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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
							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	1.128	--	1.75	0.27	1.35	60'	EL	29.482	0.608	1.13	60'	EL	2.948	0.80	0.27	1.39	60'	EL	29.482	
		HL-93(Opr)	N/A	--	1.463	--	1.35	0.27	1.76	60'	EL	29.482	0.608	1.46	60'	EL	2.948	N/A	--	--	--	--	--	
		HS-20(Inv)	36.000	2	1.381	49.722	1.75	0.27	1.72	60'	EL	29.482	0.608	1.38	60'	EL	2.948	0.80	0.27	1.76	60'	EL	29.482	
		HS-20(Opr)	36.000	--	1.79	64.455	1.35	0.27	2.22	60'	EL	29.482	0.608	1.79	60'	EL	2.948	N/A	--	--	--	--	--	
LEGAL LOAD RATING	SV	SNSH	13.500	--	3.791	51.185	1.4	0.27	4.62	60'	EL	29.482	0.608	4.02	60'	EL	2.948	0.80	0.27	3.79	60'	EL	29.482	
		SNGARBS2	20.000	--	2.888	57.751	1.4	0.27	3.53	60'	EL	29.482	0.608	2.89	60'	EL	2.948	0.80	0.27	2.90	60'	EL	29.482	
		SNAGRIS2	22.000	--	2.691	59.194	1.4	0.27	3.39	60'	EL	29.482	0.608	2.69	60'	EL	2.948	0.80	0.27	2.78	60'	EL	29.482	
		SNCOTTS3	27.250	--	1.889	51.473	1.4	0.27	2.3	60'	EL	29.482	0.608	2.01	60'	EL	2.948	0.80	0.27	1.89	60'	EL	29.482	
		SNAGGRS4	34.925	--	1.608	56.157	1.4	0.27	1.96	60'	EL	29.482	0.608	1.69	60'	EL	2.948	0.80	0.27	1.61	60'	EL	29.482	
		SNS5A	35.550	--	1.57	55.826	1.4	0.27	1.91	60'	EL	29.482	0.608	1.72	60'	EL	2.948	0.80	0.27	1.57	60'	EL	29.482	
		SNS6A	39.950	--	1.453	58.064	1.4	0.27	1.77	60'	EL	29.482	0.608	1.58	60'	EL	2.948	0.80	0.27	1.45	60'	EL	29.482	
		SNS7B	42.000	--	1.385	58.152	1.4	0.27	1.69	60'	EL	29.482	0.608	1.56	60'	EL	2.948	0.80	0.27	1.38	60'	EL	29.482	
	TTST	TNAGRIT3	33.000	--	1.776	58.612	1.4	0.27	2.16	60'	EL	29.482	0.608	1.87	60'	EL	2.948	0.80	0.27	1.78	60'	EL	29.482	
		TNT4A	33.075	--	1.787	59.12	1.4	0.27	2.18	60'	EL	29.482	0.608	1.81	60'	EL	2.948	0.80	0.27	1.79	60'	EL	29.482	
		TNT6A	41.600	--	1.474	61.31	1.4	0.27	1.79	60'	EL	29.482	0.608	1.68	60'	EL	2.948	0.80	0.27	1.47	60'	EL	29.482	
		TNT7A	42.000	--	1.488	62.489	1.4	0.27	1.81	60'	EL	29.482	0.608	1.62	60'	EL	2.948	0.80	0.27	1.49	60'	EL	29.482	
		TNT7B	42.000	--	1.515	63.636	1.4	0.27	1.89	60'	EL	29.482	0.608	1.52	60'	EL	2.948	0.80	0.27	1.55	60'	EL	29.482	
		TNAGRIT4	43.000	--	1.464	62.958	1.4	0.27	1.79	60'	EL	29.482	0.608	1.46	60'	EL	2.948	0.80	0.27	1.47	60'	EL	29.482	
		TNAGT5A	45.000	--	1.378	62.016	1.4	0.27	1.68	60'	EL	29.482	0.608	1.47	60'	EL	2.948	0.80	0.27	1.38	60'	EL	29.482	
		TNAGT5B	45.000	3	1.356	61.038	1.4	0.27	1.65	60'	EL	29.482	0.608	1.39	60'	EL	2.948	0.80	0.27	1.36	60'	EL	29.482	

LOAD FACTORS:

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

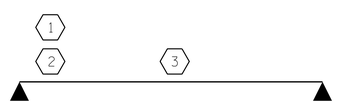
NOTES:

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.



LRFR SUMMARY

FOR SPAN 'B'

PROJECT NO. 17BP.9.R.3

DAVIDSON COUNTY

STATION: 12+65.20 -L-

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 030046 ENGINEER MATTHEW PAYNE

DocuSigned by: 3C4001646640F4D7... 6/10/2015

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
LRFR SUMMARY FOR 60' CORED SLAB UNIT 75° SKEW & 105° SKEW
(NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			22

ATKINS 1616 E. MILLBROOK ROAD, SUITE #310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

ASSEMBLED BY : C. BLAKES DATE : 2/13
CHECKED BY : M. PAYNE DATE : 5/15
DRAWN BY : CVC 6/10
CHECKED BY : DNS 6/10