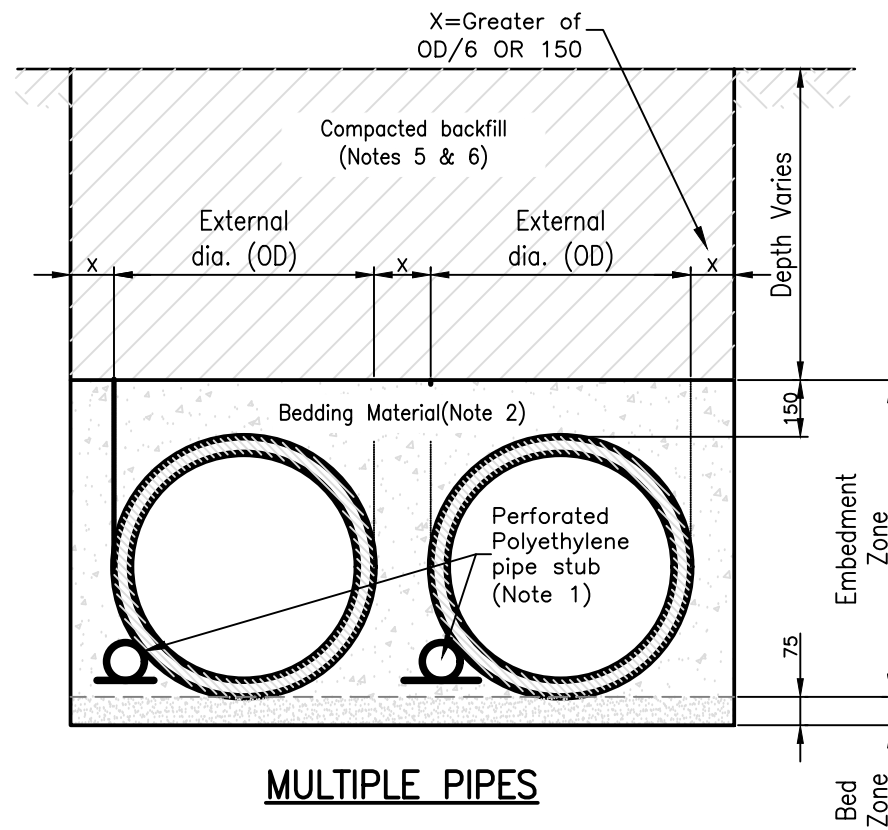
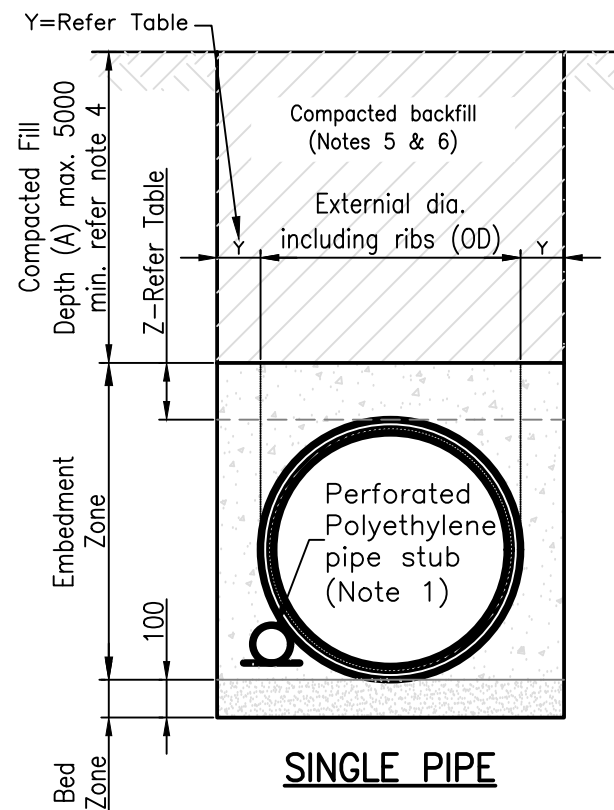


