

LOAD FACTORS:

DESIGN LOAD RATING FACTORS

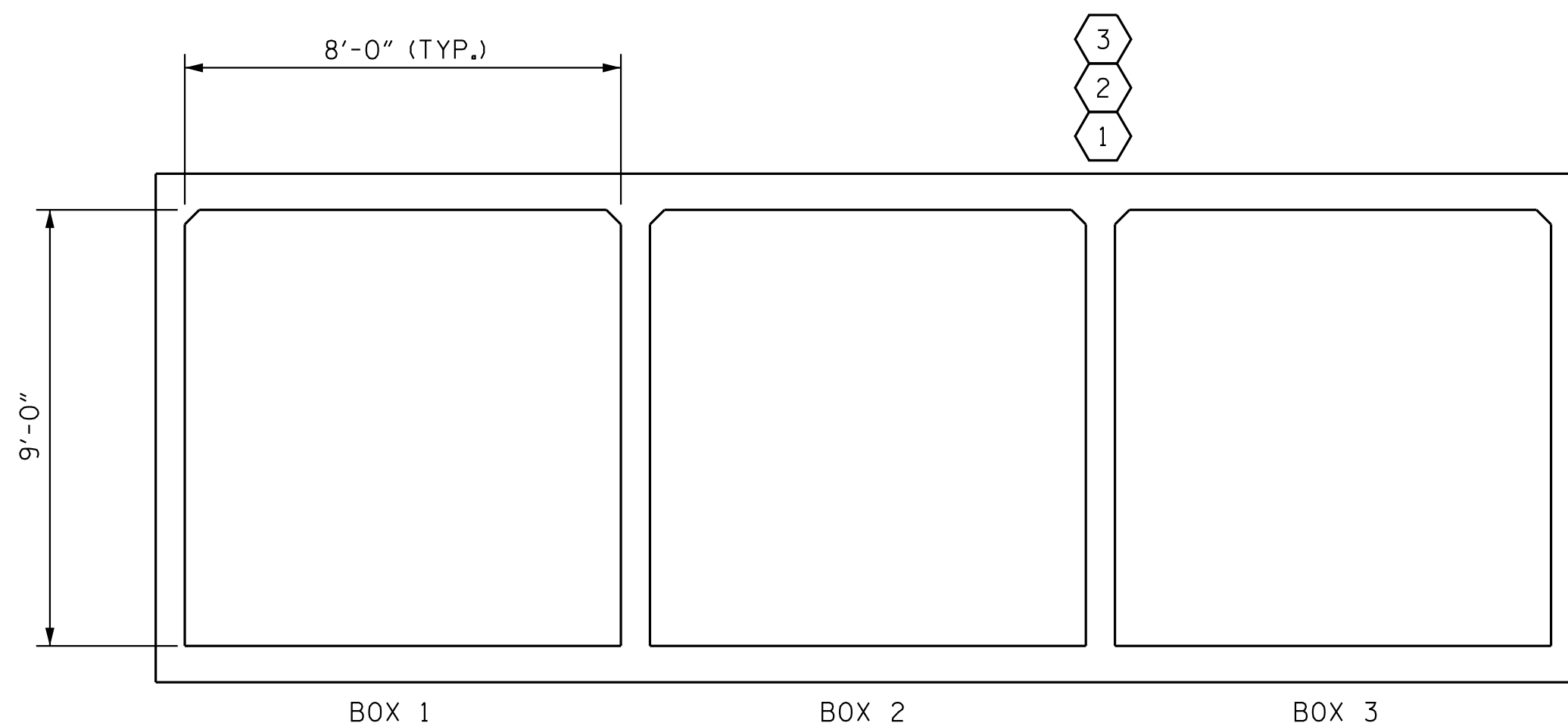
LOAD TYPE	MAX FACTOR	MIN FACTOR
DC	1.25	0.90
DW	1.50	0.65
EV	1.30	0.90
EH	1.35	0.90
ES	1.35	0.90
LS	1.75	--
WA	1.00	--

NOTE:  
RATING FACTORS ARE BASED ON THE STRENGTH I LIMIT STATE.

COMMENTS:  
1.  
2.  
3.  
4.

LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR REINFORCED CONCRETE BOX CULVERTS															
LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING #	MINIMUM RATING FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE								COMMENT NUMBER	
						LIVE-LOAD FACTORS (γ <sub>LL</sub> )	MOMENT				SHEAR				
							RATING FACTOR	BOX NO.	ELEMENT TYPE	DISTANCE FROM LEFT END OF ELEMENT (ft)	RATING FACTOR	BOX NO.	ELEMENT TYPE		DISTANCE FROM LEFT END OF ELEMENT (ft)
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	①	1.13	--	1.75	1.47	2	TOP SLAB	13.21	1.13	2	TOP SLAB	17.33	
	HL-93 (OPERATING)	N/A		1.47	--	1.35	1.90	2	TOP SLAB	13.21	1.47	2	TOP SLAB	17.33	
	HS-20 (INVENTORY)	36,000	②	1.26	45.36	1.75	1.56	2	TOP SLAB	13.21	1.26	2	TOP SLAB	17.33	
	HS-20 (OPERATING)	36,000		1.63	58.68	1.35	2.02	2	TOP SLAB	13.21	1.63	2	TOP SLAB	17.33	
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SH		3.05	41.18	1.40	3.30	2	TOP SLAB	13.21	3.05	2	TOP SLAB	17.33	
		S3C	21,500		1.91	41.07	1.40	3.26	2	TOP SLAB	13.21	1.91	2	TOP SLAB	17.33
		S3A	22,750		1.91	43.45	1.40	3.26	2	TOP SLAB	13.21	1.91	2	TOP SLAB	17.33
		S4A	26,750		1.88	50.29	1.40	3.20	2	TOP SLAB	13.21	1.88	2	TOP SLAB	17.33
		S5A	30,500		1.86	56.73	1.40	3.17	2	TOP SLAB	13.21	1.86	2	TOP SLAB	17.33
		S6A	34,500		1.86	64.17	1.40	3.19	2	TOP SLAB	13.21	1.86	2	TOP SLAB	17.33
		S7B	38,500	③	1.85	71.23	1.40	3.19	2	TOP SLAB	13.21	1.85	2	TOP SLAB	17.33
		S7A	40,000		1.85	74.00	1.40	3.16	2	TOP SLAB	13.21	1.85	2	TOP SLAB	17.33
	TRUCK TRACTOR SEMI-TRAILER (TTST)	T4A	28,250		1.89	53.39	1.40	3.19	2	TOP SLAB	13.21	1.89	2	TOP SLAB	17.33
		T5B	32,000		1.88	60.16	1.40	3.20	2	TOP SLAB	13.21	1.88	2	TOP SLAB	17.33
		T6A	36,000		1.88	67.68	1.40	3.18	2	TOP SLAB	13.21	1.88	2	TOP SLAB	17.33
		T7A	40,000		1.88	75.20	1.40	3.13	2	TOP SLAB	13.21	1.88	2	TOP SLAB	17.33
	T7B	40,000		1.87	74.80	1.40	3.19	2	TOP SLAB	13.21	1.87	2	TOP SLAB	17.33	

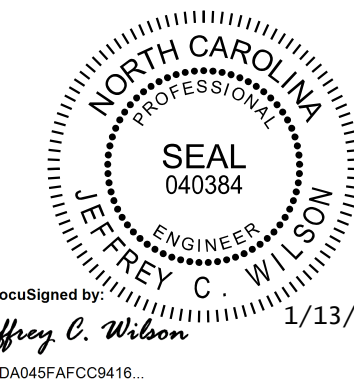
#	CONTROLLING LOAD RATING
①	DESIGN LOAD RATING (HL-93)
②	DESIGN LOAD RATING (HS-20)
③	LEGAL LOAD RATING **
**	SEE CHART FOR VEHICLE TYPE



LRFR SUMMARY  
(LOOKING DOWNSTREAM)

PROJECT NO. U-2579BA  
FORSYTH COUNTY  
STATION: 45+66.21 -Y4-

SHEET 8 OF 8



**Kimley»Horn**  
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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
STANDARD  
LRFR SUMMARY FOR  
REINFORCED CONCRETE  
BOX CULVERTS  
(INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-8
1			3			TOTAL SHEETS
2			4			8

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

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STD. NO. LRFR6

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ASSEMBLED BY : J.J. KIMBLE	DATE : 1/20
CHECKED BY : J.C. WILSON	DATE : 1/20
DRAWN BY : WMC 7/11	REV. 10/1/11 MAA/GM
CHECKED BY : GM 7/11	REV. 12/17 MAA/THG