

LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS

LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING (#)	MINIMUM RATING FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE										SERVICE III LIMIT STATE					COMMENT NUMBER			
						MOMENT					SHEAR					MOMENT								
						LIVE-LOAD FACTORS (γ _{LL})	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FT)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FT)	LIVE-LOAD FACTORS (γ _{LL})	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FT)	
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	①	1.03	--	1.75	0.930	1.75	A	E	43.125	1.055	1.03	A	I	8.625	0.80	0.863	1.50	A	I	43.125		
	HL-93 (OPERATING)	N/A		1.37	--	1.35	0.930	2.27	A	E	43.125	1.055	1.37	A	I	8.625	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.37	49.32	1.75	0.930	2.37	A	E	43.125	1.055	1.37	A	I	8.625	0.80	0.863	2.03	A	I	43.125		
	HS-20 (OPERATING)	36.000		1.80	64.80	1.35	0.930	3.07	A	E	43.125	1.055	1.80	A	I	8.625	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SH	12.500		4.71	58.88	1.40	0.930	7.48	A	E	43.125	1.055	4.71	A	I	8.625	0.80	0.863	5.13	A	I	43.125	
		S3C	21.500		2.72	58.48	1.40	0.930	4.38	A	E	43.125	1.055	2.72	A	I	8.625	0.80	0.863	3.00	A	I	43.125	
		S3A	22.750		2.58	58.69	1.40	0.930	4.15	A	E	43.125	1.055	2.58	A	I	8.625	0.80	0.863	2.84	A	I	43.125	
		S4A	26.750		2.24	59.92	1.40	0.930	3.65	A	E	43.125	1.055	2.24	A	I	8.625	0.80	0.863	2.50	A	I	43.125	
		S5A	30.500		2.04	62.22	1.40	0.930	3.22	A	E	43.125	1.055	2.04	A	I	8.625	0.80	0.863	2.21	A	I	43.125	
		S6A	34.500		1.83	63.13	1.40	0.930	2.92	A	E	43.125	1.055	1.83	A	I	8.625	0.80	0.863	2.00	A	I	43.125	
		S7B	38.500		1.70	65.45	1.40	0.930	2.66	A	E	43.125	1.055	1.70	A	I	8.625	0.80	0.863	1.82	A	I	43.125	
		S7A	40.000		1.73	69.20	1.40	0.930	2.63	A	E	43.125	1.055	1.73	A	I	8.625	0.80	0.863	1.80	A	I	43.125	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	T4A	28.250		2.17	61.30	1.40	0.930	3.60	A	E	43.125	1.055	2.17	A	I	8.625	0.80	0.863	2.47	A	I	43.125	
		T5B	32.000		2.05	65.60	1.40	0.930	3.16	A	E	43.125	1.055	2.05	A	I	8.625	0.80	0.863	2.17	A	I	43.125	
		T6A	36.000		1.87	67.32	1.40	0.930	2.90	A	E	43.125	1.055	1.87	A	I	8.625	0.80	0.863	1.99	A	I	43.125	
		T7A	40.000		1.74	69.60	1.40	0.930	2.69	A	E	43.125	1.055	1.74	A	I	8.625	0.80	0.863	1.84	A	I	43.125	
	T7B	40.000	③	1.63	65.20	1.40	0.930	2.87	A	E	43.125	1.055	1.63	A	I	8.625	0.80	0.863	1.97	A	I	43.125		

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ _{DC}	γ _{DW}
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

NOTES:

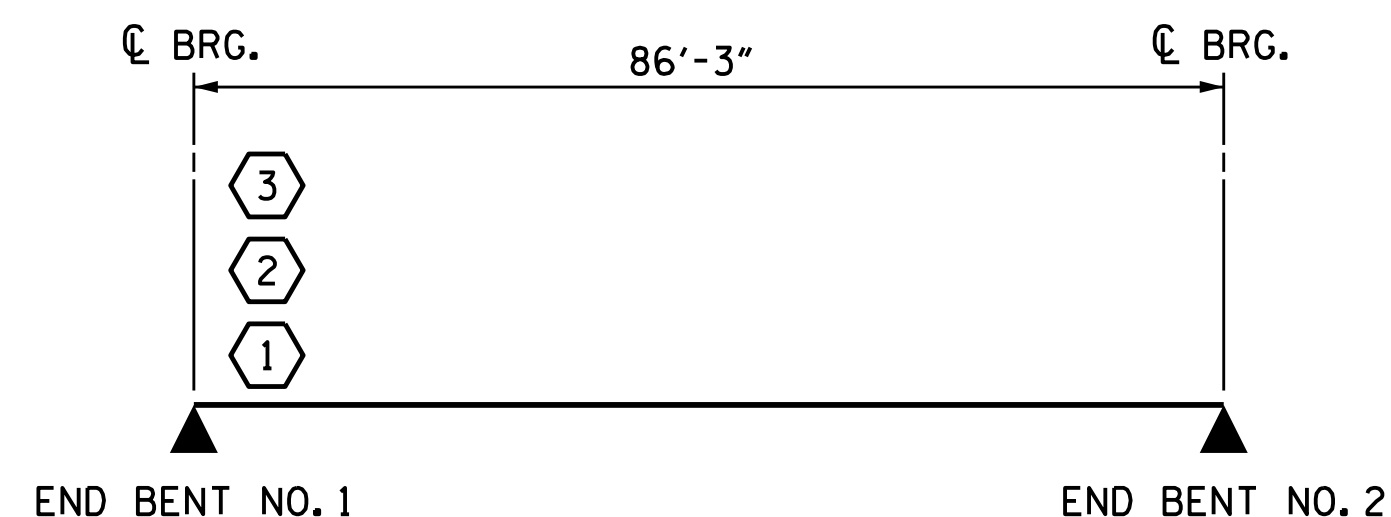
MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

COMMENTS:

- 1.
- 2.
- 3.
- 4.

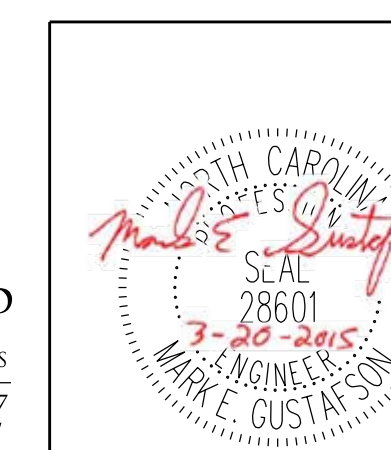
CONTROLLING LOAD RATING
① DESIGN LOAD RATING (HL-93)
② DESIGN LOAD RATING (HS-20)
③ LEGAL LOAD RATING **
** SEE CHART FOR VEHICLE TYPE
GIRDER LOCATION
I - INTERIOR GIRDER EL - EXTERIOR LEFT GIRDER ER - EXTERIOR RIGHT GIRDER



LRFR SUMMARY

PROJECT NO. R-2514D
JONES COUNTY
 STATION: 561+15.20 -L-
=17+04.80 -Y7-

DocuSigned by:
 Mark Gustafson
 9E00EDB87408456...
 3/23/2015



PLAN PREPARED BY:

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 A&O PROJECT NO. 2013.044

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**STANDARD
 LRFR SUMMARY FOR
 PRESTRESSED
 CONCRETE GIRDERS
 (INTERSTATE TRAFFIC)
 LEFT LANE**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			21
2			4			21

REFERENCE NO. 13-4

STRUCTURE NO. 13

STD. NO. LRFR2

DRAWN BY: JD GOODIN DATE: 5/16/14
 CHECKED BY: MEG / HMS DATE: 6/23/14
 QC / QA BY: TG ZEBLO DATE: 7/7/14
 DRAWN BY: MAA 1/08 REV. 11/12/08RR MAA/GM
 CHECKED BY: GM/DI 2/08 REV. 10/1/11 MAA/GM