



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**  
**Amendment to 2024 International Plumbing Code (IPC)**  
**Section 704.1**

**Submitted by:** International Plumbing Code Committee

**704.1 Slope of horizontal drainage piping.**

Horizontal drainage piping shall be installed in uniform alignment at uniform slopes. The slope of a horizontal drainage pipe shall be not less than that indicated in Table 704.1 except that where the drainage piping is upstream of a grease interceptor, the slope of the piping shall be not less than 1/4 inch per foot (2-percent slope).

**TABLE 704.1**  
**SLOPE OF HORIZONTAL DRAINAGE PIPE**

SIZE (inches)	MINIMUM SLOPE (inch per foot)
2½ or less	¼ <sup>a</sup>
3 to 6	⅛ <sup>a</sup>
8 or larger	1/16 <sup>a</sup>

For SI: 1 inch = 25.4 mm, 1 inch per foot = 83.33 mm/m.

a. Slopes for piping draining to a grease interceptor shall comply with Section 704.1.

**Exception:** The Authority Having Jurisdiction may approve a lesser slope for building sewers in lieu of a sewage ejector or pumping station when a registered engineer or architect certifies the building sewer design and its installation, and when the building owner agrees in writing under notary to accept the lesser slope. The minimum slope permitted shall be calculated from Manning’s Formula using a coefficient roughness of 0.013 and a sewage velocity of 2 feet per second. See chart below for calculated pipe slope and flow. (Arizona Administrative Code, R18-9-E301 Paragraph D, 2.e).

**Manning's Formula Solution - Friction Factor = 013**

Pipe Size (inches)	Slope (%)	Velocity (ft/s)	Full Flow Rate (cfs)	Full Flow Rate (GPM)	Full Flow Rate (GPD)	1/2 Full Flow Rate (GPM)
4	0.85	2.01	0.18	79	113,410	39
6	0.50	2.02	0.40	178	256,451	89
8	0.33	2.00	0.70	313	450,954	157
10	0.25	2.01	1.10	492	708,085	246
12	0.20	2.03	1.59	715	1,029,85	358
15	0.15	2.04	2.50	1,123	1,617,13	561
16	0.15	2.13	2.97	1,334	1,920,75	667

A low slope sewer certificate of compliance is required to be provided to the code official for designs and installations that utilize this exception.

**Justification:** This amendment adds the option of using a lesser slope for building sewers based on engineering calculations. The owner will be required to sign under notary that they have accepted the lesser slope. The registrant shall certify the design and final installation through special inspection.

**Cost Impact:** This amendment will reduce the costs associated with the previous approval process for low slope sewer installations.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

**ACTION TAKEN:**

**2024 Code Committee**      Date: 01/15/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB)**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**Transportation, Infrastructure and Planning Subcommittee**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**City Council Action**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC)

#### Section 101.1

**Submitted by:** Uniform Plumbing Code Committee

#### CHAPTER 1 ADMINISTRATION

##### Notes:

1. For reserved sections herein, refer to the amendments and requirements in Chapter 1 of the International Building Code for these code requirements.
2. For sections that remain unchanged from base code, the term “see this section of the 2024 UPC” shall refer to the unchanged base code.

##### **101.1 Title**

This document shall be known as the “Uniform Plumbing Code,” as amended by the City of Phoenix. may be cited as such, and will be referred to herein as “this code.” hereinafter referred to as “this code.” These regulations are one document of the overall Phoenix Building Construction Code as defined by the adopting ordinance.

**101.2 Scope.** - see this section of the 2024 UPC

**101.3 Purpose.** - see this section of the 2024 UPC

**101.4 Unconstitutional.** - Reserved.

**101.5 Validity.** - Reserved.

**102.1 Conflicts Between Codes.** - Reserved.

**102.2 Existing Installations.** - see this section of the 2024 UPC

**102.3 Maintenance.** - see this section of the 2024 UPC

**102.4 Additions, Alterations, Renovations, or Repairs.** - see this section of the 2024 UPC

**102.4.1 Building Sewers and Drains.** - see this section of the 2024 UPC

**102.4.2 Openings.** - see this section of the 2024 UPC

**102.5 Health and Safety** - see this section of the 2024 UPC

**102.6 Changes in Building Occupancy.** - see this section of the 2024 UPC

**102.7 Moved Structures.** - see this section of the 2024 UPC

**102.8 Appendices.** - see this section of the 2024 UPC

**103.0 DUTIES AND POWERS OF THE AUTHORITY HAVING JURISDICTION.** – Reserved.

**104.0 PERMITS.** – Reserved.

**105.0 INSPECTIONS AND TESTING.** – Reserved.

**106.0 VIOLATIONS AND PENALTIES.** – Reserved.

**107.0 BOARD OF APPEALS.** – Reserved.

**Justification:**

All the adopted and amended building code documents taken together are known as the Phoenix Building Construction Code. Each code document is a separate document of the Phoenix Building Construction Code. This document is the Uniform Plumbing Code as Amended by the City of Phoenix. This document is intended to apply where a code or referenced standard identifies the Uniform Plumbing Code as being applicable.

The reserved provisions are contained in the Phoenix Building Construction Code – Administrative Provisions (Chapter 1 of the International Building Code).

