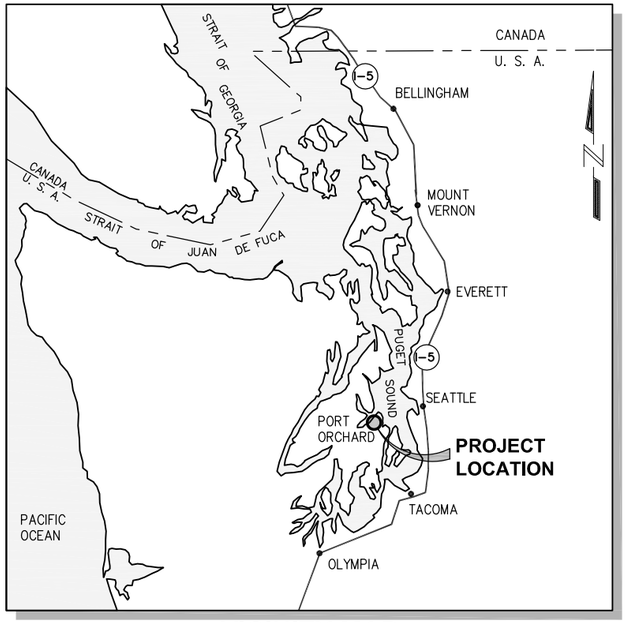
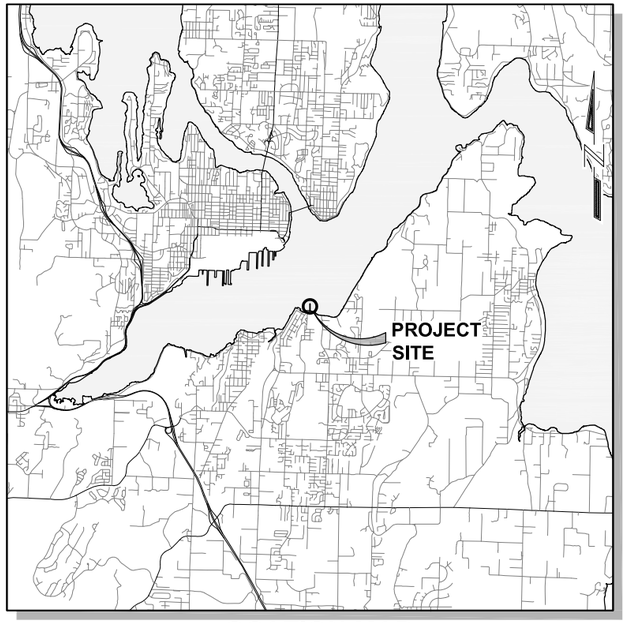
KITSAP TRANSIT
ANNAPOLIS FERRY DOCK FENDERS

ISSUED FOR BID

JULY 2021



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

ANNAPOLIS DOCK

PORTIONS OF GOVERNMENT LOT 5 AND THE NE QUARTER OF SECTION 25, TOWNSHIP 24 N, RANGE 01 E, W.M. IN THE COUNTY OF KITSAP, WASHINGTON.

LATITUDE: 47° 33' 49"
LONGITUDE 122° 37' 19"

TIDAL WATER LEVELS (FT)

DATUM	MLLW
MEAN HIGHER HIGH WATER (MHHW)	+11.74
MEAN HIGH WATER (MHW)	+10.86
MEAN LOW WATER (MLW)	+2.84
MEAN LOWER LOW WATER (MLLW)	0.00

NOAA TIDAL STATION 9445958, BREMERTON, WA

SHEET INDEX

DIGITAL SIGNATURE:
Todd Belsick
Todd Belsick (Jul 1, 2021 10:32 PDT)

THIS DRAWING SET WAS CREATED AS AN ELECTRONIC DOCUMENT. IF THE ELECTRONIC DOCUMENT DOES NOT INCLUDE A VERIFIABLE DIGITAL SIGNATURE IN THE BOX ABOVE, PLEASE CONTACT THE ENGINEER OF RECORD FOR THE ORIGINAL CERTIFIED ELECTRONIC DOCUMENT.

PND ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

TODD WILLIAM BELSICK — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER
7/1/2021

REV	DATE	DESCRIPTION

REVISIONS

ISSUED FOR BID

PROJECT: KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS

TITLE: COVER AND SHEET INDEX

DESIGNED BY:	CK	PROJECT NO:	204049	SHEET NO: G1.01
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

7/1/21 - GDEAN - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 - G1.01.DWG

GENERAL NOTES

The following General Notes are applicable and shall be considered part of this specification.

APPLICABLE CODES AND STANDARDS

1. Unified Facilities Criteria 4-159-03 Design: Moorings.
2. Unified Facilities Criteria 4-152-07N Design: Small Craft Berthing Facilities.
3. Unified Facilities Criteria 4-152-01 Design: Piers and Wharves.
4. International Code Council (ICC) "International Building Code", 2015 Edition.
5. American Association of State Highway, Transportation Officials (AASHTO), LRFD Bridge Design Specifications, 4th Edition, with 2008 Interim Revisions.
6. American Society of Civil Engineers "Minimum Design Loads for Buildings and Other Structures" (ASCE 7-10)
7. American Society for Testing and Materials (ASTM) Standards, current edition.
8. American Institute of Steel Construction (AISC), "Manual of Steel Construction, Thirteenth Edition".
9. American Welding Society (AWS), "D1.1 Structural Welding Code – Steel, current edition".
10. American Welding Society (AWS), "D1.2 Structural Welding Code – Aluminum, current edition".
11. American Bureau of Shipping (ABS), "Rules for Building and Classing Offshore Installations".

The information contained in these General Notes is in addition to the details and notes provided on the individual plan sheets. In case of conflict between notation in the above references, these General Notes, and notes and details on individual sheets, the following priority shall be followed:

1. All project permit requirements.
2. Notes on individual plan sheets.
3. Details and callouts on individual plan sheets.
4. These General Notes.
5. Local Codes.
6. The specifications and standards listed above in order of appearance.

DESIGN CRITERIA

DEAD LOAD
Weight of all materials of construction.

LIVE LOAD
100 PSF Uniform all walking surfaces
500 LB Point Load

GROUND SNOW LOAD
15 PSF Uniform
Exposure Factor: C

WIND LOAD
100 MPH, Exposure C (3 Sec Gusts)

WAVE LOAD
Significant Wave Height, H_S = 4.0 FT
Significant Wave Period, T_S = 3.7 SEC
Design Wave Height, H_{10}= 5.1 FT
Vessel Wake Wave Height, H_W= 2.0 FT
Vessel Wake Wave Period, T_W = 3.7 SEC

CURRENT LOAD
Current Velocity: V_C = 0.1 Knots Parallel to bathymetry contours.

DESIGN VESSELS

Vessel Charateristic	Waterman	Rich Passage/ Reliant
Length	70'-0"	78'-0"
Beam	26'-0"	28'-0"
Displacement (Light Ship)	130,000 lbs	125,000 lbs
Freeboard at Door (Light)	4'-7"	4'-4"
Freeboard at Door (Laden)	4'-1"	3'-10"
Max. Draft	4'-3"	7'-7"
Profile Height	16'-0"	16'-0"
Berthing Speed (Normal to berth)	1 ft/s	1 ft/s

CATHODIC PROTECTION
Cathodic protection provided by galvanization. After 10 years, Owner shall inspect and provide anodes, if necessary.

MATERIALS AND CONSTRUCTION

STRUCTURAL STEEL
Wide Flange Shapes shall conform to A992 Grade 50.
Plate shall conform to A572 Grade 50, unless otherwise noted.
Flatbar shall conform to ASTM A36.
Rectangular and Square HSS shall conform to ASTM A500 Grade B/C.
Pipe sections with 12-inches O.D. or less shall conform to ASTM A53 Grade B, Type E or S.
Angles and Channels shall conform to ASTM A572 Grade 50 at a minimum.

GALVANIZING
All steel shall be hot-dipped galvanized per ASTM A123 or A153 after fabrication unless otherwise noted.

SPRAY METALIZING
Spray metalizing may be used as an alternative to hot-dip galvanizing.

COATING REPAIR
Damaged galvanized coatings shall be repaired by using the hot-stick method, followed by a brush applied, two coats of Zinc rich paint, ZRC or equal (cold galvanize repair). Total thickness of repair coating shall be 12 mils.

BOLTS AND OTHER HARDWARE
All connecting bolts for steel to steel shall be ASTM A325 with threads excluded from the shear plane. All steel to concrete, anchor bolts, and threaded rods shall be ASTM F1554, Grade 105, or as specified on the drawings. All other bolts shall be ASTM A307 with heavy hex nuts or as otherwise shown on the drawings. All bolts shall be galvanized, unless otherwise noted. All stainless steel hardware shall be Grade 316. Threaded studs shall be Nelson CPL Partially Threaded Studs or engineer-approved equal. Studs shall be CJP welded to the base metal before coating with weld profile ground flush. Washers shall be installed at each end of all hardware.

Thru-rods and tie-rods shall be A193 B8M Class 2, 316 stainless with corresponding nuts and washers. Thin plastic washers shall be provided between stainless washers and galvanized surfaces.

EPOXY ANCHORS
All epoxy anchors shall be DEWALT Pure 100+ adhesive, or approved equal, and installed per manufacturer's recommendations, unless otherwise noted.

RUBBER
Rubber material shall be new neoprene or natural rubber with a minimum tensile strength of 2,300 psi (26 MPa), and a Shore A durometer hardness of 20 ±5. Rubber shall be UV resistant and suitable for the marine environment. Color shall be black.

STRUCTURAL ALUMINUM
Aluminum hollow structural sections and angles shall conform to 6061-T6.
Aluminum plate and flat bar shall conform to 5086-T116.
Aluminum pipe shall conform to 6063-T6.

DECK GRATING
1" Deep Duragrid R-6200 pedestrian deck grating with 60% open space for light transmission shall be ADA compliant. The top shall have an integrally applied non-skid, slip resistant surface by Strongwell or approved substitute.

The color shall be light gray to match existing grating on Annapolis Ferry Dock.

NON-SLIP SURFACE
All non-slip/non-skid walking surfaces noted shall be thermal sprayed to obtain a slip-resistant surface. Prepare surface and apply per manufacturer's recommendations. Coating thickness shall be 10 mils minimum. Seal and top coat per manufacturer's recommendations. Submit samples of surface texture for approval to Engineer.

FLOATATION POLYTUBS
Floatation tubs (Polytubs) used to provide required supplemental floatation shall be Premier Materials Technology (Manufactured by ACE Roto-Mold) (800-262-2275) or Engineer-approved equivalent. Buy America requirements apply.

Polytub encasement shall provide 100% protection to all surfaces of the flotation material and allow zero water to enter the unit and shall be 100% virgin grade linear low density polyethylene, black in color, with a nominal wall thickness of 0.150 inches and a minimum wall thickness of 0.125 inches. The encasement shall meet the ASTM 1998D-04 Falling Dart Test to assure the material quality and molding process. The encasement shall have the following minimum characteristics:
1. Density per ASTM D-1505: 0.937 g/cc
2. Tensile strength per ASTM D-638: 2750 psi
3. Flexural modulus per ASTM D-790: 109,000 psi

Polytub floatation material shall be 100% virgin grade polystyrene, expanded in-place inside the encasement, with a density of 0.8 to 0.937 g/cc based on ASTM D-1505. Floatation material shall not sink or contaminate the water if the encasement is punctured. Material shall meet the Seven Day Hunt Absorption Test of less than 3.0 lbs per cubic foot water absorption in seven days per the test requirements.

Units shall be secured to the concrete float in a manner to hold them in place without being dislodged by the wind and wave conditions stated in the Design Criteria. Each unit shall have a minimum of six molded mounting slots with 1.50-inch thick mounting flanges available for necessary mounting hardware.

The Polytub manufacturer shall furnish test results for each size furnished showing wall thickness, water absorption, falling dart test, and certified buoyancy rating. The manufacturer shall provide a minimum of 15-year warranty with the first 10 years non-prorated.

SPECIAL INSPECTION SCHEDULE

ITEM	CI	PI	REFERENCE STANDARD	IBC 2015 REFERENCE
GENERAL:				
PREFABRICATED ITEMS		X		1704.2
POST-INSTALLED ANCHORS:				
GROUTED ANCHORS	X			1910.1
ADHESIVE ANCHORS	X			1910.1
MECHANICAL ANCHORS	X			1910.1
STEEL:				
HIGH-STRENGTH BOLTS, NUTS, AND WASHER MATERIALS		X	ASTM AS NOTED, AISC 360 A3.3	
BEARING TYPE CONNECTIONS		X	AISC 360 M2.5	1905.2
STRUCTURAL STEEL MATERIALS		X	ASTM A36, A568, AS NOTED	
WELD FILLER MATERIALS		X	AISC 360 A3.5	
CP & PP GROOVE WELDS	X		AWS D1.1	1705.2.2.1
MULTI-PASS FILLET WELDS	X		AWS D1.1	1705.2.2.1
SINGLE PASS FILLET WELDS < 5/16"		X	AWS D1.1	1705.2.2.1
SINGLE PASS FILLET WELDS > 5/16"	X		AWS D1.1	1705.2.2.1

INSPECTION SCHEDULE NOTES
1. Items marked with an "X" indicate whether the inspection is continuous or periodic as defined in the IBC section 1702.1. For items not marked with an "X" comply with IBC chapter 17.
2. CI = Continuous Inspection
3. PI = Periodic Inspection
4. Testing and inspection reports shall be submitted to the Engineer.
5. See Tables 1704.5.1 and 1704.5.3 for level 1 and level 2 special inspections, respectively.
6. Special inspector shall be paid by Contractor.

SUPPLEMENTAL INFORMATION

SUBMITTALS
The following is a partial list of required submittals for this project. The Engineer may require additional submittals.

