

2015 IPC, IMC and IFGC Significant Changes

2015 MPC, MMC and IFGC Significant Changes

Based on the 2015 Michigan Plumbing Code (MPC), the 2015 Michigan Mechanical Code (MMC) and the 2015 International Fuel Gas Code (IFGC)

2015 IFGC, IMC and IFGC Significant Changes 2

Purpose

- This program is designed to provide a general overview of notable changes that occurred between the 2012 and 2015 editions of the International Plumbing, Mechanical and Fuel Gas (PMG) Codes.
- It is intended to acquaint users of the PMG Codes with some of those provisions that have been added, modified or clarified with the previous edition.
- Only a limited number of changes will be addressed.

2015 IFGC, IMC and IFGC Significant Changes 2

Description

- Overviews the changes from the 2012 to the 2015 International Plumbing Code®, 2015 International Mechanical Code® and 2015 International Fuel Gas Code®.

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Objectives

Upon completion of this seminar, participants will be better able to:

- Identify the most significant differences between the 2012 IPC, IMC and IFGC and the 2015 IPC, IMC and IFGC.
- Explain the differences between the current and previous edition.
- Identify key changes in organization and code requirements.
- Identify the applicability of design, plan review and inspection requirements.

2015 IFGC, IMC and IFGC Significant Changes 3

This seminar is based on:



2015 IFGC, IMC and IFGC Significant Changes 3

About the Significant Changes

- Underlined text has been added.
 - "Interior exit stairways and interior exit ramps shall be enclosed with fire barriers constructed in accordance with Section 706."
- Lined-out text has been deleted.
 - "Elevator lobbies shall have at least one means of egress complying with Chapter 10 ~~and other provisions within this code.~~"

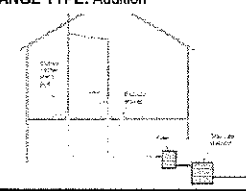
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Part 1 International Plumbing Code, Chapters 1-15

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202 Alternate Onsite Nonpotable Water Definition

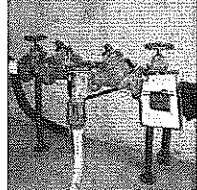
- CHANGE TYPE: Addition



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202 Backflow Preventer Definition

- CHANGE TYPE: Modification
- This definition has been made more specific about what constitutes a backflow preventer: a backflow prevention assembly, a backflow prevention device or other means or methods.

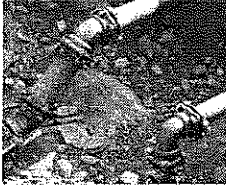


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202 Mechanical Joint Definition

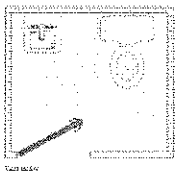
- The definition of a mechanical joint now includes heat-fused joints.



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202 Toilet Facility Definition


- CHANGE TYPE:** Addition
- This definition has been added to clarify that a toilet facility is a room or space that contains not less than one water closet and one lavatory.



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202 Waste Receptor Definition

- CHANGE TYPE:** Addition
- This definition has been added to clarify what is considered a waste receptor.



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202, 410.4 Drinking Fountain, Water Cooler and Water Dispenser Definitions; Substitution for Drinking Fountains

- CHANGE TYPE:** Modification
- These definitions for a drinking fountain, a water dispenser and a water cooler clarify Section 410 on drinking fountain requirements. The water dispenser definition expands the group of devices and apparatus that can be used as substitutions for 50 percent of the required number of drinking fountains.

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202 Grease Interceptor, Definition of Fats, Oils and Greases (FOG) Disposal System

- CHANGE TYPE:** Addition
- Another type of grease interceptor, the Fats, Oils and Greases (FOG) disposal system, has been added to support the revised text in Section 1003.3.4 covering grease interceptors.

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Table 308.5 Mid-Story Pipe Guide