**Cost Impact:** No cost impact.

**Approved in previous 2018 Code Adoption process:**       YES       NO

**ACTION TAKEN:**

**2024 Code Committee**      Date: 01/28/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB)**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**Transportation, Infrastructure and Planning Subcommittee**      Date:  
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**City Council Action**      Date:  
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# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC)

#### Section 209.0

**Submitted by:** Uniform Plumbing Code Committee

### CHAPTER 2 DEFINITIONS

**209.0 Gravity Grease Interceptor.** A plumbing appurtenance or appliance that is installed in a sanitary drainage system to intercept nonpetroleum fats, oils and greases (FOG) from a wastewater discharge and is identified by volume, ~~30~~ 12 or 17-minute retention time, baffle(s), not less than two compartments, a total volume of not less than ~~300~~ 500 gallons (4435 1895 L), and gravity separation. [These interceptors comply with the requirements of Chapter 10 or are designed by a registered design professional and approved by the Authority Having Jurisdiction.] Gravity grease interceptors ~~are generally~~ shall be installed outside unless otherwise approved by the Authority Having Jurisdiction.

**Justification:** The larger interceptor has two man-ways and two compartments which makes it easier for the user to clean and maintain the device. The 12 and 17-minute retention time is currently used to size interceptors in the City of Phoenix Water Department's Office of Environmental Programs and was developed based on feedback from three public forums held in 1997 to address sizing of commercial grease interceptors. Gravity interceptors are generally installed outside to prevent sewer gases and odors from entering the building.

**Cost Impact:** Minimal cost impact. The cost impact to install a 500-gallon interceptor versus a 300-gallon interceptor is minimal. This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

### ACTION TAKEN:

**2024 Code Committee**      Date: 12/12/2024  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

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**Transportation, Infrastructure and Planning Subcommittee**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**City Council Action**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Section 209.0 (GRD)

**Submitted by:** Uniform Plumbing Code Committee

#### CHAPTER 2 DEFINITIONS

**209.0 Grease Removal Device (GRD).** A hydromechanical grease interceptor that automatically, mechanically removes non-petroleum fats, oils and grease (FOG) from the interceptor, the control of which are either automatic or manually initiated. These devices must be able to perform as a gravity interceptor if mechanical or electrical power is lost and be able to provide continued separation.

**Justification:** Grease removal devices rely on moving parts and electricity to separate grease from the waste stream; therefore, if moving parts break down or electrical power is lost the device will still be able to operate as a passive device and prevent grease from entering the sewer system.

\*\*2012 DAB Technical asked for the last sentence to be reworked and accepted as modified.

**Cost Impact:** Possibly increased due to increased performance requirements.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 12/12/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
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# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC)

#### Section 225.0

**Submitted by:** Uniform Plumbing Code Committee

### CHAPTER 2 DEFINITIONS

#### 225.0 Add new definitions as follows:

**Water Dispenser.** A plumbing fixture that is manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle. Such fixture is connected to the potable water distribution system of the premises. This definition also includes a freestanding apparatus for the same purpose that is not connected to the potable water distribution system and that is supplied with potable water from a container, bottle or reservoir.

**Water Cooler.** A drinking fountain that incorporates a means of reducing the temperature of the water supplied to it from the potable water distribution system.

**Justification:** There is often confusion regarding what is or is not a water cooler. Currently the code does not define any of the terms. In reality, drinking fountains are drinking fountains and everything else is some form of a water dispenser. The code does not require cooled water. The code can be simplified in Section 415.2 by referring only to drinking fountains or their alternative, water dispensers. The new definitions establish that a drinking fountain and a water dispenser that is connected to the potable water supply system are both plumbing fixtures by definition and a bottled water dispenser is not a plumbing fixture by definition.

**Cost Impact:** No cost impact. This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

**Approved in previous 2018 Code Adoption process:**       YES       NO

#### ACTION TAKEN:

**2024 Code Committee**      Date: 12/12/2024  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
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**Development Advisory Board (DAB)**      Date:  
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**Transportation, Infrastructure and Planning Subcommittee**      Date:  
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**City Council Action**      Date:  
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# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Sections 415.2, 415.4

**Submitted by:** Uniform Plumbing Code Committee

#### 415.0 Drinking Fountains.

**415.2 Drinking Fountain Alternatives.** Where restaurants provide drinking water in a container free of charge, drinking fountains shall not be required in those restaurants. In other occupancies where drinking fountains are required, water dispensers shall be permitted to be substituted for not more than 50 percent of the required number of drinking fountains. Bottle filling stations shall be permitted to be substituted for drinking fountains up to 50 percent of the requirements for drinking fountains. Drinking fountains shall not be required for an occupant load of ~~30~~ 50 or less.

**415.4 Location.** *Drinking fountains, water coolers and water dispensers shall not be installed in toilet rooms.*

**Justification:** These terms were added to the above sections to align with the 2024 IBC chapter 29. These terms are defined in 2024 UPC amended Section 225.0.

The number of occupants amendment is made to provide a relief to small businesses from the cost of installing drinking fountains.

