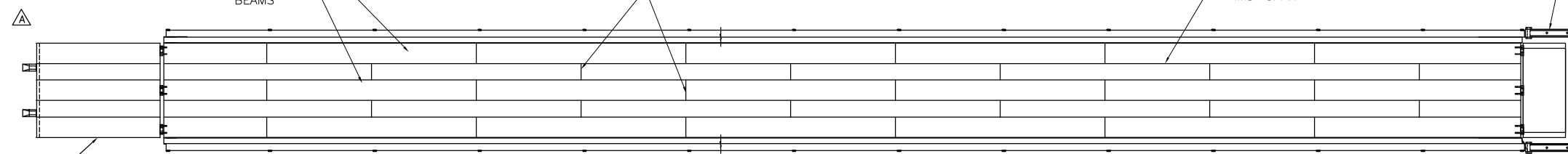


GALV. STEEL DIAMOND-GRIP DECKING 51 MM DEEP, 2.66 MM (12 GAUGE), 241 (9 1/2") AND 298 MM (11 3/4") WIDE x 3048 LONG. STAGGER DECKING WIDTHS. BOLT TO FLOOR BEAMS WITH 2 -10MM (3/8") BOLTS/CONTACT/PLANK BOLTS TO BE TIGHTENED TO DEVELOP FRICTION BETWEEN PLANKS AND FLOOR BEAMS

CONNECT PLANK WEBS WITH 1-#12-14 GALV. SHEET METAL SCREW AT MID-SPAN

COVER HINGES WITH FLASHING DETAIL 3 SHT 5



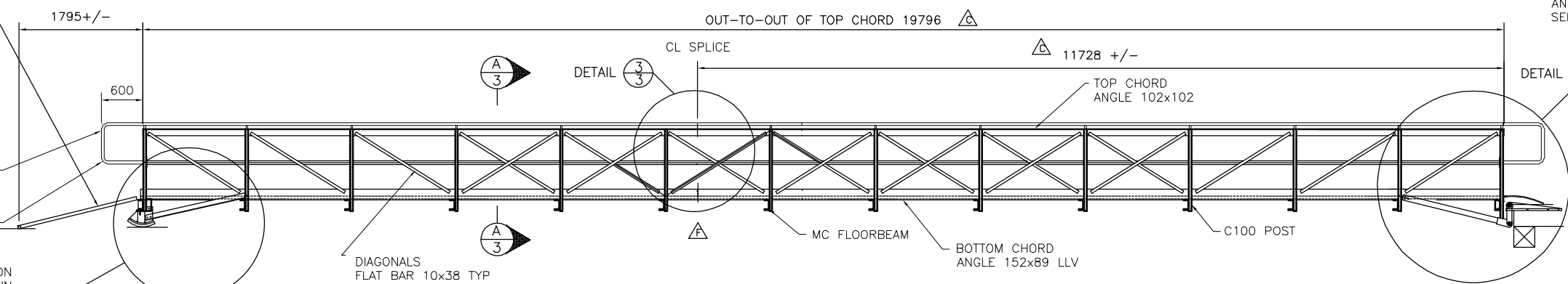
PLAN (TOP VIEW)
SCALE: 1:80

NOTE: HANDRAIL NOT SHOWN FOR CLARITY

COVER ENDS OF DECKING WITH 2.66 MM (12 GAUGE) GALV. PLATE

NOTE: FOR HINGE DETAILS AND TRANSITION PLATE SEE DWG 2

LOWER TRANSITION SPAN SEE SHEET 4



ELEVATION
SCALE: 1:80

BOLT-ON HANDRAIL EXTENSION - SIMILAR TO DETAIL 1/2

10 MM DRAIN HOLES AT LOW POINTS OF HANDRAILS IN SERVICE.

NOTE: SLIDERS FOR TRANSITION SPAN AND TRACKS FOR MAIN SLIDERS NOT SHOWN FOR CLARITY

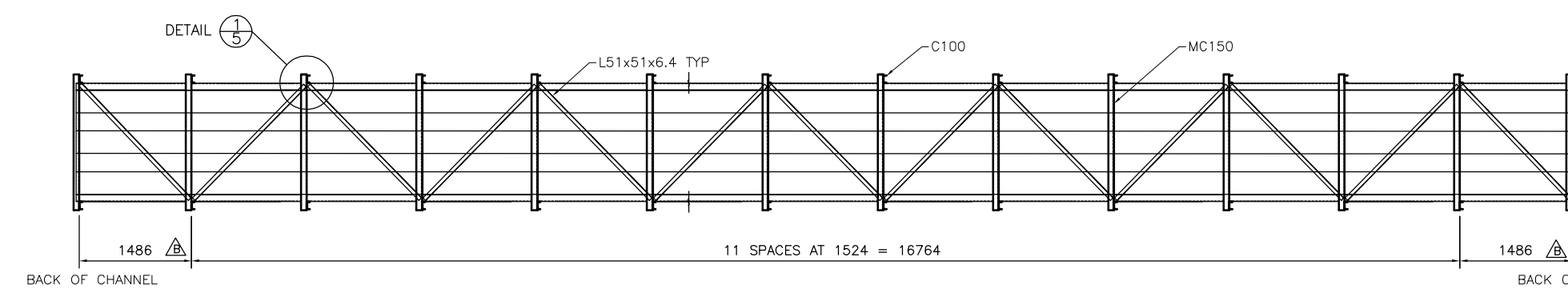
DETAIL 2/3

DIAGONALS FLAT BAR 10x38 TYP

MC FLOORBEAM

BOTTOM CHORD ANGLE 152x89 LLV

C100 POST



PLAN (BOTTOM VIEW)
SCALE: 1:80

NOTES:

- HANDRAIL NOT SHOWN FOR CLARITY.
- NOT ALL HIDDEN LINES REMOVED. SEE LOWER END FOR REPRESENTATIVE SAMPLE.

