JANUARY 2023

# BUILDING PERMIT APPLICATION GUIDE:

## Installation of Backflow Assembly for Premise Isolation Existing Buildings

BUILDING CODE SERVICES

### Purpose

This document provides a summary of building permit application requirements for the installation of a backflow assembly for premise isolation purposes, in existing buildings.

This document applies to the following installation categories:

- Installation of a new assembly
- Relocation of a working assembly
- Replacement of a defective assembly, including instances where the class of backflow assembly or size of the existing device is not being altered

### Definitions

*Premises Isolation* means backflow protection provided at the entrance to a building or facility.

### Description

The City of Ottawa's Backflow Prevention Program protects drinking water quality by ensuring the appropriate installation and inspection of devices that prevent contaminated water from flowing back into the City's water distribution system, as required under Schedule 'I' of the City of Ottawa's Water By-Law. The program supports compliance with the highest industry drinking water protection standards to ensure public safety and the long-term safety of our shared water resource.

Impacted occupancies include industrial, commercial, institutional, and multi-residential uses, classified as severe or moderate risk for backflow incidents, as per CSA B64.10-17, 'Selection and Installation of Backflow Preventers'.

For commercial multi-tenant occupancies, area protection may be required if the hazard classification of the tenant is greater than the hazard presented by the premise. This may occur at time of tenant fit up in an existing premise, dependent on the suite hazard being greater than that of the premise (e.g., dental office in an office building). In such cases, area protection will be required for the individual suite in conjunction with the premise isolation backflow device(s).

A summary of building permit application submission requirements is outlined below, to ensure the proposed design complies with the Ontario Building Code and referenced CSA standard.

For details regarding timelines, associated fees, applicable forms, permit approval process and building inspections, please see https://ottawa.ca/en/planning-development-and-construction/building-and-renovating/do-i-need-building-permit or contact BuildingPermits@ottawa.ca For questions regarding the City of Ottawa Backflow Prevention Program, please see https://ottawa.ca/en/living- ottawa/drinking-water-stormwater-and-wastewater/drinking-water/drinking-water-programs/backflow- prevention-program# or contact the City of Ottawa Backflow Prevention Program Coordinator backflow@ottawa.ca

Part 7 Plumbing of the Ontario Building Code outlines the minimum requirements for backflow prevention and referenced standard. An electronic copy can be found on the Ministry of Municipal Affairs and Housing website at https://www.ontario.ca/page/ontarios-building-code

Designer Requirements

A property owner may seek either the design services of a Professional Engineer licensed in the Province of Ontario or a BCIN Designer who is qualified with the Ministry of Municipal Affairs and Housing in the category of 'Plumbing – All Buildings', in accordance with the qualification requirements in Division C – Part 3 of the Ontario Building Code.

Building Permit Application Submission Requirements

A building permit application can be filed at any one of our Client Service Centres. The following items shall be included in the building permit application submission package:

☐ Completed building permit application form and fee payment,

and two sets of:

☐ A completed survey of premise isolation

☐ Site plan (indicating municipal address, lot area, main building area, addition area, location of proposed addition dimensioned to other existing buildings on the property, lot lines and septic system, where applicable)

☐ Building key plan (indicating water service entry room location(s))

☐ Proposed plumbing schematic indicating the following:

- Type of proposed new/replacement device(s) for potable water and fire suppression system (where applicable), in accordance with the OBC and referenced standard CSA B64.10-17
- Manufacturers specifications for the proposed backflow assembly(s)
- Installation schematic at each water service entry location showing the configuration of the system and components, including the proposed backflow assembly, water meter, strainer, control valves, parallel service, type of piping, drainage and any other fixtures/devices as required (see schematic below)
- Confirmation that the backflow device is located as close as reasonably possible to water meter
- Verification that the design static water pressure downstream of the installed assembly remains adequate
- Verification of thermal expansion protection of the building plumbing system
- Installation clearances

Building Inspections

The plumbing inspector (building official) shall confirm that the new or relocated backflow assembly complies with the requirements of the Ontario Building Code and referenced standard CSA B64.10-17. Additionally, the plumbing inspector shall verify that the device has passed testing by a Qualified Tester as described in the City of Ottawa Water By-Law. It is your responsibility to call for inspections.