Pipe Size (inches)	Minimum Number of Pipes	Maximum Number of Pipes	Minimum Spacing (feet)	
			Between Pipes	From Wall
1/2	1	1	1	1
3/4	1	1	1	1
1	1	1	1	1
1 1/4	1	1	1	1
1 1/2	1	1	1	1
2	1	1	1	1
2 1/2	1	1	1	1
3	1	1	1	1
3 1/2	1	1	1	1
4	1	1	1	1
4 1/2	1	1	1	1
5	1	1	1	1
6	1	1	1	1
8	1	1	1	1
10	1	1	1	1
12	1	1	1	1
14	1	1	1	1
16	1	1	1	1
18	1	1	1	1
20	1	1	1	1
24	1	1	1	1
30	1	1	1	1
36	1	1	1	1
42	1	1	1	1
48	1	1	1	1
54	1	1	1	1
60	1	1	1	1
72	1	1	1	1
84	1	1	1	1
96	1	1	1	1
108	1	1	1	1
120	1	1	1	1
144	1	1	1	1
168	1	1	1	1
192	1	1	1	1
216	1	1	1	1
240	1	1	1	1
270	1	1	1	1
300	1	1	1	1
360	1	1	1	1
420	1	1	1	1
480	1	1	1	1
540	1	1	1	1
600	1	1	1	1
720	1	1	1	1
840	1	1	1	1
960	1	1	1	1
1080	1	1	1	1
1200	1	1	1	1
1440	1	1	1	1
1680	1	1	1	1
1920	1	1	1	1
2160	1	1	1	1
2400	1	1	1	1
2700	1	1	1	1
3000	1	1	1	1
3600	1	1	1	1
4200	1	1	1	1
4800	1	1	1	1
5400	1	1	1	1
6000	1	1	1	1
7200	1	1	1	1
8400	1	1	1	1
9600	1	1	1	1
10800	1	1	1	1
12000	1	1	1	1
14400	1	1	1	1
16800	1	1	1	1
19200	1	1	1	1
21600	1	1	1	1
24000	1	1	1	1
27000	1	1	1	1
30000	1	1	1	1
36000	1	1	1	1
42000	1	1	1	1
48000	1	1	1	1
54000	1	1	1	1
60000	1	1	1	1
72000	1	1	1	1
84000	1	1	1	1
96000	1	1	1	1
108000	1	1	1	1
120000	1	1	1	1
144000	1	1	1	1
168000	1	1	1	1
192000	1	1	1	1
216000	1	1	1	1
240000	1	1	1	1
270000	1	1	1	1
300000	1	1	1	1
360000	1	1	1	1
420000	1	1	1	1
480000	1	1	1	1
540000	1	1	1	1
600000	1	1	1	1
720000	1	1	1	1
840000	1	1	1	1
960000	1	1	1	1
1080000	1	1	1	1
1200000	1	1	1	1
1440000	1	1	1	1
1680000	1	1	1	1
1920000	1	1	1	1
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2400000	1	1	1	1
2700000	1	1	1	1
3000000	1	1	1	1
3600000	1	1	1	1
4200000	1	1	1	1
4800000	1	1	1	1
5400000	1	1	1	1
6000000	1	1	1	1
7200000	1	1	1	1
8400000	1	1	1	1
9600000	1	1	1	1
10800000	1	1	1	1
12000000	1	1	1	1
14400000	1	1	1	1
16800000	1	1	1	1
19200000	1	1	1	1
21600000	1	1	1	1
24000000	1	1	1	1
27000000	1	1	1	1
30000000	1	1	1	1
36000000	1	1	1	1
42000000	1	1	1	1
48000000	1	1	1	1
54000000	1	1	1	1
60000000	1	1	1	1
72000000	1	1	1	1
84000000	1	1	1	1
96000000	1	1	1	1
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192000000	1	1	1	1
216000000	1	1	1	1
240000000	1	1	1	1
270000000	1	1	1	1
300000000	1	1	1	1
360000000	1	1	1	1
420000000	1	1	1	1
480000000	1	1	1	1
540000000	1	1	1	1
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1680000000	1	1	1	1
1920000000	1	1	1	1
2160000000	1	1	1	1
2400000000	1	1	1	1
2700000000	1	1	1	1
3000000000	1	1	1	1
3600000000	1	1	1	1
4200000000	1	1	1	1
4800000000	1	1	1	1
5400000000	1	1	1	1
6000000000	1	1	1	1
7200000000	1	1	1	1
8400000000	1	1	1	1
9600000000	1	1	1	1
10800000000	1	1	1	1
12000000000	1	1	1	1
14400000000	1	1	1	1
16800000000	1	1	1	1
19200000000	1	1	1	1
21600000000	1	1	1	1
24000000000	1	1	1	1
27000000000	1	1	1	1
30000000000	1	1	1	1
36000000000	1	1	1	1
42000000000	1	1	1	1
48000000000	1	1	1	1
54000000000	1	1	1	1
60000000000	1	1	1	1
72000000000	1	1	1	1
84000000000	1	1	1	1
96000000000	1	1	1	1
108000000000	1	1	1	1
120000000000	1	1	1	1
144000000000	1	1	1	1
168000000000	1	1	1	1
192000000000	1	1	1	1
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270000000000	1	1	1	1
300000000000	1	1	1	1
360000000000	1	1	1	1
420000000000	1	1	1	1
480000000000	1	1	1	1
540000000000	1	1	1	1
600000000000	1	1	1	1
720000000000	1	1	1	1
840000000000	1	1	1	1
960000000000	1	1	1	1
1080000000000	1	1	1	1
1200000000000	1	1	1	1
1440000000000	1	1	1	1
1680000000000	1	1	1	1
1920000000000	1	1	1	1
2160000000000	1	1	1	1
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3000000000000	1	1	1	1
3600000000000	1	1	1	1
4200000000000	1	1	1	1
4800000000000	1	1	1	1
5400000000000	1	1	1	1
6000000000000	1	1	1	1
7200000000000	1	1	1	1
8400000000000	1	1	1	1
9600000000000	1	1	1	1
10800000000000	1	1	1	1
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14400000000000	1	1	1	1
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27000000000000	1	1	1	1
30000000000000	1	1	1	1
36000000000000	1	1	1	1
42000000000000	1	1	1	1
48000000000000	1	1	1	1
54000000000000	1	1	1	1
60000000000000	1	1	1	1
72000000000000	1	1	1	1
84000000000000	1	1	1	1
96000000000000	1	1	1	1
10800000				

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406.1, 409.2 Backflow Protection for Clothes Washing and Dishwashing Machines

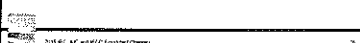
- CHANGE TYPE: Modification
- The 2012 IPC required that an air gap within the appliance or an external backflow preventer in the appliance connections be provided. This modification adds the standards designations with which air gaps must comply, so that the enforcement can be accomplished by the inspector identifying those standard numbers either on the machines or in the literature for the machines. Otherwise, verification would have to be by physical inspection of the machines, which might be impossible to perform.