NOTE: LOWER TRANSITION SPAN NOT SHOWN FOR CLARITY

NOTE: HINGE DETAILS AND TRANSITION PLATE NOT SHOWN FOR CLARITY SEE DWG 2

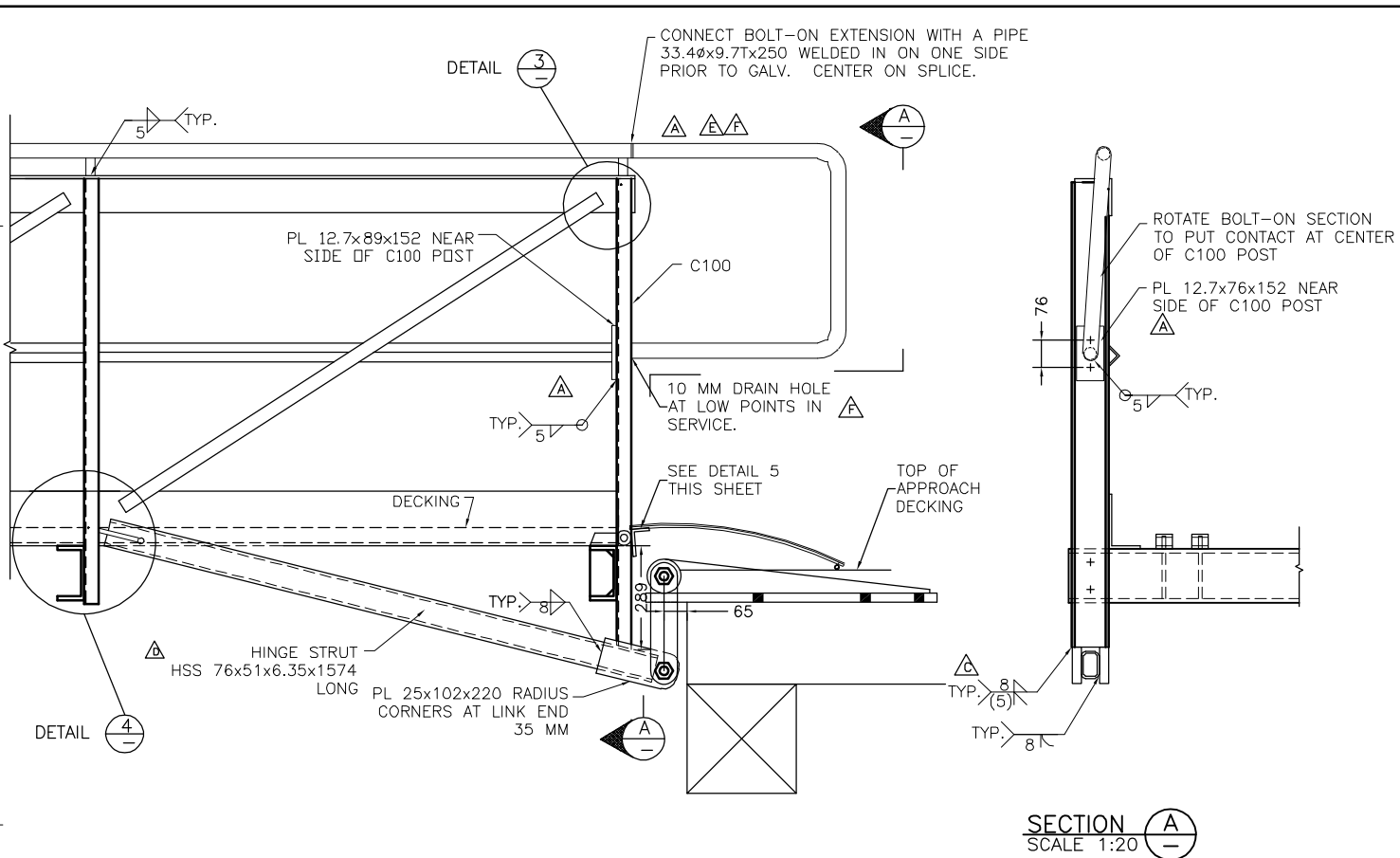
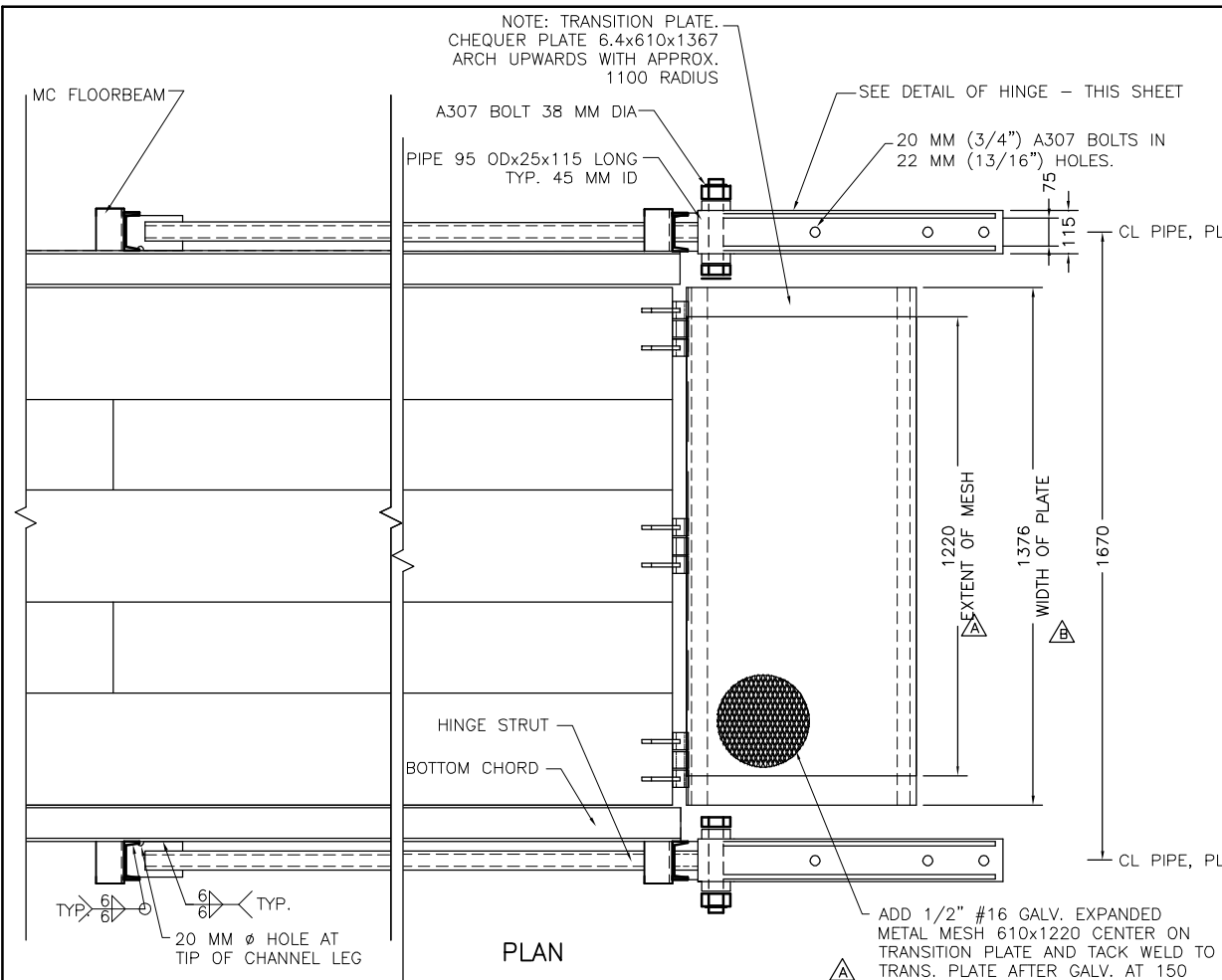
FOR GENERAL NOTES SEE SHEET 5
SCALES SET FOR LEDGER PAPER

REVISIONS	DATE	BY	REVISIONS	DATE	BY
E	15/11/27	RDW	J		
D	14/04/09	RDW	I		
C	09/07/10	RDW	H		
B	09/06/24	RDW	G		
A	07/08/19	RDW	F	16/05/01	RDW

NORTH ISLAND
ENGINEERING LTD.
2007002
1833 ROBB AVENUE, COMOX, B.C.
TEL/FAX (250) 339-2243

APPROVED FOR USE IN CONSTRUCTION	
DRAWN BY: RDW	DESIGN BY: RDW
DATE: 12 APR 2007	CHECKED BY: RDW
FILE No. 2014003	SCALE 1:10

DFO-SCH	STANDARD GANGWAYS SLIDER
19800 (65') -WIDE-1800 TRANS-HANDRAIL TOP	
GENERAL ARRANGEMENT	DRAWING No. 2007002-1 F

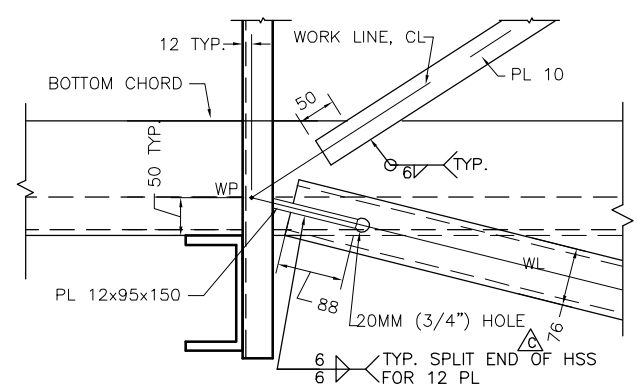
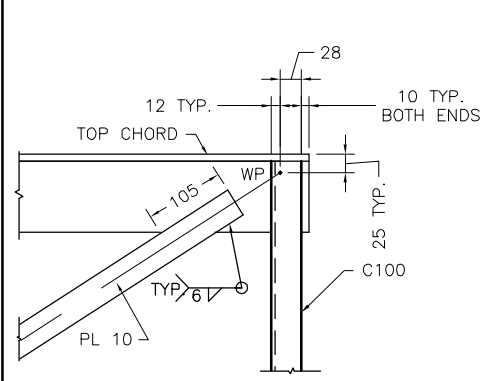
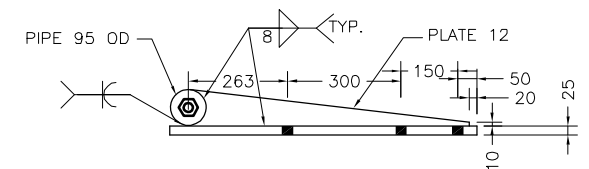
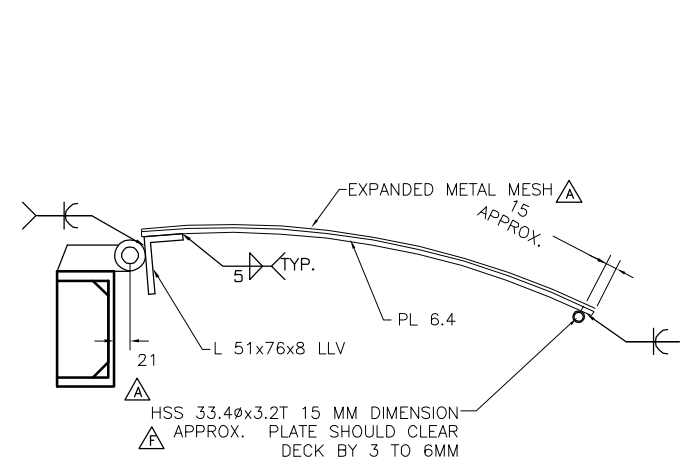


ELEVATION

NOTE: SHOWN FOR ANCHORING INTO TIMBER STRINGERS. MAY NEED BLOCKING TO PREVENT ROLLING SHEAR. FOR OTHER SUPPORT CONDITIONS DETAIL MAY NEED MODIFICATION. SUPPORT TO BE CHECKED FOR THE APPLIED LOADS (SHEET 5.)

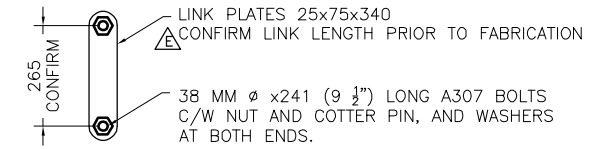
NOTES:
 1. DROP HINGE, BOLTS, NOT SHOWN FOR CLARITY
 2. BOLTED FB/POST CONN. SHOWN.
 3. ONLY PIPES WELDED TO MC SHOWN.

DETAIL 1
SCALE 1:20



DETAIL 5
SCALE 1:10

NOTE: DETAIL OF HINGE SIMILAR TO LOWER TRANSITION PLATE EXCEPT AS NOTED. SEE DETAILS ON SHEET 4 FOR INFORMATION NOT SHOWN.



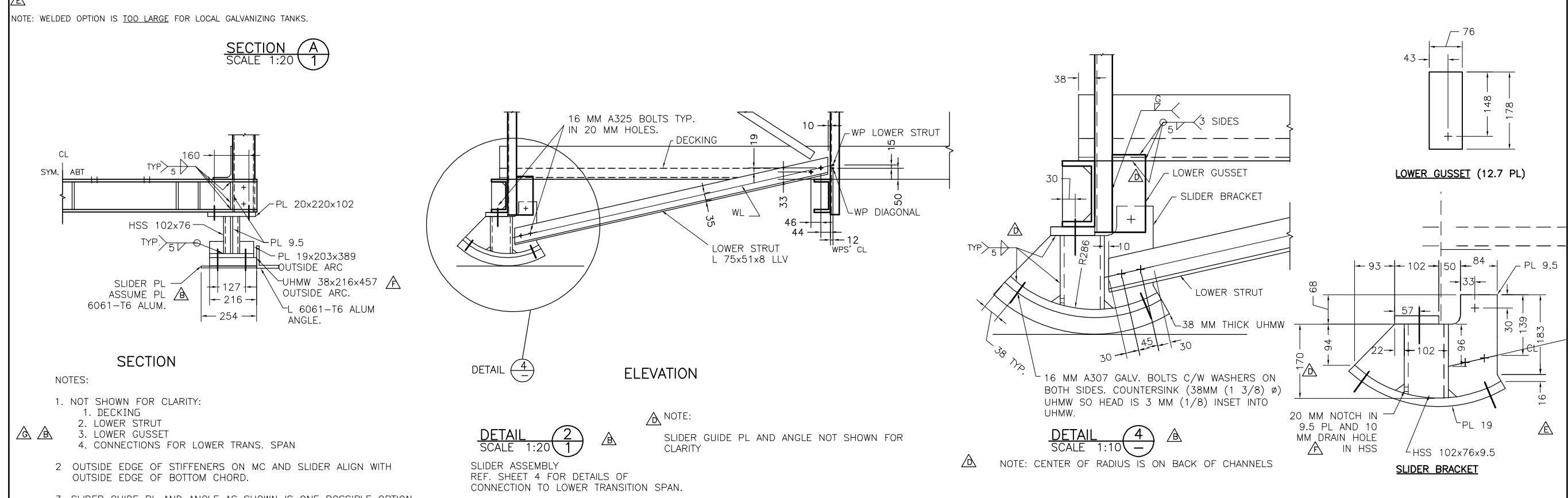
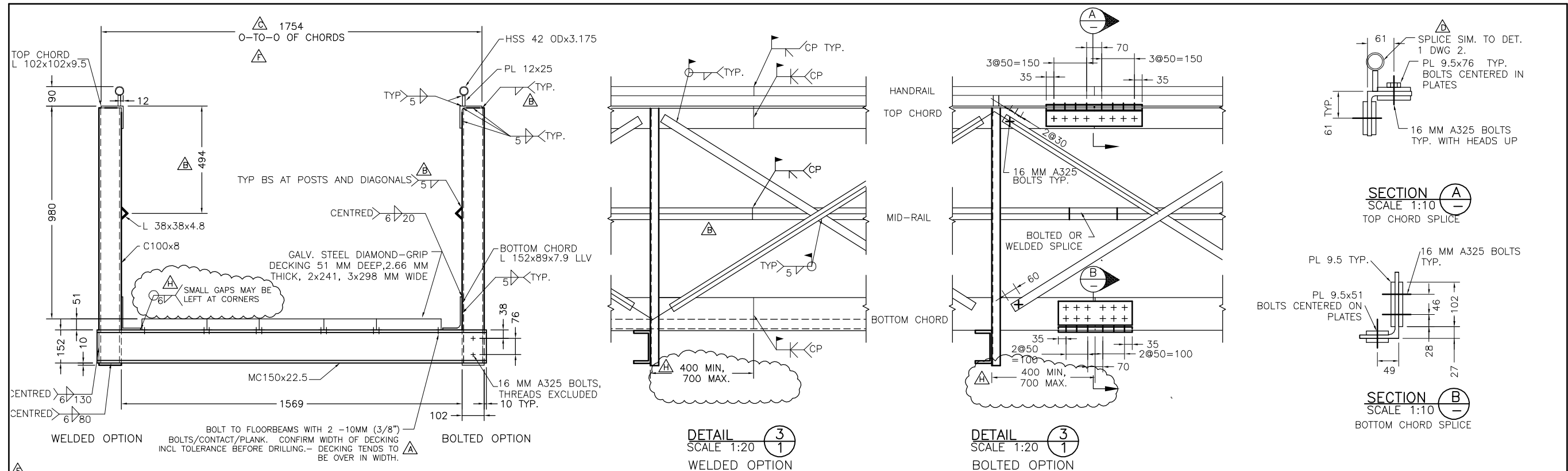
FOR GENERAL NOTES SEE SHEET 5 SCALES SET FOR LEDGER PAPER

