LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR PRESTRESSED CONCRETE CORED SLABS

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(Inv)	N/A	1	1.06	--	1.75	0.279	1.44	C	EL	22	0.549	1.24	A	EL	1.7	0.80	0.275	1.06	B	EL	27.000	
		HL-93(Opr)	N/A	--	1.60	--	1.35	0.279	1.87	C	EL	22	0.549	1.60	A	EL	1.7	N/A	--	--	--	--	--	
		HS-20(Inv)	36.000	2	1.33	47.842	1.75	0.279	1.77	C	EL	22	0.549	1.42	A	EL	1.7	0.80	0.275	1.33	B	EL	27.000	
		HS-20(Opr)	36.000	--	1.84	66.386	1.35	0.279	2.29	C	EL	22	0.549	1.84	A	EL	1.7	N/A	--	--	--	--	--	
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500	--	2.79	37.678	1.40	0.279	4.32	C	EL	22	0.549	3.67	A	EL	1.7	0.80	0.275	2.79	B	EL	27.000	
		SNGARBS2	20.000	--	2.17	43.327	1.40	0.279	3.48	C	EL	22	0.549	2.77	A	EL	1.7	0.80	0.275	2.17	B	EL	27.000	
		SNAGRIS2	22.000	--	2.09	45.981	1.40	0.279	3.37	C	EL	17.6	0.549	2.64	A	EL	1.7	0.80	0.275	2.09	B	EL	27.000	
		SNCOTTS3	27.250	--	1.39	37.912	1.40	0.279	2.16	C	EL	22	0.549	1.85	A	EL	1.7	0.80	0.275	1.39	B	EL	27.000	
		SNAGGRS4	34.925	--	1.20	41.751	1.40	0.279	1.90	C	EL	22	0.549	1.65	A	EL	1.7	0.80	0.275	1.20	B	EL	27.000	
		SNS5A	35.550	--	1.17	41.478	1.40	0.279	1.85	C	EL	22	0.549	1.74	A	EL	1.7	0.80	0.275	1.17	B	EL	27.000	
		SNS6A	39.950	--	1.08	43.335	1.40	0.279	1.75	C	EL	22	0.549	1.64	A	EL	1.7	0.80	0.275	1.08	B	EL	27.000	
		SNS7B	42.000	--	1.03	43.408	1.40	0.279	1.66	C	EL	22	0.549	1.68	A	EL	1.7	0.80	0.275	1.03	B	EL	27.000	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000	--	1.33	43.792	1.40	0.279	2.14	C	EL	22	0.549	1.91	A	EL	1.7	0.80	0.275	1.33	B	EL	27.000	
		TNT4A	33.075	--	1.34	44.217	1.40	0.279	2.16	C	EL	22	0.549	1.80	A	EL	1.7	0.80	0.275	1.34	B	EL	27.000	
		TNT6A	41.600	--	1.11	46.059	1.40	0.279	1.82	C	EL	22	0.549	1.77	A	EL	1.7	0.80	0.275	1.11	B	EL	27.000	
		TNT7A	42.000	--	1.12	47.057	1.40	0.279	1.85	C	EL	22	0.549	1.64	A	EL	1.7	0.80	0.275	1.12	B	EL	27.000	
		TNT7B	42.000	--	1.17	49.112	1.40	0.279	1.93	C	EL	22	0.549	1.59	A	EL	1.7	0.80	0.275	1.17	B	EL	27.000	
		TNAGRIT4	43.000	--	1.11	47.586	1.40	0.279	1.84	C	EL	22	0.549	1.53	A	EL	1.7	0.80	0.275	1.11	B	EL	27.000	
		TNAGT5A	45.000	--	1.04	46.655	1.40	0.279	1.71	C	EL	22	0.549	1.61	A	EL	1.7	0.80	0.275	1.04	B	EL	27.000	
		TNAGT5B	45.000	3	1.02	45.828	1.40	0.279	1.67	C	EL	22	0.549	1.44	A	EL	1.7	0.80	0.275	1.02	B	EL	27.000	

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.

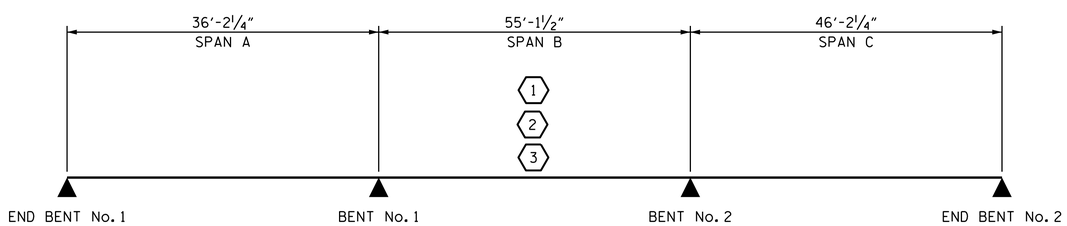
ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

COMMENTS:

1.
2.
3.
4.

(#) 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

PROJECT NO. B-5124
NASH COUNTY
STATION: 36+88.50 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LRFR SUMMARY FOR PRESTRESSED CONCRETE CORED SLABS
(NON-INTERSTATE TRAFFIC)

NORTH CAROLINA PROFESSIONAL SEAL 14045 ENGINEER TIMOTHY L. COGGINS
3/9/2015
DocuSigned by: Tim Coggins DEFD4A8D48FA47B...

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

SHEET NO. S-26
TOTAL SHEETS 71

DRAWN BY : GHOLAMREZAK KOUCHEKI DATE : 12/19/13
CHECKED BY : D.G. ELY DATE : 2/19/14
DESIGN ENGINEER OF RECORD: K.P.SEDAI DATE : 11/17/14

09-MAR-2015 07:54
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STR. #2 STD. NO. LRFR1