

LOAD FACTORS:

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

## LOAD AND RESISTANCE FACTOR RATING (LRFR) 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 ( $\gamma_{LL}$ )	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 ( $\gamma_{LL}$ )	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FT)				
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	①	1.06	--	1.75	0.817	1.37	A	EL	45.17	1.005	1.07	A	I	81.83	0.80	0.779	1.06	A	I	45.17				
	HL-93 (OPERATING)	N/A		1.41	--	1.35	0.817	1.77	A	EL	45.17	1.005	1.41	A	I	81.83	N/A	--	--	--	--	--				
	HS-20 (INVENTORY)	36.000	②	1.43	51.480	1.75	0.817	1.86	A	EL	45.17	1.005	1.43	A	I	81.83	0.80	0.779	1.45	A	I	45.17				
	HS-20 (OPERATING)	36.000		1.88	67.680	1.35	0.817	2.42	A	EL	45.17	1.005	1.88	A	I	81.83	N/A	--	--	--	--	--				
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.39	45.765	1.40	0.817	5.45	A	EL	45.17	1.005	4.54	A	I	81.83	0.80	0.779	3.39	A	I	45.17			
		SNGARBS2	20.000		2.48	49.600	1.40	0.817	3.98	A	EL	45.17	1.005	3.16	A	I	81.83	0.80	0.779	2.48	A	I	45.17			
		SNAGRIS2	22.000		2.32	51.040	1.40	0.817	3.73	A	EL	45.17	1.005	2.92	A	I	81.83	0.80	0.779	2.32	A	I	45.17			
		SNCOTTS3	27.250		1.69	46.053	1.40	0.817	2.71	A	EL	45.17	1.005	2.22	A	I	81.83	0.80	0.779	1.69	A	I	45.17			
		SNAGGRS4	34.925		1.39	48.546	1.40	0.817	2.23	A	EL	45.17	1.005	1.80	A	I	81.83	0.80	0.779	1.39	A	I	45.17			
		SNS5A	35.550		1.36	48.348	1.40	0.817	2.19	A	EL	45.17	1.005	1.81	A	I	81.83	0.80	0.779	1.36	A	I	45.17			
		SNS6A	39.950		1.24	49.538	1.40	0.817	1.99	A	EL	45.17	1.005	1.63	A	I	81.83	0.80	0.779	1.24	A	I	45.17			
		SNS7B	42.000		1.18	49.560	1.40	0.817	1.90	A	EL	45.17	1.005	1.59	A	I	81.83	0.80	0.779	1.18	A	I	45.17			
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.51	49.830	1.40	0.817	2.43	A	EL	45.17	1.005	1.97	A	I	81.83	0.80	0.779	1.51	A	I	45.17			
		TNT4A	33.075		1.51	49.943	1.40	0.817	2.43	A	EL	45.17	1.005	1.93	A	I	81.83	0.80	0.779	1.51	A	I	45.17			
		TNT6A	41.600		1.23	51.168	1.40	0.817	1.98	A	EL	45.17	1.005	1.68	A	I	81.83	0.80	0.779	1.23	A	I	45.17			
		TNT7A	42.000		1.23	51.660	1.40	0.817	1.98	A	EL	45.17	1.005	1.65	A	I	81.83	0.80	0.779	1.23	A	I	45.17			
		TNT7B	42.000		1.26	52.920	1.40	0.817	2.03	A	EL	45.17	1.005	1.56	A	I	81.83	0.80	0.779	1.26	A	I	45.17			
		TNAGRIT4	43.000		1.21	52.030	1.40	0.817	1.94	A	EL	45.17	1.005	1.51	A	I	81.83	0.80	0.779	1.21	A	I	45.17			
		TNAGT5A	45.000		1.14	51.300	1.40	0.817	1.84	A	EL	45.17	1.005	1.49	A	I	81.83	0.80	0.779	1.14	A	I	45.17			
TNAGT5B	45.000	③	1.13	50.850	1.40	0.817	1.82	A	EL	45.17	1.005	1.43	A	I	81.83	0.80	0.779	1.13	A	I	45.17					

**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)

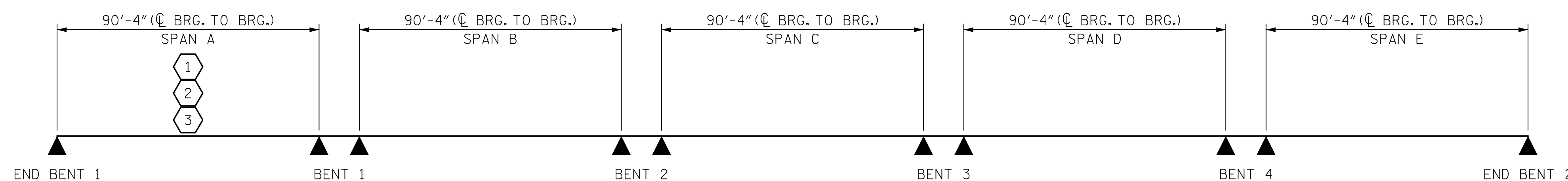
③ LEGAL LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

---

GIRDER LOCATION

I - INTERIOR GIRDER  
 EL - EXTERIOR LEFT GIRDER  
 ER - EXTERIOR RIGHT GIRDER



### LRFR SUMMARY



111 E. Hargett Street  
 Suite 300  
 Raleigh, NC 27601  
 919-714-8670  
 meadhunt.com  
 NC License No. F-1235



Jack Hobson 02/10/2021  
 586E7C28670048

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

PROJECT NO. B-5619  
LENOIR COUNTY  
 STATION: 30+80.00 -L-

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD

LRFR SUMMARY FOR  
 PRESTRESSED  
 CONCRETE GIRDERS  
 (NON-INTERSTATE TRAFFIC)

ASSEMBLED BY : J.S. HOBSON	DATE : 10/27/20
CHECKED BY : J.A. BOYER	DATE : 12/19/20
DRAWN BY : MAA 1/08	REV. 11/12/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM
	REV. 12/17 MAA/THC

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-04
1			3			TOTAL SHEETS
2			4			40