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413.1 Food Waste Disposer Approval

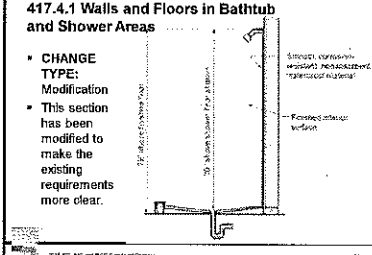
- CHANGE TYPE: Modification
- Terminology for food waste grinders has been changed to a more industry-accepted term. For electrical safety, domestic food waste disposers must be listed and labeled to a standard.



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417.4.1 Walls and Floors in Bathtub and Shower Areas

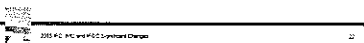
- CHANGE TYPE: Modification
- This section has been modified to make the existing requirements more clear.



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420.1 Water Closet Approval

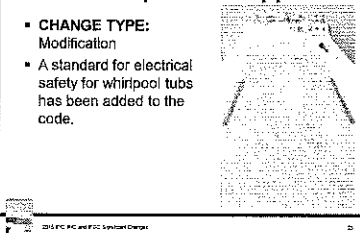
- CHANGE TYPE: Modification
- Dual-flush water closets have become popular in recent years. The code now has a standard that covers those types of water closets.



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421.1 Whirlpool Tub Approval

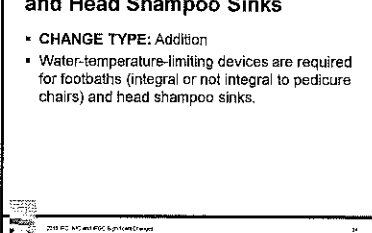
- CHANGE TYPE: Modification
- A standard for electrical safety for whirlpool tubs has been added to the code.



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423.3 Footbaths, Pedicure Baths and Head Shampoo Sinks

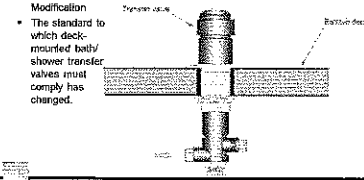
- CHANGE TYPE: Addition
- Water-temperature-limiting devices are required for footbaths (integral or not integral to pedicure chairs) and head shampoo sinks.



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424.8 Deck-Mounted Bath/Shower Transfer Valves

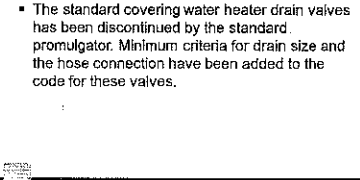
- CHANGE TYPE: Modification
- The standard to which deck-mounted bath/shower transfer valves must comply has changed.



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501.3 Water Heater Drain Valves

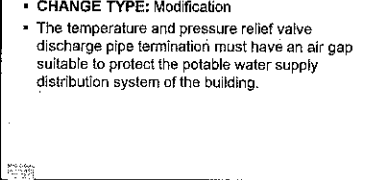
- CHANGE TYPE: Modification
- The standard covering water heater drain valves has been discontinued by the standard promulgator. Minimum criteria for drain size and the hose connection have been added to the code for these valves.



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504.6 Temperature and Pressure Relief Discharge Piping

- CHANGE TYPE: Modification
- The temperature and pressure relief valve discharge pipe termination must have an air gap suitable to protect the potable water supply distribution system of the building.




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504.7.2 Water Heater Pan Drain Line

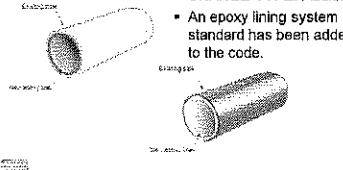
- CHANGE TYPE: Modification
- In a replacement water heater installation situation, there might not be a nearby drain point for a required pan for the water heater. This code modification allows a pan to not have a drain line if one is not present.



2015 IPC, IMC and IFGC Significant Changes

601.5 Rehabilitation of Piping Systems by Internal Lining

- CHANGE TYPE: Addition
- An epoxy lining system standard has been added to the code.



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605.2.1 Lead Content of Components Conveying Drinking Water

- CHANGE TYPE: Addition
- The code now has a more stringent limitation for lead content in pipe, pipe fittings, joints, valves, faucets and fixture fittings that convey water used for drinking and cooking.

