



Township of Perry

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PLUMBING

A Homeowners Guide for the Installation of Plumbing

The following information is a brief summary of the material outlined under Part 7 of the Ontario Building Code and is intended only to give the reader an overview of the many requirements therein. For accurate reference, please refer to the appropriate provisions of Part 7 of the Ontario Building Code and/or Building By-law 2017-24, as amended.

THE PLUMBING SYSTEM

The plumbing system in a dwelling comprises four basic elements:

1. The Water Supply and Distribution System

Composed of the water pipes which transport fresh water from the source of supply and conveys it to the fixtures and appliances and in the case of hot water, from the water heater to the fixtures and appliances. The source of supply may be a municipal system or a private well or cistern, etc.

2. The Drainage System

Consists of the drain and sewer pipes which convey waste fluids from the fixtures to an approved place of disposal such as a septic system, holding tank, etc.

3. The Venting System

Consists of pipes which terminate in open air above the roof connected to the drainage system and which introduces air into the drainage system.

4. The Fixtures and Appliances

Consists of the sinks, wash basins, water closets (toilets), laundry tubs, water heaters, washing machines, etc. All fixture drains are required to be vented and equipped with a trap which provides a water seal in the drain and thus prevents the emissions of sewage gases.

THE CODE

The Ontario Building Code is administered and enforced locally by the Chief Building Official of the Township of Perry. This includes responses to enquires, processing of Applications, Issuance of Permits, and Inspection of plumbing installations.

Before any plumbing work commences an Application for a Permit should be made and a Permit obtained. It is the responsibility of the property owner and any person performing plumbing installations to determine whether a Permit is required and to ensure that the work is inspected at the appropriate stages.

A Permit is required for the following work:

- (a) The installation of plumbing in a new building.
- (b) The installation of new plumbing in an existing building.
- (c) The alteration of existing plumbing.

- (d) The repair of existing plumbing except for the repair of existing fixtures, leaks, or blockages.
- (e) The replacement of existing fixtures or existing water heater.

A Plumbing Permit can only be issued to a qualified, licensed Master Plumber except where the owner of a residence is performing the work, at or in that residence for his/her own use.

To obtain a Permit, a complete Application should be presented to the Building Department at the Township Office. The Application should be accompanied by a floor plan of the dwelling showing the location of the fixtures to be installed and schematic or sectional drawing showing the proposed drainage or sectional drawing showing the proposed draining and venting layout. (A schematic drawing and a sectional drawing of a typical residential plumbing system is attached hereto.)

Some of the more common terms used in plumbing and defined in the Ontario Building Code are as follows:

Building Drain: The horizontal pipe at the lowest point in the building (generally, under the basement floor) which receives the discharge from the other drainage piping.

Clean Out: A fitting access in a drainage pipe for cleaning and inspection provided with an air-tight cover.

Drainage Piping: All piping which conveys sanitary waste and liquid to a building drain.

Fixture: A receptacle that receives water, etc., and which discharges into drainage piping.

Horizontal: Departing from the true horizontal by not more than 45 degrees.

Potable Water: Water fit for human consumption.

Stack: A vertical drain, waste or vent pipe that serves one or more fixtures.

Trap: A fitting or device that provides a liquid seal to prevent the emission of sewer gas without affecting the flow of waste water.

Vent: A pipe that is installed to provide a flow of air, to or from drainage piping, and which terminates to open air at the vent stack.

Note: All of the above are represented on the attached schematic.

The minimum size of piping, in general, which is required to serve a specific fixture of appliance, is as follows:

1. Water Pipes

The minimum size of water service pipe entering a dwelling from the exterior is required to be ¾" diameter. The ¾" diameter should be maintained towards the water heater until the first takeoff or branch and thereafter it can be reduced to ½" diameter. The hot and cold water distribution system requires a minimum diameter of ½".

2. Drainage Pipes

The minimum size of pipe serving the various fixtures is as follows:

Description	Minimum Diameter (INCHES)
Building Drain	4
Floor Drain	3
Bath Tub	1 ½
Bidet	1 ¼
Dishwasher	1 ½
Laundry Tub	1 ½
Wash Basin	1 ½
Shower Stall	1 ½
Sink (Kitchen)	1 ½
Water Closet (Toilet)	3

3. Vent Pipes

Description	Minimum Diameter (INCHES)
Main Vent Stack (Through Roof)	3 inches minimum diameter

All other vent pipes in a dwelling are generally required to be a minimum diameter of either 1 1/2" or 1 1/4" as shown on the attached schmetic.

MATERIALS

The most commonly used materials in plumbing in a dwelling are copper water pipes, ABS plastic drainage and vent pipes above ground and PVC plastic drainage pipes below ground. However, a wide variety of other materials as listed in the Ontario Building Code can be used.

It should be noted that all materials, fixtures and appliances in a plumbing system are required to meet prescribed standards, e.g. certified by the Canadian Standards Association or other accredited testing agency, as applicable. The installation of any element of a plumbing system which does not meet the required standard would not be accepted when the work is inspected.

INSPECTION

All plumbing for which a Permit has been issued is required to be inspected. No plumbing should be covered or concealed until it has been inspected and no plumbing system should be put into use until it has been inspected and the use authorized.

LOW FLOW FIXTURES

Water efficient water closets (toilets), shower heads, and faucets are now required to be installed in accordance with the Ontario Building Code.

