

SPAN		HGHT		REINFORCING STEEL											QUAN./LF		HEADWALLS						WINGWALL			
(FT.)	(FT.)	SIZE	SPACING C-C	a	b	c	d	e	f	g	LENGTH	NO. BL1 BARS	NO. BL2 BARS	REINFORCING STEEL (LBS/LONG. JT)	CONCRETE CLASS A4 (CY/LF)	REINFORCING STEEL (LBS/LF)	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)
3	3	4	12"	2'- 8 7/8"	0'- 4 1/2"	1'- 6 5/8"	0'- 5 7/8"	0'- 3 3/4"	14'- 11 1/8"	1'- 5 7/8"	15'- 9"	60	20	57.160	1.284	141.899	16'- 10"	6	16'- 6"	3	12	2.222	137.876	2.191	99.132	A
3	4	3	12"	2'- 8 7/8"	0'- 4 3/8"	1'- 6 1/2"	0'- 5 5/8"	0'- 3 3/8"	15'- 0"	1'- 5 3/4"	15'- 9"	60	30	60.690	1.407	143.141	16'- 10"	6	16'- 6"	3	15	2.333	148.230	2.284	99.132	C
4	3	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 5/8"	0'- 3 3/4"	19'- 0"	2'- 1"	19'- 9"	76	20	70.520	1.479	168.508	20'- 10"	6	20'- 6"	3	12	2.626	161.908	2.609	123.164	A
4	4	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 5/8"	0'- 3 3/4"	19'- 0"	2'- 1"	19'- 9"	76	30	74.050	1.602	178.948	20'- 10"	6	20'- 6"	3	15	2.738	172.262	2.702	123.164	C
4	5	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 5/8"	0'- 3 3/4"	19'- 0"	2'- 1"	19'- 9"	76	40	77.580	1.724	189.388	20'- 10"	6	20'- 6"	3	18	2.849	182.616	2.794	123.164	E
4	6	4	12"	3'- 6 1/2"	0'- 4 1/2"	1'- 11 1/2"	0'- 5 5/8"	0'- 3 3/4"	19'- 0"	2'- 1"	19'- 9"	76	50	81.110	1.847	199.828	20'- 10"	6	20'- 6"	3	21	2.960	192.970	2.887	123.164	G
5	3	4	12"	4'- 3 3/4"	0'- 5 1/4"	2'- 3 1/2"	0'- 6 5/8"	0'- 4 1/2"	23'- 0"	2'- 7 1/2"	23'- 11"	92	20	83.880	1.781	209.367	24'- 10"	6	24'- 6"	3	12	2.992	185.940	2.987	147.196	A
5	4	4	12"	4'- 3 3/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	23'- 0"	2'- 7 1/4"	24'- 0"	92	30	87.410	1.941	214.496	24'- 10"	6	24'- 6"	3	15	3.090	196.294	3.067	147.196	C
5	5	4	12"	4'- 3 3/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	23'- 0"	2'- 7 1/4"	24'- 0"	92	40	90.940	2.063	224.936	24'- 10"	6	24'- 6"	3	18	3.201	206.648	3.167	147.196	E
5	6	4	12"	4'- 3 3/8"	0'- 5 1/2"	2'- 3 1/4"	0'- 7 1/4"	0'- 4 3/4"	23'- 0"	2'- 7 1/4"	24'- 0"	92	50	94.470	2.186	240.799	24'- 10"	6	24'- 6"	3	21	3.313	217.002	3.253	147.196	G
5	7	4	12"	4'- 3 1/2"	0'- 5 3/4"	2'- 3"	0'- 7 5/8"	0'- 5"	23'- 0"	2'- 7"	24'- 0"	92	60	98.000	2.344	251.239	24'- 10"	6	24'- 6"	3	24	3.429	227.356	3.351	147.196	J
6	4	4	11"	5'- 1/2"	0'- 7"	2'- 6 1/2"	0'- 9 3/8"	0'- 6 1/4"	27'- 0"	3'- 1"	28'- 3"	108	30	100.770	2.412	262.246	28'- 10"	6	28'- 6"	3	15	3.404	220.326	3.394	171.228	D