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Tables 605.3 and 605.4, Section 605.16 CPVC/AL/CPVC Water Service and Water Distribution Piping

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Tables 605.3, 702.2, 702.3, 702.4, 1102.4, 1102.5 Asbestos Cement Pipe

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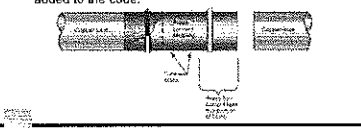
Tables 605.3, 702.2, 702.3, 702.4, 1102.4, 1102.5 Asbestos Cement Pipe

- CHANGE TYPE: Modification
- References to asbestos cement pipe and applicable referenced standards have been removed from the code.

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Table 605.5, Sections 605.14.3, 605.14.5, 605.18.3, 605.22.2, 605.23.3 Groove and Shouldered Mechanical Joints and Press-Connect Fittings

- CHANGE TYPE: Modification
- Two standards for groove and shouldered mechanical joints and a press-connect fitting standard have been added to the code.



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605.7, Table 605.7 Valve Compliance to Standards

- CHANGE TYPE: Modification
- All types of valves that supply drinking water must now comply with NSF 61. Standards for numerous types of valves have been added to the code.

2015 IPC, IMC and IFGC Significant Changes

607.2.1 Hot Water Temperature Maintenance System Controls

- CHANGE TYPE: Modification
- Changes in the commercial portion of the International Energy Conservation Code (IECC) caused changes in this IECC-controlled section of the IPC. This section requires temperature maintenance systems (for maintaining hot water temperature near plumbing fixtures) to be automatically turned off when there is not a demand for hot water. The code change also makes it clear that the Section 607.2.1 and its subsection 607.2.1.1 do not apply to Group R2, R3 and R4 occupancies that are 3 stories or less in height above grade, because those occupancies are covered by the residential portion of the IECC.

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607.2.1 Hot Water Temperature Maintenance System Controls

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607.3 Hot Water Thermal Expansion Pressure Control

- CHANGE TYPE: Modification
- The available method to control closed-system pressure increases caused by the heating of water has been limited to the use of thermal expansion tanks only.

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608.8, 608.8.1, 608.8.2 Identification of Nonpotable Water

- CHANGE TYPE: Modification
- Fixtures such as water closets and urinals that utilize nonpotable water must be identified with words and a symbol indicating that nonpotable water is being used. The color purple is established for identifying distribution piping conveying nonpotable water.

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702.5 Temperature Rating of Drainage Piping

- CHANGE TYPE: Addition
- Wastewater having a temperature greater than 140°F (60°C) does not need to be cooled before it enters the drainage system if the drainage system piping is rated for the higher temperature.

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703.6 Connection to Combined Sanitary and Storm Public Sewer

- CHANGE TYPE: Addition
- Building sanitary sewers and building storm sewers must be independent even though connecting to a combined sanitary/storm public sewer.

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705.11.2 Exception for Solvent Cementing PVC Piping 4 Inches and Smaller

- CHANGE TYPE: Modification
- The application of a primer to drain, waste and vent PVC pipe and fittings prior to solvent cementing is not required for 4-inch pipe size and smaller.

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708 Cleanouts for Drainage and Waste Systems

- CHANGE TYPE: Modification
- The section on cleanouts has been completely reorganized and reworded for clarity. Brass cleanout plugs are permitted for metallic piping only. Where located at a finished wall, the cleanout must be within 1½ inches of the finished surface. A cleanout is no longer required at the base of each waste or soil stack.

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715.1 Exception for Backwater Valve Installations

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716 Vacuum Drainage Systems

- CHANGE TYPE: Addition
- Vacuum drainage system provisions (as opposed to gravity drainage system provisions) have been moved from the appendix to the code.

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717 Replacement of Sewers by Pipe-Bursting Method

- CHANGE TYPE: Addition
- Replacement of building sewers by the pipe-bursting method has been used for many decades and is useful especially where excavation of the existing sewer is difficult and costly because of parking lots and other items on the ground surface that would need to be removed and replaced.

802.1, 802.1.1, 802.1.8 Food-Handling Equipment Indirect Connection

- CHANGE TYPE: Modification
- The section has been clarified to indicate that Section 802.1 and its subsections do not apply to fixtures and equipment in dwelling units. The section was modified to indicate the types of food-handling equipment that Sections 802.1 through 802.1.8 cover.

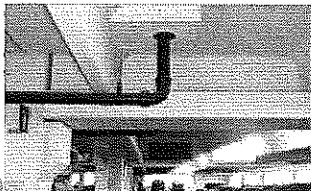
802.3 Waste Receptors, Hub Drains and Standpipes

- CHANGE TYPE: Modification
- The code has clarified that standpipes are waste receptors. Some limitations for where waste receptors could not be located have been removed. Hub drains now require a strainer.

903.1, 903.2 Vent Terminations to Outdoors

- CHANGE TYPE: Modification
- This change clarifies vent terminations to outdoors where roofs are used for purposes other than weather protection and where very cold weather conditions occur.