1. Material certifications for all steel and aluminum structural members and fasteners. Material certifications shall be submitted for Engineer review prior to fabrication. Contractor is responsible for assuring all material certifications conform to the specifications.
2. Coating certification for all steel.
3. Steel coating repair methods.
4. AWS Weld Procedure Specifications for all welding.
5. AWS Welder Qualification records for welders working on this project.
6. Fabrication shop drawings.
7. Fender shop drawings, rubber material certifications.
8. UHMW (Ultra-High-Molecular-Weight) Polyethylene: Submit Manufacturer's published literature for specific products along with fabrication shop drawings for each type of UHMW piece.
9. Grating shop drawings, manufacturer's specifications, and sample
10. Floatation tub shop drawings and manufacturer's specifications
11. Quality control plan and list of contacts.

AS-BUILT RECORDS

The Contractor shall maintain an updated set of red-line as-built drawings at the project site. As-built drawings shall be submitted upon request to the Engineer at anytime throughout the project and upon substantial completion.

ISSUED FOR BID

PND ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

CODY WILLIAM BESIAK — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER
7/1/2021

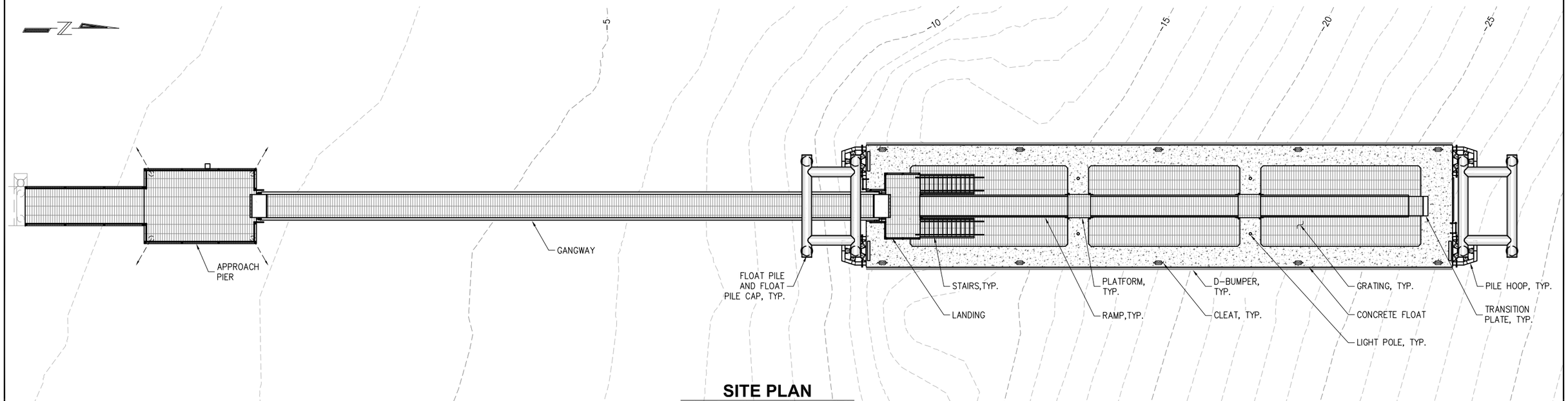
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS**

TITLE: **GENERAL NOTES**

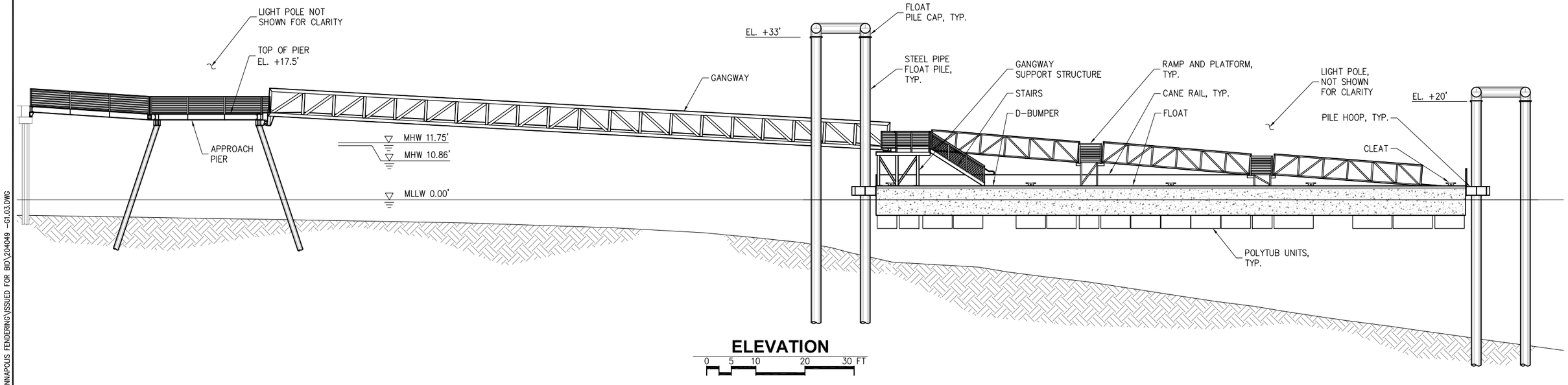
DESIGNED BY:	CK	PROJECT NO:	204049	SHEET NO: G1.02
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

6/30/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 -G1.02.DWG



SITE PLAN

0 5 10 20 30 FT



ELEVATION

0 5 10 20 30 FT

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

TODD WILLIAM BELSTOCK — 39312 — REGISTERED PROFESSIONAL ENGINEER

7/1/2021

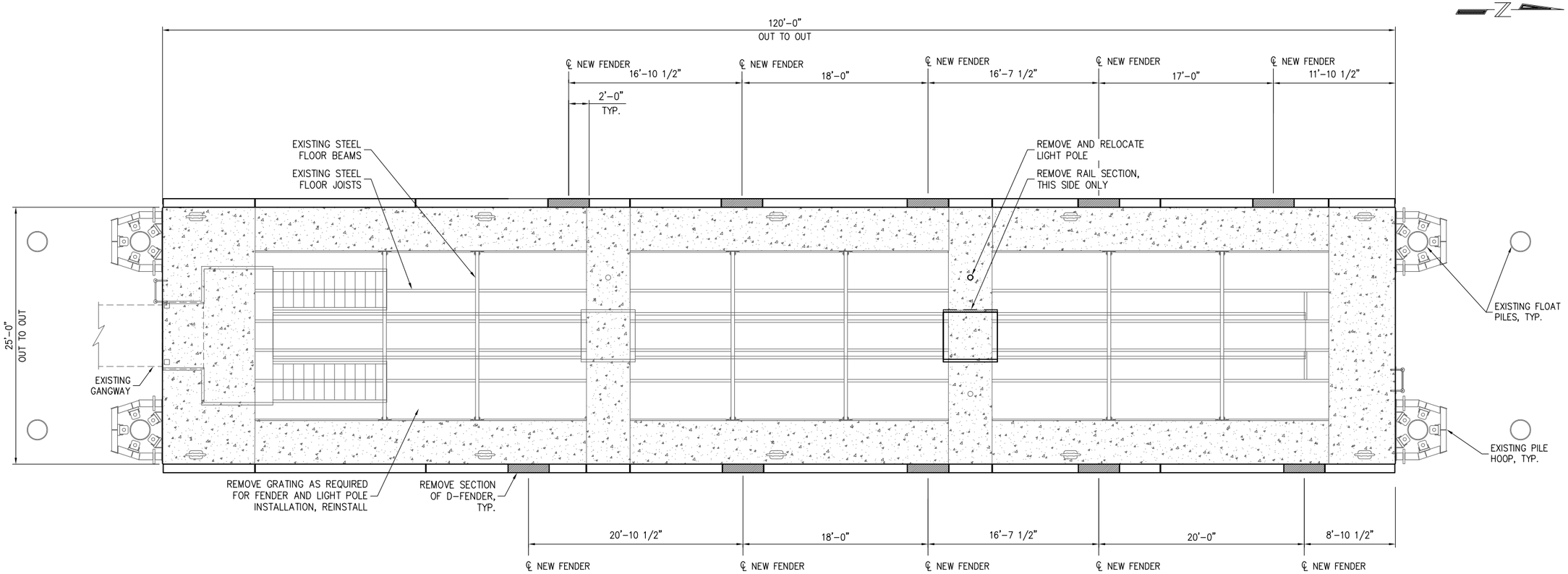
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS**

TITLE: **EXISTING SITE PLAN AND ELEVATION**

DESIGNED BY:	CK	PROJECT NO:	204049	SHEET NO:	G1.03
DRAWN BY:	WL	DATE:	JULY 2021		
CHECKED BY:	JO	SCALE:	NOTED		

6/22/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 - G1.03.DWG



NOTES:
1. GANGWAY, PLATFORMS, AND RAILING SHOWN SCHEMATICALLY ONLY.
2. SEE REFERENCE DRAWINGS FOR STRUCTURAL AS-BUILTS OF EXISTING FLOAT AND RAMPS.

DEMOLITION PLAN

0 2 4 8 12 16 FT.

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

JOHN WILLIAM BELSICK — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER
7/1/2021

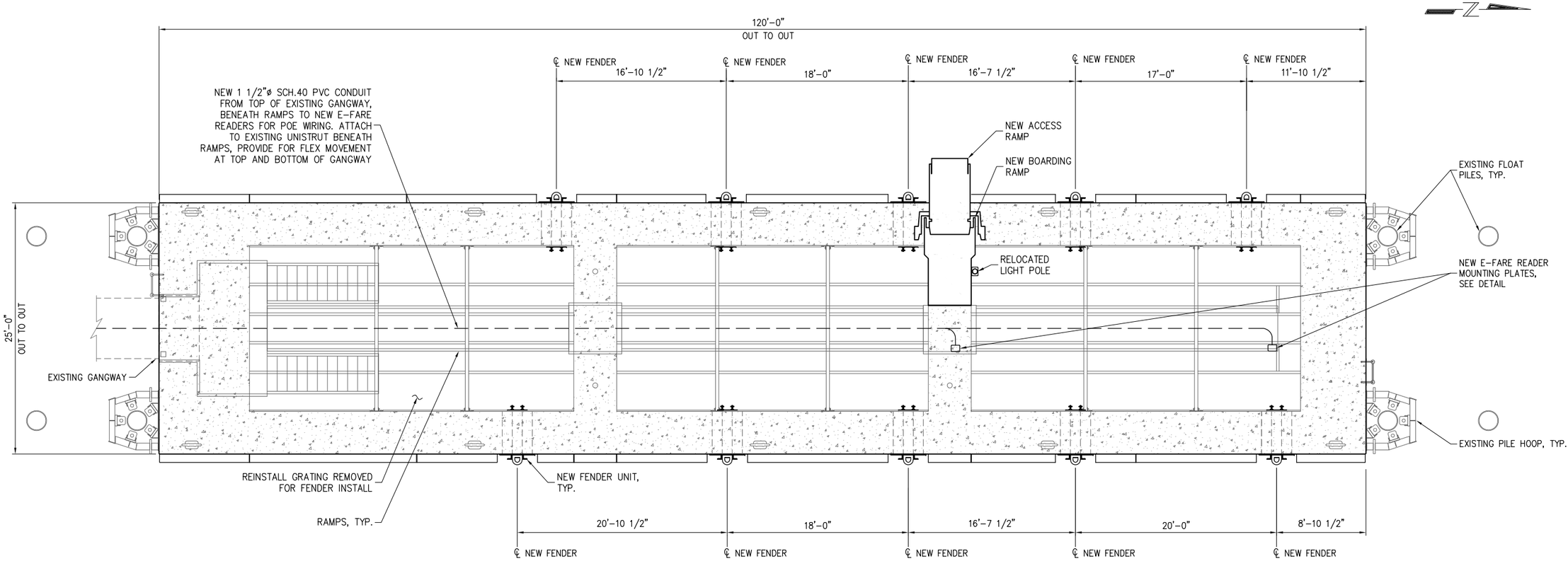
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT:
KITSAP TRANSIT
ANNAPOLIS FERRY DOCK FENDERS

TITLE:
DEMOLITION PLAN

DESIGNED BY:	CK	PROJECT NO:	204049	SHEET NO: D1.01
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

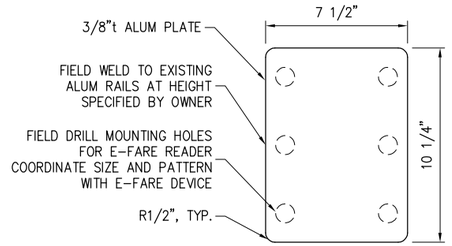
6/29/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 -D1.01.DWG



NOTES:
1. GANGWAY, PLATFORMS, AND RAILING SHOWN SCHEMATICALLY ONLY.
2. SEE REFERENCE DRAWINGS FOR STRUCTURAL AS-BUILTS OF EXISTING FLOAT AND RAMPS.
3. ADD SUPPLEMENTAL FLOATATION TO COMPENSATE FOR WEIGHT OF NEW FENDERS AND BOARDING SYSTEM. SEE S3.01.

NEW LAYOUT PLAN

0 2 4 8 12 16 FT.



