

LOAD FACTORS:

DESIGN LOAD RATING FACTORS

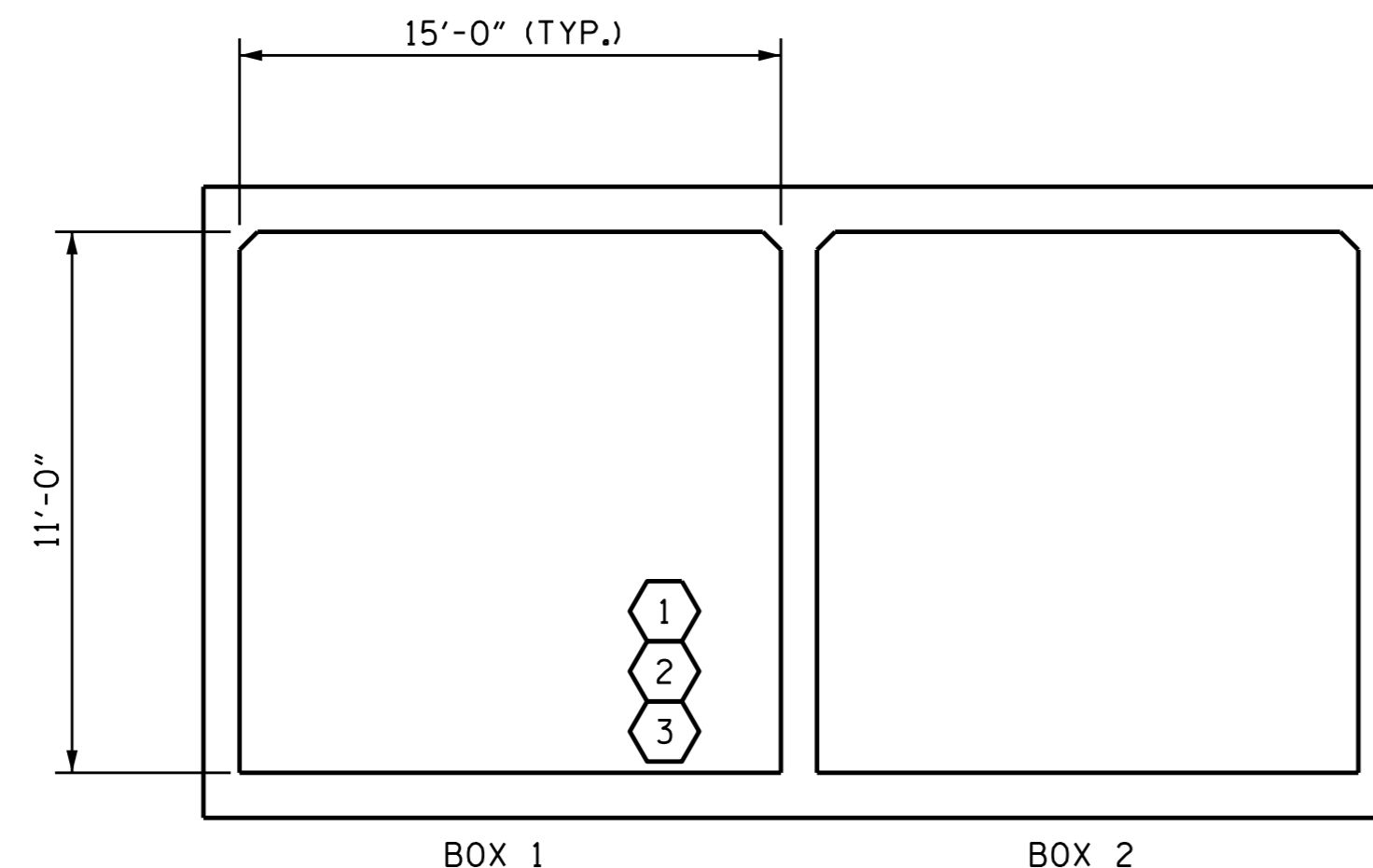
LOAD TYPE	MAX FACTOR	MIN FACTOR
DC	1.25	0.90
DW	1.50	0.65
EV	1.30	0.90
EH	1.35	0.90
ES	1.35	0.90
LS	1.75	--
WA	1.00	--

NOTE:

RATING FACTORS ARE BASED ON THE STRENGTH I LIMIT STATE.