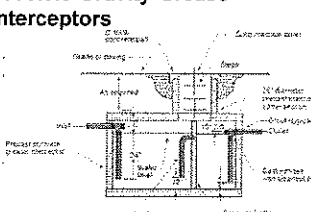
1002.1 Exception for Traps for Parking Garage Floor Drains



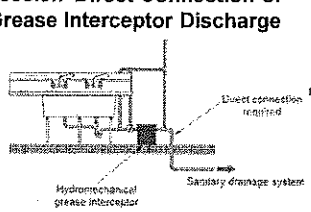
1002.4, 1002.4.1 Trap Seal Protection against Evaporation

- CHANGE TYPE: Modification
- Trap seal protection against evaporation can now be accomplished in a variety of ways.

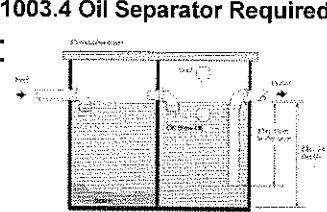
1003.3.6 Gravity Grease Interceptors



1003.3.7 Direct Connection of Grease Interceptor Discharge



1003.4 Oil Separator Required



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1003.6 Clothes Washer Discharge Interceptor

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1003.9 Venting of Interceptors and Separators

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1105.2, 1106.2 Sizing of Roof Drains, Vertical and Horizontal Storm Drain Piping

- CHANGE TYPE: Modification
- Testing of many different sizes and configurations of roof drains from a variety of manufacturers indicated that the roof drain assembly is the limiting factor in the design of storm drain systems. Storm drainage piping must now be sized based on the published roof drain flow rate and anticipated ponding at the roof drain.

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1106.3, 1106.6 Sizing of Gutters and Leaders

- CHANGE TYPE: Modification
- The 2012 Table 1106.2(2), which covered the vertical leader sizing requirements, has been replaced by the simplified Table 1106.3. The 2012 Table 1106.6, which covered horizontal gutter sizing requirements, has been replaced by the simplified Table 1106.6.
 - These sizing methods correspond with American Society of Plumbing Engineers' (ASPE) sizing tables.

2015 IPC, IMC and IFGC Significant Changes 33

Discussion Activity

- Of all the changes to the plumbing code, covered thus far, which would be most important for you in your jurisdiction.

2015 IPC, IMC and IFGC Significant Changes 34

Part 2

International Mechanical Code, Chapters 1-15

35

304.11 Fall-Arresting Restraint Systems

2015 IPC, IMC and IFGC Significant Changes 36

306.1 Access

- CHANGE TYPE: Modification
- More than just appliances are now required to have access for inspection, service, replacement and repair.

2015 IPC, IMC and IFGC Significant Changes 37

307.2.5 Condensate Drain Line Maintenance

- CHANGE TYPE: Addition
- The code requires that condensate drains be configured or equipped to allow maintenance of the drain without the drain pipe or tubing being cut.

2015 IPC, IMC and IFGC Significant Changes 38

2015 IPC, IMC and IFGC Significant Changes

307.3 Condensate Pumps in Uninhabitable Spaces

The diagram illustrates a mechanical system for a building. It shows a furnace and boiler connected to a condensate pump. The pump is connected to a drain pipe that leads to a 'Sewer' and a 'Storm' pipe. A 'Normal Ventilation (NVD) Exhaust' is shown on the left, and a 'Sewer Vent' is on the right. A 'Sewer Exchange Pump' is also indicated. The system is labeled with '307.3 Condensate Pumps in Uninhabitable Spaces'.

2015 IPC, IMC and IFGC Significant Changes 41

401.2, 407.1, Table 403.3.1.1 Ventilation Required

- CHANGE TYPE: Modification
- Occupancies including hospitals, nursing homes, detoxification facilities and ambulatory care facilities must be ventilated in accordance with a new standard, ASHRAE 170.

2015 IPC, IMC and IFGC Significant Changes 42

403.2.1, Table 403.3.1.1 Recirculation of Air

- CHANGE TYPE: Addition
- The new text introduces the basic requirements of ASHRAE 62.2 related to mechanical ventilation for Group R-2, R-3 and R-4 buildings three stories or less in height.

Occupancy Category	Minimum Outdoor Air Flow Rate (CFM/person)	Minimum Outdoor Air Flow Rate (CFM/area)	Minimum Outdoor Air Flow Rate (CFM/area)
Classrooms	15	0.06	0.06
Offices	15	0.06	0.06
Stores	15	0.06	0.06
Restaurants	15	0.06	0.06
Hotels	15	0.06	0.06
Assembly	15	0.06	0.06
Amusement	15	0.06	0.06
Public	15	0.06	0.06
Other	15	0.06	0.06

2015 IPC, IMC and IFGC Significant Changes 43

403.3 Outdoor Air and Local Exhaust Airflow Rates

- CHANGE TYPE: Addition
- The new text introduces the basic requirements of ASHRAE 62.2 related to mechanical ventilation for Group R-2, R-3 and R-4 buildings three stories or less in height.