6	5	4	11"	5'- 1/2"	0'- 7"	2'- 6 1/2"	0'- 9 3/8"	0'- 6 1/4"	27'- 0"	3'- 1"	28'- 3"	108	40	104.300	2.535	266.224	28'- 10"	6	28'- 6"	3	18	3.515	230.680	3.487	171.228	F
6	6	4	11"	5'- 3/8"	0'- 7 1/4"	2'- 6 1/4"	0'- 9 3/4"	0'- 6 1/2"	27'- 0"	3'- 3/4"	28'- 4"	108	50	107.830	2.700	276.907	28'- 10"	6	28'- 6"	3	21	3.610	241.034	3.563	171.228	H
6	7	4	11"	5'- 3/8"	0'- 7 1/4"	2'- 6 1/4"	0'- 9 3/4"	0'- 6 1/2"	27'- 0"	3'- 3/4"	28'- 4"	108	60	111.360	2.822	294.051	28'- 10"	6	28'- 6"	3	24	3.722	251.388	3.656	171.228	J
6	8	4	11"	5'- 3/8"	0'- 7 1/4"	2'- 6 1/4"	0'- 9 3/4"	0'- 6 1/2"	27'- 0"	3'- 3/4"	28'- 4"	108	70	114.890	2.945	302.538	28'- 10"	6	28'- 6"	3	27	3.833	261.742	3.749	171.228	L
7	4	4	9"	5'- 9 1/4"	0'- 8 3/4"	2'- 9 5/8"	0'- 11 1/8"	0'- 8"	31'- 1/8"	3'- 6 3/8"	32'- 8"	124	30	114.130	3.006	312.177	32'- 10"	6	32'- 6"	3	15	3.642	244.358	3.646	195.260	D
7	6	4	9"	5'- 9 1/8"	0'- 9"	2'- 9 3/8"	1'- 1/4"	0'- 8 1/4"	31'- 1/8"	3'- 6 1/8"	32'- 9"	124	50	121.190	3.300	334.096	32'- 10"	6	32'- 6"	3	21	3.846	265.066	3.812	195.260	H
7	8	4	9"	5'- 9"	0'- 9 1/4"	2'- 9 5/8"	1'- 1/2"	0'- 8 1/2"	31'- 1/8"	3'- 5 7/8"	32'- 9"	124	70	128.250	3.593	367.629	32'- 10"	6	32'- 6"	3	27	4.049	285.774	3.978	195.260	L
7	10	4	9"	5'- 9"	0'- 9 1/4"	2'- 9 5/8"	1'- 1/2"	0'- 8 1/2"	31'- 1/8"	3'- 5 7/8"	32'- 9"	124	90	135.310	3.835	422.865	32'- 10"	6	32'- 6"	3	33	4.272	306.482	4.164	195.260	P
8	4	4	9"	6'- 6 1/8"	0'- 10"	3'- 1 1/8"	1'- 1 5/8"	0'- 9 1/4"	34'- 11 1/8"	4'- 3/8"	36'- 11"	140	30	127.490	3.574	414.004	36'- 10"	6	36'- 6"	3	15	3.883	268.390	3.900	219.292	D
8	6	4	9"	6'- 6 1/8"	0'- 10"	3'- 1 1/8"	1'- 1 5/8"	0'- 9 1/4"	34'- 11 1/8"	4'- 3/8"	36'- 11"	140	50	134.550	3.819	435.775	36'- 10"	6	36'- 6"	3	21	4.105	289.098	4.085	219.292	H
8	8	4	9"	6'- 6"	0'- 10 1/4"	3'- 7/8"	1'- 2"	0'- 9 1/2"	34'- 11 1/8"	4'- 1/8"	37'- 0"	140	70	141.610	4.118	470.171	36'- 10"	6	36'- 6"	3	27	4.306	309.806	4.248	219.292	L
8	10	4	9"	6'- 6"	0'- 10 1/4"	3'- 7/8"	1'- 2"	0'- 9 1/2"	34'- 11 1/8"	4'- 1/8"	37'- 0"	140	90	148.670	4.360	526.510	36'- 10"	6	36'- 6"	3	33	4.528	330.514	4.434	219.292	P
9	4	4	8"	7'- 3"	0'- 11 1/2"	3'- 4 1/2"	1'- 3 3/4"	0'- 10 3/4"	39'- 0"	4'- 6"	41'- 3"	156	30	140.850	4.265	494.140	40'- 10"	6	40'- 6"	3	15	4.067	292.422	4.097	243.324	D
9	6	4	8"	7'- 3"	0'- 11 1/2"	3'- 4 1/2"	1'- 3 3/4"	0'- 10 3/4"	39'- 0"	4'- 6"	41'- 3"	156	50	147.910	4.510	516.356	40'- 10"	6	40'- 6"	3	21	4.289	313.130	4.282	243.324	H
