



Ministry of Forests

STANDARD BRIDGE DRAWINGS:
STEEL GIRDER TIMBER DECK

DRAWING SCHEDULE			
DRAWING NUMBER	DRAWING TITLE	REV.	DATE
STD-EC-020-01	GENERAL NOTES - SHEET 1	0	NOVEMBER 23, 2023
STD-EC-020-02	GENERAL NOTES - SHEET 2	0	NOVEMBER 23, 2023
STD-EC-020-03	PERMANENT, CONTINUOUS TIMBER DECK BRIDGE GENERAL ARRANGEMENT	1	MARCH 26, 2012
STD-EC-020-04	PORTABLE, CONTINUOUS TIMBER DECK BRIDGE GENERAL ARRANGEMENT	1	MARCH 26, 2012
STD-EC-020-05	MODULAR TIMBER DECK PANEL, GENERAL ARRANGEMENT & DETAILS	1	MARCH 26, 2012
STD-EC-020-06	MODULAR TIMBER DECK PANELS, ATTACHMENT DETAILS - NEW BRIDGES	1	MARCH 26, 2012
STD-EC-020-07	MODULAR TIMBER DECK PANELS, ATTACHMENT DETAILS FIELD RETROFIT TO EXISTING BRIDGES	1	MARCH 26, 2012

1. GENERAL NOTES

- 1.1
- THESE STANDARD DRAWINGS APPLY TO SINGLE LANE STEEL GIRDER BRIDGES WITH TIMBER DECKS.
- 1.2
- APPLICABLE BRIDGE GIRDER LENGTH (OUT-TO-OUT): 6.096 M (20') TO 39.624 M (130').
- 1.3
- SPECIAL INVESTIGATION AND MINISTRY ENGINEER APPROVAL WILL BE REQUIRED FOR UNUSUAL SITUATIONS INCLUDING BUT NOT LIMITED TO:

• GIRDER LENGTHS > THOSE SPECIFIED ABOVE;

• BRIDGE WIDTHS > STD. SINGLE LANE WIDTHS;

• MULTI-SPAN BRIDGES.
- 1.4
- UNLESS OTHERWISE SPECIFIED ON THESE DRAWINGS, ALL WORK ASSOCIATED WITH THESE DRAWINGS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE MINISTRY BRIDGE STANDARDS MANUAL (BSM) INCLUDING BUT NOT LIMITED TO:

• DESIGN;


• MATERIALS AND FABRICATION;

• LIFTING, TRANSPORTATION AND INSTALLATION; AND

• CERTIFICATION AND QUALITY CONTROL.
- 1.5
- WHERE APPLICABLE, BARRIERS AND SUBSTRUCTURE COMPONENTS SHALL BE DETAILED IN ACCORDANCE WITH THE FOLLOWING MINISTRY STANDARD DRAWINGS:


• BARRIERS (STD-EC-010 SERIES); AND

• SUBSTRUCTURES (STD-EC-050 SERIES).
- 1.6
- ALL DIMENSIONS IN mm UNLESS NOTED OTHERWISE.
- 1.7
- THE ENGINEERS SPECIFIED IN THE TITLE BLOCK HAVE WORKED IN ACCORDANCE WITH THEIR FIRMS' ENGINEERS AND GEOSCIENTISTS BC PERMITS TO PRACTICE. THE MINISTRY OWNS, AND RETAINS FULL OVERALL RESPONSIBILITY FOR, THESE DRAWINGS AND RETAINS SUPERSEDED VERSIONS OF THESE DRAWINGS IN MINISTRY FILES.
- 1.8
- SIGNIFICANT CHANGES MADE IN THIS STANDARD DRAWING SET ARE DESCRIBED IN THE BSM REVISION HISTORY.
- 1.9
- MINISTRY STANDARD BRIDGE DRAWINGS PROVIDE STANDARDS THAT SHALL BE USED, WHERE APPROPRIATE, BY ENGINEERS RESPONSIBLE FOR SPECIFIC FOREST SERVICE ROAD (FSR) BRIDGE PROJECTS.
- 1.10
- STANDARD BRIDGE DRAWINGS ARE NOT TO BE USED DIRECTLY FOR CONSTRUCTION (I.E. FABRICATION AND/OR INSTALLATION.) PROJECT SPECIFIC DRAWINGS SHALL BE CREATED FOR CONSTRUCTION OF SPECIFIC PROJECTS.
- 1.11
- ENGINEERS INVOLVED WITH SPECIFIC PROJECTS SHALL DETERMINE WHETHER STANDARD DRAWING REQUIREMENTS ARE APPROPRIATE FOR THEIR PROJECT. IF THEY DETERMINE THAT CERTAIN REQUIREMENTS ARE INAPPROPRIATE, THEY SHALL PROPOSE VARIATIONS FOR APPROVAL BY THE MINISTRY ENGINEER.

