

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	$\gamma_{DC}$	$\gamma_{DW}$
	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 ( $\gamma_{LL}$ )	MOMENT					SHEAR					LIVE-LOAD FACTORS ( $\gamma_{LL}$ )	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	1.07	--	1.75	0.805	1.53	A & B	1	45.36	0.959	1.55	A & B	3	82.22	1.00	0.805	1.07	A & B	1	45.36	1, 2	
	HL-93 (OPERATING)	N/A		1.98	--	1.35	0.805	1.98	A & B	1	45.36	0.959	2.05	A & B	3	82.22	N/A	-	-	-	-	-	2	
	HS-20 (INVENTORY)	36.000	②	1.48	53.28	1.75	0.805	2.11	A & B	1	45.36	0.959	2.09	A & B	3	82.22	1.00	0.805	1.48	A & B	1	45.36	1, 2	
	HS-20 (OPERATING)	36.000		2.73	98.28	1.35	0.805	2.73	A & B	1	45.36	0.959	2.74	A & B	3	82.22	N/A	-	-	-	-	-	2	
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.52	47.52	1.40	0.805	6.27	A & B	1	45.36	0.959	6.96	A & B	3	63.79	1.00	0.805	3.52	A & B	1	45.36	1, 2
		SNGARBS2	20.000		2.54	50.80	1.40	0.805	4.52	A & B	1	45.36	0.959	4.88	A & B	3	63.79	1.00	0.805	2.54	A & B	1	45.36	1, 2
		SNAGRIS2	22.000		2.36	51.92	1.40	0.805	4.21	A & B	1	45.36	0.959	4.51	A & B	3	63.79	1.00	0.805	2.36	A & B	1	45.36	1, 2
		SNCOTTS3	27.250		1.73	47.14	1.40	0.805	3.08	A & B	1	45.36	0.959	3.36	A & B	3	63.79	1.00	0.805	1.73	A & B	1	45.36	1, 2
		SNAGGRS4	34.925		1.42	49.59	1.40	0.805	2.53	A & B	1	45.36	0.959	2.67	A & B	3	82.22	1.00	0.805	1.42	A & B	1	45.36	1, 2
		SNS5A	35.550		1.39	49.41	1.40	0.805	2.48	A & B	1	45.36	0.959	2.69	A & B	3	82.22	1.00	0.805	1.39	A & B	1	45.36	1, 2
		SNS6A	39.950		1.27	50.74	1.40	0.805	2.26	A & B	1	45.36	0.959	2.43	A & B	3	82.22	1.00	0.805	1.27	A & B	1	45.36	1, 2
		SNS7B	42.000		1.20	50.40	1.40	0.805	2.15	A & B	1	45.36	0.959	2.36	A & B	3	82.22	1.00	0.805	1.20	A & B	1	45.36	1, 2
	TRUCK TRACTOR SEMI-TRAILER (TST)	TNAGRIT3	33.000		1.54	50.82	1.40	0.805	2.75	A & B	1	45.36	0.959	2.88	A & B	3	82.22	1.00	0.805	1.54	A & B	1	45.36	1, 2
		TNT4A	33.075		1.54	50.94	1.40	0.805	2.75	A & B	1	45.36	0.959	2.96	A & B	3	63.79	1.00	0.805	1.54	A & B	1	45.36	1, 2
		TNT6A	41.600		1.25	52.00	1.40	0.805	2.23	A & B	1	45.36	0.959	2.48	A & B	3	82.22	1.00	0.805	1.25	A & B	1	45.36	1, 2
		TNT7A	42.000		1.25	52.50	1.40	0.805	2.24	A & B	1	45.36	0.959	2.44	A & B	3	82.22	1.00	0.805	1.25	A & B	1	45.36	1, 2
		TNT7B	42.000		1.28	53.76	1.40	0.805	2.28	A & B	1	45.36	0.959	2.32	A & B	3	82.22	1.00	0.805	1.28	A & B	1	45.36	1, 2
		TNAGRIT4	43.000		1.23	52.89	1.40	0.805	2.19	A & B	1	45.36	0.959	2.28	A & B	3	82.22	1.00	0.805	1.23	A & B	1	45.36	1, 2
		TNAGT5A	45.000		1.16	52.20	1.40	0.805	2.08	A & B	1	45.36	0.959	2.17	A & B	3	82.22	1.00	0.805	1.16	A & B	1	45.36	1, 2
		TNAGT5B	45.000	③	1.15	51.75	1.40	0.805	2.06	A & B	1	45.36	0.959	2.14	A & B	3	8.51	1.00	0.805	1.15	A & B	1	45.36	1, 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.