**SINGLE PIPE**

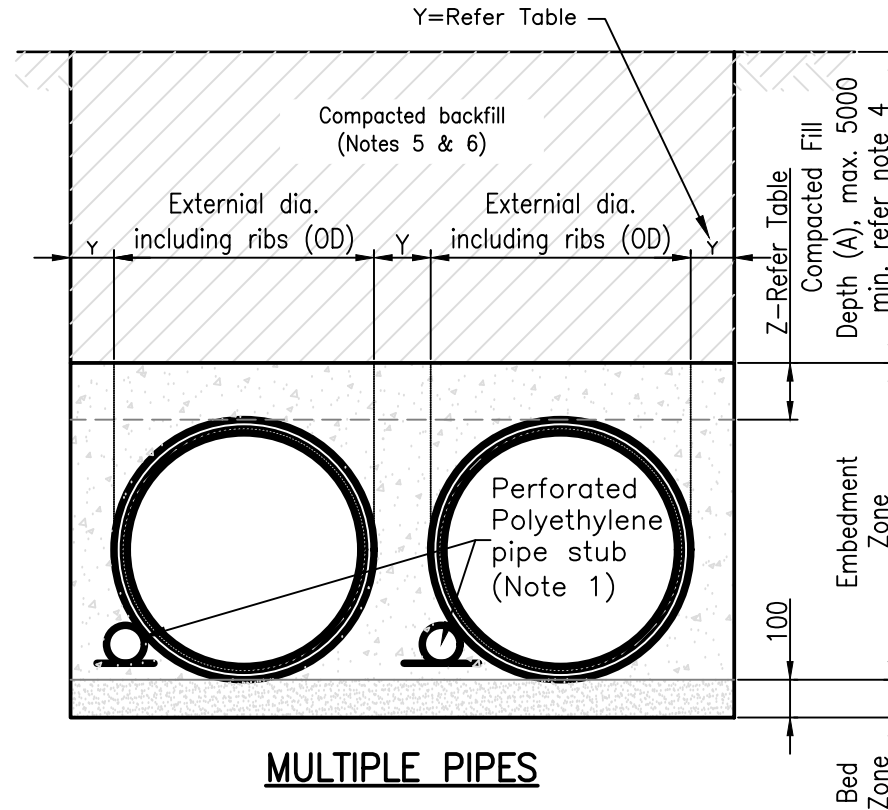


**MULTIPLE PIPES**

**RIGID PIPE**



**SINGLE PIPE**



**MULTIPLE PIPES**

**FLEXIBLE PIPE**

**NOTES:**

1. Unless directed otherwise, provide pipe stub to dewater drainage trench. Stub to be 1000mm long x 100mm dia. Corrugated polyethylene pipe Class 400 to AS 2439 (with end cap) installed on the upstream face of manholes.
2. Bed zone material: 5mm or 10mm screenings, or alternatively washed screened bedding sand to grading specified below to bed zone.

Sieve size(mm)	Passing (% by weight)
9.5	100
4.75	95-100
2.36	75-90
1.18	15-25
0.60	10-20
0.30	5-10
0.15	0-5

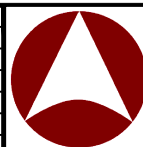
3. Embedment Zone material: 5mm or 10mm screenings.
4. For flexible pipes, depth of compacted backfill (a) varies:
  - minimum 600 to underside of constructed pavement or;
  - minimum 750 to finished surface level (whichever is greater).
5. Compacted backfill under roads (rigid and flexible pipes): granular fill comprising crushed rock (75mm maximum size, non plastic open graded material) or crusher run recycled concrete. Where approved under special circumstances, stabilised sand (1 part cement to 12 parts sand by volume) or controlled low strength material or lean mix concrete or Class 3 material may be permitted.
6. Compacted backfill under pathways (rigid and flexible pipes): excavated materials provided adequate compaction can be obtained. Alternatively use granular fill or sand.
7. Increase excavation locally at spigot and socket joints (rigid pipes) to ensure minimum bottom cover as shown.
8. Dimensions are in millimetres unless noted otherwise.

**FLEXIBLE PIPE SPACINGS 'Y' & 'Z'**

EXTERNAL DIA. (OD)	SPACING 'Y'	SPACING 'Z'
>150, ≤300	150	150
>300, ≤450	200	
>450, ≤900	300	200
>900, ≤1500	350	
>1500	OD/4	300

These drawings have been developed in consultation between the participating Councils. BEFORE USE, the user shall confirm that the drawing has been adopted by the appropriate Council.

Rv.	DATE	REVISIONS
F	06/16	Review
E	02/16	Drawing amended
D	09/15	Note 8 added
C	06/14	Review
B	03/14	Amended Drawing Number
A	10/12	ORIGINAL ISSUE



**INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA  
STANDARD DRAWINGS**

**EXCAVATION, BEDDING AND BACKFILLING  
RIGID & FLEXIBLE DRAINAGE PIPES**

**DS-030**

F  
E  
D  
C  
B  
A  
Rv.