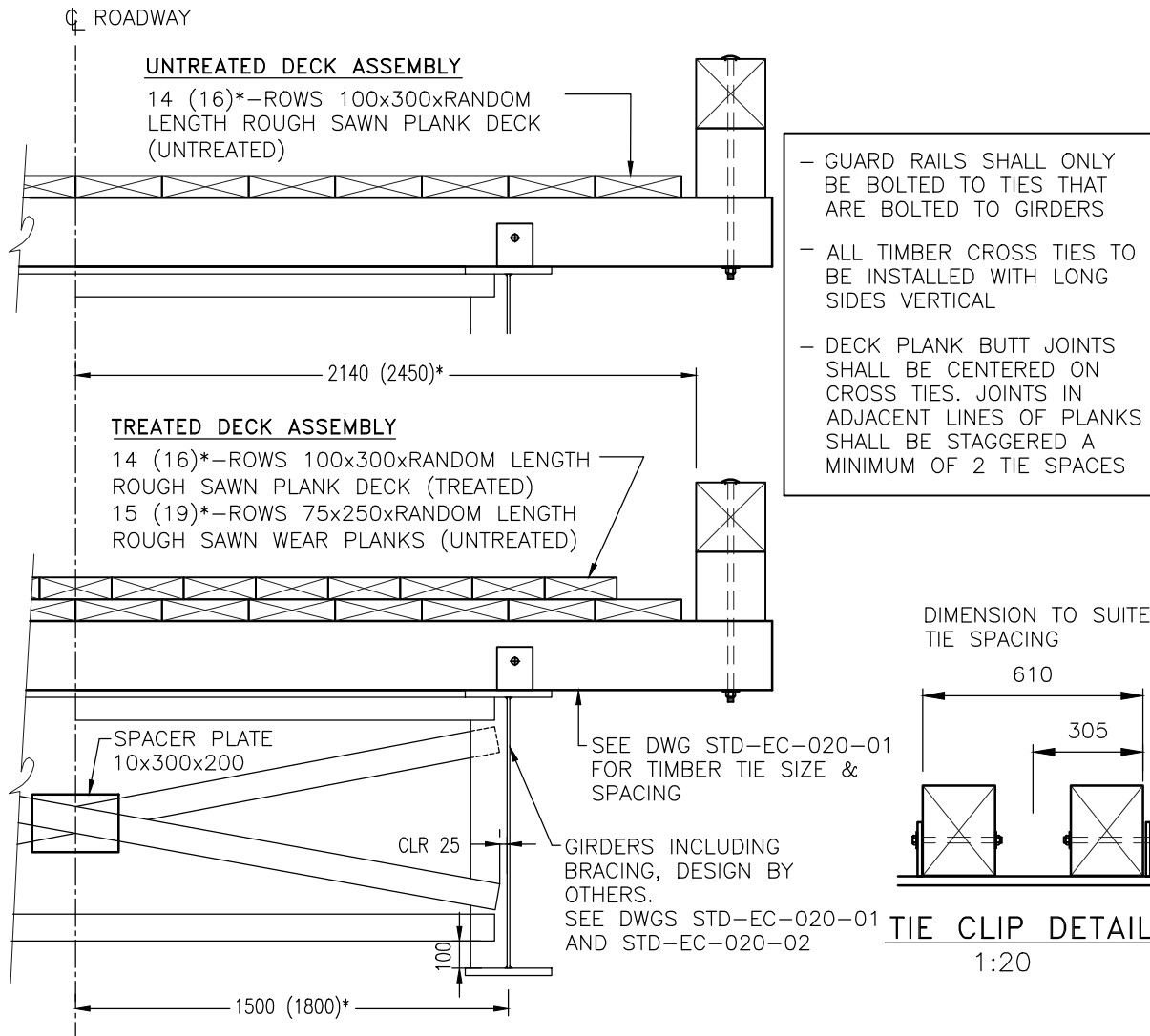
REV #	DATE	REVISION DESCRIPTION	DRAFTING	DESIGN	CHECK / REVIEW	APPROVAL	<div><div><div>BRITISH COLUMBIA</div>Ministry of Forests</div><div>STANDARD BRIDGE DRAWING</div></div>
0	NOV. 23, 2023	NEW GENERAL NOTES & MISC. DWG. REVS	M. DAVIES (SNT ENG.)	M. PENNER (MINISTRY)	C. DIPASQUALE (SNT ENG.)	J. HARVEY (MINISTRY)	
							STEEL GIRDER TIMBER DECK
							SHEET 01 OF 07
							GENERAL NOTES - SHEET 1
							DWG #: STD-EC-020-01

NOT FOR CONSTRUCTION
ASSUME NOT TO SCALE

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REV #	DATE	REVISION DESCRIPTION	DRAFTING	DESIGN	CHECK / REVIEW	APPROVAL	<div> BRITISH COLUMBIA Ministry of Forests STANDARD BRIDGE DRAWING</div>
0	NOV. 23, 2023	NEW GENERAL NOTES & MISC. DWG. REVS	M. DAVIES (SNT ENG.)	M. PENNER (MINISTRY)	C. DIPASQUALE (SNT ENG.)	J. HARVEY (MINISTRY)	
							STEEL GIRDER TIMBER DECK
							SHEET 02 OF 07
							GENERAL NOTES - SHEET 2
							DWG #: STD-EC-020-02

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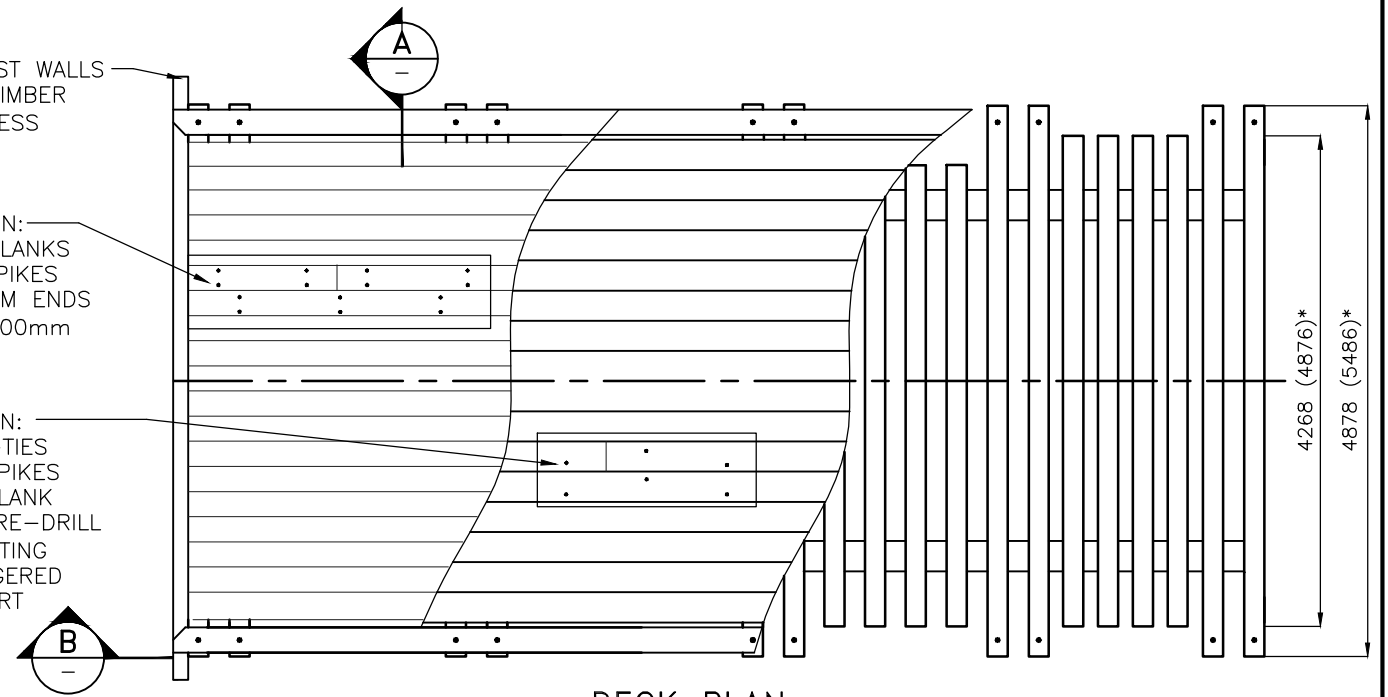
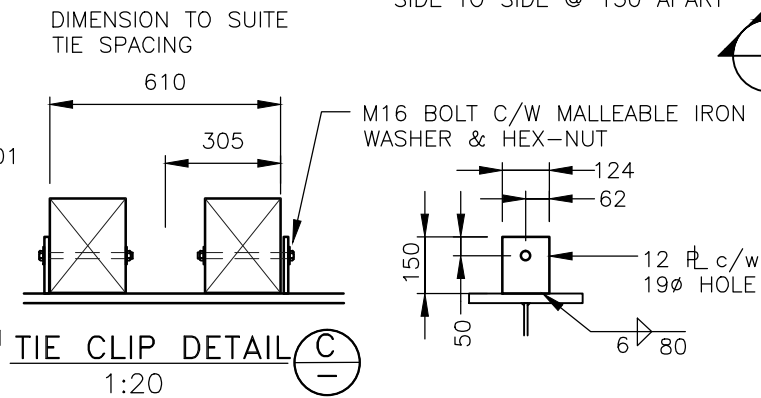
FOR PERMANENT BRIDGES, BALLAST WALLS
TO BE 150x300x6000 TREATED TIMBER
BOLTED TO GIRDER END PL's UNLESS
SPECIFIED OTHERWISE.