MOUNTING PLATE DETAIL

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

CHRISTOPHER WILLIAM BELSTON — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER
7/1/2021

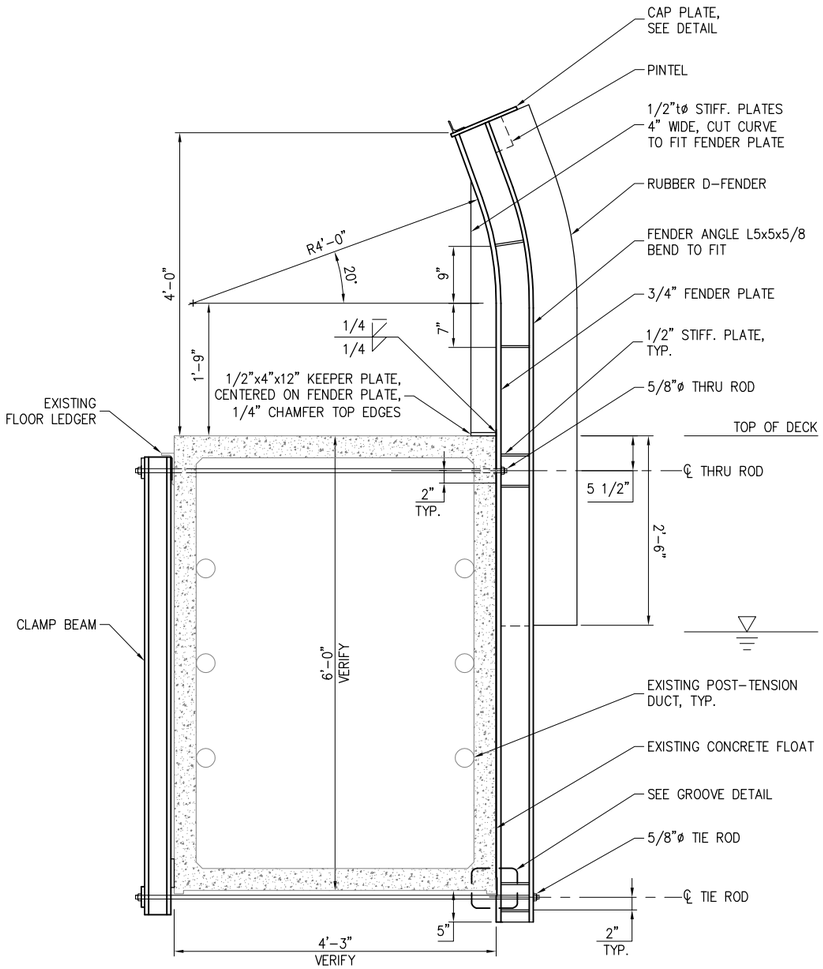
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS**

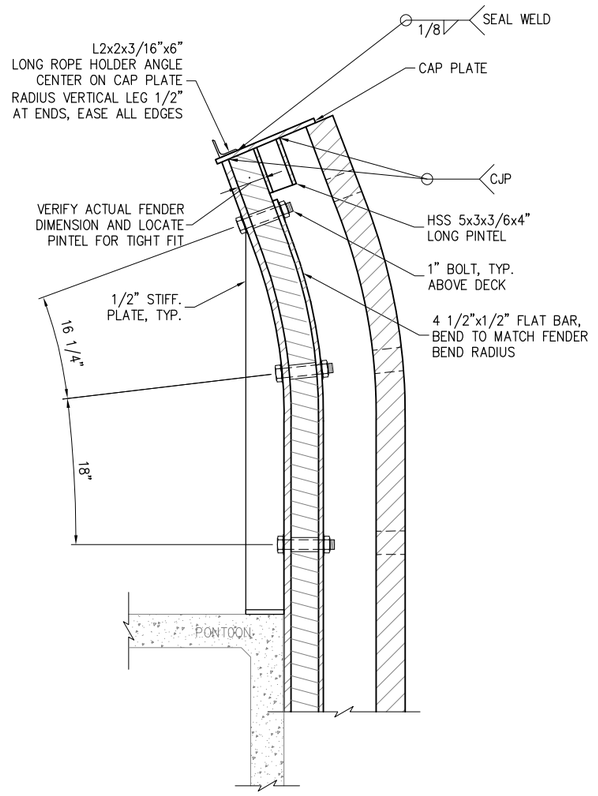
TITLE: **NEW FENDERS AND RAMPS LAYOUT PLAN**

DESIGNED BY:	CK	PROJECT NO:	204049	SHEET NO:	S1.01
DRAWN BY:	WL	DATE:	JULY 2021		
CHECKED BY:	JO	SCALE:	NOTED		

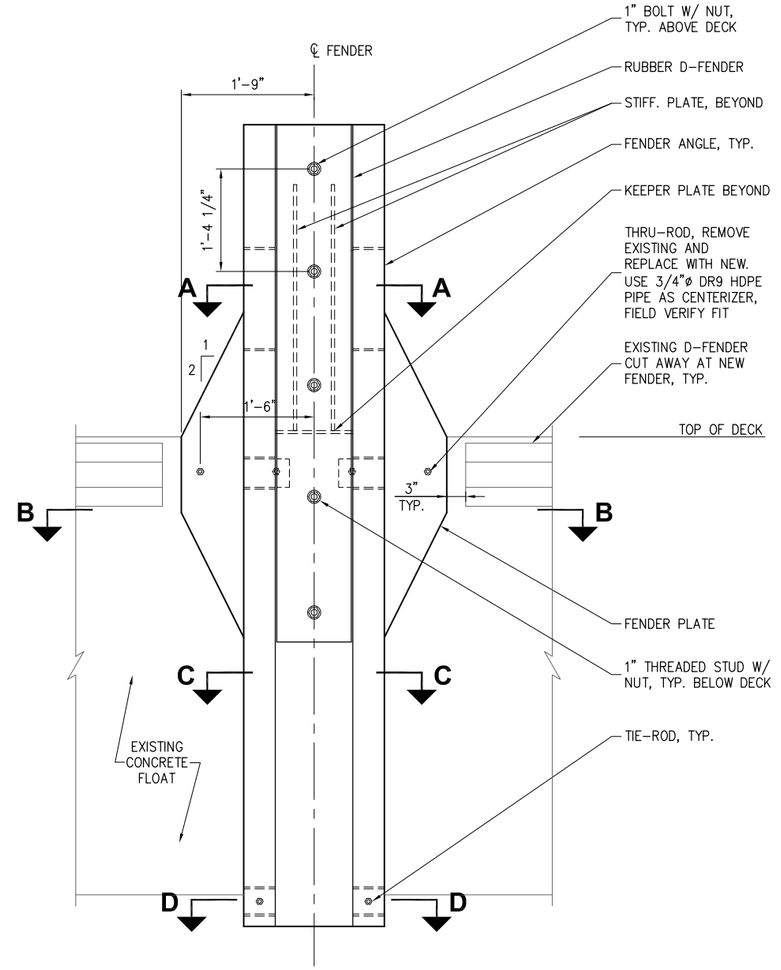
7/1/21 - GDEAN - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 - S1.01.DWG



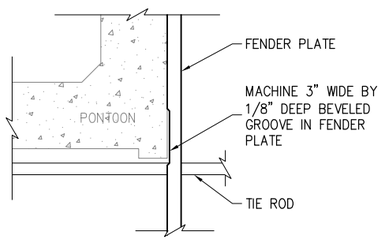
FENDER PROFILE



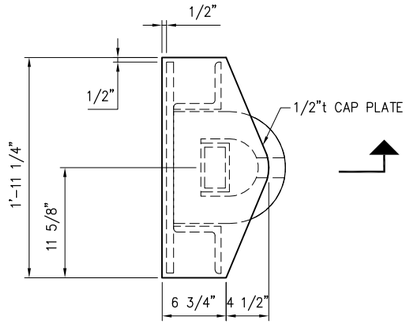
SECTION



FENDER ELEVATION



GROOVE DETAIL



PLAN

CAP PLATE DETAIL

(L2 ROPE HOLDER, NOT SHOWN)

NOTES:
1. VERIFY ALL AS-BUILT DIMENSIONS.
2. ALL JOINTS SHALL BE WELDED WITH A CONTINUOUS 5/16" FILLET OR EQUIVALENT GROOVE WELD AND SEAL WELDED UNLESS OTHERWISE NOTED.
3. REMOVE ALL MARINE GROWTH FROM SURFACE OF FLOAT BEFORE FENDER INSTALLATION.
4. ALL JOINTS FACING THE D-FENDER SHALL BE GROOVE WELDS AND GROUND FLUSH.
5. ALL NUTS SHALL BE NYLOCK OR DOUBLE NUTS TO PREVENT LOOSENING.
6. INSTALL THREADED RODS SNUG TIGHT IN THE FOLLOWING ORDER:
   A. THRU-RODS
   B. TIE-RODS
7. AFTER ALL THREADED RODS ARE SNUG TIGHT, FIRST TIGHTEN THRU-RODS, THEN TIGHTEN TIE-RODS USING TURN-OF-NUT METHOD.

PND ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

JOHN WILLIAM BELSICK — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER

7/1/2021

REVISIONS		
REV	DATE	DESCRIPTION

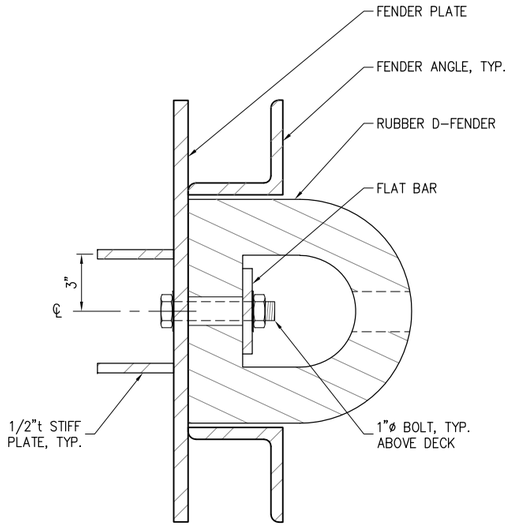
ISSUED FOR BID

PROJECT: KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS

TITLE: FENDER PROFILE AND ELEVATION

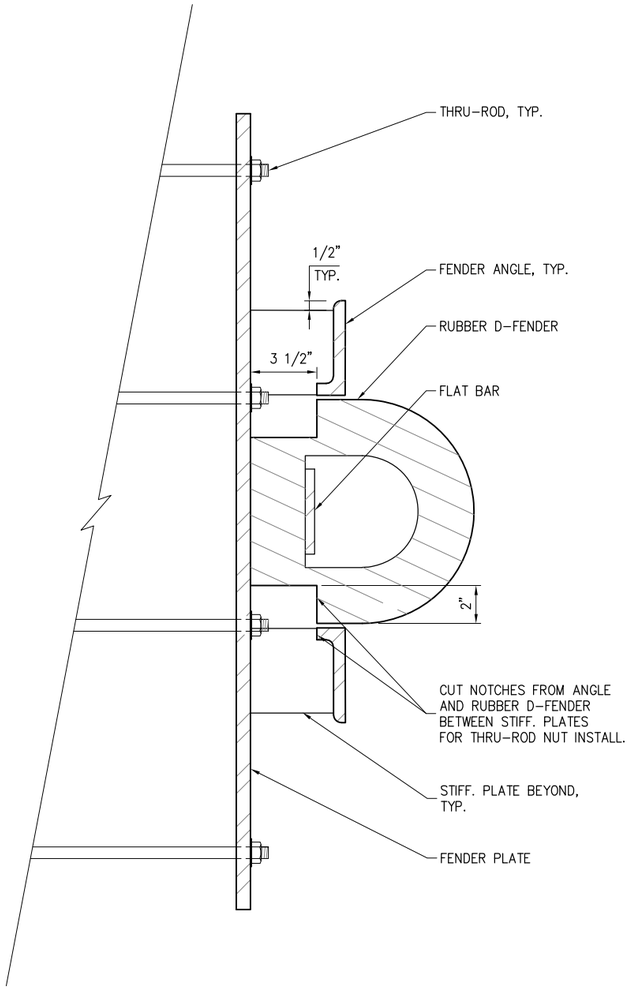
DESIGNED BY:	CK	PROJECT NO:	204049	SHEET NO: S1.02
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

6/30/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 - S1.02.DWG



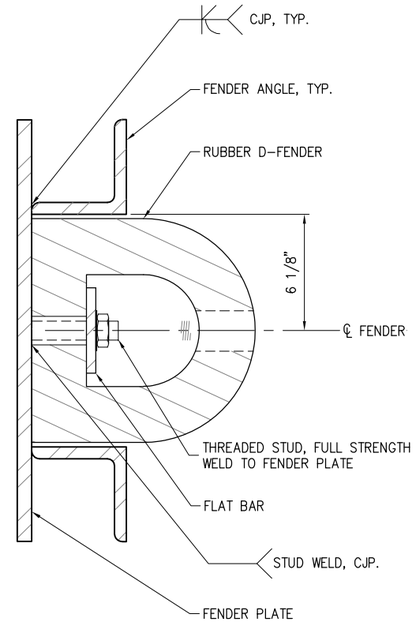
SECTION A-A

PONTOON NOT SHOWN FOR CLARITY



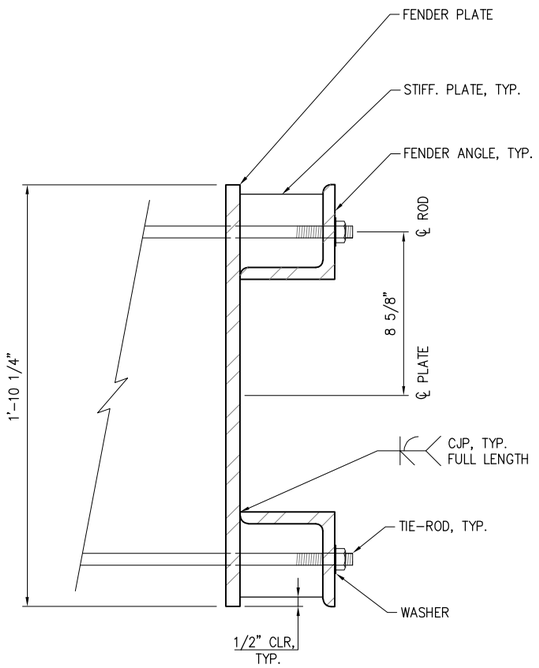
SECTION B-B

PONTOON NOT SHOWN FOR CLARITY



SECTION C-C

PONTOON NOT SHOWN FOR CLARITY



SECTION D-D

PONTOON NOT SHOWN FOR CLARITY

NOTES:
1. VERIFY ALL AS-BUILT DIMENSIONS. ALL JOINTS SHALL BE WELDED WITH A CONTINUOUS 5/16" FILLET OR EQUIVALENT GROOVE WELD AND SEAL WELDED UNLESS OTHERWISE NOTED.
2. REMOVE ALL MARINE GROWTH FROM SURFACE OF FLOAT BEFORE FENDER INSTALLATION.
3. ALL JOINTS FACING THE D-FENDER SHALL BE GROOVE WELDS AND GROUND FLUSH.
4. SLOPE ALL STIFFENER PLATES 1% TO FACILITATE DRAINAGE.

