

LOAD FACTORS:

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

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	1.12	- -	1.75	0.838	1.28	A	EL	53.3	0.845	1.41	A	EL	42.5	0.80	0.838	1.12	A	EL	53.3		
	HL-93 (OPERATING)	N/A		1.66	- -	1.35	0.838	1.66	A	EL	53.3	0.893	2.11	A	I	10.1	N/A	- -	- -	- -	- -	- -		
	HS-20 (INVENTORY)	36.000	②	1.59	57.2	1.75	0.838	1.82	A	EL	53.3	0.893	2.21	A	I	10.1	0.80	0.838	1.59	A	EL	53.3		
	HS-20 (OPERATING)	36.000		2.35	84.6	1.35	0.838	2.35	A	EL	53.3	0.893	2.90	A	I	10.1	N/A	- -	- -	- -	- -	- -		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SH	12.500		4.12	51.5	1.40	0.838	5.89	A	EL	53.3	0.893	7.67	A	I	10.1	0.80	0.838	4.12	A	EL	53.3	
		S3C	21.500		2.41	51.8	1.40	0.838	3.44	A	EL	53.3	0.893	4.44	A	I	10.1	0.80	0.838	2.41	A	EL	53.3	
		S3A	22.750		2.28	51.9	1.40	0.838	3.26	A	EL	53.3	0.893	4.21	A	I	10.1	0.80	0.838	2.28	A	EL	53.3	
		S4A	26.750		1.99	53.2	1.40	0.838	2.85	A	EL	53.3	0.893	3.64	A	I	10.1	0.80	0.838	1.99	A	EL	53.3	
		S5A	30.500		1.76	53.7	1.40	0.838	2.51	A	EL	53.3	0.893	3.29	A	I	10.1	0.80	0.838	1.76	A	EL	53.3	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	S6A	34.500		1.59	54.9	1.40	0.838	2.27	A	EL	53.3	0.893	2.94	A	I	10.1	0.80	0.838	1.59	A	EL	53.3	
		S7B	38.500		1.44	55.4	1.40	0.838	2.06	A	EL	53.3	0.893	2.71	A	I	10.1	0.80	0.838	1.44	A	EL	53.3	
		S7A	40.000	③	1.41	56.4	1.40	0.838	2.02	A	EL	53.3	0.893	2.73	A	I	10.1	0.80	0.838	1.41	A	EL	53.3	
		T4A	28.250		1.95	55.1	1.40	0.838	2.79	A	EL	53.3	0.893	3.50	A	I	10.1	0.80	0.838	1.95	A	EL	53.3	
		T5B	32.000		1.71	54.7	1.40	0.838	2.45	A	EL	53.3	0.893	3.26	A	I	10.1	0.80	0.838	1.71	A	EL	53.3	

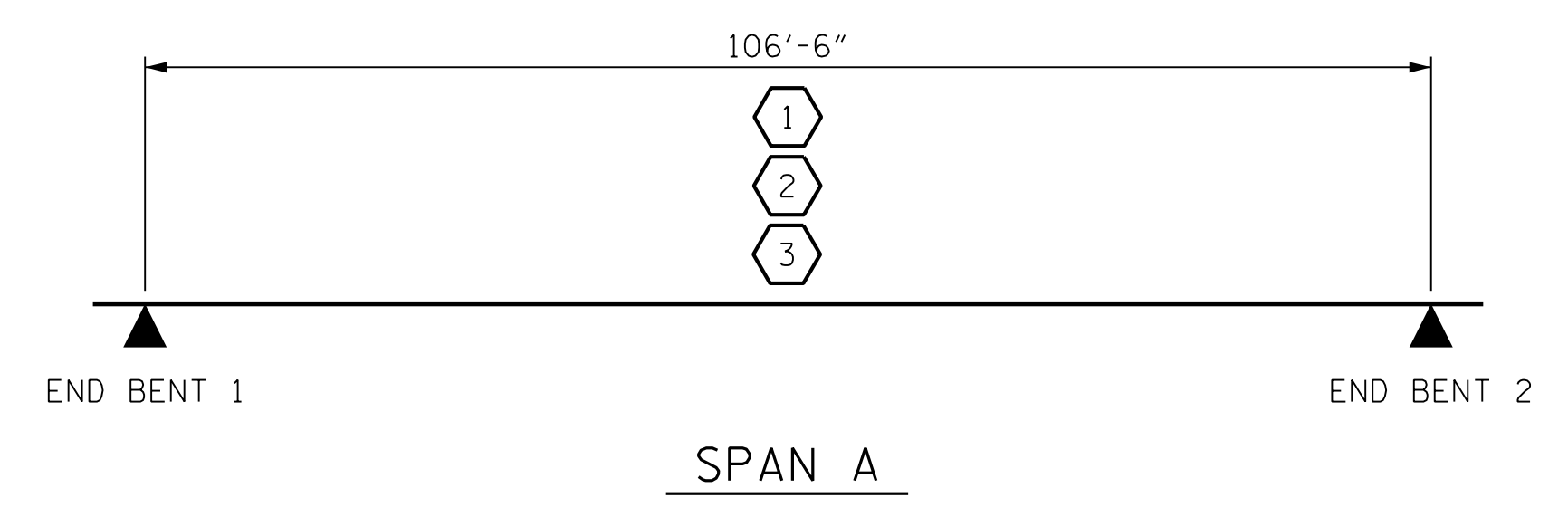
NOTES:

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:

DISTANCE FROM LEFT END OF SPAN IS MEASURED FROM \bar{C} BEARING.

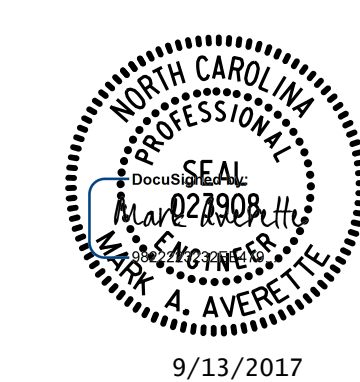
①	CONTROLLING LOAD RATING
①	DESIGN LOAD RATING (HL-93)
②	DESIGN LOAD RATING (HS-20)
③	LEGAL LOAD RATING **
** SEE CHART FOR VEHICLE TYPE	
GIRDER LOCATION	
I - INTERIOR GIRDER	
EL - EXTERIOR LEFT GIRDER	
ER - EXTERIOR RIGHT GIRDER	



LRFR SUMMARY

PROJECT NO. U-2525C
GUILFORD COUNTY
 STATION: 470+43.12 -L-
24+51.12 -Y6-
 SHEET 5 OF 5

PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
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 www.simpsonengr.com
 LICENSURE NO. C-2521



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 LRFR SUMMARY FOR
 PRESTRESSED
 CONCRETE GIRDERS
 (INTERSTATE TRAFFIC)
 RIGHT LANE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S9-5
1			3			TOTAL SHEETS
2			4			32

DRAWN BY: S.D. COOPER DATE: 8-17
 CHECKED BY: M.A. AVERETTE DATE: 8-17
 DESIGN ENGINEER OF RECORD: M.A. AVERETTE DATE: 8-17

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

\$DATE\$ \$TIME\$ \$FILE\$