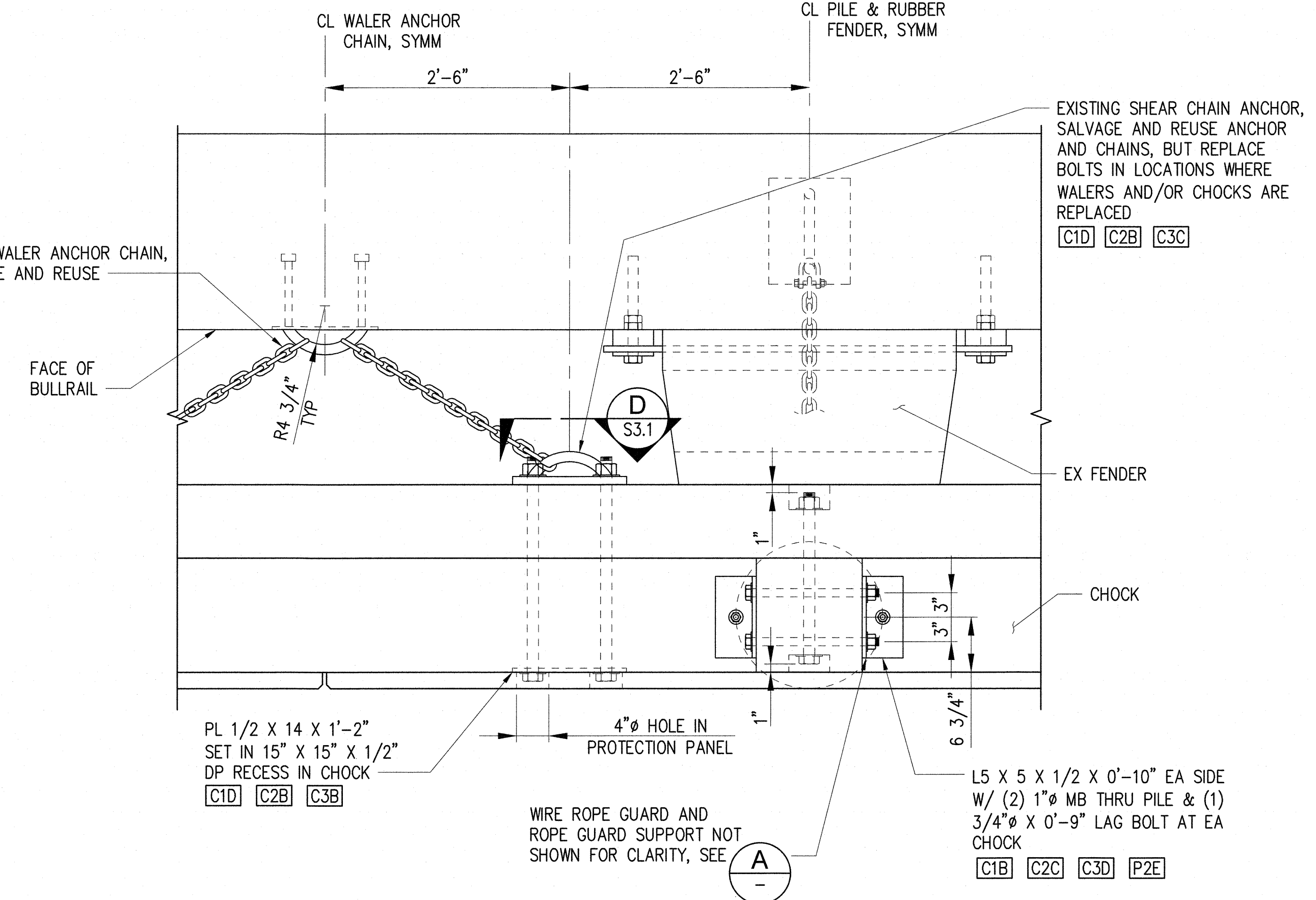


1 PLAN - FENDER SYSTEM PARTIAL PLAN
S4.1 SCALE: 1/2" = 1'-0"



A SECTION
S2.0, S3.0, S3.1, S4.0, S4.1 SCALE: 1" = 1'-0"

- NOTES:
1. THESE DETAILS ARE REPRODUCED FROM PORT RECORD DRAWINGS AND HAVE ONLY BEEN GENERALLY VERIFIED. THE CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS AT EACH SPECIFIC LOCATION PRIOR TO CUTTING OR DRILLING MATERIALS.
 2. SEE SHEETS S4.0 AND S4.1 FOR REPAIR NOTES. [XXX]



2 DETAIL
S3.0, S4.0 SCALE: 1" = 1'-0"

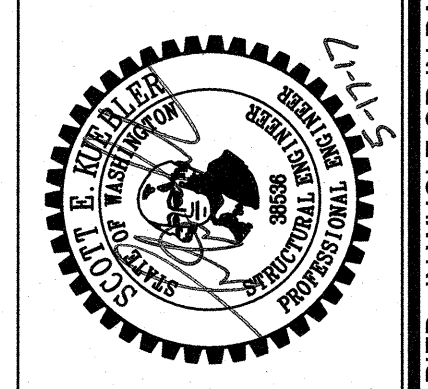
6562 S3.0 SH 07 OF 10	APM TERMINAL FENDER REPAIRS TYPICAL FENDER SYSTEM CONFIGURATION DETAILS 1 OF 2		APPROVED:	SEK 5/16/17
	CONT/CONS: 070444	TOWNSHIP: 21N	RANGE: 3E	SECTION: 27
M. ID: 101068.01	DATE-HRZ:	VERT:	PRINTED BY: tlemos May 17, 2017	DATE 5/16/17
PHASE: CONSTRUCTION	PARCEL:	DRAWING SCALE: AS NOTED	PORT ADDRESS: ONE SITCUM PLAZA	DATE 5/16/17
			TACOMA WA 98401-1837	DATE 5/16/17

