

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			
						MOMENT					SHEAR					MOMENT								
						LIVELOAD FACTORS	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)	LIVELOAD FACTORS	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING	HL-93(Inv)	N/A	1	1.38	--	1.75	0.226	1.38	70'	EL	34.5	0.507	1.57	70'	EL	6.9	0.80	0.226	1.47	70'	EL	34.5	1	
	HL-93(0pr)	N/A	--	1.79	--	1.35	0.226	1.79	70'	EL	34.5	0.507	2.09	70'	EL	6.9	N/A	--	--	--	--	--	1	
	HS-20(Inv)	36.000	2	1.79	64.44	1.75	0.226	1.79	70'	EL	34.5	0.507	2.00	70'	EL	6.9	0.80	0.226	1.91	70'	EL	34.5	1	
	HS-20(0pr)	36.000	--	2.32	83.52	1.35	0.226	2.32	70'	EL	34.5	0.507	2.65	70'	EL	6.9	N/A	--	--	--	--	--	1	
LEGAL LOAD RATING	SV	SNSH	13.500	--	4.27	57.65	1.4	0.226	5.00	70'	EL	34.5	0.507	6.30	70'	EL	6.9	0.80	0.226	4.27	70'	EL	34.5	1
		SNGARBS2	20.000	--	3.20	64.00	1.4	0.226	3.75	70'	EL	34.5	0.507	4.45	70'	EL	6.9	0.80	0.226	3.20	70'	EL	34.5	1
		SNAGRIS2	22.000	--	3.04	66.88	1.4	0.226	3.56	70'	EL	34.5	0.507	4.12	70'	EL	6.9	0.80	0.226	3.04	70'	EL	34.5	1
		SNCOTTS3	27.250	--	2.13	58.04	1.4	0.226	2.49	70'	EL	34.5	0.507	3.07	70'	EL	6.9	0.80	0.226	2.13	70'	EL	34.5	1
		SNAGGRS4	34.925	--	1.78	62.17	1.4	0.226	2.09	70'	EL	34.5	0.507	2.52	70'	EL	6.9	0.80	0.226	1.78	70'	EL	34.5	1
		SNS5A	35.550	--	1.74	61.86	1.4	0.226	2.04	70'	EL	34.5	0.507	2.54	70'	EL	6.9	0.80	0.226	1.74	70'	EL	34.5	1
		SNS6A	39.950	--	1.60	63.92	1.4	0.226	1.88	70'	EL	34.5	0.507	2.32	70'	EL	6.9	0.80	0.226	1.60	70'	EL	34.5	1
	TTST	SNS7B	42.000	--	1.53	64.26	1.4	0.226	1.79	70'	EL	34.5	0.507	2.28	70'	EL	6.9	0.80	0.226	1.53	70'	EL	34.5	1
		TNAGRIT3	33.000	--	1.96	64.68	1.4	0.226	2.29	70'	EL	34.5	0.507	2.80	70'	EL	6.9	0.80	0.226	1.96	70'	EL	34.5	1
		TNT4A	33.075	--	1.97	65.16	1.4	0.226	2.30	70'	EL	34.5	0.507	2.72	70'	EL	6.9	0.80	0.226	1.97	70'	EL	34.5	1
		TNT6A	41.600	--	1.61	66.98	1.4	0.226	1.89	70'	EL	34.5	0.507	2.44	70'	EL	6.9	0.80	0.226	1.61	70'	EL	34.5	1
		TNT7A	42.000	--	1.62	68.04	1.4	0.226	1.90	70'	EL	34.5	0.507	2.38	70'	EL	6.9	0.80	0.226	1.62	70'	EL	34.5	1
		TNT7B	42.000	--	1.68	70.56	1.4	0.226	1.97	70'	EL	34.5	0.507	2.21	70'	EL	6.9	0.80	0.226	1.68	70'	EL	34.5	1
		TNAGRIT4	43.000	--	1.60	68.80	1.4	0.226	1.87	70'	EL	34.5	0.507	2.14	70'	EL	6.9	0.80	0.226	1.60	70'	EL	34.5	1
TNACT5A	45.000	--	1.50	67.50	1.4	0.226	1.76	70'	EL	34.5	0.507	2.13	70'	EL	6.9	0.80	0.226	1.50	70'	EL	34.5	1		
TNACT5B	45.000	3	1.48	66.60	1.4	0.226	1.74	70'	EL	34.5	0.507	2.03	70'	EL	6.9	0.80	0.226	1.48	70'	EL	34.5	1		

