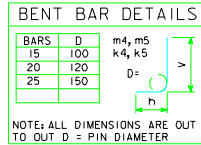


# VARIABLE DIMENSIONS AND QUANTITIES FOR BARREL SECTIONS

FILL		REINFORCING BAR LIST																			
		e1		e2		e3		e4		e5		e6		e7		e8		e9		e10	
SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	
0	15	280	2900	15	105	2900	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
300	15	280	2930	15	105	2930	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
600	15	210	2860	15	105	2860	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
900-1800	15	210	2830	15	140	2830	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
2100-3000	15	280	2830	15	105	2830	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
3300-3600	20	210	2860	15	105	2860	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
3900-4500	20	210	2930	15	105	2930	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
4800-5100	15	210	2960	15	105	2960	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
5400-5700	15	140	3030	15	105	3030	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
6000-6300	15	140	3070	15	105	3070	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
6600-6900	15	140	3120	15	105	3120	10	175	28	10	175	30	15	300	18	10	360	20	15	300	
7200-7500	15	210	3110	15	105	3110	10	175	28	10	175	30	15	300	18	10	360	20	15	300	

FILL		REINFORCING BAR LIST																																						
		k6		k7		k9		m1		m2		m3		m4		m5		m6		m7		m9																		
SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH																	
0	15	280	9820	15	280	1550	15	105	9820	15	280	9970	15	280	2110	15	280	1890	15	280	3380	610	2770	15	280	3270	490	2780	15	280	9970	15	280	1100	15	105	9970			
300	15	280	8740	15	280	1500	15	105	9820	15	280	9970	15	280	2160	15	280	1890	15	280	3410	590	2820	15	210	7800	15	210	3310	560	2750	15	280	7880	20	280	1400	15	105	9970
600	15	280	8340	15	280	1480	15	105	9820	15	280	1960	15	280	1960	15	210	1350	15	210	3310	560	2750	15	210	3310	560	2750	15	280	7880	20	280	1400	15	105	9970			
900-1800	15	280	7830	15	280	1320	15	105	9820	15	210	9970	15	210	2160	15	210	1810	15	280	3390	670	2720	15	280	3210	490	2720	15	210	7750	15	210	1350	15	105	9970			
2100-3000	15	210	7650	15	210	1500	15	105	9820	15	280	9970	20	280	2190	15	280	1630	15	210	3410	690	2720	15	210	3280	560	2720	20	280	7730	20	280	1400	20	105	9970			
3300-3600	15	210	7600	15	210	1280	15	105	9820	15	280	9970	20	280	2240	15	280	1480	15	210	3440	670	2770	15	210	3270	490	2780	20	280	7700	20	280	1300	20	105	9970			
3900-4500	20	280	7630	20	280	1350	20	105	9820	15	210	9970	15	210	2290	15	210	1450	15	280	3530	610	2920	20	280	3360	540	2820	25	350	7730	25	350	1400	25	175	9970			
4800-5100	20	280	7630	20	280	1350	20	105	9820	15	210	9970	15	210	2060	15	210	1220	15	280	3750	870	2880	20	280	3420	540	2880	25	350	7730	25	350	1400	25	175	9970			
5400-5700	25	350	7650	25	350	1400	25	175	9820	15	210	9970	15	210	2090	15	210	1220	15	280	3800	870	2930	20	280	3460	540	2920	25	420	7780	25	420	1610	25	105	9970			
6000-6300	25	350	7650	25	350	1430	25	175	9820	15	210	9970	15	210	2160	15	210	1220	15	280	3820	900	2920	20	280	3490	540	2920	20	280	7780	20	280	1610	20	105	9970			
6600-6900	25	350	7650	25	350	1430	25	175	9820	15	210	9970	15	210	2210	15	210	1280	15	210	3770	770	3000	15	210	3560	560	3000	20	280	7700	20	280	1380	20	105	9970			
7200-7500	25	350	7650	25	350	1450	25	175	9820	15	210	9970	15	210	2290	15	210	1320	15	210	3840	790	3050	15	210	3610	560	3050	20	280	7700	20	280	1430	20	105	9970			

