LOAD RATINGS

FOR

STANDARD BRIDGES

Final Report

For

TR-785

JANUARY 2021

ENGINEERING STUDY
IOWA HIGHWAY RESEARCH BOARD
PROJECT TR-785

F I N A L R E P O R T

LOAD RATING FOR STANDARD BRIDGES

IOWA DEPARTMENT OF TRANSPORTATION
AMES, IOWA 50010

JANUARY 2021

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ACKNOWLEDGEMENT

Project TR-785 was sponsored by the Iowa Highway Research Board and the Iowa Department of Transportation. The Iowa Highway Research Board approved expenditures to conduct the engineering study. The engineering determinations for this project were conducted by HGM Associates Inc.

DISCLAIMERS

INTRODUCTION

Load Rating: Evaluation of the capacity of a bridge to carry vehicle loads

Standard Bridge: Bridge built according to standards issued by the Iowa Department of Transportation

Inventory Rating: Load level which can safely utilize the bridge for an indefinite period of time

Operating Rating: Maximum permissible load level for the bridge

A load rating states the load in tons which a vehicle can impose on a bridge. A load rating may also be expressed in terms of a Rating Factor which represents a ratio of the capacity of the bridge to the maximum response computed for the stated load. Changes in guidelines, standards, and customary uses of bridges require analyses of bridges to be updated and revaluated.

In this report, seventeen secondary and primary bridge standards for three types of bridges are rated utilizing Load and Resistance Factor methodology and AASHTO BrR Bridge Rating software, Version 6.8.4.3001:

Precast Beam	Reinforced Concrete Slab	Rolled Steel Beam
H24-06	J24-06	RS40-10/14 (Original)
H30-06	J30-06	RS40-10/14 (2017 Revision)
H30SI-12	J40-06/14	
H40-06/14	J44-06/14	
H44-07/14		

The ratings apply only to those bridges which:

(1) are built according to the applicable bridge standard plans
(2) have no structural deterioration or damage
(3) have no added wearing surface in excess of a one-half inch integral wearing surface

Load ratings in this report are in compliance with the AASHTO Manual for Bridge Evaluation, 3rd Edition, with Interim Specifications through 2019, and the AASHTO LRFD Bridge Design Specifications, 8th Edition. All standards were rated as multilane structures with full impact load for design and legal trucks. Permit trucks were rated as Routine or Annual permits, >5000 ADTT in accordance with MBE Table B6A-45.

The H Standards were rated as simple spans; negative moment reinforcing steel was not considered.

The J30-06 standards include an epoxy and non-epoxy coated reinforcement option. Both options were rated, and the values reported are the lowest value computed. As a result, the ratings from this table can be used for both the epoxy and non-epoxy coated reinforcement option.

The RS Standards were rated considering moment redistribution and using plastic section analysis. Bridges were modelled as composite in the positive moment region only. Longitudinal deck reinforcement was not considered effective. Splices were not analyzed.

The RS40-10/14 Standards listed below were revised in February, 2017. These revisions included changes to the diaphragm spacing and the addition of a diaphragm to the center span in the exterior bays near the pier. The revision had a significant effect on the load ratings, and ratings for both the Original and Revised 2017 versions are presented in this report.

Standard	Length	Skew
RS40-10/14	160’-0	20 and 30 degrees
RS40-10/14	180’-0	0, 20 and 30 degrees
RS40-10/14	200’-0	20 and 30 degrees
RS40-10/14	220’-0	0, 20 and 30 degrees

The proper use and application of these bridge ratings requires due consideration and evaluation by a qualified engineer of all relevant factors affecting these ratings. Anyone using any part of these bridge ratings assumes sole responsibility for their proper application.

References:

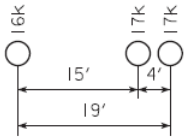
Manual for Bridge Evaluation, 3rd Edition
As amended by Interim Specifications through 2019,
prepared by Highway Subcommittee on Bridges and Structures
publ. American Association of State Highway and Transportation Officials, Washington, D.C. , 2018.

AASHTO LRFD Bridge Design Specifications, 8th Edition
Prepared by Highway Subcommittee on Bridges and Structures
publ. American Association of State Highway and Transportation Officials, Washington, D.C. 2017

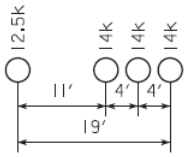
IOWA TRUCK DIAGRAMS

Straight Truck

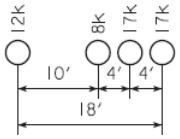
Type 3
GVW = 50 Kips
(25 Tons)



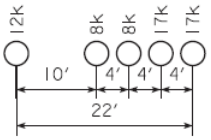
Type 4
GVW = 54.5 Kips
(27.25 Tons)



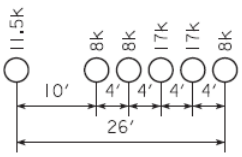
SU4
GVW = 54 Kips
(27 Tons)



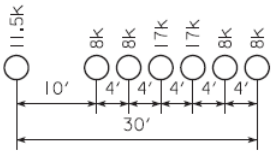
SU5
GVW = 62 Kips
(31 Tons)



SU6
GVW = 69.5 Kips
(34.75 Tons)

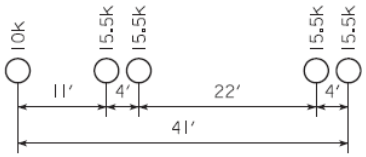


SU7
GVW = 77.5 Kips
(38.75 Tons)

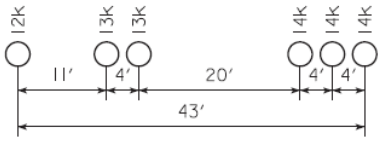


Truck + Semi Trailer

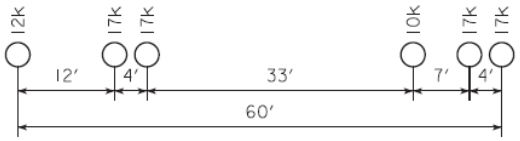
Type 3S2
GVW = 72 Kips
(36 Tons)



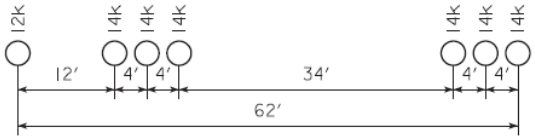
Type 3S3A
GVW = 80 Kips
(40 Tons)



Type 3S3B
GVW = 90 Kips
(45 Tons)

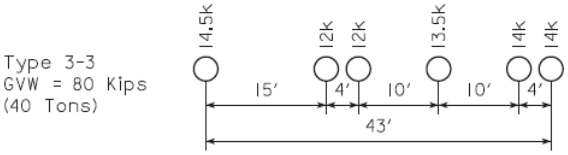


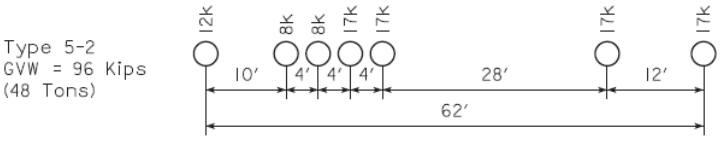
Type 4S3
GVW = 96 Kips
(48 Tons)



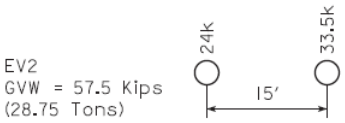
IOWA TRUCK DIAGRAMS

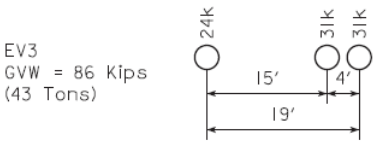
Truck + Full Trailer





Emergency Vehicles

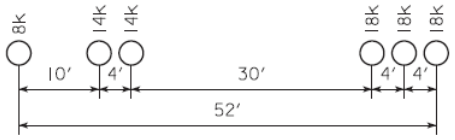




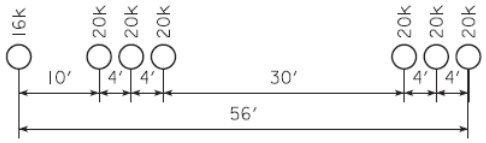
IOWA TRUCK DIAGRAMS

Annual Permit Trucks

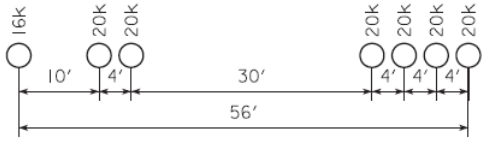
90k Truck
GVW = 90 Kips
(45 Tons)



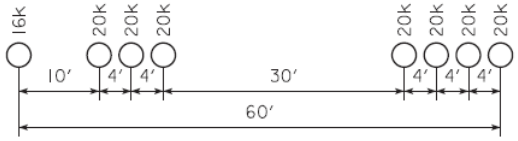
136k Truck "A"
GVW = 136 Kips
(68 Tons)



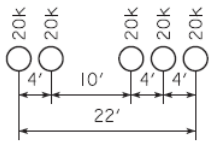
136k Truck "B"
GVW = 136 Kips
(68 Tons)



156k Truck
GVW = 156 Kips
(78 Tons)



Crane Truck
GVW = 100 Kips
(50 Tons)



PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H24-06, 0 and 15 Degree Skew, 2'-8 Open Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.80	1.69	1.75	1.69	1.78	1.90	1.96	1.96	1.97
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	SRV3 +M
Location	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 1 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 1 E	0.5L Sp 1 E
HL-93 Inv	1.39	1.24	1.35	1.31	1.31	1.47	1.41	1.33	1.33
Controlled by	STR1 +M	SRV3 +M	STR1 +M	STR1 +M	SRV3 +M	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 E
IA Type 4	45.6	40.2	47.8	46.8	45.0	49.8	49.6	47.8	47.8
IA Type 3	47.2	41.4	49.2	48.0	46.1	51.0	50.8	48.7	48.7
IA SU4	44.5	39.2	46.8	45.8	44.1	48.8	48.7	47.1	47.1
IA SU5	47.1	41.4	49.1	47.9	46.0	51.0	50.7	48.7	48.7
IA SU6	47.5	41.6	49.4	48.2	46.2	51.2	51.0	48.9	48.9
IA SU7	49.0	42.8	50.7	49.3	47.2	52.5	52.1	49.7	49.7
IA 3S3A	73.6	62.6	72.5	69.3	65.4	73.7	69.1	64.5	64.5
IA 3S2A	73.4	61.6	70.1	66.1	61.7	70.3	65.3	61.3	61.3
IA 3S3B	83.5	74.2	89.1	87.7	84.9	93.3	93.6	89.4	89.4
IA 4S3	81.7	71.8	85.5	83.6	80.3	88.9	88.6	83.9	83.9
IA 3-3	69.9	60.1	69.7	65.8	61.4	70.0	65.0	61.1	61.1
IA 5-2	73.0	64.0	76.1	74.2	70.0	78.9	74.9	70.8	70.8
IA EV2	47.5	41.6	49.4	48.2	46.2	51.3	51.0	48.8	48.8
IA EV3	45.9	40.4	48.1	47.0	45.2	50.0	49.8	48.0	48.0
90k	69.0	61.4	73.9	72.8	70.6	77.5	75.5	70.7	70.7
100k Crane	55.7	48.6	57.4	55.8	53.4	59.3	58.7	56.1	56.1
136k A	85.8	75.7	90.3	88.4	85.1	94.0	91.2	83.6	83.6
136k B	77.5	68.7	82.2	80.8	78.0	85.9	84.6	79.0	79.0
156k	88.9	78.8	94.3	92.6	89.5	98.6	97.0	89.4	89.4