2015 IPC, IMC and IFGC Significant Changes 44

Table 403.3.1.1 Manicure and Pedicure Station Exhaust Rate

- CHANGE TYPE: Modification
- The revised note h to Table 403.3.1.1 recognizes new Section 502.20 for the design of manicure and pedicure station exhaust systems and also specifies the applicability to both. Note h addresses the relationship between the source capture system exhaust-flow rate and the exhaust-flow rate specified within the table for nail salons.

2015 IPC, IMC and IFGC Significant Changes 45

404.1 Intermittent Operation of Mechanical Ventilation Systems for Enclosed Parking Garages

- CHANGE TYPE: Modification
- For enclosed parking garages, the ventilation system must operate continuously or must be automatically controlled for intermittent operation utilizing both carbon monoxide and nitrogen dioxide detectors. The option to detect vehicle operation or occupant presence has been deleted.

2015 IPC, IMC and IFGC Significant Changes 46

501.3 Mechanical Exhaust System Discharge

- CHANGE TYPE: Modification
- The adjective "public" was added to "nuisance" to make this requirement more enforceable. The new exception correlates with Section 505.1, exception 1.

2015 IPC, IMC and IFGC Significant Changes 47

502.20 Manicure and Pedicure Station Exhaust System

- CHANGE TYPE: Addition
- New text specifically covers manicure and pedicure stations and states exhaust requirements in addition to those in Table 403.3.1.1. In previous editions of the code, pedicure stations were not specifically called out, as the text in Table 403.3.1.1 referred only to nail salons generically.

2015 IPC, IMC and IFGC Significant Changes 48

504.5, 504.8.4.3 Dryer Exhaust Duct Power Ventilators

- CHANGE TYPE: Addition
- New text recognizes the use of dryer exhaust duct power ventilators (DEDPVs) for installations that exceed the allowable exhaust duct length for clothes dryers.

2015 IPC, IMC and IFGC Significant Changes 49

2015 IPC, IMC and IFGC Significant Changes

504.8.2 Dryer Exhaust Duct Installation

- **CHANGE TYPE:** Modification
- Instead of prohibiting all duct fasteners such as screws and rivets, the code now limits the penetration of fasteners where installed.

2015 IPC, IMC and IFGC Significant Changes 11

505.1, 505.4 Domestic Range Hoods

- **CHANGE TYPE:** Modification
- The scope of domestic kitchen hoods coverage has been expanded to beyond dwellings units. Domestic hoods are mandated in new Section 505.4.

2015 IPC, IMC and IFGC Significant Changes 12

505.3 Domestic Kitchen Exhaust Systems in Multistory Buildings

- **CHANGE TYPE:** Addition
- New text regulates the design and construction of exhaust shafts that serve domestic kitchen exhaust systems in multistory buildings.

2015 IPC, IMC and IFGC Significant Changes 13

506.3.7.1 Grease Duct Reservoirs

- **CHANGE TYPE:** Modification
- A grease duct reservoir must now be the full width of the duct in all cases, and the reservoir must be provided with a drain opening.

2015 IPC, IMC and IFGC Significant Changes 14

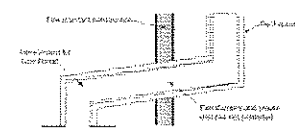
506.3.8 Grease Duct Cleanouts and Openings

- **CHANGE TYPE:** Modification
- The cleanout spacing provisions have been added to be consistent with Section 506.3.9 for horizontal ducts.

2015 IPC, IMC and IFGC Significant Changes 15

506.3.11 Grease Duct Enclosures

- **CHANGE TYPE:** Modification
- The code specifically prohibits the installation of fire and smoke dampers in grease ducts.



2015 IPC, IMC and IFGC Significant Changes 16

506.5.1.2 In-Line Fan Location in Exhaust Ducts Serving Commercial Kitchen Hoods

- **CHANGE TYPE:** Addition
- New text addresses the enclosure requirements for in-line exhaust fans located in kitchen hood exhaust ducts, in effect treating them the same as ducts.

2015 IPC, IMC and IFGC Significant Changes 19

506.5.3 Hinged Up-Blast Fans for Type I Hoods

- **CHANGE TYPE:** Modification
- The code now requires that hinged exhaust fans be provided with a means to limit the travel of the fan assembly to prevent injury to personnel and damage to the building and fan.

2015 IPC, IMC and IFGC Significant Changes 20

507.1 Type I Hood Installation

- **CHANGE TYPE:** Modification
- A requirement has been added for Type I hood installations to comply with all aspects of a Type I exhaust system, whether the Type I hood is required by the code or installed by choice.

2015 IPC, IMC and IFGC Significant Changes 21

2015 IPC, IMC and IFGC Significant Changes

507.1.1 Commercial Kitchen Exhaust Hood System Operation

- **CHANGE TYPE:** Modification
- The requirement for automatic activation of the exhaust system has been revised to provide the intended performance requirements and to clarify that an interlock arrangement is an alternative to automatic hood operation.

2015 IBC, IMC and IFGC Significant Changes

507.1.1.1 Heat Sensors for Multiple Commercial Kitchen Hoods

- **CHANGE TYPE:** Addition
- New text prohibits the use of a single sensor mounted in the common ductwork for commercial kitchen hood systems having multiple hoods manifolded together.

