

## 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			
						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	1.83	--	1.75	0.14	<b>1.83</b>	70'	EL	34.4	0.35	3.04	70'	EL	13.4	0.80	0.14	2.76	70'	EL	34.4		
	HL-93(Opr)	N/A	--	2.37	--	1.35	0.14	2.37	70'	EL	34.4	0.35	4.04	70'	EL	13.4	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	②	2.37	85.32	1.75	0.14	<b>2.37</b>	70'	EL	34.4	0.35	3.79	70'	EL	13.4	0.80	0.14	3.58	70'	EL	34.4		
	HS-20(Opr)	36.000	--	3.07	110.52	1.35	0.14	3.07	70'	EL	34.4	0.35	5.02	70'	EL	13.4	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	6.61	89.24	1.4	0.14	6.61	70'	EL	34.4	0.35	11.67	70'	EL	13.4	0.80	0.14	8.00	70'	EL	34.4	
		SNGARBS2	20.000	--	4.96	99.20	1.4	0.14	4.96	70'	EL	34.4	0.35	8.31	70'	EL	13.4	0.80	0.14	6.00	70'	EL	34.4	
		SNAGRIS2	22.000	--	4.71	103.62	1.4	0.14	4.71	70'	EL	34.4	0.35	7.72	70'	EL	13.4	0.80	0.14	5.70	70'	EL	34.4	
		SNCOTTS3	27.250	--	3.29	89.65	1.4	0.14	3.29	70'	EL	34.4	0.35	5.70	70'	EL	13.4	0.80	0.14	3.98	70'	EL	34.4	
		SNAGGRS4	34.925	--	2.76	96.39	1.4	0.14	2.76	70'	EL	34.4	0.35	4.73	70'	EL	13.4	0.80	0.14	3.34	70'	EL	34.4	
		SNS5A	35.550	--	2.70	95.85	1.4	0.14	2.70	70'	EL	34.4	0.35	4.79	70'	EL	13.4	0.80	0.14	3.27	70'	EL	34.4	
	TTST	SNS6A	39.950	--	2.48	99.08	1.4	0.14	2.48	70'	EL	34.4	0.35	4.40	70'	EL	13.4	0.80	0.14	3.00	70'	EL	34.4	
		SNS7B	42.000	--	2.36	99.12	1.4	0.14	2.36	70'	EL	34.4	0.35	4.35	70'	EL	13.4	0.80	0.14	2.86	70'	EL	34.4	
		TNAGRIT3	33.000	--	3.03	99.99	1.4	0.14	3.03	70'	EL	34.4	0.35	5.28	70'	EL	13.4	0.80	0.14	3.67	70'	EL	34.4	
		TNT4A	33.075	--	3.04	100.55	1.4	0.14	3.04	70'	EL	34.4	0.35	5.11	70'	EL	13.4	0.80	0.14	3.68	70'	EL	34.4	
		TNT6A	41.600	--	2.49	103.58	1.4	0.14	2.49	70'	EL	34.4	0.35	4.68	70'	EL	13.4	0.80	0.14	3.02	70'	EL	34.4	
		TNT7A	42.000	--	2.51	105.42	1.4	0.14	2.51	70'	EL	34.4	0.35	4.48	70'	EL	13.4	0.80	0.14	3.04	70'	EL	34.4	
		TNT7B	42.000	--	2.60	109.20	1.4	0.14	2.60	70'	EL	34.4	0.35	4.18	70'	EL	13.4	0.80	0.14	3.15	70'	EL	34.4	
		TNAGRIT4	43.000	--	2.47	106.21	1.4	0.14	2.47	70'	EL	34.4	0.35	4.06	70'	EL	13.4	0.80	0.14	2.99	70'	EL	34.4	
TNAGT5A	45.000	--	2.33	104.85	1.4	0.14	2.33	70'	EL	34.4	0.35	4.07	70'	EL	13.4	0.80	0.14	2.82	70'	EL	34.4			
TNAGT5B	45.000	③	2.30	103.50	1.4	0.14	<b>2.30</b>	70'	EL	34.4	0.35	3.84	70'	EL	13.4	0.80	0.14	2.78	70'	EL	34.4			

**LOAD FACTORS:**

DESIGN LOAD RATING FACTORS	LIMIT STATE	$\gamma_{DC}$	$\gamma_{DW}$
	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)

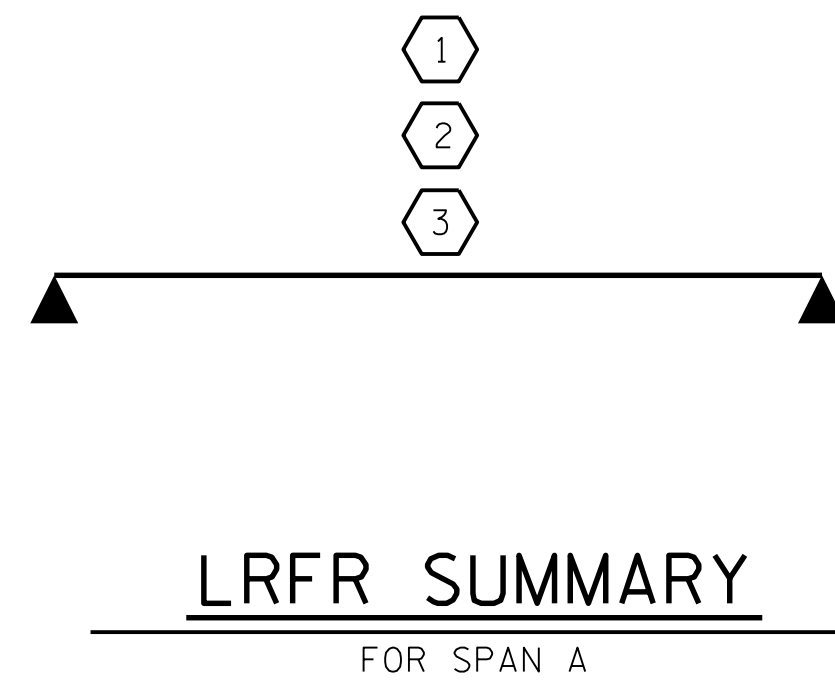
③ LEGAL LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

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GIRDER LOCATION

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



PROJECT NO. B-5644  
PENDER COUNTY  
 STATION: 15+55.00 -L-

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

**CDM Smith**  
 CDM SMITH  
 5400 Glenwood Avenue, Suite 400  
 Raleigh, NC 27612-3228  
 NC COA No. F-1255

DRAWN BY : VDK DATE : 5/19  
 CHECKED BY : THF DATE : 4/20  
 DESIGN ENGINEER : VDK DATE : 5/20

DWG. No.

STATE OF NORTH CAROLINA  
 PROFESSIONAL ENGINEER  
 SEAL  
 16301  
 TUNG FANG  
 7/16/2020

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**LRFR SUMMARY FOR  
 70' CORED SLAB UNIT  
 120° SKEW  
 SPAN A  
 (NON-INTERSTATE TRAFFIC)**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-04
1			3			TOTAL SHEETS
2			4			19