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H24-06, 30 and 45 Degree Skew, 2'-8 Open Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.81	1.70	1.96	1.81	1.80	2.12	2.15	2.04	2.04
Controlled by	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V	STR1 +M	STR1 +M	STR1 V	STR1 V
Location	0.5L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 2 E	0.1L Sp 2 I	0.1L Sp 1 I
HL-93 Inv	1.40	1.31	1.51	1.40	1.39	1.63	1.55	1.46	1.46
Controlled by	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 E
IA Type 4	50.2	43.9	52.7	51.3	49.1	55.4	54.7	52.3	52.3
IA Type 3	51.9	45.3	54.2	52.6	50.3	56.9	55.9	53.3	53.3
IA SU4	48.9	42.9	51.6	50.3	48.2	54.3	53.9	51.5	51.5
IA SU5	51.9	45.2	54.1	52.5	50.2	56.8	55.8	53.2	53.2
IA SU6	52.2	45.5	54.4	52.8	50.5	57.1	56.1	53.4	53.4
IA SU7	53.9	46.8	55.8	54.1	51.6	58.4	57.1	54.4	54.4
IA 3S3A	81.0	68.4	79.9	76.0	71.4	82.1	75.8	70.0	70.0
IA 3S2A	80.7	67.4	77.3	72.5	67.3	78.1	71.7	67.1	67.1
IA 3S3B	91.8	81.2	98.2	96.2	92.7	104.0	103.6	97.1	97.1
IA 4S3	89.9	78.6	94.2	91.6	87.7	99.0	97.7	91.6	91.6
IA 3-3	76.9	65.7	76.8	72.1	67.0	77.7	71.4	66.9	66.9
IA 5-2	80.3	70.0	83.8	81.4	76.4	87.9	82.3	77.4	77.4
IA EV2	52.2	45.5	54.4	52.8	50.5	57.1	56.1	53.4	53.4
IA EV3	50.5	44.2	53.0	51.5	49.3	55.7	55.0	52.5	52.5
90k	75.9	67.2	81.4	79.9	77.0	86.3	82.8	77.2	77.2
100k Crane	61.2	53.1	63.3	61.2	58.3	66.1	64.4	61.3	61.3
136k A	94.4	82.8	99.5	96.9	92.9	104.7	100.1	90.2	90.2
136k B	85.3	75.1	90.6	88.6	85.1	95.7	92.9	85.7	85.7
156k	97.8	86.2	103.9	101.6	97.6	109.8	106.5	96.6	96.6

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H30-06, 0 and 15 Degree Skew, 2'-8 Open Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.87	1.76	1.82	1.77	1.86	1.98	2.05	2.05	2.06
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 1 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 1 E	0.5L Sp 1 E
HL-93 Inv	1.45	1.32	1.41	1.37	1.40	1.53	1.50	1.42	1.42
Controlled by	STR1 +M	SRV3 +M	STR1 +M	STR1 +M	SRV3 +M	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 E
IA Type 4	48.4	42.7	50.6	49.6	47.8	52.6	52.5	50.9	50.9
IA Type 3	50.0	44.0	52.1	50.9	49.0	54.0	53.8	51.9	51.9
IA SU4	47.1	41.7	49.5	48.6	46.9	51.6	51.6	50.1	50.1
IA SU5	50.0	44.0	52.0	50.8	48.9	54.0	53.7	51.8	51.8
IA SU6	50.3	44.2	52.3	51.1	49.1	54.2	54.0	52.0	52.0
IA SU7	51.9	45.5	53.6	52.3	50.2	55.5	55.2	53.0	53.0
IA 3S3A	78.0	66.5	76.7	73.5	69.5	78.0	73.3	68.8	68.8
IA 3S2A	77.8	65.5	74.2	70.1	65.6	74.4	69.3	65.4	65.4
IA 3S3B	88.5	78.9	94.3	93.1	90.3	98.8	99.2	95.3	95.3
IA 4S3	86.6	76.3	90.5	88.6	85.4	94.1	93.8	89.5	89.5
IA 3-3	74.1	63.8	73.8	69.7	65.3	74.0	69.1	65.2	65.2
IA 5-2	77.4	68.0	80.5	78.7	74.4	83.5	79.6	75.4	75.4
IA EV2	50.3	44.2	52.3	51.1	49.2	54.2	54.0	52.0	52.0
IA EV3	48.7	42.9	50.9	49.8	48.0	52.9	52.8	51.1	51.1
90k	73.1	65.3	78.2	77.3	75.0	82.0	80.1	75.5	75.5
100k Crane	59.0	51.6	60.8	59.2	56.8	62.8	62.3	59.7	59.7
136k A	90.9	80.4	95.5	93.7	90.5	99.5	96.8	89.3	89.3
136k B	82.1	73.0	87.0	85.7	82.9	90.9	89.8	84.4	84.4
156k	94.2	83.7	99.8	98.2	95.1	104.3	103.0	95.5	95.5

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H30-06, 0 and 15 Degree Skew, 2'-10 Barrier Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.92	1.78	1.81	1.76	1.88	1.96	2.04	2.07	2.15
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I
HL-93 Inv	1.48	1.37	1.40	1.36	1.45	1.51	1.52	1.47	1.47
Controlled by	STR1 +M	SRV3 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L Sp 1 I	0.5L Sp 2 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 2 I	0.5L Sp 1 I
IA Type 4	49.2	44.3	51.2	50.3	49.9	52.0	52.0	52.5	52.5
IA Type 3	50.9	45.7	52.6	51.8	51.1	53.4	53.2	53.5	53.5
IA SU4	48.0	43.3	50.0	49.1	49.0	51.0	51.0	51.7	51.7
IA SU5	50.9	45.7	52.5	51.8	51.1	53.3	53.1	53.5	53.5
IA SU6	51.2	45.9	52.8	52.1	51.3	53.6	53.4	53.7	53.7
IA SU7	52.8	47.3	54.2	53.6	52.4	54.9	54.6	54.6	54.6
IA 3S3A	79.4	69.1	77.5	75.5	72.6	77.1	74.7	71.0	71.0
IA 3S2A	79.2	68.0	75.0	72.0	68.5	73.5	70.6	67.4	67.4
IA 3S3B	90.0	81.9	95.3	92.9	94.2	97.6	98.1	98.3	98.3
IA 4S3	88.1	79.3	91.4	89.9	89.2	92.9	92.8	92.3	92.3
IA 3-3	75.4	66.3	74.6	71.7	68.1	73.1	70.3	67.2	67.2
IA 5-2	78.7	70.7	81.3	80.1	77.7	82.5	80.9	77.7	77.7
IA EV2	51.2	45.9	52.8	52.1	51.3	53.6	53.4	53.7	53.7
IA EV3	49.6	44.6	51.4	50.6	50.1	52.3	52.2	52.7	52.7
90k	74.4	67.8	79.0	76.9	78.3	81.0	81.5	77.8	77.8
100k Crane	60.1	53.6	61.4	60.8	59.2	62.1	61.7	61.6	61.6
136k A	92.6	83.6	96.5	94.7	94.4	98.3	98.3	92.1	92.1
136k B	83.6	75.8	87.9	85.9	86.5	89.8	90.1	87.0	87.0
156k	95.9	87.0	100.9	98.6	99.3	103.0	103.3	98.5	98.5

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H30-06, 30 and 45 Degree Skew, 2'-8 Open Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.84	1.76	2.03	1.88	1.86	2.20	2.24	2.11	2.11
Controlled by	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V	STR1 +M	STR1 +M	STR1 V	STR1 V
Location	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 2 E	0.1L Sp 2 I	0.1L Sp 1 I
HL-93 Inv	1.42	1.36	1.57	1.45	1.44	1.69	1.64	1.55	1.55
Controlled by	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 E
IA Type 4	53.0	46.6	55.7	54.3	52.1	58.5	58.0	55.5	55.5
IA Type 3	54.8	48.1	57.3	55.7	53.4	60.0	59.2	56.6	56.6
IA SU4	51.6	45.5	54.5	53.2	51.1	57.3	57.0	54.7	54.7
IA SU5	54.7	48.0	57.2	55.6	53.3	60.0	59.2	56.6	56.6
IA SU6	55.1	48.3	57.5	55.9	53.6	60.3	59.4	56.8	56.8
IA SU7	56.9	49.7	59.0	57.2	54.7	61.7	60.6	57.8	57.8
IA 3S3A	85.4	72.6	84.4	80.4	75.7	86.7	80.3	75.2	75.2
IA 3S2A	85.2	71.5	81.6	76.7	71.5	82.7	76.0	71.4	71.4
IA 3S3B	96.9	86.1	103.7	101.8	98.4	109.8	109.6	104.0	104.0
IA 4S3	94.8	83.4	99.6	97.0	93.1	104.6	103.6	97.7	97.7
IA 3-3	81.1	69.7	81.2	76.3	71.1	82.3	75.7	71.1	71.1
IA 5-2	84.7	74.3	88.6	86.1	81.1	92.8	87.2	82.3	82.3
IA EV2	55.1	48.3	57.5	55.9	53.6	60.3	59.4	56.8	56.8
IA EV3	53.3	46.9	56.0	54.6	52.4	58.8	58.3	55.8	55.8
90k	80.1	71.3	86.0	84.6	81.8	91.1	87.8	82.4	82.4
100k Crane	64.6	56.3	66.8	64.8	61.8	69.8	68.3	65.2	65.2
136k A	99.6	87.8	105.1	102.6	98.6	110.6	106.1	97.5	97.5
136k B	90.0	79.7	95.7	93.7	90.4	101.1	98.4	92.1	92.1
156k	103.2	91.4	109.8	107.5	103.6	115.9	112.9	104.3	104.3

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H30-06, 30 and 45 Degree Skew, 2'-10 Barrier Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.83	1.75	2.02	1.87	1.85	2.18	2.25	2.10	2.10
Controlled by	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V	STR1 +M	STR1 +M	STR1 V	STR1 V
Location	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 1 I	0.1L Sp 2 I	0.1L Sp 1 I
HL-93 Inv	1.42	1.35	1.55	1.44	1.43	1.68	1.67	1.60	1.60
Controlled by	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 2 I	0.5L Sp 2 I	0.5L Sp 1 I
IA Type 4	54.1	48.5	56.3	55.6	54.4	57.8	57.5	57.3	57.3
IA Type 3	56.0	50.0	57.9	57.3	55.7	59.3	58.8	58.4	58.4
IA SU4	52.7	47.3	55.1	54.3	53.4	56.7	56.4	56.4	56.4
IA SU5	55.9	49.9	57.8	57.2	55.7	59.2	58.8	58.4	58.4
IA SU6	56.2	50.2	58.1	57.5	55.9	59.6	59.0	58.6	58.6
IA SU7	58.0	51.6	59.6	58.9	57.2	61.0	60.3	59.6	59.6
IA 3S3A	87.2	75.5	85.3	82.7	79.1	85.6	81.8	77.5	77.5
IA 3S2A	87.0	74.3	82.5	78.9	74.6	81.7	77.4	73.6	73.6
IA 3S3B	98.9	89.5	104.9	102.8	102.7	108.5	108.5	107.3	107.3
IA 4S3	96.8	86.7	100.6	99.5	97.2	103.3	102.6	100.7	100.7
IA 3-3	82.8	72.4	82.0	78.5	74.3	81.3	77.1	73.4	73.4
IA 5-2	86.5	77.2	89.5	88.5	84.7	91.7	88.8	84.9	84.9
IA EV2	56.2	50.2	58.1	57.5	55.9	59.6	59.1	58.6	58.6
IA EV3	54.5	48.7	56.6	56.0	54.7	58.1	57.7	57.5	57.5
90k	81.7	74.1	86.9	85.1	85.4	90.1	89.4	85.0	85.0
100k Crane	66.0	58.6	67.6	66.6	64.6	69.0	68.2	67.2	67.2
136k A	101.7	91.3	106.2	104.8	103.0	109.3	108.1	100.5	100.5
136k B	91.9	82.8	96.8	95.1	94.3	99.9	99.6	95.0	95.0
156k	105.4	95.0	111.0	109.1	108.2	114.5	114.3	107.5	107.5

