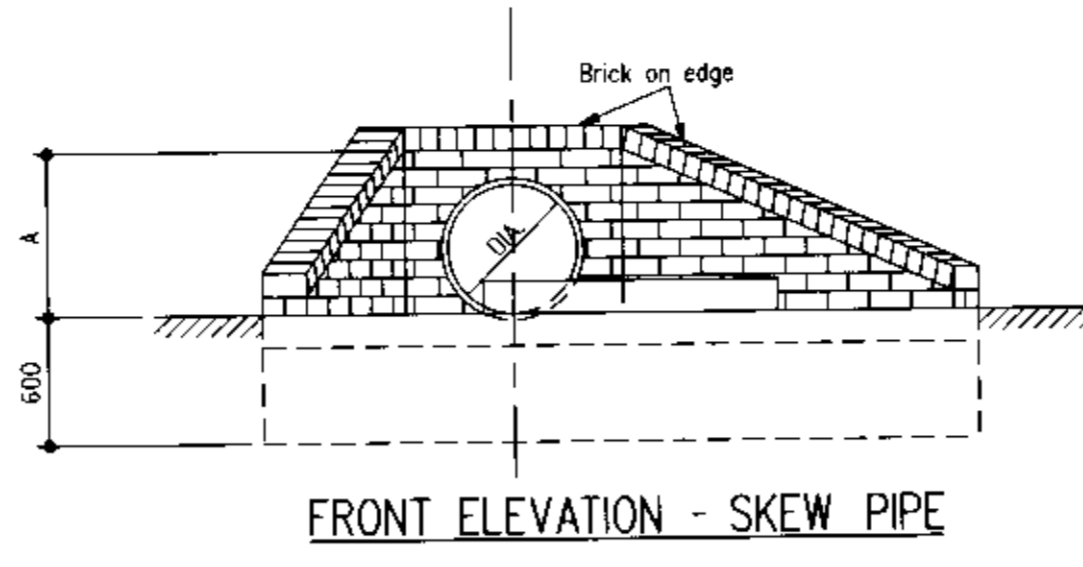
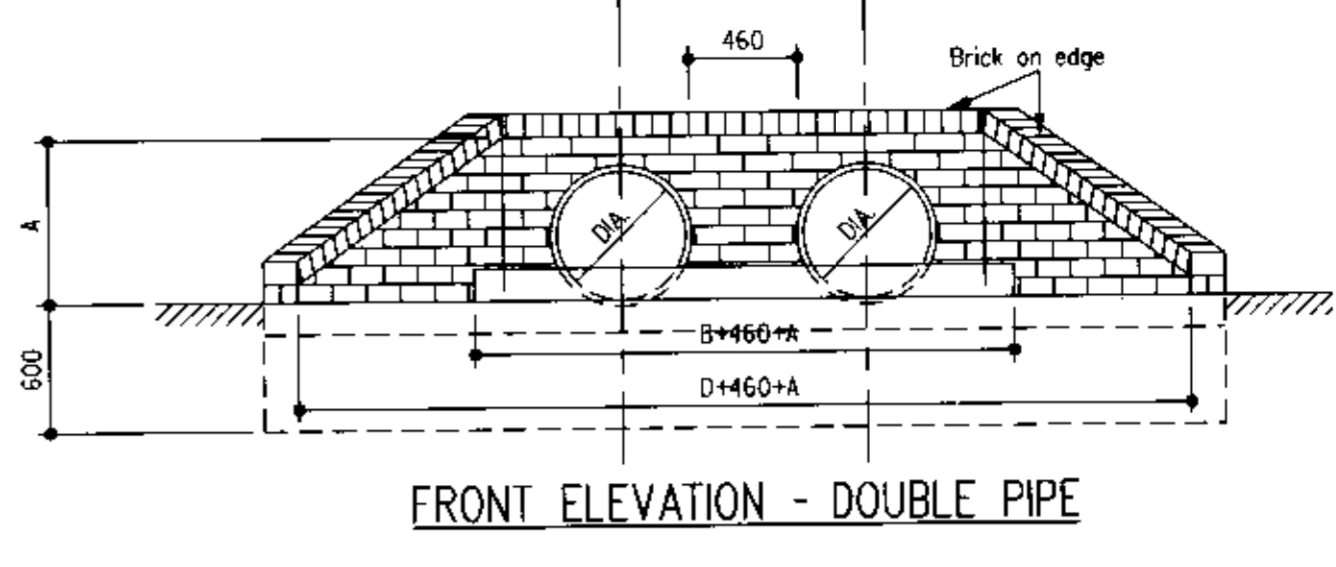


