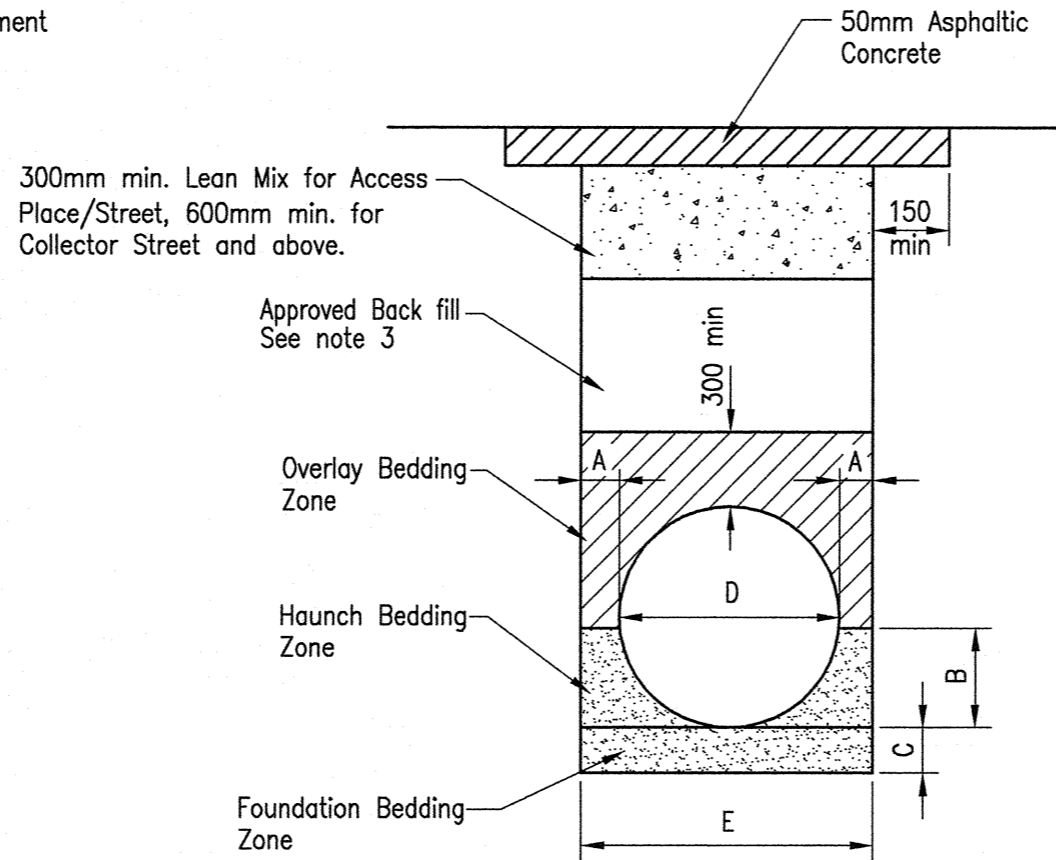
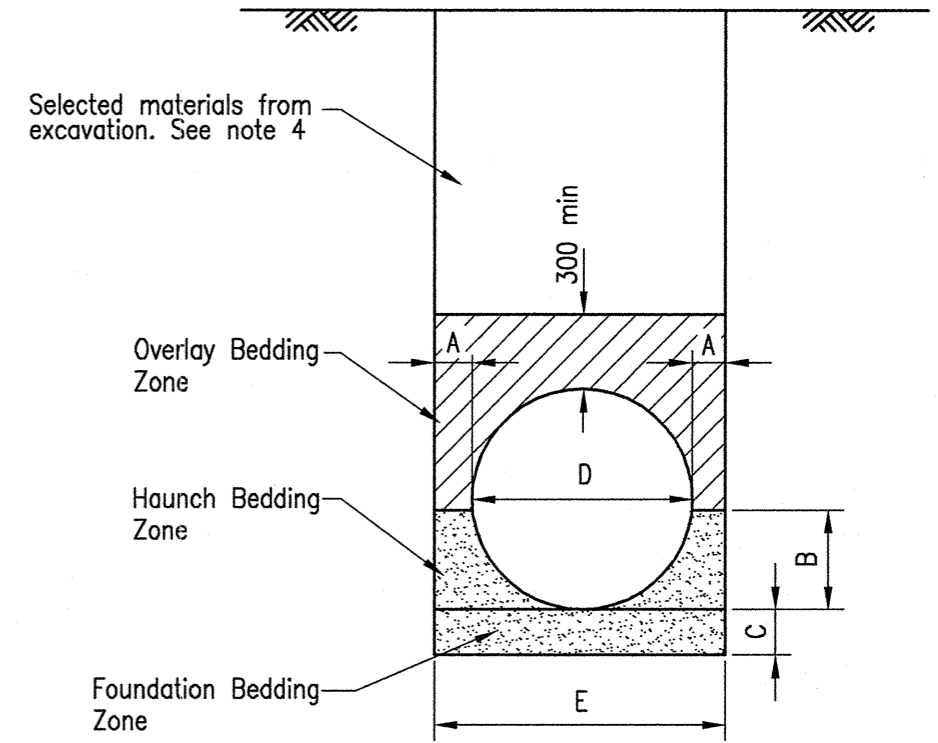