#### Cost Impact:

Minimal cost impact. Cost savings by replacing drinking fountain installations with water dispense

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 12/12/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Table 422.1

**Submitted by:** Uniform Plumbing Code Committee

#### 422.0 Minimum Number of Required Fixtures.

#### Table 422.1 Minimum Plumbing Facilities

Replace UPC Table 422.1 and footnotes with 2024 International Plumbing (IPC) Table 403.1 & footnotes.

add new footnotes, "g" & "h" in this replacement table.

Delete all references to the IPC from this replacement table.

g. Drinking fountains are not required for an occupant load of ~~45~~ 50 or fewer.

h. Where urinals are provided they may be substituted for water closets, provided the number of water closets is not reduced to less than 50% of the minimum required by Table 422.1.

**Justification:** These revisions are made to provide consistency between the 2024 UPC and the minimum plumbing fixture table that is found in the 2024 IPC.

**Cost Impact:** Minimal cost impact. Cost savings.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 12/12/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Section 603.4.3

**Submitted by:** Uniform Plumbing Code Committee

**603.4.3 Access and Clearance.** Access and clearance shall be provided for the required testing, maintenance, and repair. Access and clearance shall be in accordance with manufacturer’s instructions, and not less than 12 inches between the lowest portion of the assembly and grade, floor, or platform. ~~Installations elevated~~ Elevated installations that exceed 5 feet above the floor or grade shall be provided with a platform capable of supporting a tester or maintenance person.

Secondary backflow assemblies shall be installed above ground, as close as practicable to the point of service delivery. A minimum 3-foot (914 mm) clear space shall be maintained for testing, maintenance and repair.

**Justification:**

- Clears up original grammatically incorrect code language regarding elevated installations.
- Clarifies that secondary backflow prevention assemblies shall be installed above ground.
- Clarifies the minimum required clearance dimensions for secondary backflow prevention assemblies.

**Cost Impact:** No cost impact.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

**ACTION TAKEN:**

**2024 Code Committee**      Date: 01/30/2025

Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025

Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB)**      Date:

Approved as submitted    Modified and approved    Denied    No action taken

**Transportation, Infrastructure and Planning Subcommittee**      Date:

Approved as submitted    Modified and approved    Denied    No action taken

**City Council Action**      Date:

Approved as submitted    Modified and approved    Denied    No action taken



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

**Amendment to 2024 Uniform Plumbing Code (UPC)  
Section 603.4.9**

**Submitted by:** Uniform Plumbing Code Committee

**603.4.9 Prohibited Locations.** Backflow prevention devices ~~with atmospheric vents or ports~~ shall not be installed in pits, underground vaults, or submerged locations. Backflow preventers shall not be located in an area containing fumes that are toxic, poisonous, or corrosive.

**Justification:** Phoenix City Code Chapter 37-144 (d) regarding backflow assembly accessibility and testing presents design constraints for adequate clearance and drainage in a proposed vault installation. Proposed vault dimensions typically restrict full accessibility to all parts of an assembly.

Eliminates the possibility of installing a backflow prevention assembly in a pit or vault.

Adds the word vault to better define underground locations.

Reflects installation drawings shown in City of Phoenix Standard Details P1351 through P1355.

Corresponds to manufacturer’s installation instructions which restrict underground installations to AHJ approval.

**Cost Impact:** No cost impact.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

**ACTION TAKEN:**

**2024 Code Committee**      Date: 01/23/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB)**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**Transportation, Infrastructure and Planning Subcommittee**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**City Council Action**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Section 603.4.10

**Submitted by:** Uniform Plumbing Code Committee

**New section:**

**603.4.10 Secondary Backflow Protection.** The following activities or facilities shall have a Secondary Reduced Pressure Principle Backflow Prevention assembly installed as close as practical to each point of service delivery: Hospitals, surgical clinics, medical buildings, laboratories, morgues, mortuaries, veterinary hospitals, animal grooming shops, industrial occupancies, packing plants, slaughter houses, chemical plants, municipal waste treatment facilities, auxiliary water systems, construction water services or as otherwise listed in the most current edition of Phoenix City Code Chapter 37 ARTICLE XII. Backflow Prevention. Note: Multiple water services which are interconnected onsite shall be provided with not less than a Double Check Valve Assembly at each service connection.

**Justification:** ADEQ, Maricopa County and City of Phoenix Water Services Department all require secondary protection for the services cited.

**Cost Impact:** No Cost Impact

**Approved in the previous 2018 Code Adoption process:**  YES  NO

**ACTION TAKEN:**

**2024 Code Committee** Date: 01/23/2025  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendments to 2024 Uniform Plumbing Code Section 604.14

**Submitted by:** Uniform Plumbing Code Committee

**604.14 Non-Metallic Potable Water Pipe, Fittings, and Valves**

Non-Metallic potable water pipe, fittings, and valves shall not be exposed in exterior outdoor locations. Components of the exterior exposed potable water system shall be metallic only and approved metallic materials, fittings, and valves are listed in UPC Table 604.1

**Justification:** Due to extreme exterior summer weather conditions, all nonmetallic potable water pipe, fittings, and valves shall be prohibited from areas of direct sunlight, such as roofs, ground surfaces, and exterior wall locations. Nonmetallic pipe, fittings, and valves would be subjected to extreme exterior heat and will soften and sag between pipe supports. In addition, exposure to UV rays from the sun will cause the pipe to become brittle and be subjected to fracture and breakage when placed under stress or strain. Both conditions will lead to water breaks and failures with the likely result of heavy property damage.

