

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			
						LIVELOAD FACTORS (VLL)	MOMENT					SHEAR					LIVELOAD FACTORS (VLL)	MOMENT						
							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)		DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING	HL-93(Inventory)	N/A	1	1.05	--	1.75	0.877	1.23	B	1	59.13	0.971	1.06	C	3	84.83	0.80	0.877	1.05	B	1	59.13		
	HL-93(Operating)	N/A	--	1.38	--	1.35	0.877	1.60	B	1	59.13	0.971	1.38	C	3	84.83	N/A	--	--	--	--	--		
	HS-20(Inventory)	36.000	2	1.40	50.41	1.75	0.877	1.79	B	1	59.13	0.971	1.40	C	3	84.83	0.80	0.877	1.52	B	1	59.13		
	HS-20(Operating)	36.000	--	1.82	65.35	1.35	0.877	2.32	B	1	59.13	0.971	1.82	C	3	84.83	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500	--	3.69	49.78	1.40	0.877	5.42	B	1	59.13	0.966	4.07	A	2	54.50	0.80	0.877	3.69	B	1	59.13	
		SNGARBS2	20.000	--	2.64	52.75	1.40	0.877	3.88	B	1	59.13	0.966	2.92	A	2	54.50	0.80	0.877	2.64	B	1	59.13	
		SNAGRIS2	22.000	--	2.45	53.99	1.40	0.877	3.61	B	1	59.13	0.966	2.73	A	2	54.50	0.80	0.877	2.45	B	1	59.13	
		SNCOTTS3	27.250	--	1.83	49.92	1.40	0.877	2.69	B	1	59.13	0.966	2.03	A	2	54.50	0.80	0.877	1.83	B	1	59.13	
		SNAGGRS4	34.925	--	1.49	51.97	1.40	0.877	2.19	B	1	59.13	0.966	1.71	A	2	54.50	0.80	0.877	1.49	B	1	59.13	
		SNS5A	35.550	--	1.46	51.83	1.40	0.877	2.14	B	1	59.13	0.966	1.74	A	2	54.50	0.80	0.877	1.46	B	1	59.13	
		SNS6A	39.950	--	1.32	52.76	1.40	0.877	1.94	B	1	59.13	0.971	1.59	C	3	84.83	0.80	0.877	1.32	B	1	59.13	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000	--	1.61	52.98	1.40	0.877	2.36	B	1	59.13	0.966	1.90	A	2	54.50	0.80	0.877	1.61	B	1	59.13	
		TNT4A	33.075	--	1.61	53.18	1.40	0.877	2.36	B	1	59.13	0.966	1.84	A	2	54.50	0.80	0.877	1.61	B	1	59.13	
		TNT6A	41.600	--	1.30	54.03	1.40	0.877	1.91	B	1	59.13	0.971	1.63	C	3	84.83	0.80	0.877	1.30	B	1	59.13	
		TNT7A	42.000	--	1.30	54.47	1.40	0.877	1.91	B	1	59.13	0.971	1.60	C	3	84.83	0.80	0.877	1.30	B	1	59.13	
		TNT7B	42.000	--	1.32	55.51	1.40	0.877	1.94	B	1	59.13	0.971	1.52	C	3	84.83	0.80	0.877	1.32	B	1	59.13	
		TNAGRIT4	43.000	--	1.27	54.70	1.40	0.877	1.87	B	1	59.13	0.971	1.48	C	3	84.83	0.80	0.877	1.27	B	1	59.13	
		TNAGT5A	45.000	--	1.21	54.29	1.40	0.877	1.77	B	1	59.13	0.971	1.45	C	3	84.83	0.80	0.877	1.21	B	1	59.13	
TNAGT5B	45.000	3	1.20	53.92	1.40	0.877	1.76	B	1	59.13	0.971	1.41	C	3	84.83	0.80	0.877	1.20	B	1	59.13			
EV LOAD RATING	EV2	28.750	--	1.85	53.24	1.30	0.877	2.93	B	1	59.13	0.966	2.21	A	2	54.50	0.80	0.877	1.85	B	1	59.13		
	EV3	43.000	4	1.22	52.61	1.30	0.877	1.94	B	1	59.13	0.966	1.49	A	2	54.50	0.80	0.877	1.22	B	1	59.13		

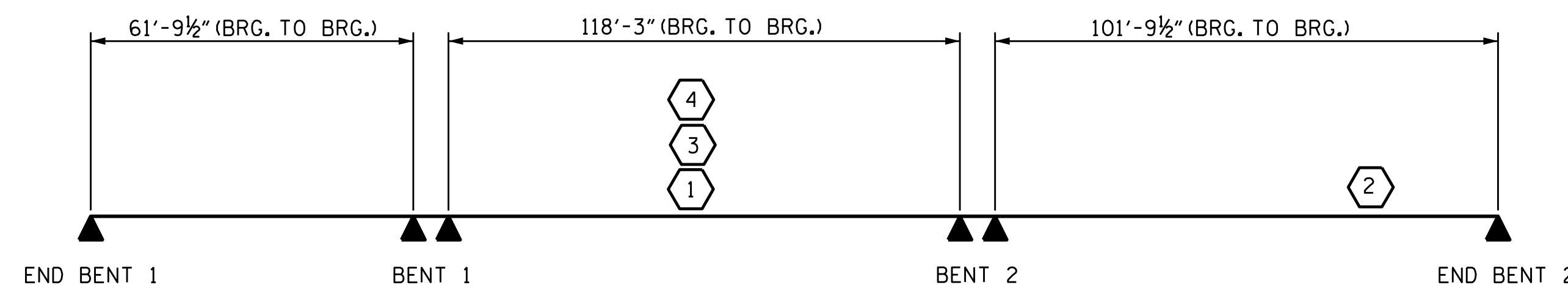
NOTES:

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.

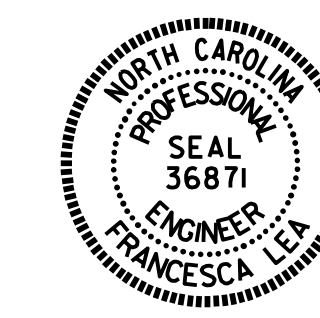
#	CONTROLLING LOAD RATING
1	DESIGN LOAD RATING (HL-93)
2	DESIGN LOAD RATING (HS-20)
3	LEGAL LOAD RATING **
4	EMERGENCY VEHICLE LOAD RATING **
** SEE CHART FOR VEHICLE TYPE	

GIRDER LOCATION	
2, 3	- INTERIOR GIRDER
1	- EXTERIOR LEFT GIRDER



LRFR SUMMARY

PROJECT NO. BR-0093  
ROCKINGHAM COUNTY  
 STATION: 17+85.52 -L-



DocuSigned by:  
 Francesca Lea  
 8780AD865084EF  
 05/01/2024

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD  
 LRFR SUMMARY FOR  
 PRESTRESSED  
 CONCRETE GIRDERS  
 (NON-INTERSTATE TRAFFIC)

ASSEMBLED BY: E. BAYISSA	DATE: 10/2023
CHECKED BY: Z. MALIK	DATE: 01/2024
DRAWN BY: MAA 1/08	REV. 11/12/08RR MAA/GM
CHECKED BY: GM/DI 2/08	REV. 10/1/18 MAA/GM
	REV. 04/23 BNB/AM

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-05
1			3			TOTAL SHEETS
2			4			36