

LOAD AND RESISTANCE FACTOR RATING (LRFD) 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			
						LIVELOAD FACTORS	MOMENT					SHEAR					LIVELOAD FACTORS	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(Inv)	N/A	1	1.085	--	1.75	0.832	1.235	A	ER	40.90	0.832	1.249	A	ER	65.70	0.80	0.832	1.085	A	ER	40.90		
	HL-93(0pr)	N/A	--	1.085	--	1.35	0.832	1.600	A	ER	40.90	0.832	1.619	A	ER	65.70	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.452	52.282	1.75	0.832	1.653	A	ER	40.90	0.832	1.560	A	ER	49.28	0.80	0.832	1.452	A	ER	40.90		
	HS-20(0pr)	36.000	--	1.452	52.282	1.35	0.832	2.142	A	ER	40.90	0.832	2.022	A	ER	49.28	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	3.351	45.235	1.40	0.832	4.766	A	ER	40.90	0.832	4.449	A	ER	49.28	0.80	0.832	3.351	A	ER	40.90	
		SNGARBS2	20.000	--	2.466	49.315	1.40	0.832	3.507	A	ER	40.90	0.832	3.223	A	ER	49.28	0.80	0.832	2.466	A	ER	40.90	
		SNAGRIS2	22.000	--	2.322	51.088	1.40	0.832	3.303	A	ER	40.90	0.832	3.015	A	ER	49.28	0.80	0.832	2.322	A	ER	40.90	
		SNCOTTS3	27.250	--	1.667	45.413	1.40	0.832	2.371	A	ER	40.90	0.832	2.227	A	ER	49.28	0.80	0.832	1.667	A	ER	40.90	
		SNAGGRS4	34.925	--	1.381	48.219	1.40	0.832	1.964	A	ER	40.90	0.832	1.890	A	ER	49.28	0.80	0.832	1.381	A	ER	40.90	
		SNS5A	35.550	--	1.351	48.026	1.40	0.832	1.922	A	ER	40.90	0.832	1.937	A	ER	49.28	0.80	0.832	1.351	A	ER	40.90	
		SNS6A	39.950	--	1.235	49.319	1.40	0.832	1.756	A	ER	40.90	0.832	1.778	A	ER	65.70	0.80	0.832	1.235	A	ER	40.90	
	SNS7B	42.000	--	1.175	49.370	1.40	0.832	1.672	A	ER	40.90	0.832	1.747	A	ER	65.70	0.80	0.832	1.175	A	ER	40.90		
	TTST	TNAGRIT3	33.000	--	1.504	49.631	1.40	0.832	2.139	A	ER	40.90	0.832	2.110	A	ER	49.28	0.80	0.832	1.504	A	ER	40.90	
		TNT4A	33.075	--	1.509	49.918	1.40	0.832	2.147	A	ER	40.90	0.832	2.037	A	ER	49.28	0.80	0.832	1.509	A	ER	40.90	
		TNT6A	41.600	--	1.229	51.139	1.40	0.832	1.749	A	ER	40.90	0.832	1.860	A	ER	65.70	0.80	0.832	1.229	A	ER	40.90	
		TNT7A	42.000	--	1.233	51.783	1.40	0.832	1.754	A	ER	40.90	0.832	1.823	A	ER	65.70	0.80	0.832	1.233	A	ER	40.90	
		TNT7B	42.000	--	1.269	53.313	1.40	0.832	1.806	A	ER	40.90	0.832	1.706	A	ER	65.70	0.80	0.832	1.269	A	ER	40.90	
		TNAGRIT4	43.000	--	1.212	52.120	1.40	0.832	1.724	A	ER	40.90	0.832	1.652	A	ER	65.70	0.80	0.832	1.212	A	ER	40.90	
TNAGRIT5A		45.000	--	1.145	51.525	1.40	0.832	1.629	A	ER	40.90	0.832	1.641	A	ER	65.70	0.80	0.832	1.145	A	ER	40.90		
TNAGRIT5B	45.000	3	1.133	50.988	1.40	0.832	1.612	A	ER	40.90	0.832	1.571	A	ER	65.70	0.80	0.832	1.133	A	ER	40.90			

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)

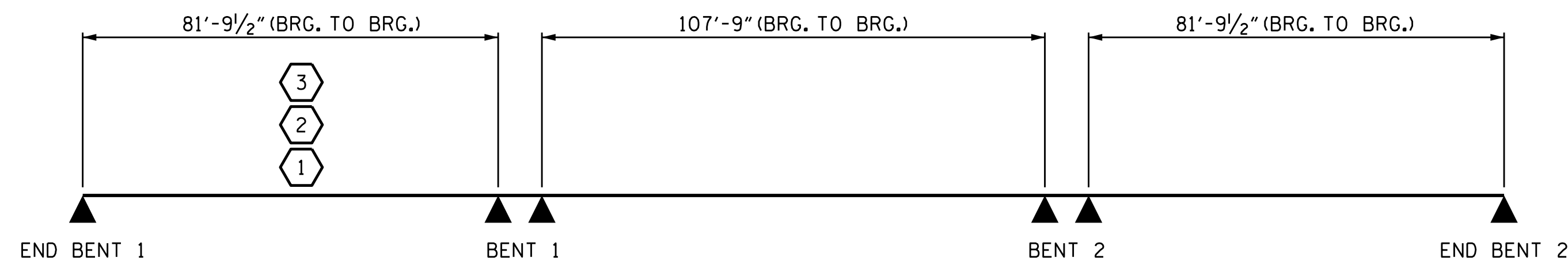
2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

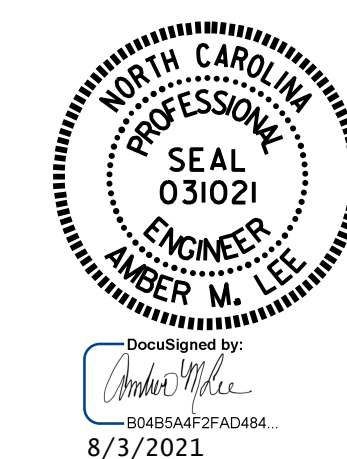
GIRDER LOCATION

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



LRFR SUMMARY

PROJECT NO. BR-0002
ASHE COUNTY
STATION: 23+80.00 -L-



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

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

ASSEMBLED BY : M. G. SHAIKH	DATE : 06/2020
CHECKED BY : H. LOCKLEAR	DATE : 06/2020
DRAWN BY : MAA 1/08	REV. 11/2/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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