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H30SI-12, 0 and 15 Degree Skew, 2'-8 Open Rail

	Bridge Length						
Truck	**46'-8**	**55'-0**	**67'-6**	**80'-0**	**90'-0**	**100'-0**	**110'-0**
HL-93 Oper	1.74	1.80	2.00	2.13	2.04	2.22	1.99
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR V
Location	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.1L I
HL-93 Inv	1.34	1.32	1.41	1.42	1.48	1.39	1.31
Controlled by	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I
IA Type 4	45.8	42.8	48.3	50.8	54.8	53.1	51.2
IA Type 3	47.5	44.2	49.5	51.8	55.7	53.9	51.9
IA SU4	44.4	41.8	47.4	50.1	54.1	52.4	50.6
IA SU5	47.5	44.1	49.4	51.8	55.7	53.8	51.9
IA SU6	47.8	44.4	49.6	52.0	55.9	54.0	52.0
IA SU7	49.5	45.6	50.7	52.9	56.7	54.7	52.6
IA 3S3A	75.2	66.7	70.2	68.8	71.0	66.5	62.6
IA 3S2A	73.8	65.7	66.2	65.3	67.9	64.1	60.6
IA 3S3B	82.7	79.1	91.2	95.2	94.8	85.6	77.8
IA 4S3	82.0	76.6	86.3	89.4	89.7	81.1	74.3
IA 3-3	72.2	64.1	65.9	65.1	67.7	63.9	60.4
IA 5-2	73.5	68.3	75.2	75.3	77.7	71.9	67.0
IA EV2	47.8	44.4	49.6	52.0	55.9	54.0	52.0
IA EV3	46.1	43.1	48.5	51.0	55.0	53.2	51.3
90k	68.2	65.5	75.8	75.4	78.0	72.5	67.8
100k Crane	56.4	51.8	57.3	59.6	63.8	61.5	59.1
136k A	85.8	80.7	91.4	89.2	89.0	81.5	75.4
136k B	77.1	73.2	83.7	84.3	86.5	79.5	73.8
156k	88.4	84.0	96.0	95.4	95.9	87.7	80.2

HL-93 ratings are reported as Rating Factors, all others are Tons.
E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H30SI-12, 0 and 15 Degree Skew, 2'-10 Barrier Rail

	Bridge Length						
Truck	**46'-8**	**55'-0**	**67'-6**	**80'-0**	**90'-0**	**100'-0**	**110'-0**
HL-93 Oper	1.73	1.79	1.98	2.12	2.03	2.20	1.98
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 V
Location	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.1L I
HL-93 Inv	1.33	1.30	1.39	1.40	1.46	1.37	1.28
Controlled by	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I
IA Type 4	45.3	42.3	47.6	50.0	53.9	52.1	50.1
IA Type 3	47.0	43.6	48.7	51.0	54.8	52.9	50.8
IA SU4	44.0	41.3	46.7	49.3	53.2	51.5	49.6
IA SU5	46.9	43.5	48.7	51.0	54.8	52.8	50.8
IA SU6	47.3	43.8	48.9	51.2	55.0	53.0	50.9
IA SU7	49.0	45.0	50.0	52.1	55.8	53.7	51.5
IA 3S3A	74.4	65.8	69.2	67.7	69.8	65.3	61.2
IA 3S2A	73.0	64.8	65.3	64.3	66.9	62.9	59.3
IA 3S3B	81.8	78.1	89.9	93.7	93.5	84.0	76.1
IA 4S3	81.1	75.6	85.0	88.0	88.3	79.6	72.7
IA 3-3	71.4	63.2	65.0	64.1	66.7	62.7	59.1
IA 5-2	72.7	67.4	74.1	74.1	76.5	70.6	65.6
IA EV2	47.3	43.8	48.9	51.2	55.0	53.0	50.9
IA EV3	45.6	42.5	47.8	50.2	54.1	52.2	50.2
90k	67.4	64.6	74.7	74.2	76.8	71.2	66.3
100k Crane	55.8	51.1	56.5	58.7	62.8	60.4	57.9
136k A	84.9	79.6	90.1	87.8	87.6	80.0	73.8
136k B	76.3	72.2	82.5	83.0	85.1	78.1	72.2
156k	87.5	82.9	94.7	93.9	94.4	86.1	78.5

HL-93 ratings are reported as Rating Factors, all others are Tons.
E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H30SI-12, 30 Degree Skew, 2'-8 Open Rail

	Bridge Length						
Truck	**46'-8**	**55'-0**	**67'-6**	**80'-0**	**90'-0**	**100'-0**	**110'-0**
HL-93 Oper	1.82	1.82	1.92	2.17	2.13	2.18	1.92
Controlled by	STR1 +M	STR V	STR V	STR V	STR1 +M	STR V	STR V
Location	0.5L I	0.1L I	0.1L I	0.1L I	0.5L I	0.1L I	0.1L I
HL-93 Inv	1.40	1.37	1.47	1.48	1.54	1.44	1.35
Controlled by	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I
IA Type 4	47.8	44.5	50.1	52.8	57.0	55.0	52.9
IA Type 3	49.7	45.9	51.4	53.9	58.0	55.9	53.7
IA SU4	46.4	43.5	49.2	52.0	56.2	54.4	52.4
IA SU5	49.6	45.8	51.3	53.8	57.9	55.8	53.6
IA SU6	50.0	46.1	51.5	54.0	58.1	56.0	53.8
IA SU7	51.8	47.4	52.7	55.0	59.0	56.7	54.4
IA 3S3A	78.6	69.4	72.9	71.5	73.8	69.0	64.7
IA 3S2A	77.1	68.3	68.8	67.9	70.7	66.4	62.6
IA 3S3B	86.4	82.2	94.7	98.9	98.6	88.8	80.5
IA 4S3	85.7	79.6	89.6	92.9	93.3	84.1	76.8
IA 3-3	75.5	66.6	68.5	67.6	70.5	66.3	62.5
IA 5-2	76.8	71.0	78.1	78.3	80.9	74.6	69.3
IA EV2	50.0	46.1	51.5	54.0	58.1	56.0	53.8
IA EV3	48.2	44.8	50.4	53.0	57.2	55.2	53.1
90k	71.2	68.1	78.7	78.4	81.1	75.2	70.1
100k Crane	59.0	53.8	59.5	62.0	66.4	63.8	61.2
136k A	89.7	83.9	94.9	92.7	92.6	84.5	77.9
136k B	80.6	76.1	86.9	87.6	89.9	82.5	76.3
156k	92.4	87.3	99.7	99.1	99.8	90.9	83.0

HL-93 ratings are reported as Rating Factors, all others are Tons.
E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H30SI-12, 30 Degree Skew, 2'-10 Barrier Rail

	Bridge Length						
Truck	**46'-8**	**55'-0**	**67'-6**	**80'-0**	**90'-0**	**100'-0**	**110'-0**
HL-93 Oper	1.80	1.82	1.91	2.16	2.11	2.17	1.90
Controlled by	STR1 +M	STR1 V	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V
Location	0.5L I	0.1L I	0.1L I	0.1L I	0.5L I	0.1L I	0.1L I
HL-93 Inv	1.39	1.35	1.44	1.45	1.52	1.42	1.32
Controlled by	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I	0.5L I
IA Type 4	47.3	43.9	49.4	52.0	56.1	54.0	51.8
IA Type 3	49.1	45.3	50.6	53.0	57.0	54.8	52.5
IA SU4	45.9	42.9	48.5	51.2	55.3	53.4	51.3
IA SU5	49.0	45.2	50.6	53.0	57.0	54.8	52.5
IA SU6	49.4	45.5	50.8	53.2	57.2	55.0	52.6
IA SU7	51.2	46.8	51.9	54.1	58.1	55.7	53.3
IA 3S3A	77.8	68.4	71.8	70.4	72.6	67.7	63.3
IA 3S2A	76.2	67.3	67.8	66.8	69.6	65.2	61.3
IA 3S3B	85.4	81.1	93.3	97.4	97.2	87.2	78.7
IA 4S3	84.7	78.5	88.3	91.4	91.8	82.5	75.2
IA 3-3	74.6	65.7	67.5	66.6	69.3	65.1	61.2
IA 5-2	75.9	70.0	76.9	77.0	79.6	73.2	67.8
IA EV2	49.4	45.5	50.8	53.2	57.2	55.0	52.6
IA EV3	47.7	44.2	49.7	52.2	56.3	54.2	52.0
90k	70.5	67.2	77.5	77.2	79.8	73.8	68.6
100k Crane	58.3	53.1	58.7	61.0	65.4	62.6	59.9
136k A	88.7	82.7	93.5	91.3	91.1	83.0	76.3
136k B	79.7	75.1	85.7	86.2	88.5	81.0	74.7
156k	91.4	86.1	98.3	97.6	98.2	89.2	81.2

HL-93 ratings are reported as Rating Factors, all others are Tons.
E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H40-06/14, 0 and 15 Degree Skew, 2'-8 Open Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.74	1.63	1.70	1.64	1.72	1.84	1.90	1.90	1.97
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 1 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 1 E	0.5L Sp 1 E
HL-93 Inv	1.34	1.20	1.31	1.26	1.27	1.42	1.37	1.30	1.32
Controlled by	STR1 +M	SRV3 +M	STR1 +M	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 E
IA Type 4	44.1	38.8	46.3	45.8	43.6	47.8	47.7	46.4	47.3
IA Type 3	45.6	40.0	47.6	47.0	44.6	49.1	48.8	47.3	48.2
IA SU4	42.9	37.9	45.3	44.9	42.8	46.9	46.8	45.7	46.5
IA SU5	45.5	40.0	47.5	47.0	44.6	49.0	48.8	47.3	48.2
IA SU6	45.8	40.2	47.8	47.2	44.8	49.3	49.0	47.5	48.3
IA SU7	47.3	41.4	49.0	48.3	45.8	50.5	50.1	48.3	49.2
IA 3S3A	71.0	60.5	70.1	67.9	63.3	70.9	67.0	62.8	64.0
IA 3S2A	70.8	59.6	67.8	64.8	59.8	67.6	63.4	59.7	60.7
IA 3S3B	80.6	71.7	86.2	85.2	82.3	89.8	90.0	87.0	88.5
IA 4S3	78.9	69.5	82.7	81.9	77.8	85.5	85.2	81.6	83.1
IA 3-3	67.5	58.1	67.4	64.4	59.5	67.3	63.1	59.5	60.5
IA 5-2	70.5	61.9	73.6	72.7	67.8	75.9	72.7	68.8	70.0
IA EV2	45.8	40.2	47.8	47.2	44.8	49.3	49.0	47.5	48.3
IA EV3	44.4	39.1	46.5	46.0	43.8	48.1	47.9	46.6	47.4
90k	66.6	59.4	71.5	70.5	68.4	74.5	73.2	68.9	70.1
100k Crane	53.7	46.9	55.5	54.7	51.7	57.1	56.6	54.5	55.5
136k A	82.8	73.2	87.3	86.6	82.4	90.4	88.5	81.5	82.9
136k B	74.8	66.4	79.5	78.8	75.6	82.6	82.1	77.0	78.4
156k	85.8	76.2	91.2	90.4	86.7	94.8	94.2	87.1	88.7