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

7/1/2021

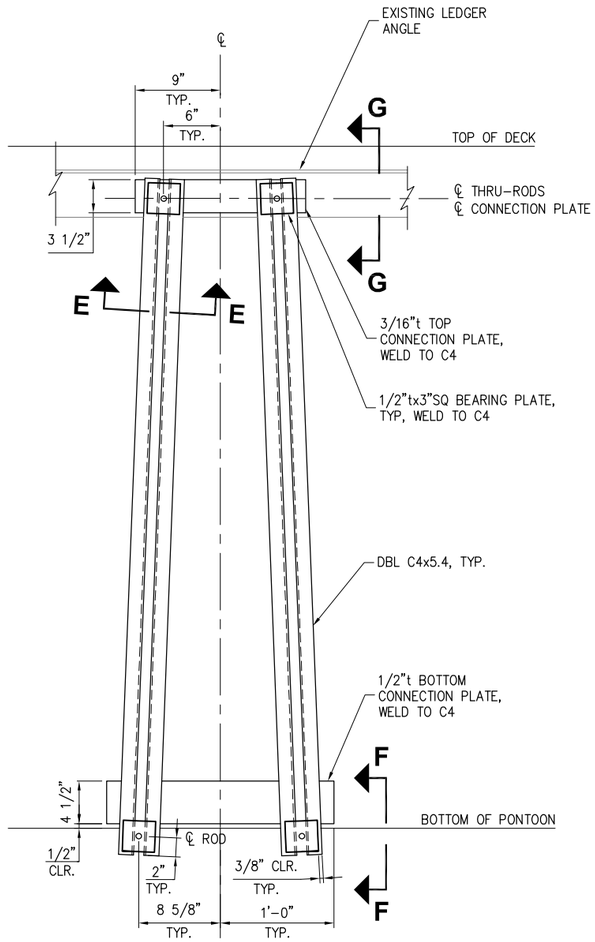
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS**

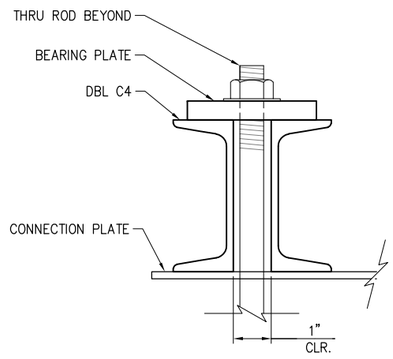
TITLE: **FENDER SECTIONS AND DETAILS**

DESIGNED BY:	CK	PROJECT NO:	204049	SHEET NO: **S1.03**
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

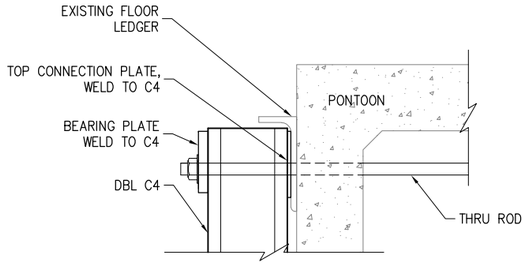
6/30/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 -S1.03.DWG



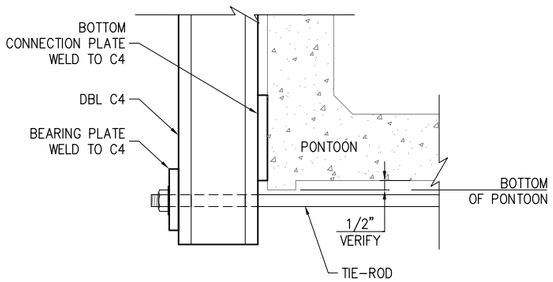
ELEVATION



SECTION E-E



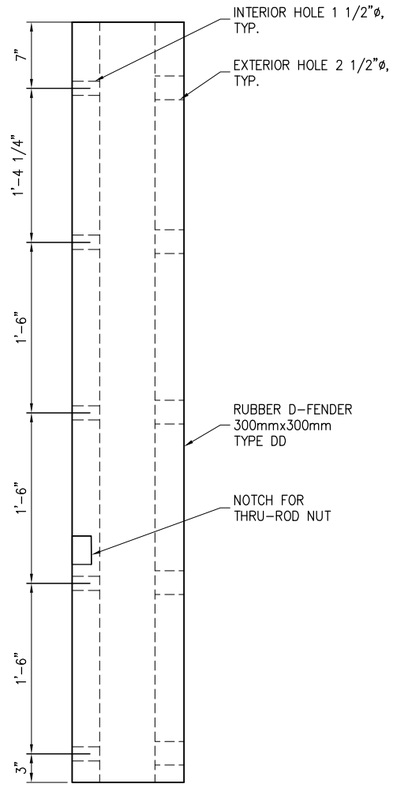
SECTION G-G



SECTION F-F

NOTES:
1. VERIFY ALL AS-BUILT DIMENSIONS. ALL JOINTS SHALL BE WELDED WITH A CONTINUOUS 5/16" FILLET OR EQUIVALENT GROOVE WELD AND SEAL WELDED UNLESS OTHERWISE NOTED.
2. REMOVE ALL MARINE GROWTH FROM SURFACE OF FLOAT BEFORE FENDER AND CLAMP BEAM INSTALLATION.
3. ALL JOINTS FACING THE D-FENDER SHALL BE GROOVE WELDS AND GROUND FLUSH.
4. COORDINATE ALL BOLT HOLES WITH OTHER FENDER COMPONENTS AND EXISTING STRUCTURES.

CLAMP BEAM



RUBBER D-FENDER

SIDE PROFILE VIEW

ISSUED FOR BID

PND ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

TODD WILLIAM BELSON — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER
7/1/2021

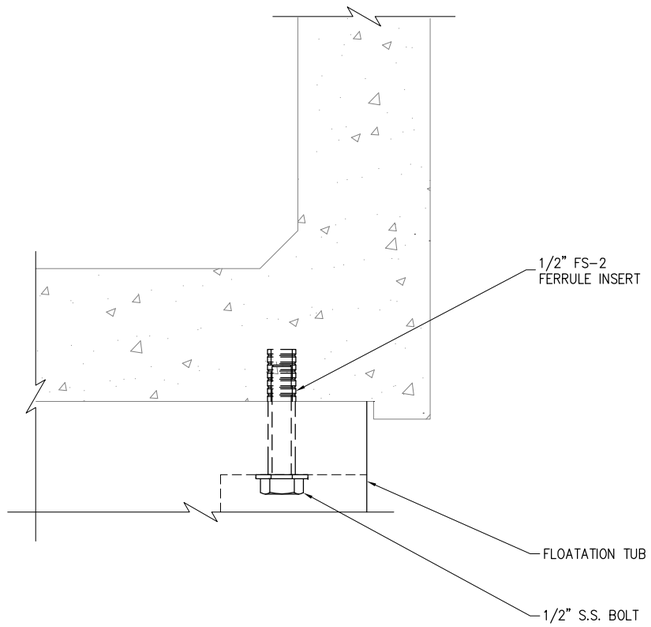
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS**

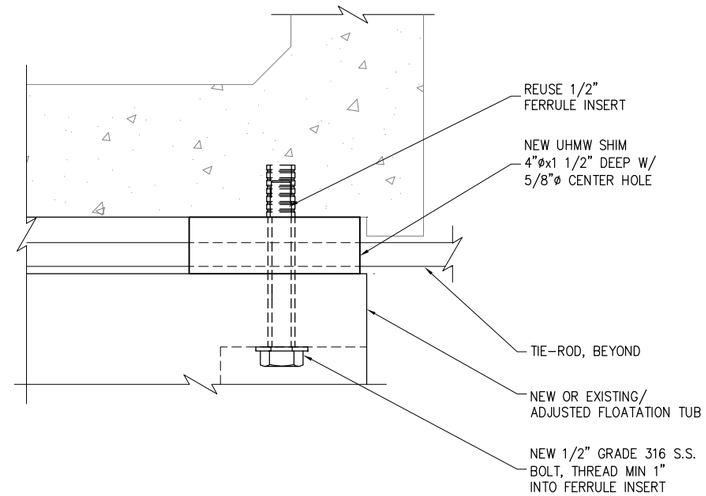
TITLE: **FENDER DETAILS**

DESIGNED BY:	CK	PROJECT NO:	204049	SHEET NO: S1.04
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

6/30/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 -S1.04.DWG



EXISTING TUB ATTACHMENT



ADJUSTED TUB ATTACHMENT

NOTES:
1. MODIFIED TUB ATTACHMENT APPLIED TO ALL TUBS WHERE NEW FENDERS ARE INSTALLED.
2. OMIT NEW UHMW SHIM AT LOCATIONS WHERE TIE-RODS CONFLICT WITH ITS INSTALLATION.

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

CODY WILLIAM BELSTAD — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER
7/1/2021

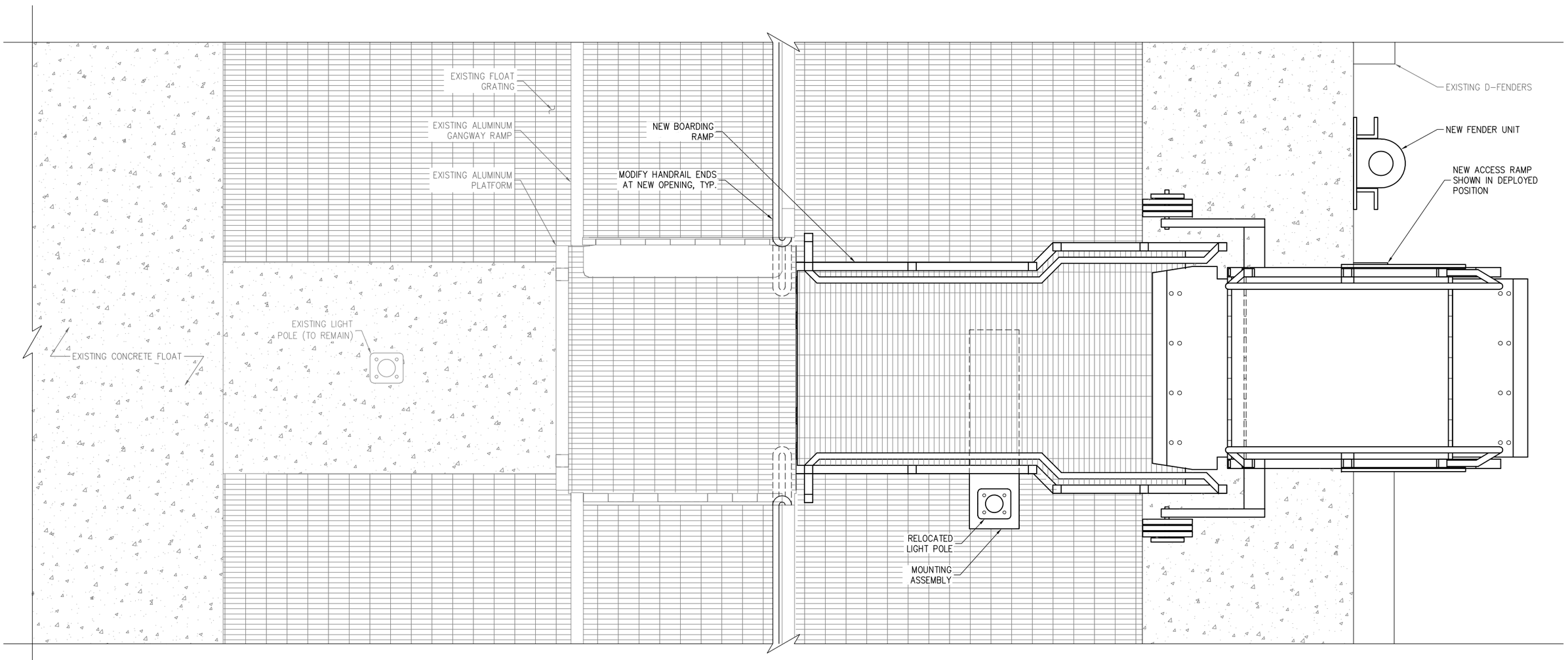
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: KITSAP TRANSIT
ANNAPOLIS FERRY DOCK FENDERS

TITLE: FLOATATION TUB ADJUSTMENT

DESIGNED BY:	CK	PROJECT NO:	204049	SHEET NO: S1.05
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

