


FOR TYPICAL SECTION, NOTES AND OTHER DETAILS, REFER TO STANDARD BCD-DT.

BCD-10

SPAN (FT.)	HIGHT (FT.)	REINFORCING STEEL											QUAN./LF		HEADWALLS							WINGWALL					
		BT I										NO. BL1 #4 BARS	NO. BL2 #3 BARS	REINFORCING STEEL (LBS./LONG. JT)	CONCRETE CLASS A4 (CY/ LF)	REINFORCING STEEL (LBS./LF)	G		HW I		NO. HW2 BARS		NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)	INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)	OUTLET REINFORCING STEEL (LBS)
		SIZE	SPACING C-C	a	b	c	d	e	f	g	LENGTH						HEADWALL LENGTH	SIZE	LENGTH								
3	3	4	12"	2'- 8 3/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	7'- 7 7/8"	-----	7'- 11"	32	12	30.956	0.695	79.439	9'- 6"	6	9'- 2"	I	4	1.433	67.988	1.425	55.073	A	
3	4	4	12"	2'- 8 3/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	7'- 7 7/8"	-----	7'- 11"	32	18	33.074	0.768	85.703	9'- 6"	6	9'- 2"	I	5	1.531	71.439	1.517	55.073	C	
4	3	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	9'- 8"	-----	9'- 11"	40	12	37.636	0.792	92.688	11'- 6"	6	11'- 2"	I	4	1.635	80.004	1.634	67.089	A	
4	4	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	9'- 8"	-----	9'- 11"	40	18	39.754	0.866	98.952	11'- 6"	6	11'- 2"	I	5	1.734	83.455	1.726	67.089	C	
4	5	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	9'- 8"	-----	9'- 11"	40	24	41.872	0.940	105.216	11'- 6"	6	11'- 2"	I	6	1.833	86.907	1.819	67.089	E	
4	6	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 7/8"	0'- 3 3/4"	9'- 8"	-----	9'- 11"	40	30	43.990	1.013	111.480	11'- 6"	6	11'- 2"	I	7	1.932	90.358	1.912	67.089	G	
5	3	3	12"	4'- 4"	0'- 4 3/8"	2'- 4 1/8"	0'- 5 7/8"	0'- 3 7/8"	11'- 7 7/8"	-----	11'- 11"	48	12	44.316	0.891	99.200	13'- 6"	6	13'- 2"	I	4	1.837	92.020	1.843	79.105	A	
5	4	3	12"	4'- 4"	0'- 4 3/8"	2'- 4 1/8"	0'- 5 7/8"	0'- 3 7/8"	11'- 7 7/8"	-----	11'- 11"	48	18	46.434	0.964	105.464	13'- 6"	6	13'- 2"	I	5	1.936	95.471	1.935	79.105	C	
5	5	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	11'- 8"	-----	11'- 11"	48	24	48.552	1.037	118.687	13'- 6"	6	13'- 2"	I	6	2.035	98.923	2.028	79.105	E	
5	6	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	11'- 8"	-----	11'- 11"	48	30	50.670	1.111	124.951	13'- 6"	6	13'- 2"	I	7	2.134	102.374	2.121	79.105	G	
5	7	4	12"	4'- 4 1/8"	0'- 4 1/2"	2'- 4 1/4"	0'- 5 7/8"	0'- 3 3/4"	11'- 8"	-----	11'- 11"	48	36	52.788	1.185	131.215	13'- 6"	6	13'- 2"	I	8	2.233	105.825	2.214	79.105	I	
