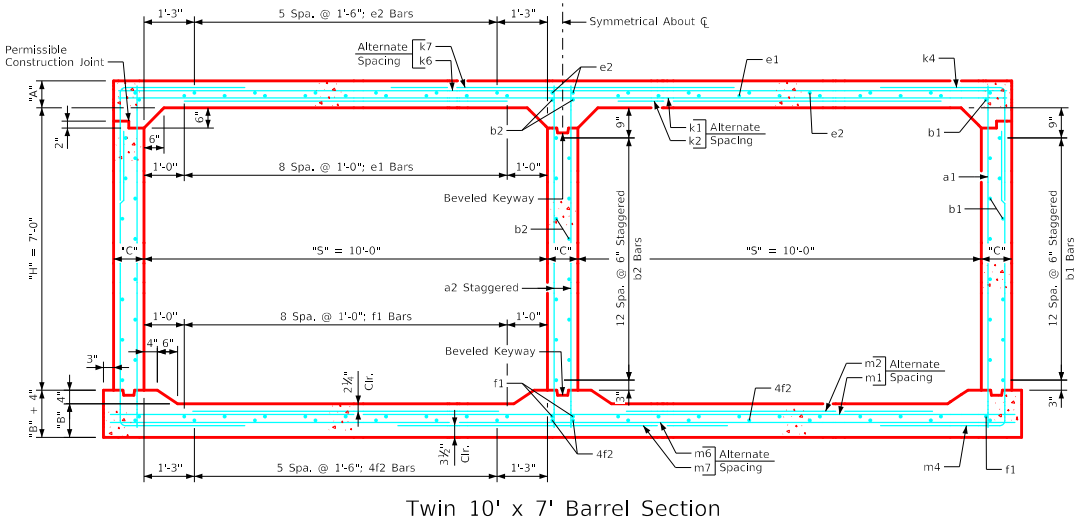
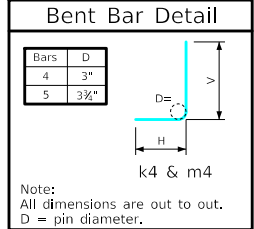


### Variable Dimensions and Quantities for Twin 10' x 7' Barrel Sections

Dimensions													Bar List																																										
Fill	S	H	A	B	C	D	E	U	W	X	Z	a1			a2			b1			b2			e1			e2			f1			k1			k2			k4			k6			k7			k9							
												Size	Sp.	L	Size	Sp.	L	Size	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.						
0	10	7	13	11.5	9	6	9	0'-0	6'-2	1'-9	6'-2	4	6	8'-11	6	9	8'-11	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	6	18	21'-11	5	18	10'-4	4	6	9'-3	6'-2	3'-1	5	18	21'-11	5	18	12'-10	5	4.5	21'-11
1	10	7	12.5	11	9	6	9	0'-7	6'-5	2'-2	5'-5	4	6	8'-10	6	9	8'-10	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	6	18	21'-11	5	18	10'-4	4	6	9'-3	6'-2	3'-1	5	18	21'-11	5	4.5	21'-11			
2	10	7	9	10	9	9	9	1'-11	5'-11	3'-0	4'-4	4	12	8'-6	6	9	8'-6	4	6	28	4	6	15	5	12	18	4	18	16	4	12	22	4	18	16	5	9	21'-11	4	9	7'-10	5	6	6'-10	3'-8	3'-2	5	12	21'-11	5	12	11'-10	5	4.5	21'-11
3	10	7	8	10	9	6	9	1'-8	4'-7	2'-2	3'-10	4	6	8'-5	6	9	8'-5	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	8'-3	5	6	6'-8	3'-4	3'-4	4	12	21'-11	6	12	9'-2	6	4.5	21'-11
4	10	7	8	10	9	6	9	1'-10	4'-1	2'-6	3'-9	4	6	8'-5	6	9	8'-5	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	6	18	21'-11	6	18	8'-0	4	6	6'-2	3'-1	3'-1	4	12	21'-11	6	12	8'-2	6	4.5	21'-11
5-7	10	7	8	10	9	6	9	2'-3	3'-10	2'-5	3'-9	4	6	8'-5	6	9	8'-5	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	7'-3	4	6	6'-0	3'-0	3'-0	5	12	21'-11	6	12	7'-8	6	4.5	21'-11
8-10	10	7	9	11.5	9	6	9	2'-2	3'-5	2'-2	3'-8	4	6	8'-7	6	9	8'-7	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	7'-10	4	6	5'-8	2'-10	2'-10	5	9	21'-11	5	9	6'-10	5	4.5	21'-11
11-13	10	7	11	13	9	9	9	1'-11	3'-7	2'-0	3'-7	5	12	8'-11	6	9	8'-11	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	6	18	21'-11	6	18	8'-7	4	6	6'-0	3'-0	3'-0	4	9	21'-11	6	9	7'-2	6	4.5	21'-11
14-16	10	7	12.5	14.5	9	9	9	1'-8	3'-8	1'-11	3'-8	5	12	9'-2	6	9	9'-2	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	6	18	21'-11	6	18	9'-3	4	6	6'-2	3'-1	3'-1	5	12	21'-11	7	12	7'-4	7	4.5	21'-11
17-19	10	7	14	16	9	9	9	1'-5	3'-9	1'-7	3'-10	5	12	9'-5	6	9	9'-5	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	9'-6	4	6	6'-0	2'-9	3'-3	5	12	21'-11	7	12	7'-6	7	4.5	21'-11
20-22	10	7	15	17	9	9	9	1'-5	3'-9	1'-11	3'-11	4	9	9'-7	6	9	9'-7	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	9'-6	4	6	6'-1	2'-9	3'-4	5	12	21'-11	7	12	7'-6	7	4.5	21'-11
23-25	10	7	16	18.5	9	9	9	1'-7	3'-10	1'-8	4'-0	4	9	9'-9	6	9	9'-9	4	6	28	4	6	15	4	12	18	4	18	16	4	12	22	4	18	16	5	9	21'-11	4	9	9'-4	4	6	6'-1	2'-9	3'-4	5	9	21'-11	6	9	7'-8	6	4.5	21'-11

