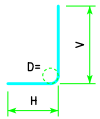
VARIABLE DIMENSIONS AND QUANTITIES FOR 12 x 5 BARREL SECTIONS

DIMENSIONS							BAR LIST																																							QUANTITIES				
							a1			b1			e1			e2			f1			f2			k1			k2					k9			m1			m2					m9		CONCRETE (CY/FT)				STEEL
FILL	S	H	A	B	C	D	SIZE	SP.	L	SIZE	SP.	NO.	SIZE	SP.	NO.	SIZE	SP.	NO.	SIZE	SP.	NO.	SIZE	SP.	NO.	SIZE	SP.	L	SIZE	SP.	L	H	V	SIZE	L	SIZE	SP.	L	SIZE	SP.	L	H	V	SIZE	L	SLAB	FLOOR	WALLS	TOTAL	(LB/FT)
0	12	5	13.5	13	9	9	4	12	7'-1	4	6	20	5	12	11	4	14	6	4	12	13	4	13	8	7	9	13'-2	5	6	6'-4	3'-0	3'-4	5	13'-2	7	9	13'-8	5	6	9'-5	3'-11	5'-6	5	13'-8	0.595	0.598	0.257	1.450	196.74
1	12	5	12.5	13	9	9	4	12	7'-0	4	6	20	5	12	11	4	16	6	4	12	13	4	17	6	8	12	13'-2	5	6	6'-8	3'-4	3'-4	5	13'-2	7	9	13'-8	5	6	8'-11	3'-5	5'-6	5	13'-8	0.553	0.598	0.257	1.408	195.00
2-3	12	5	8.5	10.5	9	9	4	12	6'-6	4	6	20	4	12	11	4	12	8	4	12	13	4	12	8	8	9	13'-2	7	9	7'-6	3'-9	3'-9	7	13'-2	6	6	13'-8	7	9	9'-0	3'-8	5'-4	7	13'-8	0.387	0.490	0.257	1.134	236.42
4-6	12	5	8.5	10.5	9	6	4	6	6'-6	4	6	20	4	12	11	4	16	6	4	12	13	4	16	6	8	9	13'-2	5	6	6'-2	3'-4	2'-10	5	13'-2	7	6	13'-8	5	6	8'-8	3'-4	5'-4	5	13'-8	0.387	0.490	0.257	1.134	224.26
7-9	12	5	8.5	10.5	9	9	4	12	6'-6	4	6	20	4	12	11	4	16	6	4	12	13	4	16	6	7	6	13'-2	6	6	6'-6	3'-3	3'-3	6	13'-2	7	6	13'-8	6	6	8'-7	3'-3	5'-4	6	13'-8	0.387	0.490	0.257	1.134	251.08
10	12	5	9	11	9	9	4	12	6'-7	4	6	20	4	12	11	4	16	6	4	12	13	4	15	6	7	6	13'-2	6	6	6'-6	3'-3	3'-3	6	13'-2	7	6	13'-8	6	6	8'-5	3'-1	5'-4	6	13'-8	0.407	0.512	0.257	1.176	250.18
11-15	12	5	10.5	12.5	9	9	4	12	6'-10	4	6	20	4	12	11	4	13	6	4	12	13	4	13	6	7	6	13'-2	7	9	6'-9	2'-10	3'-11	7	13'-2	8	6	13'-8	7	9	8'-4	2'-10	5'-6	7	13'-8	0.470	0.577	0.257	1.304	263.82
16-20	12	5	12.5	14.5	9.5	9	4	12	7'-2	4	6	20	4	12	11	4	11	6	4	12	13	4	11	6	8	6	13'-3	7	9	6'-7	2'-6	4'-1	7	13'-3	8	6	13'-9	7	9	8'-2	2'-6	5'-8	7	13'-9	0.558	0.668	0.271	1.497	279.95
21-25	12	5	14.5	17	10.5	9	6	9	7'-6	4	6	20	4	12	11	4	11	6	4	12	13	4	11	6	8	6	13'-5	5	6	6'-1	2'-8	3'-5	5	13'-5	8	6	13'-11	5	6	8'-6	2'-8	5'-10	5	13'-11	0.652	0.786	0.301	1.739	278.32
26-30	12	5	16.5	18.5	11	9	6	9	7'-10	4	6	20	4	12	11	4	12	6	4	12	13	4	12	6	9	6	13'-6	5	6	6'-3	2'-9	3'-6	5	13'-6	9	6	14'-0	5	6	8'-9	2'-9	6'-0	5	14'-0	0.742	0.858	0.315	1.915	323.00
31-35	12	5	18	20.5	12	9	4	9	8'-1	4	6	20	4	12	11	4	13	6	4	12	13	4	12	6	9	6	13'-8	7	9	7'-6	3'-0	4'-6	7	13'-8	9	6	14'-2	7	9	9'-1	2'-11	6'-2	7	14'-2	0.818	0.959	0.344	2.121	340.89
36-40	12	5	19.5	22	12.5	9	6	9	8'-4	4	6	20	4	12	11	4	12	6	5	12	13	4	13	6	9	6	13'-9	5	6	6'-10	3'-0	3'-10	5	13'-9	9	6	14'-3	5	6	9'-4	3'-1	6'-3	5	14'-3	0.889	1.032	0.358	2.279	338.34
41-45	12	5	21	23.5	13.5	9	5	12	8'-7	4	6	20	4	12	11	4	13	6	5	12	13	4	13	6	9	6	13'-11	7	9	7'-11	3'-2	4'-9	7	13'-11	9	6	14'-5	7	9	9'-8	3'-3	6'-5	7	14'-5	0.968	1.114	0.386	2.468	358.76
46-50	12	5	22.5	25	14	9	6	9	8'-10	4	6	20	5	12	11	4	14	6	5	12	13	4	14	6	9	6	14'-0	5	6	7'-5	3'-4	4'-1	5	14'-0	9	6	14'-6	5	6	9'-10	3'-4	6'-6	5	14'-6	1.041	1.190	0.400	2.631	352.39
51-55	12	5	25	27.5	14.5	9	6	9	9'-3	4	6	20	5	12	11	4	14	6	5	12	13	4	14	6	9	6	14'-1	6	9	8'-1	3'-6	4'-7	6	14'-1	9	6	14'-7	6	9	10'-3	3'-6	6'-9	6	14'-7	1.159	1.312	0.414	2.885	359.87