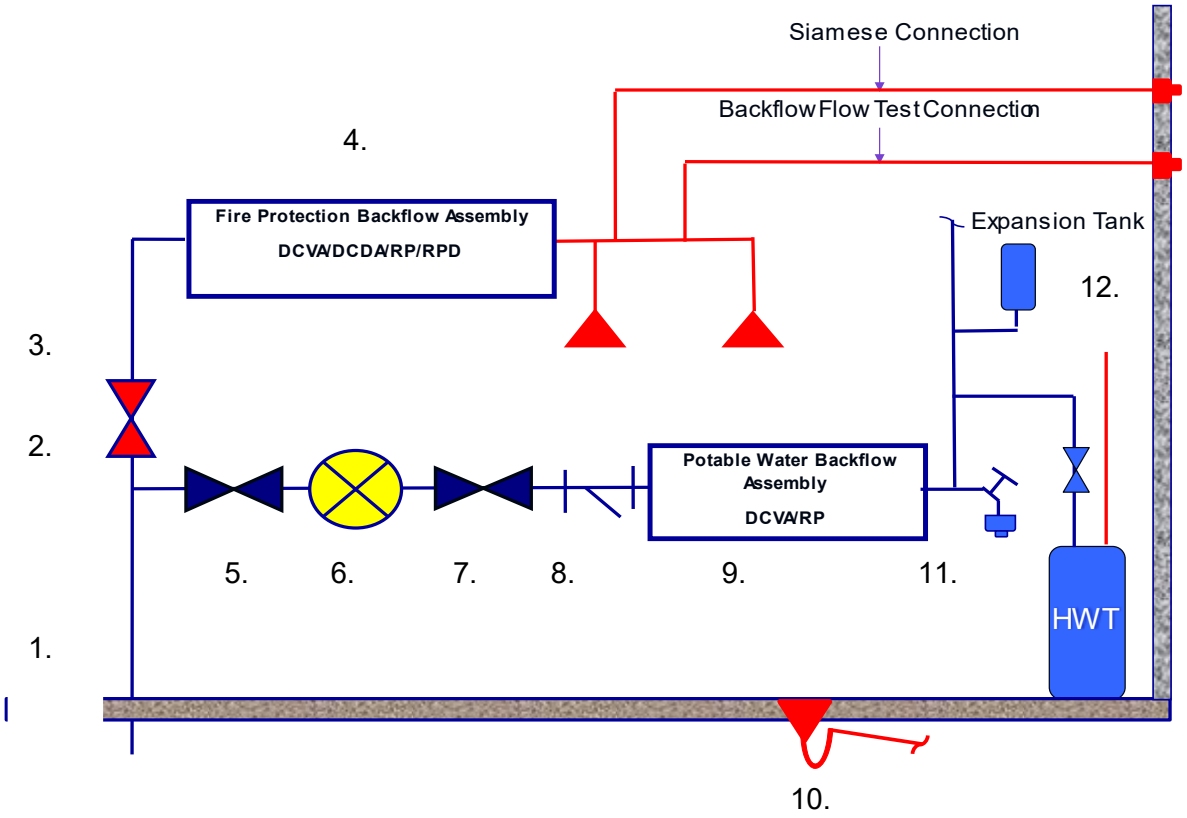
Any site-specific questions or concerns are to be raised to the attention of the plumbing inspector assigned to the building permit. The plumbing inspectors' name and phone number are identified on the building permit.

Any concerns with the new piping or re-piping of the water meter (or moving meter) are to be directed to the metering department at 613-580-2424 x 22224 or via email at watermeters@ottawa.ca

Please note that the property will only be compliant with the City of Ottawa Water By-Law once the test report and designer's conformance letter have been provided to Building Code Services.

*Sample schematic located on page #4

Sample Schematic




1. Combined water piping (Fire protection/potable water)
2. Monitored fire control valve (NFPA 13)
3. Potable water rated pipe to the fire protection backflow assembly (OBC)
4. Applicable fire protection back flow assembly (City of Ottawa/B64.10/NFPA 13)
5. Building control valve (OBC)
6. Water meter (City of Ottawa) by-pass serving the water meter to be removed unless deem necessary by water meter operations
7. Control valve (City of Ottawa)
8. Strainer (City of Ottawa/B64.10)
9. Applicable backflow assembly (OBC/B64.10/City of Ottawa By-law)
10. Drainage if required (RP assembly)
11. Drainage downstream of backflow assembly with vacuum breaker
12. Expansion tank as sized by mechanical engineer (OBC/B64.10)