6/29/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 -S1.05.DWG



NEW BOARDING SYSTEM LAYOUT PLAN

6/30/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 -S2.01.DWG

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

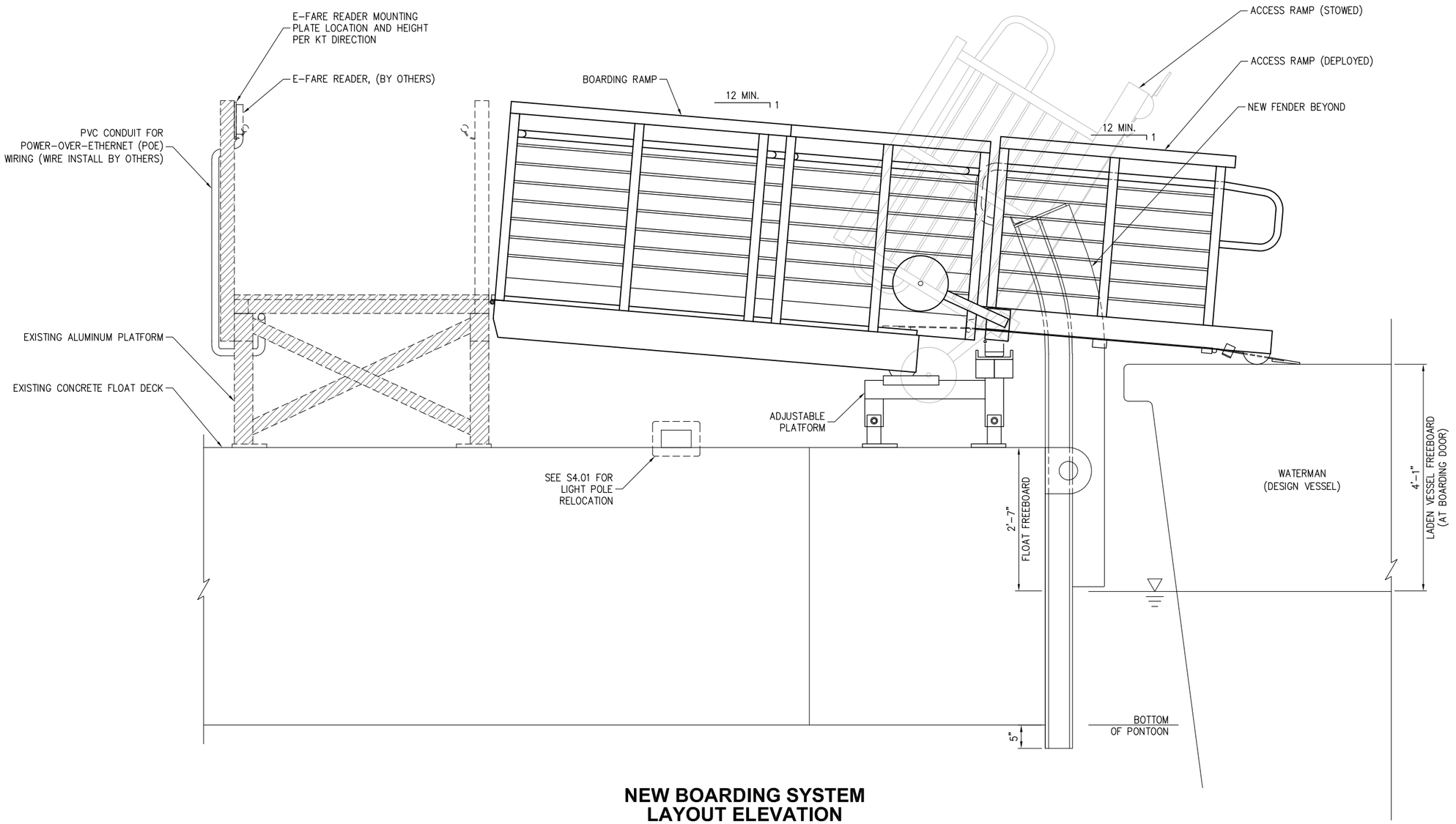
Kitsap Transit

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS**

TITLE: **NEW BOARDING SYSTEM LAYOUT PLAN**

DESIGNED BY:	RC	PROJECT NO:	204049	SHEET NO:	S2.01
DRAWN BY:	WL	DATE:	JULY 2021		
CHECKED BY:	JO	SCALE:	NOTED		



NEW BOARDING SYSTEM LAYOUT ELEVATION

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

TODD WILLIAM BEASLEY — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER

7/1/2021

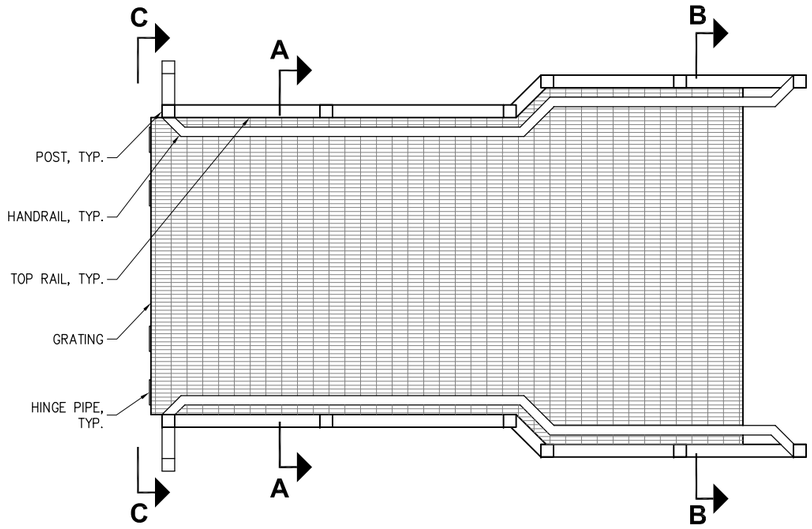
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS**

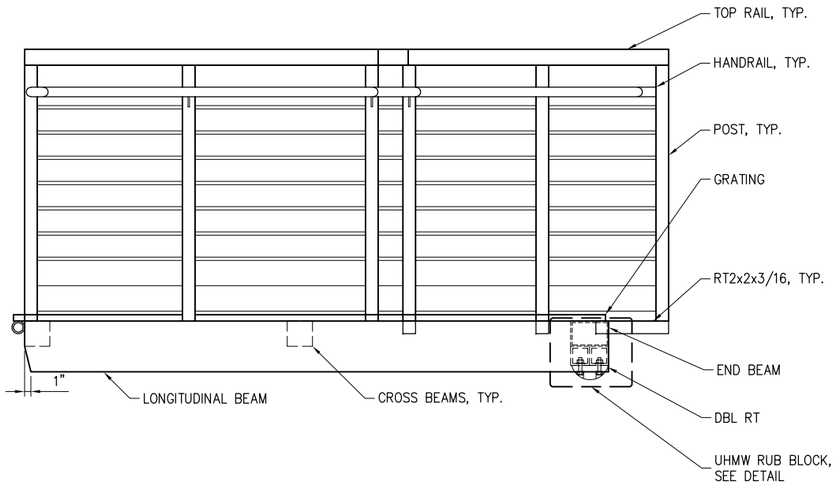
TITLE: **NEW BOARDING SYSTEM LAYOUT ELEVATION**

DESIGNED BY:	RC	PROJECT NO:	204049	SHEET NO:
DRAWN BY:	WL	DATE:	JULY 2021	**S2.02**
CHECKED BY:	JO	SCALE:	NOTED	

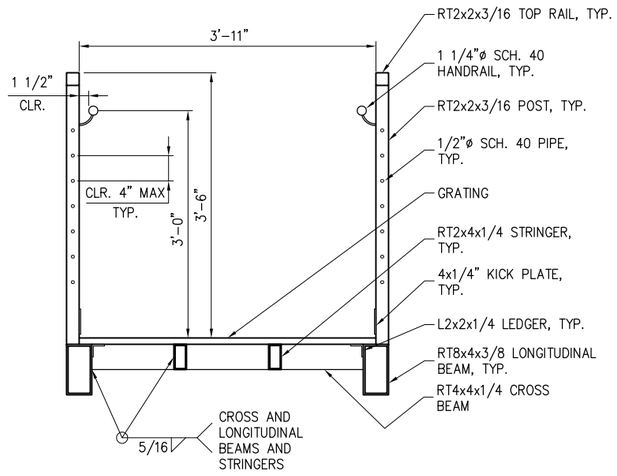
6/30/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 -S2.02.DWG



PLAN

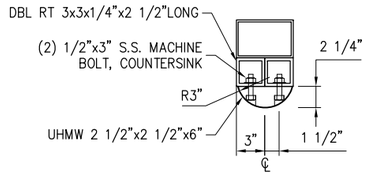


ELEVATION

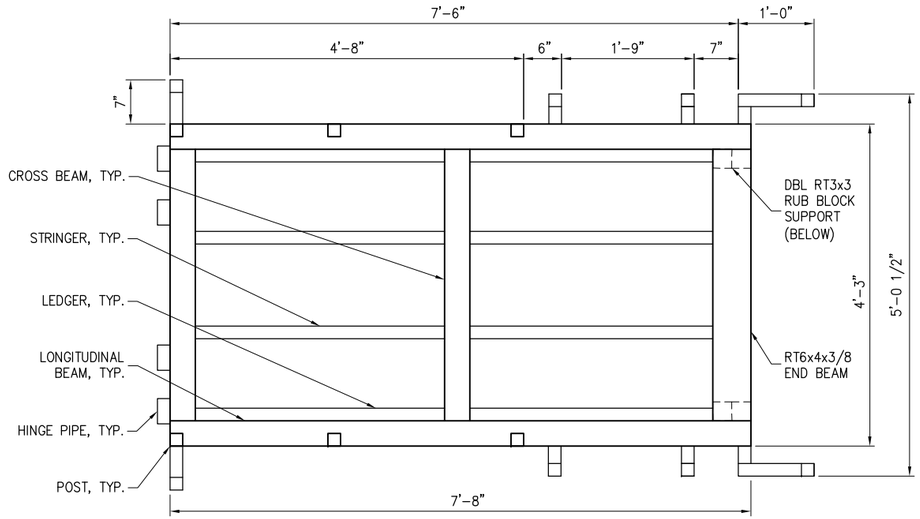


SECTION A-A

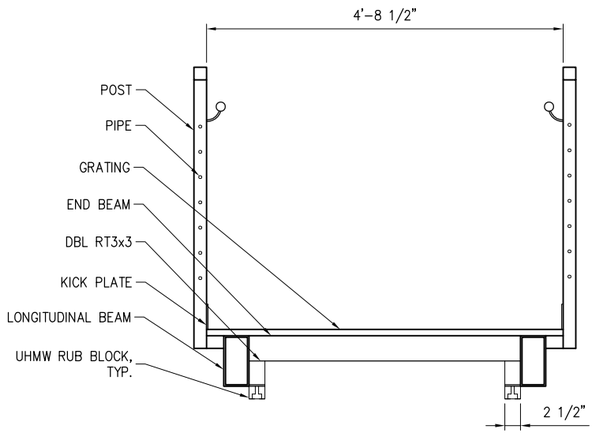
NOTES:
ALL WELDS 3/16" FILLET SEAL WELD, ALL AROUND, U.N.O.



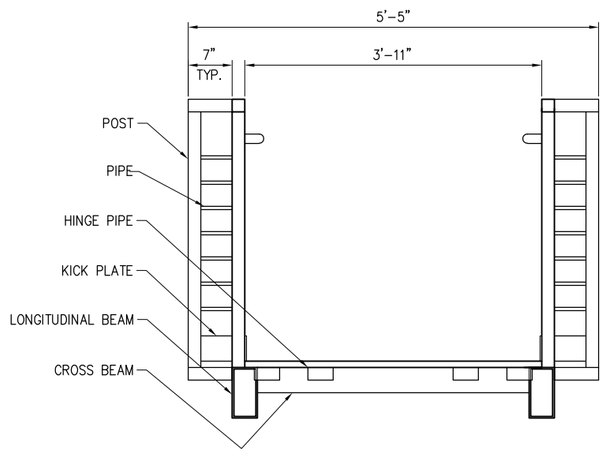
UHMW RUB BLOCK DETAIL



FRAMING PLAN



SECTION B-B



SECTION C-C

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

TODD WILLIAM BELSON STATE OF WASHINGTON 39312 REGISTERED PROFESSIONAL ENGINEER
7/1/2021

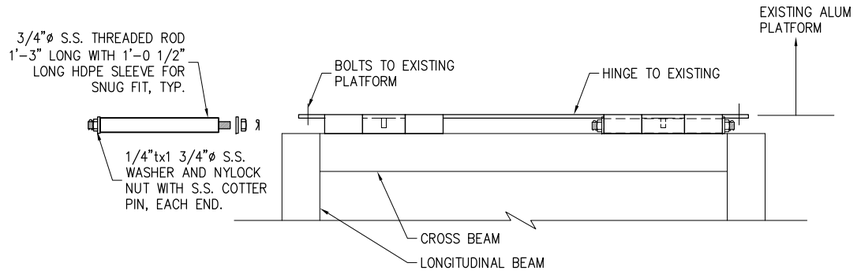
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS

TITLE: BOARDING RAMP PLAN AND ELEVATION

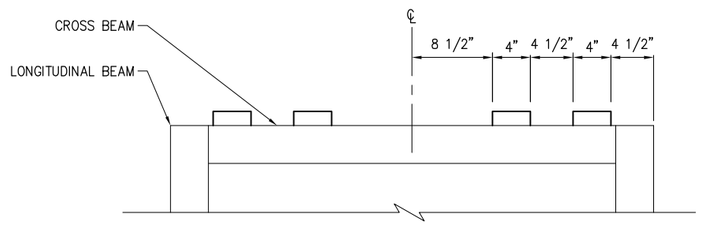
DESIGNED BY:	RC	PROJECT NO:	204049	SHEET NO: S2.03
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

6/21/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 -S2.03.DWG

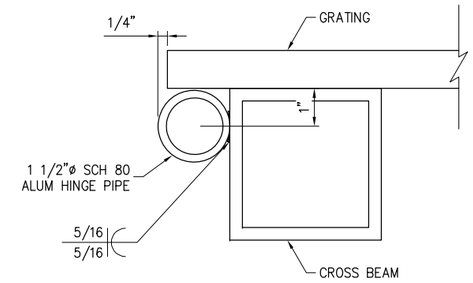


PLAN - ASSEMBLY

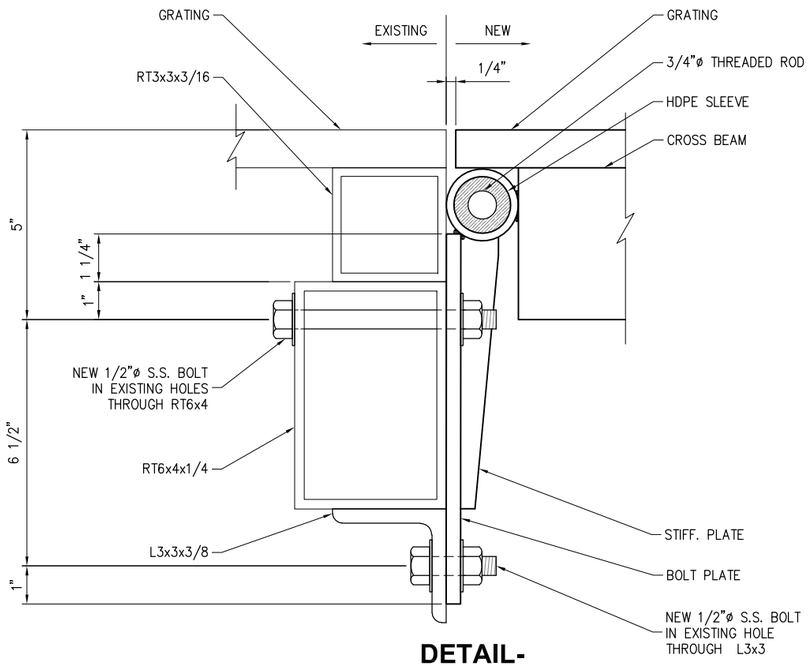
1. GRATING NOT SHOWN
2. EXISTING PLATFORM NOT SHOWN



