

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ_{DC}	γ_{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 FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE										SERVICE III LIMIT STATE					COMMENT NUMBER			
						MOMENT					SHEAR					MOMENT								
						LIVE-LOAD FACTORS (γ_{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 (γ_{LL})	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FT)	
DESIGN LOAD	HL-93 (INVENTORY)	N/A	①	1.14	--	1.75	0.662	1.39	A	EL	60.500	0.771	1.39	A	I	11.500	0.80	0.662	1.14	A	EL	60.500		
	HL-93 (OPERATING)	N/A		1.80	--	1.35	0.662	2.03	A	EL	60.500	0.771	1.84	A	I	11.500	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.67	60.12	1.75	0.662	1.80	A	EL	60.500	0.771	1.99	A	I	11.500	0.80	0.662	1.67	A	EL	60.500		
	HS-20 (OPERATING)	36.000		2.62	94.32	1.35	0.662	2.63	A	EL	60.500	0.771	2.62	A	I	11.500	N/A	--	--	--	--	--		
LEGAL LOAD	SINGLE VEHICLE (SV)	SNSH		4.05	54.68	1.40	0.662	6.15	A	EL	60.500	0.771	6.51	A	I	11.500	0.80	0.662	4.05	A	EL	60.500		
		SNGARBS2	20.000		2.90	58.00	1.40	0.662	4.40	A	EL	60.500	0.771	4.49	A	I	11.500	0.80	0.662	2.90	A	EL	60.500	
		SNAGRIS2	22.000		2.69	59.18	1.40	0.662	4.09	A	EL	60.500	0.771	4.12	A	I	11.500	0.80	0.662	2.69	A	EL	60.500	
		SNCOTTS3	27.250		2.01	54.77	1.40	0.662	3.06	A	EL	60.500	0.771	3.17	A	I	11.500	0.80	0.662	2.01	A	EL	60.500	
		SNAGGRS4	34.925		1.63	56.93	1.40	0.662	2.48	A	EL	60.500	0.771	2.54	A	I	11.500	0.80	0.662	1.63	A	EL	60.500	
		SNS5A	35.550		1.60	56.88	1.40	0.662	2.43	A	EL	60.500	0.771	2.54	A	I	11.500	0.80	0.662	1.60	A	EL	60.500	
		SNS6A	39.950		1.45	57.93	1.40	0.662	2.20	A	EL	60.500	0.771	2.28	A	I	11.500	0.80	0.662	1.45	A	EL	60.500	
	TRUCK TRACTOR SEMI-TRAILER (TTS1)	TNAGRIT3	33.000		1.76	58.08	1.40	0.662	2.68	A	EL	60.500	0.771	2.76	A	I	11.500	0.80	0.662	1.76	A	EL	60.500	
		TNT4A	33.075		1.77	58.54	1.40	0.662	2.68	A	EL	60.500	0.771	2.71	A	I	11.500	0.80	0.662	1.77	A	EL	60.500	
		TNT6A	41.600		1.43	59.49	1.40	0.662	2.16	A	EL	60.500	0.771	2.29	A	I	11.500	0.80	0.662	1.43	A	EL	60.500	
		TNT7A	42.000		1.42	59.64	1.40	0.662	2.16	A	EL	60.500	0.771	2.25	A	I	11.500	0.80	0.662	1.42	A	EL	60.500	
		TNT7B	42.000		1.45	60.90	1.40	0.662	2.20	A	EL	60.500	0.771	2.17	A	I	11.500	0.80	0.662	1.45	A	EL	60.500	
		TNAGRIT4	43.000		1.40	60.20	1.40	0.662	2.12	A	EL	60.500	0.771	2.10	A	I	11.500	0.80	0.662	1.40	A	EL	60.500	
		TNAGT5A	45.000		1.32	59.40	1.40	0.662	2.01	A	EL	60.500	0.771	2.05	A	I	11.500	0.80	0.662	1.32	A	EL	60.500	
TNAGT5B	45.000	③	1.32	59.40	1.40	0.662	2.00	A	EL	60.500	0.771	2.00	A	I	11.500	0.80	0.662	1.32	A	EL	60.500			
EMERGENCY VEHICLE (EV)	EV2	28.750		2.03	58.36	1.30	0.662	3.32	A	EL	60.500	0.771	3.34	A	I	11.500	0.80	0.662	2.03	A	EL	60.500		
	EV3	43.000	④	1.34	57.62	1.30	0.662	2.20	A	EL	60.500	0.771	2.20	A	I	11.500	0.80	0.662	1.34	A	EL	60.500		

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)

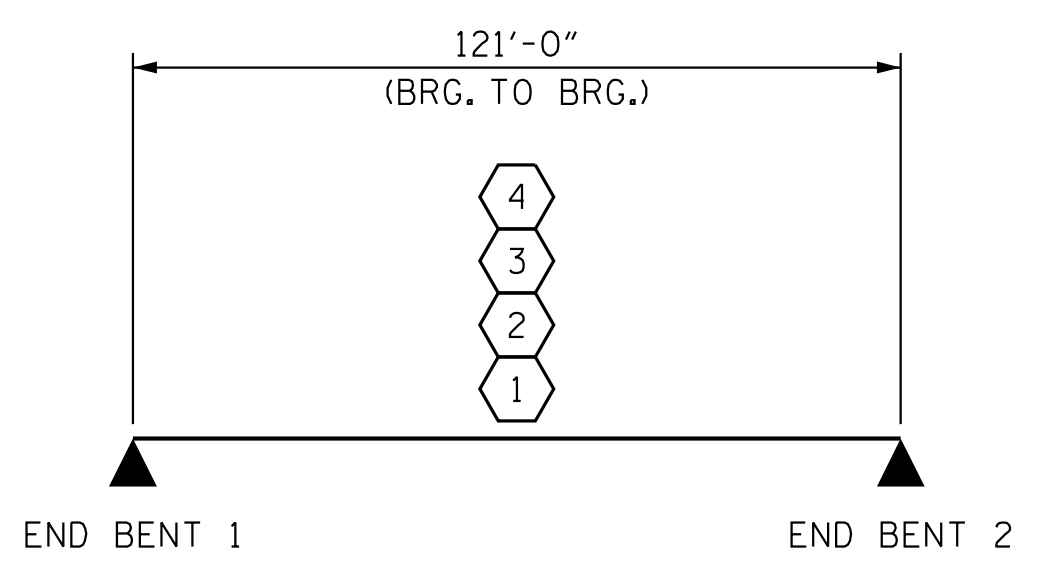
③ LEGAL LOAD RATING **

④ EMERGENCY VEHICLE LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

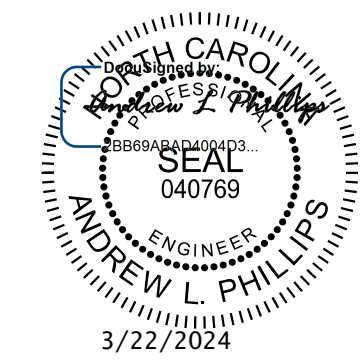
GIRDER LOCATION

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



LRFR SUMMARY

PROJECT NO. P-5720
WAKE COUNTY
 STATION: 32+23.01 -L-



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 Raleigh, NC 27601-1772
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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.	DATE:
1			3	
2			4	

TOTAL SHEETS: 33

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

ASSEMBLED BY : D.D. LOWERY	DATE : 1/19
CHECKED BY : S.A. DENNEY	DATE : 1/19
DRAWN BY : MAA 1/08	REV. 11/2/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM
	REV. 04/23 BNB/AAI

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