REVISIONS	BY	DATE	REVISIONS	BY	DATE
E	RDW	14/04/09	J		
D	RDW	13/07/25	I		
C	RDW	09/08/20	H		
B	RDW	09/07/10	G	RDW	16/05/01
A	RDW	09/06/24	F	RDW	15/11/27

NORTH ISLAND ENGINEERING LTD.
 2014003
 1833 ROBB AVENUE, COMOX, B.C.
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APPROVED FOR USE IN CONSTRUCTION	DESIGN BY: RDW
DRAWN BY: RDW	CHECKED BY: RDW
DATE: 12 APR 2007	SCALE: 1:10
FILE No: 2014003	

DFO-SCH	STANDARD GANGWAYS SLIDER
19800 (65') -WIDE-1800 TRANS-HANDRAIL TOP	
UPPER TRANSITION	DRAWING No. 2007002-2

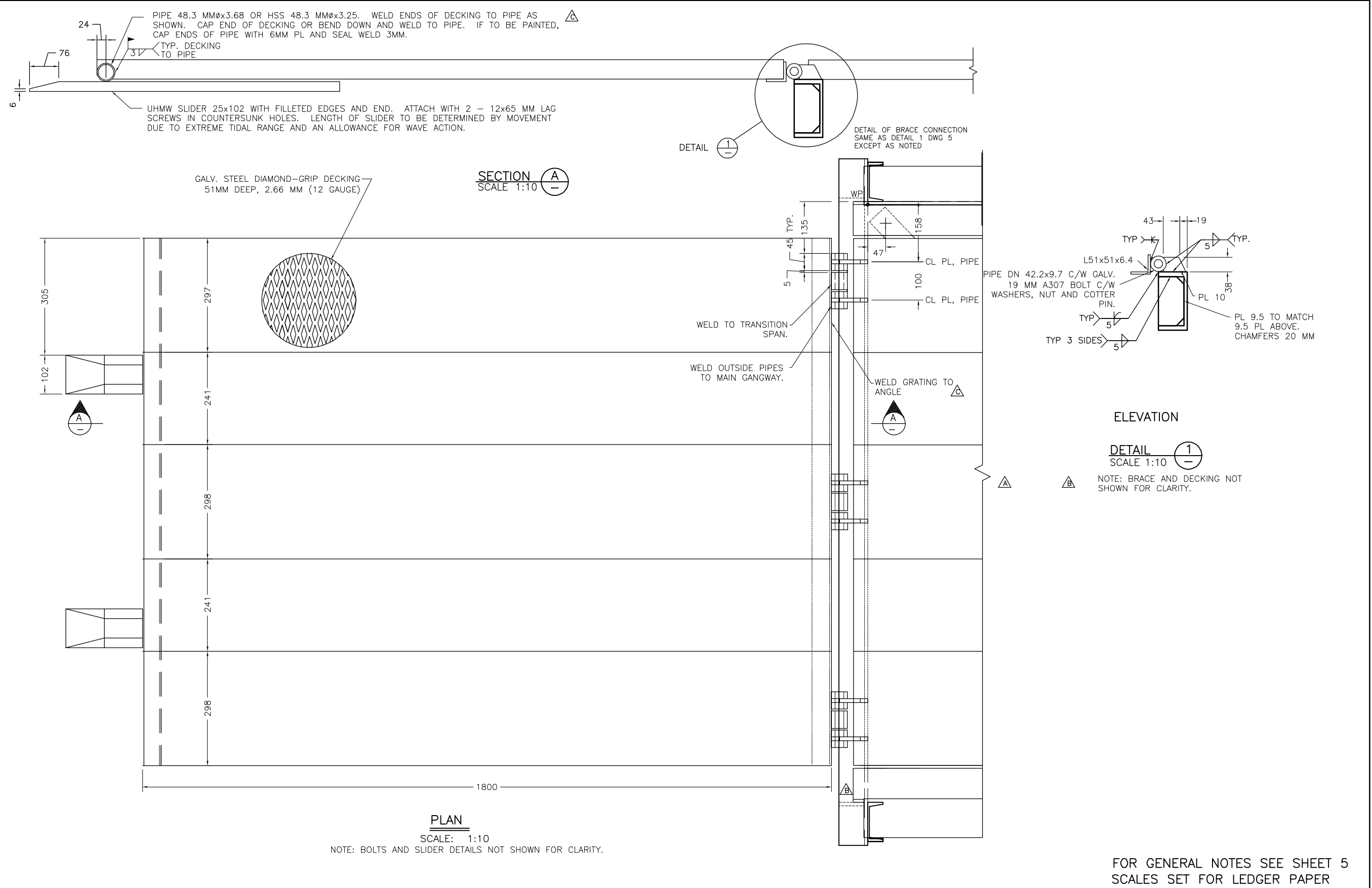


- NOTES:
- NOT SHOWN FOR CLARITY:
 - DECKING
 - LOWER STRUT
 - LOWER GUSSET
 - CONNECTIONS FOR LOWER TRANS. SPAN
 - OUTSIDE EDGE OF STIFFENERS ON MC AND SLIDER ALIGN WITH OUTSIDE EDGE OF BOTTOM CHORD.
 - SLIDER GUIDE PL AND ANGLE AS SHOWN IS ONE POSSIBLE OPTION.
 - ISOLATE ALL ALUM FROM TREATED WOOD.

FOR GENERAL NOTES SEE SHEET 5
SCALES SET FOR LEDGER PAPER

E	MINOR REVISIONS	14/04/10	RDW	J																
D	MINOR REVISIONS	09/08/20	RDW	I																
C	MINOR REVISIONS	09/07/10	RDW	H	MINOR CLARIFICATIONS	17/08/09	RDW													
B	REVISED FOR SLIDER	09/06/24	RDW	G	CHANGED SCALES, MINOR REV.	16/05/01	RDW													
A	FOR CONSTRUCTION	08/12/02	RDW	F	MINOR CLARIFICATIONS	15/11/27	RDW													
REVISIONS		T/M/D BY		REVISIONS		T/M/D BY		NORTH ISLAND ENGINEERING LTD. 2007002 1833 ROBB AVENUE, COMOX, B.C. TEL/FAX (250) 339-2243				APPROVED FOR USE IN CONSTRUCTION DFO-SCH STANDARD GANGWAYS SLIDER 19800 (65') -WIDE-1800 TRANS-HANDRAIL TOP DETAILS 1 DRAWING No. 2007002-3 H CANCEL PRINTS BEARING EARLIER REVIS								

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REVISIONS	Y/M/D	BY	REVISIONS	Y/M/D	BY
E			J		
D	16/05/01	RDW	I		
C	15/11/27	RDW	H		
B	09/07/10	RDW	G		
A	09/06/24	RDW	F		

PLAN
SCALE: 1:10
NOTE: BOLTS AND SLIDER DETAILS NOT SHOWN FOR CLARITY.