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 (LL)	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	1.59	--	1.75	4.26	1	TOP SLAB	6.76	1.59	1	BOTTOM SLAB	14.07		
	HL-93 (OPERATING)	N/A		2.06	--	1.35	5.52	1	TOP SLAB	6.76	2.06	1	BOTTOM SLAB	14.07		
	HS-20 (INVENTORY)	36.000	2	1.59	57.09	1.75	4.88	1	BOT CORNER WALL	12.11	1.59	1	BOTTOM SLAB	14.07		
	HS-20 (OPERATING)	36.000		2.06	74.00	1.35	6.33	1	BOT. CORNER WALL	12.11	2.06	1	BOTTOM SLAB	14.07		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH		3.75	50.63	1.40	6.37	1	BOT. CORNER WALL	12.11	3.75	1	EXTERIOR WALL	11.17		
		SNGARBS2	20.000		3.04	60.71	1.40	6.36	1	BOT. CORNER WALL	12.11	3.04	1	TOP SLAB	14.14	
		SNAGRIS2	22.000		2.89	63.49	1.40	6.31	1	BOT. CORNER WALL	12.11	2.89	1	TOP SLAB	14.14	
		SNCOTTS3	27.250		1.97	53.58	1.40	5.32	1	TOP SLAB	6.76	1.97	1	TOP SLAB	14.14	
		SNAGRS4	34.925		1.80	62.94	1.40	5.16	1	TOP SLAB	6.76	1.80	1	TOP SLAB	14.14	
		SNS5A	35.550		1.70	60.28	1.40	4.83	1	TOP SLAB	6.76	1.70	1	TOP SLAB	14.14	
		SNS6A	39.950		1.65	65.90	1.40	4.74	1	TOP SLAB	6.76	1.65	1	TOP SLAB	14.14	
		SNS7B	42.000		1.57	65.91	1.40	4.63	1	TOP SLAB	6.76	1.57	1	TOP SLAB	14.14	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		2.06	67.93	1.40	6.07	1	BOT. CORNER WALL	12.11	2.06	1	BOTTOM SLAB	14.07	
		TNT4A	33.075		2.08	68.85	1.40	5.89	1	TOP SLAB	6.76	2.08	1	BOTTOM SLAB	14.07	
		TNT6A	41.600		1.77	73.50	1.40	5.51	1	TOP SLAB	6.37	1.77	1	BOTTOM SLAB	14.07	
		TNT7A	42.000		1.75	73.42	1.40	6.01	1	BOT. CORNER WALL	12.11	1.75	1	BOTTOM SLAB	14.07	
		TNT7B	42.000		1.82	76.34	1.40	5.00	1	TOP SLAB	6.76	1.82	1	BOTTOM SLAB	14.07	
		TNAGRIT4	43.000		1.65	71.15	1.40	5.04	1	TOP SLAB	6.37	1.65	1	BOTTOM SLAB	14.07	
		TNAGT5A	45.000		1.59	71.42	1.40	5.13	1	TOP SLAB	6.37	1.59	1	BOTTOM SLAB	14.07	
TNAGT5B	45.000		3	1.53	68.74	1.40	4.91	1	TOP SLAB	6.76	1.53	1	BOTTOM SLAB	14.07		

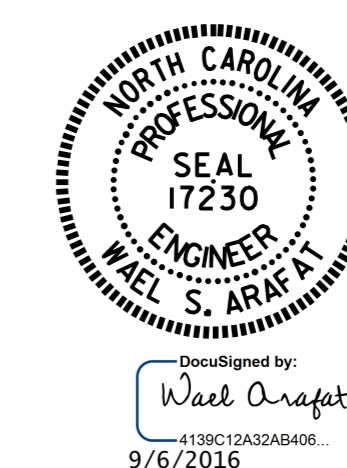
#	CONTROLLING LOAD RATING
1	DESIGN LOAD RATING (HL-93)
2	DESIGN LOAD RATING (HS-20)
3	LEGAL LOAD RATING **
** SEE CHART FOR VEHICLE TYPE	



LRFR SUMMARY
(LOOKING DOWNSTREAM)

PROJECT NO. R-2915C
ASHE COUNTY
 STATION: 374+56.00 -L-

SHEET 10 OF 12



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 LRFR SUMMARY FOR
 REINFORCED CONCRETE
 BOX CULVERTS
 (NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO. C-12
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 12
2			4			

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

ASSEMBLED BY : H. T. BARBOUR DATE : 7-6-16
 CHECKED BY : V. X. NGUYEN DATE : 7-16
 DRAWN BY : WMC 7/11 REV. 10/1/11 MAA/GM
 CHECKED BY : CM 7/11