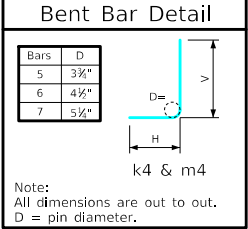
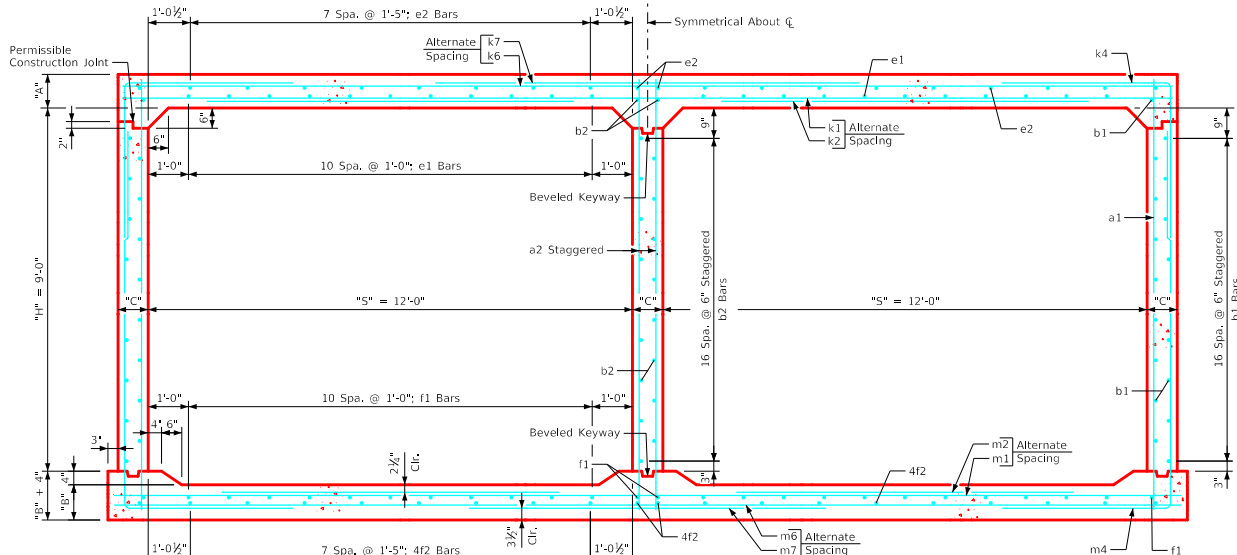


