

### 3 @ 10 x 4 REINFORCED CONCRETE BOX BRIDGE

Maximum Fill Height ft.	Dimensions					Bars TST				Bars TSB				Bars BST				Bars BSB				Bars EWE				Bars EWI				Bars IW			Bars LNT	Bars LND	Bars WS	Concrete CY/LF	Reinf. Steel LB/LF	
	ST in.	SB in.	WT in.	IT in.	BW ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	No.	No.	No.						
No Fill	11.5	11	8	8	32.67	6	2	6	32.17	6	2	6	32.17	6	1	12	33.17	6	1	12	33.17	4	2	12	4.00	5	2	12	4.00	4	4	12	4.00	130	30	8	2.70	542
3	13	13	8	8	32.67	9	1	12	32.17	6	2	6	32.17	6	1	12	33.17	7	1	12	33.17	4	2	12	4.00	5	2	12	4.00	4	4	12	4.00	130	30	8	3.06	573
5	12	12	8	8	32.67	6	2	6	32.17	6	2	6	32.17	7	1	12	33.17	8	1	12	33.17	4	2	12	4.00	5	2	12	4.00	4	4	12	4.00	162	0	8	2.85	589
10	13	13	8	8	32.67	6	2	6	32.17	5	2	6	32.17	7	1	12	33.17	8	1	12	33.17	4	2	12	4.00	5	2	12	4.00	4	4	12	4.00	162	0	8	3.06	559
20	12	13	8	8	32.67	4	3	12	10.66	8	2	6	32.17	11	1	12	33.17	4	3	12	10.66	4	2	12	4.00	5	2	12	4.00	4	4	12	4.00	162	0	8	2.96	630
30	18	18	8	8	32.67	4	3	12	10.66	7	2	6	32.17	7	2	6	33.17	4	3	12	10.66	4	2	12	4.00	5	2	12	4.00	4	4	12	4.00	162	0	8	4.08	549
40	22	22	8	8	32.67	4	3	12	10.66	7	2	6	32.17	7	2	6	33.17	4	3	12	10.66	4	2	12	4.00	5	2	12	4.00	5	4	12	4.00	162	0	8	4.90	555
50	25	25	8	8	32.67	4	3	12	10.66	8	2	6	32.17	10	1	12	33.17	4	3	12	10.66	4	2	12	4.00	5	2	12	4.00	4	8	6	4.00	162	0	8	5.51	607
60	29	29	8	8	32.67	4	3	12	10.66	8	2	6	32.17	11	1	12	33.17	4	3	12	10.66	4	2	12	4.00	5	2	12	4.00	4	8	6	4.00	162	0	8	6.33	641