**Cost Impact:** Minimal. This amendment addresses the reduction of future water breaks, property damage, and personal financial liability.

**Approved in previous Code Adoption process:**       YES       NO

**ACTION TAKEN:**

**2024 Code Committee**      Date: 01/15/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB)**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**Transportation, Infrastructure and Planning Subcommittee**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**City Council Action**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Section 612.0

**Submitted by:** Uniform Plumbing Code Committee

**Sections:** 612.0 Residential Fire Sprinkler System.

Delete Section 612.0 in its entirety.

**Justification:** Design, installation and inspection of Fire Sprinkler Systems in one and two-family dwellings or townhouses is regulated by the Phoenix Fire Code.

**Cost Impact:** No cost impact.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 01/25/2025  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

**Amendment to 2024 Uniform Plumbing Code (UPC)**

**Section 718.1**

**Submitted by:** Uniform Plumbing Code Committee

**718.1 Slope.**

Building sewers shall be run in practical alignment and at a uniform slope of not less than 1/4 inch per foot (20.0mm/m) toward the point of disposal.

**Exceptions:**

1. Where approved by the Authority Having Jurisdiction and where it is impractical, due to the depth of the street sewer, the structural features or the arrangement of a building or structure, to obtain a slope of 1/4 inch per foot (20.8 mm/m), piping 4 inches (100 mm) through 6 inches (150 mm) shall be permitted to have a slope of not less than 1/8 inch per foot (10.4 mm/m) and such piping 8 inches (200 mm) and larger shall be permitted to have a slope of not less than 1/16 inch per foot (5.2 mm/m). The maximum and minimum fixture unit loading shall be in accordance with Table 717.1.
2. The Authority Having Jurisdiction may approve a lessor slope in lieu of a sewage ejector or pumping station when a registered engineer or architect certifies the sewer design and its installation, and when the building owner agrees in writing under notary to accept the lessor slope. The minimum slope permitted shall be calculated from Manning's Formula using a coefficient roughness of 0.013 and a sewage velocity of 2 feet per second. See chart below for calculated pipe slope and flow. (Arizona Administrative Code, R18-9-E301 Paragraph D, 2, e).

**Manning's Formula Solution - Friction Factor - n = 013**

Pipe Size (inches)	Slope (%)	Velocity (ft/s)	Full Flow Rate (cfs)	Full Flow Rate (GPM)	Full Flow Rate (GPD)	1/2 Full Flow Rate (GPM)
4	0.85	2.01	0.18	79	113,410	39
6	0.50	2.02	0.40	178	256,451	89
8	0.33	2.00	0.70	313	450,954	157
10	0.25	2.01	1.10	492	708,085	246
12	0.20	2.03	1.59	715	1,029,85	358
15	0.15	2.04	2.50	1,123	1,617,13	561
16	0.15	2.13	2.97	1,334	1,920,75	667

A low slope sewer certificate of compliance is required to be provided to the building official for designs and installations that utilize this exception.

**Justification:** This amendment adds the option of using a lessor slope for building sewers based on engineering calculations. The owner will be required to sign under notary that they have accepted the lessor slope. The registrant shall certify the design and final installation through special inspection.

**Cost Impact:**

This amendment will reduce the costs associated with the current approval process for low slope sewer installations.

Approved in previous 2018 Code Adoption process:       YES       NO

**ACTION TAKEN:**

**2024 Code Committee**      Date: 01/15/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB)**      Date:  
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# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Section 1014.1

**Submitted by:** Uniform Plumbing Code Committee

#### 1014.0 Grease Interceptors.

**1014.1 General.** Where it is determined by the Authority Having Jurisdiction that waste pretreatment is required, an approved type of grease interceptor(s) shall comply with ASME A112.14.3, ASME A112.14.4, CSA B481, ANSI/CAN/IAPMO Z1001, PDI G-101, or PDI G-102, and sized in accordance with Section 1014.2.1 or Section 1014.3.6, shall be installed in accordance with the manufacturer’s installation instructions to receive the drainage from fixtures or equipment that produce grease-laden waste. Grease-laden waste fixtures shall include, but not be limited to, sinks and drains, such as floor drains, floor sinks, and other fixtures or equipment in serving establishments, such as restaurants, cafes, lunch counters, cafeterias, bars and clubs, hotels, hospitals, sanitariums, factory or school kitchens, or other establishments where grease is introduced into the drainage or sewage system in quantities that can effect line stoppage or hinder sewage treatment or private sewage disposal systems. A Where approved by the Authority Having Jurisdiction, a combination of hydromechanical, gravity grease interceptors and engineered systems shall be allowed to meet this code and other applicable requirements of the Authority Having Jurisdiction where space or existing physical constraints of existing buildings necessitate such installations. A grease interceptor shall not be required for individual dwelling units or private living quarters. Water closets, urinals, and other plumbing fixtures conveying human waste shall not drain into or through the grease interceptor.

**Justification:** Combination pretreatment systems are generally not allowed by the Water Services Department’s Environmental Services Division but will be considered on a case by case basis.