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H40-06/14, 0 and 15 Degree Skew, 2'-10 Barrier Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.79	1.66	1.69	1.64	1.76	1.83	1.91	1.94	2.04
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I
HL-93 Inv	1.38	1.23	1.30	1.27	1.31	1.41	1.38	1.32	1.32
Controlled by	STR1 +M	SRV3 +M	STR1 +M	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L Sp 1 I	0.5L Sp 2 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 2 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 2 I	0.5L Sp 1 I
IA Type 4	44.5	39.8	46.3	45.6	44.9	47.4	47.2	47.3	47.3
IA Type 3	46.1	41.0	47.7	47.1	46.0	48.6	48.3	48.2	48.2
IA SU4	43.4	38.8	45.3	44.6	44.1	46.4	46.3	46.5	46.5
IA SU5	46.0	40.9	47.6	47.0	45.9	48.5	48.3	48.1	48.1
IA SU6	46.3	41.2	47.9	47.3	46.1	48.8	48.5	48.3	48.3
IA SU7	47.8	42.4	49.1	48.6	47.1	49.9	49.5	49.2	49.2
IA 3S3A	71.8	61.9	70.2	69.7	65.2	70.2	67.5	63.9	63.9
IA 3S2A	71.6	61.0	67.9	66.5	61.6	66.9	63.9	60.7	60.7
IA 3S3B	81.5	73.5	86.3	84.3	84.7	88.9	89.0	88.5	88.5
IA 4S3	79.7	71.1	82.8	81.6	80.2	84.6	84.3	83.1	83.1
IA 3-3	68.2	59.5	67.5	66.1	61.3	66.6	63.6	60.5	60.5
IA 5-2	71.2	63.4	73.7	72.8	69.9	75.1	73.3	70.0	70.0
IA EV2	46.3	41.2	47.9	47.3	46.1	48.8	48.5	48.3	48.3
IA EV3	44.8	40.0	46.6	45.9	45.1	47.6	47.4	47.4	47.4
90k	67.3	60.8	71.6	69.8	70.4	73.8	73.8	70.1	70.1
100k Crane	54.3	48.1	55.6	55.2	53.3	56.5	56.0	55.4	55.4
136k A	83.7	74.9	87.5	86.0	84.9	89.5	89.2	82.9	82.9
136k B	75.6	68.0	79.7	78.0	77.8	81.8	81.8	78.3	78.3
156k	86.8	78.0	91.4	89.5	89.3	93.8	93.8	88.7	88.7

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H40-06/14, 30 and 45 Degree Skew, 2'-8 Open Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.72	1.63	1.90	1.76	1.74	2.06	2.09	1.97	1.99
Controlled by	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V	STR1 +M	STR1 +M	STR1 V	STR1 V
Location	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 2 E	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 2 E	0.1L Sp 2 I	0.1L Sp 1 I
HL-93 Inv	1.33	1.26	1.46	1.36	1.34	1.59	1.51	1.42	1.44
Controlled by	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 2 E	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 E
IA Type 4	48.6	42.6	51.1	50.2	47.7	53.5	53.0	50.9	51.6
IA Type 3	50.3	43.9	52.6	51.5	48.8	54.9	54.3	51.9	52.6
IA SU4	47.3	41.6	50.0	49.2	46.8	52.4	52.0	50.1	50.8
IA SU5	50.2	43.9	52.5	51.5	48.8	54.8	54.2	51.9	52.6
IA SU6	50.5	44.1	52.8	51.7	49.0	55.1	54.5	52.1	52.8
IA SU7	52.2	45.4	54.2	53.0	50.1	56.4	55.6	53.0	53.7
IA 3S3A	78.4	66.4	77.5	74.4	69.3	79.2	73.8	68.9	69.8
IA 3S2A	78.2	65.3	75.0	71.0	65.4	75.6	69.7	65.4	66.3
IA 3S3B	88.9	78.7	95.3	94.2	90.0	100.3	100.1	95.3	96.7
IA 4S3	87.0	76.2	91.4	89.8	85.2	95.5	94.7	89.5	90.7
IA 3-3	74.4	63.7	74.5	70.6	65.1	75.2	69.5	65.2	66.1
IA 5-2	77.7	67.9	81.3	79.7	74.2	84.8	80.0	75.4	76.4
IA EV2	50.5	44.1	52.8	51.7	49.0	55.1	54.5	52.1	52.8
IA EV3	48.9	42.9	51.4	50.5	47.9	53.7	53.3	51.1	51.8
90k	73.5	65.1	79.0	78.2	74.8	83.3	80.6	75.5	76.5
100k Crane	59.3	51.5	61.4	59.9	56.6	63.8	62.7	59.7	60.5
136k A	91.4	80.2	96.5	94.9	90.2	101.0	97.4	89.3	90.6
136k B	82.5	72.8	87.9	86.8	82.7	92.3	90.4	84.4	85.6
156k	94.7	83.5	100.8	99.5	94.8	105.9	103.7	95.5	96.9

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H40-06/14, 30 and 45 Degree Skew, 2'-10 Barrier Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.72	1.63	1.89	1.75	1.74	2.05	2.12	1.96	1.96
Controlled by	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V	STR1 +M	STR1 +M	STR1 V	STR1 V
Location	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 1 I	0.1L Sp 2 I	0.1L Sp 1 I
HL-93 Inv	1.33	1.26	1.46	1.35	1.34	1.57	1.52	1.45	1.45
Controlled by	STR1 V	STR1 V	STR1 +M	STR1 V	STR1 V	SRV3 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.1L Sp 2 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 2 I	0.5L Sp 2 I	0.5L Sp 1 I
IA Type 4	49.2	43.6	51.2	50.8	49.1	52.9	52.4	51.8	51.8
IA Type 3	50.9	45.0	52.7	52.4	50.3	54.3	53.7	52.8	52.8
IA SU4	47.9	42.6	50.1	49.6	48.2	51.9	51.5	51.0	51.0
IA SU5	50.8	44.9	52.6	52.3	50.3	54.2	53.6	52.8	52.8
IA SU6	51.1	45.2	52.9	52.6	50.5	54.5	53.9	53.0	53.0
IA SU7	52.8	46.5	54.3	54.1	51.6	55.8	55.1	53.9	53.9
IA 3S3A	79.3	68.0	77.7	76.4	71.4	78.4	74.4	70.1	70.1
IA 3S2A	79.1	66.9	75.1	72.9	67.4	74.8	70.3	66.6	66.6
IA 3S3B	89.9	80.6	95.5	93.8	92.8	99.3	99.0	97.1	97.1
IA 4S3	88.0	78.1	91.6	90.8	87.8	94.6	93.6	91.1	91.1
IA 3-3	75.3	65.3	74.7	72.6	67.1	74.4	70.0	66.4	66.4
IA 5-2	78.6	69.6	81.5	81.0	76.5	84.0	80.7	76.8	76.8
IA EV2	51.1	45.2	52.9	52.6	50.5	54.5	53.9	53.0	53.0
IA EV3	49.5	43.9	51.5	51.1	49.4	53.2	52.7	52.0	52.0
90k	74.3	66.8	79.1	77.7	77.1	82.4	81.3	76.9	76.9
100k Crane	60.0	52.8	61.5	61.4	58.3	63.1	62.2	60.8	60.8
136k A	92.4	82.2	96.7	95.7	93.0	100.0	98.2	90.9	90.9
136k B	83.5	74.6	88.1	86.8	85.2	91.4	90.9	85.9	85.9
156k	95.8	85.6	101.0	99.6	97.7	104.8	104.3	97.3	97.3

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H44-07/14, 0 and 15 Degree Skew, 2'-8 Open Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.87	1.76	1.82	1.77	1.85	1.98	2.04	2.05	2.09
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 1 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 1 E	0.5L Sp 1 E
HL-93 Inv	1.45	1.32	1.41	1.36	1.41	1.53	1.53	1.43	1.43
Controlled by	STR1 +M	SRV3 +M	STR1 +M	STR1 +M	SRV3 +M	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 E
IA Type 4	48.4	42.9	50.8	49.8	48.1	52.8	52.8	51.3	51.3
IA Type 3	50.0	44.2	52.2	51.1	49.3	54.2	54.1	52.3	52.3
IA SU4	47.1	41.9	49.7	48.8	47.2	51.8	51.8	50.5	50.5
IA SU5	50.0	44.2	52.2	51.1	49.2	54.2	54.0	52.2	52.2
IA SU6	50.3	44.4	52.5	51.3	49.4	54.4	54.3	52.4	52.4
IA SU7	51.9	45.7	53.8	52.5	50.5	55.7	55.5	53.4	53.4
IA 3S3A	78.0	66.8	77.0	73.8	69.9	78.3	74.9	69.4	69.4
IA 3S2A	77.8	65.8	74.5	70.4	66.0	74.7	70.8	65.9	65.9
IA 3S3B	88.5	79.2	94.6	93.5	90.8	99.1	99.7	96.0	96.0
IA 4S3	86.6	76.7	90.8	89.0	85.9	94.4	94.3	90.1	90.1
IA 3-3	74.1	64.1	74.0	70.1	65.7	74.3	70.6	65.7	65.7
IA 5-2	77.4	68.4	80.8	79.1	74.9	83.8	81.3	76.0	76.0
IA EV2	50.3	44.4	52.5	51.3	49.4	54.4	54.3	52.4	52.4
IA EV3	48.7	43.2	51.1	50.1	48.3	53.1	53.0	51.5	51.5
90k	73.1	65.6	78.5	77.6	75.5	82.3	81.9	76.1	76.1
100k Crane	59.0	51.9	61.0	59.4	57.1	63.0	62.7	60.2	60.2
136k A	90.9	80.8	95.9	94.2	91.0	99.9	98.9	90.0	90.0
136k B	82.1	73.3	87.3	86.0	83.4	91.3	91.5	85.0	85.0
156k	94.2	84.1	100.2	98.7	95.7	104.7	105.0	96.2	96.2

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H44-07/14, 0 and 15 Degree Skew, 2'-10 Barrier Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.92	1.78	1.81	1.76	1.89	1.97	2.04	2.08	2.19
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I
HL-93 Inv	1.48	1.37	1.40	1.36	1.46	1.52	1.53	1.48	1.48
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 2 I	0.5L Sp 1 I
IA Type 4	49.5	44.7	51.5	50.6	50.4	52.4	52.4	53.1	53.1
IA Type 3	51.2	46.1	53.0	52.1	51.6	53.8	53.7	54.1	54.1
IA SU4	48.2	43.6	50.4	49.4	49.4	51.3	51.4	52.3	52.3
IA SU5	51.1	46.0	52.9	52.1	51.5	53.7	53.6	54.1	54.1
IA SU6	51.5	46.3	53.2	52.4	51.8	54.0	53.8	54.3	54.3
IA SU7	53.1	47.6	54.6	53.9	52.9	55.3	55.0	55.2	55.2
IA 3S3A	79.8	69.6	78.0	76.1	73.2	77.6	76.2	71.8	71.8
IA 3S2A	79.6	68.5	75.5	72.6	69.1	74.1	71.9	68.2	68.2
IA 3S3B	90.5	82.6	95.9	93.4	95.1	98.3	98.9	99.4	99.4
IA 4S3	88.6	79.9	92.1	90.4	90.0	93.6	93.6	93.3	93.3
IA 3-3	75.8	66.8	75.0	72.2	68.8	73.7	71.5	68.0	68.0
IA 5-2	79.1	71.2	81.9	80.6	78.4	83.1	81.6	78.6	78.6
IA EV2	51.5	46.3	53.2	52.4	51.8	54.0	53.8	54.3	54.3
IA EV3	49.8	45.0	51.8	50.9	50.6	52.7	52.6	53.3	53.3
90k	74.8	68.3	79.5	77.3	79.0	81.6	82.2	78.7	78.7
100k Crane	60.4	54.0	61.8	61.1	59.8	62.5	62.2	62.3	62.3
136k A	93.0	84.2	97.2	95.3	95.3	99.0	99.1	93.1	93.1
136k B	84.1	76.4	88.5	86.4	87.3	90.5	90.8	88.0	88.0
156k	96.4	87.6	101.5	99.2	100.2	103.8	104.2	99.6	99.6