6	4	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	13'- 8"	-----	13'- 11"	56	18	53.114	1.061	129.872	15'- 6"	6	15'- 2"	I	5	2.138	107.487	2.144	91.121	C	
6	5	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	13'- 8"	-----	13'- 11"	56	24	55.232	1.135	136.324	15'- 6"	6	15'- 2"	I	6	2.237	110.939	2.237	91.121	E	
6	6	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	13'- 8"	-----	13'- 11"	56	30	57.350	1.208	142.777	15'- 6"	6	15'- 2"	I	7	2.336	114.390	2.330	91.121	G	
6	7	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	13'- 8"	-----	13'- 11"	56	36	59.468	1.282	149.229	15'- 6"	6	15'- 2"	I	8	2.435	117.841	2.423	91.121	I	
6	8	4	12"	5'- 1 3/4"	0'- 4 1/2"	2'- 9"	0'- 5 7/8"	0'- 3 3/4"	13'- 8"	-----	13'- 11"	56	42	61.586	1.355	164.914	15'- 6"	6	15'- 2"	I	9	2.534	121.293	2.515	91.121	K	
7	4	4	12"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 7/8"	0'- 5 7/8"	0'- 3 3/4"	15'- 8 1/8"	-----	15'- 11"	64	18	59.794	1.158	152.712	17'- 6"	6	17'- 2"	I	5	2.341	119.503	2.353	103.137	C	
7	6	4	12"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 7/8"	0'- 5 7/8"	0'- 3 3/4"	15'- 8 1/8"	-----	15'- 11"	64	30	64.030	1.305	172.209	17'- 6"	6	17'- 2"	I	7	2.539	126.406	2.539	103.137	G	
7	8	4	12"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 7/8"	0'- 5 7/8"	0'- 3 3/4"	15'- 8 1/8"	-----	15'- 11"	64	42	68.266	1.452	186.929	17'- 6"	6	17'- 2"	I	9	2.736	133.309	2.724	103.137	K	
7	10	4	11"	5'- 11 3/8"	0'- 4 1/2"	3'- 1 7/8"	0'- 5 7/8"	0'- 3 3/4"	15'- 8 1/8"	-----	15'- 11"	64	54	72.502	1.598	218.493	17'- 6"	6	17'- 2"	I	11	2.934	140.211	2.910	103.137	O	
8	4	4	10"	6'- 8 3/4"	0'- 4 3/4"	3'- 6 3/8"	0'- 6 1/4"	0'- 4"	17'- 7 7/8"	-----	17'- 11"	72	18	66.474	1.282	189.026	19'- 6"	6	19'- 2"	I	5	2.534	131.519	2.553	115.153	C	
8	6	4	10"	6'- 8 5/8"	0'- 5"	3'- 6 1/8"	0'- 6 1/2"	0'- 4 1/4"	17'- 7 7/8"	-----	17'- 11"	72	30	70.710	1.457	200.594	19'- 6"	6	19'- 2"	I	7	2.723	138.422	2.730	115.153	G	
8	8	4	9"	6'- 8 1/2"	0'- 5 1/4"	3'- 5 7/8"	0'- 6 7/8"	0'- 4 1/2"	17'- 7 7/8"	-----	18'- 0"	72	42	74.946	1.631	230.003	19'- 6"	6	19'- 2"	I	9	2.912	145.325	2.906	115.153	K	
8	10	4	10"	6'- 8 3/8"	0'- 5 1/2"	3'- 5 5/8"	0'- 7 1/4"	0'- 4 3/4"	17'- 7 7/8"	-----	18'- 0"	72	54	79.182	1.805	258.190	19'- 6"	6	19'- 2"	I	11	3.101	152.227	3.083	115.153	O	
9	4	4	9"	7'- 5 7/8"	0'- 5 3/4"	3'- 10 1/4"	0'- 7 5/8"	0'- 5"	19'- 8"	-----	20'- 0"	80	18	73.154	1.503	250.774	21'- 6"	6	21'- 2"	I	5	2.711	143.535	2.737	127.169	D	
