

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	
						LIVE-LOAD FACTORS (γ _{LL})	MOMENT					SHEAR					LIVE-LOAD FACTORS (γ _{LL})	MOMENT						
							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)		DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)		
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	⬡1	1.02	--	1.75	0.917	1.47	1	EXT.	43.8	1.115	1.11	1	INT.	17.1	0.80	0.917	1.02	1	INT.	43.8		
	HL-93 (OPERATING)	N/A		1.48	--	1.35	0.917	1.90	1	EXT.	43.8	1.115	1.48	1	INT.	17.1	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	⬡2	1.39	50.0	1.75	0.917	1.99	1	EXT.	43.8	1.115	1.45	1	INT.	17.1	0.80	0.917	1.39	1	INT.	43.8		
	HS-20 (OPERATING)	36.000		1.92	69.1	1.35	0.917	2.58	1	EXT.	43.8	1.115	1.92	1	INT.	17.1	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.23	43.6	1.40	0.917	5.80	1	EXT.	43.8	1.115	4.61	1	INT.	17.1	0.80	0.917	3.23	1	INT.	43.8	
		SNGARBS2	20.000		2.36	47.2	1.40	0.917	4.24	1	EXT.	43.8	1.115	3.23	1	INT.	17.1	0.80	0.917	2.36	1	INT.	43.8	
		SNAGRIS2	22.000		2.22	48.8	1.40	0.917	3.98	1	EXT.	43.8	1.115	2.98	1	INT.	17.1	0.80	0.917	2.22	1	INT.	43.8	
		SNCOTTS3	27.250		1.61	43.8	1.40	0.917	2.88	1	EXT.	43.8	1.115	2.23	1	INT.	17.1	0.80	0.917	1.61	1	INT.	43.8	
		SNAGGRS4	34.925		1.33	46.4	1.40	0.917	2.38	1	EXT.	43.8	1.115	1.82	1	INT.	17.1	0.80	0.917	1.33	1	INT.	43.8	
		SNS5A	35.550		1.30	46.2	1.40	0.917	2.33	1	EXT.	43.8	1.115	1.84	1	INT.	17.1	0.80	0.917	1.30	1	INT.	43.8	
		SNS6A	39.950		1.18	47.1	1.40	0.917	2.12	1	EXT.	43.8	1.115	1.67	1	INT.	17.1	0.80	0.917	1.18	1	INT.	43.8	
		SNS7B	42.000		1.13	47.4	1.40	0.917	2.02	1	EXT.	43.8	1.115	1.63	1	INT.	17.1	0.80	0.917	1.13	1	INT.	43.8	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.44	47.5	1.40	0.917	2.59	1	EXT.	43.8	1.115	2.00	1	INT.	17.1	0.80	0.917	1.44	1	INT.	43.8	
		TNT4A	33.075		1.45	47.9	1.40	0.917	2.59	1	EXT.	43.8	1.115	1.96	1	INT.	17.1	0.80	0.917	1.45	1	INT.	43.8	
		TNT6A	41.600		1.18	49.0	1.40	0.917	2.11	1	EXT.	43.8	1.115	1.74	1	INT.	17.1	0.80	0.917	1.18	1	INT.	43.8	
		TNT7A	42.000		1.18	49.5	1.40	0.917	2.11	1	EXT.	43.8	1.115	1.70	1	INT.	17.1	0.80	0.917	1.18	1	INT.	43.8	
		TNT7B	42.000		1.21	50.8	1.40	0.917	2.17	1	EXT.	43.8	1.115	1.59	1	INT.	17.1	0.80	0.917	1.21	1	INT.	43.8	
		TNAGRIT4	43.000		1.16	49.8	1.40	0.917	2.08	1	EXT.	43.8	1.115	1.54	1	INT.	17.1	0.80	0.917	1.16	1	INT.	43.8	
		TNAGT5A	45.000		1.09	49.0	1.40	0.917	1.96	1	EXT.	43.8	1.115	1.52	1	INT.	17.1	0.80	0.917	1.09	1	INT.	43.8	
		TNAGT5B	45.000	⬡3	1.08	48.6	1.40	0.917	1.94	1	EXT.	43.8	1.115	1.46	1	INT.	17.1	0.80	0.917	1.08	1	INT.	43.8	

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.