INSTALLATION UNDER PROPOSED PAVEMENTS



INSTALLATION UNDER EXISTING PAVEMENTS

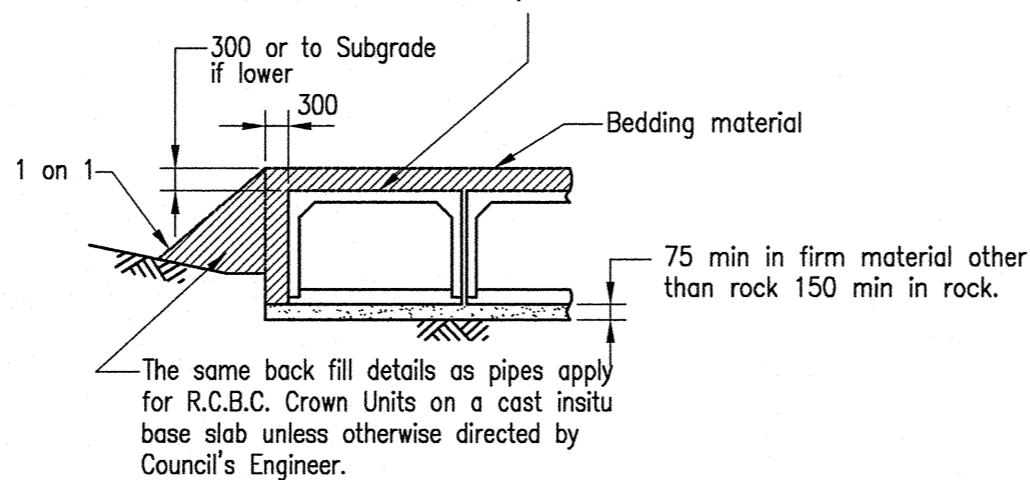


INSTALLATION UNDER FOOTPATHS AND ALLOTMENTS

TABLE

NOMINAL ϕ culvert D (mm)	MINIMUM width A (mm)	HAUNCH depth B	Bedding depth C	Allowable width E (m)	
				DES	MAX
375	300	45	100	1.1	1.2
450	300	53	100	1.1	1.3
525	300	61	100	1.2	1.5
600	300	69	100	1.3	1.6
750	300	85	100	1.5	1.8
900	300	103	100	1.6	1.9
1050	300	120	100	1.8	2.1
1200	300	135	100	2.0	2.2
1350	300	150	100	2.1	2.4
1500	300	169	100	2.3	2.7
1650	330	184	150	2.6	2.9
1800	360	200	150	2.8	3.1
1950	390	222	150	3.1	3.3
2100	420	239	150	3.4	3.5
2400	480	270	150	3.9	4.2
2700	540	303	150	4.3	4.6
3000	600	335	150	4.9	5.0

Unless otherwise specified, joints between lengths of box culverts, tops and sides shall be covered outside by a mortar not less than 150 mm in width and a minimum of 20 mm thickness. Mortar bands shall be reinforced with chicken wire for a minimum width of 130 mm. Approved jointing tape, applied in accordance with the manufacturer's instructions, may be substituted for mortar bands.



INSTALLATION OF PRECAST R.C. BOX CULVERT

NOTES

1. Bedding material (foundation, haunch and overlay) to have the following grading or course, clean, sharp river sand approved by Council's Engineer.

AS Sieve Size	% Passing by mass
19.0	100
2.36	40 - 100
0.425	15 - 70
0.075	3 - 30

2. Bedding compaction
Non-cohesive material - density index of 70 MIN, refer AS1289.5.5.1
Sand - compact by flooding and use of vibrators.
3. Back fill to consist of approved subgrade replacement material with a minimum California Bearing Ratio of 15, placed in layers not exceeding 250 mm loose and compacted until the dry density is not less than 95% Modified Maximum Dry Density.
4. Selected material from excavations shall be placed in layers not exceeding 250 mm loose in depth and shall be compacted to a minimum consolidation of 95% Standard Compaction.
5. Wingwalls fill/backfill material shall be placed 300mm thick behind wingwalls for the length and height of the wings.
6. Working loads are those due to fill material and standard highway vehicles as per AS 3725. Construction loads have not been allowed for.
7. Dimensions are in millimetres unless shown otherwise.

REVISIONS					
AMENDMENT	INITIALS	DATE	AMENDMENT	INITIALS	DATE
F				L	
E				K	
D				J	
C				I	
B				H	
A				G	

B Unit of measure amended in table.
A ORIGINAL ISSUE

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APPROVED

 CHIEF OPERATING OFFICER (WPR)
 DATE 21/08/2013

STANDARD DRAWING
 EXCAVATION, BEDDING AND BACK FILLING
 OF CONCRETE/FIBRE REINFORCED
 DRAINAGE PIPES/CULVERTS

DRAINAGE
 SD.11
 REV: B DRAWER: 100