

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			
						LIVELOAD FACTORS	MOMENT					SHEAR					LIVELOAD FACTORS	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(Inv)	N/A	1	1.03	--	1.75	0.9	1.44	B	ER	38.261	1.041	2.02	B	I	38.261	0.80	1.041	1.03	B	I	38.261		
	HL-93(Opr)	N/A	--	1.87	--	1.35	0.9	1.87	B	ER	38.261	1.041	2.62	B	I	38.261	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.41	50.698	1.75	0.9	2.05	B	ER	38.261	1.041	2.39	B	I	38.261	0.80	0.879	1.41	B	I	38.261		
	HS-20(Opr)	36.000	--	2.66	95.626	1.35	0.9	2.66	B	ER	38.261	1.041	3.10	B	I	38.261	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500	--	3.21	43.328	1.4	0.9	5.84	B	ER	38.261	1.041	6.46	B	I	38.261	0.80	0.879	3.21	B	I	38.261	
		SNGARBS2	20.000	--	2.38	47.572	1.4	0.9	4.33	B	ER	38.261	1.041	4.79	B	I	38.261	0.80	0.879	2.38	B	I	38.261	
		SNAGRIS2	22.000	--	2.25	49.436	1.4	0.9	4.09	B	ER	38.261	1.041	4.52	B	I	38.261	0.80	0.879	2.25	B	I	38.261	
		SNCOTTS3	27.250	--	1.60	43.511	1.4	0.9	2.90	B	ER	38.261	1.041	3.24	B	I	38.261	0.80	0.879	1.60	B	I	38.261	
		SNAGGRS4	34.925	--	1.33	46.427	1.4	0.9	2.42	B	ER	38.261	1.041	2.83	B	I	38.261	0.80	0.879	1.33	B	I	38.261	
		SNS5A	35.550	--	1.30	46.225	1.4	0.9	2.36	B	ER	38.261	1.041	2.94	B	I	38.261	0.80	0.879	1.30	B	I	38.261	
		SNS6A	39.950	--	1.19	47.577	1.4	0.9	2.17	B	ER	38.261	1.041	2.75	B	I	38.261	0.80	0.879	1.19	B	I	38.261	
	SNS7B	42.000	--	1.13	47.630	1.4	0.9	2.06	B	ER	38.261	1.041	2.79	B	I	38.261	0.80	0.879	1.13	B	I	38.261		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000	--	1.45	47.904	1.4	0.9	2.64	B	ER	38.261	1.041	3.22	B	I	38.261	0.80	0.879	1.45	B	I	38.261	
		TNT4A	33.075	--	1.46	48.205	1.4	0.9	2.65	B	ER	38.261	1.041	3.07	B	I	38.261	0.80	0.879	1.46	B	I	38.261	
		TNT6A	41.600	--	1.19	49.490	1.4	0.9	2.16	B	ER	38.261	1.041	3.15	B	I	38.261	0.80	0.879	1.19	B	I	38.261	
		TNT7A	42.000	--	1.20	50.170	1.4	0.9	2.17	B	ER	38.261	1.041	3.05	B	I	38.261	0.80	0.879	1.20	B	I	38.261	
		TNT7B	42.000	--	1.23	51.791	1.4	0.9	2.24	B	ER	38.261	1.041	2.66	B	I	38.261	0.80	0.879	1.23	B	I	38.261	
		TNAGRIT4	43.000	--	1.18	50.526	1.4	0.9	2.14	B	ER	38.261	1.041	2.55	B	I	38.261	0.80	0.879	1.18	B	I	38.261	
TNAGT5A		45.000	--	1.11	49.897	1.4	0.9	2.02	B	ER	38.261	1.041	2.64	B	I	38.261	0.80	0.879	1.11	B	I	38.261		
TNAGT5B	45.000	3	1.10	49.331	1.4	0.9	1.99	B	ER	38.261	1.041	2.42	B	I	38.261	0.80	0.879	1.10	B	I	38.261			