Variable Dimensions and Quantities for Twin 12' x 9' Barrel Sections

Dimensions													Bar List																																										
													a1			a2			b1			b2			e1			e2			f1			f2			k1			k2			k4			k6			k7			k9			
Fill	S	H	A	B	C	D	E	U	W	X	Z		Size	Sp.	L	Size	Sp.	L	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L							
0	12	9	14	12.5	9	9	9	0'-0"	7'-2"	3'-0"	7'-5"	4	12	11'-1"	6	9	11'-0"	4	6	36	4	6	19	4	12	22	4	17	20	4	12	26	4	17	20	6	18	25'-11"	6	18	12'-11"	6	12	11'-5"	7'-5"	4'-0"	4	9	25'-11"	4	9	14'-4"	4	4.5	25'-11"
1	12	9	13.5	12	9	9	9	0'-6"	7'-2"	3'-0"	7'-7"	4	12	11'-0"	6	9	11'-0"	4	6	36	4	6	19	4	12	22	4	17	20	4	12	26	4	17	20	6	18	25'-11"	6	18	12'-5"	5	6	11'-0"	7'-5"	3'-7"	4	9	25'-11"	4	9	14'-4"	4	4.5	25'-11"
2	12	9	10	10.5	9	9	9	1'-6"	7'-9"	2'-9"	5'-1"	5	12	10'-7"	6	9	10'-7"	4	6	36	4	6	19	5	12	22	4	17	20	4	12	26	4	17	20	7	18	25'-11"	7	18	11'-5"	6	9	8'-5"	4'-9"	3'-8"	4	12	25'-11"	7	12	15'-6"	7	4.5	25'-11"
3	12	9	9	10	9	9	9	2'-5"	5'-6"	3'-2"	4'-7"	5	12	10'-6"	6	9	10'-6"	4	6	36	4	6	19	4	12	22	4	17	20	4	12	26	4	17	20	6	12	25'-11"	5	12	8'-9"	6	9	7'-10"	4'-3"	3'-7"	5	9	25'-11"	5	9	11'-0"	5	4.5	25'-11"
4	12	9	9	10	9	9	9	2'-8"	4'-11"	3'-3"	4'-3"	4	9	10'-6"	6	9	10'-6"	4	6	36	4	6	19	4	12	22	4	17	20	4	12	26	4	17	20	6	12	25'-11"	5	12	8'-9"	6	9	7'-10"	3'-11"	4	9	25'-11"	6	9	9'-10"	6	4.5	25'-11"	
5-7	12	9	10	11.5	9	9	9	3'-1"	4'-9"	3'-3"	4'-3"	4	9	10'-8"	6	9	10'-8"	4	6	36	4	6	19	4	12	22	4	17	20	4	12	26	4	17	20	5	9	25'-11"	4	9	8'-2"	6	9	7'-6"	3'-9"	3'-9"	5	12	25'-11"	7	12	9'-6"	7	4.5	25'-11"
8-10	12	9	11.5	13.5	9	9	9	3'-0"	4'-3"	2'-11"	4'-2"	4	12	11'-0"	6	9	11'-0"	4	6	36	4	6	19	4	12	22	4	17	20	4	12	26	4	17	20	5	9	25'-11"	4	9	8'-7"	5	6	6'-8"	3'-4"	3'-4"	5	9	25'-11"	6	9	8'-6"	6	4.5	25'-11"
11-13	12	9	13	15	9	9	9	2'-10"	4'-3"	3'-0"	4'-3"	4	12	11'-3"	6	9	11'-3"	4	6	36	4	6	19	4	12	22	4	17	20	4	12	26	4	17	20	5	9	25'-11"	4	9	8'-3"	6	9	7'-2"	3'-3"	3'-11"	4	9	25'-11"	7	9	8'-6"	7	4.5	25'-11"
14-16	12	9	14.5	17	9	9	9	2'-5"	4'-4"	2'-7"	4'-5"	4	12	11'-6"	6	9	11'-6"	4	6	36	4	6	19	4	12	22	4	17	20	4	12	26	4	17	20	7	18	25'-11"	6	18	10'-5"	6	9	7'-5"	3'-4"	4'-1"	5	12	25'-11"	8	12	8'-8"	8	4.5	25'-11"
17-19	12	9	16.5	18.5	10	9	9	2'-3"	4'-6"	2'-3"	4'-7"	4	9	11'-10"	7	9	11'-10"	4	6	36	4	6	19	4	12	22	4	17	20	4	12	26	4	17	20	6	12	26'-2"	5	12	10'-8"	6	9	7'-7"	3'-5"	4'-2"	4	9	26'-2"	7	9	9'-0"	7	4.5	26'-2"
20-22	12	9	18.5	20	11	9	9	1'-8"	4'-7"	1'-10"	4'-8"	4	9	12'-1"	7	9	12'-1"	4	6	36	4	6	19	4	12	22	4	17	20	4	12	26	4	17	20	6	12	26'-5"	5	12	11'-6"	6	9	8'-0"	3'-7"	4'-5"	4	9	26'-5"	7	9	9'-2"	7	4.5	26'-5"
23-25	12	9	20	21.5	11	9	9	1'-7"	4'-8"	1'-5"	4'-10"	4	9	12'-4"	7	9	12'-4"	4	6	36	4	6	19	4	12	22	4	17	20	5	12	26	4	17	20	6	12	26'-5"	5	12	11'-7"	6	9	8'-2"	3'-8"	4'-6"	4	9	26'-5"	7	9	9'-4"	7	4.5	26'-5"