WEAR PLANKS NAILING PATTERN:-

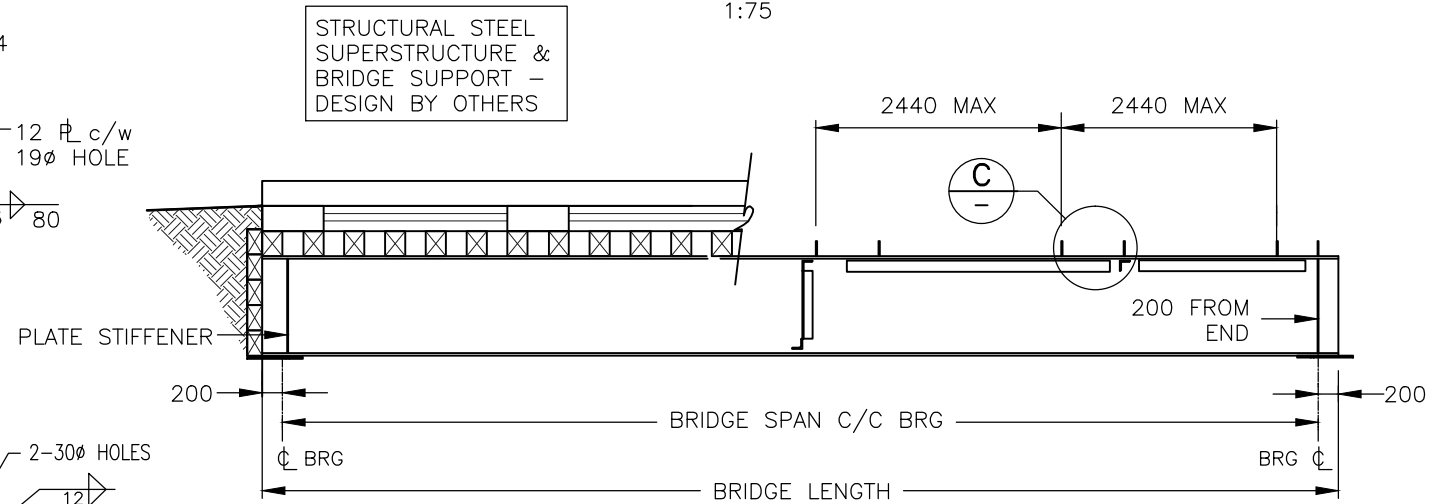
- WEAR PLANKS TO DECK PLANKS
- 150mm GALV. COMMON SPIKES
- 2 @ 150 APART 300 FROM ENDS
- 2 @ 150 APART @+/-1000mm
O/C TYPICAL

DECK PLANKS NAILING PATTERN:

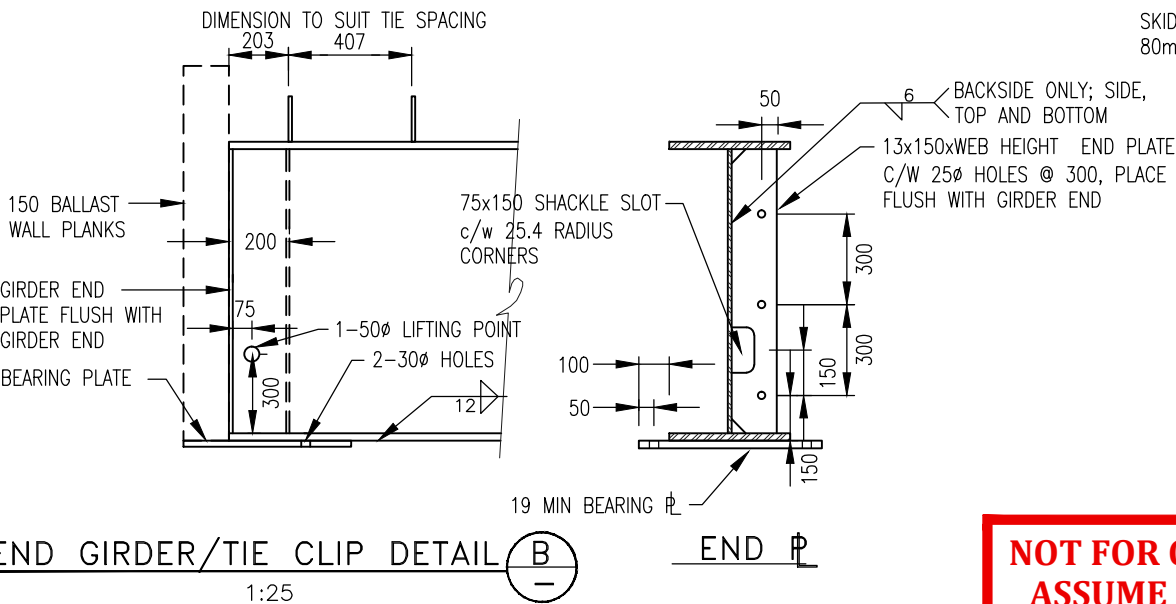
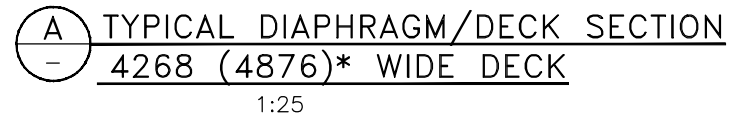
- DECK PLANKS TO CROSS-TIES
- 200mm GALV. COMMON SPIKES
- 1 SPIKE, CENTERED ON PLANK AND TIE AT EACH END; PRE-DRILL (6mm) TO PREVENT SPLITTING
- 1 SPIKE EVERY TIE, STAGGERED SIDE TO SIDE @ 150 APART



DECK PLAN
1:75



TYPICAL ELEVATION
1:75



OPTIONAL SKID PLATE BEARING DETAIL
1:25

SCALE	AS SHOWN	Designed _____ ABS _____	Date 2012/03/12
		Checked _____ LT _____	Date 2012/03/20
		Drawn _____ ABS _____	Date 2012/03/12