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H44-07/14, 30 Degree Skew, 2'-8 Open Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.95	1.83	1.91	1.85	1.93	2.07	2.11	2.13	2.17
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 1 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 1 E	0.5L Sp 1 E
HL-93 Inv	1.50	1.37	1.47	1.42	1.46	1.60	1.59	1.49	1.49
Controlled by	STR1 +M	SRV3 +M	STR1 +M	STR1 +M	SRV3 +M	STR1 +M	SRV3 +M	SRV3 +M	SRV3 +M
Location	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 1 E	0.5L Sp 2 E	0.5L Sp 1 I	0.5L Sp 2 E	0.5L Sp 2 E	0.5L Sp 1 E
IA Type 4	50.4	44.6	52.9	51.8	49.9	55.3	56.2	53.2	53.2
IA Type 3	52.1	45.9	54.4	53.1	51.1	56.7	57.4	54.3	54.3
IA SU4	49.1	43.5	51.8	50.8	49.0	54.2	55.3	52.4	52.4
IA SU5	52.0	45.9	54.4	53.1	51.1	56.7	57.3	54.2	54.2
IA SU6	52.4	46.2	54.7	53.4	51.3	56.9	57.6	54.5	54.5
IA SU7	54.1	47.5	56.1	54.6	52.4	58.3	58.7	55.4	55.4
IA 3S3A	81.2	69.4	80.2	76.7	72.6	81.9	77.8	72.0	72.0
IA 3S2A	81.0	68.3	77.6	73.2	68.5	78.1	73.6	68.4	68.4
IA 3S3B	92.1	82.3	98.6	97.2	94.2	103.7	106.4	99.7	99.7
IA 4S3	90.2	79.7	94.6	92.6	89.2	98.8	100.4	93.6	93.6
IA 3-3	77.1	66.6	77.1	72.8	68.2	77.7	73.3	68.2	68.2
IA 5-2	80.6	71.0	84.2	82.2	77.7	87.7	84.5	78.9	78.9
IA EV2	52.4	46.2	54.7	53.4	51.3	57.0	57.6	54.5	54.5
IA EV3	50.7	44.8	53.2	52.1	50.2	55.6	56.4	53.5	53.5
90k	76.1	68.1	81.8	80.7	78.3	86.1	85.1	79.0	79.0
100k Crane	61.4	53.9	63.5	61.8	59.2	66.0	66.2	62.5	62.5
136k A	94.7	83.9	99.9	97.9	94.5	104.5	102.8	93.4	93.4
136k B	85.6	76.2	91.0	89.5	86.6	95.5	95.4	88.3	88.3
156k	98.1	87.4	104.4	102.6	99.3	109.5	109.4	99.9	99.9

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

PPCB Bridge Standards Load Rating Summary - LRFR Rating Method

H44-07/14, 30 Degree Skew, 2'-10 Barrier Rail

	Bridge Length								
Truck	**138'-10**	**151'-4**	**163'-10**	**176'-4**	**188'-10**	**201'-4**	**213'-10**	**226'-4**	**243'-0**
HL-93 Oper	1.95	1.86	1.90	1.84	1.96	2.06	2.11	2.17	2.21
Controlled by	STR1 V	STR1 +M	STR1 +M	STR1 +M	STR1 V	STR1 +M	STR1 +M	STR1 +M	STR1 V
Location	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 1 I	0.1L Sp 1 I
HL-93 Inv	1.50	1.43	1.46	1.42	1.51	1.59	1.63	1.54	1.54
Controlled by	STR1 V	SRV3 +M	STR1 +M	STR1 +M	STR1 V	STR1 +M	STR1 +M	SRV3 +M	SRV3 +M
Location	0.1L Sp 2 I	0.5L Sp 2 I	0.5L Sp 1 I	0.5L Sp 1 I	0.1L Sp 2 I	0.5L Sp 1 I	0.5L Sp 1 I	0.5L Sp 2 I	0.5L Sp 1 I
IA Type 4	51.5	46.4	53.7	52.8	52.3	54.8	58.0	55.1	55.1
IA Type 3	53.3	47.9	55.2	54.5	53.5	56.3	59.2	56.2	56.2
IA SU4	50.2	45.3	52.5	51.6	51.3	53.7	57.1	54.3	54.3
IA SU5	53.2	47.8	55.1	54.4	53.5	56.2	59.2	56.1	56.1
IA SU6	53.6	48.1	55.4	54.7	53.7	56.5	59.4	56.4	56.4
IA SU7	55.3	49.5	56.9	56.3	54.9	57.8	60.6	57.4	57.4
IA 3S3A	83.1	72.3	81.3	79.1	76.0	81.2	80.3	74.6	74.6
IA 3S2A	82.9	71.2	78.6	75.5	71.7	77.5	76.0	70.8	70.8
IA 3S3B	94.3	85.8	100.0	97.6	98.7	102.9	109.9	103.2	103.2
IA 4S3	92.2	83.0	95.9	94.5	93.4	98.0	103.6	96.9	96.9
IA 3-3	78.9	69.4	78.2	75.1	71.4	77.1	75.7	70.6	70.6
IA 5-2	82.4	74.0	85.3	84.2	81.4	87.0	87.2	81.6	81.6
IA EV2	53.6	48.1	55.4	54.7	53.7	56.5	59.4	56.4	56.4
IA EV3	51.9	46.7	53.9	53.1	52.5	55.1	58.3	55.3	55.3
90k	77.9	71.0	82.9	80.8	82.0	85.4	87.8	81.8	81.8
100k Crane	62.9	56.1	64.4	63.7	62.0	65.4	68.3	64.7	64.7
136k A	96.9	87.5	101.3	99.5	98.9	103.6	106.1	96.7	96.7
136k B	87.5	79.4	92.2	90.3	90.6	94.7	98.4	91.4	91.4
156k	100.4	91.0	105.8	103.6	104.0	108.6	112.9	103.4	103.4

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

Slab Bridge Standards Load Rating Summary - LRFR Rating Method

J24-06, 2'-8 Open Rail, All Skews

	Bridge Length								
Truck	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**	**150**
HL-93 Oper	1.60	1.50	1.50	1.54	1.45	1.53	1.59	1.67	1.59
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.5L Sp 2	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2
HL-93 Inv	1.23	1.16	1.16	1.19	1.12	1.18	1.22	1.29	1.23
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.5L Sp 2	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2
IA Type 4	61.8	56.1	54.7	55.4	52.2	54.6	55.9	58.7	58.7
IA Type 3	61.6	58.5	57.3	57.9	55.1	57.4	58.6	61.2	60.6
IA SU4	57.9	53.1	52.2	53.0	50.4	52.8	54.3	57.1	57.1
IA SU5	64.6	58.6	57.1	57.7	54.5	56.8	58.1	60.8	60.5
IA SU6	67.4	60.6	58.7	59.0	56.6	58.7	59.8	62.4	61.2
IA SU7	73.8	65.7	62.8	62.6	60.0	62.7	63.6	66.1	63.5
IA 3S3A	86.0	84.3	83.6	87.7	81.8	86.9	90.4	96.0	94.6
IA 3S2A	85.3	85.1	80.1	90.7	84.4	88.7	91.4	96.3	90.7
IA 3S3B	100.2	93.0	95.3	98.4	91.4	96.7	100.3	105.9	98.9
IA 4S3	106.5	101.0	100.5	102.1	93.4	97.6	100.1	105.0	98.4
IA 3-3	95.5	103.6	97.5	108.7	100.5	99.8	101.1	100.2	92.2
IA 5-2	102.8	94.0	91.3	92.5	84.3	87.9	89.9	94.1	99.3
IA EV2	58.0	55.3	55.7	56.7	53.0	54.4	56.9	59.7	60.3
IA EV3	58.1	55.2	54.5	55.3	52.9	55.2	56.6	59.3	58.9
90k	81.8	76.4	76.5	79.5	74.1	78.8	81.9	87.0	93.4
100k Crane	79.6	80.3	75.5	74.1	71.1	72.8	73.2	75.6	72.9
136k A	100.7	92.5	91.0	93.3	86.1	90.7	93.7	98.9	103.4
136k B	100.7	92.5	91.0	93.3	86.1	90.7	93.7	98.9	103.4
156k	115.2	106.0	104.4	107.0	98.8	104.0	107.5	112.8	106.3

HL-93 ratings are reported as Rating Factors, all others are Tons.

Slab Bridge Standards Load Rating Summary - LRFR Rating Method

J30-06, 2'-8 Open Rail, All Skews

	Bridge Length								
Truck	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**	**150**
HL-93 Oper	1.65	1.55	1.56	1.61	1.51	1.60	1.66	1.75	1.67
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.5L Sp 2	0.4L Sp 1	0.4L Sp1	0.4L Sp 1	0.4L Sp1	0.5L Sp 2
HL-93 Inv	1.27	1.20	1.20	1.24	1.17	1.23	1.28	1.35	1.29
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.5L Sp 2	0.4L Sp 1	0.4L Sp1	0.4L Sp 1	0.4L Sp1	0.5L Sp 2
IA Type 4	63.7	58.3	56.8	57.8	54.3	56.9	58.4	61.3	61.6
IA Type 3	63.4	60.6	59.5	60.4	57.4	59.8	61.1	63.9	63.6
IA SU4	59.6	55.2	54.2	55.3	52.4	55.0	56.6	59.6	59.9
IA SU5	67.0	60.9	59.3	60.1	56.7	59.2	60.6	63.5	63.5
IA SU6	69.8	63.0	60.9	61.5	59.0	61.2	62.4	65.2	64.2
IA SU7	76.4	68.2	65.2	65.3	62.4	65.3	66.4	69.0	66.6
IA 3S3A	89.2	87.3	80.1	86.1	85.2	90.6	94.4	94.0	99.4
IA 3S2A	87.2	88.4	76.7	83.8	87.8	92.5	95.4	91.7	95.3
IA 3S3B	103.1	96.6	98.9	102.2	95.2	100.8	100.8	90.3	93.4
IA 4S3	109.6	104.8	104.3	106.0	97.3	101.7	100.0	89.5	92.9
IA 3-3	99.0	107.7	93.4	100.4	104.6	103.7	105.8	99.8	96.8
IA 5-2	106.5	97.4	94.7	96.1	87.8	91.7	93.8	90.0	93.8
IA EV2	59.7	57.2	57.8	58.1	55.1	56.4	59.4	62.4	63.3
IA EV3	59.8	57.2	56.6	57.7	55.0	57.6	59.1	62.0	61.8
90k	84.7	79.1	79.4	82.5	77.2	82.1	85.5	88.2	93.3
100k Crane	82.5	83.4	78.4	77.3	74.1	75.9	76.4	78.9	76.5
136k A	104.5	95.8	94.5	96.9	89.7	94.5	97.8	93.4	97.7
136k B	104.4	95.8	94.5	96.9	89.7	94.5	97.8	93.4	97.7
156k	118.6	109.9	108.4	111.1	102.8	108.4	106.6	96.2	100.4

HL-93 ratings are reported as Rating Factors, all others are Tons.