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

Port of Tacoma
2407 North 31st Street, Suite 100
(253) 396-0150 Fax (253) 396-0162
P.O. BOX 1637 TACOMA, WA 98401 (253) 396-0411

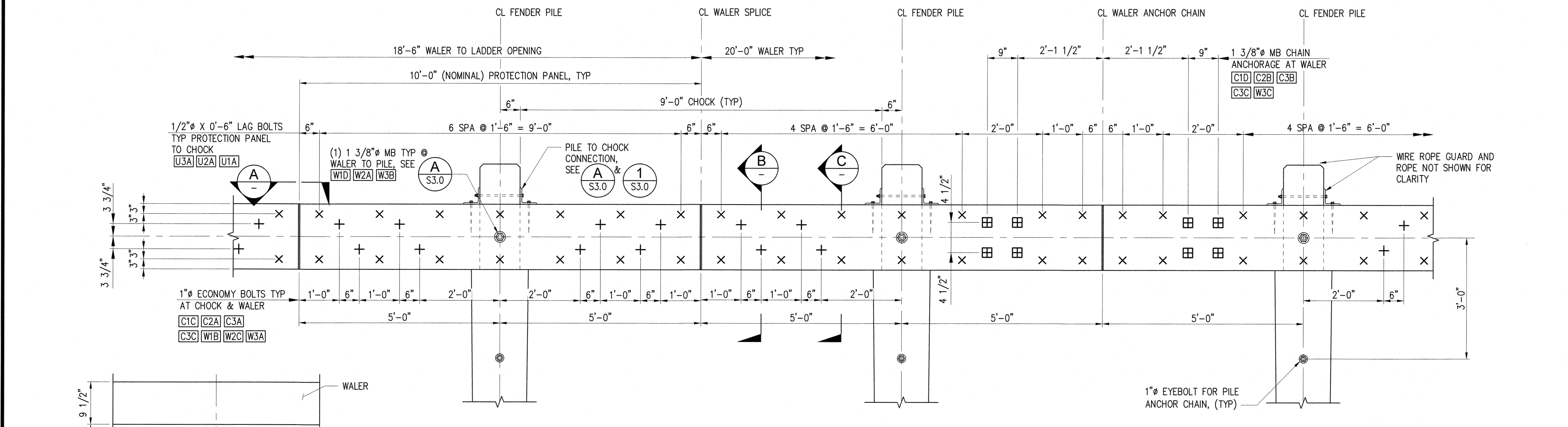
kpff

MARK: REVISION: BY: DATE: APPR:

