

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ_{DC}	γ_{DW}
	STRENGTH I	1.25	1.50
	SERVICE II	1.00	1.00

LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR STEEL GIRDERS																								
LEVEL	VEHICLE	WEIGHT (TONS)	CONTROLLING LOAD RATING #	MINIMUM RATING FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE										SERVICE II 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)	N/A	1	1.11	--	1.75	0.751	1.62	1	ER	52.5	0.931	1.11	1	I	9.9	0.80	0.751	1.11	1	ER	52.5		
	HL-93 (OPERATING)	N/A		1.48	--	1.35	0.751	2.11	1	ER	52.5	0.931	1.48	1	I	9.9	N/A	-	-	-	-	-		
	HS-20 (INVENTORY)	36.000	2	1.55	55.8	1.75	0.751	2.29	1	ER	52.5	0.931	1.55	1	I	9.9	0.80	0.751	1.57	1	ER	52.5		
	HS-20 (OPERATING)	36.000		2.04	73.4	1.35	0.751	2.97	1	ER	52.5	0.931	2.04	1	I	9.9	N/A	-	-	-	-	-		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SH	12.500		4.06	50.8	1.40	0.751	7.43	1	ER	52.5	0.931	5.48	1	I	9.9	0.80	0.751	4.06	1	ER	52.5	
		S3C	21.500		2.37	51.0	1.40	0.751	4.34	1	ER	52.5	0.931	3.15	1	I	9.9	0.80	0.751	2.37	1	ER	52.5	
		S3A	22.750		2.25	51.2	1.40	0.751	4.11	1	ER	52.5	0.931	2.98	1	I	9.9	0.80	0.751	2.25	1	ER	52.5	
		S4A	26.750		1.96	52.4	1.40	0.751	3.60	1	ER	52.5	0.931	2.57	1	I	9.9	0.80	0.751	1.96	1	ER	52.5	
		S5A	30.500		1.73	52.8	1.40	0.751	3.17	1	ER	52.5	0.931	2.32	1	I	9.9	0.80	0.751	1.73	1	ER	52.5	
		S6A	34.500		1.56	53.8	1.40	0.751	2.77	1	ER	52.5	0.931	2.07	1	I	9.9	0.80	0.751	1.56	1	ER	52.5	
		S7B	38.500		1.41	54.3	1.40	0.751	2.52	1	ER	52.5	0.931	1.91	1	I	9.9	0.80	0.751	1.41	1	ER	52.5	
	S7A	40.000	3	1.39	55.6	1.40	0.751	2.48	1	ER	52.5	0.931	1.93	1	I	9.9	0.80	0.751	1.39	1	ER	52.5		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	T4A	28.250		1.92	54.2	1.40	0.751	3.52	1	ER	52.5	0.931	2.48	1	I	9.9	0.80	0.751	1.92	1	ER	52.5	
		T5B	32.000		1.69	54.1	1.40	0.751	3.09	1	ER	52.5	0.931	2.31	1	I	9.9	0.80	0.751	1.69	1	ER	52.5	
		T6A	36.000		1.54	55.4	1.40	0.751	2.82	1	ER	52.5	0.931	2.09	1	I	9.9	0.80	0.751	1.54	1	ER	52.5	
		T7A	40.000		1.42	56.8	1.40	0.751	2.60	1	ER	52.5	0.931	1.92	1	I	9.9	0.80	0.751	1.42	1	ER	52.5	
		T7B	40.000		1.49	59.6	1.40	0.751	2.73	1	ER	52.5	0.931	1.83	1	I	9.9	0.80	0.751	1.49	1	ER	52.5	

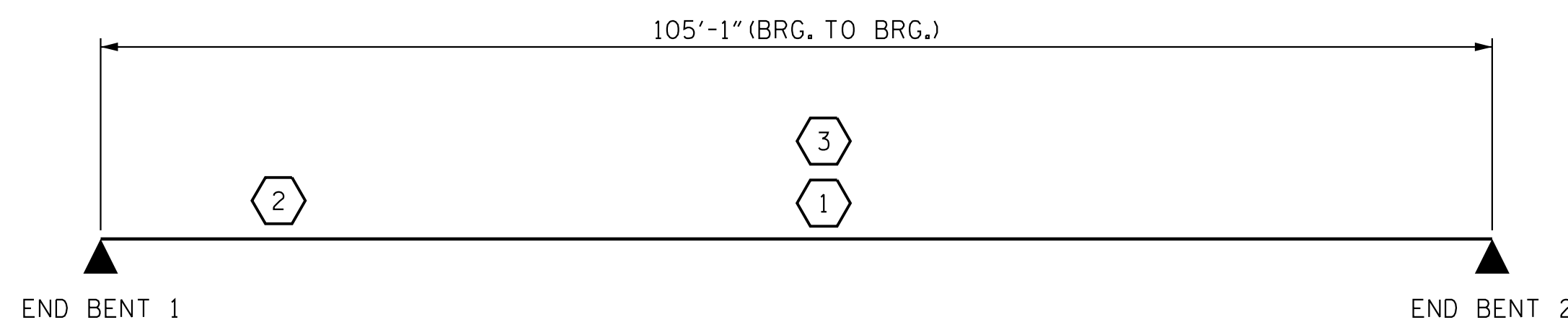
NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE II LIMIT STATES.
ALLOWABLE STRESS FOR SERVICE II 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	

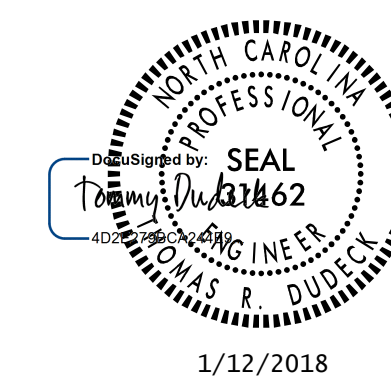


LRFR SUMMARY

PROJECT NO. U-2525C
GUILFORD COUNTY
STATION: 329+95.42 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
LRFR SUMMARY FOR
STEEL GIRDERS
(INTERSTATE TRAFFIC)
(RL)



1/12/2018

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S3-5
1			3			TOTAL SHEETS
2			4			29

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STR. #3

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