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APPROVED FOR USE IN CONSTRUCTION	DFO-SCH	STANDARD GANGWAYS SLIDER
DRAWN BY: RDW	DESIGN BY: RDW	19800 (65') -WIDE-1800 TRANS-HANDRAIL TOP
DATE 12 APR 2007	CHECKED BY: RDW	LOWER TRANSITION SPAN
FILE No. 2007002	SCALE 1:10	DRAWING No. 2007002-4

DFO-SCH

STANDARD GANGWAYS SLIDER

19800 (65') -WIDE-1800 TRANS-HANDRAIL TOP

LOWER TRANSITION SPAN

DRAWING No. 2007002-4

CANCEL PRINTS BEARING EARLIER REVIS

DESIGN CRITERIA

THIS STRUCTURE HAS BEEN DESIGNED IN GENERAL ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:

- NBC BUILDING CODE 2005, PART 4. EXCEPT LIVE LOAD ONLY 2.4 KPA AND ONLY CONSIDERED LOAD COMBINATION 1.25DL+1.5LL
- WCB OCCUPATIONAL HEALTH AND SAFETY REG. 296/97, AMENDED 185/99
- CSA STANDARD, S16.1 LIMIT STATES DESIGN OF STEEL STRUCTURES, 2001
- AISC LRFD SPEC. FOR DESIGN OF SINGLE-ANGLE MEMBERS, NOV. 2000

DESIGN LOADS (SERVICE)

DEAD LOAD	2.0 KN/M (TOTAL BOTH SIDES)
SERVICES	0.6 KN/M (TOTAL BOTH SIDES)
LIVE LOAD	2.4 KPA OR 2.2 KN POINT LOAD
REVA COEFF. OF FRICTION FOR SLIDER	0.3
TWIST AT BASE	10 DEGREES
LATERAL DEFLECTION AT SLIDER	150 MM
TIDAL RANGE	8.0 M (9.1M APPROACH TO FLOAT DECK)

ENGINEER SHOULD DETERMINE IF

1. THE LIVE LOAD IS APPLICABLE TO THE PROPOSED SITE- IN SOME CASES, SNOW LOAD MAY BE HIGHER THAN 2.4 KPA.
2. DIFFERENTIAL DECK TO DECK ADEQUATE INCL. ALLOW. FOR FLOAT MOTIONS.
3. WHETHER EXTRA PRECAUTIONS REQUIRED FOR WIND LOADS..
4. THE LOWER TRANSITION PLATE DETAIL IS NOT SUITABLE IF THE ANGLE FROM THE LINE OF GANGWAY TO THE TRANS. PLATE EXCEEDS ABOUT 30° INCL. WAVE ACTION.

BASED ON PREVIOUS DESIGNS 2004013, 2005006, 2005013

STEEL

MATERIALS TO CONFORM TO THE FOLLOWING:

ROLLED SECTIONS	GRADE 300W, CSA STANDARDS G40.20/G40.21
PLATE	GRADE 300W, CSA STANDARDS G40.20/G40.21
HSS	GRADE 350W, CLASS C CSA STANDARDS G40.20/G40.21
PIPE	ASTM A53 TYPE B, MIN. YIELD 241 MPA (33 KSI)

STEEL FOR SPLICE PLATES NOT TO BE SHEARED ALONG EDGES.

