

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

LOAD FACTORS:

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

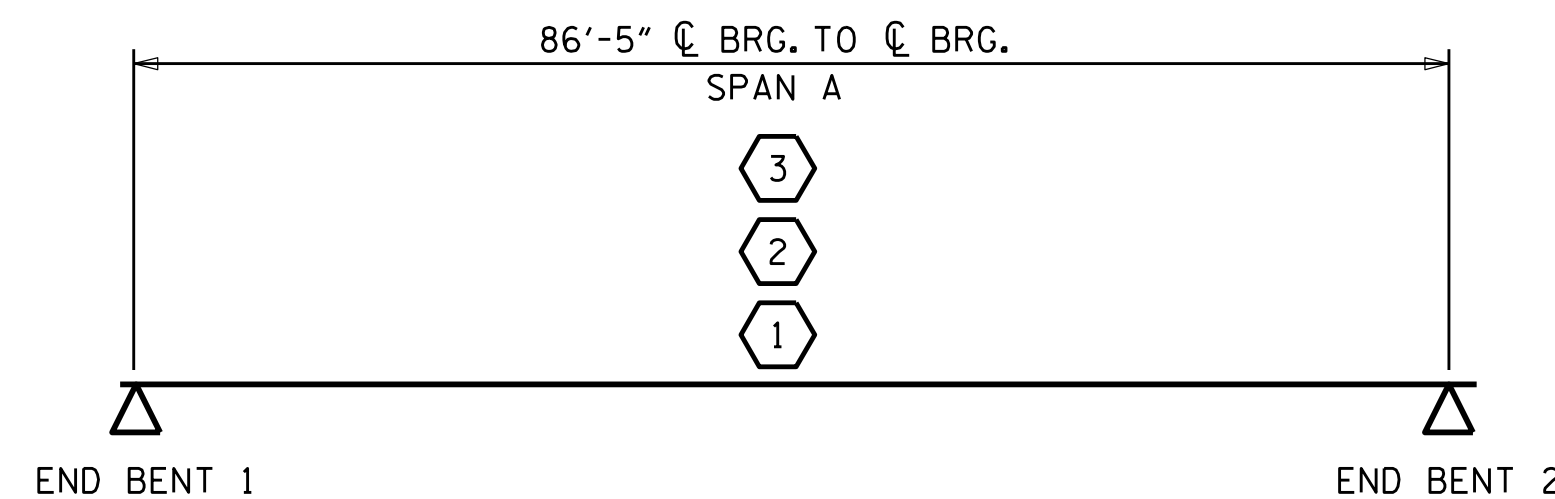
LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING #	MINIMUM RATING FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE										SERVICE III LIMIT STATE					COMMENT NUMBER			
						MOMENT					SHEAR					MOMENT								
						LIVE-LOAD FACTORS (γ_{LL})	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER 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	1.11		1.75	0.844	1.46	A	E	43.2	0.976	1.25	A	I	69.6	0.80	0.772	1.11	A	I	43.2		
	HL-93 (OPERATING)	N/A		1.66		1.35	0.844	1.89	A	E	43.2	0.976	1.66	A	I	69.6	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.51	54.36	1.75	0.844	1.97	A	E	43.2	0.976	1.62	A	I	69.6	0.80	0.772	1.51	A	I	43.2		
	HS-20 (OPERATING)	36.000		2.13	76.68	1.35	0.844	2.55	A	E	43.2	0.976	2.13	A	I	69.6	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.51	47.38	1.40	0.844	5.73	A	E	43.2	0.976	5.10	A	I	69.6	0.80	0.772	3.51	A	I	43.2	
		SNGARBS2	20.000		2.56	51.20	1.40	0.844	4.19	A	E	43.2	0.976	3.57	A	I	69.6	0.80	0.772	2.56	A	I	43.2	
		SNAGRIS2	22.000		2.41	53.02	1.40	0.844	3.94	A	E	43.2	0.976	3.31	A	I	69.6	0.80	0.772	2.41	A	I	43.2	
		SNCOTTS3	27.250		1.74	47.41	1.40	0.844	2.85	A	E	43.2	0.976	2.48	A	I	69.6	0.80	0.772	1.74	A	I	43.2	
		SNAGGRS4	34.925		1.44	50.29	1.40	0.844	2.35	A	E	43.2	0.976	2.03	A	I	69.6	0.80	0.772	1.44	A	I	43.2	
		SNS5A	35.550		1.41	50.12	1.40	0.844	2.30	A	E	43.2	0.976	2.05	A	I	69.6	0.80	0.772	1.41	A	I	43.2	
		SNS6A	39.950		1.29	51.40	1.40	0.844	2.10	A	E	43.2	0.976	1.86	A	I	69.6	0.80	0.772	1.29	A	I	43.2	
		SNS7B	42.000		1.22	51.24	1.40	0.844	2.00	A	E	43.2	0.976	1.82	A	I	69.6	0.80	0.772	1.22	A	I	43.2	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.57	51.81	1.40	0.844	2.56	A	E	43.2	0.976	2.22	A	I	69.6	0.80	0.772	1.57	A	I	43.2	
		TNT4A	33.075		1.57	51.92	1.40	0.844	2.57	A	E	43.2	0.976	2.18	A	I	69.6	0.80	0.772	1.57	A	I	43.2	
		TNT6A	41.600		1.28	53.24	1.40	0.844	2.09	A	E	43.2	0.976	1.94	A	I	69.6	0.80	0.772	1.28	A	I	43.2	
		TNT7A	42.000		1.28	53.76	1.40	0.844	2.09	A	E	43.2	0.976	1.90	A	I	69.6	0.80	0.772	1.28	A	I	43.2	
		TNT7B	42.000		1.32	55.44	1.40	0.844	2.15	A	E	43.2	0.976	1.78	A	I	69.6	0.80	0.772	1.32	A	I	43.2	
		TNAGRIT4	43.000		1.26	54.18	1.40	0.844	2.06	A	E	43.2	0.976	1.72	A	I	69.6	0.80	0.772	1.26	A	I	43.2	
TNAGT5A	45.000		1.19	53.55	1.40	0.844	1.94	A	E	43.2	0.976	1.69	A	I	69.6	0.80	0.772	1.19	A	I	43.2			
TNAGT5B	45.000		③	1.18	53.10	1.40	0.844	1.92	A	E	43.2	0.976	1.63	A	I	69.6	0.80	0.772	1.18	A	I	43.2		

