

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	1.149	--	1.75	0.931	1.320	B	EL	51.38	0.990	1.149	A	I	41.7	0.80	0.931	1.182	B	EL	51.38		
	HL-93 (OPERATING)	N/A		1.489	--	1.35	0.931	1.712	B	EL	51.38	0.990	1.489	A	I	41.7	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.369	49.278	1.75	0.931	1.855	B	EL	51.38	0.990	1.369	A	I	41.7	0.80	0.931	1.661	B	EL	51.38		
	HS-20 (OPERATING)	36.000		1.774	63.879	1.35	0.931	2.405	B	EL	51.38	0.990	1.774	A	I	41.7	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.776	50.980	1.40	1.017	5.381	A	EL	26.06	0.990	3.776	A	I	41.7	0.80	0.931	3.959	B	EL	51.38	
		SNGARBS2	20.000		2.775	55.496	1.40	0.931	3.991	B	EL	51.38	0.990	2.775	A	I	41.7	0.80	0.931	2.859	B	EL	51.38	
		SNAGRIS2	22.000		2.612	57.455	1.40	0.931	3.728	B	EL	51.38	0.990	2.612	A	I	41.7	0.80	0.931	2.671	B	EL	51.38	
		SNCOTTS3	27.250		1.894	51.615	1.40	1.017	2.683	A	EL	26.06	0.990	1.894	A	I	41.7	0.80	0.931	1.967	B	EL	51.38	
		SNAGGRS4	34.925		1.609	56.186	1.40	0.931	2.246	B	EL	51.38	0.990	1.636	A	I	41.7	0.80	0.931	1.609	B	EL	51.38	
		SNS5A	35.550		1.576	56.011	1.40	0.931	2.200	B	EL	51.38	0.990	1.692	A	I	41.7	0.80	0.931	1.576	B	EL	51.38	
		SNS6A	39.950		1.431	57.178	1.40	0.931	1.998	B	EL	51.38	0.990	1.572	A	I	41.7	0.80	0.931	1.431	B	EL	51.38	
	SNS7B	42.000		1.362	57.223	1.40	0.931	1.902	B	EL	51.38	0.990	1.583	A	I	41.7	0.80	0.931	1.362	B	EL	51.38		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.741	57.457	1.40	0.931	2.431	B	EL	51.38	0.990	1.848	A	I	41.7	0.80	0.931	1.741	B	EL	51.38	
		TNT4A	33.075		1.745	57.714	1.40	0.931	2.436	B	EL	51.38	0.990	1.771	A	I	41.7	0.80	0.931	1.745	B	EL	51.38	
		TNT6A	41.600		1.413	58.797	1.40	0.931	1.973	B	EL	51.38	0.990	1.735	A	I	41.7	0.80	0.931	1.413	B	EL	51.38	
		TNT7A	42.000		1.413	59.364	1.40	0.931	1.973	B	EL	51.38	0.990	1.608	A	I	41.7	0.80	0.931	1.413	B	EL	51.38	
		TNT7B	42.000		1.445	60.697	1.40	0.931	2.018	B	EL	51.38	0.990	1.518	A	I	41.7	0.80	0.931	1.445	B	EL	51.38	
		TNAGRIT4	43.000		1.387	59.659	1.40	0.931	1.937	B	EL	51.38	0.990	1.459	A	I	41.7	0.80	0.931	1.387	B	EL	51.38	
TNAGT5A		45.000		1.314	59.137	1.40	0.931	1.835	B	EL	51.38	0.990	1.495	A	I	41.7	0.80	0.931	1.314	B	EL	51.38		
TNAGT5B	45.000	③	1.304	58.664	1.40	0.931	1.820	B	EL	51.38	0.990	1.383	A	I	41.7	0.80	0.931	1.304	B	EL	51.38			
EV RATING	EV2	28.750		2.01	57.790	1.30	0.931	3.022	B	EL	51.38	0.990	2.107	A	I	41.7	0.80	0.931	2.01	B	EL	51.38		
	EV3	43.000		1.325	56.990	1.30	0.931	1.993	B	EL	51.38	0.990	1.428	A	I	41.7	0.80	0.931	1.325	B	EL	51.38		

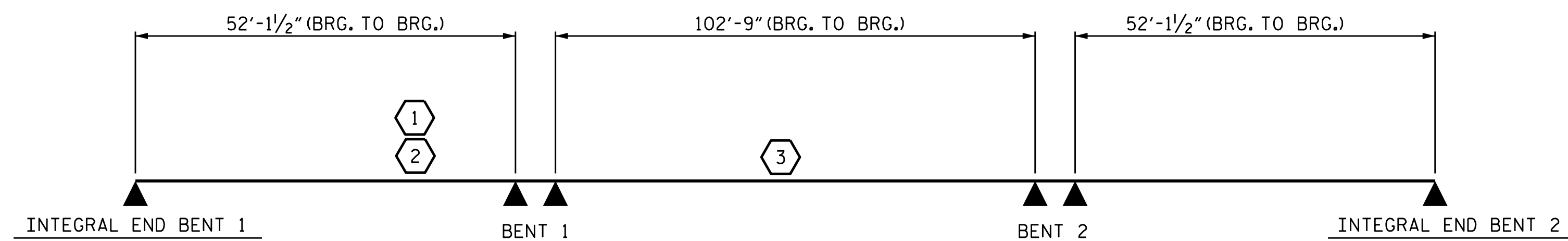
NOTES:

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:

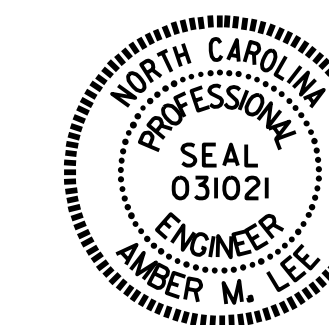
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#	CONTROLLING LOAD RATING
①	DESIGN LOAD RATING (HL-93)
②	DESIGN LOAD RATING (HS-20)
③	LEGAL LOAD RATING **
** SEE CHART FOR VEHICLE TYPE	
GIRDER LOCATION	
I - INTERIOR GIRDER EL - EXTERIOR LEFT GIRDER ER - EXTERIOR RIGHT GIRDER	



LRFR SUMMARY

PROJECT NO. BR-0048
SURREY COUNTY
STATION: 18+50.00 -L-



DocuSigned by:
Amber M. Lee
B0B5A2FAD484
03/18/2022

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
LRFR SUMMARY FOR
PRESTRESSED
CONCRETE GIRDERS
(NON-INTERSTATE TRAFFIC)

ASSEMBLED BY : M. G. SHAIKH	DATE : 12/2020
CHECKED BY : J. A. TILLMAN	DATE : 02/2021
DRAWN BY : MAA 1/08	REV. 11/2/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM
	REV. 12/17 MAA/THC

3/17/2022
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omlee

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			33

STD. NO. LRFR1