

MAINE STATE INTERNAL PLUMBING CODE BASED ON THE 2000 UNIFORM PLUMBING CODE

TRAINING PRESENTATION



Department of Professional and Financial Regulation
Office of Licensing and Registration

PLUMBERS' EXAMINING BOARD

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STATE OF MAINE
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AND FINANCIAL REGULATION
OFFICE OF LICENSING & REGISTRATION
PLUMBERS EXAMINING BOARD
35 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0035

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BOARD CHAIR

To: Brianne Hasty

From: Dana Tuttle

Subject: Objectives for Local Plumbing Inspectors

Chapter 1 Administration

1. How an internal plumbing permit is filed out.
2. What to charge for a permit.
3. Who to issue a permit to.
4. When inspections are required.

Chapter 2 Definitions

1. Understand all definitions and be able to refer to them when needed.

Chapter 3 General Regulations

1. Material listing and labeled and marked.
2. Disposal of waste.
3. Prohibited fittings and practices.
4. Protection of piping and materials.
5. Table 3-2
6. Backfilling
7. Joints and connections/ soldered, solvent cement.

Chapter 4 Plumbing Fixtures and Fixture Fittings

1. Quality of fixtures.
2. Installations
3. Water closet seats.
4. Flushing devices required.
5. Floor drain and shower stalls.
6. Size of showers.
7. Separate facilities.
8. Tub and shower control valves.
9. Table 4-1



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Chapter 6 Water Supply and Distribution

1. Running water required.
2. Unlawful connections.
3. Cross connection control.
4. Materials
5. Valves
6. Tables 6-4 & 6-5
7. Size of water distribution piping.

Chapter 7 Sanitary Drainage

1. Tables 7-3 & 7-5
2. Size of drainage piping.
3. Change in direction of drainage flow.
4. Cleanouts
5. Grade of horizontal drainage piping.

Chapter 8 Indirect Wastes

1. Airgap or airbreak.
2. Food and beverage handling establishments.
3. Indirect waste piping.
4. Indirect waste receptors.
5. Chemical waste.

Chapter 9 Vents

1. Vents required.
2. Size of vent.
3. Vent pipe grades and connections.
4. Vent termination.
5. Venting for island fixtures.

Chapter 10 Traps and Interceptors

1. Traps required.
2. Traps protected by vent pipes.
3. Traps prohibited and trap seals.
4. Grease Traps and interceptors.

Chapter 11 Storm Drainage

1. Where required.
2. Roof drains.

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JOHN ELIAS BALDACCI
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ANNE L. HEAD
DIRECTOR

November 4, 2005

TO: ALL LICENSED PLUMBERS
SUBJECT: New Maine State Internal Plumbing Code

The State of Maine Plumbers' Examining Board has adopted a new Maine State Internal Plumbing Code based on the 2000 edition of the Uniform Plumbing Code.

In order to transition to the new code, any plumbing projects in process prior to January 1, 2006 can be completed under the old State of Maine Internal Plumbing Code.

After January 1, 2006, the plumbing code requirements of the Maine State Internal Plumbing Code, which is based on the 2000 edition of the Uniform Plumbing Code, must be followed.

Listed below are materials in the new internal plumbing code that may affect what you install.

- All materials installed shall be listed by an approved listing agency.
- Drum trap: The use of drum traps is limited to repair or direct replacement of a trap when first approved by the Local Plumbing Inspector.
- Floor drains shall be installed in conjunction with trap primers and shall be required in toilet rooms containing two or more water closets or a combination of one water closet and one urinal and all commercial kitchens.
- PVC primer with an ASTM 656 listing is required when joining PVC to PVC. Primer may be purple but not required in the new internal plumbing code. Local jurisdiction may require otherwise.
- Stud guards or nail plates are required as stated.
- Thermal expansion tanks shall be required if, when heating domestic water, excessive water pressure is present.
- Offset closet flangs are prohibited unless listed by an approved testing agency.
- Recessed PVC and ABS bushings are prohibited. Reducing couplings shall be installed.
- Left and right handed side inlet sanitary tees may be installed in the drainage system.
- Test gauges shall meet the requirements listed in the new internal plumbing code.
- Mechanical water hammer arrester devices.

Sincerely,

Dana Tuttle

Dana Tuttle
Senior Plumbing Inspector



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Maine's Plumbing Code moves into the 21st century

Training prepared by: Office of Licensing and
Registration
Department of Professional and Financial Regulations
November 2005

Purpose of training

- To better understand the contents of the recently adopted Maine Internal Plumbing Code, based on the 2000 edition of the Uniform Plumbing Code.