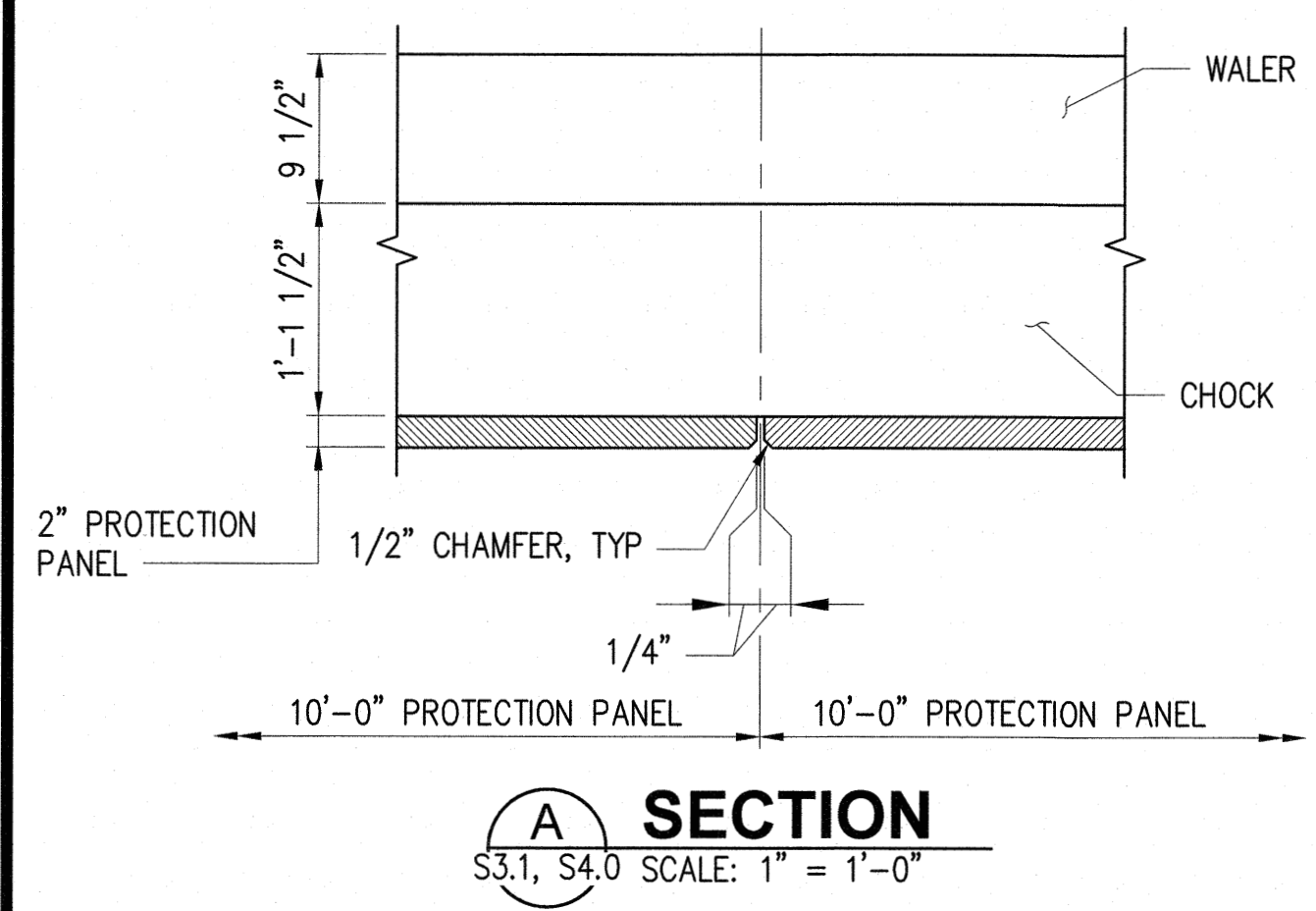


PORT OF TACOMA FILE: N120181600125 POT APM Fender Repair (drawings)current18_S3.1-TYP CONFIG 2

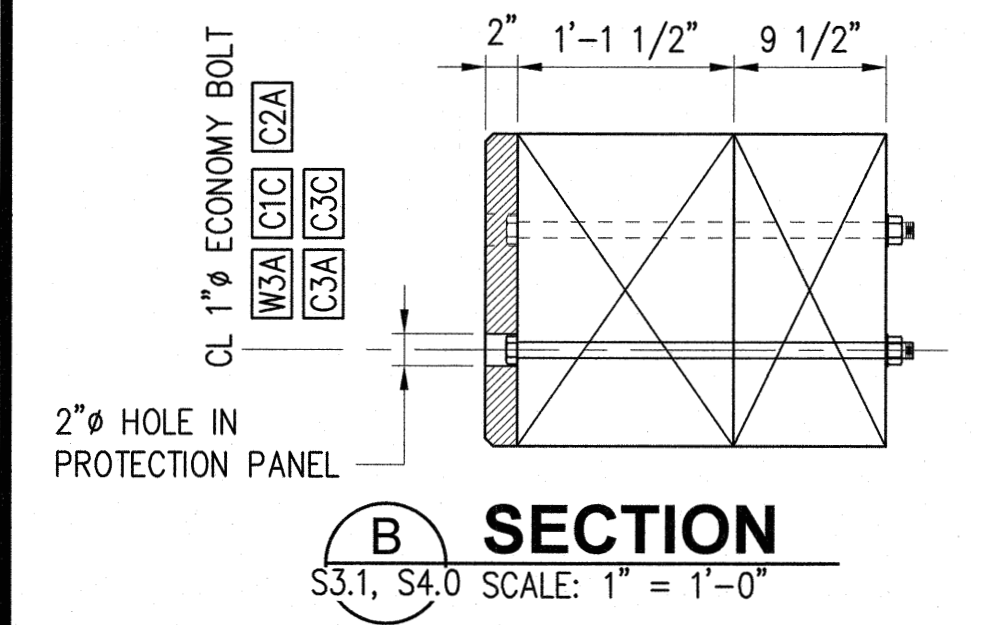
BINDING EDGE



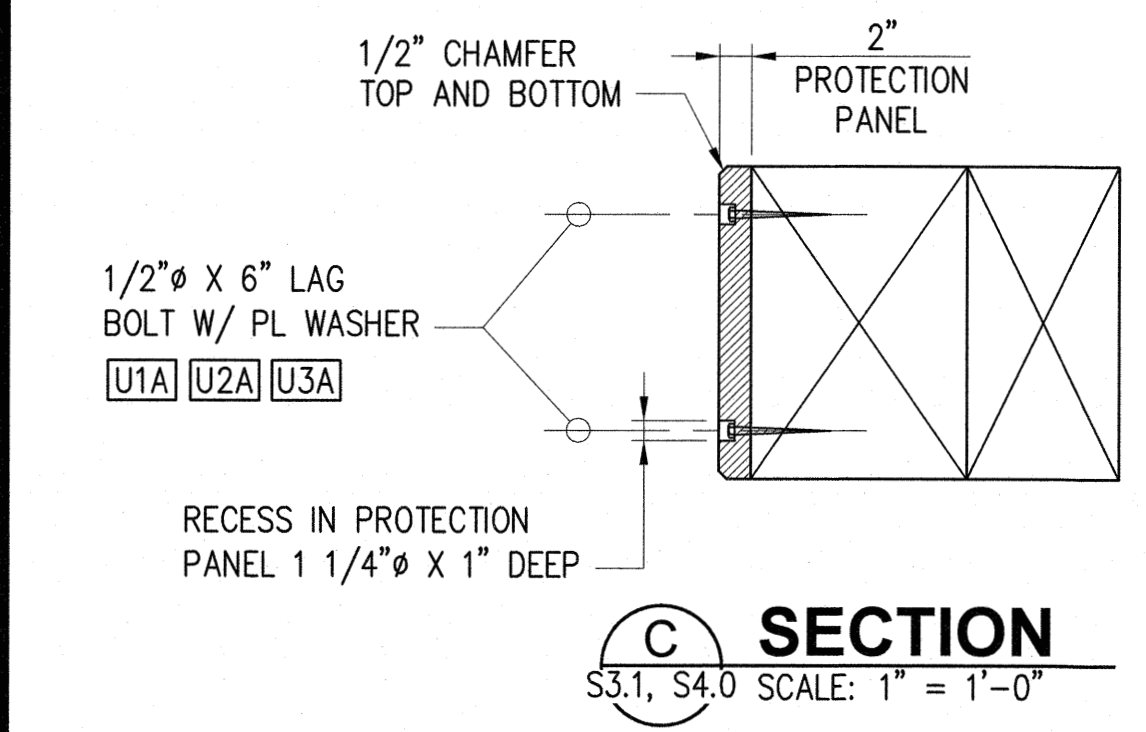
1 TYPICAL CONNECTION DETAIL - ELEVATION
S4.0, S4.1 SCALE: 3/4" = 1'-0"



