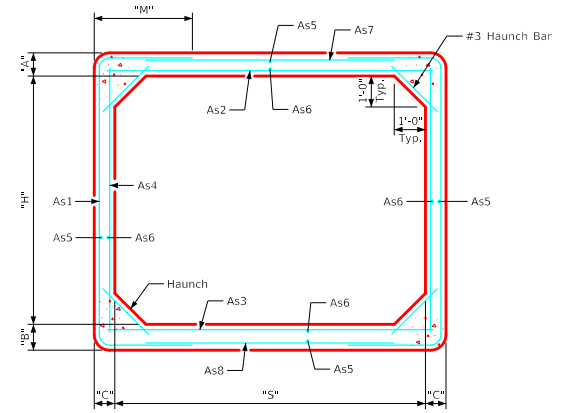
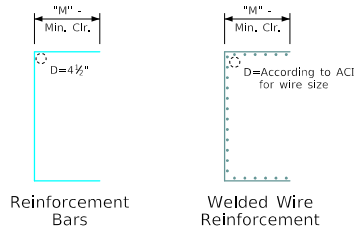


## Variable Dimensions and Quantities for 10' Span Barrel Sections

Dimensions										Reinforcement Requirements								Weight (LB/FT)		
Size	Class	f'c (KSI)	Fill (FT)	S (FT)	H (FT)	A (IN)	B (IN)	C (IN)	As1 Area (IN <sup>2</sup> /FT)	As1 Length	M	As2 Area (IN <sup>2</sup> /FT)	As2 Length	As3 Area (IN <sup>2</sup> /FT)	As3 Length	As4 Area (IN <sup>2</sup> /FT)	As4 Length		As7/As8 Area (IN <sup>2</sup> /FT)	As7/As8 Length
10'x4'	1	5.0	2-11	10	4	9	10	8	0.72	9'-11"	2'-6"	0.56	10'-6"	0.57	10'-6"	0.20	4'-6"	0.24	9'-4"	3795
	2	5.0	12-21	10	4	9	10	8	1.29	10'-7"	2'-10"	0.98	10'-6"	0.99	10'-6"	0.20	4'-6"	0.24	9'-4"	3795
	3	5.0	22-25	10	4	10	10	9	1.26	10'-8"	2'-10"	0.98	10'-6"	1.01	10'-6"	0.23	4'-6"	0.24	9'-6"	4075
10'x5'	1	5.0	2-11	10	5	9	10	8	0.63	10'-7"	2'-4"	0.66	10'-6"	0.68	10'-6"	0.20	5'-6"	0.24	9'-4"	3995
	2	5.0	12-22	10	5	9	10	8	1.16	11'-3"	2'-8"	1.20	10'-6"	1.22	10'-6"	0.20	5'-6"	0.24	9'-4"	3995
	3	5.0	23-25	10	5	10	10	9	1.11	11'-6"	2'-9"	1.13	10'-6"	1.19	10'-6"	0.23	5'-6"	0.24	9'-6"	4300
10'x6'	1	5.0	2-11	10	6	9	10	8	0.59	11'-7"	2'-4"	0.74	10'-6"	0.77	10'-6"	0.20	6'-6"	0.24	9'-4"	4195
	2	5.0	12-22	10	6	9	10	8	1.01	12'-3"	2'-8"	1.28	10'-6"	1.34	10'-6"	0.20	6'-6"	0.24	9'-4"	4195
	3	5.0	23-25	10	6	10	10	9	1.01	12'-4"	2'-8"	1.25	10'-6"	1.28	10'-6"	0.23	6'-6"	0.24	9'-6"	4525
10'x7'	1	5.0	2-11	10	7	9	10	8	0.54	12'-7"	2'-4"	0.81	10'-6"	0.84	10'-6"	0.20	7'-6"	0.24	9'-4"	4395
	2	5.0	12-22	10	7	9	10	8	0.92	13'-1"	2'-7"	1.40	10'-6"	1.46	10'-6"	0.20	7'-6"	0.24	9'-4"	4395
	3	5.0	23-25	10	7	10	10	9	0.93	13'-4"	2'-8"	1.35	10'-6"	1.41	10'-6"	0.23	7'-6"	0.24	9'-6"	4750
10'x8'	1	5.0	2-10	10	8	9	10	8	0.53	13'-7"	2'-4"	0.89	10'-6"	0.95	10'-6"	0.20	8'-6"	0.24	9'-4"	4595
	2	5.0	11-21	10	8	9	10	8	0.83	14'-3"	2'-8"	1.44	10'-6"	1.47	10'-6"	0.20	8'-6"	0.24	9'-4"	4595
	3	5.0	22-25	10	8	10	11	8	0.86	14'-1"	2'-6"	1.50	10'-6"	1.56	10'-6"	0.20	8'-6"	0.27	9'-4"	4875
10'x9'	1	5.0	2-11	10	9	9	11	8	0.53	14'-10"	2'-5"	0.96	10'-6"	1.02	10'-6"	0.20	9'-6"	0.24	9'-4"	4935
