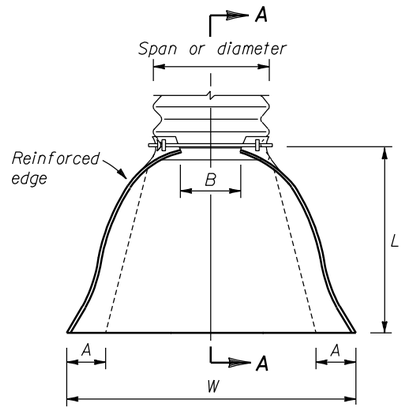
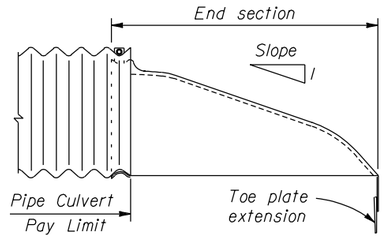
STATE	PROJECT	SHEET NUMBER

END SECTIONS FOR PIPE ARCH CULVERT

PIPE SIZE	STEEL	ALU-MINUM	DIMENSIONS						SLOPE
SPAN X RISE	METAL THICKNESS		A	B	H	F	L	W	Approx.
430 x 330	1.63	1.52	125	225	150	700	500	1300	2.1
530 x 380	1.63	1.52	150	275	150	850	600	1450	2.0
610 x 460	1.63	1.52	175	300	150	1000	700	1575	2.1
710 x 510	1.63	1.52	175	400	150	1150	800	1750	2.0
885 x 610	2.01	1.91	225	400	150	1450	925	2125	1.9
1060 x 740	2.01	1.91	275	450	175	1825	1150	2600	1.9
1240 x 840	2.77	2.67	300	525	225	2050	1325	2925	1.8
1440 x 990	2.77	2.67	400	650	300	2200	1550	3300	1.9
1620 x 1100	2.77	2.67	425	750	300	2500	1725	3600	1.9
1520 x 1170	2.77	2.67	425	900	300	2500	1750	3550	1.9
1800 x 1200	2.77	2.67	425	900	300	2800	1925	3900	1.9
1670 x 1300	2.77	2.67	425	900	300	2800	1925	3900	1.8
1950 x 1320	2.77	2.67	425	900	300	3100	1925	4175	1.6
1850 x 1400	2.77	2.67	425	900	300	3100	1925	4200	1.5
2110 x 1450	2.77	2.67	425	1100	300	3250	1925	4425	1.5
2050 x 1500	2.77	2.67	425	1100	300	3400	1925	4475	1.6
2200 x 1620	2.77	2.67	425	1100	300	3400	1925	4650	1.5
2400 x 1720	2.77	2.67	425	1100	300	4000	2175	5250	1.5
2600 x 1820	2.77	2.67	425	1100	300	4300	2175	5550	1.3
2840 x 1920	2.77	2.67	425	1100	300	4300	2175	5650	1.2