PLAN - BOARDING RAMP HINGE

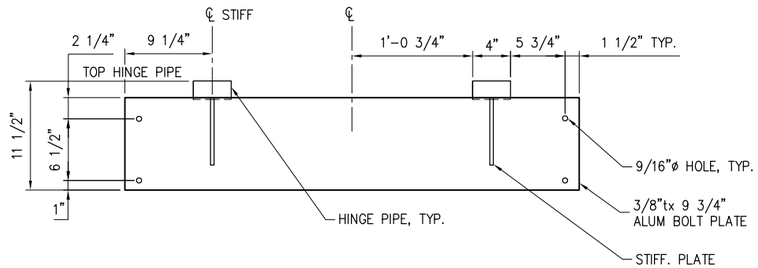


DETAIL - BOARDING RAMP HINGE



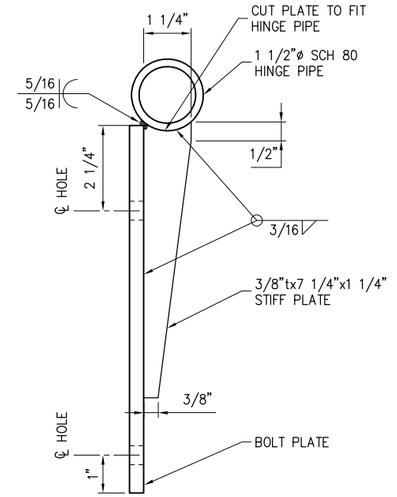
DETAIL- ASSEMBLY

(ASSEMBLED)



NOTES:
FIELD VERIFY EXISTING BOLT HOLE SPACING AND SIZE IN EXISTING PLATFORM BEFORE FABRICATING.

ELEVATION - HINGE TO EXISTING



DETAIL - HINGE TO EXISTING

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

TODD WILLIAM BEASLEY — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER

7/1/2021

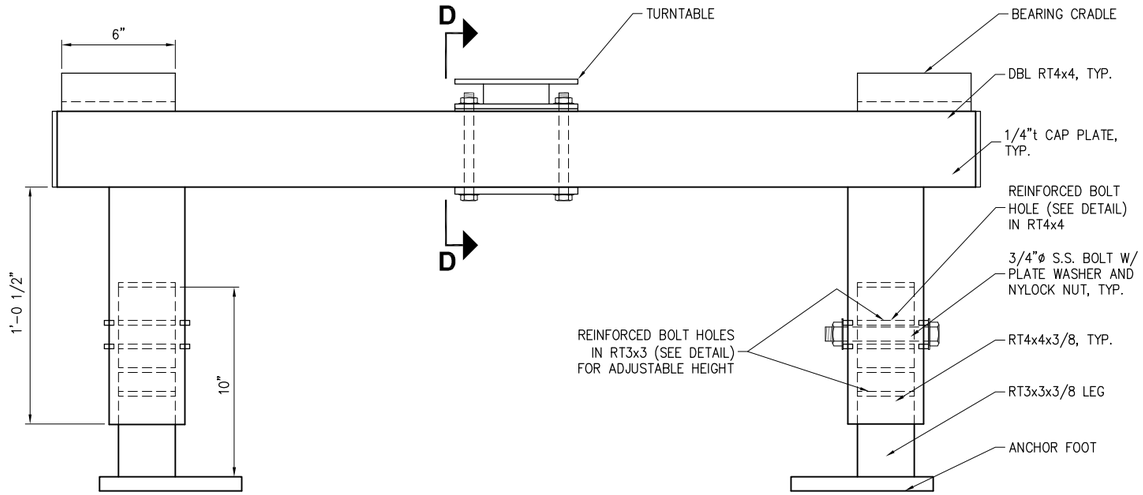
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS**

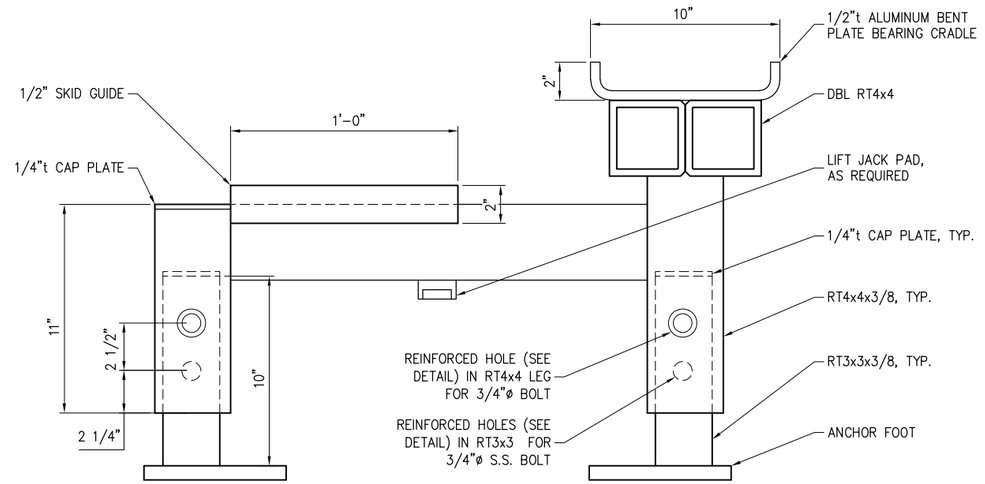
TITLE: **BOARDING RAMP HINGE DETAILS**

DESIGNED BY:	RC	PROJECT NO:	204049	SHEET NO: S2.04
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

6/21/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 -S2.04.DWG

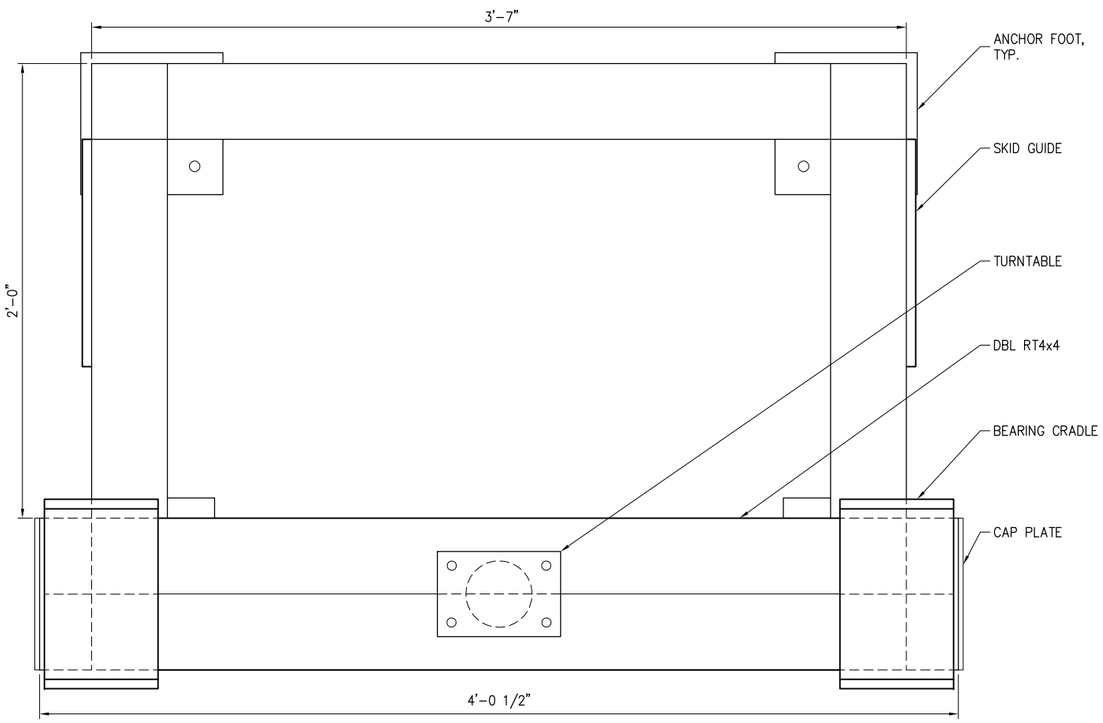


ELEVATION

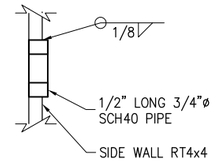


PROFILE

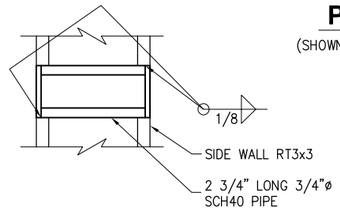
(SHOWN IN RAISED POSITION)



PLAN

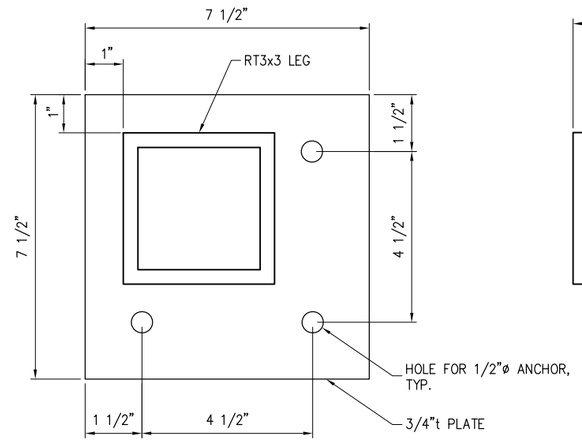


RT4x4 REINFORCED HOLE

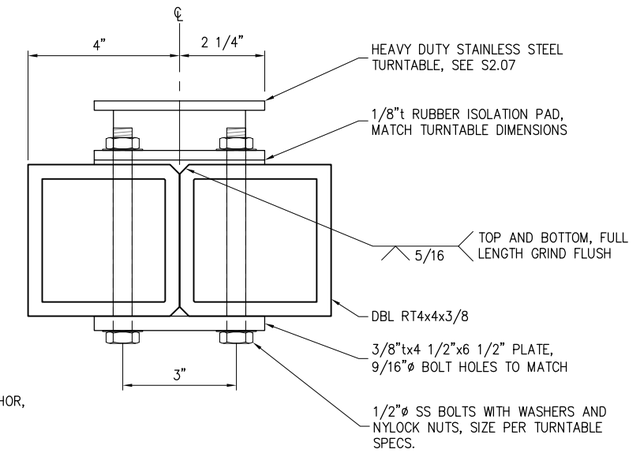


RT3x3 REINFORCED HOLE

NOTES:
ALL WELDS 5/16" FILLET SEAL WELD, ALL AROUND, U.N.O.



ANCHOR FOOT PLAN



SECTION D-D

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

TODD WILLIAM BEASLEY — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER

7/1/2021

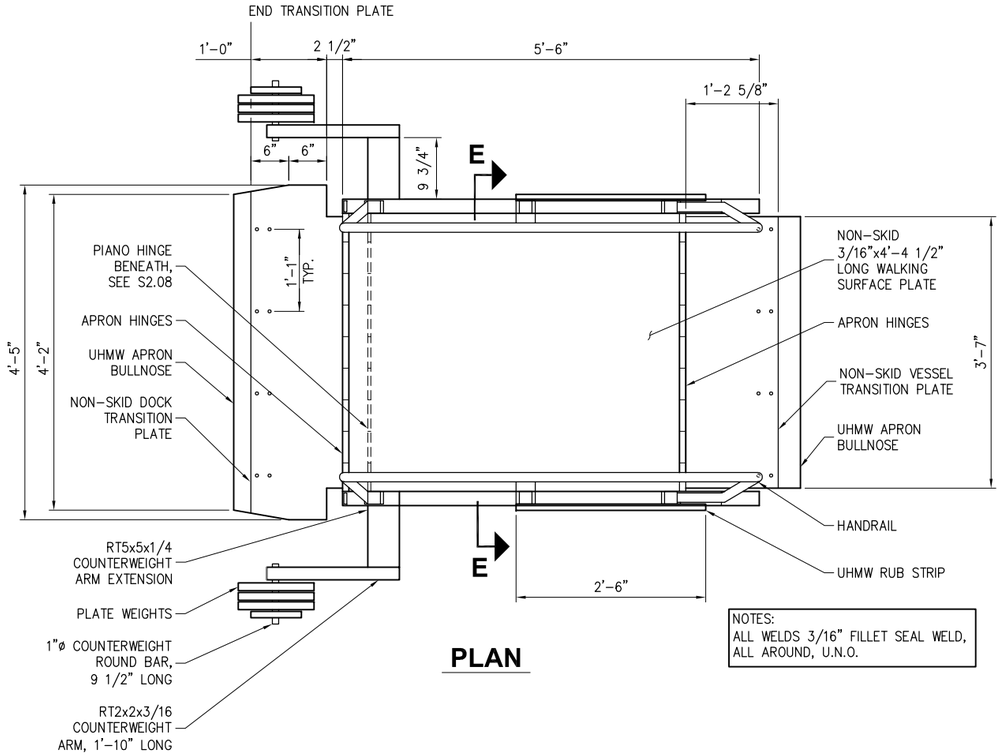
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS**

TITLE: **ADUSTABLE PLATFORM DETAILS**

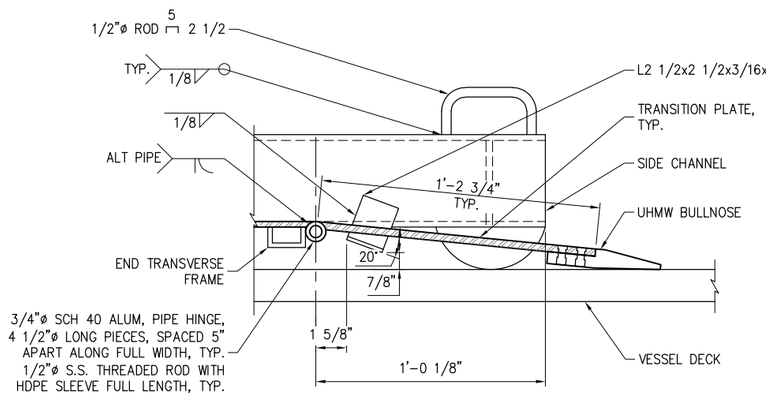
DESIGNED BY:	RC	PROJECT NO:	204049	SHEET NO: S2.05
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

6/30/21 – WLE – K:\2020\204049 – ANNAPOLIS FENDERING\ISSUED FOR BID\204049 –S2.05.DWG

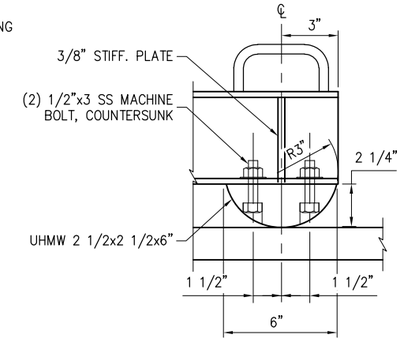


NOTES:
ALL WELDS 3/16" FILLET SEAL WELD, ALL AROUND, U.N.O.