9	6	4	9"	7'- 5 3/4"	0'- 6"	3'- 10"	0'- 8"	0'- 5 1/4"	19'- 8"	-----	20'- 0"	80	30	77.390	1.682	251.871	21'- 6"	6	21'- 2"	I	7	2.899	150.438	2.912	127.169	H	
9	8	4	9"	7'- 5 5/8"	0'- 6 1/4"	3'- 9 3/4"	0'- 8 3/8"	0'- 5 1/2"	19'- 8"	-----	20'- 1"	80	42	81.626	1.860	266.494	21'- 6"	6	21'- 2"	I	9	3.086	157.341	3.087	127.169	L	
9	10	4	9"	7'- 5 5/8"	0'- 6 1/4"	3'- 9 3/4"	0'- 8 3/8"	0'- 5 1/2"	19'- 8"	-----	20'- 1"	80	54	85.862	2.005	301.091	21'- 6"	6	21'- 2"	I	11	3.284	164.243	3.272	127.169	P	
9	12	4	8"	7'- 5 1/2"	0'- 6 1/2"	3'- 9 1/2"	0'- 8 5/8"	0'- 5 3/4"	19'- 8"	-----	20'- 1"	80	66	90.098	2.179	363.528	21'- 6"	6	21'- 2"	I	13	3.471	171.146	3.447	127.169	T	
10	4	4	8"	8'- 3 1/8"	0'- 6 1/2"	4'- 2 1/4"	0'- 8 5/8"	0'- 5 3/4"	21'- 8"	-----	22'- 1"	88	18	79.834	1.715	295.784	23'- 6"	6	23'- 2"	I	5	2.870	155.551	2.902	139.185	D	
10	6	5	9"	8'- 3"	0'- 6 7/8"	4'- 2"	0'- 9 1/8"	0'- 6"	21'- 8"	-----	22'- 1"	88	30	84.070	1.896	317.091	23'- 6"	6	23'- 2"	I	7	3.055	162.454	3.075	139.185	H	
10	8	5	9"	8'- 2 7/8"	0'- 7 1/8"	4'- 1 3/4"	0'- 9 1/2"	0'- 6 1/4"	21'- 8"	-----	22'- 1"	88	42	88.306	2.077	334.039	23'- 6"	6	23'- 2"	I	9	3.241	169.357	3.249	139.185	L	
10	10	5	10"	8'- 2 3/4"	0'- 7 3/8"	4'- 1 1/2"	0'- 9 7/8"	0'- 6 1/2"	21'- 8"	-----	22'- 1"	88	54	92.542	2.258	344.909	23'- 6"	6	23'- 2"	I	11	3.427	176.259	3.422	139.185	P	
10	12	5	10"	8'- 2 3/4"	0'- 7 3/8"	4'- 1 1/2"	0'- 9 7/8"	0'- 6 1/2"	21'- 8"	-----	22'- 1"	88	66	96.778	2.402	403.179	23'- 6"	6	23'- 2"	I	13	3.625	183.162	3.608	139.185	T	
12	6	5	9"	9'- 9 3/8"	0'- 8 5/8"	4'- 9 7/8"	0'- 11 5/8"	0'- 7 3/4"	25'- 8 1/8"	-----	26'- 2"	104	30	97.430	2.423	407.615	27'- 6"	6	27'- 2"	I	7	3.326	186.486	3.359	163.217	H	
12	8	5	9"	9'- 9 1/4"	0'- 8 7/8"	4'- 9 5/8"	1'- 0"	0'- 8"	25'- 8 1/8"	-----	26'- 3"	104	42	101.666	2.610	420.889	27'- 6"	6	27'- 2"	I	9	3.509	193.389	3.530	163.217	L	
12	10	5	9"	9'- 9 1/8"	0'- 9 1/8"	4'- 9 3/8"	1'- 1/4"	0'- 8 1/4"	25'- 8 1/8"	-----	26'- 3"	104	54	105.902	2.797	434.886	27'- 6"	6	27'- 2"	I	11	3.691	200.291	3.700	163.217	P	
12	12	5	9"	9'- 9 1/8"	0'- 9 1/8"	4'- 9 3/8"	1'- 1/4"	0'- 8 1/4"	25'- 8 1/8"	-----	26'- 3"	104	66	110.138	2.938	531.734	27'- 6"	6	27'- 2"	I	13	3.889	207.194	3.885	163.217	T	

A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.

SPECIFICATION REFERENCE	<h1>DOUBLE BOX CULVERTS</h1> <h2>5 TO 10 FT. FILLS</h2> <p>VIRGINIA DEPARTMENT OF TRANSPORTATION</p>	 ROAD AND BRIDGE STANDARDS	
		REVISION DATE 07/11	SHEET 2 OF 2 1003.10