

# 2019 PHILADELPHIA PLUMBING CODE

## HIGHLIGHTS

Mayor Kenney issued Executive Order 06-17 establishing a Plumbing Advisory Board charged with developing recommendations for a modern Philadelphia Plumbing Code. The Order states that the new code is to be based upon model codes published by the International Code Council.

The Plumbing Advisory Board gathered members of the development, design, and plumbing communities and advisors from various City departments and the International Code Council to collaborate on new code provisions. The final recommendations were submitted to the Department of Licenses & Inspections in March 2019 and approved by the PA Department of Labor and Industry in May 2019.

The proposal adopts the 2018 International Plumbing Code (IPC), which provides transparency, consistency, and leverages modern technologies to promote economy, energy efficiency, and water conservation. The proposal also retains some of the current provisions of the Philadelphia Plumbing Code that specifically address our existing infrastructure and necessary protections unique to a densely populated city.

The changes effectuated by the adoption of the IPC include the following:

- 1) **Expanded use of non-metallic pipe.** The provisions allow for non-metallic pipe in residential buildings that do not exceed 150' in height, with certain limitations. The use of non-metallic pipe will reduce overall construction cost, thus creating a more competitive market and promoting affordable housing in Philadelphia. Certain restrictions will be imposed on commercial and high-rise construction where the demand on services necessitate more durable materials. These restrictions are similar to those imposed by other large cities, such as New York, Boston, and Washington.
- 2) **Energy Efficiency and Water Conservation** Provisions that promote conservation are prevalent in the IPC. Examples include:
  - a. Allowance of non-potable water systems. In an effort to promote the conservation of fresh water resources, the IPC includes provisions for the use of non-potable water (i.e. recirculated tap water, rainwater) in certain applications such as fixture flushing and irrigation.
  - b. Waterless urinals, which provide drainage without the flushing of water.
- 3) **Use of pipe-bursting methodology and materials.** This methodology allows for the repair of sewers without excavation, which is not only practical but sometimes essential. It is an example of the improved technologies developed and adopted by the model codes in recent years.
- 4) **Separation of sanitary and stormwater drainage lines.** The combined sanitary and storm sewers that exist through most of Philadelphia will eventually be replaced by

separate sewer systems as PWD continues to upgrade infrastructure. The new provisions will require separate drains installed from the building to the curb to prepare for future upgrades.

- 5) **Number of required plumbing fixtures.** The required number of plumbing fixtures is now aligned with occupancy categories of the Building Code. The incompatibility between the Philadelphia Plumbing Code and model codes has made compliance both confusing and challenging. This change will eliminate the need for a variance on many projects.
- 6) **Eliminate the requirement for building traps on storm drains.** A trap is a device designed to prevent sewer gases from entering a building from the City sewer. A trap will no longer be required for a drain that only collects storm water due to the limited hazard.

Certain provisions which are unique to the Philadelphia Code have been retained. These include the following:

- 7) **Philly single stack venting system.** Each plumbing fixture is vented to supply fresh air to facilitate the movement of water and to allow wastewater gas and odor to escape. The single stack venting method uses as a single line to both drain and vent multiple fixtures. This methodology was developed in Philadelphia and has been used successfully for over 100 years. This venting method was added to the International Plumbing Code in recent years; however, there are slight differences (i.e. maximum distance from fixture to stack) that make it incompatible with existing construction in Philadelphia. The proposal retains the Philly single stack vent method as an engineered alternative.
- 8) **Building traps on sanitary drains.** A trap prevents sewer gasses from entering a building while still allowing waste materials to pass through. Individual plumbing fixtures are trapped and, in Philadelphia, there is a secondary trap installed between the building and the City sewer called a building or house trap. The IPC prohibits the use of building traps as they are viewed as redundant, and potentially restrictive, since the individual fixtures are trapped. The proposal retains the use of building traps because the need for a secondary means of protection outweighs the concern of restricted flow in a densely populated city.

Large combined sanitary/ storm sewers used in Philadelphia transport high volumes of waste and are frequently overtaxed during a rainfall event. Both the potential for overflow/ failure and the impact on people are high in an urban environment. Whole building traps are used in other large cities, such as New York and Los Angeles, that face similar issues.

- 9) **Terminology.** Certain terms unique to Philadelphia were retained to minimize confusion to the plumbing industry during the transition.

The proposed bill also includes additions:

- 10) **Private infrastructure.** Bill No 180554 was passed into law in October 2018 to permit private water and sewer infrastructure where a planned unit or condominium ownership structure exists. Private infrastructure allows for single water main or sewer to serve multiple buildings in lieu of a direct connection between each building and the City sewer or main. The bill relies on the Philadelphia Plumbing Code to establish standards and provisions have been added to satisfy this requirement.
- 11) **Green roof design.** The proposal provides modified design requirements when a green roof is otherwise subject to the Philadelphia Water Department installation and maintenance requirements.