### 3 @ 10 x 5 REINFORCED CONCRETE BOX BRIDGE

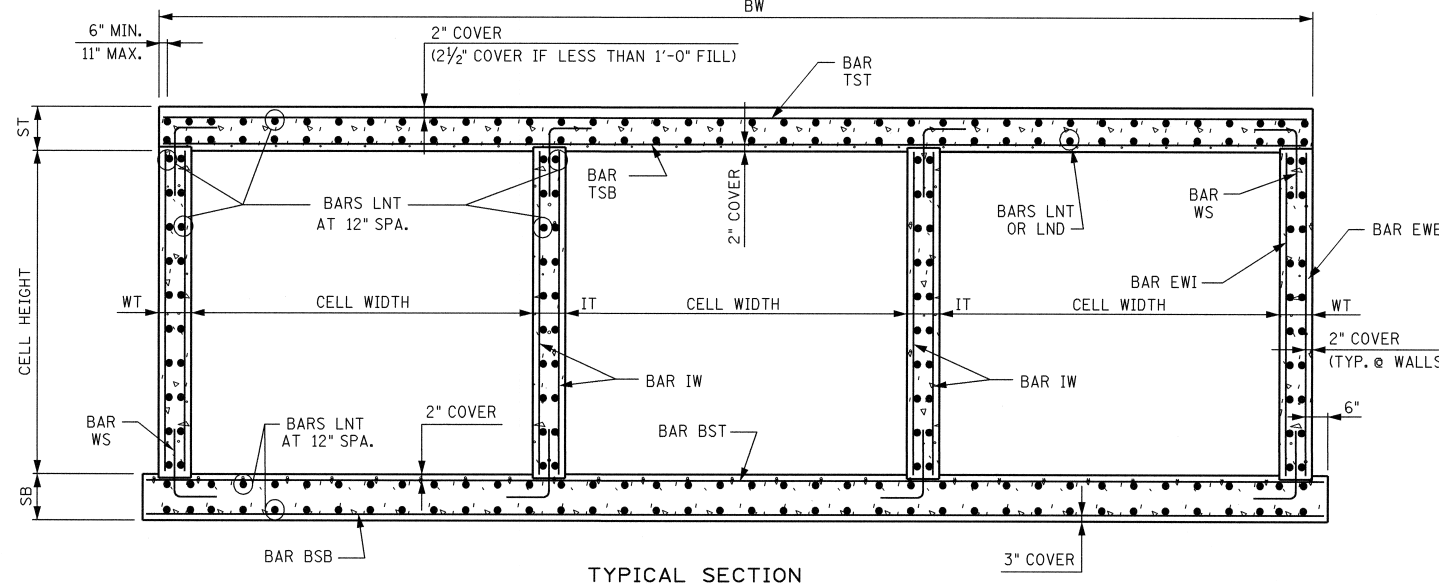
Maximum Fill Height ft.	Dimensions					Bars TST				Bars TSB				Bars BST				Bars BSB				Bars EWE				Bars EWI				Bars IW			Bars LNT	Bars LND	Bars WS	Concrete CY/LF	Reinf. Steel LB/LF	
	ST in.	SB in.	WT in.	IT in.	BW ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	No.	No.	No.						
No Fill	11.5	11	8	8	32.67	6	2	6	32.17	6	2	6	32.17	6	1	12	33.17	6	1	12	33.17	4	2	12	5.00	5	2	12	5.00	4	4	12	5.00	138	30	8	2.80	554
3	13	13	8	8	32.67	9	1	12	32.17	6	2	6	32.17	6	1	12	33.17	5	2	6	33.17	4	2	12	5.00	5	2	12	5.00	4	4	12	5.00	138	30	8	3.16	586
5	12	12	8	8	32.67	6	2	6	32.17	6	2	6	32.17	7	1	12	33.17	8	1	12	33.17	4	2	12	5.00	5	2	12	5.00	4	4	12	5.00	174	0	8	2.95	603
10	13	13	8	8	32.67	6	2	6	32.17	5	2	6	32.17	7	1	12	33.17	8	1	12	33.17	4	2	12	5.00	5	2	12	5.00	4	4	12	5.00	174	0	8	3.16	574
20	12	13	8	8	32.67	4	3	12	10.66	8	2	6	32.17	11	1	12	33.17	4	3	12	10.66	4	2	12	5.00	5	2	12	5.00	4	4	12	5.00	174	0	8	3.05	644
30	18	18	8	8	32.67	4	3	12	10.66	7	2	6	32.17	7	2	6	33.17	4	3	12	10.66	4	2	12	5.00	5	2	12	5.00	4	4	12	5.00	174	0	8	4.18	563
40	22	22	8	8	32.67	4	3	12	10.66	7	2	6	32.17	7	2	6	33.17	4	3	12	10.66	4	2	12	5.00	5	2	12	5.00	5	4	12	5.00	174	0	8	5.00	571
50	25	25	9	8	32.83	4	3	12	10.66	8	2	6	32.33	10	1	12	33.33	4	3	12	10.66	4	2	12	5.00	5	2	12	5.00	4	8	6	5.00	174	0	8	5.67	626
60	29	29	10	8	33.00	4	3	12	10.66	8	2	6	32.50	11	1	12	33.50	4	3	12	10.66	4	2	12	5.00	5	2	12	5.00	4	8	6	5.00	174	0	8	6.55	661

