2 2/3" x 1/2" (68 mm x 13 mm) CORRUGATIONS

CULVERT SIZE SPAN X RISE	CORNER RADIUS	STEEL				ALUMINUM					
		MINIMUM COVER FOR 2 TONS (1.8 m.t.) PER Sq. Ft. (PER sq. m.)		MINIMUM THICKNESS REQUIRED		MAXIMUM COVER (IN FT.) FOR COVER BEARING PRESSURE IN TONS PER SQ. FT. (TONS PER SQ. M.)		MINIMUM COVER FOR 2 TONS (1.8 m.t.) Per Sq. Ft. (Per Sq. m.)		MINIMUM THICKNESS REQUIRED		MAXIMUM COVER (IN FT.) FOR COVER BEARING PRESSURE IN TONS PER SQ. FT. (TONS PER SQ. M.)	
INCHES (mm)	INCHES (mm)	INCHES	(mm)	INCHES	(mm)	2 TONS (1.8 t.)	3 TONS (2.7 t.)	INCHES	(mm)	INCHES	(mm)	2 TONS (1.8 t.)	3 TONS (2.7 t.)
17 X 13 (432 x 330)	3 (76)	18	(457)	0.064	(1.6)	13 (4 m)	15+ (4.6 m)	18	(457)	0.060	(1.5)	15 (4.6)	
21 X 15 (533 x 331)	3 (76)	18	(457)	0.064	(1.6)	12 (3.7 m)	15+ (4.6 m)	18	(457)	0.060	(1.5)	14 (4.3)	
24 X 18 (610 x 457)	3 (76)	18	(457)	0.064	(1.6)	10 (3 m)	15+ (4.6 m)	18	(457)	0.060	(1.5)	12 (3.6)	15+ (4.6)
28 X 20 (711 x 508)	3 (76)	18	(457)	0.064	(1.6)	10 (3 m)	15 (4.6 m)	18	(457)	0.060	(1.5)	10 (3.0)	15+ (4.6)
35 X 24 (889 x 610)	3 (76)	18	(457)	0.064	(1.6)	9 (2.7 m)	14 (4.2 m)	18	(457)	0.060	(1.5)	9 (2.7)	14 (4.3)
42 X 29 (1067 x 737)	3 1/2 (89)	18	(457)	0.064	(1.6)	9 (2.7 m)	13 (4.0 m)	18	(457)	0.075	(1.9)	9 (2.7)	13 (4.0)
49 X 33 (1245 x 838)	4 (102)	18	(457)	0.079	(2.0)	8 (2.4 m)	12 (3.7 m)	18	(457)	0.105	(2.67)	8 (2.4)	12 (3.6)
57 X 38 (1448 x 965)	5 (127)	18	(457)	0.109	(2.8)	8 (2.4 m)	12 (3.7 m)	18	(457)	0.135	(3.4)	8 (2.4)	12 (3.6)
64 X 43 (1626 x 1042)	6 (152)	18	(457)	0.109	(2.8)	8 (2.4 m)	12 (3.7 m)	18	(457)	0.135	(3.4)	8 (2.4)	12 (3.6)
71 X 47 (1803 x 1194)	7 (178)	18	(457)	0.138	(3.5)	8 (2.4 m)	12 (3.7 m)	18	(457)	0.164	(4.2)	8 (2.4)	12 (3.6)
77 X 52 (1956 x 1321)	8 (203)	18	(457)	0.168	(4.2)	8 (2.4 m)	12 (3.7 m)						
83 X 57 (2108 c 1448)													

CULVERT SIZE SPAN X RISE	CORNER RADIUS	STEEL					
		MINIMUM COVER FOR 2 TONS PER SQ. FT.		MINIMUM THICKNESS REQUIRED		MAXIMUM COVER (IN FT.) FOR COVER BEARING PRESSURE IN TONS PER SQ. FT.	
INCHES (mm)	INCHES (mm)	INCHES	(mm)	INCHES	(mm)	2 TONS	3 TONS
81 x 59 (2057 x 1499)	14 (356)	18	(457)	0.079	(2.0)	15 (4.6 m)	
87 x 63 (2210 x 1600)	14 (356)	18	(457)	0.079	(2.0)	14 (4.3 m)	15+ (4.6 m)
95 x 67 (2413 x 1702)	16 (406)	18	(457)	0.109	(2.77)	13 (4.0 m)	15+ (4.6 m)
103 x 71 (2616 x 1803)	16 (406)	24	(610)	0.109	(2.77)	12 (3.6 m)	15+ (4.6 m)
112 x 75 (2845 x 1905)	18 (457)	24	(610)	0.109	(2.77)	11 (3.4 m)	15+ (4.6 m)
117 x 79 (2972 x 2007)	18 (457)	24	(610)	0.109	(2.77)	10 (3.0 m)	15 (4.6 m)
128 x 83 (3251 x 2108)	18 (457)	24	(610)	0.138	(3.5)	9 (2.7 m)	14 (4.3 m)

3" X 1" (76 mm x 25 mm) CORRUGATIONS

NOTES:

1. CAMBER: NORMALLY, PIPE SHALL BE CAMBERED FROM A CHORD THROUGH THE INLET & OUTLET INVERTS AN ORDINATE AMOUNT EQUAL TO 1% PIPE LENGTH. CAMBER SHALL BE DEVELOPED ON A PARABOLIC CURVE.
   IF THE MID-POINT ELEVATION ON THE PARABOLIC CURVE, AS DESIGNED, EXCEEDS THE ELEVATION OF THE INLET INVERT THE AMOUNT OF CAMBER SHALL BE REDUCED OR THE PIPE GRADIENT INCREASED.