COMMENTS:  
1. A SERVICE III LIVE LOAD FACTOR OF 1.0 WAS USED TO BE CONSISTENT WITH THE VALUE USED DURING DESIGN.  
2. DISTANCE FROM LEFT END OF SPAN IS GIVEN WITH RESPECT TO CENTERLINE OF BEARING AND IS MEASURED ALONG THE CONTROLLING GIRDER.

③ CONTROLLING LOAD RATING

① DESIGN LOAD RATING (HL-93)

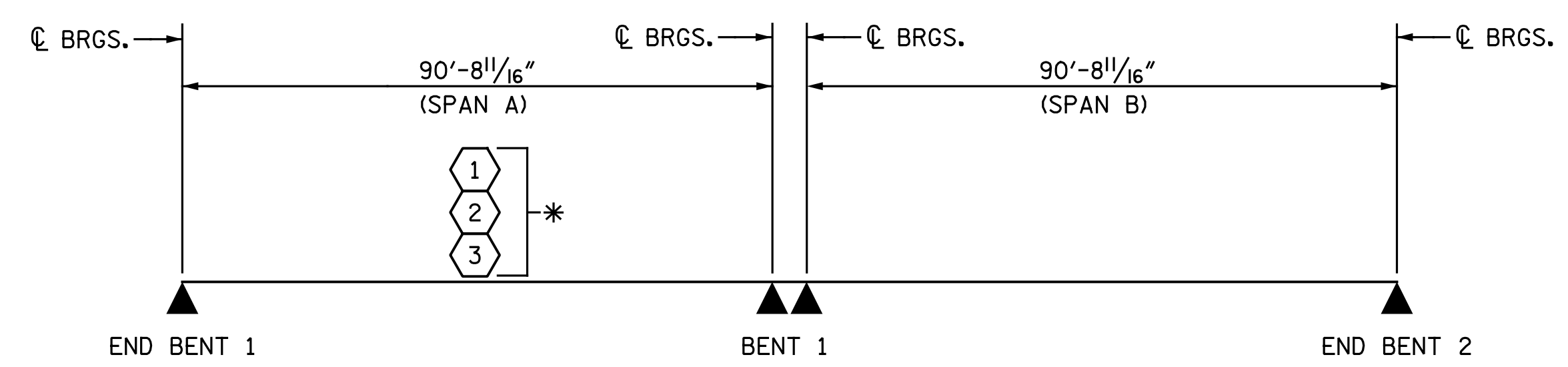
② DESIGN LOAD RATING (HS-20)

③ LEGAL LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

GIRDER LOCATION IS PROVIDED USING GIRDER NUMBER, WHERE GIRDER 1 IS THE LEFT EXTERIOR GIRDER LOOKING AHEAD STATION. SEE "GIRDER LAYOUT" SHEET FOR ALL GIRDER LOCATIONS.



LRFR SUMMARY  
\* TYPICAL SPANS A & B

PROJECT NO. I-5883  
HARNETT COUNTY  
STATION: 27+09.19 -Y16-

DocuSigned by:  
Amanda H. Sharpe  
4186FF4ECEF402  
4/8/2020

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL  
043878  
AMANDA H. SHARPE

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

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

Michael Baker INTERNATIONAL  
Michael Baker Engineering  
8000 Regency Parkway, Suite 600  
Cary, North Carolina 27518  
NC License No.: F-1084

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SI-4
1			3			TOTAL SHEETS
2			4			35

ASSEMBLED BY : N. B. SPEAKS	DATE : 7-11-18
CHECKED BY : A. H. SHARPE	DATE : 7-12-18
DRAWN BY : MAA 1/08	REV. 11/12/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM
	REV. 12/17 MAA/THC