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	Size	Sp.	L	Slab	Floor	Walls	Total	Steel	
0	6	18	22'-5	6	18	8'-7	4	6	13'-10	6'-5	7'-5	4	9	22'-5	4	9	12'-4	4	4.5	22'-5	0.950	0.866	0.549	2.365	317.55						
1	5	12	22'-5	5	12	7'-7	4	6	12'-11	5'-7	7'-4	4	9	22'-5	4	9	10'-10	4	4.5	22'-5	0.915	0.831	0.549	2.295	312.47						
2	5	9	22'-5	4	9	6'-2	5	6	10'-11	3'-8	7'-3	4	9	22'-5	5	9	8'-8	5	4.5	22'-5	0.675	0.761	0.549	1.985	344.34						
3	5	12	22'-5	5	12	7'-6	4	6	10'-6	3'-3	7'-3	5	12	22'-5	5	12	7'-8	5	4.5	22'-5	0.606	0.761	0.549	1.916	316.89						
4	5	12	22'-5	5	12	7'-2	4	6	10'-4	3'-1	7'-3	4	12	22'-5	6	12	7'-6	6	4.5	22'-5	0.606	0.761	0.549	1.916	298.21						
5-7	5	12	22'-5	5	12	7'-3	4	6	10'-3	3'-0	7'-3	4	12	22'-5	7	12	7'-6	7	4.5	22'-5	0.606	0.761	0.549	1.916	308.74						
8-10	5	12	22'-5	5	12	8'-0	4	6	10'-2	2'-9	7'-5	4	12	22'-5	7	12	7'-4	7	4.5	22'-5	0.675	0.866	0.549	2.090	314.97						
11-13	5	12	22'-5	5	12	8'-5	4	6	10'-3	2'-9	7'-6	4	9	22'-5	6	9	7'-2	6	4.5	22'-5	0.812	0.972	0.549	2.333	312.92						
14-16	5	12	22'-5	5	12	9'-0	4	6	10'-5	2'-9	7'-8	5	12	22'-5	7	12	7'-4	7	4.5	22'-5	0.915	1.077	0.549	2.541	327.87						
17-19	5	12	22'-5	5	12	9'-5	4	6	10'-6	2'-9	7'-9	5	12	22'-5	7	12	7'-8	7	4.5	22'-5	1.018	1.182	0.549	2.749	331.16						
20-22	5	9	22'-5	4	9	9'-1	4	6	10'-8	2'-10	7'-10	5	9	22'-5	6	9	7'-10	6	4.5	22'-5	1.087	1.253	0.549	2.889	339.45						
23-25	5	9	22'-5	4	9	9'-4	4	6	10'-10	2'-10	8'-0	5	9	22'-5	6	9	8'-0	6	4.5	22'-5	1.156	1.358	0.549	3.063	351.53						



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

LATEST REVISION DATE	 Highway Division	Standard Design <b>Twin Reinforced Concrete Box Culverts</b> July, 2020		
APPROVED BY BRIDGE ENGINEER		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Culvert Barrel Details 10' x 7' Barrel Sections</td> <td style="width: 50%; text-align: center;">TWRCB 10-7-20</td> </tr> </table>	Culvert Barrel Details 10' x 7' Barrel Sections	TWRCB 10-7-20
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