

# 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 (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 (LL)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FT)	
DESIGN LOAD RATING	HL-93 (INVENTORY)	36.000	①	1.24	---	1.75	0.783	1.75	B	I	49.661	1.115	1.27	A	I	10.321	0.80	0.783	1.24	B	I	49.661		
	HL-93 (OPERATING)	36.000		1.68	---	1.35	0.783	2.27	B	I	49.661	1.115	1.68	A	I	10.321	---	---	---	---	---	---		
	HS-20 (INVENTORY)	36.000	②	1.73	62.280	1.75	0.783	2.44	B	I	49.661	1.115	1.73	A	I	10.321	0.80	0.783	1.73	B	I	49.661		
	HS-20 (OPERATING)	36.000		2.27	81.720	1.35	0.783	3.17	B	I	49.661	1.115	2.27	A	I	10.321	---	---	---	---	---	---		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		4.12	55.620	1.40	0.783	7.26	B	I	49.661	1.115	5.51	A	I	10.321	0.80	0.783	4.12	B	I	49.661	
		SNGARBS2	20.000		2.98	59.600	1.40	0.783	5.25	B	I	49.661	1.115	3.83	A	I	10.321	0.80	0.783	2.98	B	I	49.661	
		SNAGRIS2	22.000		2.79	61.380	1.40	0.783	4.91	B	I	49.661	1.115	3.53	A	I	10.321	0.80	0.783	2.79	B	I	49.661	
		SNCOTTS3	27.250		2.05	55.863	1.40	0.783	3.61	B	I	49.661	1.115	2.69	A	I	10.321	0.80	0.783	2.05	B	I	49.661	
		SNAGGRS4	34.925		1.68	58.674	1.40	0.783	2.95	B	I	49.661	1.115	2.18	A	I	10.321	0.80	0.783	1.68	B	I	49.661	
		SNS5A	35.550		1.64	58.302	1.40	0.783	2.89	B	I	49.661	1.115	2.19	A	I	10.321	0.80	0.783	1.64	B	I	49.661	
		SNS6A	39.950		1.49	59.526	1.40	0.783	2.63	B	I	49.661	1.115	1.97	A	I	10.321	0.80	0.783	1.49	B	I	49.661	
		SNS7B	42.000		1.42	59.640	1.40	0.783	2.50	B	I	49.661	1.115	1.92	A	I	10.321	0.80	0.783	1.42	B	I	49.661	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.81	59.730	1.40	0.783	3.20	B	I	49.661	1.115	2.38	A	I	10.321	0.80	0.783	1.81	B	I	49.661	
		TNT4A	33.075		1.82	60.197	1.40	0.783	3.21	B	I	49.661	1.115	2.33	A	I	10.321	0.80	0.783	1.82	B	I	49.661	
		TNT6A	41.600		1.47	61.152	1.40	0.783	2.60	B	I	49.661	1.115	2.02	A	I	10.321	0.80	0.783	1.47	B	I	49.661	
		TNT7A	42.000		1.47	61.740	1.40	0.783	2.60	B	I	49.661	1.115	1.98	A	I	10.321	0.80	0.783	1.47	B	I	49.661	
		TNT7B	42.000		1.51	63.420	1.40	0.783	2.66	B	I	49.661	1.115	1.88	A	I	10.321	0.80	0.783	1.51	B	I	49.661	
		TNAGRIT4	43.000		1.45	62.350	1.40	0.783	2.55	B	I	49.661	1.115	1.83	A	I	10.321	0.80	0.783	1.45	B	I	49.661	
TNAGT5A	45.000		1.37	61.650	1.40	0.783	2.42	B	I	49.661	1.115	1.79	A	I	10.321	0.80	0.783	1.37	B	I	49.661			
TNAGT5B	45.000	③	1.36	61.200	1.40	0.783	2.40	B	I	49.661	1.115	1.73	A	I	10.321	0.80	0.783	1.36	B	I	49.661			

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	$\gamma_{DC}$	$\gamma_{DW}$
	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)

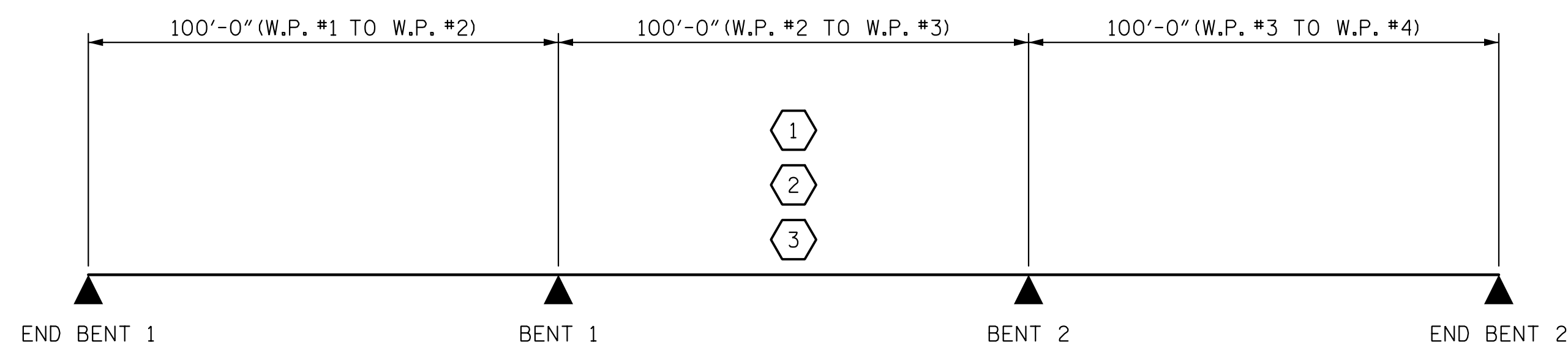
③ LEGAL LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

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GIRDER LOCATION

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

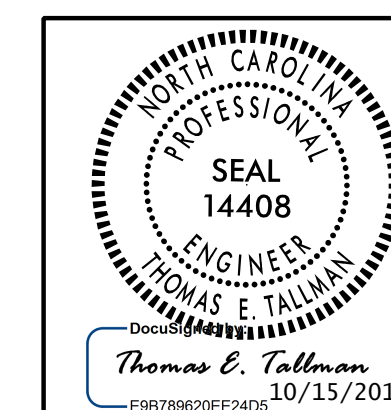


LRFR SUMMARY

PROJECT NO. B-4159  
JACKSON COUNTY  
 STATION: 20+16.00 -L-

SHEET 1 OF 1

ASSEMBLED BY : D. H. CARTER DATE : SEP 2015  
 CHECKED BY : M. T. NEIHEISEL DATE : SEP 2015  
 DRAWN BY : MAA 1/08 REV. 11/12/08RR MAA/GM  
 CHECKED BY : GM/DI 2/08 REV. 10/1/11 MAA/GM



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

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			64