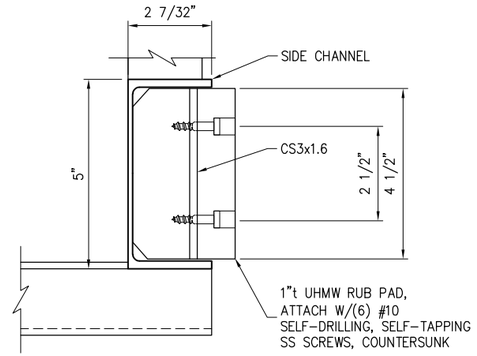
PLAN



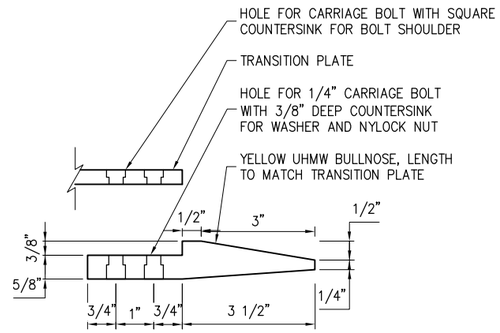
HINGE DETAIL



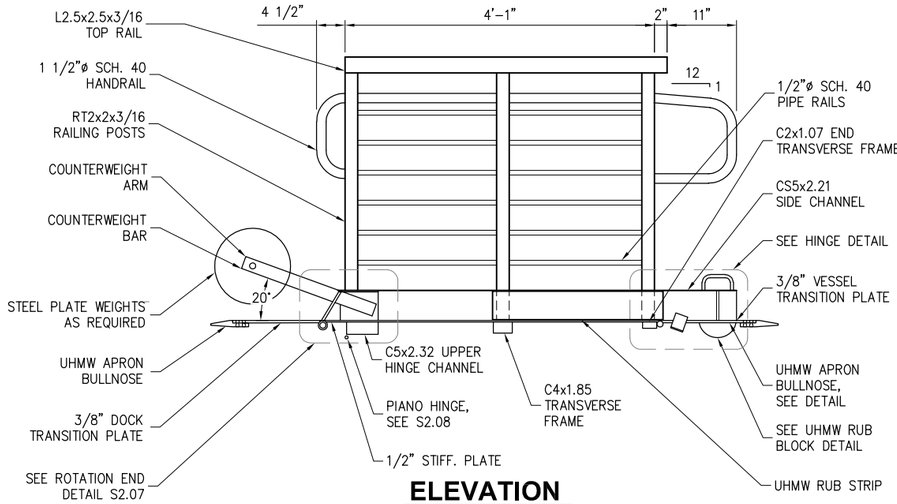
RUB BLOCK DETAIL



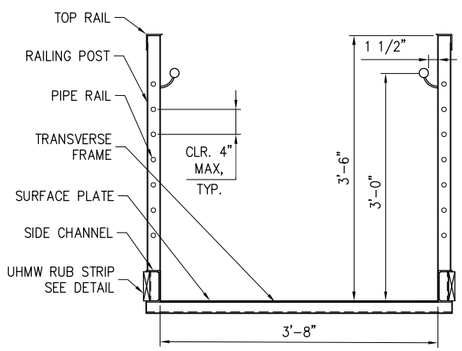
RUB STRIP DETAIL



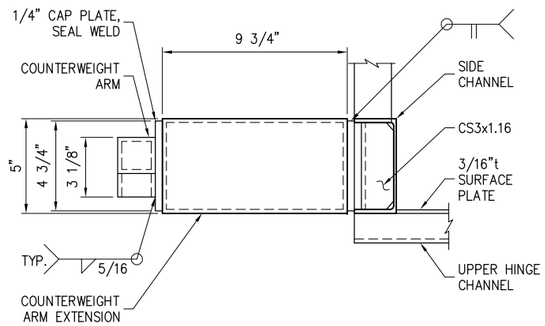
BULLNOSE DETAIL



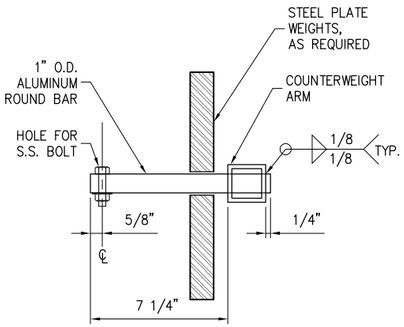
ELEVATION



SECTION E-E



COUNTERWEIGHT ARM DETAIL



COUNTERWEIGHT ROD DETAIL

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

TODD WILLIAM BERGSMA — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER
7/1/2021

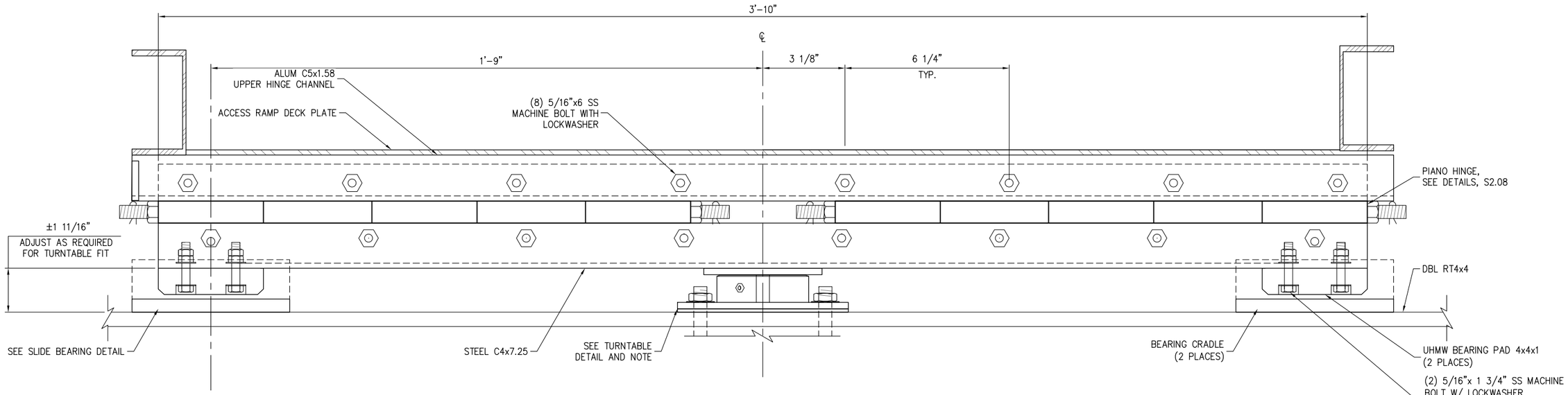
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS**

TITLE: **ACCESS RAMP DETAILS**

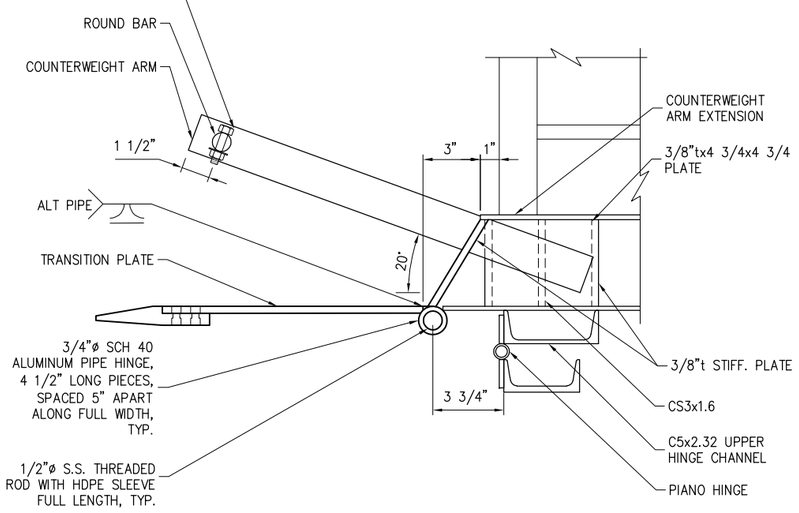
DESIGNED BY:	RC	PROJECT NO:	204049	SHEET NO:	S2.06
DRAWN BY:	WL	DATE:	JULY 2021		
CHECKED BY:	JO	SCALE:	NOTED		

7/1/21 - G:\EAN - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 - S2.06.DWG

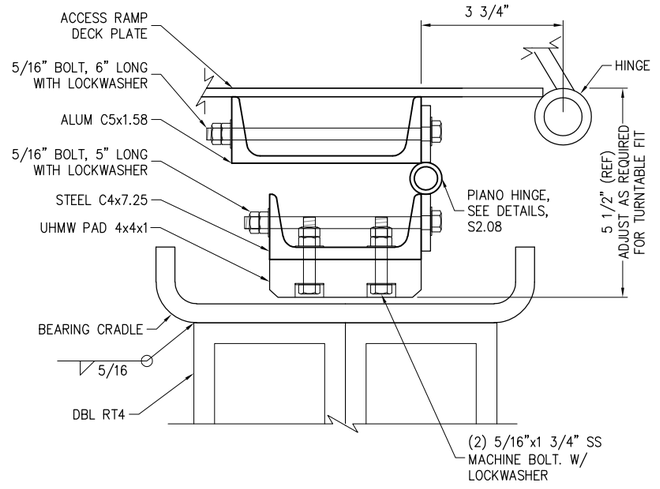


ACCESS RAMP HINGE ASSEMBLY DETAIL

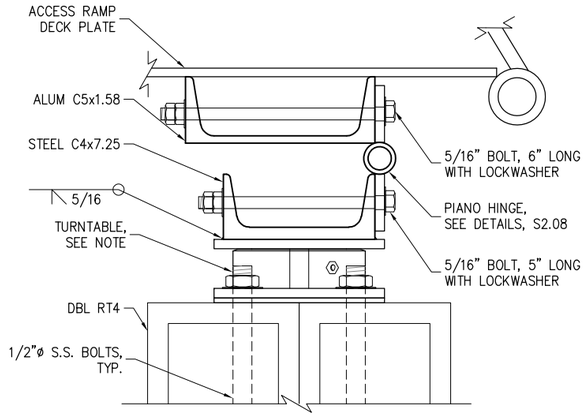
NOTE:
TURNTABLE: HEAVY DUTY STAINLESS STEEL TURNTABLE, MCMASTER-CARR PART NUMBER 22345T22



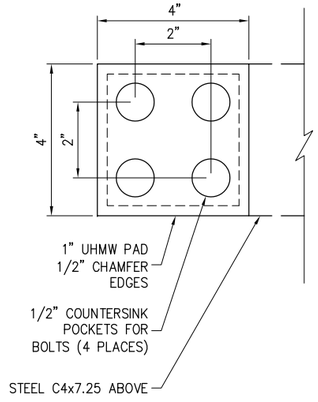
ROTATION END DETAIL



SLIDE BEARING DETAIL



TURNTABLE DETAIL



UHMW BEARING PAD DETAIL

6/30/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 - S2.07.DWG

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

7/1/2021

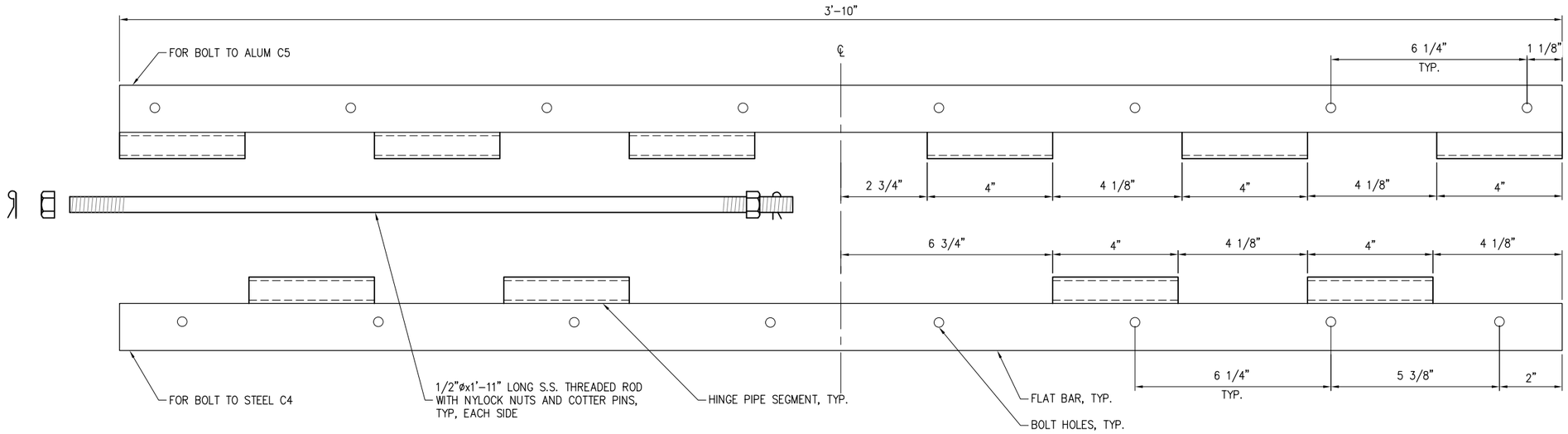
REVISIONS		
REV	DATE	DESCRIPTION

ISSUED FOR BID

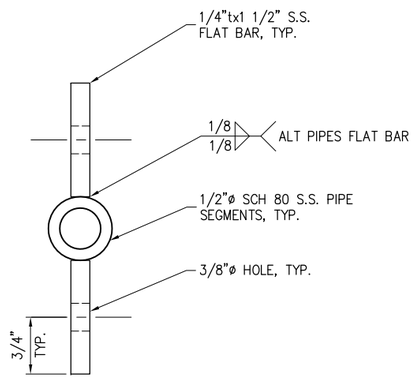
PROJECT: KITSAP TRANSIT ANNAPOLIS FERRY DOCK FENDERS

TITLE: ACCESS RAMP DETAILS

DESIGNED BY:	RC	PROJECT NO:	204049	SHEET NO: S2.07
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	