9	8	4	8"	7'- 2 7/8"	0'- 11 3/4"	3'- 4 1/4"	1'- 4 1/8"	0'- 11"	39'- 0"	4'- 5 3/4"	41'- 3"	156	70	154.970	4.815	553.828	40'- 10"	6	40'- 6"	3	27	4.505	333.838	4.461	243.324	M
9	10	4	8"	7'- 2 7/8"	0'- 11 3/4"	3'- 4 1/4"	1'- 4 1/8"	0'- 11"	39'- 0"	4'- 5 3/4"	41'- 3"	156	90	162.030	5.059	599.537	40'- 10"	6	40'- 6"	3	33	4.728	354.546	4.646	243.324	Q
9	12	5	9"	7'- 2 7/8"	0'- 11 7/8"	3'- 4 1/4"	1'- 4 1/8"	0'- 11"	39'- 0"	4'- 5 3/4"	41'- 3"	156	110	169.090	5.298	701.994	40'- 10"	6	40'- 6"	3	39	4.951	375.254	4.832	243.324	U
10	4	5	9"	7'- 11 7/8"	1'- 1 1/8"	3'- 7 3/4"	1'- 6"	1'- 1/4"	43'- 0"	4'- 11 3/4"	45'- 6"	172	30	154.210	5.029	592.064	44'- 10"	6	44'- 6"	3	15	4.232	316.454	4.276	267.356	E
10	6	5	9"	7'- 11 7/8"	1'- 1 1/8"	3'- 7 3/4"	1'- 6"	1'- 1/4"	43'- 0"	4'- 11 3/4"	45'- 6"	172	50	161.270	5.275	613.834	44'- 10"	6	44'- 6"	3	21	4.455	337.162	4.461	267.356	I
10	8	5	9"	7'- 11 3/4"	1'- 1 3/8"	3'- 7 1/2"	1'- 6 1/4"	1'- 1/2"	43'- 0"	4'- 11 1/2"	45'- 6"	172	70	168.330	5.586	650.050	44'- 10"	6	44'- 6"	3	27	4.649	357.870	4.618	267.356	M
10	10	5	9"	7'- 11 3/4"	1'- 1 3/8"	3'- 7 1/2"	1'- 6 1/4"	1'- 1/2"	43'- 0"	4'- 11 1/2"	45'- 6"	172	90	175.390	5.828	708.391	44'- 10"	6	44'- 6"	3	33	4.872	378.578	4.804	267.356	Q
10	12	5	9"	7'- 11 5/8"	1'- 1 5/8"	3'- 7 1/4"	1'- 6 5/8"	1'- 3/4"	43'- 0"	4'- 11 1/4"	45'- 7"	172	110	182.450	6.135	793.624	44'- 10"	6	44'- 6"	3	39	5.066	399.286	4.960	267.356	U
12	6	6	8"	9'- 5 1/2"	1'- 4 1/2"	4'- 2 5/8"	1'- 10 5/8"	1'- 3 1/2"	51'- 1/8"	5'- 10 7/8"	54'- 2"	204	50	187.990	7.101	859.578	52'- 10"	6	52'- 6"	3	21	4.603	385.226	4.636	315.420	I
12	8	6	8"	9'- 5 1/2"	1'- 4 1/2"	4'- 2 5/8"	1'- 10 5/8"	1'- 3 1/2"	51'- 1/8"	5'- 10 7/8"	54'- 2"	204	70	195.050	7.345	900.047	52'- 10"	6	52'- 6"	3	27	4.826	405.934	4.821	315.420	M
12	10	6	8"	9'- 5 1/2"	1'- 4 1/2"	4'- 2 5/8"	1'- 10 5/8"	1'- 3 1/2"	51'- 1/8"	5'- 10 7/8"	54'- 2"	204	90	202.110	7.588	947.856	52'- 10"	6	52'- 6"	3	33	5.048	426.642	5.007	315.420	Q
12	12	6	8"	9'- 5 3/8"	1'- 4 3/4"	4'- 1 7/8"	1'- 11"	1'- 3 3/4"	51'- 1/8"	5'- 10 5/8"	54'- 3"	204	110	209.170	7.908	1,030.481	52'- 10"	6	52'- 6"	3	39	5.236	447.350	5.158	315.420	U

SPECIFICATION REFERENCE

QUADRUPLE BOX CULVERTS
 20 TO 25 FT. FILLS
 VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT
 ROAD AND BRIDGE STANDARDS

REVISION DATE	SHEET 2 OF 2
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