

2016 ROAD & BRIDGE STANDARDS

BCQ-40

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

DIMENSIONS						REINFORCING STEEL																										
SPAN (FT.)	HGHT (FT.)	T1 TOP SLAB	T2 BOTTOM SLAB	T3 EXTERIOR WALL (IN.)	T4 INTERIOR WALL (IN.)	A	B	C	D	E	F	BH1			BH2			BH3			BH4			BV1			BV2					
												SIZE	SPACING C-C	LENGTH	SIZE	SPACING C-C	LENGTH	SIZE	SPACING C-C	a	LENGTH	SIZE	SPACING C-C	a	b	LENGTH	SIZE	SPACING C-C	LENGTH	SIZE	SPACING C-C	LENGTH
3	3	8"	8"	8"	8"	13	13'- 0"	13	13'- 0"	1	1'- 0"	4	12"	13'-11"	4	12"	15'- 0"	4	12"	2'- 2"	4'- 0"	4	12"	2'- 4"	2'- 8"	4'- 9"	4	12"	4'- 0"	4	12"	4'- 0"
3	4	8"	8"	8"	8"	13	13'- 0"	13	13'- 0"	2	2'- 0"	4	12"	13'-11"	4	12"	15'- 0"	3	12"	2'- 4"	4'- 5"	4	12"	2'- 4"	3'- 2"	5'- 3"	4	12"	5'- 0"	4	12"	5'- 0"
4	3	10"	10"	8"	8"	17	17'- 0"	17	17'- 0"	1	1'- 0"	4	12"	17'-11"	4	12"	19'- 0"	--	---	---	---	4	12"	2'- 4"	2'- 10"	4'- 11"	4	12"	4'- 4"	4	12"	4'- 4"
4	4	9 3/4"	9 3/4"	8"	8"	17	17'- 0"	17	17'- 0"	2	2'- 0"	4	12"	17'-11"	4	12"	19'- 0"	--	---	---	---	4	12"	2'- 4"	3'- 4"	5'- 5"	4	12"	5'- 3"	4	12"	5'- 3"
4	5	9 3/4"	9 3/4"	8"	8"	17	17'- 0"	17	17'- 0"	3	3'- 0"	4	12"	17'-11"	4	12"	19'- 0"	--	---	---	---	4	12"	2'- 4"	3'- 10"	5'- 11"	4	12"	6'- 3"	4	12"	6'- 3"
4	6	9 3/4"	9 3/4"	8"	8"	17	17'- 0"	17	17'- 0"	4	4'- 0"	4	12"	17'-11"	4	12"	19'- 0"	4	12"	2'- 11"	5'- 6"	4	12"	2'- 4"	4'- 4"	6'- 5"	5	12"	7'- 3"	4	12"	7'- 3"
5	3	12"	12"	8"	8"	21	21'- 0"	21	21'- 0"	1	1'- 0"	4	11"	21'-11"	4	11"	23'- 0"	--	---	---	---	4	11"	2'- 4"	3'- 0"	5'- 1"	4	12"	4'- 8"	4	12"	4'- 8"
5	4	12"	12"	8"	8"	21	21'- 0"	21	21'- 0"	2	2'- 0"	4	11"	21'-11"	4	11"	23'- 0"	--	---	---	---	4	11"	2'- 4"	3'- 6"	5'- 7"	4	12"	5'- 8"	4	12"	5'- 8"
5	5	11 3/4"	11 3/4"	8"	8"	21	21'- 0"	21	21'- 0"	3	3'- 0"	4	11"	21'-11"	4	11"	23'- 0"	--	---	---	---	4	11"	2'- 4"	4'- 0"	6'- 1"	4	12"	6'- 7"	4	12"	6'- 7"
5	6	11 3/4"	11 3/4"	8"	8"	21	21'- 0"	21	21'- 0"	4	4'- 0"	4	11"	21'-11"	4	11"	23'- 0"	3	11"	3'- 1"	5'- 10"	4	11"	2'- 4"	4'- 6"	6'- 7"	5	12"	7'- 7"	4	12"	7'- 7"
5	7	11 3/4"	11 3/4"	8"	8"	21	21'- 0"	21	21'- 0"	5	5'- 0"	4	11"	21'-11"	4	11"	23'- 0"	4	11"	3'- 3"	6'- 2"	4	11"	2'- 4"	5'- 0"	7'- 1"	5	8 1/2"	8'- 7"	4	12"	8'- 7"
6	4	14"	14"	8"	8"	25	25'- 0"	25	25'- 0"	2	2'- 0"	4	9"	25'-11"	4	9"	27'- 0"	--	---	---	---	4	9"	2'- 4"	3'- 8"	5'- 9"	4	12"	6'- 0"	4	12"	6'- 0"
6	5	14"	14"	8"	8"	25	25'- 0"	25	25'- 0"	3	3'- 0"	4	9"	25'-11"	4	9"	27'- 0"	--	---	---	---	4	9"	2'- 4"	4'- 2"	6'- 3"	4	12"	7'- 0"	4	12"	7'- 0"
6	6	14"	14"	8"	8"	25	25'- 0"	25	25'- 0"	4	4'- 0"	4	9"	25'-11"	4	9"	27'- 0"	--	---	---	---	4	9"	2'- 4"	4'- 8"	6'- 9"	5	12"	8'- 0"	4	12"	8'- 0"
6	7	14"	14"	8"	8"	25	25'- 0"	25	25'- 0"	5	5'- 0"	4	9"	25'-11"	4	9"	27'- 0"	3	9"	3'- 5"	6'- 8"	4	9"	2'- 4"	5'- 2"	7'- 3"	5	8 1/2"	9'- 0"	4	12"	9'- 0"
6	8	14"	14"	8 1/2"	8"	25	25'- 0"	25	25'- 0"	6	6'- 0"	4	9"	25'-9"	4	9"	27'- 1"	--	---	---	---	5	9"	2'- 6"	5'- 10"	8'- 0"	5	6"	10'- 0"	4	12"	10'- 0"
7	4	16 1/2"	16 1/2"	8"	8"	29	29'- 0"	29	29'- 0"	2	2'- 0"	5	9"	29'-11"	5	9"	31'- 0"	--	---	---	---	4	9"	2'- 9"	3'- 11"	6'- 4"	4	12"	6'- 5"	4	11 1/2"	6'- 5"
7	6	16"	16"	8"	8"	29	29'- 0"	29	29'- 0"	4	4'- 0"	5	9"	29'-11"	5	9"	31'- 0"	--	---	---	---	4	9"	2'- 9"	4'- 10"	7'- 4"	5	12"	8'- 3"	4	11 1/2"	8'- 3"
7	8	15 3/4"	15 3/4"	8"	8"	29	29'- 0"	29	29'- 0"	6	6'- 0"	5	9"	29'-11"	5	9"	31'- 0"	3	9"	3'- 9"	7'- 4"	4	9"	2'- 9"	5'- 10"	8'- 4"	5	6"	10'- 3"	4	11 1/2"	10'- 3"
7	10	15 3/4"	15 3/4"	10 1/2"	8"	29	29'- 0"	29	29'- 0"	8	8'- 0"	5	9"	30'-1"	5	9"	31'- 5"	3	9"	4'- 2"	8'- 2"	5	9"	2'- 11"	7'- 0"	9'- 6"	6	6 1/2"	12'- 3"	4	12"	12'- 3"
8	4	18 1/2"	18 1/2"	8"	8"	33	33'- 0"	33	33'- 0"	2	2'- 0"	5	9"	33'-11"	5	9"	35'- 0"	--	---	---	---	4	9"	2'- 9"	4'- 1"	6'- 6"	4	12"	6'- 9"	4	10 1/2"	6'- 9"
8	6	18"	18"	8"	8"	33	33'- 0"	33	33'- 0"	4	4'- 0"	5	8"	33'-11"	5	8"	35'- 0"	--	---	---	---	4	8"	2'- 9"	5'- 0"	7'- 6"	5	12"	8'- 7"	4	10 1/2"	8'- 7"
8	8	17 3/4"	17 3/4"	8"	8"	33	33'- 0"	33	33'- 0"	6	6'- 0"	5	8"	33'-11"	5	8"	35'- 0"	3	8"	3'- 11"	7'- 8"	4	8"	2'- 9"	6'- 0"	8'- 6"	5	6"	10'- 7"	4	10 1/2"	10'- 7"
8	10	18"	18"	10 1/2"	8"	33	33'- 0"	33	33'- 0"	8	8'- 0"	5	8"	34'-1"	5	8"	35'- 4"	3	8"	4'- 4"	8'- 6"	5	8"	2'- 11"	7'- 2"	9'- 9"	6	8	12'- 7"	4	10 1/2"	12'- 7"
9	4	20 1/2"	20 1/2"	8"	8"	37	37'- 0"	37	37'- 0"	2	2'- 0"	6	9"	37'-11"	6	9"	39'- 0"	--	---	---	---	4	9"	3'- 2"	4'- 3"	7'- 1"	4	12"	7'- 0"	4	10"	7'- 0"
