

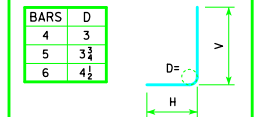
## VARIABLE DIMENSIONS AND QUANTITIES FOR TWIN 10 x 8 BARREL SECTIONS

DIMENSIONS															BAR LIST																																								
FILL	S	H	A	B	C	D	E	U	W	X	Z	a1		a2		b1		b2		e1		e2		f1		f2		k1		k2		k4		k6		k7		k9																	
SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L														
0	10	8	13.5	11.5	9	6	9	0'-0	6'-3	2'-0	6'-3	4	6	10'-0	6	9	10'-0	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	6	18	21'-11	6	18	10'-11	5	9	9'-8	6'-5	3'-3	4	9	21'-11	4	9	12'-6	4	4.5	21'-11
1	10	8	13	11.5	9	6	9	0'-7	6'-3	1'-10	6'-3	4	6	9'-11	6	9	9'-11	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	6	18	21'-11	6	18	10'-4	5	9	9'-8	6'-5	3'-3	4	9	21'-11	4	9	12'-6	4	4.5	21'-11
2	10	8	9.5	10	9	9	9	0'-11	6'-8	2'-8	4'-9	4	12	9'-6	6	9	9'-6	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	10'-0	5	6	7'-8	4'-8	3'-0	5	18	21'-11	7	18	13'-4	7	4.5	21'-11
3	10	8	9.5	10	9	9	9	1'-4	5'-6	2'-9	4'-4	4	12	9'-6	6	9	9'-6	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	9'-5	5	6	6'-10	3'-10	3'-0	5	12	21'-11	5	12	11'-0	5	4.5	21'-11
4	10	8	8.5	10	9	9	9	1'-10	4'-6	3'-1	4'-1	4	12	9'-5	6	9	9'-5	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	7'-10	5	6	6'-3	3'-4	2'-11	5	12	21'-11	6	12	8'-0	6	4.5	21'-11
5-7	10	8	8.5	10	9	9	9	2'-0	4'-0	2'-11	3'-7	4	12	9'-5	6	9	9'-5	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	7'-10	5	6	6'-3	3'-4	2'-11	5	12	21'-11	6	12	8'-0	6	4.5	21'-11
8-10	10	8	9.5	11.5	9	9	9	2'-3	3'-9	2'-3	3'-6	4	12	9'-8	6	9	9'-8	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	7'-8	5	6	6'-0	3'-0	3'-0	4	12	21'-11	7	12	7'-6	7	4.5	21'-11
11-13	10	8	11.5	13.5	9	6	9	1'-10	3'-7	2'-1	3'-8	4	6	10'-0	6	9	10'-0	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	6	18	21'-11	6	18	8'-9	5	9	21'-11	5	9	7'-2	5	9	7'-2	5	4.5	21'-11		
14-16	10	8	13	15	9	6	9	1'-10	3'-8	1'-9	3'-9	4	6	10'-3	6	9	10'-3	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	6	18	21'-11	6	18	9'-1	4	6	6'-6	3'-3	3'-3	4	9	21'-11	6	9	7'-4	6	4.5	21'-11
17-19	10	8	14	16	9	6	9	1'-6	3'-9	2'-0	3'-10	4	6	10'-5	6	9	10'-5	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	9'-5	6	12	6'-8	3'-0	3'-8	5	12	21'-11	7	12	7'-6	7	4.5	21'-11
20-22	10	8	15	17	9	6	9	1'-6	3'-9	1'-11	3'-11	4	6	10'-7	6	9	10'-7	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	5	12	21'-11	5	12	9'-5	6	12	6'-9	3'-0	3'-9	5	12	21'-11	7	12	7'-6	7	4.5	21'-11
23-25	10	8	16.5	18.5	9.5	6	6	1'-8	3'-10	1'-10	4'-0	4	6	10'-10	5	6	10'-10	4	6	32	4	6	17	4	12	18	4	18	16	4	12	22	4	18	16	5	9	22'-0	4	9	9'-4	6	12	6'-10	3'-0	3'-10	5	12	22'-0	7	12	7'-8	7	4.5	22'-0