	2	5.0	12-21	10	9	9	10	8	0.78	15'-5"	2'-9"	1.53	10'-6"	1.58	10'-6"	0.20	9'-6"	0.24	9'-4"	4795
	3	5.0	22-25	10	9	10	11	8	0.83	15'-3"	2'-7"	1.58	10'-6"	1.64	10'-6"	0.20	9'-6"	0.27	9'-4"	5075
10'x10'	1	5.0	2-11	10	10	9	10	8	0.54	16'-7"	2'-10"	1.04	10'-6"	1.13	10'-6"	0.20	10'-6"	0.24	9'-4"	4995
	2	5.0	12-21	10	10	9	10	8	0.80	16'-11"	3'-0"	1.61	10'-6"	1.67	10'-6"	0.24	10'-6"	0.24	9'-4"	4995
	3	5.0	22-25	10	10	10	11	9	0.78	16'-11"	2'-11"	1.53	10'-6"	1.61	10'-6"	0.23	10'-6"	0.27	9'-6"	5570
10'x11'	1	5.0	2-9	10	11	9	10	8	0.59	18'-5"	3'-3"	1.10	10'-6"	1.16	10'-6"	0.29	11'-6"	0.24	9'-4"	5195
	2	5.0	10-16	10	11	9	10	8	0.60	18'-7"	3'-4"	1.37	10'-6"	1.44	10'-6"	0.35	11'-6"	0.24	9'-4"	5195
	3	5.0	17-20	10	11	9	10	9	0.68	18'-7"	3'-4"	1.49	10'-6"	1.56	10'-6"	0.32	11'-6"	0.27	9'-6"	5510
10'x12'	1	5.0	21-25	10	11	10	11	11	0.69	18'-7"	3'-3"	1.34	10'-6"	1.43	10'-6"	0.27	11'-6"	0.27	9'-10"	6435
	2	5.0	2-12	10	12	9	11	8	0.59	21'-4"	4'-2"	1.16	10'-6"	1.22	10'-6"	0.41	12'-6"	0.27	9'-4"	5535
	3	5.0	13-19	10	12	9	10	10	0.62	20'-1"	3'-7"	1.37	10'-6"	1.46	10'-6"	0.39	12'-6"	0.24	9'-8"	6075
10'x12'	2	5.0	20-25	10	12	10	11	11	0.69	20'-3"	3'-7"	1.40	10'-6"	1.52	10'-6"	0.36	12'-6"	0.27	9'-10"	6710



Typical Barrel Section



### Bent Bar Details

All dimensions are out to out.  
D = pin diameter (min.).  
Pin diameter may be increased if needed to maintain clear cover.

### Notes:

1. Longitudinal reinforcement denoted as As5 and As6 must be placed in slab, floor, and walls and must be 0.06 in<sup>2</sup>/ft minimum.
2. All reinforcement lengths and areas are minimum requirements.
3. If reinforcing bars are substituted for welded wire reinforcing, dimension "M" and/or length of the As7/As8 reinforcement shall be adjusted to ensure adequate lap length is provided.
4. Weight of sections assumes a density of 150 PCF and squared corners.
5. See PRCB G1-20 and G2-20 for additional information and notes.

LATEST REVISION DATE	APPROVED BY BRIDGE ENGINEER		
		Standard Design <b>Single Precast Reinforced Concrete Box Culverts</b> December, 2020	
		Culvert Barrel Details 10'-0" Span Barrel Sections	PRCB 10-20