

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 (LRFD) 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	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	2.07	--	1.75	0.23	3.65	60'	I	29.50	0.23	2.07	60'	I	2.75	0.80	0.23	4.11	60'	I	29.50		
	HL-93(Opr)	N/A	--	2.68	--	1.35	0.23	4.73	60'	I	29.50	0.23	2.68	60'	I	2.75	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	2.54	91.44	1.75	0.23	4.62	60'	I	29.50	0.23	2.54	60'	I	2.75	0.80	0.23	5.21	60'	I	29.50		
	HS-20(Opr)	36.000	--	3.29	118.44	1.35	0.23	6.00	60'	I	29.50	0.23	3.29	60'	I	2.75	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	7.40	99.90	1.4	0.23	10+	60'	I	29.50	0.23	7.40	60'	I	2.75	0.80	0.23	10+	60'	I	29.50	
		SNGARBS2	20.000	--	5.31	106.20	1.4	0.23	9.53	60'	I	29.50	0.23	5.31	60'	I	2.75	0.80	0.23	8.59	60'	I	29.50	
		SNAGRIS2	22.000	--	4.94	108.68	1.4	0.23	9.13	60'	I	29.50	0.23	4.94	60'	I	2.75	0.80	0.23	8.23	60'	I	29.50	
		SNCOTTS3	27.250	--	3.70	100.83	1.4	0.23	6.20	60'	I	29.50	0.23	3.70	60'	I	2.75	0.80	0.23	5.59	60'	I	29.50	
		SNAGGRS4	34.925	--	3.10	108.27	1.4	0.23	5.28	60'	I	29.50	0.23	3.10	60'	I	2.75	0.80	0.23	4.76	60'	I	29.50	
		SNS5A	35.550	--	3.16	112.34	1.4	0.23	5.15	60'	I	29.50	0.23	3.16	60'	I	2.75	0.80	0.23	4.65	60'	I	29.50	
		SNS6A	39.950	--	2.90	115.86	1.4	0.23	4.77	60'	I	29.50	0.23	2.90	60'	I	2.75	0.80	0.23	4.30	60'	I	29.50	
	SNS7B	42.000	--	2.86	120.12	1.4	0.23	4.54	60'	I	29.50	0.23	2.86	60'	I	2.75	0.80	0.23	4.10	60'	I	29.50		
	TTST	TNAGRIT3	33.000	--	3.44	113.52	1.4	0.23	5.83	60'	I	29.50	0.23	3.44	60'	I	2.75	0.80	0.23	5.25	60'	I	29.50	
		TNT4A	33.075	--	3.33	110.14	1.4	0.23	5.87	60'	I	29.50	0.23	3.33	60'	I	2.75	0.80	0.23	5.29	60'	I	29.50	
		TNT6A	41.600	--	3.09	128.54	1.4	0.23	4.84	60'	I	29.50	0.23	3.09	60'	I	2.75	0.80	0.23	4.36	60'	I	29.50	
		TNT7A	42.000	--	2.97	124.74	1.4	0.23	4.88	60'	I	29.50	0.23	2.97	60'	I	2.75	0.80	0.23	4.40	60'	I	29.50	
		TNT7B	42.000	--	2.78	116.76	1.4	0.23	5.10	60'	I	29.50	0.23	2.78	60'	I	2.75	0.80	0.23	4.60	60'	I	29.50	
		TNAGRIT4	43.000	--	2.69	115.67	1.4	0.23	4.82	60'	I	29.50	0.23	2.69	60'	I	2.75	0.80	0.23	4.34	60'	I	29.50	
TNAGT5A		45.000	--	2.69	121.05	1.4	0.23	4.52	60'	I	29.50	0.23	2.69	60'	I	2.75	0.80	0.23	4.08	60'	I	29.50		
TNAGT5B	45.000	3	2.56	115.20	1.4	0.23	4.45	60'	I	29.50	0.23	2.56	60'	I	2.75	0.80	0.23	4.01	60'	I	29.50			

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
FOR SPANS A THRU E

PROJECT NO. BR-0160
BRUNSWICK COUNTY
STATION: 21+77.50 -L-

SHEET 1 OF 2

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LRFR SUMMARY FOR
60' CORED SLAB UNIT
90° SKEW
(NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			42

DRAWN BY : NSC DATE : 01/2022
CHECKED BY : MRA DATE : 01/2023
DESIGN ENGINEER OF RECORD: RLB DATE : 03/2023

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED