

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	$\gamma_{DC}$	$\gamma_{DW}$
	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 ( $\gamma_{LL}$ )	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 ( $\gamma_{LL}$ )	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	①	1.12	--	1.75	0.929	1.41	A	EXT	55.90	0.962	1.24	A	INT	101.14	0.80	0.929	1.12	A	EXT	55.90		
	HL-93 (OPERATING)	N/A		1.64	--	1.35	0.929	1.83	A	EXT	55.90	0.962	1.64	A	INT	101.14	N/A	--	--	--				
	HS-20 (INVENTORY)	36.000	②	1.61	57.96	1.75	0.929	2.04	A	EXT	55.90	0.962	1.75	A	INT	101.14	0.80	0.929	1.61	A	EXT	55.90		
	HS-20 (OPERATING)	36.000		2.30	82.80	1.35	0.929	2.64	A	EXT	55.90	0.962	2.30	A	INT	101.14	N/A	--	--	--				
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.92	52.92	1.40	0.929	6.19	A	EXT	55.90	0.962	5.69	A	INT	101.14	0.80	0.929	3.92	A	EXT	55.90	
		SNGARBS2	20.000		2.79	55.80	1.40	0.929	4.41	A	EXT	55.90	0.962	3.93	A	INT	101.14	0.80	0.929	2.79	A	EXT	55.90	
		SNAGRIS2	22.000		2.59	56.98	1.40	0.929	4.08	A	EXT	55.90	0.962	3.61	A	INT	101.14	0.80	0.929	2.59	A	EXT	55.90	
		SNCOTTS3	27.250		1.93	52.59	1.40	0.929	3.05	A	EXT	55.90	0.962	2.77	A	INT	101.14	0.80	0.929	1.93	A	EXT	55.90	
		SNAGGRS4	34.925		1.57	54.83	1.40	0.929	2.48	A	EXT	55.90	0.962	2.22	A	INT	101.14	0.80	0.929	1.57	A	EXT	55.90	
		SNS5A	35.550		1.54	54.75	1.40	0.929	2.43	A	EXT	55.90	0.962	2.23	A	INT	101.14	0.80	0.929	1.54	A	EXT	55.90	
		SNS6A	39.950		1.40	55.93	1.40	0.929	2.21	A	EXT	55.90	0.962	2.00	A	INT	101.14	0.80	0.929	1.40	A	EXT	55.90	
	SNS7B	42.000		1.33	55.86	1.40	0.929	2.10	A	EXT	55.90	0.962	1.93	A	INT	101.14	0.80	0.929	1.33	A	EXT	55.90		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.70	56.10	1.40	0.929	2.69	A	EXT	55.90	0.962	2.42	A	INT	101.14	0.80	0.929	1.70	A	EXT	55.90	
		TNT4A	33.075		1.70	56.23	1.40	0.929	2.69	A	EXT	55.90	0.962	2.38	A	INT	101.14	0.80	0.929	1.70	A	EXT	55.90	
		TNT6A	41.600		1.37	56.99	1.40	0.929	2.16	A	EXT	55.90	0.962	2.02	A	INT	101.14	0.80	0.929	1.37	A	EXT	55.90	
		TNT7A	42.000		1.37	57.54	1.40	0.929	2.17	A	EXT	55.90	0.962	1.99	A	INT	101.14	0.80	0.929	1.37	A	EXT	55.90	
		TNT7B	42.000		1.40	58.80	1.40	0.929	2.20	A	EXT	55.90	0.962	1.91	A	INT	101.14	0.80	0.929	1.40	A	EXT	55.90	
		TNAGRIT4	43.000		1.34	57.62	1.40	0.929	2.12	A	EXT	55.90	0.962	1.85	A	INT	101.14	0.80	0.929	1.34	A	EXT	55.90	
		TNAGT5A	45.000		1.27	57.15	1.40	0.929	2.01	A	EXT	55.90	0.962	1.81	A	INT	101.14	0.80	0.929	1.27	A	EXT	55.90	
TNAGT5B		45.000	③	1.27	57.15	1.40	0.929	2.00	A	EXT	55.90	0.962	1.76	A	INT	101.14	0.80	0.929	1.27	A	EXT	55.90		
EMERGENCY VEHICLE (EV)	EV2	28.750		1.96	56.35	1.30	0.929	3.34	A	EXT	55.90	0.962	3.20	A	INT	101.14	0.80	0.929	1.96	A	EXT	55.90		
	EV3	43.000	④	1.29	55.47	1.30	0.929	2.20	A	EXT	55.90	0.962	2.01	A	INT	101.14	0.80	0.929	1.29	A	EXT	55.90		

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)

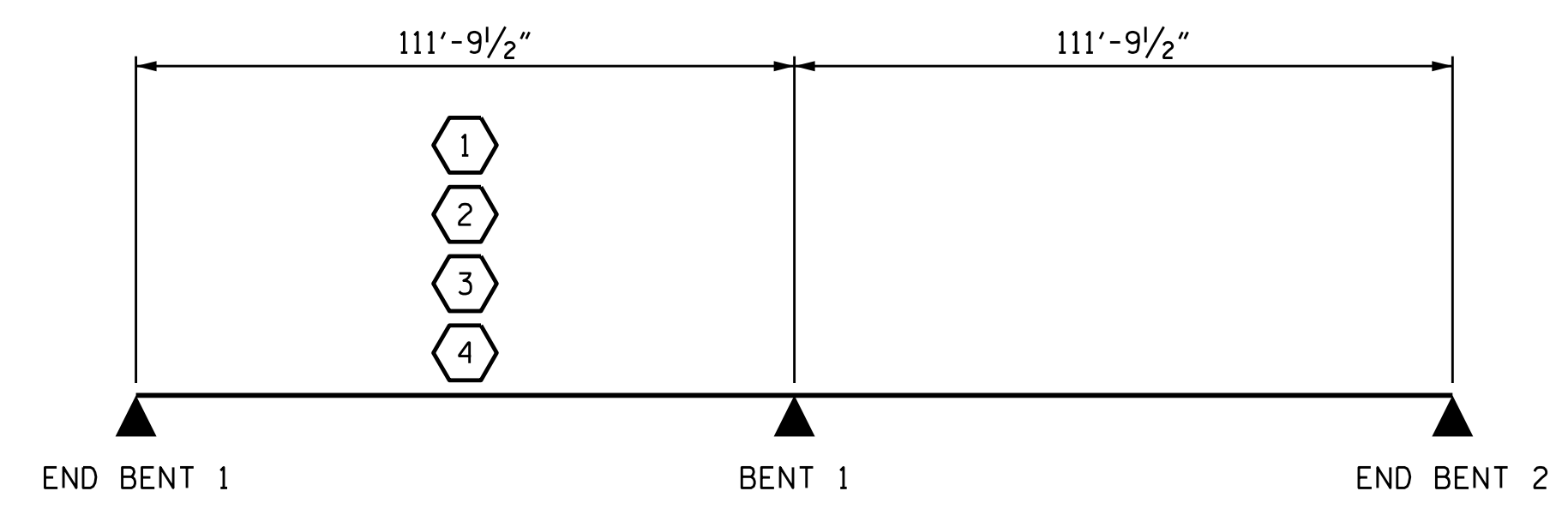
③ LEGAL LOAD RATING \*\*

④ EMERGENCY VEHICLE LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



PROJECT NO. B-5845  
CLEVELAND COUNTY  
 STATION: 22+56.00 -L-

LRFR SUMMARY  
 DIMENSIONS SHOWN ARE BEARING TO BEARING.

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

TGS ENGINEERS  
 201 W. MARION ST STE 200  
 SHELBY, NC 28150  
 PH (704) 476-0003  
 CORP. LICENSE NO.: C-0275

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.  
S-6

TOTAL SHEETS  
40

ASSEMBLED BY : ZCS DATE : 7/23  
 CHECKED BY : MGC DATE : 7/23  
 DRAWN BY : MAA 1/08 REV. 11/2/08RR MAA/GM  
 CHECKED BY : GM/DI 2/08 REV. 10/1/11 MAA/GM  
 BNB/AAI

\*\*\*\*\*SYSTEM\*\*\*\*\*  
 \*\*\*\*\*DCN\*\*\*\*\*  
 \*\*\*\*\*USERNAME\*\*\*\*\*