

5/24/2017 1:05:21 PM G:\Projects\2016\U-2525C (Greensboro Eastern Loop)\Drawings\Final\U2525C_SMU_LRFR-SITE9.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	1.11	--	1.75	0.859	1.35	A	EL	61.4	0.772	1.35	A	I	11.7	0.80	0.859	1.11	A	EL	61.4		
	HL-93 (OPERATING)	N/A		1.75	--	1.35	0.859	1.75	A	EL	61.4	0.772	1.78	A	I	11.7	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.63	58.7	1.75	0.859	1.98	A	EL	61.4	0.772	1.94	A	I	11.7	0.80	0.859	1.63	A	EL	61.4		
	HS-20 (OPERATING)	36.000		2.56	92.2	1.35	0.859	2.57	A	EL	61.4	0.772	2.56	A	I	11.7	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.16	42.7	1.40	0.859	6.03	A	EL	61.4	0.772	6.37	A	I	11.7	0.80	0.859	3.16	A	EL	61.4	
		SNGARBS2	20.000		2.26	45.2	1.40	0.859	4.30	A	EL	61.4	0.772	4.39	A	I	11.7	0.80	0.859	2.26	A	EL	61.4	
		SNAGRIS2	22.000		2.10	46.2	1.40	0.859	4.00	A	EL	61.4	0.772	4.02	A	I	11.7	0.80	0.859	2.10	A	EL	61.4	
		SNCOTTS3	27.250		1.57	42.8	1.40	0.859	2.99	A	EL	61.4	0.772	3.10	A	I	11.7	0.80	0.859	1.57	A	EL	61.4	
		SNAGGRS4	34.925		1.27	44.4	1.40	0.859	2.43	A	EL	61.4	0.772	2.48	A	I	11.7	0.80	0.859	1.27	A	EL	61.4	
		SNS5A	35.550		1.25	44.4	1.40	0.859	2.38	A	EL	61.4	0.772	2.48	A	I	11.7	0.80	0.859	1.25	A	EL	61.4	
		SNS6A	39.950		1.13	45.1	1.40	0.859	2.15	A	EL	61.4	0.772	2.21	A	I	11.7	0.80	0.859	1.13	A	EL	61.4	
	SNS7B	42.000		1.08	45.4	1.40	0.859	2.05	A	EL	61.4	0.772	2.15	A	I	11.7	0.80	0.859	1.08	A	EL	61.4		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.37	45.2	1.40	0.859	2.62	A	EL	61.4	0.772	2.69	A	I	11.7	0.80	0.859	1.37	A	EL	61.4	
		TNT4A	33.075		1.38	45.6	1.40	0.859	2.62	A	EL	61.4	0.772	2.65	A	I	11.7	0.80	0.859	1.38	A	EL	61.4	
		TNT6A	41.600		1.11	46.2	1.40	0.859	2.12	A	EL	61.4	0.772	2.23	A	I	11.7	0.80	0.859	1.11	A	EL	61.4	
		TNT7A	42.000		1.11	46.6	1.40	0.859	2.11	A	EL	61.4	0.772	2.19	A	I	11.7	0.80	0.859	1.11	A	EL	61.4	
		TNT7B	42.000		1.13	47.5	1.40	0.859	2.15	A	EL	61.4	0.772	2.11	A	I	11.7	0.80	0.859	1.13	A	EL	61.4	
		TNAGRIT4	43.000		1.09	46.9	1.40	0.859	2.07	A	EL	61.4	0.772	2.05	A	I	11.7	0.80	0.859	1.09	A	EL	61.4	
TNAGT5A		45.000		1.03	46.4	1.40	0.859	1.96	A	EL	61.4	0.772	2.00	A	I	11.7	0.80	0.859	1.03	A	EL	61.4		
TNAGT5B	45.000	③	1.02	45.9	1.40	0.859	1.95	A	EL	61.4	0.772	1.95	A	I	11.7	0.80	0.859	1.02	A	EL	61.4			

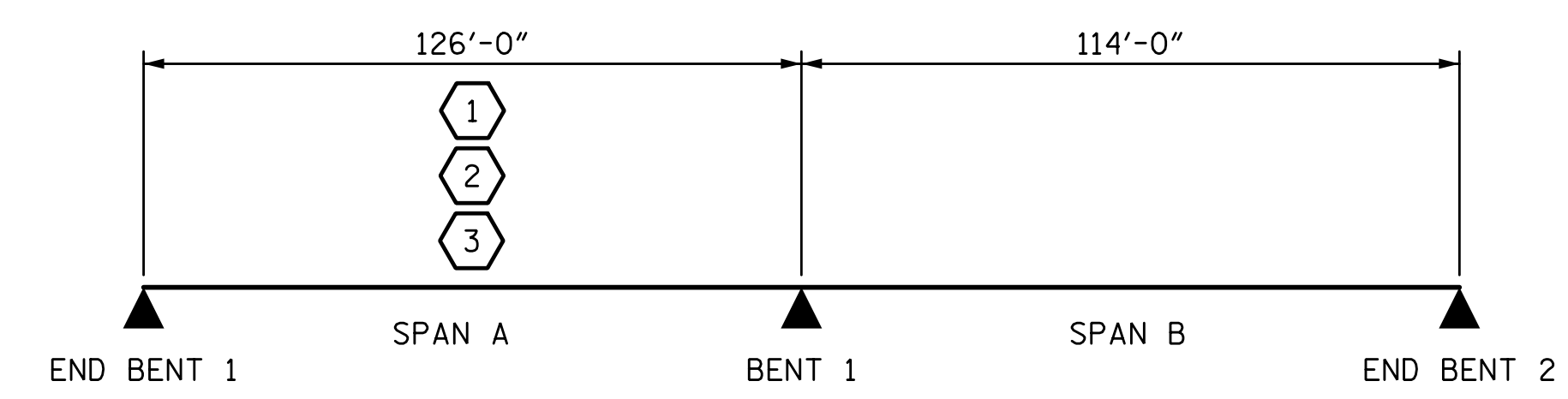
NOTES:

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 ϕ BEARING.

③	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	

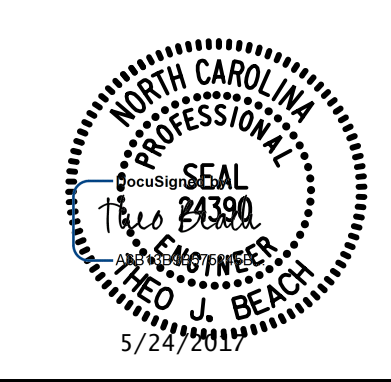


LRFR SUMMARY

PROJECT NO. U-2525C
GUILFORD COUNTY
 STATION: 25+52.71 -Y7-
522+73.40 -L-
 SHEET 4 OF 4

DRAWN BY: S.D. COOPER DATE: 3-17
 CHECKED BY: T.J. BEACH DATE: 3-17
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 3-17

PLANS PREPARED BY:
S&E IMPSON ENGINEERS ASSOCIATES
 5640 Dillard Drive Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.slmpsonengr.com
 LICENSURE NO. C-2521



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 LRFR SUMMARY
 FOR PRESTRESSED
 CONCRETE GIRDER
 (NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S10-4
1			3			TOTAL SHEETS
2			4			36

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