9	6	20 1/2"	20 1/2"	8"	8"	37	37'- 0"	37	37'- 0"	4	4'- 0"	6	9"	37'-11"	6	9"	39'- 0"	--	---	---	---	4	9"	3'- 2"	5'- 3"	8'- 1"	5	12"	9'- 0"	4	10"	9'- 0"
9	8	20"	20"	8"	8"	37	37'- 0"	37	37'- 0"	6	6'- 0"	6	9"	37'-8"	6	9"	39'- 0"	--	---	---	---	5	9"	3'- 4"	6'- 5"	9'- 4"	5	6"	11'- 0"	4	10"	11'- 0"
9	10	20"	20"	10 1/2"	8"	37	37'- 0"	37	37'- 0"	8	8'- 0"	6	9"	37'-10"	6	9"	39'- 4"	--	---	---	---	6	9"	3'- 5"	7'- 6"	10'- 6"	6	9"	13'- 0"	4	10"	13'- 0"
9	12	20"	20"	13"	8"	37	37'- 0"	37	37'- 0"	10	10'- 0"	6	9"	38'-0"	6	9"	39'- 9"	3	9"	4'- 11"	9'- 8"	7	9"	3'- 7"	8'- 9"	11'- 10"	7	10 1/2"	15'- 0"	4	10"	15'- 0"
10	4	22 1/2"	22 1/2"	8"	8"	41	41'- 0"	41	41'- 0"	2	2'- 0"	6	9"	41'-11"	6	9"	43'- 0"	--	---	---	---	4	9"	3'- 2"	4'- 5"	7'- 3"	4	12"	7'- 5"	4	10"	7'- 5"
10	6	22 1/2"	22 1/2"	8"	8"	41	41'- 0"	41	41'- 0"	4	4'- 0"	6	9"	41'-11"	6	9"	43'- 0"	--	---	---	---	4	9"	3'- 2"	5'- 5"	8'- 3"	5	12"	9'- 4"	4	10"	9'- 4"
10	8	22 1/2"	22 1/2"	8"	8"	41	41'- 0"	41	41'- 0"	6	6'- 0"	6	9"	41'-11"	6	9"	43'- 0"	3	9"	4'- 4"	8'- 6"	4	9"	3'- 2"	6'- 5"	9'- 3"	6	9"	11'- 4"	4	10"	11'- 4"
10	10	22 1/2"	22 1/2"	10"	8"	41	41'- 0"	41	41'- 0"	8	8'- 0"	7	9"	41'-9"	6	9"	43'- 3"	--	---	---	---	6	9"	4'- 1"	7'- 9"	11'- 5"	6	6"	13'- 4"	4	10"	13'- 4"
10	12	22 1/2"	22 1/2"	12 1/2"	8"	41	41'- 0"	41	41'- 0"	10	10'- 0"	6	9"	42'-2"	6	9"	43'- 9"	3	9"	5'- 2"	10'- 1"	6	9"	3'- 5"	8'- 9"	11'- 9"	6	7 1/2"	15'- 4"	4	9"	15'- 4"
12	6	27"	27"	8"	8"	49	49'- 0"	49	49'- 0"	4	4'- 0"	6	8"	49'-11"	6	8"	51'- 0"	--	---	---	---	4	8"	3'- 2"	5'- 9"	8'- 8"	5	11"	10'- 1"	4	9"	10'- 1"
12	8	27"	27"	8"	8"	49	49'- 0"	49	49'- 0"	6	6'- 0"	6	8"	49'-11"	6	8"	51'- 0"	--	---	---	---	4	8"	3'- 2"	6'- 9"	9'- 8"	5	5 1/2"	12'- 1"	4	9"	12'- 1"
12	10	27"	27"	9"	8"	49	49'- 0"	49	49'- 0"	8	8'- 0"	6	8"	49'-10"	6	8"	51'- 1"	3	8"	5'- 2"	10'- 0"	5	8"	3'- 4"	7'- 11"	10'- 11"	7	8"	14'- 1"	4	9"	14'- 1"
12	12	27"	27"	12"	8"	49	49'- 0"	49	49'- 0"	10	10'- 0"	6	8"	50'-4"	6	8"	51'- 7"	4	8"	5'- 6"	10'- 9"	5	8"	3'- 4"	8'- 11"	11'- 11"	5	5"	16'- 2"	4	9"	16'- 2"

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

VDOT
ROAD AND BRIDGE STANDARDS

SHEET 1 OF 2 REVISION DATE
1005.15 07/11

QUADRUPLE BOX CULVERTS
30 TO 40 FT. FILLS
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE