

Sizing of Water Service Pipe

Size and capacity of potable water system pipe shall be designed in accordance with 7.6.3.1, of Division B, of the Ontario Building Code (OBC). Where both hot and cold water is supplied to fixtures in residential buildings containing one or two dwelling units, the water system may be sized in accordance with the tables in Part 1 and Part 2 of this form, provided, the minimum water pressure at the entry to the building is 200 kPa, the total maximum length of the water system is 90 m, and the hydraulic loads for maximum separate demands on water distribution system piping are not less than 100% of the total hydraulic load of the fixture units given in Tables 7.6.3.2.A, 7.6.3.2.B and 7.6.3.2.D, of Division B, of the OBC for private use.

Designer name		Model name (if applicable)	
Project location			
Size of existing water service (for new build enter "0")		Number of dwelling units served	

PART 1 - Hydraulic Load (Fixture Unit Calculation)

Fixture or device	Fixture units	Quantity	Total hydraulic load (fixture units x quantity)
Bathroom group with 6 LPF flush tank*	3.6		
Bathtub with or without shower head	1.4		
Bathtub with ¾ " spout	10		
Bidet	2		
Clothes washer, dishwasher (domestic)	1.4		
Hose bibb (1/2")	2.5		
Lavatory	0.7		
Shower head, spray, multi-head, fixture unit per head	1.4		
Sink, bar	1		
Sink, kitchen, laundry	1.4		
Water closet (6 LPF or less with flush tank)	2.2		
Other:			
Total Fixture Units			

(Fixture units from Table 7.6.3.2.A, of Division B of the OBC)
* Bathroom group consists of 1 water closet, 1 basin (lavatory), and 1 bathtub or 1 shower.

PART 2 - Sizing of Water Service Pipe

Size of water pipe	Water velocity (m/s)	
	2.4 (copper piping, cold water)	Other pipe material**:
	Hydraulic load (fixture units)	
¾"	Up to 16.4***	
1"	16.4 - 31.4	
1-1/4"	31.5 to 57	

(Above information obtained from Table 7.6.3.4, of Division B of the OBC)
** If a water velocity of other than 2.4 m/s is proposed, provide documentation showing maximum permitted water velocity with maximum hydraulic loads for each water pipe size as recommended by the pipe and fitting manufacturer.
*** Where both hot and cold water is supplied to fixtures in a house containing only one dwelling unit, the water service pipe is permitted to be a minimum of ¾" in size provided the total hydraulic load is not more than 26.4 fixture units.

PART 3 - Design of Water Service Pipe

Total hydraulic load (fixture units):	Water service pipe size (inches):
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