Rev	Date	DESCRIPTION	Init
-	-	-	-

REVISIONS



BRITISH
COLUMBIA

**MINISTRY OF FORESTS, LANDS AND NATURAL
RESOURCE OPERATIONS**

ENGINEERING BRANCH

STANDARD BRIDGE DRAWING

PERMANENT, CONTINUOUS TIMBER DECK BRIDGE GENERAL ARRANGEMENT

ORIGINAL SIGNED and SEALED BY:
A.B. SWAN, PEng

DESIGN ENGINEER: A.B. SWAN P.ENG
DATE: MARCH 26, 2012

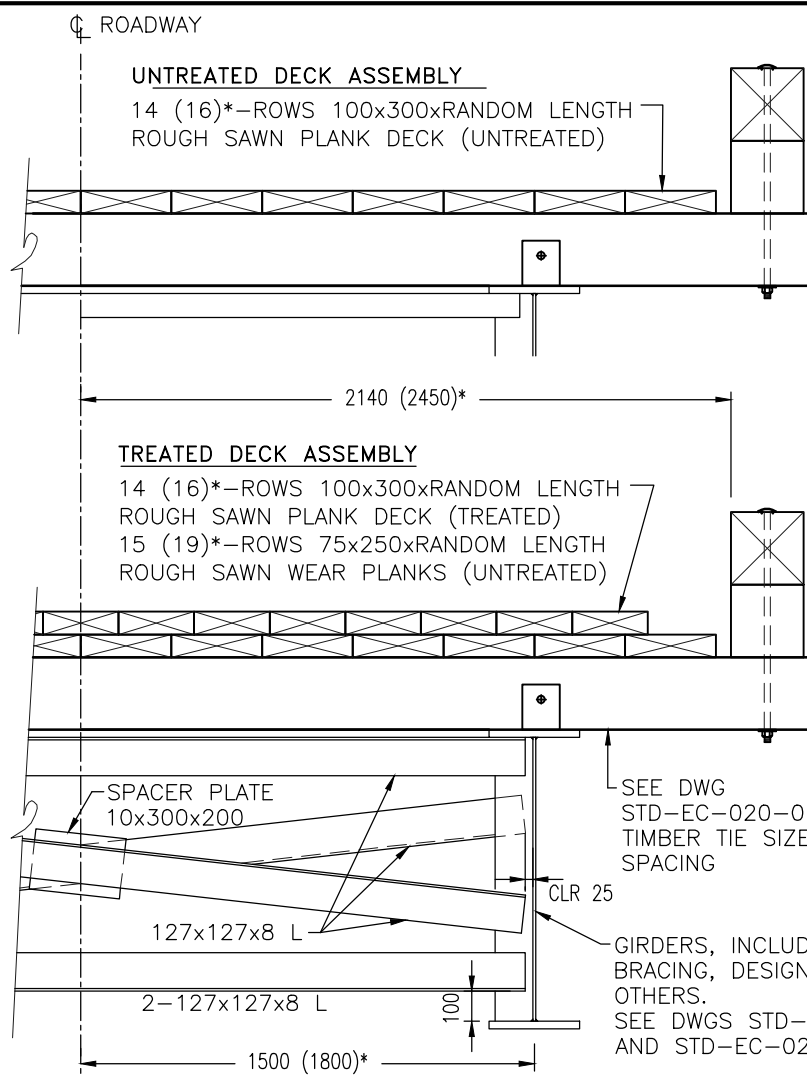
MFR ENGINEER:
DATE

APPROVED BY: BRIAN CHOW, P.ENG, CHIEF ENGINEER
DATE:

FILE No.

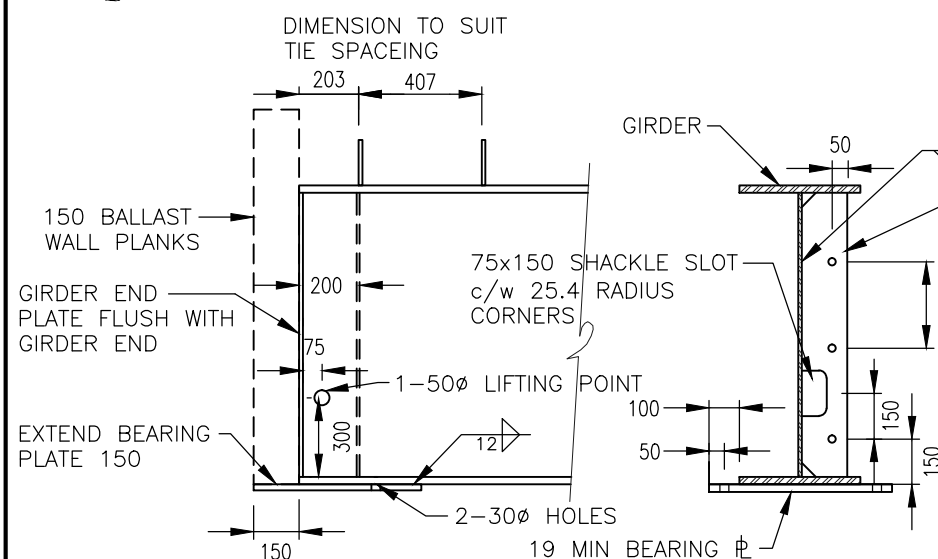
DRAWING No.
STD-EC-020-03

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A TYPICAL END DIAPHRAGM/DECK SECTION

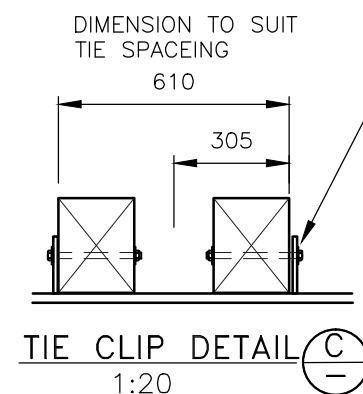
1:25



END GIRDER/TIE CLIP DETAIL (B)

1:25

- GUARD RAILS SHALL ONLY BE BOLTED TO TIES THAT ARE BOLTED TO GIRDERS
- ALL TIMBER CROSS TIES TO BE INSTALLED WITH LONG SIDES VERTICAL
- DECK PLANK BUTT JOINTS SHALL BE CENTERED ON CROSS TIES. JOINTS IN ADJACENT LINES OF PLANKS SHALL BE STAGGERED A MINIMUM OF 2 TIE SPACES



