

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								
						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	1.065	--	1.75	0.27	1.25	55'	EL	26.982	0.616	1.12	55'	EL	5.396	0.80	0.27	1.07	55'	EL	26.982		
	HL-93(Opr)	N/A	--	1.452	--	1.35	0.27	1.61	55'	EL	26.982	0.616	1.45	55'	EL	5.396	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.335	48.043	1.75	0.27	1.56	55'	EL	26.982	0.616	1.34	55'	EL	5.396	0.80	0.27	1.33	55'	EL	26.982		
	HS-20(Opr)	36.000	--	1.734	62.425	1.35	0.27	2.02	55'	EL	26.982	0.616	1.73	55'	EL	5.396	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	2.802	37.83	1.4	0.27	4.09	55'	EL	26.982	0.616	3.81	55'	EL	5.396	0.80	0.27	2.80	55'	EL	26.982	
		SNGARBS2	20.000	--	2.175	43.506	1.4	0.27	3.18	55'	EL	26.982	0.616	2.76	55'	EL	5.396	0.80	0.27	2.18	55'	EL	26.982	
		SNAGRIS2	22.000	--	2.099	46.173	1.4	0.27	3.07	55'	EL	26.982	0.616	2.58	55'	EL	5.396	0.80	0.27	2.10	55'	EL	26.982	
		SNCOTTS3	27.250	--	1.397	38.065	1.4	0.27	2.04	55'	EL	26.982	0.616	1.91	55'	EL	5.396	0.80	0.27	1.40	55'	EL	26.982	
		SNAGGRS4	34.925	--	1.2	41.922	1.4	0.27	1.75	55'	EL	26.982	0.616	1.62	55'	EL	5.396	0.80	0.27	1.20	55'	EL	26.982	
		SNS5A	35.550	--	1.172	41.648	1.4	0.27	1.71	55'	EL	26.982	0.616	1.66	55'	EL	5.396	0.80	0.27	1.17	55'	EL	26.982	
		SNS6A	39.950	--	1.089	43.514	1.4	0.27	1.59	55'	EL	26.982	0.616	1.53	55'	EL	5.396	0.80	0.27	1.09	55'	EL	26.982	
	SNS7B	42.000	--	1.038	43.587	1.4	0.27	1.52	55'	EL	26.982	0.616	1.53	55'	EL	5.396	0.80	0.27	1.04	55'	EL	26.982		
	TTST	TNAGRIT3	33.000	--	1.333	43.973	1.4	0.27	1.95	55'	EL	26.982	0.616	1.81	55'	EL	5.396	0.80	0.27	1.33	55'	EL	26.982	
		TNT4A	33.075	--	1.342	44.4	1.4	0.27	1.96	55'	EL	26.982	0.616	1.75	55'	EL	5.396	0.80	0.27	1.34	55'	EL	26.982	
		TNT6A	41.600	--	1.112	46.252	1.4	0.27	1.62	55'	EL	26.982	0.616	1.67	55'	EL	5.396	0.80	0.27	1.11	55'	EL	26.982	
		TNT7A	42.000	--	1.125	47.255	1.4	0.27	1.64	55'	EL	26.982	0.616	1.56	55'	EL	5.396	0.80	0.27	1.13	55'	EL	26.982	
		TNT7B	42.000	--	1.174	49.318	1.4	0.27	1.72	55'	EL	26.982	0.616	1.47	55'	EL	5.396	0.80	0.27	1.17	55'	EL	26.982	
		TNAGRIT4	43.000	--	1.111	47.786	1.4	0.27	1.62	55'	EL	26.982	0.616	1.42	55'	EL	5.396	0.80	0.27	1.11	55'	EL	26.982	
TNAGT5A		45.000	--	1.041	46.851	1.4	0.27	1.52	55'	EL	26.982	0.616	1.44	55'	EL	5.396	0.80	0.27	1.04	55'	EL	26.982		
TNAGT5B	45.000	3	1.023	46.02	1.4	0.27	1.49	55'	EL	26.982	0.616	1.35	55'	EL	5.396	0.80	0.27	1.02	55'	EL	26.982			

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.
- 2.
- 3.
- 4.

CONTROLLING LOAD RATING

1 DESIGN LOAD RATING (HL-93)

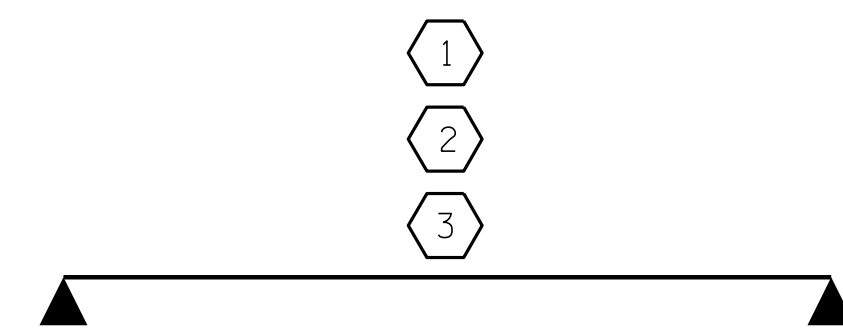
2 DESIGN LOAD RATING (HS-20)

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 SPAN 'B'

PROJECT NO. BR-0112
EDGEcombe COUNTY
STATION: 16+42.60 -L-

P:\2019\19105.01 BR-0112\Structures\DWG\BR0112_STR_LRagn 1/8/2020 1:34:40 PM

ASSEMBLED BY : J. PENDERGRAFT DATE : 10-19
CHECKED BY : B. C. HUNT DATE : 11-19
DRAWN BY : CVC 6/10
CHECKED BY : DNS 6/10

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ENGINEER OF RECORD
4/29/2020

1223 Jones Franklin Rd.
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Fax: 919 851 8107
LICENSE NO. F-0377

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
LRFR SUMMARY FOR
55' CORED SLAB UNIT
75° SKEW
(NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			21

STD. NO. 21LRFR1_75&105S_55L