Use this table for both the epoxy and non-epoxy coated reinforcement options.

Slab Bridge Standards Load Rating Summary - LRFR Rating Method

J30-06, 2'-10 Barrier Rail, All Skews

	Bridge Length								
Truck	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**	**150**
HL-93 Oper	1.65	1.55	1.55	1.60	1.50	1.59	1.65	1.74	1.66
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.5L Sp 2	0.4L Sp 1	0.4L Sp1	0.4L Sp 1	0.4L Sp1	0.5L Sp 2
HL-93 Inv	1.27	1.19	1.20	1.24	1.16	1.23	1.27	1.34	1.28
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.5L Sp 2	0.4L Sp 1	0.4L Sp1	0.4L Sp 1	0.4L Sp1	0.5L Sp 2
IA Type 4	63.7	58.1	56.5	57.5	54.0	56.6	58.1	60.9	61.2
IA Type 3	63.5	60.4	59.2	60.1	57.1	59.5	60.8	63.6	63.2
IA SU4	59.6	55.0	54.0	55.0	52.2	54.7	56.3	59.3	59.5
IA SU5	66.8	60.7	59.0	59.8	56.4	58.9	60.3	63.1	63.1
IA SU6	69.7	62.8	60.6	61.2	58.7	60.9	62.1	64.8	63.8
IA SU7	76.2	68.0	64.9	65.0	62.1	65.0	66.0	68.6	66.2
IA 3S3A	88.6	87.0	79.4	85.3	84.7	90.1	93.8	92.8	98.7
IA 3S2A	87.9	87.8	76.1	83.0	87.4	92.0	94.9	90.6	94.6
IA 3S3B	103.2	96.2	98.5	101.8	94.7	100.3	99.8	89.2	92.2
IA 4S3	109.7	104.4	103.9	105.5	96.8	101.2	99.0	88.4	91.7
IA 3-3	98.4	107.0	92.6	99.6	104.0	103.5	105.2	98.6	96.1
IA 5-2	106.2	97.0	94.3	95.7	87.3	91.2	93.3	88.9	92.6
IA EV2	59.8	57.1	57.6	57.8	54.9	56.4	59.1	62.0	62.9
IA EV3	59.9	57.0	56.3	57.4	54.7	57.3	58.7	61.6	61.4
90k	84.6	78.8	79.0	82.2	76.8	81.7	85.0	87.2	92.1
100k Crane	82.0	83.1	78.0	76.9	73.7	75.5	75.9	78.5	76.0
136k A	104.1	95.4	94.1	96.5	89.2	94.0	97.2	92.2	96.4
136k B	104.1	95.4	94.1	96.5	89.2	94.0	97.2	92.2	96.4
156k	118.7	109.5	107.9	110.6	102.3	107.8	105.5	95.0	99.1

HL-93 ratings are reported as Rating Factors, all others are Tons.

Use this table for both the epoxy and non-epoxy coated reinforcement options.

Slab Bridge Standards Load Rating Summary - LRFR Rating Method

J40-06/14, 2'-8 Open Rail, All Skews

	Bridge Length								
Truck	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**	**150**
HL-93 Oper	1.73	1.63	1.64	1.70	1.60	1.69	1.75	1.85	1.78
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2
HL-93 Inv	1.34	1.26	1.27	1.31	1.23	1.30	1.35	1.43	1.37
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2
IA Type 4	66.9	61.4	60.1	61.2	57.3	60.1	61.8	65.0	65.7
IA Type 3	66.6	63.6	63.0	63.9	60.6	63.2	64.7	67.8	67.8
IA SU4	62.6	58.2	57.4	58.5	55.4	58.2	60.0	63.2	63.9
IA SU5	70.5	64.2	62.7	63.6	59.9	62.6	64.1	67.3	67.7
IA SU6	73.5	66.4	64.5	65.1	62.2	64.7	66.1	69.1	68.5
IA SU7	80.5	71.9	69.0	69.1	65.9	69.1	70.2	73.1	71.1
IA 3S3A	93.7	91.6	84.5	91.0	89.9	95.8	99.9	100.1	106.0
IA 3S2A	92.9	93.0	81.0	88.6	92.7	97.8	101.0	97.8	101.6
IA 3S3B	108.2	101.8	104.0	107.7	100.4	106.6	107.2	96.3	99.7
IA 4S3	115.1	110.0	109.7	111.7	102.7	107.5	106.3	95.4	99.1
IA 3-3	103.9	113.3	98.6	106.2	110.4	113.7	112.5	106.3	103.2
IA 5-2	112.1	102.2	99.6	101.2	92.7	96.9	99.3	95.9	100.1
IA EV2	62.7	61.8	61.2	61.2	58.2	61.1	62.9	66.1	67.5
IA EV3	62.8	60.0	59.9	61.0	58.1	60.9	62.5	65.7	65.9
90k	89.0	83.0	83.5	86.9	81.5	86.8	90.5	94.0	99.6
100k Crane	86.6	87.9	83.0	81.8	78.2	80.2	80.8	83.7	81.6
136k A	109.9	100.5	99.4	102.1	94.6	99.9	103.5	99.5	104.2
136k B	109.9	100.5	99.4	102.1	94.6	99.9	103.5	99.5	104.2
156k	124.6	115.3	114.0	117.1	108.6	114.6	113.3	102.5	107.1

HL-93 ratings are reported as Rating Factors, all others are Tons.

Slab Bridge Standards Load Rating Summary - LRFR Rating Method

J40-06/14, 2'-10 Barrier Rail, All Skews

	Bridge Length								
Truck	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**	**150**
HL-93 Oper	1.73	1.63	1.64	1.70	1.59	1.69	1.75	1.84	1.77
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2
HL-93 Inv	1.33	1.26	1.26	1.31	1.23	1.30	1.35	1.42	1.37
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2
IA Type 4	66.8	61.3	60.0	61.0	57.2	59.9	61.6	64.7	65.4
IA Type 3	66.5	63.5	62.8	63.7	60.4	63.0	64.5	67.5	67.6
IA SU4	62.5	58.0	57.2	58.3	55.2	58.0	59.8	63.0	63.6
IA SU5	70.3	64.0	62.6	63.4	59.7	62.4	63.9	67.1	67.5
IA SU6	73.4	66.2	64.3	64.9	62.0	64.5	65.8	68.8	68.2
IA SU7	80.3	71.7	68.8	68.9	65.7	68.8	70.0	72.9	70.8
IA 3S3A	93.3	91.4	84.1	90.5	89.6	95.5	99.6	99.4	105.5
IA 3S2A	92.5	92.6	80.6	88.1	92.4	97.4	100.6	97.0	101.2
IA 3S3B	108.1	101.5	103.7	107.4	100.1	106.2	106.5	95.5	98.9
IA 4S3	114.9	109.7	109.4	111.4	102.4	107.2	105.6	94.7	98.4
IA 3-3	103.5	112.9	98.1	105.6	110.1	113.3	112.1	105.6	102.8
IA 5-2	111.9	101.9	99.4	101.0	92.4	96.6	99.0	95.2	99.4
IA EV2	62.6	61.7	61.1	61.0	58.0	60.9	62.7	65.9	67.3
IA EV3	62.7	59.9	59.7	60.9	57.9	60.7	62.3	65.5	65.6
90k	88.8	82.8	83.3	86.7	81.2	86.5	90.2	93.3	98.8
100k Crane	86.3	87.7	82.8	81.5	77.9	80.0	80.6	83.4	81.3
136k A	109.7	100.3	99.1	101.8	94.3	99.6	103.2	98.8	103.4
136k B	109.7	100.3	99.1	101.8	94.3	99.6	103.2	98.8	103.4
156k	124.4	115.1	113.7	116.8	108.2	114.3	112.6	101.8	106.3

HL-93 ratings are reported as Rating Factors, all others are Tons.

Slab Bridge Standards Load Rating Summary - LRFR Rating Method

J44-06/14, 2'-8 Open Rail, All Skews

	Bridge Length								
Truck	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**	**150**
HL-93 Oper	1.76	1.66	1.67	1.74	1.63	1.73	1.79	1.89	1.82
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2
HL-93 Inv	1.36	1.28	1.29	1.34	1.26	1.33	1.38	1.46	1.40
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2
IA Type 4	68.0	62.6	61.3	62.4	58.5	61.3	63.1	66.4	67.3
IA Type 3	67.7	64.8	64.2	65.2	61.8	64.5	66.1	69.2	69.5
IA SU4	63.6	59.3	58.5	59.7	56.5	59.4	61.2	64.5	65.4
IA SU5	71.8	65.4	64.0	64.9	61.1	63.9	65.5	68.7	69.4
IA SU6	74.9	67.6	65.8	66.4	63.5	66.0	67.4	70.5	70.1
IA SU7	81.9	73.2	70.4	70.5	67.2	70.5	71.7	74.7	72.8
IA 3S3A	95.4	93.3	86.3	92.9	91.7	97.7	102.0	102.6	108.5
IA 3S2A	94.6	94.8	82.6	90.4	94.6	99.8	103.1	100.1	104.0
IA 3S3B	110.0	103.7	105.9	109.7	102.5	108.8	109.6	98.6	102.2
IA 4S3	116.9	111.9	111.7	113.8	104.7	109.7	108.7	97.7	101.6
IA 3-3	105.8	115.5	100.6	108.4	112.6	116.2	115.1	108.9	105.7
IA 5-2	114.2	104.0	101.5	103.2	94.6	98.9	101.4	98.2	102.6
IA EV2	63.8	62.9	62.4	62.4	59.4	62.4	64.2	67.5	69.1
IA EV3	63.9	61.1	61.1	62.3	59.3	62.1	63.8	67.1	67.5
90k	90.4	84.5	85.0	88.6	83.1	88.6	92.4	96.3	102.0
100k Crane	88.2	89.6	84.6	83.5	79.7	81.9	82.5	85.5	83.5
136k A	111.8	102.3	101.2	104.0	96.5	102.0	105.7	101.9	106.8
136k B	111.8	102.3	101.2	104.0	96.5	102.0	105.7	101.9	106.8
156k	126.7	117.4	116.1	119.3	110.7	117.0	116.0	105.0	109.8

HL-93 ratings are reported as Rating Factors, all others are Tons.