FILL		DIMENSIONS														
		S	H	A	B	C	#D	#E	#F	#G	#J	#K	#L	#M	#N	#O
0	3000	2400	270	255	230	210	105	210	280	280	280	280	280	280	280	280
300	3000	2400	280	280	230	210	105	210	280	280	280	280	280	280	280	280
600	3000	2400	230	255	230	210	105	210	280	280	280	280	280	280	280	280
900-1800	3000	2400	205	255	230	210	105	210	280	280	280	280	280	280	280	280
2100-3000	3000	2400	205	255	230	210	105	210	280	280	280	280	280	280	280	280
3300-3600	3000	2400	220	270	230	210	105	210	280	280	280	280	280	280	280	280
3900-4500	3000	2400	255	305	230	210	105	210	280	280	280	280	280	280	280	280
4800-5100	3000	2400	270	325	230	210	105	210	280	280	280	280	280	280	280	280
5400-5700	3000	2400	305	355	230	140	105	210	280	280	280	280	280	280	280	280
6000-6300	3000	2400	320	380	230	140	105	210	280	280	280	280	280	280	280	280
6600-6900	3000	2400	345	405	230	140	105	210	280	280	280	280	280	280	280	280
7200-7500	3000	2400	370	430	230	140	105	210	280	280	280	280	280	280	280	280



FILL		DIMENSIONS																		
		#K	#L	R	T	U	V	#W	X	Y	Z	#AA	#AB	#AC	#AD					
0	105	105	330	410	860	3295	690	670	3370	540	105	105	330	410	860	3295	690	670	3370	540
300	105	105	380	430	810	3215	690	670	3370	540	105	105	380	430	810	3215	690	670	3370	540
600	105	105	540	430	820	1815	760	940	1280	740	105	105	540	430	820	1815	760	940	1280	740
900-1800	105	105	430	580	710	1305	660	710	1150	710	105	105	430	580	710	1305	660	710	1150	710
2100-3000	105	105	760	630	810	1125	630	800	1130	740	105	105	760	630	810	1125	630	800	1130	740
3300-3600	105	105	800	660	690	1075	630	880	1100	710	105	105	800	660	690	1075	630	880	1100	710
3900-4500	105	105	810	660	740	1105	640	890	1130	760	105	105	810	660	740	1105	640	890	1130	760
4800-5100	105	105	930	680	740	1105	760	1010	1130	760	105	105	930	680	740	1105	760	1010	1130	760
5400-5700	105	105	870	640	740	1125	760	1010	1180	870	105	105	870	640	740	1125	760	1010	1180	870
6000-6300	105	105	850	640	790	1125	740	1010	1180	870	105	105	850	640	790	1125	740	1010	1180	870
6600-6900	105	105	930	610	790	1125	720	980	1110	770	105	105	930	610	790	1125	720	980	1110	770
7200-7500	105	105	1010	660	810	1125	690	960	1100	790	105	105	1010	660	810	1125	690	960	1100	790

FILL	CONCRETE				STEEL
	SLAB	FLOOR	WALL	TOTAL	
0	2.882	2.760	2.092	7.734	736.7
300	2.982	3.012	2.092	8.085	738.7
600	2.486	2.760	2.092	7.337	783.3
900-1800	2.238	2.760	2.092	7.089	741.4
2100-3000	2.238	2.760	2.092	7.089	835.5
3300-3600	2.386	2.911	2.092	7.389	857.0
3900-4500	2.734	3.263	2.092	8.088	911.4
4800-5100	2.310	3.414	2.092	8.338	887.6
5400-5700	3.230	3.767	2.092	9.088	939.0
6000-6300	3.378	4.019	2.092	9.488	927.0
6600-6900	3.626	4.270	2.092	9.988	941.7
7200-7500	3.874	4.522	2.092	10.488	970.9

\* THESE DIMENSIONS ARE CORRECT FOR 11 480 mm LONG STANDARD SECTIONS ONLY. DIMENSIONS MUST BE RECALCULATED FOR ALL OTHER SECTION LENGTHS. DIMENSIONS LISTED ON THIS SHEET TO BE USED IN CONJUNCTION WITH SHEET MTRRCB 2-94

STANDARD DESIGN

## CULVERT BARREL DETAILS

FOR  
TRIPLE REINFORCED CONCRETE BOX CULVERTS

PROJECT DEVELOPMENT DIVISION  
IOWA DEPARTMENT OF TRANSPORTATION

DECEMBER, 1994      MTRRCB 3000-2400-94

LATEST REVISION DATE: 12-9-96

APPROVED BY: *William A. Kuntz*