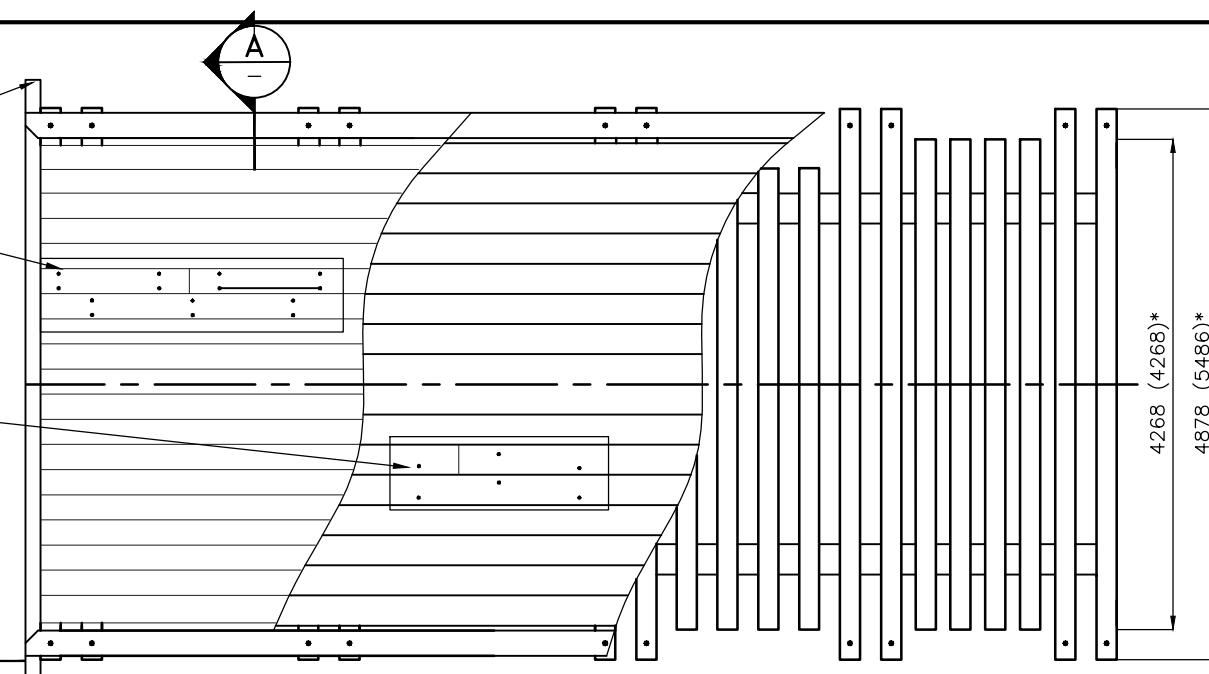
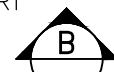
TIE CLIP DETAIL (C)

1:20

FOR PORTABLE BRIDGES BALLAST WALLS TO BE 150x300x6000 TREATED TIMBER BOLTED TO GIRDER END P's UNLESS SPECIFIED OTHERWISE.

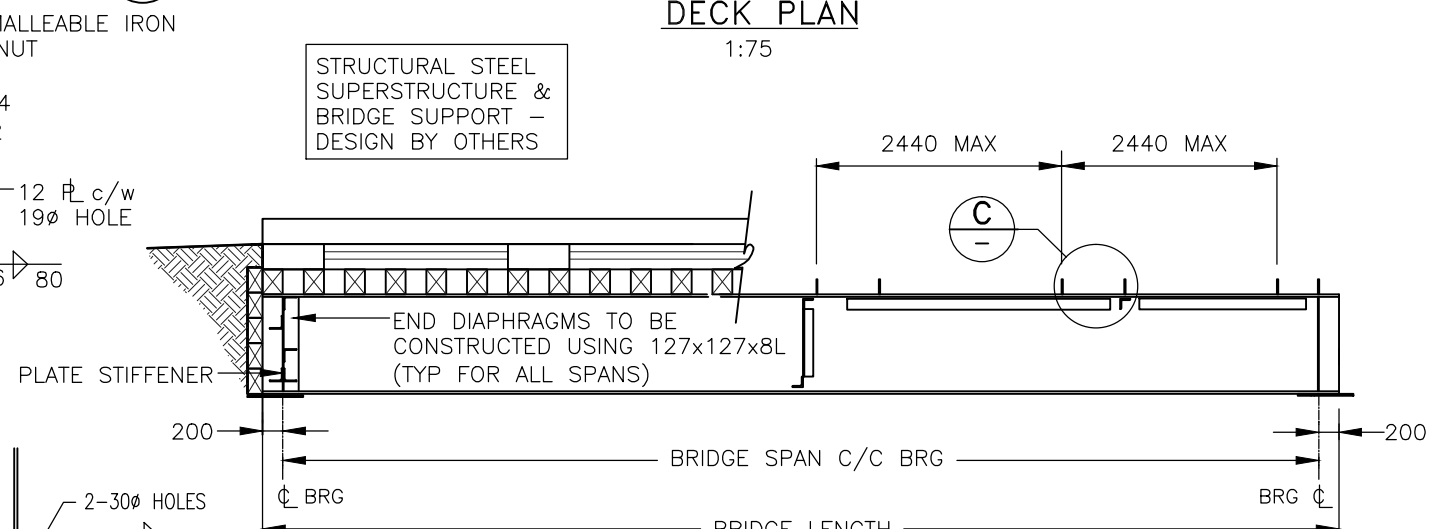
- WEAR PLANKS NAILING PATTERN:
- WEAR PLANKS TO DECK PLANKS
 - 150mm GALV. COMMON SPIKES
 - 2@150 APART 300 FROM ENDS
 - 2@150 APART @+/-1000mm O/C TYPICAL

- DECK PLANKS NAILING PATTERN:
- DECK PLANKS TO CROSS-TIES
 - 200mm GALV. COMMON SPIKES
 - 1 SPIKE, CENTERED ON PLANK AND TIE AT EACH END; PRE-DRILL (6mm) TO PREVENT SPLITTING
 - 1 SPIKE EVERY TIE, STAGGERED SIDE TO SIDE @ 150 APART