Slab Bridge Standards Load Rating Summary - LRFR Rating Method

J44-06/14, 2'-10 Barrier Rail, All Skews

	Bridge Length								
Truck	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**	**150**
HL-93 Oper	1.76	1.66	1.67	1.73	1.62	1.72	1.78	1.88	1.81
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2
HL-93 Inv	1.36	1.28	1.29	1.34	1.25	1.33	1.38	1.45	1.40
Controlled by	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M	STR1 +M
Location	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.4L Sp 1	0.5L Sp 2
IA Type 4	67.9	62.4	61.2	62.2	58.3	61.1	62.9	66.1	67.0
IA Type 3	67.6	64.6	64.1	65.0	61.6	64.3	65.8	69.0	69.2
IA SU4	63.5	59.1	58.4	59.6	56.3	59.2	61.0	64.3	65.1
IA SU5	71.6	65.2	63.8	64.7	60.9	63.7	65.3	68.5	69.1
IA SU6	74.7	67.5	65.6	66.2	63.3	65.8	67.2	70.3	69.9
IA SU7	81.8	73.1	70.2	70.3	67.0	70.2	71.5	74.5	72.5
IA 3S3A	95.0	93.1	85.8	92.4	91.4	97.4	101.6	101.8	108.0
IA 3S2A	94.2	94.4	82.2	89.9	94.3	99.4	102.8	99.4	103.6
IA 3S3B	109.8	103.5	105.6	109.5	102.1	108.4	109.0	97.9	101.4
IA 4S3	116.8	111.7	111.4	113.5	104.4	109.4	108.1	97.0	100.8
IA 3-3	105.4	115.0	100.1	107.8	112.3	115.8	114.7	108.1	105.2
IA 5-2	113.9	103.8	101.2	102.9	94.3	98.6	101.1	97.5	101.8
IA EV2	63.7	62.8	62.2	62.2	59.2	62.2	64.0	67.3	68.9
IA EV3	63.8	60.9	60.9	62.1	59.1	61.9	63.6	66.9	67.2
90k	90.3	84.3	84.8	88.4	82.9	88.3	92.1	95.6	101.3
100k Crane	87.8	89.4	84.4	83.2	79.5	81.6	82.3	85.2	83.2
136k A	111.6	102.1	101.0	103.8	96.2	101.7	105.3	101.1	106.0
136k B	111.6	102.1	101.0	103.8	96.2	101.7	105.3	101.1	106.0
156k	126.5	117.1	115.8	119.0	110.4	116.6	115.2	104.2	109.0

HL-93 ratings are reported as Rating Factors, all others are Tons.

RS Bridge Standards Load Rating Summary - LRFR Rating Method

RS40-10/14 (Original), 2'-10 Barrier Rail, 0 Degree Skew

	Bridge Length									
Truck	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**	**320**	**340**
HL-93 Oper	1.61	0.93	1.49	0.83	1.45	1.53	1.46	1.49	1.52	1.44
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
HL-93 Inv	1.24	0.71	1.15	0.64	1.12	1.18	1.13	1.15	1.18	1.11
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
IA Type 4	59.8	49.6	59.9	52.7	73.5	70.3	70.3	72.6	74.5	77.1
IA Type 3	61.6	50.3	61.4	53.3	75.0	71.6	71.5	73.7	75.7	78.2
IA SU4	58.4	49.5	58.8	52.6	72.4	69.3	69.4	71.7	73.7	76.2
IA SU5	61.5	50.2	61.3	53.1	74.9	71.5	71.5	73.7	75.6	78.1
IA SU6	62.0	50.5	61.7	53.4	75.3	71.9	71.7	73.9	75.8	78.4
IA SU7	63.8	51.0	63.1	53.8	76.7	73.1	72.9	75.1	76.9	79.4
IA 3S3A	76.7	59.4	85.2	59.4	98.1	91.7	89.9	91.2	92.3	94.1
IA 3S2A	74.5	58.7	81.3	59.1	94.0	88.3	86.7	88.2	89.5	91.4
IA 3S3B	75.5	56.2	90.7	62.1	104.4	118.1	113.6	113.3	112.9	113.6
IA 4S3	74.9	55.3	89.4	61.2	102.7	113.0	108.9	108.9	108.7	109.7
IA 3-3	78.6	58.2	81.6	58.7	94.3	88.5	86.9	88.3	89.6	91.5
IA 5-2	74.4	55.3	89.5	61.7	104.8	98.9	96.5	97.6	98.2	99.9
IA EV2	61.7	50.0	61.5	53.0	75.1	71.8	71.6	73.9	75.8	78.3
IA EV3	60.1	50.1	60.2	53.1	73.8	70.6	70.5	72.8	74.7	77.3
90k	74.8	56.4	91.5	64.3	106.2	99.0	96.9	98.1	99.0	100.8
100k Crane	72.7	56.5	71.6	59.6	86.7	82.6	82.2	84.6	86.7	89.4
136k A	79.0	59.4	96.9	66.9	113.6	113.9	110.4	110.7	111.0	112.3
136k B	78.6	58.8	95.9	66.2	112.6	109.4	106.7	107.7	108.2	109.8
156k	80.7	60.3	98.2	67.7	114.9	121.8	117.5	117.5	117.3	118.3

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

RS Bridge Standards Load Rating Summary - LRFR Rating Method

RS40-10/14 (Original), 2'-10 Barrier Rail, 10 and 20 Degree Skew

	Bridge Length									
Truck	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**	**320**	**340**
HL-93 Oper	1.61	0.86	0.83	0.72	1.45	1.53	1.46	1.49	1.52	1.44
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
HL-93 Inv	1.24	0.66	0.64	0.55	1.12	1.18	1.13	1.15	1.17	1.11
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
IA Type 4	59.8	46.3	48.9	45.8	73.5	70.3	70.3	72.6	74.6	77.1
IA Type 3	61.6	46.9	49.7	46.2	75.0	71.6	71.5	73.8	75.7	78.2
IA SU4	58.4	46.1	48.8	45.6	72.4	69.3	69.4	71.7	73.7	76.3
IA SU5	61.5	46.8	49.3	46.0	74.9	71.6	71.4	73.7	75.6	78.1
IA SU6	62.0	47.1	49.6	46.3	75.3	71.9	71.8	74.0	75.9	78.4
IA SU7	63.8	47.6	50.0	46.6	76.7	73.2	72.9	75.1	77.0	79.4
IA 3S3A	76.6	55.2	56.5	51.5	98.0	91.7	89.9	91.2	92.3	94.1
IA 3S2A	74.4	54.8	56.0	51.1	94.0	88.3	86.7	88.2	89.5	91.4
IA 3S3B	75.4	52.7	56.9	53.9	104.3	118.1	113.5	113.3	112.8	113.6
IA 4S3	74.8	51.6	56.1	53.0	102.8	113.0	108.9	108.9	108.8	109.6
IA 3-3	78.5	54.2	55.7	50.9	94.2	88.5	86.8	88.3	89.6	91.5
IA 5-2	74.3	51.6	56.0	53.5	104.7	98.9	96.5	97.5	98.3	99.9
IA EV2	61.7	46.6	49.1	45.9	75.1	71.7	71.6	73.9	75.8	78.3
IA EV3	60.1	46.7	49.5	46.3	73.8	70.6	70.5	72.8	74.8	77.3
90k	74.7	52.6	58.0	56.9	106.1	99.0	96.9	98.1	99.0	100.8
100k Crane	72.7	52.7	55.4	51.8	86.7	82.6	82.2	84.6	86.7	89.4
136k A	78.9	55.4	60.8	58.0	113.7	113.9	110.3	110.8	111.0	112.3
136k B	78.5	54.8	60.0	57.4	112.6	109.4	106.7	107.7	108.2	109.7
156k	80.6	56.3	61.6	58.7	114.4	121.8	117.5	117.6	117.3	118.3

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

RS Bridge Standards Load Rating Summary - LRFR Rating Method

RS40-10/14 (Original), 2'-10 Barrier Rail, 30 Degree Skew

	Bridge Length									
Truck	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**	**320**	**340**
HL-93 Oper	1.64	0.81	0.76	0.60	1.48	1.56	1.48	1.52	1.55	1.47
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
HL-93 Inv	1.20	0.63	0.59	0.47	1.14	1.20	1.14	1.17	1.20	1.13
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
IA Type 4	61.5	43.8	45.2	40.5	75.5	72.1	72.1	74.4	76.4	79.0
IA Type 3	63.4	44.3	45.6	41.1	77.0	73.5	73.3	75.6	77.5	80.1
IA SU4	60.1	43.6	45.0	40.4	74.3	71.1	71.1	73.5	75.5	78.1
IA SU5	63.3	44.2	45.5	40.8	76.9	73.4	73.2	75.5	77.4	80.0
IA SU6	63.8	44.5	45.8	41.0	77.3	73.7	73.5	75.8	77.7	80.2
IA SU7	65.7	44.9	46.2	41.3	78.8	75.0	74.7	76.9	78.8	81.3
IA 3S3A	78.3	52.1	52.1	45.5	100.4	94.1	92.1	93.5	94.4	96.3
IA 3S2A	76.1	51.8	51.7	45.2	96.5	90.5	88.9	90.4	91.6	93.6
IA 3S3B	77.1	49.4	52.2	47.7	106.6	121.1	116.3	116.1	115.5	116.3
IA 4S3	76.5	48.7	51.5	47.0	105.1	115.9	111.6	111.6	111.3	112.3
IA 3-3	80.4	51.8	51.4	45.0	96.8	90.7	89.0	90.5	91.7	93.7
IA 5-2	76.0	48.7	51.5	47.4	107.0	101.5	98.9	99.9	100.6	102.3
IA EV2	63.5	43.9	45.3	40.8	77.1	73.6	73.4	75.7	77.6	80.2
IA EV3	61.8	44.2	45.5	41.0	75.8	72.4	72.3	74.6	76.6	79.2
90k	76.4	49.7	53.3	50.4	108.9	101.6	99.3	100.5	101.3	103.2
100k Crane	74.8	49.8	51.2	45.8	89.0	84.7	84.3	86.7	88.8	91.5
136k A	80.7	52.3	55.8	51.3	116.2	116.8	113.0	113.5	113.6	115.0
136k B	80.3	51.8	55.2	50.8	115.1	112.2	109.3	110.3	110.7	112.4
156k	82.4	53.2	56.6	52.0	117.0	124.9	120.3	120.4	120.1	121.1

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

RS Bridge Standards Load Rating Summary - LRFR Rating Method

RS40-10/14 (Original), 2'-10 Barrier Rail, 45 Degree Skew

	Bridge Length									
Truck	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**	**320**	**340**
HL-93 Oper	1.71	1.60	1.56	1.56	1.52	1.60	1.50	1.56	1.60	1.51
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
HL-93 Inv	1.32	1.23	1.20	1.20	1.17	1.24	1.16	1.20	1.23	1.16
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
IA Type 4	63.9	61.3	63.6	68.6	78.2	74.6	74.5	76.8	78.8	81.5
IA Type 3	65.8	62.9	65.1	70.1	79.8	76.0	75.8	78.1	79.9	82.6
IA SU4	62.4	60.0	62.4	67.4	77.0	73.6	73.5	75.9	77.8	80.6
IA SU5	65.7	62.8	65.0	70.0	79.7	75.9	75.7	78.0	79.8	82.5
IA SU6	66.2	63.2	65.4	70.4	80.1	76.3	76.0	78.3	80.1	82.8
IA SU7	68.2	64.9	67.0	71.9	81.6	77.6	77.3	79.5	81.3	83.9
IA 3S3A	80.6	89.6	89.5	94.1	103.4	97.2	95.2	96.5	97.4	99.3
IA 3S2A	78.3	86.0	86.0	90.1	99.9	93.6	91.8	93.3	94.5	96.6
IA 3S3B	79.4	86.6	95.3	104.6	109.8	125.2	118.5	119.6	119.2	120.0
IA 4S3	78.8	85.5	93.8	102.9	108.2	119.7	115.2	115.1	114.8	115.8
IA 3-3	83.0	86.5	86.3	90.2	100.2	93.8	91.9	93.4	94.5	96.6
IA 5-2	78.1	85.3	94.1	102.1	110.2	104.9	102.3	103.1	103.8	105.5
IA EV2	65.9	63.0	65.2	70.1	79.8	76.1	75.9	78.1	80.0	82.7
IA EV3	64.2	61.5	63.8	68.8	78.5	74.8	74.7	77.1	78.9	81.7
90k	78.6	87.1	96.0	101.8	112.7	105.0	102.6	103.7	104.5	106.5
100k Crane	77.6	73.8	75.9	81.3	92.2	87.6	87.1	89.6	91.5	94.4
136k A	83.0	91.6	101.8	112.7	119.7	120.7	116.8	117.2	117.2	118.6
136k B	82.7	90.7	100.7	111.4	118.4	116.1	113.0	113.8	114.2	115.9
156k	84.8	93.1	103.2	113.1	120.4	129.1	124.0	124.3	123.9	124.9