⬡ CONTROLLING LOAD RATING

⬡1 DESIGN LOAD RATING (HL-93)

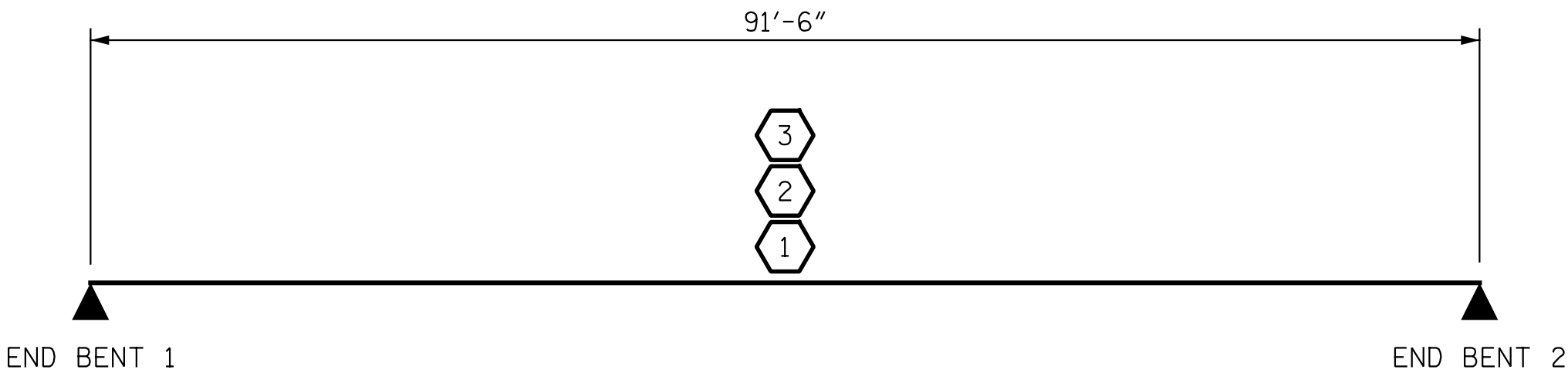
⬡2 DESIGN LOAD RATING (HS-20)

⬡3 LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

INT. - INTERIOR GIRDER
EXT. - EXTERIOR GIRDER

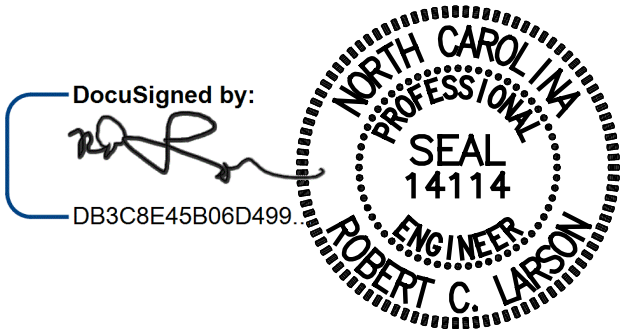


LRFR SUMMARY

DocuSigned by:

DB3C8E45B06D499

DESIGN ENGINEER OF RECORD:	DATE :	4/10/2015
DRAWN BY : E. C. DECOLA	DATE :	03/02/14
CHECKED BY : R. C. LARSON	DATE :	03/07/14
DRAWN BY : MAA 1/08	REV. 11/2/08RR	MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11	MAA/GM



DocuSigned by:

DB3C8E45B06D499

4/10/2015

KCI Associates
of North Carolina, P.A.
SUITE 220, LANDMARK CENTER II 4601 SIX FORKS RD. RALEIGH, N.C. 27609-5200 (919) 783-9244
DWG. REF. NO. 4 OF 23

PROJECT NO. R-2514D
JONES COUNTY
STATION: 363+38.90 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH											
LRFR SUMMARY FOR PRESTRESSED CONCRETE GIRDERS (NON-INTERSTATE TRAFFIC)											
STD. NO. LRFR1 RIGHT LANE						STR-#4					
REVISIONS											
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO. S04-4					
1			3			TOTAL SHEETS S04-23					
2			4								