



TABLE OF DIMENSIONS

Dim	Nominal internal diameter, d				
	375	450	525	600	675
A	600	725	850	975	1100
B	250	250	300	300	300
C	450	450	600	600	600
F	700	825	950	1100	1250
X	565	675	790	900	1015

- NOTES:**
- PIPE CULVERT END STRUCTURES shall be constructed in accordance with MRTS03. The purpose of this drawing is to detail headwalls and aprons for culverts with pipe diameter 375 to 675. For construction details of end structures for pipe culverts with diameter 750 to 2400 refer to Standard Drawing 1304. Refer Standard Drawing 1359 for details of culvert installation and earthworks.
 - CONCRETE to be in accordance with MRTS70. Headwall mass concrete to be N20/20. Apron and cut off wall reinforced concrete to be S32/20.
 - REINFORCING STEEL to be read in conjunction with Standard Drawing 1044. Reinforcing steel to be in accordance with AS/NZS 4671 and MRTS71. Reinforcing mesh Grade D500L. All reinforcing steel to be ACRS certified.
 - TACK WELDING to reinforcement for location purposes to AS/NZS 1554.3. Welding consumables to be controlled hydrogen type: G49X to AS/NZS ISO 14341-B or T49X to AS/NZS ISO 17632-B unless shown otherwise.
 - HEADWALL HEIGHT may be increased to meet standard formwork when pipes other than reinforced concrete are used.
 - PROJECT-SPECIFIC INFORMATION TO BE SHOWN ON THE DRAWINGS:
 - Skew angle
 - Steel schedule
 - DIMENSIONS are in millimetres unless shown otherwise.

- ASSOCIATED DEPARTMENTAL DOCUMENTS:
NDRRA Design Guidelines
- REFERENCED DOCUMENTS:
Departmental Standard Drawings:
1044 Reinforcing Steel - Standard Hook, Lap and Bend Details and General Steel Reinforcement Information
1304 Pipe Culverts - Wingwalls, Headwall and Apron for Pipe Diameter 750 to 2400
1359 Culverts - Installation, Bedding and Filling/backfilling against/over Culverts
- Departmental Specifications:
MRTS03 Drainage, Retaining Structures and Protective Treatments
MRTS70 Concrete
MRTS71 Reinforcing Steel

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PIPE CULVERTS				A3	Standard Drawing No
HEADWALL AND APRON FOR PIPE DIAMETER 375 to 675		Not to Scale	1305		
			Date 7/15		
A	B	C	D		