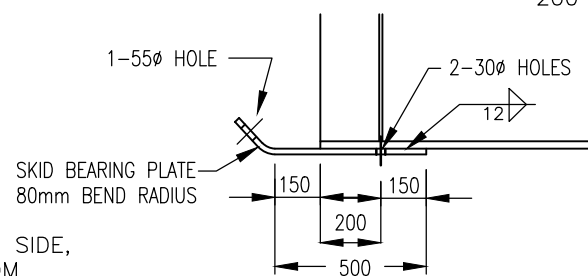
DECK PLAN

1:75



TYPICAL ELEVATION

1:75



OPTIONAL SKID PLATE BEARING DETAIL

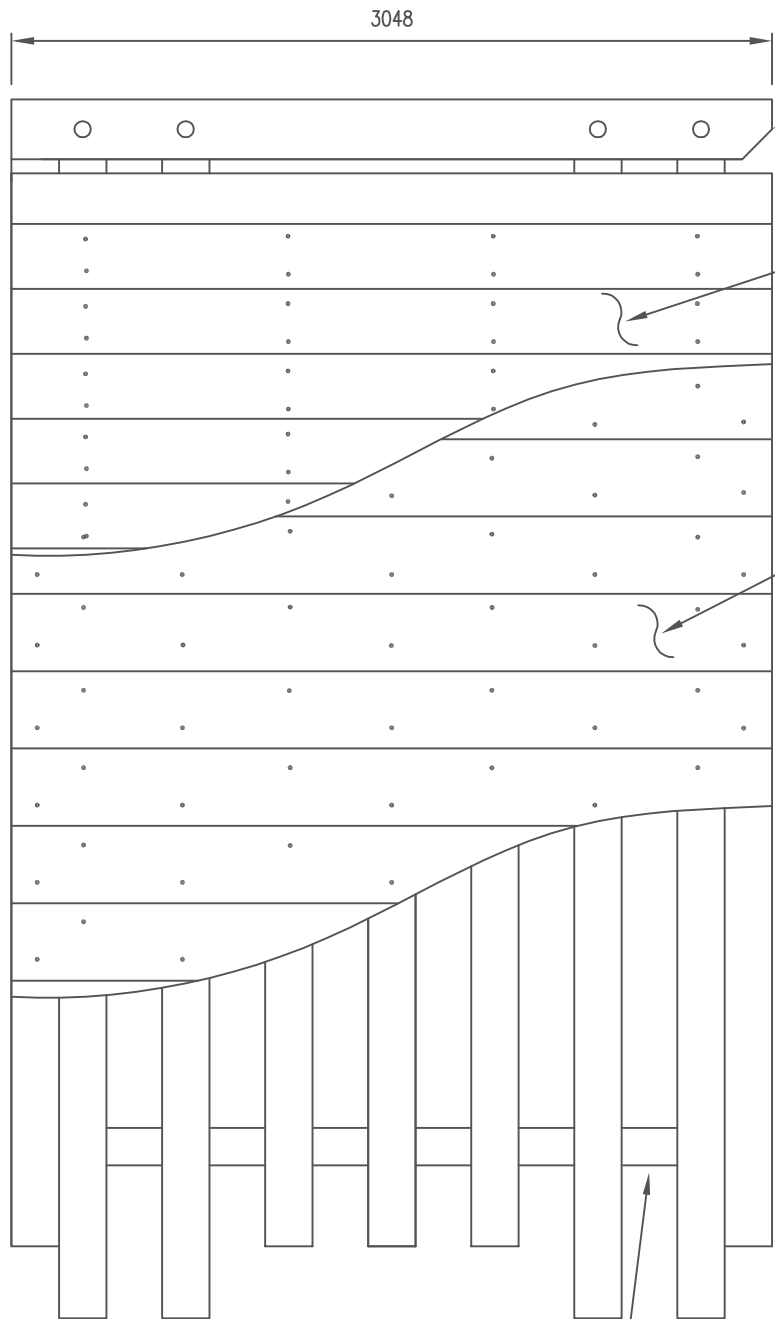
1:25

		MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS	
ENGINEERING BRANCH		STANDARD BRIDGE DRAWING	
PORTABLE, CONTINUOUS TIMBER DECK BRIDGE GENERAL ARRANGEMENT			
ORIGINAL SIGNED and SEALED BY: A.B. SWAN, PEng		MFR ENGINEER: DATE	
DESIGN ENGINEER: A.B. SWAN P.ENG DATE: MARCH 26, 2012		APPROVED BY: BRIAN CHOW, P.ENG, CHIEF ENGINEER DATE:	
FILE No.		DRAWING No. STD-EC-020-04	

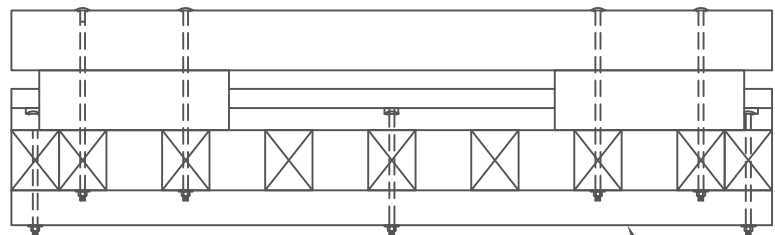
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		Checked	LT	Date	2012/03/20
		Drawn	ABS	Date	2012/03/12
Rev	Date	DESCRIPTION	Init		