Administrative Authority

Chapter 2

The individual official, board, department, or agency established and authorized by a state, county, city, or other political subdivision created by law to administer and enforce the provisions of the plumbing code as adopted or amended. This definition shall include the Administrative Authority's duly authorized representative.

“Administrative Authority Having Jurisdiction”

- Plumbers' Examining Board
- State Plumbing Inspectors
- Local Plumbing Inspectors

Building Drain

Chapter 2

That part of the lowest piping of a drainage system which receives the discharge from soil, waste and other drainage pipes inside the walls of the building and conveys it to the building sewer beginning **two (2) feet** outside the building wall.

Private or Private Use

Chapter 2

Applies to plumbing fixtures in residences and apartments, to private bathrooms in hotels and hospitals, and to restrooms in commercial establishments where the fixtures are intended for the use of a family or an individual.

General Regulations

Chapter 3

- 301.1.1 All pipe, pipe fittings, traps, fixtures, materials, and devices used in a plumbing system shall be listed or labeled by a listing agency.
- 301.1.3 A list of accepted plumbing materials standards is included in Table 14-1.

Existing Buildings

- 301.1.4 In existing buildings or premises in which plumbing installations are to be altered, repaired, or renovated, the Administrative Authority has discretionary powers to permit deviation from the provisions of this code, provided that such a proposal to deviate is first submitted for proper determination in order that health and safety requirements, as they pertain to plumbing, shall be observed.

Protection of Piping, Materials and Structures

- 313.2 No piping shall be directly embedded in concrete or masonry .
No structural member shall be seriously weakened or impaired by cutting, notching or otherwise, as defined in the building code.
- 313.10.1 Sleeves shall be provided to protect all piping through concrete and masonry walls.

Protection of Piping, Materials and Structures (cont.)

- 313.9 Plastic and copper piping run through framing members to within one (1) inch of the exposed framing shall be protected by steel plates not less than 18 gauge.

**Hangers and Supports
Table 3-2**

- Refer to Table 3-2 for the maximum distances allowed for supporting horizontal and vertical piping in the plumbing systems.

Solvent Cement Plastic Pipe Joints

- 316.1.6 CPVC and PVC pipe and fittings shall be cleaned and joined with listed primer(s) and solvent cement(s)

Food Handling Establishments

- 318.0 Food or drink shall not be stored, prepared or displayed beneath soil or drain pipes, unless those areas are protected against leakage or condensation from such pipes reaching for food or drink as described in sections 318.1 through 318.7.

Test Gauges

- 319.1 Required pressure tests of ten (10)psi or less shall be performed with gauges of 1/10 pound incrementation or less.
- 319.2 Required pressure tests exceeding ten (10) pounds but less than one hundred (100) psi shall be performed with gauges of one (1) psi incrementation or less.

Water-Conserving Fixtures and Fittings

Chapter 4

- 402.3 Water closets, either flush tank, flushometer tank, or flushometer valve operated, shall have an average consumption of not more than 1.6 gallons of water per flush.
- 402.4 Urinals shall have an average water consumption of not more than 1.0 gallons of water per flush.

Installation

- 408.2 Where a fixture comes in contact with a wall or floor, the joint between the fixture and the wall or floor shall be made watertight.
- 408.6 The clear space in front of any water closet or bidet shall not be less than twenty-four (24) inches.

Water Closets

- 409.1 Water closet bowls for public use shall be of the elongated type.
- 409.2.2 All water closet seats, except those within dwelling units, shall be of the open front type.

Location of Floor Drains

- 412.2 Floor drains shall be installed in the following areas:
 - Toilet rooms containing two (2) or more water closets or a combination of one (1) water closet and one (1) urinal, except in a dwelling unit.
 - Commercial kitchens
 - Laundry rooms in commercial buildings and common laundry facilities in multi-family dwelling buildings.

Shower Compartments

- 412.7 All shower compartments, regardless of shape, shall have a minimum finished interior of one thousand twenty-four (1024) square inches and shall also be capable of encompassing a thirty (30) inch circle.

Separate Facilities

- 413.3 Separate toilet facilities shall be provided for each sex.
- **Exceptions:**
 - (1) Residential installations.
 - (2) In occupancies serving ten(10) or fewer people, one (1) toilet facility, designed for use by no more than one (1) person at a time, shall be permitted for use by both sexes.
 - (3) In business and mercantile occupancies with a total floor area of 1500 square feet or less, one toilet facility, designed for use by no more than one person at a time, shall satisfy the requirements for serving customers and employees of both sexes.

Toilet Facilities for Workers

- 413.7 Suitable toilet facilities shall be provided and maintained in a sanitary condition for the use of workers during construction.

