

SPAN		HIGHT		REINFORCING STEEL											QUAN./LF		HEADWALLS									
(FT.)	(FT.)	SIZE	SPACING C-C	a	b	c	d	e	f	g	LENGTH	NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS./LONG. FT)	CONCRETE CLASS A4 (CY/LF)	REINFORCING STEEL (LBS./LF)	G HEADWALL LENGTH	HW1 SIZE	HW1 LENGTH	NO. HW2 BARS	NO. HW3 BARS	INLET CONCRETE CL. A4 (CY)	INLET REINFORCING STEEL (LBS)	OUTLET CONCRETE CL. A4 (CY)	OUTLET REINFORCING STEEL (LBS)	WINGWALL
3	3	4	12"	2'- 8 7/8"	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"	1	4	1.433	67.988	1.425	55.073	A
3	4	4	12"	2'- 8 7/8"	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"	1	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"	1	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"	1	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"	1	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"	1	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 3/8"	11'- 7 7/8"	-----	11'-11"	48	12	44.316	0.891	99.200	13'- 6"	6	13'- 2"	1	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 3/8"	11'- 7 7/8"	-----	11'-11"	48	18	46.434	0.964	105.464	13'- 6"	6	13'- 2"	1	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"	1	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"	1	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"	1	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	125.672	15'- 6"	6	15'- 2"	1	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	131.936	15'- 6"	6	15'- 2"	1	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	1.209	138.200	15'- 6"	6	15'- 2"	1	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	144.464	15'- 6"	6	15'- 2"	1	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	158.499	15'- 6"	6	15'- 2"	1	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	1.159	147.546	17'- 6"	6	17'- 2"	1	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	166.367	17'- 6"	6	17'- 2"	1	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	1.453	178.895	17'- 6"	6	17'- 2"	1	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	1.599	198.464	17'- 6"	6	17'- 2"	1	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	1.283	182.386	19'- 6"	6	19'- 2"	1	5	2.534	131.519	2.553	115.153	C
8	6	4	10"	6'- 8 3/8"	0'- 5"	3'- 6 1/8"	0'- 6 1/2"	0'- 4 1/4"	17'- 7 7/8"	-----	17'-11"	72	30	70.710	1.458	193.740	19'- 6"	6	19'- 2"	1	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 3/8"	0'- 4 1/2"	17'- 7 7/8"	-----	18'- 0"	72	42	74.946	1.631	220.356	19'- 6"	6	19'- 2"	1	9	2.912	145.325	2.906	115.153	K
8	10	4	10"	6'- 8 3/8"	0'- 5 1/2"	3'- 5 7/8"	0'- 7 1/4"	0'- 4 3/4"	17'- 7 7/8"	-----	18'- 0"	72	54	79.182	1.806	239.275	19'- 6"	6	19'- 2"	1	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	240.157	21'- 6"	6	21'- 2"	1	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	241.260	21'- 6"	6	21'- 2"	1	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	254.827	21'- 6"	6	21'- 2"	1	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	2.007	277.942	21'- 6"	6	21'- 2"	1	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	2.182	322.702	21'- 6"	6	21'- 2"	1	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	1.716	282.888	23'- 6"	6	23'- 2"	1	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	1.897	305.203	23'- 6"	6	23'- 2"	1	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	2.078	321.085	23'- 6"	6	23'- 2"	1	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	2.259	326.146	23'- 6"	6	23'- 2"	1	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	2.405	357.699	23'- 6"	6	23'- 2"	1	13	3.625	183.162	3.608	139.185	T
12	6	5	9"	9'- 9 3/8"	0'- 8 5/8"	4'- 9 3/8"	0'-11 5/8"	0'- 7 3/4"	25'- 8 1/8"	-----	26'- 2"	104	30	97.430	2.424	389.599	27'- 6"	6	27'- 2"	1	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	2.612	402.511	27'- 6"	6	27'- 2"	1	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	2.799	409.110	27'- 6"	6	27'- 2"	1	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	2.942	486.083	27'- 6"	6	27'- 2"	1	13	3.889	207.194	3.885	163.217	T

SPECIFICATION REFERENCE

DOUBLE BOX CULVERTS

5 TO 10 FT. FILLS

VIRGINIA DEPARTMENT OF TRANSPORTATION



ROAD AND BRIDGE STANDARDS

REVISION DATE

SHEET 2 OF 2

1003.09