

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	$\gamma_{DC}$	$\gamma_{DW}$
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

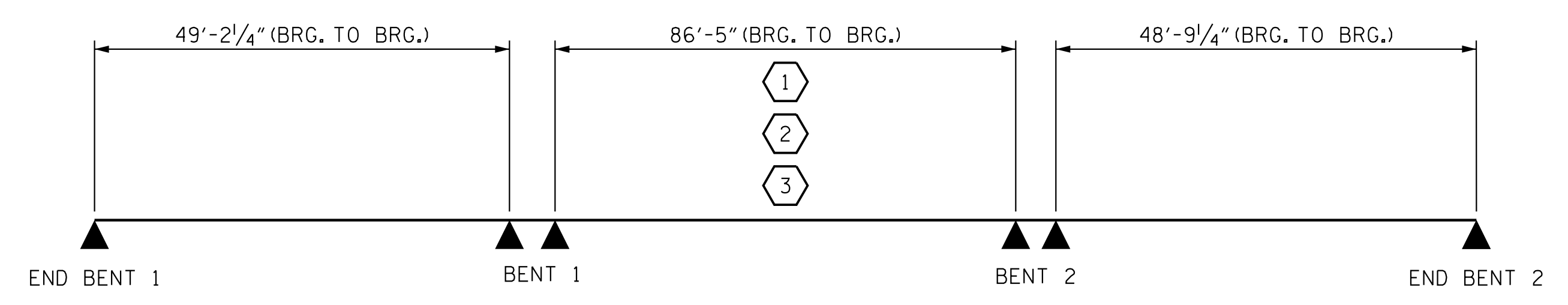
LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS																								
LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING	MINIMUM RATING FACTOR (RF)	TONS = W X RF	STRENGTH I LIMIT STATE										SERVICE III LIMIT STATE						COMMENT NUMBER		
						LIVE LOAD FACTORS ( $\gamma_{LL}$ )	MOMENT					SHEAR					LIVE LOAD FACTORS ( $\gamma_{LL}$ )	MOMENT						
							DISTRIBUTION FACTOR (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	DISTRIBUTION FACTOR (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)		DISTRIBUTION FACTOR (DF)	RATING FACTOR	SPAN	GIRDER LOCATION		DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	1	1.03	--	1.75	.841	1.25	1	I	24.6	.972	1.08	3	I	24.4	0.80	.841	1.03	2	I	43.2		
	HL-93 (OPERATING)	N/A		1.23	--	1.35	.841	1.62	1	I	24.6	.972	1.23	1	I	44.8	N/A	-	-	-	-	-		
	HS-20 (INVENTORY)	36.000	2	1.36	49.0	1.75	.841	1.57	1	I	24.6	.972	1.41	3	I	24.4	0.80	.841	1.36	2	I	43.2		
	HS-20 (OPERATING)	36.000		1.69	60.8	1.35	.841	2.04	1	I	24.6	.972	1.69	1	I	49.2	N/A	-	-	-	-	-		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SH	12.500		1.77	22.1	1.40	.841	2.42	1	I	24.6	.972	2.30	1	I	49.2	0.80	.841	1.77	1	I	24.6	
		S3C	21.500		1.86	40.0	1.40	.841	2.55	1	I	24.6	.972	2.43	1	I	49.2	0.80	.841	1.86	1	I	24.6	
		S3A	22.750		1.62	36.9	1.40	.841	2.21	1	I	24.6	.972	2.02	1	I	49.2	0.80	.841	1.62	1	I	24.6	
		S4A	26.750	3	1.20	32.1	1.40	.841	1.65	1	I	24.6	.972	1.65	1	I	49.2	0.80	.841	1.20	2	I	43.2	
		S5A	30.500		1.31	40.0	1.40	.841	1.83	1	I	24.6	.972	1.77	1	I	49.2	0.80	.841	1.31	2	I	43.2	
		S6A	34.500	3	1.20	41.4	1.40	.841	1.72	1	I	24.6	.972	1.87	2	I	69.5	0.80	.841	1.20	2	I	43.2	
		S7B	38.500		1.21	46.6	1.40	.841	1.69	1	I	24.6	.972	1.80	2	I	16.9	0.80	.841	1.21	2	I	43.2	
	S7A	40.000		2.20	88.0	1.40	.841	4.36	1	I	24.6	.972	4.15	1	I	49.2	0.80	.785	2.20	3	EL	0.0		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	T4A	28.250		1.62	45.8	1.40	.841	2.27	1	I	24.6	.972	1.98	1	I	49.2	0.80	.841	1.62	2	I	43.2	
		T5B	32.000		1.43	45.8	1.40	.841	1.99	1	I	24.6	.972	1.88	1	I	49.2	0.80	.841	1.43	2	I	43.2	
		T6A	36.000		1.32	47.5	1.40	.841	1.88	1	I	24.6	.972	1.86	3	I	0.0	0.80	.841	1.32	2	I	43.2	
		T7A	40.000		1.24	49.6	1.40	.841	1.81	1	I	24.6	.972	1.87	2	I	16.9	0.80	.841	1.24	2	I	43.2	
		T7B	40.000		1.34	53.6	1.40	.841	2.00	1	I	24.6	.972	1.71	3	I	0.0	0.80	.841	1.34	2	I	43.2	

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



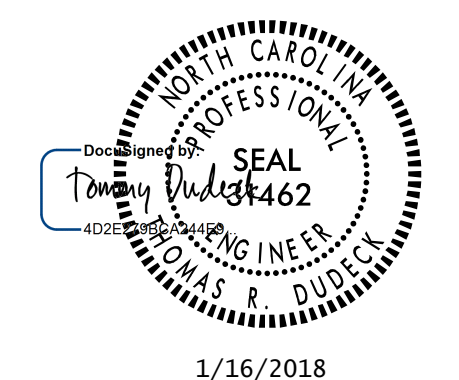
LRFR SUMMARY

LOAD RATING ANALYSIS PERFORMED AS A CONTINUOUS FOR LIVE LOAD STRUCTURE.

PROJECT NO. U-2525C  
GUILFORD COUNTY  
STATION: 337+20.09 -L-

SHEET 4 OF 4

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



1/16/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-4
1			3			TOTAL SHEETS
2			4			39

STR. #4

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CHECKED BY: V. E. FRAGA DATE: 05/04/17  
DESIGN ENGINEER OF RECORD: T.R. DUDECK DATE: 01/16/18

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