### 3 @ 10 x 6 REINFORCED CONCRETE BOX BRIDGE

Maximum Fill Height ft.	Dimensions					Bars TST				Bars TSB				Bars BST				Bars BSB				Bars EWE				Bars EWI				Bars IW			Bars LNT	Bars LND	Bars WS	Concrete CY/LF	Reinf. Steel LB/LF	
	ST in.	SB in.	WT in.	IT in.	BW ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	Size	No.	Spacing in.	Length ft.	No.	No.	No.						
No Fill	11.5	11	8	8	32.67	6	2	6	32.17	6	2	6	32.17	6	1	12	33.17	6	1	12	33.17	4	2	12	6.00	5	2	12	6.00	4	4	12	6.00	146	30	8	2.90	565
3	13	13	8	8	32.67	9	1	12	32.17	6	2	6	32.17	6	1	12	33.17	7	1	12	33.17	4	2	12	6.00	5	2	12	6.00	4	4	12	6.00	146	30	8	3.25	596
5	12	12	8	8	32.67	6	2	6	32.17	6	2	6	32.17	5	2	6	33.17	6	2	6	33.17	4	2	12	6.00	5	2	12	6.00	4	4	12	6.00	182	0	8	3.05	627
10	13	13	8	8	32.67	6	2	6	32.17	5	2	6	32.17	7	1	12	33.17	8	1	12	33.17	4	2	12	6.00	5	2	12	6.00	4	4	12	6.00	182	0	8	3.25	585
20	12	13	8	8	32.67	4	3	12	10.66	8	2	6	32.17	11	1	12	33.17	4	3	12	10.66	4	2	12	6.00	6	2	12	6.00	4	4	12	6.00	182	0	8	3.15	661
30	18	18	8	8	32.67	4	3	12	10.66	7	2	6	32.17	7	2	6	33.17	4	3	12	10.66	4	2	12	6.00	6	2	12	6.00	4	4	12	6.00	182	0	8	4.28	580
40	22	22	10	8	33.00	4	3	12	10.66	7	2	6	32.50	7	2	6	33.50	4	3	12	10.66	4	2	12	6.00	5	2	12	6.00	5	4	12	6.00	182	0	8	5.22	586
50	25	25	11	8	33.17	4	3	12	10.66	8	2	6	32.67	11	1	12	33.67	4	3	12	10.66	4	2	12	6.00	5	2	12	6.00	4	8	6	6.00	182	0	8	5.90	677
60	29	29	11	8	33.17	4	3	12	10.66	8	2	6	32.67	11	1	12	33.67	4	3	12	10.66	4	2	12	6.00	5	2	12	6.00	4	8	6	6.00	182	0	8	6.73	677

Note: Maximum fill height shown in the table is measured from the bottom of the top slab. To obtain the total fill height from the flow line, add the height of the box.  
 Note: When height of fill above the top slab is less than 1 foot, the top mat of reinforcing in the top slab shall be constructed with 2-1/2 inches of concrete cover.

The following bar information applies to all fill cases in the tables above:  
 Bars LNT Size = 4 Spacing = 12 in.  
 Bars LND Size = 5 Spacing = 12 in.  
 Bars WS Size = 8 Length = 5.00 ft. Spacing = 12 in.



NOTE: FOR DESCRIPTIONS OF BOX DIMENSIONS AND REINFORCING BAR DESIGNATIONS SEE STANDARD DRAWING NO. STD-17-5.

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 STANDARD REINFORCED CONCRETE  
 BOX BRIDGE  
 INTERIOR SECTION  
 SPANS: 3 BARRELS AT 10'-0"  
 CLEAR HEIGHTS 4'-0" THRU 6'-0"  
 0' THRU 60' FILL  
 2010

CORRECT *Edward P. Wasserman*  
 ENGINEER OF STRUCTURES

DESIGNED BY: RLL/ALP DATE: 12-09  
 DRAWN BY: KEVIN MARTINKO DATE: 1-10  
 SUPERVISED BY: EPW/RLC DATE: 12-09  
 CHECKED BY: RLL/ALP DATE: 2-10