

Water Service Calculations

LRL File No.: 170132

Project : Hindu Heritage Centre

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Water Demand

Total fixture units:	120	(as per OBC Table 7.6.3.2.A)		_	
Conversion of fixture units to equivalent gpm:			48	gpm	(as per PS&D)

Average water demand = 261647.52 L / day = 3.03 L/s

Maximum daily peak factor: 1.5

Maximum daily demand = 392471 L / day

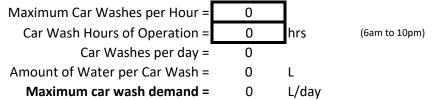
= 4.54 L/s

Maximum hour peak factor: 1.8

Maximum hour demand = 706448 L / day

= 8.18 L/s

If applicable, add car wash flow rate:



Adjusted total maximum water demand = 706448 L / day = 8.18 L / s

0.00

L/s

Water Service Pipe Sizing

Q = VA Where: V = velocity

A = area of watermain pipe Q = water supply flow rate

By deriving the above formula, we can obtain the diameter of the pipe:

Minimum pipe diameter: $d = (4Q/\pi V)^{1/2}$

d = 0.072 m

d = 72 mm

Proposed pipe diameter: 75* mm

^{*}for the final design, a 150mm diameter water service was chosen to account for the Mechanical design elements (sprinklers)