LOAD FACTORS:

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

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. LIVE LOAD DISTRIBUTION FACTORS CALCULATED PER AASHTO LRFD 8TH EDITION.
- 2.
- 3.
- 4.

CONTROLLING LOAD RATING

① DESIGN LOAD RATING (HL-93)

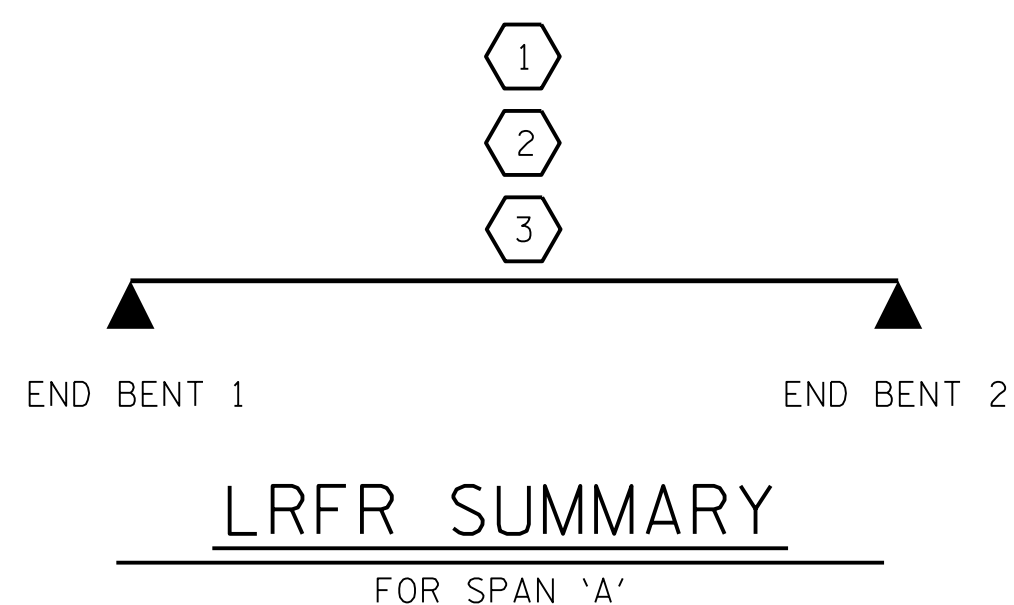
② DESIGN LOAD RATING (HS-20)

③ LEGAL LOAD RATING ***

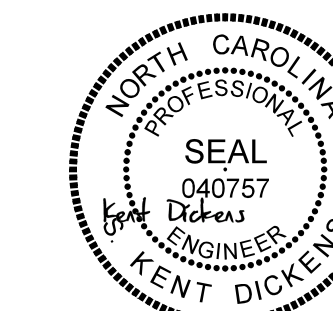
*** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



PROJECT NO. 17BP.14.R.212
JACKSON COUNTY
 STATION: 19+91.00 -L-



1/25/2022

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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

REVISIONS						SHEET NO. S-4 TOTAL SHEETS 20
NO.	BY:	DATE:	NO.	BY:	DATE:	
1	--	--	3	--	--	
2	--	--	4	--	--	

DES BY: <u>S. DHONDE</u>	DATE: <u>12/19</u>	DWG BY: <u>B. PETERSON</u>	DATE: <u>08/19</u>
DES CHK: <u>J. ROBERTS</u>	DATE: <u>12/19</u>	CHK BY: <u>K. DICKENS</u>	DATE: <u>02/20</u>



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