LOAD AND RESISTANCE FACTOR RATING (LRFD) 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					
							LIVELOAD FACTORS	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)	LIVELOAD FACTORS	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING		HL-93(Inv)	N/A	1	1.335	--	1.75	0.268	1.52	A	EL	46.724	0.574	1.35	A	EL	9.345	0.80	0.268	**1.34**	A	EL	**46.724**	
		HL-93(Opr)	N/A	--	1.752	--	1.35	0.268	1.97	A	EL	46.724	0.574	1.75	A	EL	9.345	N/A	--	--	--	--	--	
		HS-20(Inv)	36.000	2	1.784	64.228	1.75	0.268	2.09	A	EL	46.724	0.574	**1.78**	A	EL	**9.345**	0.80	0.268	1.84	A	EL	46.724	
		HS-20(Opr)	36.000	--	2.313	83.258	1.35	0.268	2.71	A	EL	46.724	0.574	2.31	A	EL	9.345	N/A	--	--	--	--	--	
LEGAL LOAD RATING	SV	SNSH	13.500	--	4.32	58.323	1.4	0.268	6.14	A	EL	46.724	0.574	5.46	A	EL	9.345	0.80	0.268	4.32	A	EL	46.724	
		SNGARBS2	20.000	--	3.143	62.855	1.4	0.268	4.47	A	EL	46.724	0.574	3.83	A	EL	9.345	0.80	0.268	3.14	A	EL	46.724	
		SNAGRIS2	22.000	--	2.945	64.794	1.4	0.268	4.19	A	EL	46.724	0.574	3.54	A	EL	9.345	0.80	0.268	2.95	A	EL	46.724	
		SNCOTTS3	27.250	--	2.148	58.522	1.4	0.268	3.05	A	EL	46.724	0.574	2.72	A	EL	9.345	0.80	0.268	2.15	A	EL	46.724	
		SNAGGRS4	34.925	--	1.765	61.649	1.4	0.268	2.51	A	EL	46.724	0.574	2.22	A	EL	9.345	0.80	0.268	1.77	A	EL	46.724	
		SNS5A	35.550	--	1.728	61.435	1.4	0.268	2.46	A	EL	46.724	0.574	2.24	A	EL	9.345	0.80	0.268	1.73	A	EL	46.724	
		SNS6A	39.950	--	1.573	62.861	1.4	0.268	2.24	A	EL	46.724	0.574	2.03	A	EL	9.345	0.80	0.268	1.57	A	EL	46.724	
		SNS7B	42.000	--	1.498	62.916	1.4	0.268	2.13	A	EL	46.724	0.574	1.97	A	EL	9.345	0.80	0.268	1.50	A	EL	46.724	
	TTST	TNAGRIT3	33.000	--	1.915	63.203	1.4	0.268	2.72	A	EL	46.724	0.574	2.42	A	EL	9.345	0.80	0.268	1.92	A	EL	46.724	
		TNT4A	33.075	--	1.92	63.518	1.4	0.268	2.73	A	EL	46.724	0.574	2.37	A	EL	9.345	0.80	0.268	1.92	A	EL	46.724	
		TNT6A	41.600	--	1.559	64.849	1.4	0.268	2.22	A	EL	46.724	0.574	2.07	A	EL	9.345	0.80	0.268	1.56	A	EL	46.724	
		TNT7A	42.000	--	1.561	65.548	1.4	0.268	2.22	A	EL	46.724	0.574	2.04	A	EL	9.345	0.80	0.268	1.56	A	EL	46.724	
		TNT7B	42.000	--	1.6	67.198	1.4	0.268	2.28	A	EL	46.724	0.574	1.94	A	EL	9.345	0.80	0.268	1.60	A	EL	46.724	
		TNAGRIT4	43.000	--	1.533	65.913	1.4	0.268	2.18	A	EL	46.724	0.574	1.88	A	EL	9.345	0.80	0.268	1.53	A	EL	46.724	
		TNAGT5A	45.000	--	1.45	65.269	1.4	0.268	2.06	A	EL	46.724	0.574	1.85	A	EL	9.345	0.80	0.268	1.45	A	EL	46.724	
		TNAGT5B	45.000	3	1.437	64.685	1.4	0.268	2.04	A	EL	46.724	0.574	1.79	A	EL	9.345	0.80	0.268	**1.44**	A	EL	**46.724**	

LOAD FACTORS:

	LIMIT STATE	γ_{DC}	γ_{DW}
DESIGN LOAD RATING FACTORS	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

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)

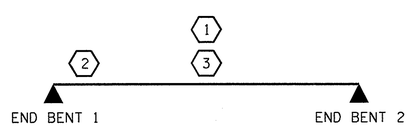
(2) DESIGN LOAD RATING (HS-20)

(3) LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



LRFR SUMMARY

FOR SPAN 'A'

PROJECT NO. BD-5102Z

PITT COUNTY

STATION: 16+09.43 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

LRFR SUMMARY FOR 95' BOX BEAM UNIT 75° SKEW & 105° SKEW (NON-INTERSTATE TRAFFIC)

NORTH CAROLINA PROFESSIONAL SEAL 22905 ENGINEER K. KEITH PASCHAL

11-26-13

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			16

ASSEMBLED BY : C. B. PRUETT DATE : 10/17/13
CHECKED BY : M. D. PISO DATE : 10/25/13

DRAWN BY : TMG 11/11
CHECKED BY : AAC 11/11

26-NOV-2013 07:47
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kpaschal

STD. NO. 39LRFR1_75&105S_95L