

TABLE 7-5
Maximum Unit Loading and Maximum Length of Drainage and Vent Piping

Size of Pipe, inches (mm)	1-1/4 (32)	1-1/2 (40)	2 (50)	2-1/2 (65)	3 (80)	4 (100)	5 (125)	6 (150)	8 (200)	10 (250)	12 (300)
Maximum Units											
Drainage Piping ¹											
Vertical	1	2 ²	16 ³	32 ³	48 ⁴	256	600	1,380	3,600	5,600	8,400
Horizontal	1	1	8 ³	14 ³	35 ⁴	216 ⁵	428 ⁵	720 ⁵	2,640 ⁵	4,680 ⁵	8,200 ⁵
Maximum Length											
Drainage Piping											
Vertical, feet (m)	45 (14)	65 (20)	85 (26)	148 (45)	212 (65)	300 (91)	390 (119)	510 (155)	750 (228)		
Horizontal (unlimited)											
Vent Piping (See note)											
Horizontal and Vertical											
Maximum Units	1	8 ³	24	48	84	256	600	1,380	3,600		
Maximum Lengths, feet (m)	45 (14)	60 (18)	120 (37)	180 (55)	212 (65)	300 (91)	390 (119)	510 (155)	750 (228)		

¹ Excluding trap arm.

² Except sinks, urinals, and dishwashers.

³ Except six-unit traps or water closets.

⁴ Only four (4) water closets or six-unit traps allowed on any vertical pipe or stack; and not to exceed three (3) water closets or six-unit traps on any horizontal branch or drain.

⁵ Based on one-fourth (1/4) inch per foot (20.9 mm/m) slope. For one-eighth (1/8) inch per foot (10.4 mm/m) slope, multiply horizontal fixture units by a factor of 0.8.

Note: The diameter of an individual vent shall not be less than one and one-fourth (1-1/4) inches (31.8 mm) nor less than one-half (1/2) the diameter of the drain to which it is connected. Fixture unit load values for drainage and vent piping shall be computed from Tables 7-3 and 7-4. Not to exceed one-third (1/3) of the total permitted length of any vent may be installed in a horizontal position. When vents are increased one (1) pipe size for their entire length, the maximum length limitations specified in this table do not apply.

or fastened in an approved manner to other materials.

704.4.4 All such closet rings (closet flanges) shall be adequately designed and secured to support fixtures connected thereto.

704.4.5 Closet screws, bolts, washers, and similar fasteners shall be of brass, copper, or other listed, equally corrosion-resistant materials. All such screws and bolts shall be of adequate size and number to properly support the fixture installed.

705.0 Joints and Connections.

705.1 Types of Joints.

705.1.1 Caulked Joints. Caulked joints for cast-iron bell-and-spigot soil pipe and other similar joints shall be firmly packed with oakum or hemp and filled with molten lead to a depth of not less than one (1) inch (25.4 mm). The lead shall be caulked thoroughly at the inside and outside edges of the joint. After caulking, the finished joint shall not extend more than one-eighth (1/8) inch (3.2 mm) below the rim of the

hub. No paint, varnish, or other coatings shall be permitted on the joining material until after the joint has been tested and approved. Caulked joints in cast-iron bell-and-spigot water piping shall be made with nontoxic materials.

705.1.2 Cement Mortar Joints. Except for repairs and connections to existing lines constructed with such joints, cement mortar joints shall be prohibited on building sewers.

705.1.3 Burned Lead Joints. Burned (welded) lead joints shall be lapped, and the lead shall be fused together to form a uniform weld at least as thick as the lead being joined.

705.1.4 Asbestos Cement Sewer Pipe Joints. Joints in asbestos cement pipe shall be a sleeve coupling of the same composition as the pipe or of other approved materials, and sealed with rubber rings or joined by an approved-type compression coupling. Joints between asbestos cement pipe and other approved pipe shall be made by means of an approved adapter coupling.

705.1.5 Packing Additives Prohibited. The addition of leak-sealing additives to joint packing shall be prohibited.