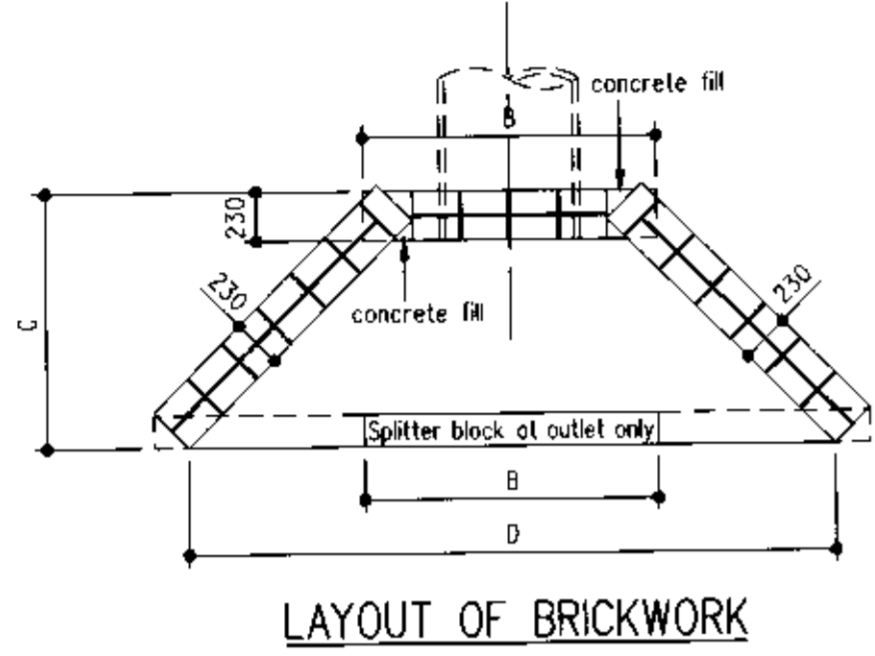
FRONT ELEVATION - SINGLE PIPE



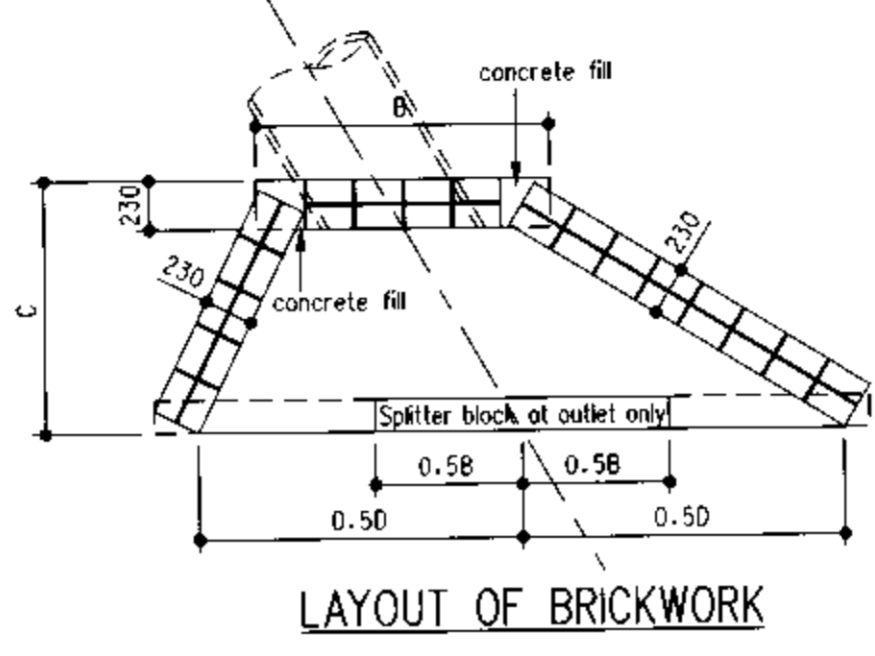
FRONT ELEVATION - SKEW PIPE



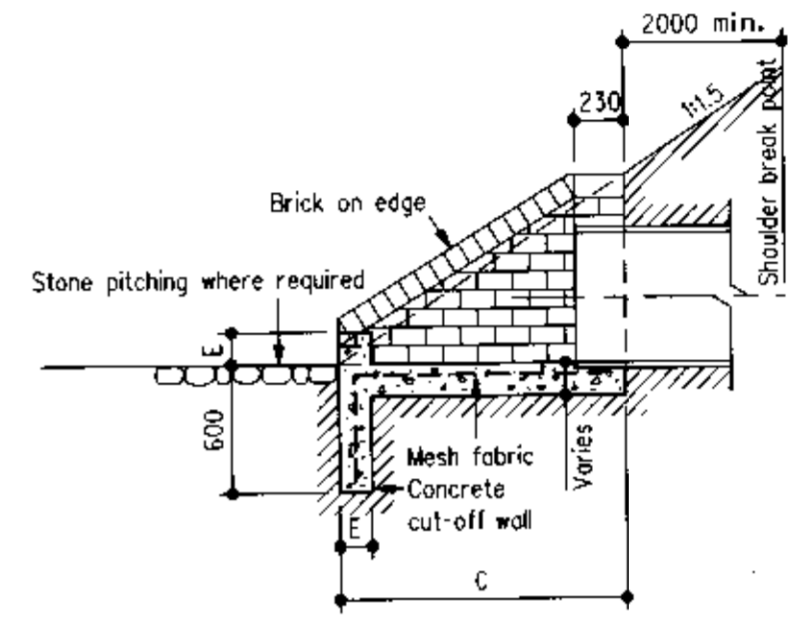
FRONT ELEVATION - DOUBLE PIPE



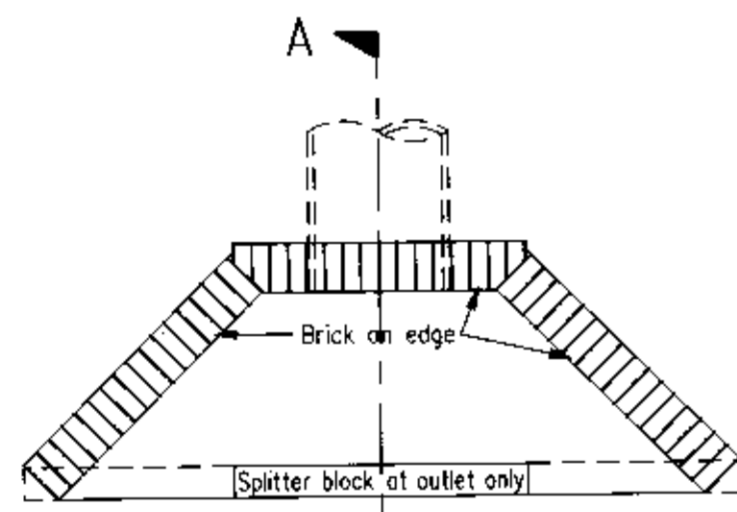
LAYOUT OF BRICKWORK



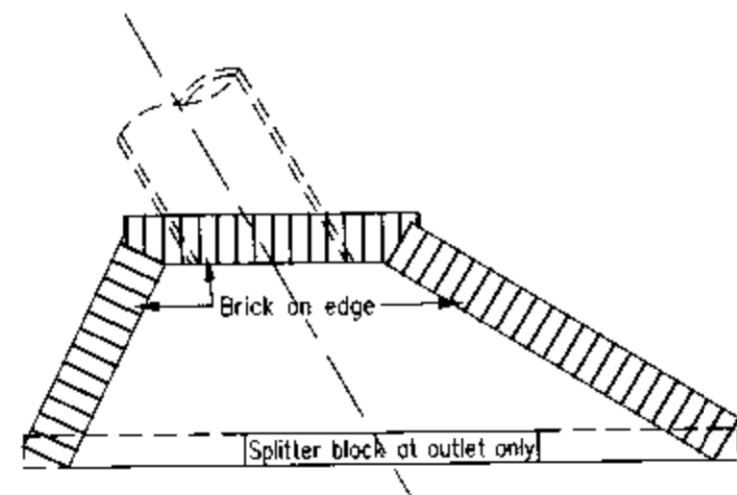
LAYOUT OF BRICKWORK



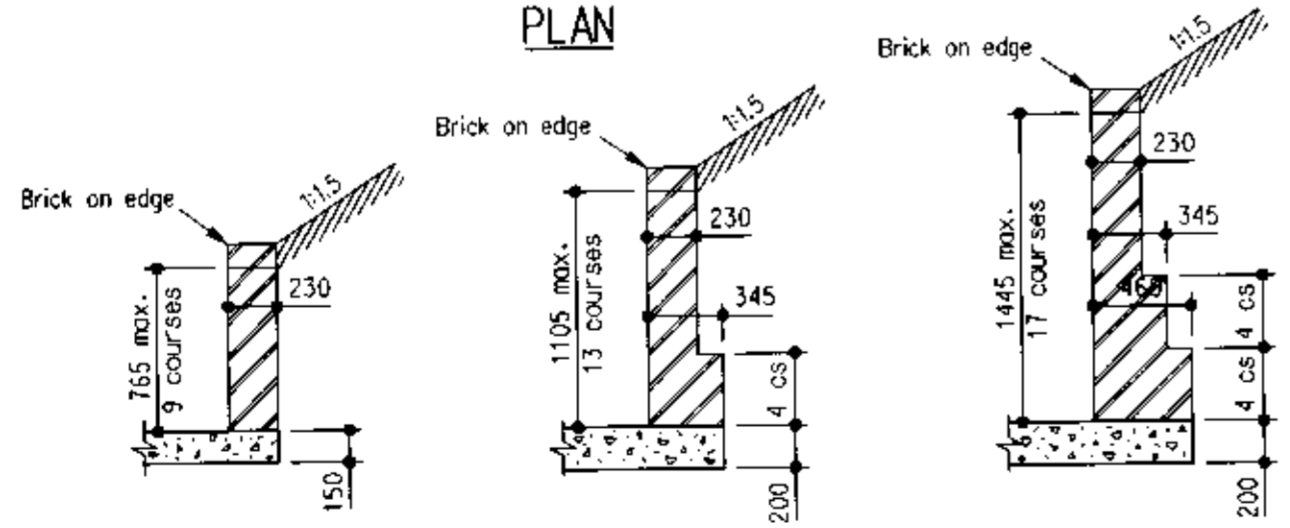
SECTION A-A



PLAN



PLAN OF SKEW CULVERT



TYPICAL RETAINING WALL DETAILS

NOTES :

1. Splitter block and pitching to be provided at all outlets where erosion is likely to occur.
2. Splitter block may be omitted if discharge velocity is less than 0.9 m/s.
3. Cut-off walls may be omitted if structure is founded on rock.