PLAN

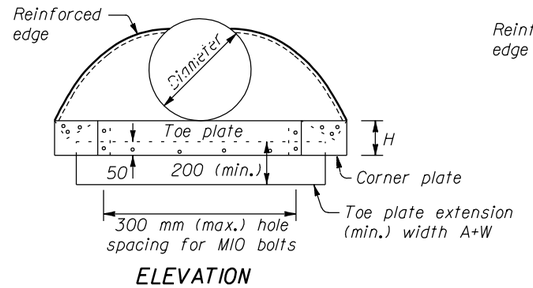


SECTION A-A

ROUND OR PIPE ARCH CULVERT

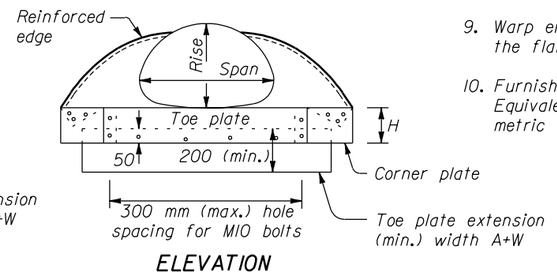
END SECTIONS FOR ROUND PIPE CULVERT

PIPE SIZE	STEEL	ALU-MINUM	DIMENSIONS						SLOPE
DIAMETER	METAL THICKNESS		A	B	H	F	L	W	Approx.
300	1.63	1.52	125	175	150	550	525	1100	2.2
375	1.63	1.52	150	200	150	700	650	1300	2.2
450	1.63	1.52	175	250	150	850	775	1450	2.1
600	1.63	1.52	225	325	150	1150	1025	1800	2.1
750	2.01	1.91	275	400	200	1375	1275	2200	2.1
900	2.01	1.91	325	475	225	1750	1500	2650	2.0
1050	2.77	2.67	375	625	250	2050	1725	3050	2.1
1200	2.77	2.67	425	725	300	2200	1950	3275	2.0
1350	2.77	2.67	425	825	300	2500	2100	3575	2.0
1500	2.77	2.67	425	900	300	2800	2175	3925	1.9
1650	2.77	2.67	425	975	300	2950	2175	4050	1.6
1800	2.77	2.67	425	1100	300	3000	2175	4225	1.5
1950	2.77	2.67	425	1200	300	3250	2175	4450	1.4
2100	2.77	2.67	425	1300	300	3400	2175	4600	1.3
2250	2.77	2.67	425	1450	300	3550	2175	4700	1.2
2400	2.77	2.67	425	1450	300	3600	2175	4925	1.1



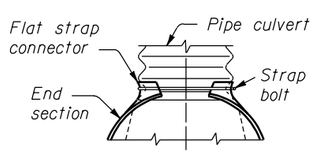
ELEVATION

ROUND PIPE CULVERT

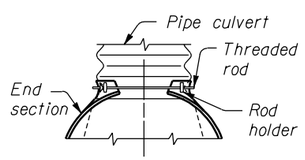


ELEVATION

PIPE ARCH CULVERT

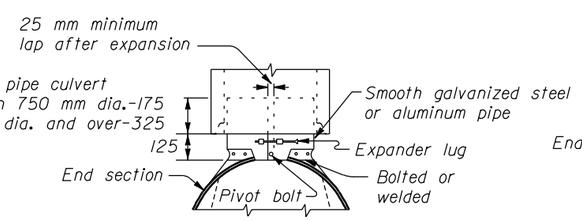


For 300 thru 600 mm round pipe and 430 x 330 thru 710 x 510 mm pipe arch.

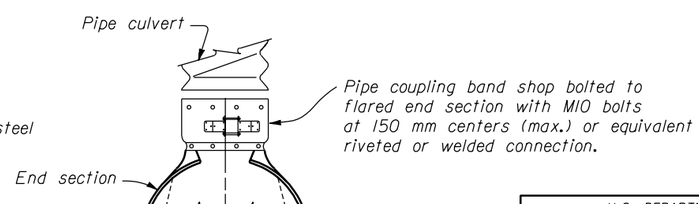


For 750 thru 1500 mm round pipe and 890 x 610 thru 1670 x 1290 mm pipe arch.

DESIGN A
CONNECTION TO ANNULAR CORRUGATED METAL PIPE



DESIGN B
CONNECTION TO CONCRETE PIPE
INLET END



For all sizes of round pipe and pipe arch.

DESIGN C
CONNECTION TO METAL PIPE
OR OUTLET END OF CONCRETE PIPE

NO SCALE

NOTE:

1. Dimensions not labeled are in millimeters.
2. Variations in design and dimensions are permitted to allow for manufacturer's standards.
3. Fabricate the diameter of the end section of Design B to match the inside diameter of the concrete pipe culvert.
4. Design C may be used in lieu of design A for all metal pipe culvert sizes. Coupling bands may be any acceptable type for the pipe culvert specified.
5. Fabricate multiple piece bodies with lap seams tightly joined by M10 rivets or bolts. Fabricate end section center panels for 1500 mm and larger diameter pipe and 1800 x 1200 mm and larger pipe arch from 3.51 mm steel or 3.43 mm aluminum.
6. On end section center panels for 1950 x 1320, 1850 x 1400 mm and larger pipe arch, provide 64 x 64 x 6.4 mm angle reinforcement bolted or riveted under the center panel seam.
7. Supplement the reinforced edges of end sections for 1500 mm and larger diameter pipe and 1950 x 1320, 1850 x 1400 mm and larger pipe arch with 51 x 51 x 6.4 mm stiffener angles attached with bolts or rivets.
8. Fabricate connector section, corner plate and toe plate extensions from the same metal thickness as the panel body. Use toe plate extension where shown on the plans.
9. Warp embankment slopes to match the slope of the flared end sections.
10. Furnish hardware in the metric sizes shown. Equivalent imperial sizes may be used when metric sizes are not available.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

METRIC STANDARD

METAL END SECTION

STANDARD APPROVED FOR USE 3/1996
REVISED: 8/1997

STANDARD
M602-4

17 NOV 2000

f:\standrdw\metric\mst6024.dgn