Shower and Tub/Shower Combination Control Valves

- 420.0 Showers and tub-shower combinations in all buildings other than single family dwellings shall be provided with individual control valves of the pressure balance or the thermostatic mixing valve type. Handle position stops shall be provided on such valves and shall be adjusted per the manufacture's instructions to deliver a maximum water setting of 120 degrees F.
- The water heater thermostat shall not be considered a suitable control for meeting this provision.

Water Supply and Distribution

Chapter 6

- 601.3 Faucets and diverters shall be connected to the water distribution system so that hot water corresponds to the left side of the fittings.

Excessive Water Pressure

- 608.2 Where local static water pressure is in excess of eighty pounds per square inch, an approved type pressure regulator preceded by an adequate strainer shall be installed and the static pressure reduced to eighty pounds per square inch or less.

Excessive Water Pressure

- 608.3 Any water system provided with a check valve, backflow preventer or a pressure regulating device which does not have a bypass feature at its source shall be provided with an approved, listed, adequately sized pressure relief valve or a means to control expansion.

Vacuum Relief Valves

- 608.7 All hot water storage tanks shall be equipped with a vacuum relief valve.
- The vacuum relief valve shall always be installed in the cold water supply line at a level at least six inches above the top of the tank.

Testing

- 609.4 Upon completion of a section or of the entire hot and cold water supply system, it shall be tested and proved tight under a water pressure not less than the working pressure under which it is to be used.
 - A fifty (50) PSI air pressure may be substituted for the water test.
 - The piping shall withstand the test for a period of not less than fifteen minutes.

Unions

- 609.5 Union shall be installed in the water supply within twelve inches of regulating equipment, water heating, conditioning tank, and similar equipment which may require service by removal or replacement.

Water Hammer

- 609.10 All building supply systems in which quick-acting valves are installed shall be provided with devices to absorb the hammer caused by high pressures resulting from the quick closing of these valves.
These pressure-absorbing devices shall be either air chambers or approved mechanical devices.

Size of Potable Water Piping

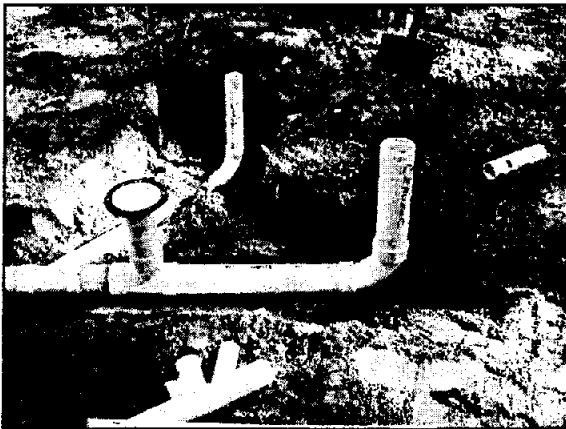
- 610.3 The quantity of water required to be supplied to every fixture shall be represented by fixture units, as shown in Table 6-4. Equivalent fixture unit values in Table 6-4 include both hot and cold water demand.

Point of Use Drinking Water Treatment Units

- 611.2 Airgap discharge from all drinking water treatment units shall enter the drainage system through an airgap or an airgap device which meets the requirements of the appropriate standards referenced in Table 14-1.

Changes in Direction of Drainage Flow

- 706.2... No fitting having more than one inlet at the same level shall be used unless such fitting is constructed so that the discharge from one inlet cannot readily enter any other inlet. Double sanitary tees may be used when the barrel of the fitting is at least two pipe sizes larger than the largest inlet.



Cleanouts

- 707.4 Each horizontal drainage pipe shall be provided with a cleanout at its upper terminal and each run of piping, which is more than one hundred feet in total developed length, shall be provided with a cleanout for each one hundred feet, or fraction thereof, in length of such piping.

Cleanouts (cont.)

- 707.5 An additional cleanout shall be provided in a drainage line for each aggregate horizontal change of direction exceeding one hundred and thirty-five degrees.

Cleanouts (cont.)

- 707.10 Each cleanout in piping two inches or less in size shall be so installed that there is a clearance of not less than twelve inches in front of the cleanout. Cleanouts in piping larger than two inches shall have a clearance of not less than eighteen inches in front of the cleanout.

Testing (cont.)

- 712.3 The air test shall be made by forcing air into the system until there is a uniform gauge pressure of five (5) pounds per square inch. The pressure shall be held without introduction of additional air for a period of at least fifteen (15) minutes.

Indirect Waste

Chapter 8

- 801.1 Where a drainage airgap is required by this Code, the minimum vertical distance as measured from the lowest point of the indirect waste pipe or the fixture outlet to the flood level rim of the receptor shall be not less than one (1) inch.