COMBUSTIBLE PIPING

Combustible piping is permitted in single, semi or townhouse dwelling units, however, in all other types of buildings non-combustible piping may be required.

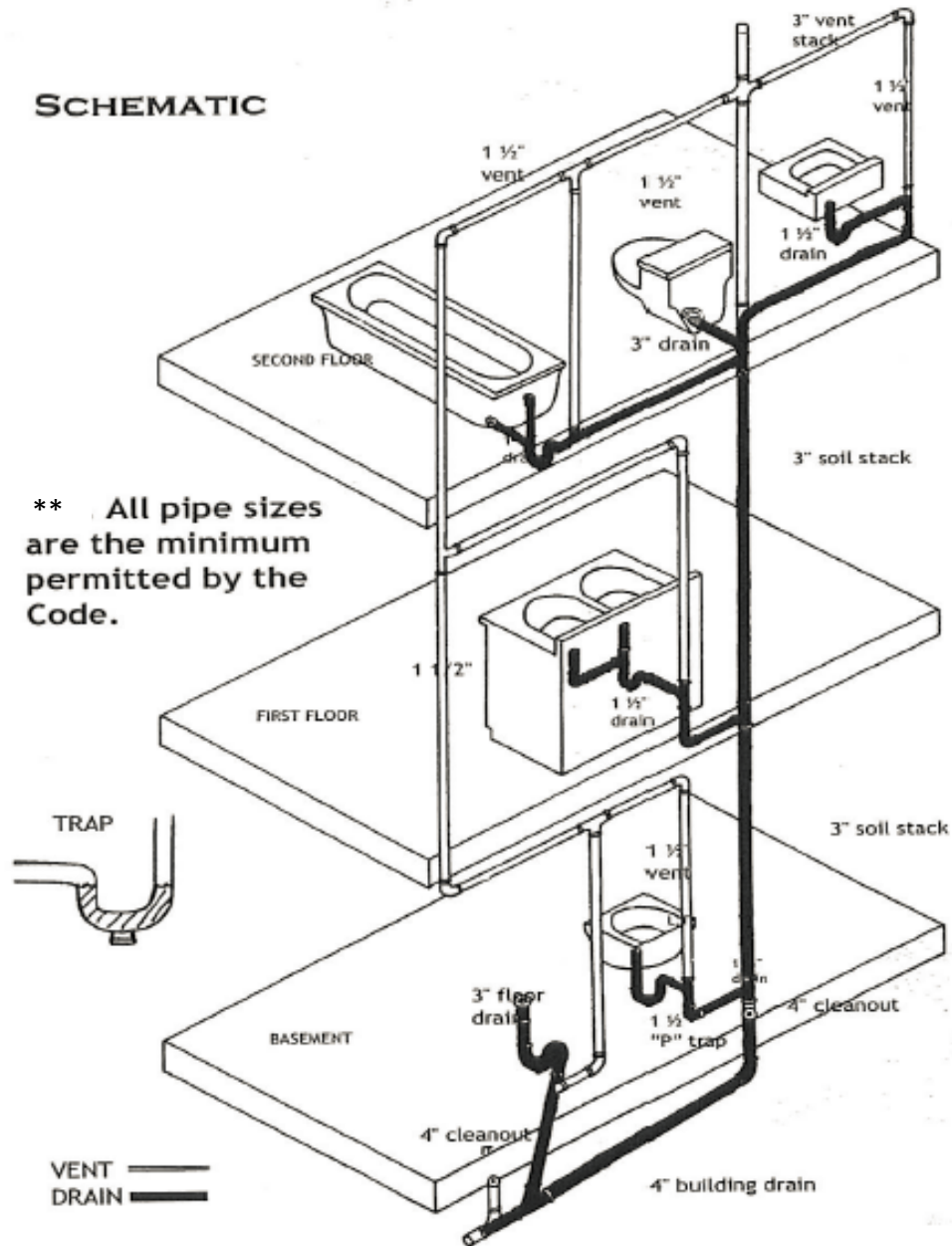
BACKFLOW PREVENTION

The requirements for backflow prevention shall be in accordance with the Ontario Building Code, including hose bibs installed outside the building or inside the garage.

MIXING VALVES

Except for hot water supplied to installed dishwashers or clothes washers the maximum temperature of hot water supplied by fittings to fixtures, in a residential occupancy, shall not exceed 49 degrees Celsius (120 degrees Fahrenheit).

TYPICAL RESIDENTIAL PLUMBING SYSTEM



SUMP PUMP/PIT

The majority of lots within the Township are capable of gravity drainage for the weeping tile. A sump pump/pit is only required when gravity drainage is not possible (as per Ontario Building Code).

SUMMARY

If you require further information about installation of plumbing or wish to obtain a Permit, visit the Chief Building Official in person at the Township Office (1695 Emsdale Road, Emsdale) Monday to Friday from 1:00 p.m. to 4:00 p.m., or contact us via telephone at 705-636-5941 or by email at mike.wilmon@townshipofperry.ca. We would be happy to answer any questions.

How Can You Find Out More?

Contact Mike Wilmon, Chief Building Official, in person by visiting the Township Office at 1695 Emsdale Road, by phone at (705) 636-5941 ext. 207, or by email at mike.wilmon@townshipofperry.ca.

TYPICAL RESIDENTIAL PLUMBING LAYOUT CROSS - SECTION N