**Cost Impact:** No cost impact.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 11/14/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB)** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Section 1014.1.3

**Submitted by:** Uniform Plumbing Code Committee

#### 1014.0 Grease Interceptors.

**1014.1.3 Food Waste Disposers and Dishwashers.** All food waste disposers and dishwashers installed in commercial applications shall be connected to and / or discharge into a gravity grease interceptor unless approved by the Authority Having Jurisdiction. ~~No food waste disposer or dishwasher shall be connected to or discharge into a grease interceptor. Commercial food waste disposers shall be permitted to discharge directly into the building's drainage system.~~

**Exception:** ~~Food waste disposers shall be permitted to discharge to grease interceptors that are designed to receive the discharge of food waste.~~

**Justification:** This code change is necessary to positively identify where disposers and dishwashers shall be discharged. Connecting a commercial disposer unit and/or dishwasher to a hydromechanical interceptor will have a negative effect on the operation, separation and grease retention efficiency of the device. This is required by the Water Service Department's Office of Environmental Programs.

**Cost Impact:** No cost impact. This requirement is an amendment carried forward from the 2018 Uniform Plumbing Code.

**Approved in previous 2018 Code Adoption process:**       YES       NO

#### ACTION TAKEN:

**2024 Code Committee**      Date: 11/13/20204

Approved as submitted     Modified and approved     Denied     No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025

Approved as submitted     Modified and approved     Denied     No action taken

**Development Advisory Board (DAB)**      Date:

Approved as submitted     Modified and approved     Denied     No action taken

**Transportation, Infrastructure and Planning Subcommittee**      Date:

Approved as submitted     Modified and approved     Denied     No action taken

**City Council Action**      Date:

Approved as submitted     Modified and approved     Denied     No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Section 1014.2.3

**Submitted by:** Uniform Plumbing Code Committee

#### 1014.2 Hydromechanical Grease Interceptors.

**1014.2.3 Maintenance.** *An approved two-way cleanout shall be installed on the discharge side of all separators, interceptors, (clarifiers) and hydromechanical grease interceptors.*

**Justification:** The purpose of this code section is to provide an entry point to clean the line downstream of the device and back to the device.

**Cost Impact:** Minimal cost impact. The cost impact is minimal to install additional piping for cleanouts. This requirement is an amendment carried forward from the 2018 Uniform Plumbing Code.

**Approved in previous 2018 Code Adoption process:**       YES       NO

#### ACTION TAKEN:

**2024 Code Committee**      Date: 11/14/2024  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
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**Development Advisory Board (DAB)**      Date:  
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**Transportation, Infrastructure and Planning Subcommittee**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**City Council Action**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL  
Amendment to 2024 Uniform Plumbing Code (UPC)  
Section 1014.3.5**

**Submitted by:** Uniform Plumbing Code Committee

**1014.3 Gravity Grease Interceptors.**

**1014.3.5 Construction Requirements.** Gravity grease interceptors shall be designed to remove grease from effluent and shall be sized in accordance with this section. Gravity grease interceptors shall also be designed to retain grease until accumulations can be removed by pumping the interceptor. ~~When provided, a sample box shall be located at the outlet end of gravity grease interceptors so that the Authority Having Jurisdiction can periodically sample effluent quality.~~ The minimum gravity grease interceptor capacity shall be 500 gallons and the maximum capacity shall be 5000 gallons unless otherwise approved by the Authority Having Jurisdiction. A 500-gallon interceptor shall have a minimum of two compartments and two man-ways. Interceptors 750 gallons and above shall have a minimum of two compartments and three man-ways. All man-ways shall have a minimum 20" inside diameter. All interceptors shall have a vented two-way cleanout on the discharge side of the interceptor. All interceptors shall have a separate set of approved plans on file with the Environmental Services Division. The plans shall be sealed by a registered professional engineer and be approved by the Authority Having Jurisdiction. These plans shall be on file with the city before installation can be completed.

The grade rings (risers) of gravity grease interceptors shall be grouted with shrink and water proof grout. The interceptor lids shall be just above grade so as to prevent rain water infiltration. All interceptors shall have gas tight and/or traffic rated lids where required.

**Justification:** The Water Service Department’s Environmental Services Division does not sample effluent discharges from grease interceptors therefore providing a sample box is an unnecessary expense for a facility. The additional requirements establish construction parameters for interceptors.

**Cost Impact:** Minimal Cost Impact. Additional requirements for grease interceptors.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

**ACTION TAKEN:**

**2024 Code Committee**      Date: 11/28/2024  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB)**      Date:  
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**Transportation, Infrastructure and Planning Subcommittee**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**City Council Action**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Section 1014.3.6

**Submitted by:** Uniform Plumbing Code Committee

#### 1014.3 Gravity Grease Interceptors.

**1014.3.6 Sizing criteria.** The volume of the interceptor shall be determined by calculating drainage fixture units (DFUs) using Table 404.3.6 702.1. Where drainage fixture units (DFUs) are not known, the interceptor shall be sized based on the maximum DFUs allowed for the pipe size connected to the inlet of the interceptor. Refer to Table 703.2, Drainage Piping, Horizontal.