A SECTION
S3.1, S4.0 SCALE: 1" = 1'-0"



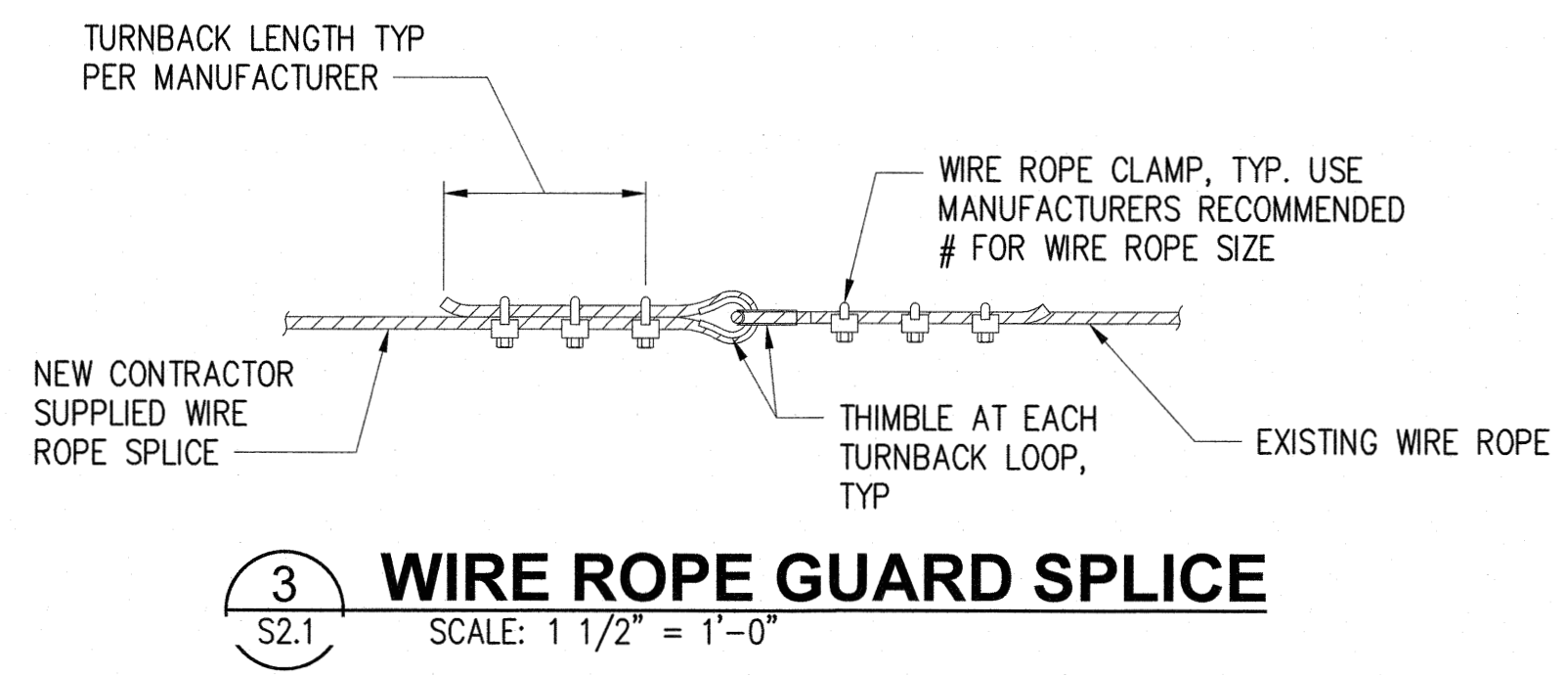
B SECTION
S3.1, S4.0 SCALE: 1" = 1'-0"



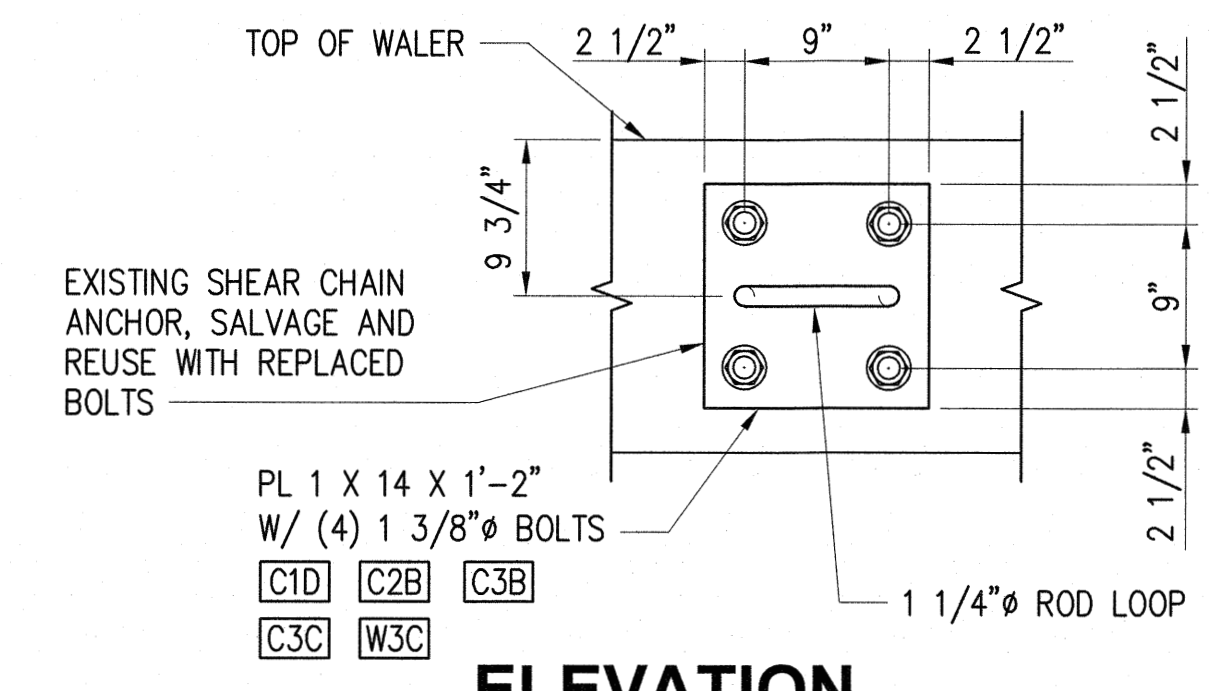
C SECTION
S3.1, S4.0 SCALE: 1" = 1'-0"