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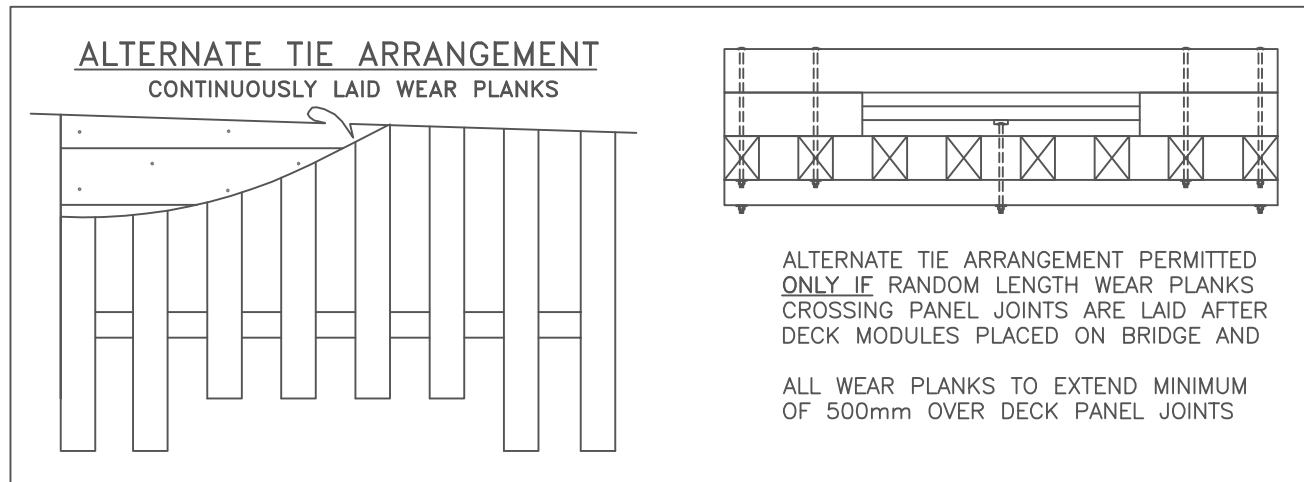
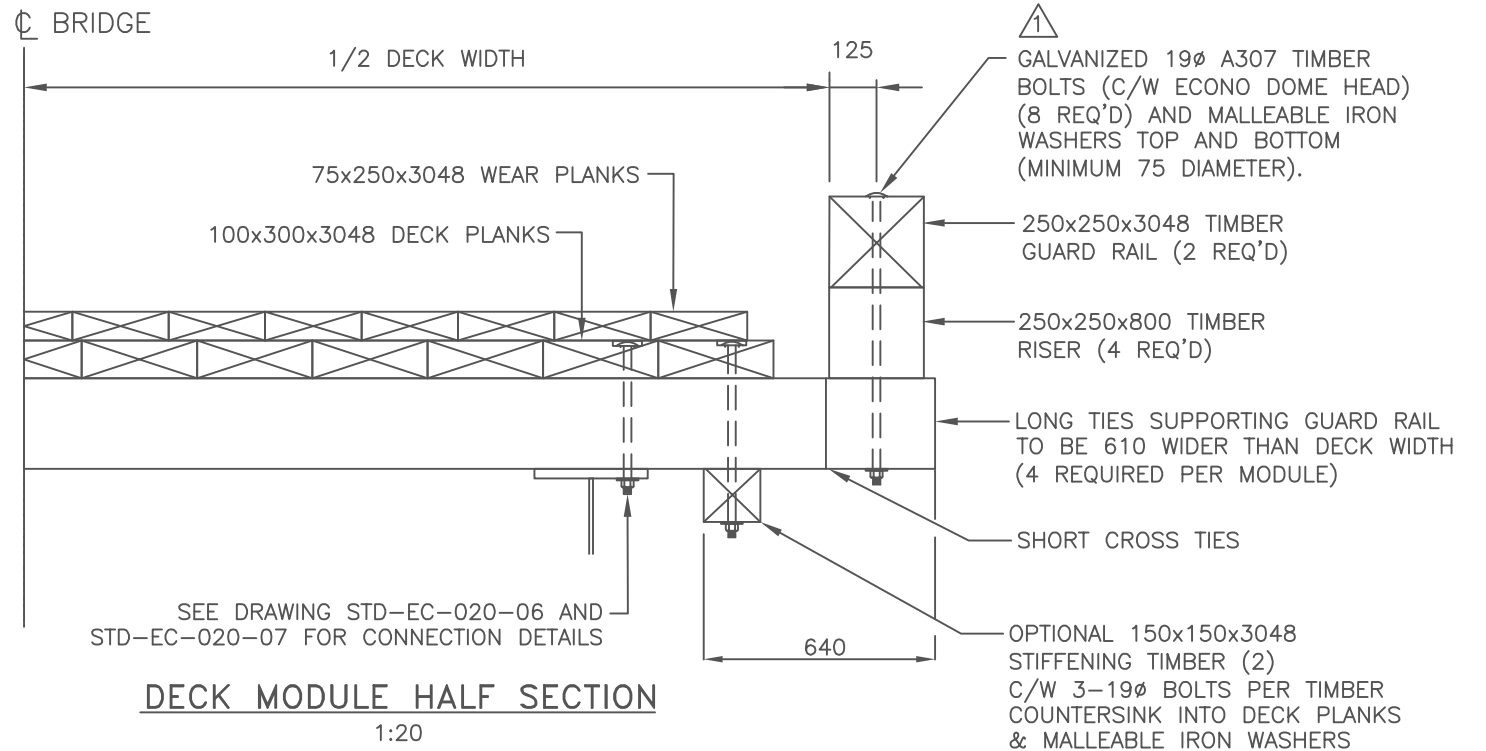


DECK MODULE PLAN
1:30



DECK MODULE ELEVATION
1:30

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NOTES

- SEE DRAWING STD-EC-020-02 FOR TIMBER CROSS TIE SIZES AND SPACINGS.
- SEE DRAWING STD-EC-020-06 FOR NEW BRIDGE DECK MODULE CONNECTION DETAILS.
- SEE DRAWING STD-EC-020-07 FOR RETROFIT DECK MODULE CONNECTION DETAILS.
- WHEN TREATED MODULE SPECIFIED, ALL TIMBERS SHALL BE TREATED EXCEPT FOR WEAR PLANKS.



MINISTRY OF FORESTS, LANDS AND NATURAL
RESOURCE OPERATIONS

ENGINEERING BRANCH

STANDARD BRIDGE DRAWING

MODULAR TIMBER DECK PANEL
GENERAL ARRANGEMENT & DETAILS

ORIGINAL SIGNED and SEALED BY:
A.B. SWAN, PEng

MFR ENGINEER:
DATE

DESIGN ENGINEER: A.B. SWAN P.ENG
DATE: MARCH 26, 2012

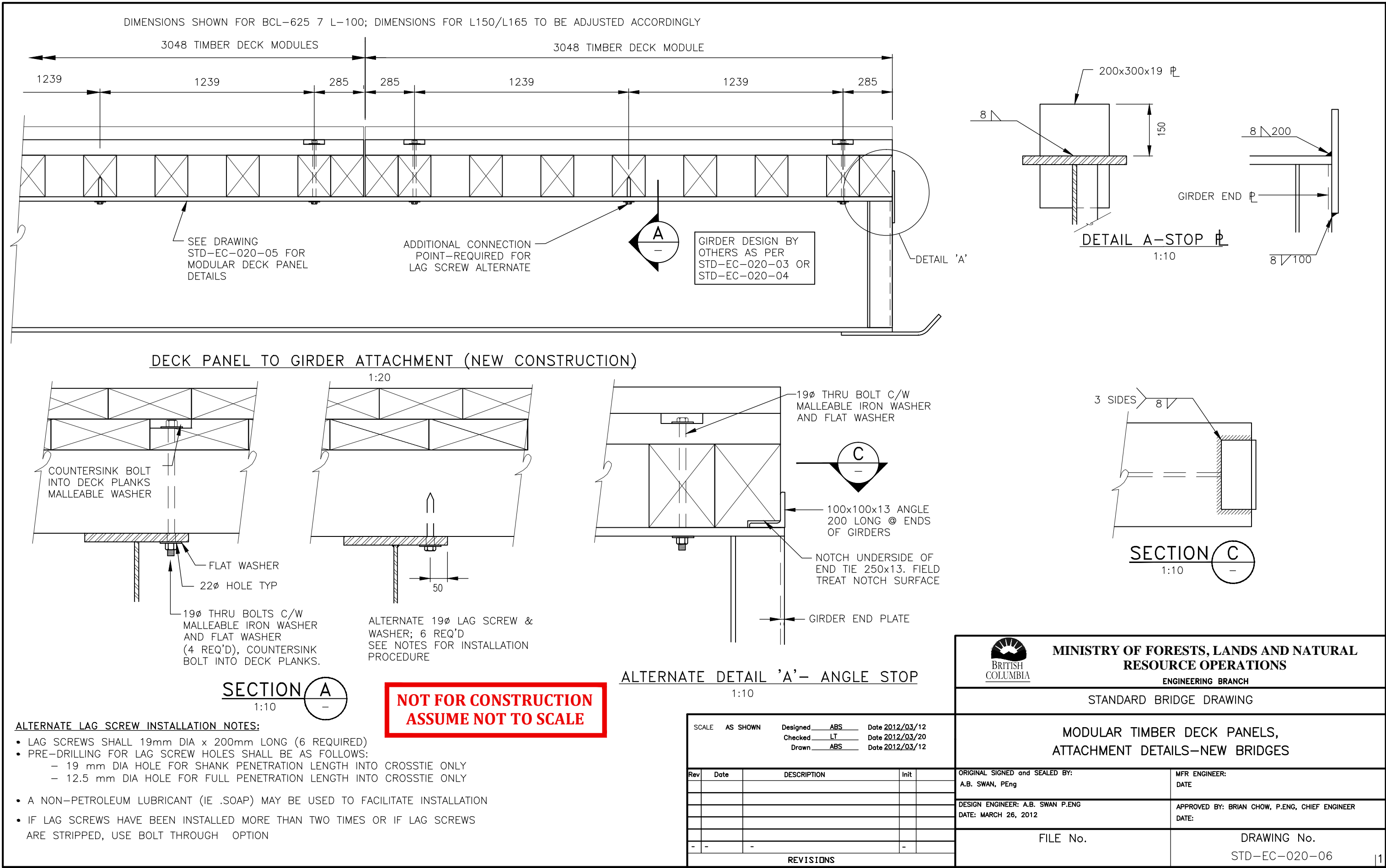
APPROVED BY: BRIAN CHOW, P.ENG, CHIEF ENGINEER
DATE:

FILE No.

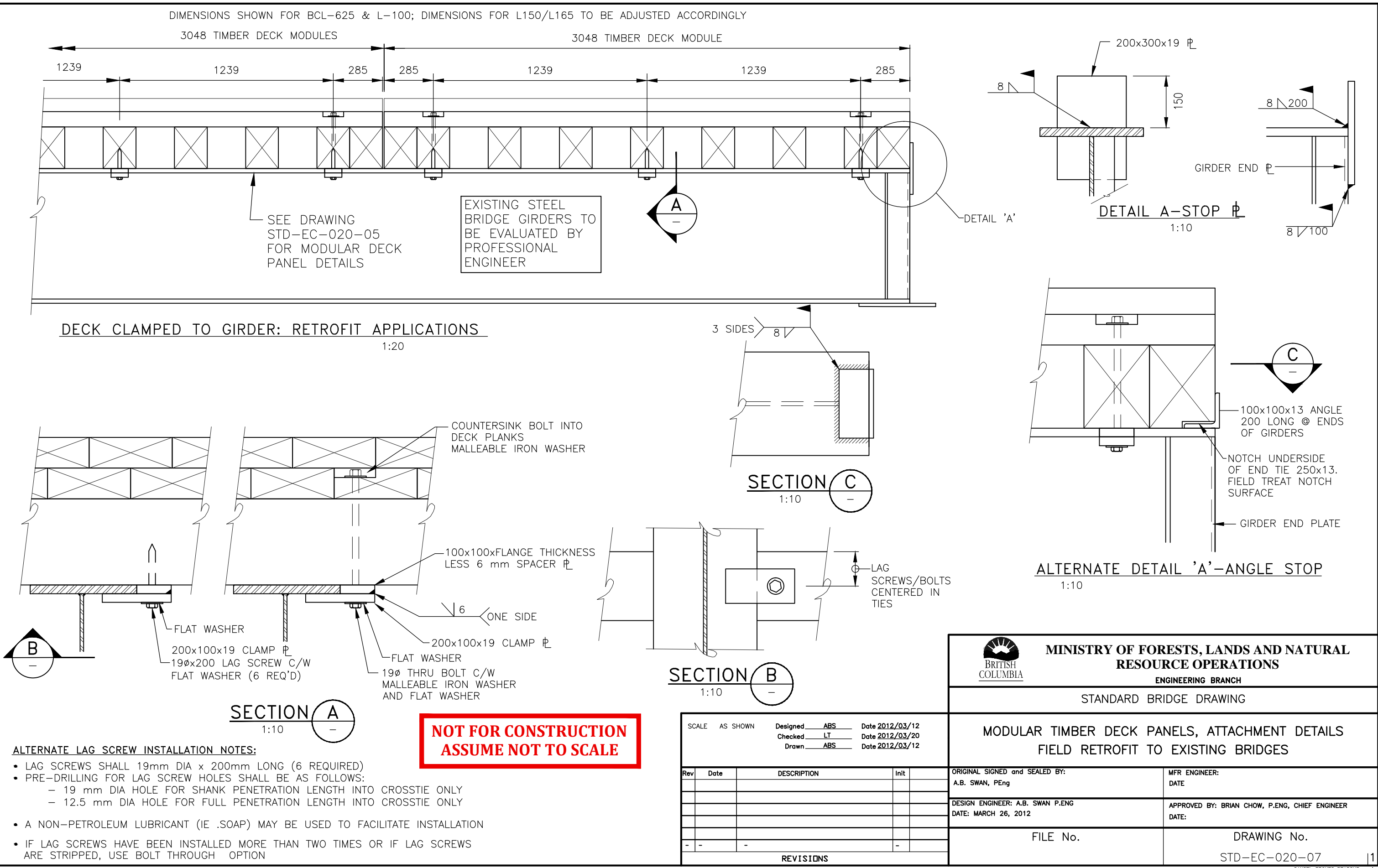
DRAWING No.
STD-EC-020-05


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		Checked	LT	Date	2012/03/20
		Drawn	ABS	Date	2012/03/12
Rev	Date	DESCRIPTION	Init		
1	JAN-17-14	REVISED BOLT AND WASHER DETAILS	JV		
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REVISIONS					

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 MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS ENGINEERING BRANCH	
STANDARD BRIDGE DRAWING	
MODULAR TIMBER DECK PANELS, ATTACHMENT DETAILS FIELD RETROFIT TO EXISTING BRIDGES	
ORIGINAL SIGNED and SEALED BY: A.B. SWAN, PEng	MFR ENGINEER: DATE
DESIGN ENGINEER: A.B. SWAN P.ENG DATE: MARCH 26, 2012	APPROVED BY: BRIAN CHOW, P.ENG, CHIEF ENGINEER DATE:
FILE No.	DRAWING No. STD-EC-020-07

SCALE AS SHOWN		Designed <u>ABS</u>	Date <u>2012/03/12</u>
		Checked <u>LT</u>	Date <u>2012/03/20</u>
		Drawn <u>ABS</u>	Date <u>2012/03/12</u>
Rev	Date	DESCRIPTION	Init
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