4. For multiple pipe culverts increase dimensions 'E' and 'F' by $(n-1)(A+460)$ mm : Where n = number of pipes and A = nominal diameter of pipes
5. Pipes to be cut flush with headwall.
6. For skew pipe culverts the headwall shall be parallel to the centre line of the road.
7. If corrugated metal pipes are used 4x20mmx150mm long galvanised anchor bolts in the hollows of the corrugation are to be used.
8. All concrete is to be 20MPa.
9. Square mesh fabric (Reference S.M.F.193) is to be placed 50mm from top in all apron slabs and centrally in cut-off walls.
10. Brickwork is to consist of good quality burnt clay common bricks in accordance with SABS 227 Specification, or cement bricks in accordance with SABS 987 Specification, uniform in size and shape laid in stretcher bond style with the skins tied together with galvanised crimped wire wall ties.
11. Brickforce is to be placed every 4th course.
12. Jointing on all visible faces to be pointed
13. No in-fill shall be larger than a half standard brick size unless 15MPa concrete is used.

Nominal Dia.	Dimensions (mm)				
	A	B	C	D	E
450	595	1150	1050	2 700	150
600	765	1380	1200	3 000	150
750	935	1610	1350	3 300	150
900	1105	1840	1500	3 600	230
1050	1275	2 070	1750	3 900	230
1200	1445	2 300	1900	4 200	230

Symbol	Date	Description	Dir.
		Amendments	

PROVINCE OF KWAZULU-NATAL
DEPARTMENT OF TRANSPORT

[Signature]
Deputy Director-General: Transport
1999/05/13
Date

Standard Details
PIPE CULVERT HEADWALL (MASONRY)

Scale
N.T.S.
Drawing Number
SD 0406
M 23221