- LEGEND**
- × 1/2" LAG BOLT
 - + 1" MB
 - ⊙ 1" EYE BOLT
 - ⊞ 1 3/8" MB @ CHAIN ANCHORAGE
 - ⊙ 1 3/8" MB @ WALER

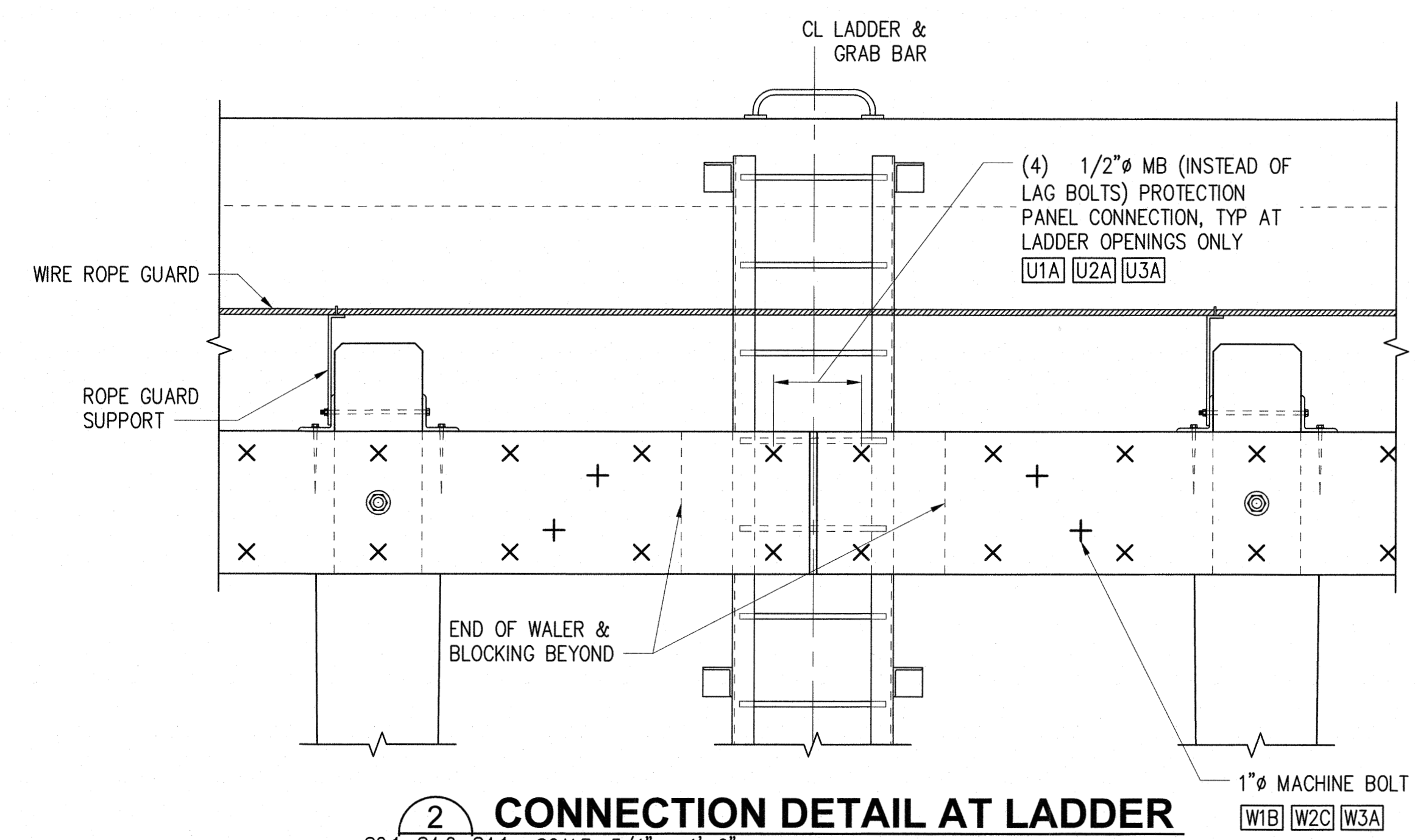
- NOTES:**
- THESE DETAILS ARE REPRODUCED FROM PORT RECORD DRAWINGS AND HAVE ONLY BEEN GENERALLY VERIFIED. THE CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS AT EACH SPECIFIC LOCATION PRIOR TO CUTTING OR DRILLING MATERIALS.
 - SEE SHEETS S4.0 AND S4.1 FOR REPAIR NOTES. [XXX]



3 WIRE ROPE GUARD SPLICE
S2.1 SCALE: 1 1/2" = 1'-0"



ELEVATION D CHAIN ANCHOR AT WALER
S3.0, S4.0, S4.1 SCALE: 1" = 1'-0"