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)

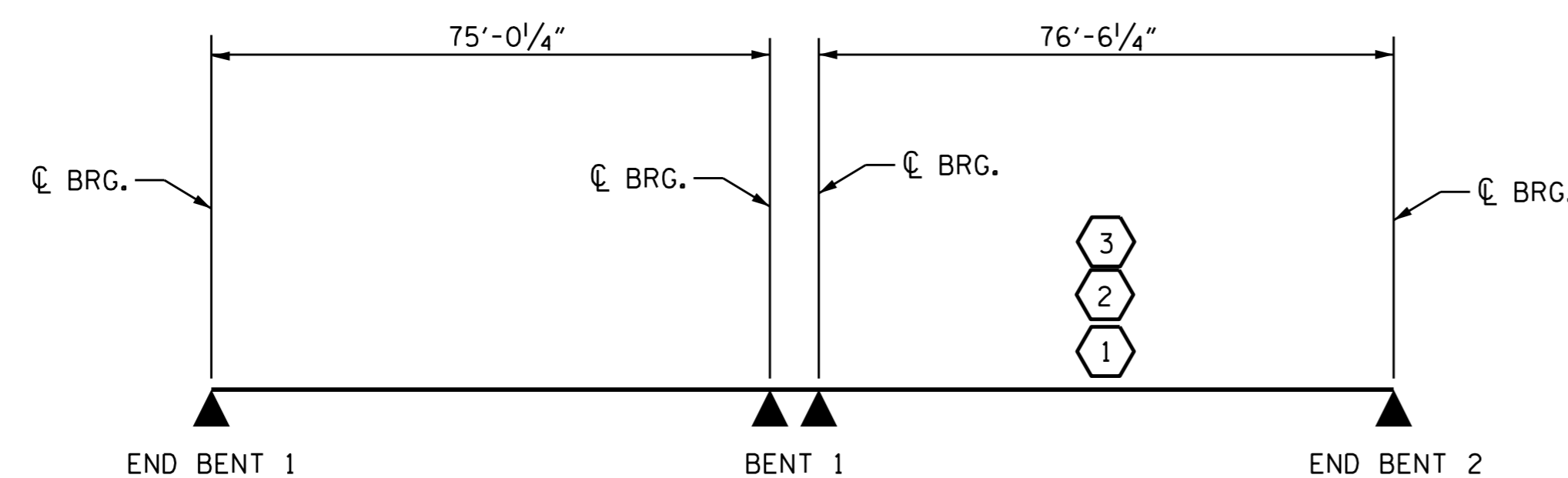
2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

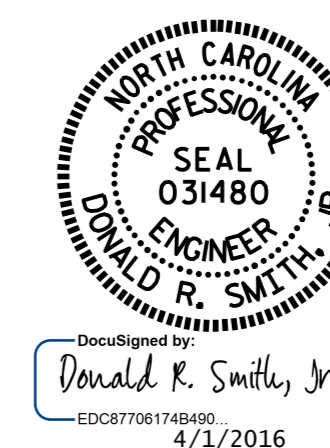
I - INTERIOR GIRDER
EL - EXTERIOR LEFT GIRDER
ER - EXTERIOR RIGHT GIRDER



SPAN A SPAN B

LRFR SUMMARY

PROJECT NO. U-3308
DURHAM COUNTY
 STATION: 23+00.86-LALT-



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

ASSEMBLED BY: P.S. ADKINS	DATE: 4/15/14
CHECKED BY: J.D. HAWK	DATE: 5/29/14
DRAWN BY: MAA	1/08
CHECKED BY: GM/DI	2/08
REV. 11/2/08RR	MAA/GM
REV. 10/1/11	MAA/GM
DESIGN ENGINEER OF RECORD:	
D.R. SMITH	DATE: 11/3/14

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-4
1			3			TOTAL SHEETS
2			4			32