2015 IBC, IMC and IFGC Significant Changes

507.2.8 Type I Hood Grease Filters

- **CHANGE TYPE:** Modification
- The code now recognizes the use of disposable grease filters.

2015 IBC, IMC and IFGC Significant Changes

508.1.2 Air Balance for Commercial Kitchen Ventilation Systems

- **CHANGE TYPE:** Addition
- This new section requires that an air balance schedule be submitted with the design plans for commercial kitchen ventilation systems.

2015 IBC, IMC and IFGC Significant Changes

510.4, 510.5 Hazardous Exhaust Systems

- **CHANGE TYPE:** Modification
- Text in previous editions of the code that alluded to the recirculation of hazardous exhaust has been deleted. The previous exception was too broad in application, so the entire section has been formatted to clarify the scope of the exception. Previous Item 7 has been revised to prescribe the method for maintaining continuous negative pressure.

2015 IBC, IMC and IFGC Significant Changes

510.7.1.1 Hazardous Exhaust Duct Penetrations of Shafts

- **CHANGE TYPE:** Addition
- A pointer to the *International Building Code (IBC)* provisions for hazardous exhaust duct penetrations of shafts has been added.

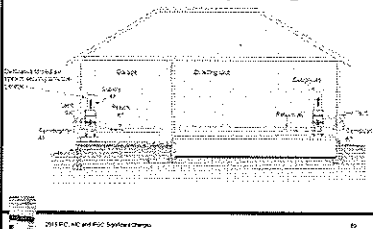
2015 IBC, IMC and IFGC Significant Changes

514.2 Energy Recovery Ventilation Systems

- **CHANGE TYPE:** Modification
- Energy recovery ventilation (ERV) systems of the coil-type heat exchanger (run-around coils) are no longer limited in their application.

2015 IBC, IMC and IFGC Significant Changes

601.5 Return Air Openings



2015 IBC, IMC and IFGC Significant Changes

602.1 Plenums Limited to One Fire Area

- **CHANGE TYPE:** Clarification
- The revision clarifies that a plenum in a fire area cannot be connected to a plenum in an adjoining fire area by means of transfer ducts or openings, regardless of the presence of fire dampers.

2015 IBC, IMC and IFGC Significant Changes

2015 IPC, IMC and IFGC Significant Changes

602.2 Plenum Construction

Concrete, Steel Joist, Suspended Piping, Fire-resistant materials in accordance with the IRC or Table 602.2.1.5 and smoke-impervious GFI, Rainwater, Exhaust (clean space)

2015 IRC, IMC and IFGC Significant Changes 31

602.2.1.5 Discrete Plumbing and Mechanical Products in Plenums

- CHANGE TYPE: Addition
- The code now addresses those products that in previous editions of the code did not fall under the category of piping, wiring, ductwork, tubing, insulation and other continuous large surface area materials installed in plenums. A definition has been added to describe what is meant by discrete products.

2015 IRC, IMC and IFGC Significant Changes 32

Table 603.4 Duct Construction Minimum Sheet Metal Thickness for Single Dwelling Units

- CHANGE TYPE: Modification
- The table for duct gages for dwelling units has been replaced with thicknesses consistent with the SMACNA sheet metal construction standard.

2015 IRC, IMC and IFGC Significant Changes 33

603.9 Duct Joints, Seams and Connections

- CHANGE TYPE: Modification
- Duct sealant tapes used on sheet-metal ducts must be listed to UL 181B as is required for sealing tapes and mastics for flexible ducts. Snap-lock and button-lock seams are no longer exempt from the sealing requirements.

2015 IRC, IMC and IFGC Significant Changes 34

701.2 Dampened Openings

- CHANGE TYPE: Addition
- Where dampers are installed on combustion air openings, the code now requires an interlock with the appliance to prevent operation of the appliance when the damper is closed. Manual dampers are prohibited on combustion air openings.

2015 IRC, IMC and IFGC Significant Changes 35

802.9 Door Clearance to Vent Terminals

- CHANGE TYPE: Addition
- To prevent damage to the vent, door or surrounding materials, doors are not permitted to swing within 12 inches of an appliance vent terminal.

2015 IRC, IMC and IFGC Significant Changes 36

903.4 Gasketed Fireplace Doors

- CHANGE TYPE: Addition
- Gasketed (sealed) doors are prohibited on factory-built fireplaces except where the fireplaces are listed for use with such doors.

2015 IRC, IMC and IFGC Significant Changes 37

1102.3 Refrigerant Access Port Protection

- CHANGE TYPE: Addition
- The requirement for making refrigerant access ports tamper resistant has been expanded to apply to existing systems when service to such systems involves adding or removing refrigerant.

2015 IRC, IMC and IFGC Significant Changes 38

Always include activity

- You can provide Test Your Knowledge review questions or another activity at the end of topics and the end of the training.
- This will help the learners to remember the content presented.

2015 IRC, IMC and IFGC Significant Changes 39

2015 IPC, IMC and IFGC Significant Changes

Discussion Activity

- Of all the changes to the mechanical code, covered thus far, which would be most important for you in your jurisdiction.

