

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ_{DC}	γ_{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 (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	1.45	--	1.75	0.221	1.45	A	EL	50.96	0.466	2.74	A	EL	9.59	0.80	0.221	1.45	A	EL	50.96		
	HL-93 (OPERATING)	N/A		1.88	--	1.35	0.221	1.88	A	EL	50.96	0.466	3.62	A	EL	9.59	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	2.04	73.440	1.75	0.221	2.04	A	EL	50.96	0.466	3.76	A	EL	9.59	0.80	0.221	2.04	A	EL	50.96		
	HS-20 (OPERATING)	36.000		2.64	95.040	1.35	0.221	2.64	A	EL	50.96	0.466	4.94	A	EL	9.59	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		4.85	65.475	1.40	0.221	6.07	A	EL	50.96	0.466	12.07	A	EL	9.59	0.80	0.221	4.85	A	EL	50.96	
		SNGARBS2	20.000		3.51	70.200	1.40	0.221	4.38	A	EL	50.96	0.466	8.38	A	EL	9.59	0.80	0.221	3.51	A	EL	50.96	
		SNAGRIS2	22.000		3.28	72.160	1.40	0.221	4.10	A	EL	50.96	0.466	7.71	A	EL	9.59	0.80	0.221	3.28	A	EL	50.96	
		SNCOTTS3	27.250		2.41	65.673	1.40	0.221	3.01	A	EL	50.96	0.466	5.89	A	EL	9.59	0.80	0.221	2.41	A	EL	50.96	
		SNAGGRS4	34.925		1.97	68.802	1.40	0.221	2.47	A	EL	50.96	0.466	4.76	A	EL	9.59	0.80	0.221	1.97	A	EL	50.96	
		SNS5A	35.550		1.93	68.612	1.40	0.221	2.41	A	EL	50.96	0.466	4.77	A	EL	9.59	0.80	0.221	1.93	A	EL	50.96	
		SNS6A	39.950		1.76	70.312	1.40	0.221	2.19	A	EL	50.96	0.466	4.30	A	EL	9.59	0.80	0.221	1.76	A	EL	50.96	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	SNS7B	42.000		1.67	70.140	1.40	0.221	2.09	A	EL	50.96	0.466	4.17	A	EL	9.59	0.80	0.221	1.67	A	EL	50.96	
		TNAGRIT3	33.000		2.14	70.620	1.40	0.221	2.67	A	EL	50.96	0.466	5.19	A	EL	9.59	0.80	0.221	2.14	A	EL	50.96	
		TNT4A	33.075		2.14	70.781	1.40	0.221	2.68	A	EL	50.96	0.466	5.09	A	EL	9.59	0.80	0.221	2.14	A	EL	50.96	
		TNT6A	41.600		1.73	71.968	1.40	0.221	2.17	A	EL	50.96	0.466	4.37	A	EL	9.59	0.80	0.221	1.73	A	EL	50.96	
		TNT7A	42.000		1.73	72.660	1.40	0.221	2.17	A	EL	50.96	0.466	4.30	A	EL	9.59	0.80	0.221	1.73	A	EL	50.96	
		TNT7B	42.000		1.77	74.340	1.40	0.221	2.22	A	EL	50.96	0.466	4.10	A	EL	9.59	0.80	0.221	1.77	A	EL	50.96	
		TNAGRIT4	43.000		1.70	73.100	1.40	0.221	2.13	A	EL	50.96	0.466	3.97	A	EL	9.59	0.80	0.221	1.70	A	EL	50.96	
TNAGT5A	45.000		1.61	72.450	1.40	0.221	2.02	A	EL	50.96	0.466	3.90	A	EL	9.59	0.80	0.221	1.61	A	EL	50.96			
TNAGT5B	45.000	③	1.60	72.000	1.40	0.221	2.00	A	EL	50.96	0.466	3.78	A	EL	9.59	0.80	0.221	1.60	A	EL	50.96			

NOTES:

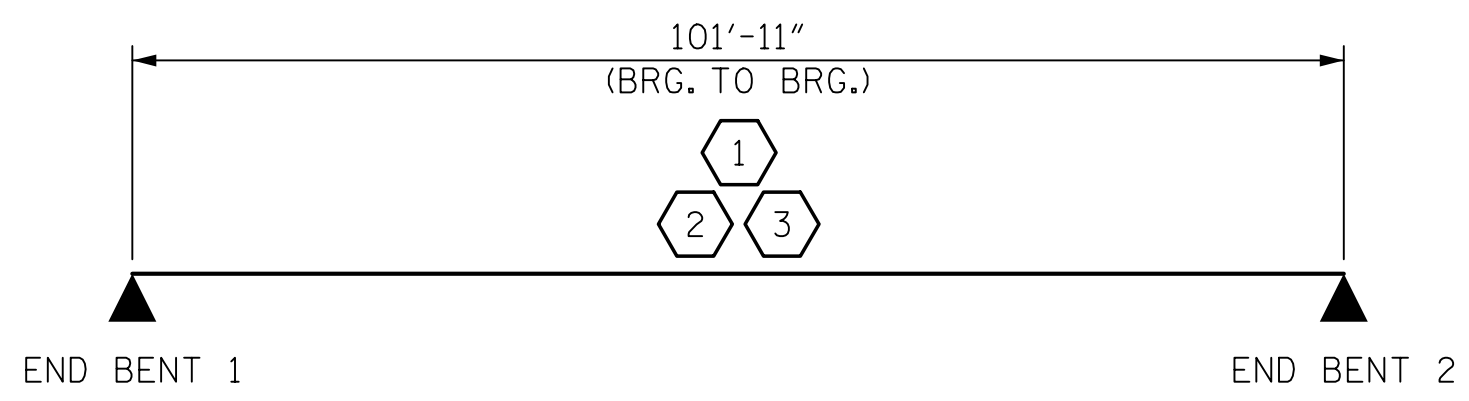
MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

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

Mead & Hunt
 133 Fayetteville Street
 Suite 210
 Raleigh, NC 27601
 919-714-8670
 meadhunt.com
 NC License No. F-1235



PROJECT NO. B-4964
ROCKINGHAM COUNTY
 STATION: 18+73.69 -L-
12+70.54 -RAIL-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 LRFR SUMMARY FOR
 BOX BEAM UNIT
 (NON-INTERSTATE TRAFFIC)

DRAWN BY : J.S. HOBSON DATE : 06/28/16
 CHECKED BY : J.A. LEE DATE : 07/20/16
 DESIGN ENGINEER OF RECORD : J.S. HOBSON DATE : 07/20/16

DocuSigned by:
 Jack Hobson
 6/1/2017
 DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-04
1			3			TOTAL SHEETS
2			4			16