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

RS Bridge Standards Load Rating Summary - LRFR Rating Method

RS40-10/14 (Revised 2017), 2'-10 Barrier Rail, 0 Degree Skew

	Bridge Length									
Truck	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**	**320**	**340**
HL-93 Oper	1.61	1.52	1.49	1.48	1.45	1.53	1.46	1.49	1.52	1.44
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
HL-93 Inv	1.24	1.17	1.15	1.14	1.12	1.18	1.13	1.15	1.18	1.11
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
IA Type 4	59.8	57.5	59.9	64.6	73.5	70.3	70.3	72.6	74.5	77.1
IA Type 3	61.6	59.1	61.4	66.1	75.0	71.6	71.5	73.7	75.7	78.2
IA SU4	58.4	56.3	58.8	63.5	72.4	69.3	69.4	71.7	73.7	76.2
IA SU5	61.5	59.0	61.3	66.0	74.9	71.5	71.5	73.7	75.6	78.1
IA SU6	62.0	59.4	61.7	66.4	75.3	71.9	71.7	73.9	75.8	78.4
IA SU7	63.8	61.0	63.1	67.8	76.7	73.1	72.9	75.1	76.9	79.4
IA 3S3A	76.7	85.0	85.2	88.8	98.1	91.7	89.9	91.2	92.3	94.1
IA 3S2A	74.5	81.1	81.3	85.0	94.0	88.3	86.7	88.2	89.5	91.4
IA 3S3B	75.5	82.4	90.7	99.6	104.4	118.1	113.6	113.3	112.9	113.6
IA 4S3	74.9	81.2	89.4	98.0	102.7	113.0	108.9	108.9	108.7	109.7
IA 3-3	78.6	81.3	81.6	85.2	94.3	88.5	86.9	88.3	89.6	91.5
IA 5-2	74.4	81.1	89.5	96.3	104.8	98.9	96.5	97.6	98.2	99.9
IA EV2	61.7	59.2	61.5	66.2	75.1	71.8	71.6	73.9	75.8	78.3
IA EV3	60.1	57.8	60.2	64.9	73.8	70.6	70.5	72.8	74.7	77.3
90k	74.8	82.7	91.5	96.1	106.2	99.0	96.9	98.1	99.0	100.8
100k Crane	72.7	69.3	71.6	76.7	86.7	82.6	82.2	84.6	86.7	89.4
136k A	79.0	87.0	96.9	107.1	113.6	113.9	110.4	110.7	111.0	112.3
136k B	78.6	86.2	95.9	106.1	112.6	109.4	106.7	107.7	108.2	109.8
156k	80.7	88.5	98.2	108.6	114.9	121.8	117.5	117.5	117.3	118.3

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

RS Bridge Standards Load Rating Summary - LRFR Rating Method

RS40-10/14 (Revised 2017), 2'-10 Barrier Rail, 10 and 20 Degree Skew

	Bridge Length									
Truck	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**	**320**	**340**
HL-93 Oper	1.60	1.52	1.49	1.48	1.45	1.53	1.46	1.49	1.52	1.44
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
HL-93 Inv	1.24	1.17	1.15	1.14	1.12	1.18	1.13	1.15	1.17	1.11
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
IA Type 4	59.8	57.5	60.0	64.6	73.5	70.3	70.3	72.6	74.6	77.1
IA Type 3	61.6	59.0	61.4	66.0	75.0	71.6	71.5	73.8	75.7	78.2
IA SU4	58.4	56.3	58.9	63.5	72.4	69.3	69.4	71.7	73.7	76.3
IA SU5	61.5	58.9	61.3	65.9	74.9	71.6	71.4	73.7	75.6	78.1
IA SU6	62.0	59.4	61.8	66.3	75.3	71.9	71.8	74.0	75.9	78.4
IA SU7	63.8	61.0	63.2	67.7	76.7	73.2	72.9	75.1	77.0	79.4
IA 3S3A	76.6	84.2	84.7	88.2	98.0	91.7	89.9	91.2	92.3	94.1
IA 3S2A	74.4	80.5	81.0	84.6	94.0	88.3	86.7	88.2	89.5	91.4
IA 3S3B	75.4	82.3	91.0	99.5	104.3	118.1	113.5	113.3	112.8	113.6
IA 4S3	74.8	81.2	89.5	98.0	102.8	113.0	108.9	108.9	108.8	109.6
IA 3-3	78.7	81.1	81.5	85.0	94.2	88.5	86.8	88.3	89.6	91.5
IA 5-2	74.3	81.1	89.5	95.8	104.7	98.9	96.5	97.5	98.3	99.9
IA EV2	61.7	58.9	61.3	65.9	75.1	71.7	71.6	73.9	75.8	78.3
IA EV3	60.1	57.8	60.2	64.9	73.8	70.6	70.5	72.8	74.8	77.3
90k	74.7	82.7	91.0	95.5	106.1	99.0	96.9	98.1	99.0	100.8
100k Crane	72.7	69.3	71.7	76.7	86.7	82.6	82.2	84.6	86.7	89.4
136k A	78.8	87.0	97.1	107.1	113.7	113.9	110.3	110.8	111.0	112.3
136k B	78.5	86.2	95.9	105.9	112.6	109.4	106.7	107.7	108.2	109.7
156k	80.6	88.4	98.4	108.5	114.4	121.8	117.5	117.6	117.3	118.3

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

RS Bridge Standards Load Rating Summary - LRFR Rating Method

RS40-10/14 (Revised 2017), 2'-10 Barrier Rail, 30 Degree Skew

	Bridge Length									
Truck	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**	**320**	**340**
HL-93 Oper	1.64	1.55	1.52	1.51	1.48	1.56	1.48	1.52	1.55	1.47
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
HL-93 Inv	1.27	1.19	1.17	1.17	1.14	1.20	1.14	1.17	1.20	1.13
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
IA Type 4	61.5	59.1	61.5	66.3	75.5	72.1	72.1	74.4	76.4	79.0
IA Type 3	63.4	60.7	63.0	67.7	77.0	73.5	73.3	75.6	77.5	80.1
IA SU4	60.1	57.9	60.3	65.2	74.3	71.1	71.1	73.5	75.5	78.1
IA SU5	63.3	60.6	62.9	67.7	76.9	73.4	73.2	75.5	77.4	80.0
IA SU6	63.8	61.0	63.3	68.0	77.3	73.7	73.5	75.8	77.7	80.2
IA SU7	65.7	62.6	64.7	69.5	78.8	75.0	74.7	76.9	78.8	81.3
IA 3S3A	78.4	86.3	86.5	90.3	100.4	94.1	92.1	93.5	94.4	96.3
IA 3S2A	76.1	82.6	82.9	86.7	96.5	90.5	88.9	90.4	91.6	93.6
IA 3S3B	77.1	84.2	92.7	101.7	106.6	121.1	116.3	116.1	115.5	116.3
IA 4S3	76.5	83.1	91.3	100.1	105.1	115.9	111.6	111.6	111.3	112.3
IA 3-3	80.6	83.4	83.5	87.3	96.8	90.7	89.0	90.5	91.7	93.7
IA 5-2	76.0	83.0	91.4	98.1	107.0	101.5	98.9	99.9	100.6	102.3
IA EV2	63.5	60.4	62.7	67.6	77.1	73.6	73.4	75.7	77.6	80.2
IA EV3	61.8	59.4	61.7	66.5	75.8	72.4	72.3	74.6	76.6	79.2
90k	76.3	84.7	93.0	97.7	108.9	101.6	99.3	100.5	101.3	103.2
100k Crane	74.8	71.2	73.4	78.6	89.0	84.7	84.3	86.7	88.8	91.5
136k A	80.6	89.0	99.0	109.5	116.2	116.8	113.0	113.5	113.6	115.0
136k B	80.2	88.2	97.9	108.3	115.1	112.2	109.3	110.3	110.7	112.4
156k	82.4	90.5	100.4	110.9	117.0	124.9	120.3	120.4	120.1	121.1

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.

RS Bridge Standards Load Rating Summary - LRFR Rating Method

RS40-10/14 (Revised 2017), 2'-10 Barrier Rail, 45 Degree Skew

	Bridge Length									
Truck	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**	**320**	**340**
HL-93 Oper	1.71	1.60	1.56	1.56	1.52	1.60	1.50	1.56	1.60	1.51
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
HL-93 Inv	1.32	1.23	1.20	1.20	1.17	1.24	1.16	1.20	1.23	1.16
Controlled by	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E	STR1 -M E
Location	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier	Pier
IA Type 4	63.9	61.3	63.6	68.6	78.2	74.6	74.5	76.8	78.8	81.5
IA Type 3	65.8	62.9	65.1	70.1	79.8	76.0	75.8	78.1	79.9	82.6
IA SU4	62.4	60.0	62.4	67.4	77.0	73.6	73.5	75.9	77.8	80.6
IA SU5	65.7	62.8	65.0	70.0	79.7	75.9	75.7	78.0	79.8	82.5
IA SU6	66.2	63.2	65.4	70.4	80.1	76.3	76.0	78.3	80.1	82.8
IA SU7	68.2	64.9	67.0	71.9	81.6	77.6	77.3	79.5	81.3	83.9
IA 3S3A	80.6	89.6	89.5	94.1	103.4	97.2	95.2	96.5	97.4	99.3
IA 3S2A	78.3	86.0	86.0	90.1	99.9	93.6	91.8	93.3	94.5	96.6
IA 3S3B	79.4	86.6	95.3	104.6	109.8	125.2	118.5	119.6	119.2	120.0
IA 4S3	78.8	85.5	93.8	102.9	108.2	119.7	115.2	115.1	114.8	115.8
IA 3-3	83.0	86.5	86.3	90.2	100.2	93.8	91.9	93.4	94.5	96.6
IA 5-2	78.1	85.3	94.1	102.1	110.2	104.9	102.3	103.1	103.8	105.5
IA EV2	65.9	63.0	65.2	70.1	79.8	76.1	75.9	78.1	80.0	82.7
IA EV3	64.2	61.5	63.8	68.8	78.5	74.8	74.7	77.1	78.9	81.7
90k	78.6	87.1	96.0	101.8	112.7	105.0	102.6	103.7	104.5	106.5
100k Crane	77.6	73.8	75.9	81.3	92.2	87.6	87.1	89.6	91.5	94.4
136k A	83.0	91.6	101.8	112.7	119.7	120.7	116.8	117.2	117.2	118.6
136k B	82.7	90.7	100.7	111.4	118.4	116.1	113.0	113.8	114.2	115.9
156k	84.8	93.1	103.2	113.1	120.4	129.1	124.0	124.3	123.9	124.9

HL-93 ratings are reported as Rating Factors, all others are Tons.

E and I designation in the location cells refer to Exterior and Interior beams.