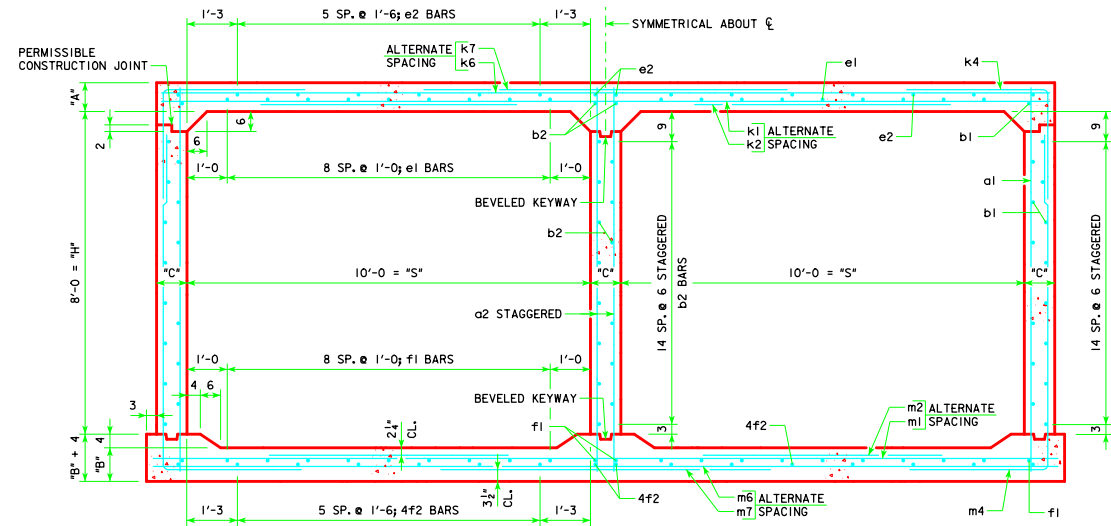
  

BAR LIST															QUANTITIES																										
FILL	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	H	V	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L
0	5	12	22'-5	5	12	8'-0	5	9	14'-10	6'-5	8'-5	4	9	22'-5	4	9	12'-6	4	4.5	22'-5	0.984	0.866	0.632	2.482	347.63																
1	6	18	22'-5	6	18	8'-7	5	9	14'-10	6'-5	8'-5	4	9	22'-5	4	9	12'-6	4	4.5	22'-5	0.950	0.866	0.632	2.448	347.08																
2	5	9	22'-5	4	9	6'-7	5	6	12'-4	4'-1	8'-3	5	18	22'-5	8	18	9'-6	8	4.5	22'-5	0.709	0.761	0.632	2.102	359.66																
3	6	12	22'-5	5	12	6'-6	5	6	11'-9	3'-6	8'-3	5	18	22'-5	8	18	8'-8	8	4.5	22'-5	0.709	0.761	0.632	2.102	355.13																
4	5	9	22'-5	4	9	5'-11	5	6	11'-8	3'-5	8'-3	5	18	22'-5	8	18	8'-2	8	4.5	22'-5	0.641	0.761	0.632	2.034	338.21																
5-7	5	9	22'-5	4	9	6'-0	5	6	11'-6	3'-3	8'-3	5	9	22'-5	5	9	7'-2	5	4.5	22'-5	0.641	0.761	0.632	2.034	349.16																
8-10	5	12	22'-5	5	12	7'-10	5	6	11'-5	3'-0	8'-5	5	9	22'-5	5	9	7'-0	5	4.5	22'-5	0.709	0.866	0.632	2.207	342.39																
11-13	5	12	22'-5	5	12	8'-5	5	9	11'-7	3'-0	8'-7	5	9	22'-5	5	9	7'-4	5	4.5	22'-5	0.847	1.007	0.632	2.486	345.89																
14-16	5	12	22'-5	5	12	9'-3	4	6	11'-9	3'-1	8'-8	4	9	22'-5	6	9	7'-6	6	4.5	22'-5	0.950	1.112	0.632	2.694	336.89																
17-19	5	9	22'-5	4	9	8'-10	6	12	11'-10	3'-1	8'-9	5	12	22'-5	7	12	7'-8	7	4.5	22'-5	1.018	1.182	0.632	2.832	363.63																
20-22	5	9	22'-5	4	9	9'-0	6	12	11'-11	3'-1	8'-10	5	9	22'-5	6	9	7'-10	6	4.5	22'-5	1.087	1.253	0.632	2.972	371.42																
23-25	5	9	22'-6	4	9	9'-3	6	12	12'-1	3'-1	9'-0	5	9	22'-6	6	9	8'-0	6	4.5	22'-6	1.198	1.367	0.667	3.232	380.05																

### BENT BAR DETAIL



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIAMETER.



**TWIN 10 x 8 BARREL SECTION**

### NOTES:

- DIMENSIONS LISTED ON THIS SHEET TO BE USED IN CONJUNCTION WITH SHEET TWRCB G2-12.
- DIMENSIONS "A", "B", "C", "D", "E", AND "SP." LISTED IN THE BAR LIST ARE IN INCHES.

LATEST REVISION DATE	<i>Thomas E. M. Donnell</i> APPROVED BY BRIDGE ENGINEER		<b>Iowa Department of Transportation</b> <i>Highway Division</i>
	STANDARD DESIGN <b>TWIN REINFORCED CONCRETE BOX CULVERTS</b> APRIL, 2012		
	<b>CULVERT BARREL DETAILS</b> 10 x 8 BARREL SECTIONS		<b>TWRCB 10-8-12</b>