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.

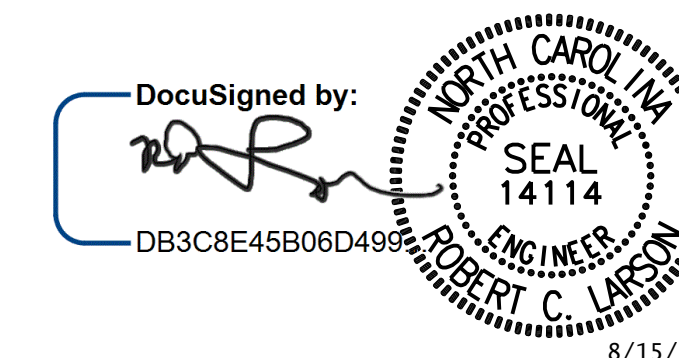
#	CONTROLLING LOAD RATING
①	DESIGN LOAD RATING (HL-93)
②	DESIGN LOAD RATING (HS-20)
③	LEGAL LOAD RATING **
** SEE CHART FOR VEHICLE TYPE	
GIRDER LOCATION	
I - INTERIOR GIRDER	
E - EXTERIOR	



LRFR SUMMARY

PROJECT NO. R-2561CA
COLUMBUS COUNTY
 STATION: 16+93.00 -Y-

DESIGN ENGINEER OF RECORD:	DATE: 8/15/2022
ASSEMBLED BY: C. E. LARSON	DATE: 04/10/20
CHECKED BY: R. F. DECOLA	DATE: 06/25/20
DRAWN BY: MAA	1/08
CHECKED BY: GM/DI	2/08
REV. 11/12/08RR	MAA/GM
REV. 10/1/11	MAA/GM
REV. 12/17	MAA/THC



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD LRFR SUMMARY FOR PRESTRESSED CONCRETE GIRDERS (NON-INTERSTATE TRAFFIC)					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S2-4
					TOTAL SHEETS 24

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



STD. NO. LRFR1

\$FILEL\$ \$TIME\$ \$USERS\$ \$PLTDYVS\$ \$PENTBLS\$ \$PLTDYVS\$
 \$DATES\$ \$PROJECT NO. 241704391.04\$