**Example:** Take the total DFUs going to grease waste, multiply by three (3) gallons per minute (GPM), multiply by a 12-minute detention time and this will give the interceptor size in gallons. If there is a disposal, use a 17-minute detention time.

**Justification:** The purpose of this code change is to define how an interceptor will be sized. The sizing criteria was developed from three public forums held in 1997 to standardize gravity grease interceptor sizing.

**Cost Impact:** Minimal cost increase due to changing the sizing criteria. This requirement is an amendment carried forward from the 2006, 2012, and 2018 Uniform Plumbing Codes.

**Approved in previous 2018 Code Adoption process:**       YES       NO

#### ACTION TAKEN:

**2024 Code Committee**      Date: 11/28/2024  
 Approved as submitted     Modified and approved     Denied     No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted     Modified and approved     Denied     No action taken

**Development Advisory Board (DAB)**      Date:  
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**Transportation, Infrastructure and Planning Subcommittee**      Date:  
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**City Council Action**      Date:  
 Approved as submitted     Modified and approved     Denied     No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC)

#### Section: Table 1014.3.6

**Submitted by:** Uniform Plumbing Code Committee

**1014.3 Gravity Grease Interceptors.**

**Delete TABLE 1014.3.6 GRAVITY GREASE INTERCEPTOR SIZING**

**Justification:** Gravity grease interceptor sizing is defined in 2024 UPC amended section 1014.3.6 and amended section Example 1014.3.6. This requirement is an amendment carried forward from the 2018 Uniform Plumbing Code.

**Cost Impact:** Minimal cost increase due to changing the sizing criteria.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 11/28/2024  
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**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC)

#### Section: Example 1014.3.6

**Submitted by:** Uniform Plumbing Code Committee

### 1014.3 Gravity Grease Interceptors.

#### EXAMPLE 1014.3.6

#### GRAVITY GREASE INTERCEPTOR SIZING EXAMPLE

Given: A restaurant with the following fixtures and equipment.

One food preparation sink; three floor drains – one in the food prep area, one in the grill area, and one receiving the indirect waste from the ice machine and mop sink.

Kitchen Drain Line DFU Count (from Table 702.1):

3 floor drains at 2 DFUs each = 6 DFUs

Mop sink at 3 DFUs each = 3 DFUs

Food prep sink at 3 DFUs each = 3 DFUs

Total = 12 DFUs

~~Using Table 1014.3.6, the grease interceptor will be sized at 750 gallons (2389 L).~~ Using UPC 1014.3.6:

12 DFUs x 3 GPM x 12-minute detention time = 432 gallons. The interceptor will be sized at 500 gallons (1893 L).

**Justification:** The purpose of this code change is to provide a design example that clearly illustrates how to size an interceptor.

**Cost Impact:** No cost impact.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 11/28/2024  
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**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Section 1101.12.1

**Submitted by:** Uniform Plumbing Code Committee

#### 1101.12 Roof Drainage.

**1101.12.1 Primary Roof Drainage.** Roof areas of a building shall be drained by roof drains, scuppers or gutters. The location and sizing of drains and gutters shall be coordinated with the structural design and pitch of the roof. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by this section. Scupper openings shall be not less than 4 inches (102 mm) in height and have an opening width equal to the circumference of the roof drain required for the area served, sized in accordance with Table 1101.12. Unless otherwise required by the Authority Having Jurisdiction, roof drains, scuppers, gutters, vertical conductors or leaders, and horizontal storm drains for primary drainage shall be sized based on a rainfall rate of three (3) inches per hour storm of 60 minutes duration and 100 year return period. ~~Refer to Table D 101.1 (in Appendix D) for 100 years, 60 minute storms at various locations.~~

**Justification:** Current language in the 2024 UPC implies that scuppers are only approved for secondary roof drainage. It has been a long-standing practice in Phoenix to allow the use of scuppers as primary roof drains. This proposal adds the acceptance of scuppers as primary roof drains and matches the sizing criteria found for the secondary scuppers in Section 1101.12.2.1. The annual rainfall rate is given in the Appendix D of this code as 2.2 inches per hour. It is proposed to round this number up to 3 inches for ease of use of the sizing Tables.

**Cost Impact:** Minimal cost increase as increasing the expected rainfall rate will require larger drains. Carried over from 2018 Amendment.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

#### ACTION TAKEN:

**2024 Code Committee**      Date: 11/21/2024  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB)**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**Transportation, Infrastructure and Planning Subcommittee**      Date:  
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**City Council Action**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken





# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Sections 1101.12.2.2 & 1101.12.2.2.2

**Submitted by:** Uniform Plumbing Code Committee

#### 1101.12 Roof Drainage.

**1101.12.2.2 Secondary Roof Drain.** Secondary roof drains shall be provided. The secondary roof drains shall be located not less than 2 inches (51 mm) above the roof surface. The maximum height of the roof drains shall be a height to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.12.1. The secondary roof drains shall connect to a piping system in accordance with Section 1101.12.2.2.1, ~~or Section 1101.12.2.2.2.~~

**1101.12.2.2.1 Separate Piping System.** The secondary drainage system shall be separate system of piping, independent of the primary roof drainage system. The discharge shall be above grade, in a location observable by the building occupants or maintenance personnel. Secondary roof drain systems shall be sized in accordance with Section 1101.12.1 based on rainfall rate for which the primary system is sized.

~~**1101.12.2.2.2 Combined System.** The secondary roof drains shall connect to the vertical piping of the primary storm drainage conductor downstream of the last horizontal offset located below the roof. The primary storm drainage system shall connect to the building storm water that connects to an underground public storm sewer. The combined secondary and primary roof drain systems shall be sized in accordance with Section 1103.0 based on double rainfall rate for the local area.~~

**Justification:** The city of Phoenix does not allow for combined primary and secondary rainwater removal systems. A combined system does not have any way to indicate there is a blockage in the primary drain.

**Cost Impact:** Minimal Cost Impact. Remove the combined system option.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

#### ACTION TAKEN:

##### 2024 Code Committee

Date: 11/21/2024

Approved as submitted    Modified and approved    Denied    No action taken

##### Development Advisory Board (DAB) Subcommittee

Date: 02/13/2025

Approved as submitted    Modified and approved    Denied    No action taken

##### Development Advisory Board (DAB)

Date:

Approved as submitted    Modified and approved    Denied    No action taken

##### Transportation, Infrastructure and Planning Subcommittee

Date:

Approved as submitted    Modified and approved    Denied    No action taken

##### City Council Action

Date:

Approved as submitted    Modified and approved    Denied    No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC) Section 1101.16.2

**Submitted by:** Uniform Plumbing Code Committee

**1101.16 Leaders, Conductors, and Connections.** Leaders or conductors shall not be used as soil, waste, or vent pipes nor shall soil, waste, or vent pipes be used as leaders or conductors.

**1101.16.1 Protection of Leaders.** Leaders installed along alleyways, driveways, or other locations where exposed to damage shall be protected by metal guards, recessed into the wall, or constructed from the ferrous pipe.

~~**1101.16.2 Combining Storm with Sanitary Drainage.** The sanitary and storm drainage system of a building shall be entirely separate, except where a combined sewer is used, in which case the building storm drain shall be connected in the same horizontal plane through a single wye fitting to the combined building sewer not less than 10 feet (3048 mm) downstream from a soil stack.~~

**Justification:** The city of Phoenix does not allow for combined sanitary and storm drainage systems. This type of combined system is under the jurisdiction of the city of Phoenix Water Services Department.

**Cost Impact:** No cost impact.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 11/21/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB)** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

**Amendment to 2024 Uniform Plumbing Code (UPC)  
Section 1208.5.11.**

**Submitted by:** Uniform Plumbing Code Committee

**1208.5.11 Flange Specification.**

Flanges shall comply with Section 128.5.11.1 through Section 1208.5.11.7.

**1208.5.11.1 Cast Iron Flanges**

Cast iron flanges shall be in accordance with ASME B16.1. [NFPA 54:5.5.9.1.1]

**1208.5.11.2 Steel Flanges.**

Steel flanges shall be in accordance with one of the following:

- (1) ASME B16.5 or
- (2) ASME B16.47. [NFPA 54:5.5.9.1.2]

**1208.5.11.3 Non-Ferrous Flanges.**

Non-ferrous flanges shall be in accordance with ASME B16.24. [NFPA 54:5.5.9.1.2]

**1208.5.11.4 Ductile Iron Flanges.**

Ductile iron flanges shall be in accordance with ASME B16.42. [NFPA 54:5.5.9.1.4]

**1208.5.11.5 Dissimilar Flange Connections.**

Raised-face flanges shall not be joined to flat-faced cast iron, ductile iron or nonferrous material flanges. [NFPA54:5.5.9.2]

**1208.5.11.6 Flange Facings.**

Standard facings shall be permitted for use under this code. ~~Where 150 psi (1034 kPa) steel flanges are bolted to Class 125 cast iron flanges, the raised face on the steel flange shall be removed. [NFPA 54:5.5.9.3]~~

**1208.5.11.7 Lapped Flanges.**

Lapped flanges shall be used only aboveground or in exposed locations accessible for inspection. [NFPA 54:5.5.9.4]

**Justification:** Defacing a listed product voids its certification to a design standard. This amendment is consistent with the amended similar section in the 2024 International Fuel Gas Code.

**Cost Impact:** No cost impact.

Approved in previous 2018 Code Adoption process:       YES       NO

**ACTION TAKEN:**

**2024 Code Committee**      Date: 12/12/2024  
 Approved as submitted     Modified and approved     Denied     No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted     Modified and approved     Denied     No action taken

**Development Advisory Board (DAB)**      Date:  
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**Transportation, Infrastructure and Planning Subcommittee**      Date:  
 Approved as submitted     Modified and approved     Denied     No action taken

**City Council Action**      Date:  
 Approved as submitted     Modified and approved     Denied     No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 Uniform Plumbing Code (UPC)

#### Section: Appendices

**Submitted by:** Uniform Plumbing Code Committee

Adopt Appendices A, B, I, & M

**Justification:** Appendix A provides an alternative engineered method of water pipe sizing. Appendix B provides supplemental and explanatory information on combination waste and vent systems. Appendix I contains installation standards for PEX tubing systems. Appendix M provides a method for estimating water supply requirements for single and multi-family dwelling units using water conserving plumbing fixtures. Appendix M is also in line with the current City of Phoenix water conservation ordinances.

