

## LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS

LEVEL	VEHICLE	WEIGHT (TONS)	CONTROLLING LOAD RATING (#)	MINIMUM RATING FACTOR (RF)	TONS = W × RF	STRENGTH I LIMIT STATE								SERVICE III LIMIT STATE						COMMENT NUMBER			
						MOMENT				SHEAR				MOMENT									
						LIVE-LOAD FACTORS (γ <sub>LL</sub> )	DISTRIBUTION FACTOR (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FT)	DISTRIBUTION FACTOR (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FT)	LIVE-LOAD FACTORS (γ <sub>LL</sub> )	DISTRIBUTION FACTOR (DF)	RATING FACTOR		SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FT)
LOAD DESIGN RATING	H-10 ( INVENTORY )	10.00	①	3.73	37.30	1.75	0.73	3.73	A	E	81.98	0.73	5.59	A	E	77.92	0.80	0.73	4.20	A	E	41.70	1,3
	H-10 ( OPERATING )	10.00		4.83	48.30	1.35	0.73	4.83	A	E	81.98	0.73	7.25	A	E	77.92	N/A	--	--	--	--	--	1,2,3
	PEDESTRIAN ( INVENTORY )	N/A	②	1.30	--	1.75	0.50	1.30	A	E	81.98	0.50	2.76	A	E	75.06	0.80	0.50	2.48	A	E	81.98	1,3
	PEDESTRIAN ( OPERATING )	N/A		1.68	--	1.35	0.50	1.68	A	E	81.98	0.50	3.58	A	E	75.06	N/A	--	--	--	--	--	1,2,3

**LOAD FACTORS:**

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ <sub>DC</sub>	γ <sub>DW</sub>
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

**NOTES:**

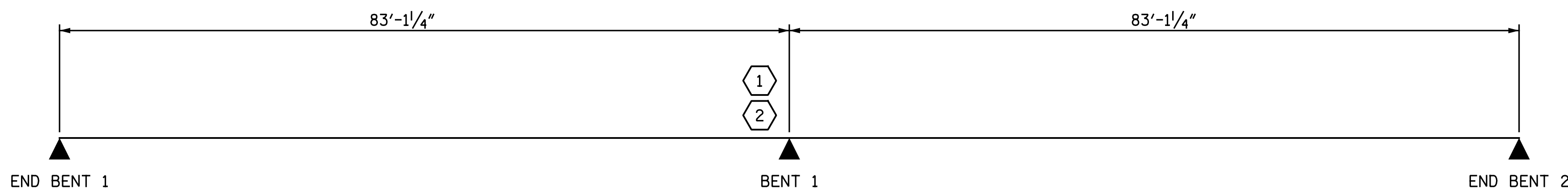
MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

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

**COMMENTS:**

1. ALL DISTANCES ARE MEASURED FROM THE CENTERLINE OF SUBSTRUCTURE UNIT.
2. SERVICE III LIMIT STATE NOT APPLICABLE AT THE OPERATING LEVEL.
3. SPAN A AND B ARE SIMILAR

# CONTROLLING LOAD RATING
① DESIGN LOAD RATING (H-10)
② DESIGN LOAD RATING (PEDESTRIAN)
GIRDER LOCATION
E - EXTERIOR GIRDER



PROJECT NO. U-2524D  
GUILFORD COUNTY  
 STATION: 13+62.84 -PED-  
452+42.11 -L-  
 SHEET 4 OF 4

LRFR SUMMARY

DRAWN BY : N. B. SPEAKS DATE : 2-8-16  
 CHECKED BY : A. M. HOUSTON DATE : 2-9-16

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH  <b>GENERAL DRAWING</b>  LRFR SUMMARY FOR PRESTRESSED CONCRETE GIRDERS																	
		REVISIONS																	
	Michael Baker Engineering 8000 Regency Parkway, Suite 600 Cary, North Carolina 27518 NC License No.: F-1084	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>BY:</th> <th>DATE:</th> <th>NO.</th> <th>BY:</th> <th>DATE:</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td>4</td> <td></td> <td></td> </tr> </tbody> </table>	NO.	BY:	DATE:	NO.	BY:	DATE:	1			3			2			4	
NO.	BY:	DATE:	NO.	BY:	DATE:														
1			3																
2			4																

SHEET NO. **S2-4**  
 TOTAL SHEETS **33**

cmayhew 5/5/2016 12:03:14 PM  
 File Name: Y:\Projects\NCDOT\U-2524D\Site\1.DWG\Final\402\_005\_U2524D\_SMLL\_GD04.dgn