2. CULVERT EXTENSIONS: THE DAMAGED OR CORRODED ENDS OF EXIST. METAL PIPE TO BE EXTENDED SHALL BE REMOVED. IF THE DAMAGED END IS FLAME CUT, THE SPELTER ON GALVANIZED PIPE WHICH HAS BEEN BURNED BY FLAME CUTTING SHALL BE WIRE BRUSHED TO CLEAN METAL, & THE AREA PAINTED WITH TWO COATS OF ZINC DUST-ZINC OXIDE PRIMER. IF THE DAMAGED END OF A BITUMINUOUS-COATED PIPE IS FLAME CUT THE END SHALL BE WIRE BRUSHED TO CLEAN THE METAL, & THE AREA GIVEN ONE HEAVY COAT OF AN APPROVED ASPHALTIC PAINT.

3. "HUGGER" TYPE BANDS: THE "HUGGER" TYPE BAND OR AN APPROVED SIMILARLY DESIGNED COUPLER BAND MAY BE USED IN PLACE OF STANDARD COUPLER BANDS FOR CONNECTING METAL PIPE SECTIONS WITH TWO ANNULAR CORRUGATIONS ROLLED INTO THE PIPE ENDS. THE "HUGGER" TYPE, OR THE APPROVED EQUIVALENT COUPLER BAND SHALL BE MADE OF BASE METAL CONFORMING TO AASHTO M36 OR MI96. THE COUPLER BANDS SHALL HAVE A MINIMUM WIDTH OF 10 1/2"(267 mm) & MAY BE TWO NUMERICAL THICKNESSES LIGHTER THAN THE THICKNESS DESIGNED FOR THE CONDUIT JOINED. THE BANDS SHALL BE DESIGNED TO BE DRAWN TOGETHER WITH TWO ONE-HALF INCH BOLTS, THROUGH USE OF A BAR & STRIP SUITABLY WELDED TO THE BAND. THE BAND SHALL ENGAGE & MESH WITH THE SECOND ANNULAR CORRUGATION INWARD FROM THE END OF EACH OF THE CONDUIT SECTIONS JOINED.

4. "FLANGE" TYPE BANDS: THE "FLANGE" TYPE BANDS OR AN APPROVED SIMILARLY DESIGN COUPLER BAND MAY BE USED IN PLACE OF STANDARD COUPLER BANDS FOR CONNECTING METAL PIPE SECTION WITH TWO ANNULAR CORRUGATIONS ROLLED INTO THE PIPE ENDS, & WHEN THE PIPE ENDS ARE FLANGED TO A DEPTH OF 5/8" (16 mm) MEASURED FROM THE CREST OF THE INSIDE CORRUGATION. THE "FLANGE" TYPE OR THE APPROVED EQUIPMENT COUPLER BAND SHALL BE MADE OF BASE METAL CONFORMING TO AASHTO M36 & SHALL BE U-SHAPED & 2-PIECE & SHALL HAVE A NOMINAL THICKNESS OF 0.0079"(.2 mm) FOR LIGHTER PIPE & A NOMINAL THICKNESS OF 0.109"(3 mm) FOR HEAVIER PIPE. THE NOMINAL INTERIOR WIDTH OF THE FLANGE BAND SHALL BE 3/4"(19 mm) FOR 0.079"(2 mm) THICK BANDS AND1" FOR 0.109"(3 mm) THICK BANDS. THE NOMINAL INTERIOR DEPTH OF THE FLANGE BAND SHALL BE 3/4"(19 mm). INTERIOR BEND RADII OF THE PIPE FLANGE & THE FLANGE BAND SHALL NOT BE LESS THAN THE THICKNESS OF THE METAL OF WHICH THEY ARE FORMED.
   THE FLANGE BAND SHALL BE CONNECTED BY USING 2"x2"x3/16" (51 mm x 51 mm x 5 mm) ANGLES.

   THE ANGLES SHALL BE CONNECTED WITH 2 SPOTWELDS PER LEG & SHALL BE PROVIDED WITH 5/8"x1"(16 mm x 25 mm) SLOTTED BOLTED HOLES.
   THE FLANGE BANDS SHALL BE 1 3/4"(44 mm) LONG AT EACH END OF THE COUPLING BAND. SUPPLIED WITH 1/2"x4"(13 mm x 102 mm) SQUARE NECK CARRIAGE BOLTS WITH HEX. NUTS.

5. GASKETS: WHEN SPECIFIED, A 3/8"(10 mm) THICK CLOSED CELL SPONGE NEOPRENE GASKET 0F BUTYL RUBBER SHALL BE PLACED IN THE CHANNEL INTERIOR.

6. THE METRIC CONVERSIONS ARE PROVIDED IN PARENTHESIS FOLLOWING THE ENGLISH UNITS.