Fill	Bar List																											Quantities				
	m1			m2			m4			m6			m7			m9			Concrete (CY/FT)			Steel (LB/FT)										
Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	H	V	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	Slab	Floor	Walls	Total						
0	5	9	26'-5"	4	9	8'-6"	7	12	17'-0"	7'-6"	9'-6"	5	12	26'-5"	5	12	14'-10"	5	4.5	26'-5"	1.191	1.091	0.715	2.997	431.76							
1	5	9	26'-5"	4	9	8'-5"	5	6	16'-9"	7'-4"	9'-5"	4	12	26'-5"	6	12	15'-2"	6	4.5	26'-5"	1.151	1.050	0.715	2.916	434.32							
2	5	9	26'-5"	5	9	8'-8"	6	9	13'-10"	4'-6"	9'-4"	4	9	26'-5"	6	9	10'-2"	6	4.5	26'-5"	0.867	0.926	0.715	2.508	469.92							
3	5	9	26'-5"	5	9	8'-1"	6	9	13'-3"	4'-0"	9'-3"	5	12	26'-5"	7	12	9'-2"	7	4.5	26'-5"	0.786	0.885	0.715	2.386	448.95							
4	5	9	26'-5"	5	9	8'-0"	6	9	13'-1"	3'-10"	9'-3"	5	9	26'-5"	6	9	8'-6"	6	4.5	26'-5"	0.786	0.885	0.715	2.386	442.00							
5-7	6	12	26'-5"	5	12	8'-0"	6	9	13'-1"	3'-8"	9'-5"	5	9	26'-5"	6	9	8'-6"	6	4.5	26'-5"	0.867	1.008	0.715	2.590	437.82							
8-10	5	9	26'-5"	4	9	9'-0"	5	6	13'-0"	3'-5"	9'-7"	5	9	26'-5"	6	9	8'-4"	6	4.5	26'-5"	0.989	1.174	0.715	2.878	431.50							
11-13	6	12	26'-5"	5	12	9'-1"	6	9	13'-0"	3'-4"	9'-8"	4	9	26'-5"	7	9	8'-6"	7	4.5	26'-5"	1.110	1.297	0.715	3.122	431.61							
14-16	6	12	26'-5"	5	12	10'-2"	6	9	13'-3"	3'-5"	9'-10"	4	9	26'-5"	7	9	8'-10"	7	4.5	26'-5"	1.232	1.463	0.715	3.410	450.11							
17-19	6	12	26'-8"	5	12	10'-10"	6	9	13'-6"	3'-6"	10'-0"	5	12	26'-8"	8	12	9'-2"	8	4.5	26'-8"	1.410	1.604	0.795	3.809	473.95							
20-22	7	18	26'-11"	7	18	11'-5"	6	9	13'-8"	3'-7"	10'-1"	5	9	26'-11"	7	9	9'-4"	7	4.5	26'-11"	1.592	1.745	0.876	4.213	495.53							
23-25	7	18	26'-11"	7	18	11'-10"	6	9	13'-11"	3'-8"	10'-3"	5	9	26'-11"	7	9	9'-8"	7	4.5	26'-11"	1.716	1.871	0.876	4.463	510.58							



- Notes:**
1. Dimensions listed on this sheet to be used in conjunction with Sheet TWRCB G3-20.
 2. Fill, dimensions "S" and "H" are in feet.
 3. Dimensions "A", "B", "C", "D", and "Sp." listed in the bar list are in inches.
 4. Dimensions "L", "H", "V" are in feet and inches.

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Standard Design
**Twin Reinforced Concrete
Box Culverts**
July, 2020

TWRCB
12-9-20

**Culvert Barrel
Details**
12' x 9' Barrel Sections

TWRCB
12-9-20