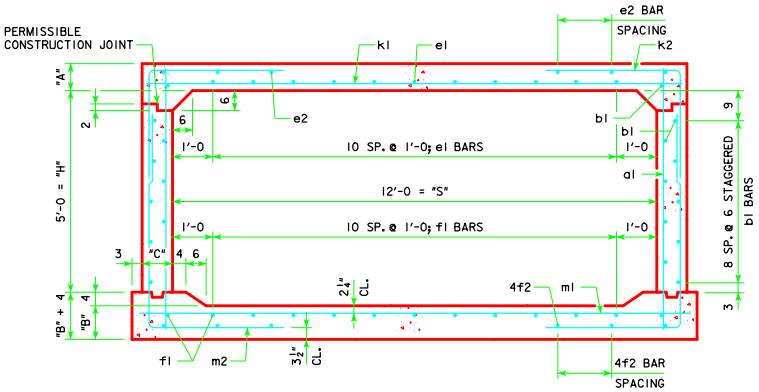
BENT BAR DETAIL

BARS	D
5	$3\frac{3}{4}$
6	$4\frac{1}{2}$
7	$5\frac{1}{4}$



k2 & m2

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



12 x 5 BARREL SECTION

NOTES:

1. DIMENSIONS LISTED ON THIS SHEET TO BE USED IN CONJUNCTION WITH SHEET RCB G2-12.
2. THE k2 AND m2 BARS HORIZONTAL LEGS MAY LAP IN LOW FILL SITUATIONS.
3. DIMENSIONS "A", "B", "C", "D", AND "SP." LISTED IN THE BAR LIST ARE IN INCHES.

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN

SINGLE REINFORCED CONCRETE BOX CULVERTS

APRIL, 2012

CULVERT BARREL DETAILS

12 x 5 BARREL SECTIONS

RCB 12-5-12

ENGLISH,RFDSIGNEDSINGLECULVERTS.DGN - RCB 12-5-12 - THIS SHEET ISSUED 04-12.