2 CONNECTION DETAIL AT LADDER
S2.1, S4.0, S4.1 SCALE: 3/4" = 1'-0"

ISSUED FOR BID

2407 North 31st Street, Suite 100
Tacoma, WA 98401
(253) 996-0130 Fax (253) 996-0132

2407 North 31st Street, Suite 100
Tacoma, WA 98401
(253) 996-0130 Fax (253) 996-0132

APPROVED:	SEK	5/16/17	CHECKED BY:	DATE
	AWB	5/16/17	DIRECTOR ENG. DATE	DATE
	PRINTED BY:	tenions May 17, 2017	PORT ADDRESS: ONE SITCUM PLAZA	
		TACOMA, WA 98401-1837		

6562

S3.1

SH 08 OF 10

APM TERMINAL FENDER REPAIRS

TYPICAL FENDER SYSTEM CONFIGURATION

DETAILS 2 OF 2

CONTRACT/CONS: 070444

M. ID: 101068.01

PHASE: CONSTRUCTION

TOWNSHIP: 21N

DAT-HRZ:

RANGE: 3E

VERT:

SECTION: 27

PARCEL:

DRAWING SCALE: AS NOTED

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

UHMW PROTECTION PANEL REPAIR STEPS IPP

- U1. REMOVAL
- U1A) REMOVE LAG BOLTS AND PL WASHERS PER 1 S3.1 AND C S3.1 FOR PANEL SECTIONS AT LADDER OPENINGS, REMOVE MACHINE BOLTS PER 2 S3.1
- U1B) REMOVE PANEL.
- U2. FOR REINSTALLATION OF EXISTING PANEL
- U2A) INSTALL LAG BOLTS AND PL WASHERS PER 1 S3.1 AND C S3.1 FOR PANEL SECTIONS AT LADDER OPENINGS, INSTALL MACHINE BOLTS PER 2 S3.1
- U3. FOR INSTALLATION OF NEW 10' (NOM) PORT PROVIDED UHMW PANEL
- U3A) INSTALL PANEL W/ LAG BOLTS AND PL WASHER PER 1 S3.1 AND C S3.1 FOR PANEL SECTIONS AT LADDER OPENINGS, INSTALL MACHINE BOLTS PER 2 S3.1

QUANTITY SUMMARY

REPLACED UHMW PROTECTION PANELS	IPP>	16
REPLACED CHOCKS	RPC>	25

NOTES:

1. QUANTITY SUMMARY TABLES ON S4.0 AND S4.1 INDICATE THE NUMBER OF ITEMS TO BE REPLACED WITH PORT PROVIDED MATERIALS, AND THE NUMBER OF PILES TO BE FRESH HEADED. REMOVAL AND REINSTALLATION OF EXISTING ELEMENTS OF THE FENDER SYSTEM WILL BE REQUIRED, ARE NOT QUANTIFIED EXPLICITLY IN THESE TABLES, AND SHALL BE CONSIDERED IN THE CONTRACTOR'S BID.
2. REPAIR STEPS ARE PROVIDED AS A SUGGESTED MEANS FOR REPLACING THE INDICATED ITEMS AND ARE NOT INTENDED TO DICTATE CONTRACTOR MEANS AND METHODS OR REPRESENT ALL WORK REQUIRED FOR REPLACEMENT OF EACH ITEM. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE MEANS, METHODS AND EXTENT OF WORK NECESSARY TO REPLACE THE INDICATED ITEMS WITHOUT DAMAGE TO NEW ITEMS OR ITEMS TO REMAIN.

CHOCK REPAIR STEPS RPC

- C1. REMOVAL
- C1A) REMOVE CONNECTED PROTECTION PANELS PER STEPS U1A)– U1B).
- C1B) REMOVE PILE–TO–CHOCK CONNECTION ANGLE, WIRE ROPE GUARD, AND ROPE GUARD SUPPORTS AT EA END PER 2 S3.0 AND A S3.0
- C1C) REMOVE ECONOMY BOLTS PER 1 S3.1 AND B S3.1
- C1D) AT WALER CHAIN ANCHORAGE LOCATIONS, REMOVE PL 1/2 x 14 x 1'–2" AND SHEAR CHAIN ANCHOR PER 2 S3.0 AND MACHINE BOLTS PER 1 S3.1 AND D S3.1
- C1E) REMOVE CHOCK.
- C2. FOR REINSTALLATION OF EXISTING CHOCK (COORDINATE CHOCK INSTALLATION WITH INSTALLATION OF NEW OR REUSED WALER)
- C2A) INSTALL ECONOMY BOLTS PER 1 S3.1 AND B S3.1
- C2B) AT WALER CHAIN ANCHORAGE LOCATIONS, INSTALL PL 1/2 x 14 x1'–2" IN 1/2" DEEP RECESS IN CHOCK AND SHEAR CHAIN ANCHOR PER 2 S3.0 AND INSTALL BOLTS PER 1 S3.1 AND D S3.1
- C2C) INSTALL PILE–TO–CHOCK CONNECTION ANGLE, WIRE ROPE GUARD, AND ROPE GUARD SUPPORTS EA END OF CHOCK PER 2 S3.0 AND A S3.0
- C2D) INSTALL UHMW PROTECTION PANELS PER STEPS U2A) OR U3A) FOR EXISTING OR NEW PANELS, RESPECTIVELY.
- C3. FOR INSTALLATION OF NEW PORT PROVIDED CHOCK (COORDINATE CHOCK INSTALLATION WITH INSTALLATION OF NEW OR REUSED WALER)
- C3A) DRILL HOLES FOR ECONOMY BOLTS PER 1 S3.1 AND B S3.1
- C3B) AT WALER CHAIN ANCHORAGE LOCATIONS, CUT 15" x 15" x 1/2" DEEP RECESS IN CHOCK FOR PL 1/2 x 14 x 1'–2" PER 2 S3.0. DRILL HOLES FOR BOLTS PER D S3.1 AND 1 S3.1
- C3C) INSTALL ECONOMY BOLTS PER 1 S3.1 AND B S3.1 AT WALER CHAIN ANCHORAGE LOCATIONS, INSTALL BOLTS, PL 1/2x14x1'–2", AND SHEAR CHAIN ANCHOR PER D S3.1 AND 1 S3.1
- C3D) INSTALL PILE–TO–CHOCK CONNECTION ANGLE, WIRE ROPE GUARD, AND ROPE GUARD SUPPORTS AT EA END OF CHOCK PER 2 S3.0 AND A S3.0
- C3E) INSTALL UHMW PROTECTION PANELS PER STEPS U2A) OR U3A) FOR EXISTING OR NEW PANELS, RESPECTIVELY

