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10/31/2025

Jones

DRAWN BY : LEM

CHECKED BY : JTG

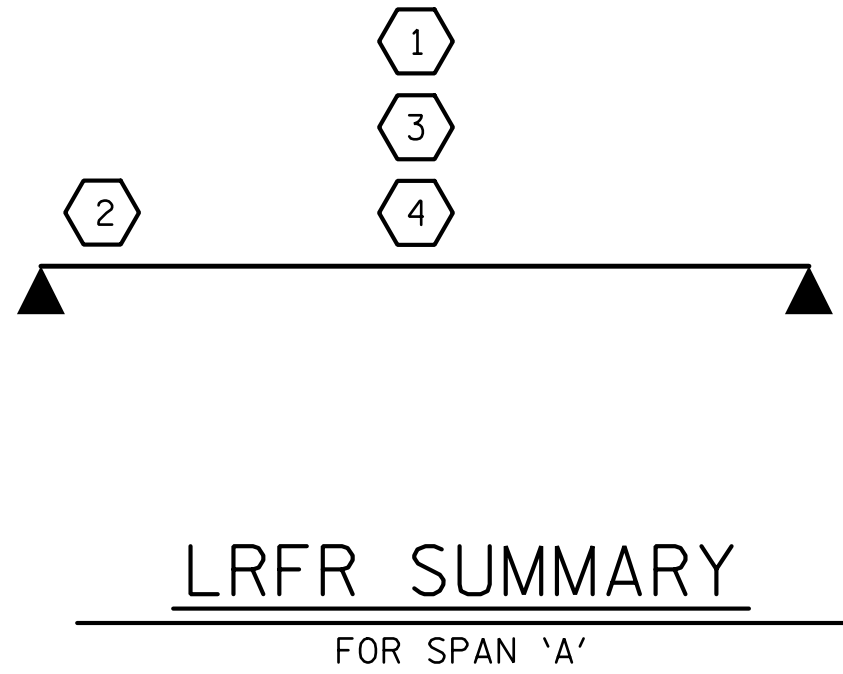
DESIGN ENGINEER OF RECORD : JWJ

DATE : 7-17

DATE : 11-17

DATE : 10-25

LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS																								
LOAD TYPE		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		HL-93(Inv)	N/A	1	1.03	--	1.75	0.248	1.04	70'	EL	34.423	0.655	1.06	70'	EL	6.885	0.80	0.248	1.03	70'	I	34.423	
		HL-93(0pr)	N/A	--	1.35	--	1.35	0.248	1.35	70'	EL	34.423	0.655	1.37	70'	EL	6.885	N/A	--	--	--	--	--	
		HS-20(Inv)	36.000	2	1.32	47.520	1.75	0.248	1.35	70'	EL	34.423	0.655	1.32	70'	EL	6.885	0.80	0.248	1.34	70'	I	34.423	
		HS-20(0pr)	36.000	--	1.71	61.560	1.35	0.248	1.75	70'	EL	34.423	0.655	1.71	70'	EL	6.885	N/A	--	--	--	--	--	
LEGAL LOAD	SINGLE VEHICLE (SV)	SNSH	13.500	--	2.99	40.365	1.4	0.248	3.76	70'	EL	34.423	0.655	3.9	70'	EL	6.885	0.80	0.248	2.99	70'	I	34.423	
		SNGARBS2	20.000	--	2.24	44.800	1.4	0.248	2.82	70'	EL	34.423	0.655	2.78	70'	EL	6.885	0.80	0.248	2.24	70'	I	34.423	
		SNAGRIS2	22.000	--	2.13	46.860	1.4	0.248	2.68	70'	EL	34.423	0.655	2.58	70'	EL	6.885	0.80	0.248	2.13	70'	I	34.423	
		SNCOTTS3	27.250	--	1.49	40.603	1.4	0.248	1.87	70'	EL	34.423	0.655	1.95	70'	EL	6.885	0.80	0.248	1.49	70'	I	34.423	
		SNAGGRS4	34.925	--	1.25	43.656	1.4	0.248	1.57	70'	EL	34.423	0.655	1.62	70'	EL	6.885	0.80	0.248	1.25	70'	I	34.423	
		SNS5A	35.550	--	1.22	43.371	1.4	0.248	1.54	70'	EL	34.423	0.655	1.65	70'	EL	6.885	0.80	0.248	1.22	70'	I	34.423	
		SNS6A	39.950	--	1.12	44.744	1.4	0.248	1.41	70'	EL	34.423	0.655	1.5	70'	EL	6.885	0.80	0.248	1.12	70'	I	34.423	
		SNS7B	42.000	--	1.07	44.940	1.4	0.248	1.35	70'	EL	34.423	0.655	1.48	70'	EL	6.885	0.80	0.248	1.07	70'	I	34.423	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000	--	1.37	45.210	1.4	0.248	1.72	70'	EL	34.423	0.655	1.79	70'	EL	6.885	0.80	0.248	1.37	70'	I	34.423	
		TNT4A	33.075	--	1.38	45.644	1.4	0.248	1.73	70'	EL	34.423	0.655	1.74	70'	EL	6.885	0.80	0.248	1.38	70'	I	34.423	
		TNT6A	41.600	--	1.13	47.008	1.4	0.248	1.42	70'	EL	34.423	0.655	1.58	70'	EL	6.885	0.80	0.248	1.13	70'	I	34.423	
		TNT7A	42.000	--	1.13	47.460	1.4	0.248	1.43	70'	EL	34.423	0.655	1.55	70'	EL	6.885	0.80	0.248	1.13	70'	I	34.423	
		TNT7B	42.000	--	1.18	49.560	1.4	0.248	1.48	70'	EL	34.423	0.655	1.44	70'	EL	6.885	0.80	0.248	1.18	70'	I	34.423	
		TNAGRIT4	43.000	--	1.12	48.160	1.4	0.248	1.41	70'	EL	34.423	0.655	1.4	70'	EL	6.885	0.80	0.248	1.12	70'	I	34.423	
TNAGT5A		45.000	--	1.05	47.250	1.4	0.248	1.32	70'	EL	34.423	0.655	1.39	70'	EL	6.885	0.80	0.248	1.05	70'	I	34.423		
TNAGT5B	45.000	3	1.04	46.800	1.4	0.248	1.31	70'	EL	34.423	0.655	1.33	70'	EL	6.885	0.80	0.248	1.04	70'	I	34.423			
EMERGENCY VEHICLE (EV)	EV2	28.750	--	1.59	45.713	1.3	0.248	2.15	70'	EL	34.423	0.655	2.08	70'	EL	6.885	0.80	0.248	1.59	70'	I	34.423		
	EV3	43.000	4	1.04	44.720	1.3	0.248	1.41	70'	EL	34.423	0.655	1.41	70'	EL	6.885	0.80	0.248	1.04	70'	I	34.423		



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:

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CONTROLLING LOAD RATING

1 DESIGN LOAD RATING (HL-93)

2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING **

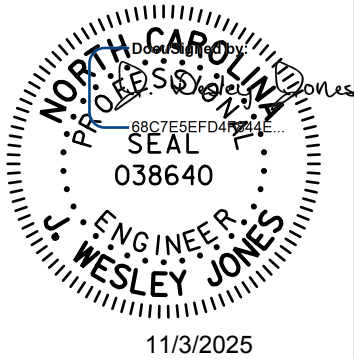
4 EMERGENCY VEHICLE LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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

PROJECT NO. B-6029
MACON COUNTY
STATION: 17+07.50 -L-



stv

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Charlotte, NC 28203
NC License Number F-0991

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			17