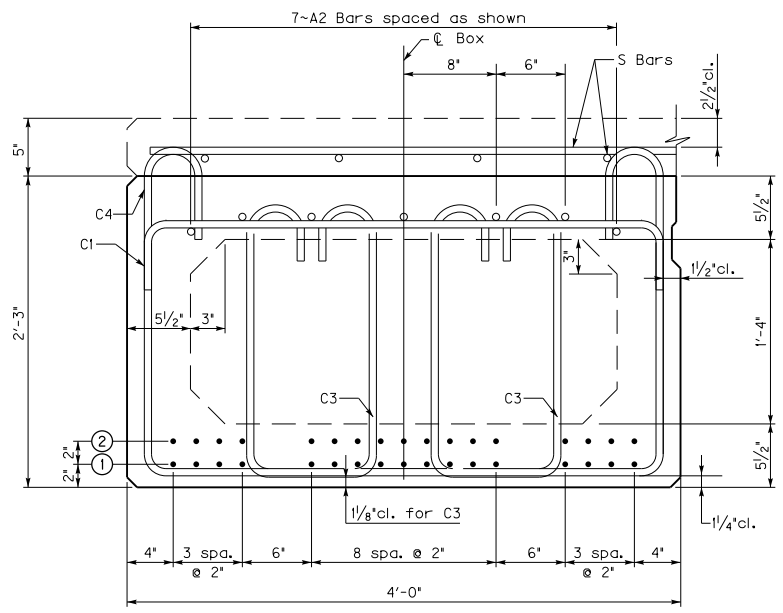
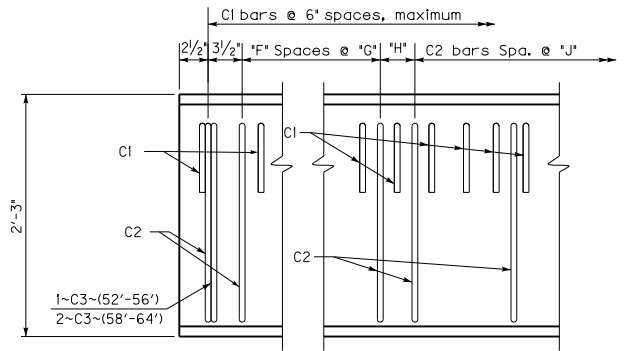


**B27 BEAM**

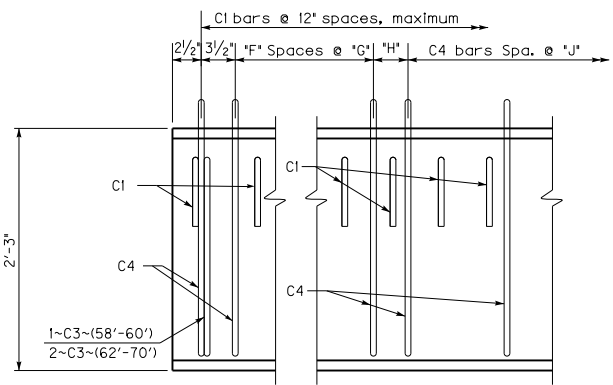


**CB27 BEAM**



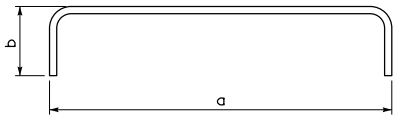
**B27 ELEVATION OF 0° SKEW**

(Refer to BDP-003, for skewed details)

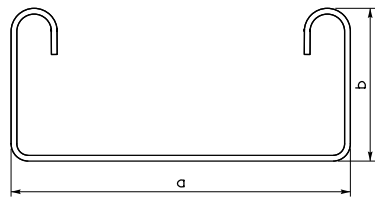


**CB27 ELEVATION OF 0° SKEW**

(Refer to BDP-003, for skewed details)



**C1(e) Bar**



**C2(e)-C4(e) Bars**

**TABLE OF STRAND DATA**

Beam Type	Beam Length (feet)	Number of Strands Required	
		Row ①	Row ②
B27	52	17	1
	54	17	2
	56	17	3
	58	17	5
	60	17	6
	62	17	8
CB27	64	17	9
	58	17	3
	60	17	4
	62	17	6
	64	17	7
	66	17	9
	68	17	10
	70	17	12

**TABLE OF DIMENSION DATA**

Beam Type	Beam Length (feet)	"F"	"G"	"H"	"J"
B27	52	5	14"	11"	18"
	54	5	13"	10"	18"
	56	5	13"	13"	18"
	58	5	13"	16"	18"
	60	6	12"	12"	18"
	62	6	12"	13 1/2"	17"
CB27	64	6	12"	8 1/2"	17"
	58	6	12"	18"	21"
	60	6	12"	19 1/2"	21"
	62	6	12"	14"	20"
	64	7	11"	11"	20"
	66	7	11"	13"	20"
	68	7	11"	15"	20"
	70	8	10"	14"	20"

**BAR QUANTITIES TABLE DESIGN DATA**

Beam Type	Beam Length (feet)	C1	C2	C3	C4	DC k/ips	DW k/ips	LL k/ips	LL+I k/ips	Δd (in.)	Δc (in.)
B27	52	105	40	2		20.6	1.5	47.0	59.1		
	54	109	42	2		21.4	1.5	47.7	60.0		
	56	113	43	2		22.2	1.6	48.4	60.7		
	58	117	44	4		23.0	1.7	49.1	61.5		
	60	121	47	4		23.7	1.7	49.7	62.2		
	62	125	50	4		24.5	1.8	50.4	62.9		
CB27	64	129	52	4		25.3	1.8	51.0	63.6		
	58	59		2	41	30.2	1.7	49.1	61.5	0.3	0.9
	60	61		2	42	31.2	1.7	49.7	62.2	0.3	0.9
	62	63		4	45	32.3	1.8	50.4	62.9	0.3	1.1
	64	65		4	48	33.3	1.8	51.0	63.6	0.4	1.2
	66	67		4	49	34.3	1.9	51.6	64.3	0.4	1.3
	68	69		4	50	35.4	1.9	52.2	65.0	0.5	1.4
	70	71		4	53	36.4	2.0	52.8	65.6	0.5	1.6

**Straight Reinforcement**

Mark	Size	Length
A1(E)	#5	Beam Length Minus 3'
A2(E)	#4	Beam Length Minus 3'
D(E)	#8	2'-0"

NOTE: A1 and A2 bars are to be lapped 2'-2" when necessary.

**Bent Reinforcement**

Mark	Size	a	b
C1(e)	#5	3'-9"	6"
C2(e)	#4	3'-9"	1'-11 1/4"
C3(e)	#5	11 3/8"	1'-11 3/8"
C4(e)	#4	3'-9"	2'-4 1/4"

**KENTUCKY DEPARTMENT OF HIGHWAYS**

**BOX BEAM B27 & CB27 DETAILS**

STANDARD DRAWING NO. BDP-009-04  
 SUBMITTED: *Mark No.* 12-01-11  
 DIRECTOR OF STRUCTURAL DESIGN  
 APPROVED: *[Signature]* 12-01-11  
 STATE HIGHWAY ENGINEER