PIANO HINGE ASSEMBLY



PIANO HINGE SECTION

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

LOWELL WILLIAM BELSON — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER

7/1/2021

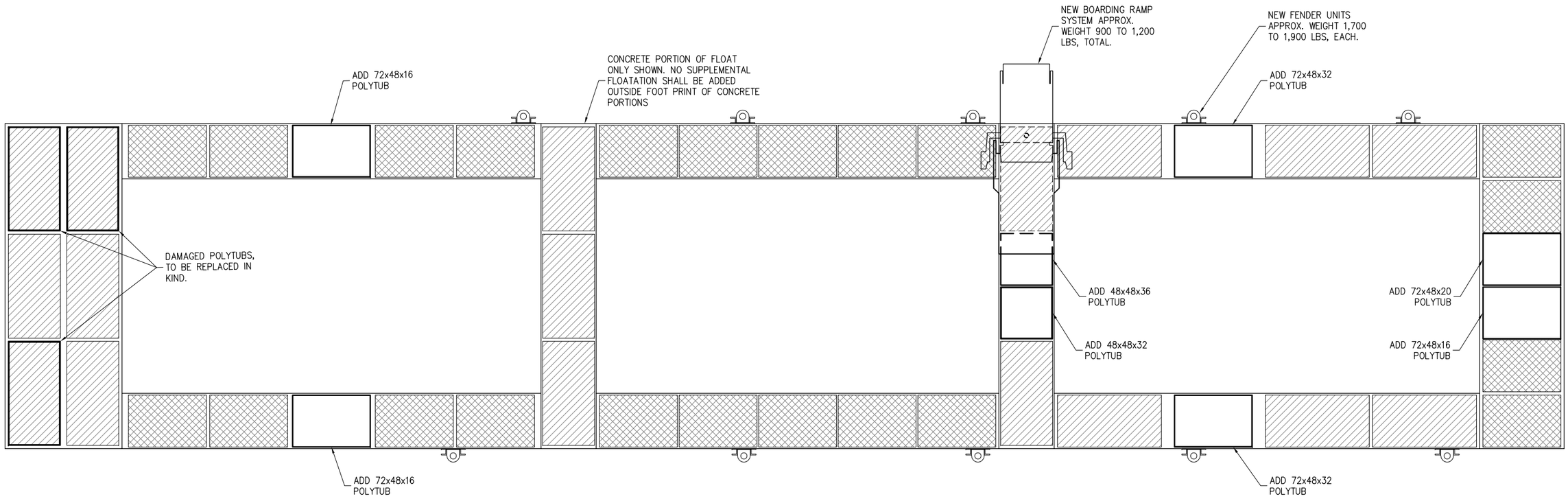
REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: KITSAP TRANSIT
ANNAPOLIS FERRY DOCK FENDERS

TITLE: PIANO HINGE DETAILS

DESIGNED BY:	RC	PROJECT NO:	204049	SHEET NO: S2.08
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

6/30/21 - WLE - K:\2020\204049 - ANNAPOLIS FENDERING\ISSUED FOR BID\204049 -S2.08.DWG



PLAN

NOTES:
CONTRACTOR SHALL VERIFY ADDED WEIGHT OF NEW COMPONENTS (FENDERS AND BOARDING SYSTEM) AND ADD FLOATATION POLYTUBS AS REQUIRED TO BALANCE OVERALL FLOAT SYSTEM AND MAINTAIN EXISTING FLOAT FREEBOARD WITHIN ±1" OF CURRENT FREEBOARD, CONTRACTOR TO FURNISH CALCULATIONS VERIFYING THESE CRITERIA WILL BE MET AFTER FINAL INSTALLATION IS COMPLETE.

ISSUED FOR BID

PND ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

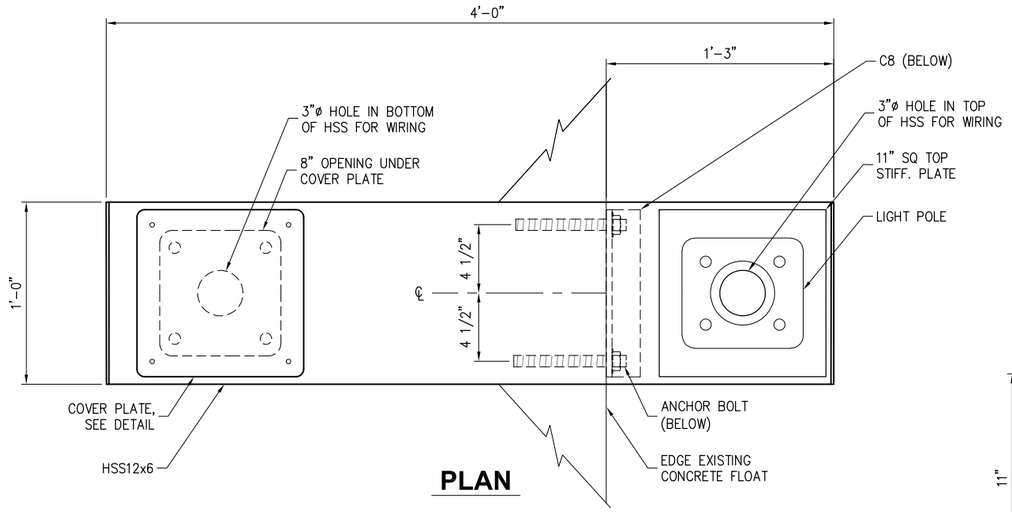
JOHN WILLIAM BELSON — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER
7/1/2021

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT:
KITSAP TRANSIT
ANNAPOLIS FERRY DOCK FENDERS

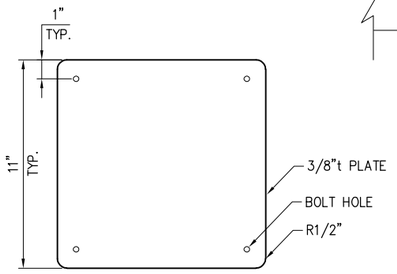
TITLE:
SUPPLEMENTAL FLOATATION PLAN

DESIGNED BY:	RC	PROJECT NO:	204049	SHEET NO: S3.01
DRAWN BY:	WL	DATE:	JULY 2021	
CHECKED BY:	JO	SCALE:	NOTED	

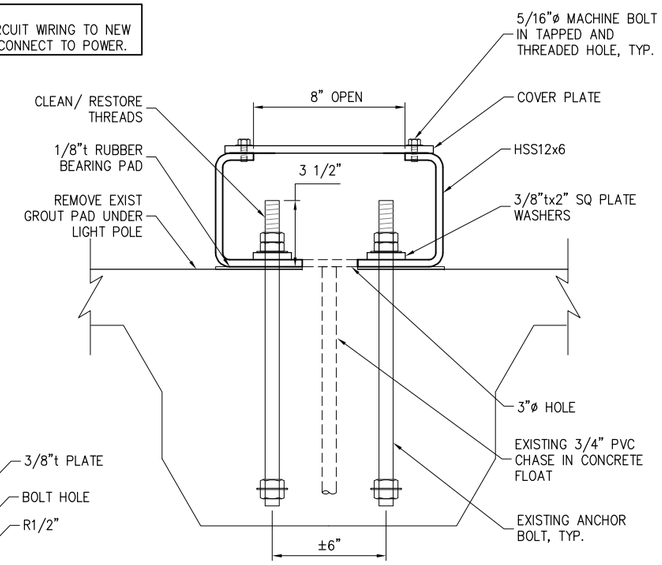


PLAN

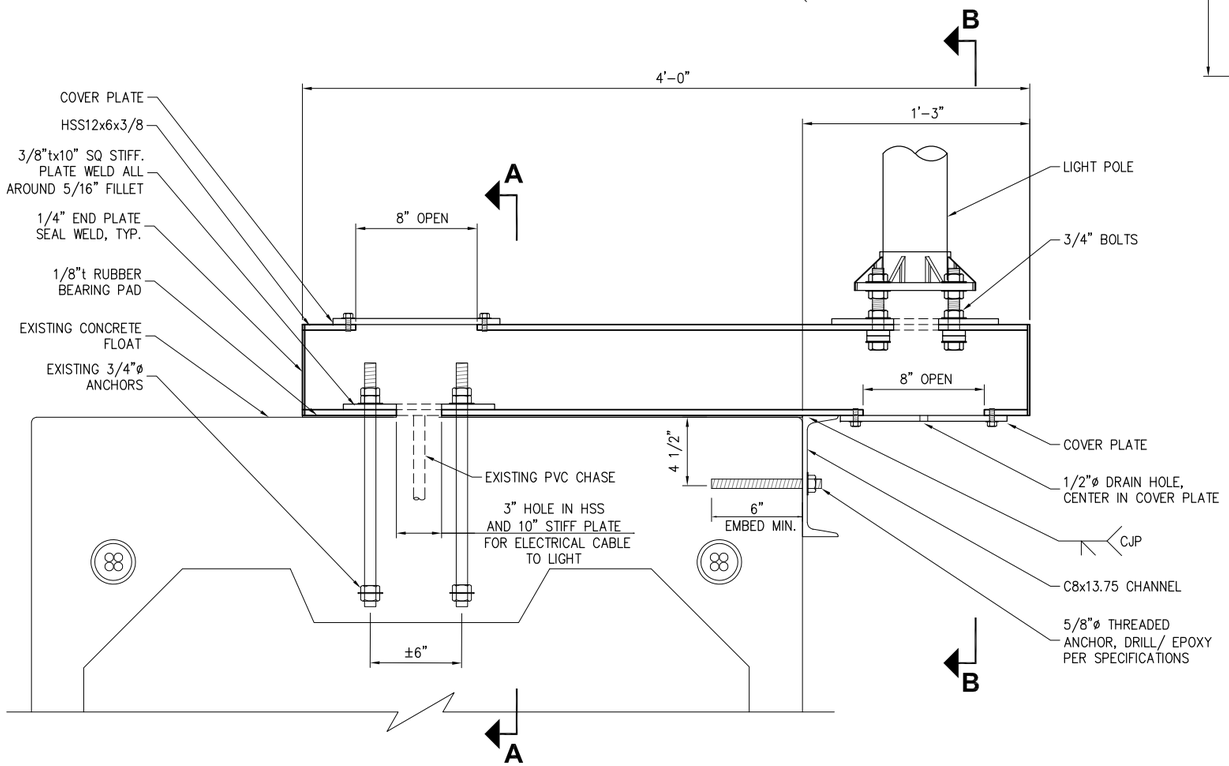
NOTES:
EXTEND EXISTING LIGHTING CIRCUIT WIRING TO NEW LIGHT POLE POSITION AND RECONNECT TO POWER.



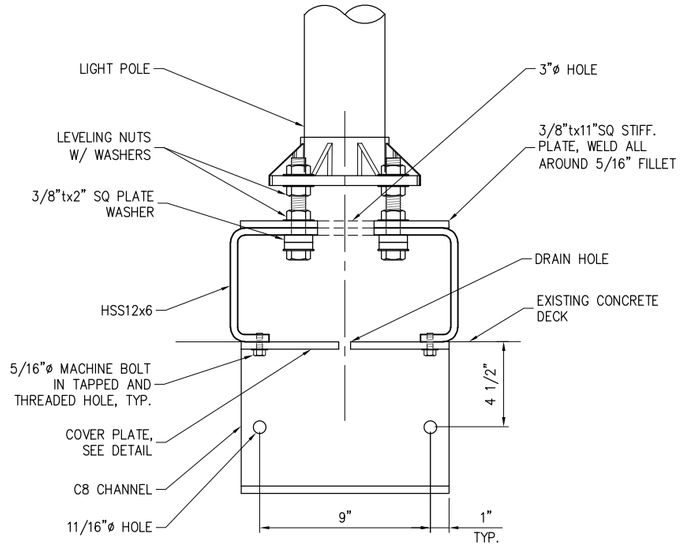
COVER PLATE



SECTION A-A



ELEVATION



SECTION B-B

ISSUED FOR BID

P N D ENGINEERS, INC.
1736 Fourth Avenue S., Suite A
Seattle, Washington 98134
P: 206.624.1387
www.pndengineers.com
WA Engineering Corp No. 734

Kitsap Transit

TODD WILLIAM BELSON — STATE OF WASHINGTON — 39312 — REGISTERED PROFESSIONAL ENGINEER
7/1/2021

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT:
KITSAP TRANSIT
ANNAPOLIS FERRY DOCK FENDERS

TITLE:
LIGHT POLE RELOCATION

DESIGNED BY:	RC	PROJECT NO:	204049	SHEET NO:	S4.01
DRAWN BY:	WL	DATE:	JULY 2021		
CHECKED BY:	JO	SCALE:	NOTED		