GRATING TO BE DIAMOND-GRIP CHANNEL BY AMICO-ISG OR APPROVED EQUAL.

OBTAIN AND PROVIDE THE ENGINEER WITH COPIES OF ALL MILL CERTIFICATES.

BOLTS TO CONFORM AS FOLLOWS:

STEEL CONNECTIONS	ASTM A325, TYPE 1, GALV.
WOOD/STEEL CONNECTIONS	ASTM A307
LINK PLATES	ASTM A307

ALL BOLTS TO BE GALVANIZED AND SOURCED FROM A CANADIAN OR AMERICAN FACTORY.

WELDING ELECTRODES TO BE E410XX OR E480XX (E60XX OR E70XX) WITH A SILICON CONTENT BELOW 0.35% FOR FABRICATION PRIOR TO GALVANIZING AND E41013 (E6013) IF STEEL GALVANIZED.

A325 BOLTS FOR STEEL CONNECTIONS TO BE SIZED TO EXCLUDE THE THREADS FROM THE SHEAR PLANE AND RESULT IN AT LEAST 1.5 TURNS PROTRUDING FROM THE NUT.

FAYING SURFACES OF BOLTED CONNECTIONS TO BE CLEAN AND FREE OF BURRS, WELD SPLATTER OR OTHER MATERIAL THAT WOULD INTERFERE WITH SOLID BEARING AND/OR FRICTION. HOLES TO BE 2 MM (1/16") LARGER THAN THE BOLT UNO.

A325 BOLTS TO BE TIGHTENED BY THE TURN-OF-NUT METHOD. USE A WASHER UNDER THE TURNED ELEMENT, EXCEPT FOR OVERSIZED HOLES USE A WASHER UNDER BOTH THE HEAD AND NUT. IN ACCORDANCE WITH THE STANDARDS, GALV. BOLTS ARE ONLY TO BE TORQUED ONCE. ENSURE GANGWAY IS PROPERLY ALIGNED BEFORE TORQUEING MOST OF THE BOLTS. EXCEPT FOR THOSE ELEMENTS TO BE SHIPPED SEPARATELY TO SITE, WHICH SHOULD ONLY BE SNUG-TIGHT:

- 1ST FLOORBEAM
- LOWER STRUT
- SLIDER ASSEMBLY
- REMOVABLE HANDRAIL ASSEMBLY

AT SITE, ALL OF THE BOLTS USED ON THE ABOVE ASSEMBLIES - ONCE INSTALLED AND ALIGNED - TO BE TIGHTENED BY THE TURN-OF-NUT METHOD.

WELDING TO BE IN ACCORDANCE WITH CSA W59, INCLUDING CLAUSE 12. WELDERS TO BE QUALIFIED BY THE CANADIAN WELDING BUREAU.

FILLET WELDS, UNO, TO BE 5 MM (3/16) WELDS. FILLET WELDS LESS THAN OR EQUAL TO 8 MM (5/16) TO BE DONE IN A SINGLE PASS.

TOLERANCES AS PER CSA W59 CLAUSE 5.8. - TO BE CHECKED BY THE FABRICATOR

GENERAL NOTES

IMMEDIATELY INFORM THE ENGINEER OF ALL DISCREPANCIES AND PROBLEMS ENCOUNTERED.

AS THIS GANGWAY IS WIDER, IT MAY BE NECESSARY TO PROVIDE SOME FORM OF BARRIER TO PREVENT THE USE BY ALL-TERRAIN VEHICLES.

GREASE ALL PINS WITH LITHIUM EP2 GREASE PRIOR TO ASSEMBLY.

PUT 10MM DRAIN HOLES IN ALL PIPES AND HSS WHERE WATER WOULD COLLECT IN SERVICE.

SEAL ENDS OF ALL PIPES AND HSS, EXCEPT HINGES, THAT ARE PAINTED.

HANDRAILS AND OTHER PARTS OF THE GANGWAY TO BE FREE OF SHARP POINTS AND OTHER DEFECTS THAT WOULD INTERFERE WITH ITS INTENDED USE.

GALVANIZING OF STEEL - ADDITIONAL REQUIREMENTS

ALL STEELS TO BE SUITABLE FOR GALVANIZING WITH
 A CARBON CONTENT LESS THAN 0.25% C<0.25%
 A PHOSPHORUS CONTENT LESS THAN 0.04% P<0.04%
 A SILICON CONTENT EITHER LESS THAN 0.03% OR BETWEEN 0.15 AND 0.25%, Si<0.03% OR 0.15<Si<0.25%
 AND A MANGANESE CONTENT BELOW 1.35%. MN<1.35%

PRIOR TO FABRICATING REMOVE ALL LACQUER FROM PIPES.

PRIOR TO GALVANIZING THE STEEL IS TO BE CLEANED BY THE FABRICATOR TO REMOVE SURFACE CONTAMINATES, SUCH AS WELDING SLAG, THAT WOULD INTERFERE WITH THE GALVANIZING PROCESS.

STEEL TO BE HOT-DIP GALVANIZED TO CSA STANDARD G164-M1981, WITH THE SPELTER COAT OF AT LEAST 0.61 KG ZINC PER SQUARE METER.

NO PROGRESSIVE DIPPING (DOUBLE DIPPING) IS PERMITTED.

AREAS TO BE WELDED WHICH HAVE BEEN HOT DIPPED GALVANIZED TO BE GROUND TO BARE STEEL.

STEEL TO BE HANDLED CAREFULLY TO AVOID DAMAGING THE GALVANIZING. GALVANIZED COATING WHERE DAMAGED AND WELD AREAS TO BE TOUCHED UP WITH 2 COATING OF ZINGA OR APPROVED EQUAL.

