

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	1.098	--	1.75	0.272	1.36	45'	EL	21.982	0.617	1.46	45'	EL	35.172	0.80	0.272	1.10	45'	EL	21.982		
	HL-93(Opr)	N/A	--	1.764	--	1.35	0.272	1.76	45'	EL	21.982	0.617	1.89	45'	EL	35.172	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.347	48.507	1.75	0.272	1.67	45'	EL	21.982	0.617	1.68	45'	EL	8.793	0.80	0.272	1.35	45'	EL	21.982		
	HS-20(Opr)	36.000	--	2.165	77.938	1.35	0.272	2.16	45'	EL	21.982	0.617	2.17	45'	EL	8.793	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	2.632	35.536	1.4	0.272	4.08	45'	EL	21.982	0.617	4.43	45'	EL	35.172	0.80	0.272	2.63	45'	EL	21.982	
		SNGARBS2	20.000	--	2.126	42.513	1.4	0.272	3.29	45'	EL	21.982	0.617	3.32	45'	EL	35.172	0.80	0.272	2.13	45'	EL	21.982	
		SNAGRIS2	22.000	--	2.085	45.877	1.4	0.272	3.19	45'	EL	17.586	0.617	3.15	45'	EL	35.172	0.80	0.272	2.09	45'	EL	21.982	
		SNCOTTS3	27.250	--	1.314	35.814	1.4	0.272	2.04	45'	EL	21.982	0.617	2.23	45'	EL	8.793	0.80	0.272	1.31	45'	EL	21.982	
		SNAGGRS4	34.925	--	1.16	40.51	1.4	0.272	1.8	45'	EL	21.982	0.617	1.97	45'	EL	35.172	0.80	0.272	1.16	45'	EL	21.982	
		SNS5A	35.550	--	1.13	40.167	1.4	0.272	1.75	45'	EL	21.982	0.617	2.06	45'	EL	8.793	0.80	0.272	1.13	45'	EL	21.982	
		SNS6A	39.950	--	1.064	42.522	1.4	0.272	1.65	45'	EL	21.982	0.617	1.94	45'	EL	35.172	0.80	0.272	1.06	45'	EL	21.982	
	SNS7B	42.000	3	1.015	42.617	1.4	0.272	1.57	45'	EL	21.982	0.617	1.98	45'	EL	35.172	0.80	0.272	1.01	45'	EL	21.982		
	TTST	TNAGRIT3	33.000	--	1.306	43.112	1.4	0.272	2.02	45'	EL	21.982	0.617	2.26	45'	EL	8.793	0.80	0.272	1.31	45'	EL	21.982	
		TNT4A	33.075	--	1.32	43.663	1.4	0.272	2.05	45'	EL	21.982	0.617	2.14	45'	EL	35.172	0.80	0.272	1.32	45'	EL	21.982	
		TNT6A	41.600	--	1.108	46.093	1.4	0.272	1.72	45'	EL	21.982	0.617	2.11	45'	EL	35.172	0.80	0.272	1.11	45'	EL	21.982	
		TNT7A	42.000	--	1.129	47.436	1.4	0.272	1.75	45'	EL	21.982	0.617	1.96	45'	EL	35.172	0.80	0.272	1.13	45'	EL	21.982	
		TNT7B	42.000	--	1.176	49.384	1.4	0.272	1.82	45'	EL	21.982	0.617	1.88	45'	EL	35.172	0.80	0.272	1.18	45'	EL	21.982	
		TNAGRIT4	43.000	--	1.12	48.157	1.4	0.272	1.74	45'	EL	21.982	0.617	1.8	45'	EL	35.172	0.80	0.272	1.12	45'	EL	21.982	
TNAGT5A		45.000	--	1.042	46.893	1.4	0.272	1.61	45'	EL	21.982	0.617	1.88	45'	EL	35.172	0.80	0.272	1.04	45'	EL	21.982		
TNAGT5B	45.000	--	1.017	45.785	1.4	0.272	1.58	45'	EL	21.982	0.617	1.7	45'	EL	35.172	0.80	0.272	1.02	45'	EL	21.982			

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)

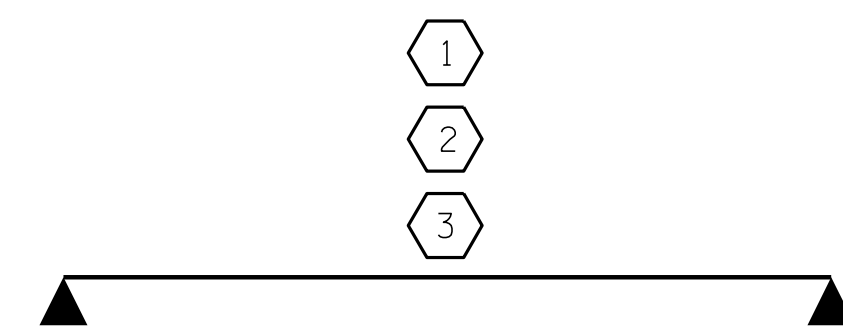
2 DESIGN LOAD RATING (HS-20)

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 SPANS 'A' AND 'C'

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 1:33:19 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

Seal: NORTH CAROLINA PROFESSIONAL ENGINEER ARTHUR DILLWORTH 22072

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 Raleigh, N.C. 27606
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 LICENSE NO. F-0377

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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

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

STD. NO. 21LRFR1_75&105S_45L