ISSUED FOR BID

6562

S4.0

SH 09 OF 10

CONT/CONS: 070444

M. ID: 101088.01

PHASE: CONSTRUCTION

APM TERMINAL FENDER REPAIRS

FENDER SYSTEM REPAIR NOTES

1 OF 2

TOWNSHIP: 21N

RANGE: 3E

DAT–HRZ:

SECTION: 27

VERT:

DRAWING SCALE: AS NOTED

APPROVED:

5/16/17

CHECKED BY: DATE

AWB 5/16/17

DIRECTOR ENG. DATE

PRINTED BY: tiemmons May 17, 2017

PORT ADDRESS: ONE SITCUM PLAZA

TACOMA WA 98401–1837

Port of Tacoma

2407 North 31st Street, Suite 100

Tacoma, WA 98407

(253) 396-0150 Fax (253) 396-0162

P.O. BOX 1837 TACOMA, WA 98407 (253)353-5841

kpff

2407 North 31st Street, Suite 100

Tacoma, WA 98407

(253) 396-0150 Fax (253) 396-0162

REVISION:

MARK:

BY:

DATE:

APPR:

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

WALER REPAIR STEPS RPW RPB RLS

- W1. REMOVAL

W1A

REMOVE CONNECTED CHOCKS PER STEPS C1A – C1E ON SHEET S4.0.

W1B

FOR WALES AT LADDER OPENINGS, REMOVE MACHINE BOLTS CONNECTING TIMBER LADDER SPLICE, WALER BLOCKING, AND WALER PER

1

S3.0

,

1

S3.1

, AND

2

S3.1

. REMOVE TIMBER LADDER SPLICE AND
WALER BLOCKING.

W1C

AT EACH PILE CONNECTED TO WALER, DISCONNECT COUPLING LINK ON PILE ANCHOR CHAIN FROM EYE BOLT PER

A

S3.0

.

W1D

AT EACH PILE CONNECTED TO WALER, REMOVE BOLT THROUGH PILE AND WALER PER

1

S3.1

 AND

A

S3.0

.
DO NOT DAMAGE PILES OR FENDERS WHEN REMOVING PILE-TO-WALER CONNECTION BOLTS.

W1E

REMOVE WALER.
- W2. FOR REINSTALLATION OF EXISTING WALER (COORDINATE WALER INSTALATION W/ INSTALATION OF NEW OR REUSED CHOCKS)

W2A

AT EACH PILE TO BE CONNECTED TO WALER, INSTALL BOLT THROUGH DAPPED PILE HEAD AND WALER PER

A

S3.0

 AND

1

S3.1

.

W2B

RECONNECT COUPLING LINK ON PILE ANCHOR CHAIN TO EYE BOLT PER

A

S3.0

.

W2C

FOR WALES AT LADDER OPENINGS, ATTACH TIMBER LADDER SPLICE AND WALER BLOCKING TO WALER WITH MACHINE BOLTS PER

1

S3.0

,

1

S3.1

 AND

2

S3.1

. FOR NEW TIMBER LADDER SPLICES OR WALER BLOCKING, DRILL
HOLES FOR BOLTS TO MATCH HOLES IN EXISTING WALER.

W2D

INSTALL CHOCKS TO WALER PER STEPS C2A – C2D OR C3A – C3D ON SHEET S4.0 FOR EXISTING OR NEW CHOCKS, RESPECTIVELY.

W2E

INSTALL UHMW PROTECTION PANELS PER STEPS U2A OR U3A ON SHEET S4.0 FOR EXISTING OR NEW UHMW PROTECTION PANELS, RESPECTIVELY.
- W3. FOR INSTALLATION OF NEW PORT PROVIDED WALER (COORDINATE WALER INSTALLATION W/ INSTALLATION OF NEW OR REUSED CHOCKS)

W3A

DRILL HOLES FOR BOLTS PER

1

S3.1

 AND

B

S3.1

. FOR WALES AT LOCATIONS
WHERE EXISTING CHOCKS ARE TO BE MOUNTED TO NEW WALER, MATCH BOLT HOLES TO EXISTING CHOCKS.

W3B

DRILL HOLES FOR BOLT AT DAPPED PILE HEAD TO WALER CONNECTION LOCATIONS PER

1

S3.1

 AND

A

S3.0

.

W3C

AT WALER CHAIN ANCHORAGE LOCATIONS, DRILL HOLES FOR BOLTS PER

1

S3.1

 AND

D

S3.1

. FOR
WALES AT LOCATIONS WHERE EXISTING CHOCKS ARE TO BE MOUNTED TO NEW WALER, MATCH BOLT HOLES TO EXISTING CHOCKS.

W3D

INSTALL WALER PER STEPS W2A – W2E

PILE REPAIR STEPS FHP RPP

- P1. TO FRESH HEAD AN EXISTING TIMBER FENDER PILE

P1A

REMOVE CONNECTED WALER, CHOCKS, AND UHMW PROTECTION PANELS PER STEPS W1A – W1E. FOR PILES AT LADDER OPENINGS, REMOVE WALER BLOCKING AND TIMBER LADDER SPLICE PER STEP W1B. DETACH PILE ANCHOR CHAIN PER

A

S3.0

. FOR PILES W/ UHMW PROTECTION PANELS, REMOVE PANELS.

P1B

PULL UP EXISTING PILE TO BE FRESH HEADED APPROXIMATELY TWO FEET AND REMOVE DAMAGED PILE TOP.

P1C

BAND PILE WITH (2) PLASTIC BANDS PER

A

S3.0

 TO PREVENT SPLITTING WHEN DAPPING
NEW PILE HEAD.

P1D

DAP AND CHAMFER NEW PILE HEAD FOR TIGHT FIT BETWEEN CHOCKS AND WALES PER

1

S3.0

AND

A

S3.0

. TREAT NEW PILE HEAD PER SPECIFICATIONS.

P1E

RECONNECT PILE ANCHOR CHAIN, WALES, CHOCKS, ROPE GUARD SUPPORTS AND PROTECTION PANELS WITH NEW HARDWARE PER STEPS W2A – W2E OR W3A – W3D FOR REINSTALLATION OF EXISTING WALER OR INSTALLATION OF NEW WALER, RESPECTIVELY.

P1F

REATTACH PILE UHMW PROTECTION PANEL W/ NEW LAG BOLTS.
- P2. TO REMOVE AND INSTALL NEW PORT PROVIDED TREATED TIMBER FENDER PILE

P2A

REMOVE CONNECTED WALER, CHOCKS, AND UHMW PROTECTION PANELS PER STEPS W1A – W1E. FOR PILES AT LADDER OPENINGS, REMOVE WALER BLOCKING AND TIMBER LADDER SPLICE PER STEP W1B. DETACH PILE ANCHOR CHAIR PER

A

S3.0

.

P2B

REMOVE AND DISPOSE OF EXISTING FENDER PILE PER SPECIFICATIONS.

P2C

INSTALL NEW TREATED TIMBER FENDER PILE TO MINIMUM TIP ELEVATION PER

A

S3.0

. SEE
SPECIFICATIONS FOR INSTALLATION REQUIREMENTS.

P2D

BAND AND DAP INSTALLED FENDER PILE PER STEPS P1C – P1D.

P2E

DRILL HOLE THROUGH PILE HEAD FOR BOLT AT PILE HEAD-TO-WALER CONNECTION PER

A

S3.0

 AND
DRILL HOLES FOR BOLTS THROUGH PILE HEAD FOR PILE TO CHOCK CONNECTION PER

2

S3.0

.

P2F

CONNECT PILE ANCHOR CHAIN, WALES, CHOCKS, ROPE GUARD SUPPORT, AND PROTECTION PANELS WITH NEW HARDWARE PER STEPS W2A – W2E OR W3A – W3D FOR REINSTALLATION OF EXISTING WALER OR INSTALLATION OF NEW WALER, RESPECTIVELY.

P2G

ATTACH PORT SUPPLIED UHMW PROTECTION PANEL.

QUANTITY SUMMARY

REPLACED WALES	RPW	23
REPLACED BLOCKING (2 EACH)	RPB	5
REPLACED LADDER SPLICES	RLS	5
REPLACED PILES	RPP	33
FRESH HEAD PILES	FHP	39

NOTES:

1. QUANTITY SUMMARY TABLES ON S4.0 AND S4.1 INDICATE THE NUMBER OF ITEMS TO BE REPLACED WITH PORT PROVIDED MATERIALS, AND THE NUMBER OF PILES TO BE FRESH HEADED. REMOVAL AND REINSTALLATION OF EXISTING ELEMENTS OF THE FENDER SYSTEM WILL BE REQUIRED, ARE NOT QUANTIFIED EXPLICITLY IN THESE TABLES, AND SHALL BE CONSIDERED IN THE CONTRACTOR'S BID.
2. REPAIR STEPS ARE PROVIDED AS A SUGGESTED MEANS FOR REPLACING THE INDICATED ITEMS AND ARE NOT INTENDED TO DICTATE CONTRACTOR MEANS AND METHODS OR REPRESENT ALL WORK REQUIRED FOR REPLACEMENT OF EACH ITEM. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE MEANS, METHODS AND EXTENT OF WORK NECESSARY TO REPLACE THE INDICATED ITEMS WITHOUT DAMAGE TO NEW ITEMS OR ITEMS TO REMAIN.

ISSUED FOR BID

6562 S4.1 SH 10 OF 10	APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>SEK CHECKED BY AWB DIRECTOR ENG. DATE PRINTED BY: tlemons MAY 17, 2017 PORT ADDRESS: ONE SITCUM PLAZA TACOMA WA 98401-1837</div>	<div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>	<div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>	<div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
	TOWNSHIP: 21N DAT-HRZ: PARCEL:	RANGE: 3E VERT:	SECTION: 27	DRAWING SCALE: AS NOTED								
CONT/CONS: 070444 M. ID: 101068.01 PHASE: CONSTRUCTION	THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION				<div><div>6562</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				<div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>			
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div><div>5/16/17</div></div> <div>DATE DATE DATE DATE</div>				
APM TERMINAL FENDER REPAIRS FENDER SYSTEM REPAIR NOTES 2 OF 2				APPROVED: <div><div>5/16/17</div><div>5/16/17</div><div>5/16/1</div></div>								