APPENDIX ‘C’

CWR THERMAL EXPANSION TABLE

CONTINUOUS WELDED RAIL THERMAL EXPANSION

Determination of rail expansion for lengths between those shown in the table can be done through averaging rail lengths that bound the intermediate length and rounding to the nearest 1/8th inch.

TEMP. Difference From PRLT °F	LENGTH OF CWR (ft.)							
	200	400	600	800	1000	1200	1400	1482
	CWR MOVEMENT (in.)							
5	1/8	1/8	1/4	3/8	3/8	1/2	5/8	5/8
10	1/8	3/8	1/2	5/8	3/4	1	1 1/8	1 1/4
15	1/4	1/2	3/4	1	1 1/4	1 1/2	1 3/4	1 3/4
20	3/8	5/8	1	1 1/4	1 5/8	1 7/8	2 1/4	2 3/8
25	3/8	3/4	1 1/4	1 5/8	2	2 3/8	2 7/8	3
30	1/2	1	1 1/2	1 7/8	2 3/8	2 7/8	3 3/8	3 5/8
35	5/8	1 1/8	1 3/4	2 1/4	2 7/8	3 3/8	4	4 1/8
40	5/8	1 1/4	1 7/8	2 5/8	3 1/4	3 7/8	4 1/2	4 3/4
45	3/4	1 1/2	2 1/8	2 7/8	3 5/8	4 3/8	5 1/8	5 3/8
50	3/4	1 5/8	2 3/8	3 1/4	4	4 7/8	5 5/8	6
55	7/8	1 3/4	2 5/8	3 1/2	4 3/8	5 1/4	6 1/4	6 ½
60	1	1 7/8	2 7/8	3 7/8	4 7/8	5 3/4	6 7/8	7 1/8
65	1	2 1/8	3 1/8	4 1/8	5 1/4	6 1/4	7 3/8	7 3/4
70	1 1/8	2 1/4	3 3/8	4 1/2	5 5/8	6 3/4	8	8 3/8
75	1 1/4	2 3/8	3 5/8	4 7/8	6	7 1/4	8 1/2	9
80	1 1/4	2 5/8	3 7/8	5 1/8	6 3/8	7 3/4	9 1/8	9 1/2
85	1 3/8	2 3/4	4 1/8	5 1/2	6 7/8	8 1/4	9 5/8	10 1/8
90	1 1/2	2 7/8	4 3/8	5 3/4	7 1/4	8 5/8	10 1/4	10 3/4
95	1 1/2	3	4 5/8	6 1/8	7 5/8	9 1/8	10 3/4	11 3/8
100	1 5/8	3 1/4	4 7/8	6 3/8	8	9 5/8	11 3/8	11 7/8
105	1 3/4	3 3/8	5 1/8	6 3/4	8 1/2	10 1/8	11 7/8	12 1/2
110	1 3/4	3 1/2	5 1/4	7 1/8	8 7/8	10 5/8	12 2/4	13 1/8
MOVEMENT (in) = RAIL LENGTH (ft) x TEMP DIFF FROM PRLT (F) x 0.00008								