

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 (FF)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FF)	LIVE-LOAD FACTORS (γ_{LL})	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION		DISTANCE FROM LEFT END OF SPAN (FF)	
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	①	1.12	-	1.75	0.99	1.15	A	ER	51.26	1.09	1.38	B	EL	30.75	0.80	0.99	1.12	A	ER	51.26		
	HL-93 (OPERATING)	N/A		1.49	-	1.35	0.99	1.49	A	ER	51.26	1.09	1.90	B	EL	103.44	N/A	-	-	-	-	-	-	
	HS-20 (INVENTORY)	36.000	②	1.57	56.52	1.75	0.99	1.61	A	ER	51.26	1.09	2.02	B	EL	103.44	0.80	0.99	1.57	A	ER	51.26		
	HS-20 (OPERATING)	36.000		2.09	75.24	1.35	0.99	2.09	A	ER	51.26	1.09	2.62	B	EL	103.44	N/A	-	-	-	-	-	-	
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.74	50.49	1.40	0.99	4.8	A	ER	51.26	1.09	6.30	B	EL	103.44	0.80	0.99	3.74	A	ER	51.26	
		SNGARBS2	20.000		2.7	5.40	1.40	0.99	3.47	A	ER	51.26	1.09	4.39	B	EL	103.44	0.80	0.99	2.7	A	ER	51.26	
		SNAGRIS2	22.000		2.52	55.44	1.40	0.99	3.24	A	ER	51.26	1.09	4.04	B	EL	103.44	0.80	0.99	2.52	A	ER	51.26	
		SNCOTTS3	27.250		1.86	50.69	1.40	0.99	2.39	A	ER	51.26	1.09	3.14	B	EL	103.44	0.80	0.99	1.86	A	ER	51.26	
		SNAGGRS4	34.925		1.52	53.09	1.40	0.99	1.95	A	ER	51.26	1.09	2.54	B	EL	103.44	0.80	0.99	1.52	A	ER	51.26	
		SNS5A	35.550		1.49	52.97	1.40	0.99	1.91	A	ER	51.26	1.09	2.54	B	EL	103.44	0.80	0.99	1.49	A	ER	51.26	
		SNS6A	39.950		1.35	53.93	1.40	0.99	1.74	A	ER	51.26	1.09	2.29	B	EL	103.44	0.80	0.99	1.35	A	ER	51.26	
	SNS7B	42.000		1.29	54.18	1.40	0.99	1.65	A	ER	51.26	1.09	2.22	B	EL	103.44	0.80	0.99	1.29	A	ER	51.26		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.65	54.45	1.40	0.99	2.11	A	ER	51.26	1.09	2.75	B	EL	103.44	0.80	0.99	1.65	A	ER	51.26	
		TNT4A	33.075		1.65	54.57	1.40	0.99	2.12	A	ER	51.26	1.09	2.71	B	EL	103.44	0.80	0.99	1.65	A	ER	51.26	
		TNT6A	41.600		1.34	55.74	1.40	0.99	1.71	A	ER	51.26	1.09	2.31	B	EL	103.44	0.80	0.99	1.34	A	ER	51.26	
		TNT7A	42.000		1.34	56.28	1.40	0.99	1.71	A	ER	51.26	1.09	2.28	B	EL	103.44	0.80	0.99	1.34	A	ER	51.26	
		TNT7B	42.000		1.38	57.96	1.40	0.99	1.77	A	ER	51.26	1.09	2.20	B	EL	103.44	0.80	0.99	1.38	A	ER	51.26	
		TNAGRIT4	43.000		1.31	56.33	1.40	0.99	1.68	A	ER	51.26	1.09	2.13	B	EL	103.44	0.80	0.99	1.31	A	ER	51.26	
TNAGT5A		45.000		1.24	55.80	1.40	0.99	1.59	A	ER	51.26	1.09	2.08	B	EL	103.44	0.80	0.99	1.24	A	ER	51.26		
TNAGT5B	45.000	③	1.23	55.35	1.40	0.99	1.58	A	ER	51.26	1.09	2.03	B	EL	103.44	0.80	0.99	1.23	A	ER	51.26			

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)

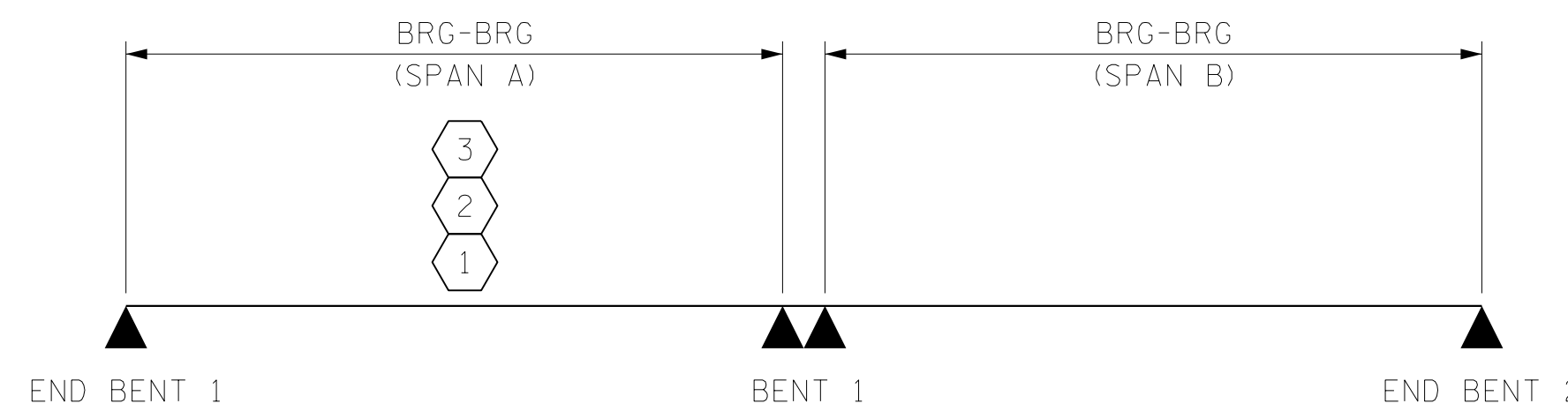
② DESIGN LOAD RATING (HS-20)

③ LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



CL BRG - CL BRG GIRDER LENGTHS		
GIRDER	SPAN A	SPAN B
1	103'-4 1/4"	103'-6 7/16"
2	103'-1 7/8"	103'-2 9/16"
3	102'-11 9/16"	102'-10 9/16"
4	102'-9 5/16"	102'-6 1/2"
5	102'-7 3/16"	102'-2 13/16"

PROJECT NO. R-2707C
CLEVELAND COUNTY
 STATION: 29+07.16 -Y2-

LRFR SUMMARY

ASSEMBLED BY : MKO DATE : 11/2016
 CHECKED BY : TLC DATE : 11/2016
 DRAWN BY : MAA 1/08 REV. 11/2/08RR MAA/GM
 CHECKED BY : GM/DI 2/08 REV. 10/1/11 MAA/GM

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD LRFR SUMMARY FOR PRESTRESSED CONCRETE GIRDERS (NON-INTERSTATE TRAFFIC)					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S3-5
					TOTAL SHEETS 36