

Residential Sprinkler Systems and Metering Requirements

Sprinkler systems in residential construction are becoming more common. These can be used to provide additional protection to newly constructed homes, or to supplement fire separation requirements during renovations of existing buildings. Concerns arise with the installation of a sprinkler system when the supply to these systems is unmetered. Under our water use bylaw, all water supplies must be metered in accordance with City of Cambridge standards. To ensure that all residential installations are complaint, the following information is being provided.

Flow Through Systems

A flow through systems is where the water pipes serving fixtures in a house (or Accessory Residential Unit) are also used to supply the sprinkler heads. These systems are permitted where the shared water supply is adequately designed under NFPA 13D. These systems do not have any additional metering requirements, as the water has already been metered once it reaches the sprinkler heads. For these types of systems, flow through sprinkler heads are to be used. Where a lateral is needed to position the head, the lateral needs to be as short as possible to prevent stagnant water in the system (6" maximum).

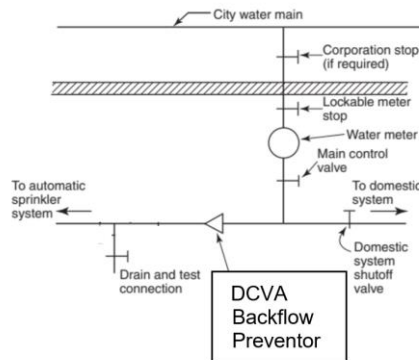
Separate Supply Line Systems

A separate supply line system is one where all the sprinkler heads are supplied by a separate supply line from the piping serving the plumbing fixtures in the building. For these systems, it is important to ensure that the installation meets both the requirements in NFPA 13D and the City of Cambridge water use bylaw. Please refer to the following page for details.

If you have any questions regarding these requirements, please contact our office.

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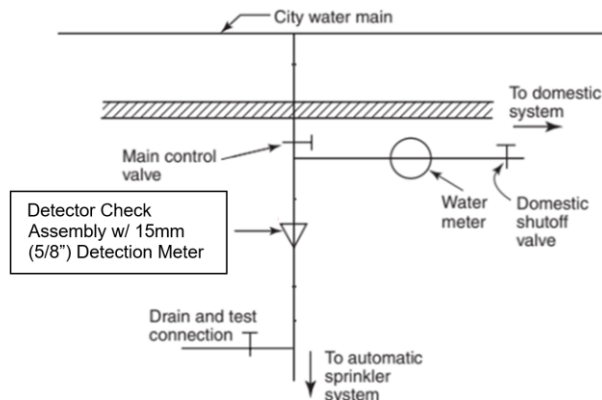
Water Supplies Less Than 37mm (1½")



For a water supply less than 37mm (1½"), the sprinkler takeoff must be downstream (after) the water meter. This ensures that all water within the building is metered.

Water Supplies 37mm (1½") or Greater

For a water supply 37mm (1½") or greater, the sprinkler takeoff can be before the water meter as shown in the detail below. The main control valve needs to be marked/signed so that the building is provided with a sprinkler system. The backflow device on the fire suppression line should be a detector check assembly, equipped with a 15mm (5/8") detection meter. This detection meter is connected to our AMI network and monitored for any flows. In such a configuration the separate "waterflow detector" may be able to be eliminated (not sure if the OBC allows for this though). The detector check meter in this installation would be established as a second meter account for the property and will receive fixed water service fees only.



For accessibility accommodations, please contact accessibility@cambridge.ca.