TOLERANCES TO BE CHECKED BEFORE AND AFTER GALVANIZING

PAINTING OF STEEL- ADDITIONAL REQUIREMENTS

PAINTING PREPARATION AND APPLICATION TO BE IN ACCORDANCE WITH DFO-SCH STANDARD PAINT SPECIFICATION. EXCEPT FOR APPLICATION ON FAYING SURFACES WHICH SHOULD BE PAINTED WITH ONE COAT OF AN INORGANIC ZINC RICH PRIMER WITH A MIN. THICKNESS OF 3 MILS. MASK FAYING SURFACES TO PREVENT OTHER PAINTS BEING APPLIED TO THE FAYING SURFACES.

TOP COAT TO BE SAFETY RED.

STEEL TO BE HANDLED CAREFULLY TO AVOID DAMAGING THE PAINT. TOUCH UP DAMAGED PAINT AS PER PAINT SPEC.

HINGE STRUT TO BE SEALED AT BOTH ENDS EXCEPT FOR ONE 10 MM DRAIN HOLE PER END AT LOW POINT

SLIDER REV A

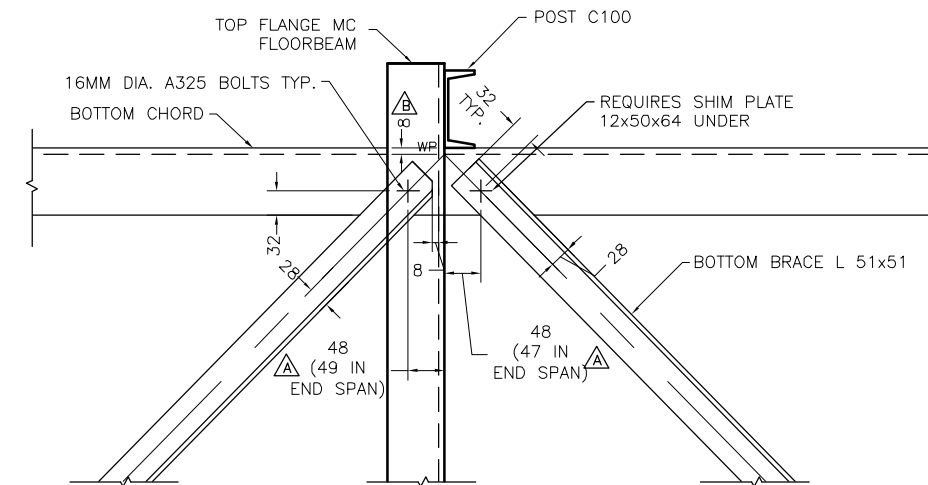
MATERIAL FOR SLIDER TO BE VIRGIN UHMW CONFORMING TO ASTM D 4020, WITH UV STABILIZERS. NOTE: HDPE IS NOT ACCEPTABLE.

IF HEAT WILL BE NEEDED TO FORM THE UHMW, THE TEMPERATURE MUST BE LESS THAN 80° C OR 180° F. DRILL HOLES AFTER FORMING TO THE CORRECT RADIUS USING A JIG. ONCE FORMED THE UHMW SHOULD BE KEPT EITHER BOLTED/CLAMPED TO THE SLIDER OR A 2 FT Ø PILE TO RETAIN ITS SHAPE.

SLIDER TRACK REV A

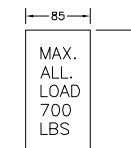
MATERIAL FOR SLIDER TRACK TO BE 6061-T6 ALUMINUM. ALUMINUM THAT MIGHT CONTACT SALT-TREATED TIMBERS TO HAVE A SUITABLE CAULK OR OTHER APPROVED ISOLATING COMPOUND INSERTED BETWEEN THE ALUMINUM AND THE SALT-TREATED WOOD.

CONNECTIONS FOR SLIDER TRACK TO BE 316 STAINLESS STEEL OR HOT DIP GALVANIZED TO CSA STANDARD G164.



DETAIL 1
SCALE 1:10

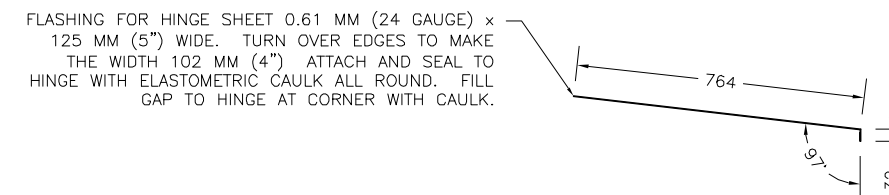
LOWER LATERAL BRACING CONNECTION



DETAIL 2
SCALE 1:10

NOTES:

1. LOAD LIMIT OF 700 LB BASED ON GRATING.
2. LOAD LIMIT OF 2000 LB WOULD BE APPROPRIATE FOR THE TRUSSES PROVIDED REST OF RAMP CLEAR OF LOADS.
3. LOAD PLAQUE TO BE ATTACHED TO VERTICAL AT TOP END.



DETAIL 3
SCALE 1:20

FLASHING FOR HINGES

SCALES SET FOR LEDGER PAPER

REVISIONS	DATE	BY	REVISIONS	DATE	BY
E	14/04/09	RDW	J		
D	13/07/23	RDW	I		
C	09/08/20	RDW	H	17/07/27	RDW
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DATE: 12 APR 2007	CHECKED BY: RDW
FILE No: 2014003	SCALE: 1:5

DFO-SCH	STANDARD GANGWAYS SLIDER
19800 (65') -WIDE-1800 TRANS-HANDRAIL TOP	
GENERAL NOTES	DRAWING No: 2007002-5 H

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