2015 IFGC and IFCC Significant Changes 101

Part 3
**International Fuel Gas Code,
 Chapters 1-8**

2015 IFGC and IFCC Significant Changes 102

304.1 Combustion Air for Appliances with Power Burners

2015 IFGC and IFCC Significant Changes 103

307.6 Condensate Pumps

- CHANGE TYPE:** Addition
- Condensate pumps located in uninhabitable spaces and used with condensing fuel-fired appliances and cooling equipment must be connected to the appliance or equipment served by the pump to prevent water damage in the event of pump failure.

2015 IFGC and IFCC Significant Changes 104

310.1.1 Electrical Bonding of Corrugated Stainless Steel Tubing

- CHANGE TYPE:** Addition
- Text has been added to address the allowable length of the bonding jumper wire and the methods of making the bonding connections.

2015 IFGC and IFCC Significant Changes 105

402.2 Maximum Gas Demand for Pipe Sizing

- CHANGE TYPE:** Modification
- Table 402.2 and the reference to it have been deleted as a result of the code requiring the actual maximum input rating of the appliances to be known and used for sizing purposes.

2015 IFGC and IFCC Significant Changes 106

403.6 Plastic Pipe, Tubing and Fittings

2015 IFGC and IFCC Significant Changes 107

403.10.4 Drilled and Tapped Metallic Pipe Fittings

- CHANGE TYPE:** Modification
- The code now expressly prohibits the practice of drilling and tapping pipe fittings in the field except where performed in accordance with five criteria that strictly limit such practice.

2015 IFGC and IFCC Significant Changes 108

404.5 Fittings in Concealed Locations

- CHANGE TYPE:** Clarification
- This section retains its basic intent, while being completely reorganized to clarify the correct application. Threaded elbows, tees and couplings are now specifically approved for concealed locations as the code always intended. The code now provides the applicable referenced standards for fittings that are listed for concealed locations.

2015 IFGC and IFCC Significant Changes 109

2015 IPC, IMC and IFGC Significant Changes

404.7 Protection of Concealed Piping against Physical Damage

- CHANGE TYPE: Modification
- The section on protection of piping has been completely rewritten to address more than just bored holes and notches in structural members. It now addresses piping parallel to framing members and piping within framing members. The new text requires that the protection extend well beyond the edge of members that are bored or notched.

404.18 Pipe Cleaning

- CHANGE TYPE: Addition
- The code now specifically prohibits the practice of using fuel gas as a medium for flushing foreign matter and debris from fuel-supply piping.

410.2 Medium-Pressure Regulators

411.1 Connecting Portable Outdoor Appliances

- CHANGE TYPE: Modification
- Where portable gas appliances are used outdoors, such as gas grills and patio heaters, the options for connecting to the gas distribution system are practically limited to gas hoses designed for the purpose. Such hoses must comply with ANSI Z21.54.

411.1.1 Connectors for Commercial Cooking Appliances

- CHANGE TYPE: Modification
- Specific installation requirements have been added for the safe installation of ANSI Z21.69 connectors for commercial cooking appliances. The options to connect the cooking appliance with semirigid tubing or rigid pipe have been removed.

502.7.1 Door Clearance to Vent Terminals

- CHANGE TYPE: Addition
- Coverage has been added to address the condition where a door could impact or come too close to an appliance vent terminal.

503.4.1 Plastic Piping for Appliance Vents

- CHANGE TYPE: Modification
- The approval of plastic pipe for venting appliances is no longer a responsibility of the code official; instead, that responsibility rests with the appliance manufacturer and the appliance listing agency.

503.6.9.3 Sizing of Plastic Pipe Vents

- CHANGE TYPE: Modification
- The code previously spoke only of vents that are defined as listed and labeled factory-made products. The code is no longer silent on the sizing of vents that do not fall under the definition of "vent."


503.8 Venting System Termination Location

- CHANGE TYPE: Modification
- Text has been added to address the location of sidewall vent terminals with respect to adjoining buildings. Previous editions of the code were silent on this subject, and the appliance manufacturer's instructions are typically silent as well.

2015 IPC, IMC and IFGC Significant Changes

614.5 Dryer Exhaust Duct Power Ventilators


- **CHANGE TYPE:** Addition
- New text recognizes the use of dryer exhaust duct power ventilators (DEDPVs) for installations that exceed the allowable exhaust duct length for clothes dryers.

 2015 IPC, IMC and IFGC Significant Changes

114

623.2 Prohibited Location of Commercial Cooking Appliances


- **CHANGE TYPE:** Modification
- The code has been clarified so that it would not inadvertently prohibit the installation of cooking appliances that are listed as both commercial and domestic appliances.

 2015 IPC, IMC and IFGC Significant Changes

115

Discussion Activity


- Of all the changes to the fuel gas code, covered thus far, which would be most important for you in your jurisdiction.

 2015 IPC, IMC and IFGC Significant Changes

116

Final Reflection

- This slide will help the learner to reflect on the day and what they will take back to the job and apply.

 2015 IPC, IMC and IFGC Significant Changes

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