

9/13/2017 1:16:29 PM G:\Projects\2016\U-2525C (Greensboro Eastern Loop)\Structures\Site 8\Drawings\Final\Left Lane\U2525C_SMU_LRFR_Site 8_L1.dgn

LOAD FACTORS:

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

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			
						LIVE-LOAD FACTORS (%LL)	MOMENT					SHEAR					LIVE-LOAD FACTORS (%LL)	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 (INVENTORY)	N/A	1	1.12	--	1.75	0.838	1.28	A	EL	53.3	0.845	1.41	A	EL	42.5	0.80	0.838	1.12	A	EL	53.3		
	HL-93 (OPERATING)	N/A		1.66	--	1.35	0.838	1.66	A	EL	53.3	0.893	2.11	A	I	10.1	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	2	1.59	57.2	1.75	0.838	1.82	A	EL	53.3	0.893	2.21	A	I	10.1	0.80	0.838	1.59	A	EL	53.3		
	HS-20 (OPERATING)	36.000		2.35	84.6	1.35	0.838	2.35	A	EL	53.3	0.893	2.90	A	I	10.1	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SH		4.12	51.5	1.40	0.838	5.89	A	EL	53.3	0.893	7.67	A	I	10.1	0.80	0.838	4.12	A	EL	53.3		
		S3C		2.41	51.8	1.40	0.838	3.44	A	EL	53.3	0.893	4.44	A	I	10.1	0.80	0.838	2.41	A	EL	53.3		
		S3A		2.28	51.9	1.40	0.838	3.26	A	EL	53.3	0.893	4.21	A	I	10.1	0.80	0.838	2.28	A	EL	53.3		
		S4A		1.99	53.2	1.40	0.838	2.85	A	EL	53.3	0.893	3.64	A	I	10.1	0.80	0.838	1.99	A	EL	53.3		
		S5A		1.76	53.7	1.40	0.838	2.51	A	EL	53.3	0.893	3.29	A	I	10.1	0.80	0.838	1.76	A	EL	53.3		
		S6A		1.59	54.9	1.40	0.838	2.27	A	EL	53.3	0.893	2.94	A	I	10.1	0.80	0.838	1.59	A	EL	53.3		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	S7B		1.44	55.4	1.40	0.838	2.06	A	EL	53.3	0.893	2.71	A	I	10.1	0.80	0.838	1.44	A	EL	53.3		
		S7A		3	1.41	56.4	1.40	0.838	2.02	A	EL	53.3	0.893	2.73	A	I	10.1	0.80	0.838	1.41	A	EL	53.3	
		T4A			1.95	55.1	1.40	0.838	2.79	A	EL	53.3	0.893	3.50	A	I	10.1	0.80	0.838	1.95	A	EL	53.3	
		T5B			1.71	54.7	1.40	0.838	2.45	A	EL	53.3	0.893	3.26	A	I	10.1	0.80	0.838	1.71	A	EL	53.3	
		T6A			1.56	56.2	1.40	0.838	2.23	A	EL	53.3	0.893	2.96	A	I	10.1	0.80	0.838	1.56	A	EL	53.3	
		T7A			1.44	57.6	1.40	0.838	2.06	A	EL	53.3	0.893	2.73	A	I	10.1	0.80	0.838	1.44	A	EL	53.3	
T7B			1.51	60.4	1.40	0.838	2.16	A	EL	53.3	0.893	2.60	A	I	10.1	0.80	0.838	1.51	A	EL	53.3			

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:

DISTANCE FROM LEFT END OF SPAN IS MEASURED FROM \odot BEARING.

CONTROLLING LOAD RATING

1 DESIGN LOAD RATING (HL-93)

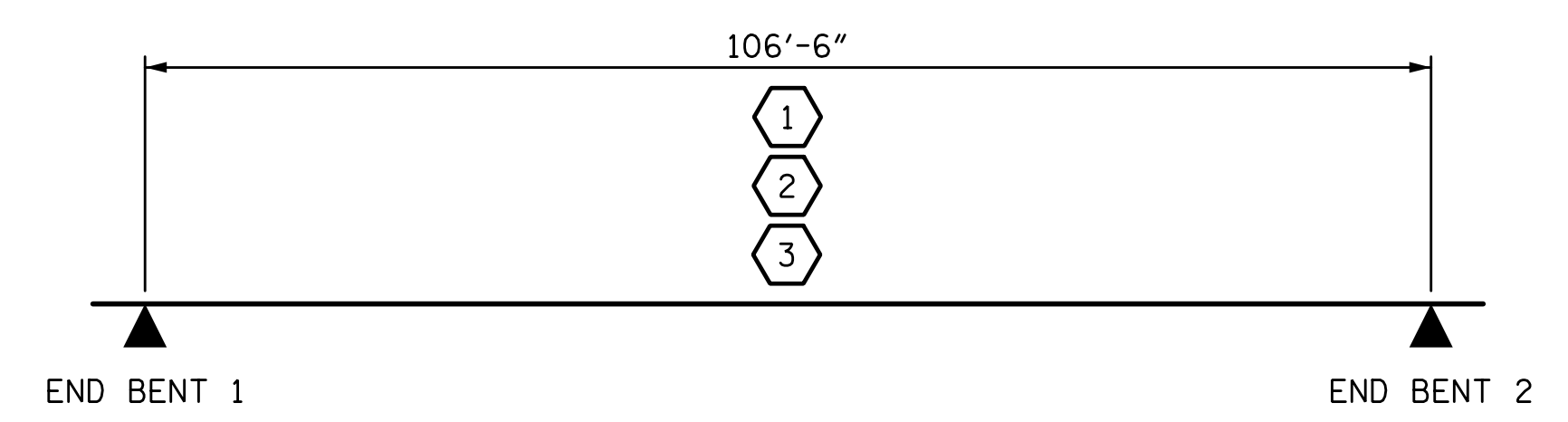
2 DESIGN LOAD RATING (HS-20)

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. U-2525C
GUILFORD COUNTY
 STATION: 470+43.12 -L-
24+51.12 -Y6-
 SHEET 5 OF 5

DRAWN BY: S.D. COOPER DATE: 8-17
 CHECKED BY: M.A. AVERETTE DATE: 8-17
 DESIGN ENGINEER OF RECORD: M.A. AVERETTE DATE: 8-17

PLANS PREPARED BY:
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 LICENSURE NO. C-2521



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 LRFR SUMMARY FOR
 PRESTRESSED
 CONCRETE GIRDERS
 (INTERSTATE TRAFFIC)
 LEFT LANE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-5
1			3			TOTAL SHEETS
2			4			32

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**