**Cost Impact:** Minor Cost Impact. Potential cost decrease for alternative water pipe sizing.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 12/12/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2024  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 International Mechanical Code (IMC)

#### Section 101.1

**Submitted by:** International Mechanical Code Committee

#### Chapter 1 Scope and administration

##### Notes:

1. For reserved sections herein, refer to the amendments and requirements in Chapter 1 of the International Building Code for these code requirements.
2. For sections that remain unchanged from base code, the term “see this section of the 2024 IMC” shall refer to the unchanged base code.

##### **101.1 Title**

These regulations shall be known as the International Mechanical Code as amended by the City of Phoenix Building Code of [NAME OF JURISDICTION], hereinafter referred to as “this code.” These regulations are one document of the overall Phoenix Building Construction Code as defined by the adopting ordinance.

**101.2 Scope.** - see this section of the 2024 IMC

**101.2.1 Appendices.** - see this section of the 2024 IMC

**101.3 Purpose.** - see this section of the 2024 IMC

**101.4 Severability.** - Reserved.

**102.1 General.** - Reserved.

**102.2 Existing installations.** - see this section of the 2024 IMC

**102.2.1 Existing buildings.** - see this section of the 2024 IMC

**102.3 Maintenance.** - see this section of the 2024 IMC

**102.4 Additions, alterations or repairs.** - see this section of the 2024 IMC

**102.5 Change in occupancy.** - see this section of the 2024 IMC

**102.6 Historic buildings.** - see this section of the 2024 IMC

**102.7 Moved buildings.** - see this section of the 2024 IMC

**102.8 Referenced codes and standards.** - Reserved

**Exception:** Where enforcement of a code provision would violate the conditions of the listing of the *equipment* or *appliance*, the conditions of the listing and the manufacturer’s installation instructions shall apply.

**102.8.1 Conflicts.** - Reserved.

**102.8.2 Provisions in referenced codes and standards.** - Reserved.

**102.9 Requirements not covered by this code.** - see this section of the 2024 IMC

**102.10 Other laws.** - Reserved.

**102.11 Application of references.** - Reserved.

**Section 103 Code compliance agency** - Reserved.

**Section 104 Duties and powers of the code official** - Reserved.

**Section 105 Permits** - Reserved.

**Section 106 Construction documents** - Reserved.

**Section 107 Notice of approval** - Reserved.

**Section 108 Fees** - Reserved.

**Section 109 Service utilities** - Reserved.

**Section 110 Temporary uses, equipment and systems** - Reserved.

**Section 111 Inspections and testing** - Reserved.

**Section 112 Means of appeals** - Reserved.

**Section 113 Board of appeals** - Reserved.

**Section 114 Violations** - Reserved.

**Section 115 Stop work order** - Reserved.

**Justification:** All the adopted and amended building code documents taken together are known as the Phoenix Building Construction Code. Each code document is a separate document of the Phoenix Building Construction Code. This document is the International Mechanical Code as Amended by the City of Phoenix. This document is intended to apply where a code or referenced standard identifies the International Mechanical Code as being applicable.

The reserved provisions are contained in the Phoenix Building Construction Code – Administrative Provisions (Chapter 1 of the International Building Code).

**Cost Impact:** No cost impact.

**Approved in previous 2018 Code Adoption process:**  YES  NO

**ACTION TAKEN:**

<b>2024 Code Committee</b>	Date: 01/28/2025
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	
<b>Development Advisory Board (DAB) Subcommittee</b>	Date: 02/13/2025
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	
<b>Development Advisory Board (DAB)</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	
<b>Transportation, Infrastructure and Planning Subcommittee</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	
<b>City Council Action</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	





# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL Amendment to 2024 International Mechanical Code (IMC) Section 307.2.2

**Submitted by:** International Mechanical Code Committee

### 307.2.2 Drain pipe materials and sizes.

Nonmetallic piping shall not be installed in exposed locations. Components of the condensate disposal system shall be ABS, cast iron, copper and copper alloy, CPVC, cross-linked polyethylene, galvanized steel, PE-RT, polyethylene, polypropylene, PVC or PVDF pipe or rigid tubing. Components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 of the *International Plumbing Code* relative to the material type. Condensate waste and drain line size shall be not less than 3/4-inch pipe size and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2.

**Justification:** Due to our extreme weather conditions, it is recommended that all nonmetallic condensate piping be prohibited from areas of direct sunlight, such as roofs. Nonmetallic piping subject to extreme heat will soften and sag between supports. This causes low spots in the drainage system and prevents gravity flow to the point of disposal. In addition, exposure to UV rays from the sun causes the pipe to become brittle and subject to fracture when placed under stress or strain. Both of these conditions lead to condensate disposal failure with the likely result of water ponding on the roof.

**Cost Impact:** Minor cost impact. Increase in cost of materials. This item is in the current 2018 code.

**Approved in previous 2018 Code Adoption process:**  YES  NO

### ACTION TAKEN:

**2024 Code Committee** Date: 11/24/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 International Mechanical Code (IMC) Section 309.1

**Submitted by:** International Mechanical Code Committee

**[BG] 309.1 ~~Space heating systems.~~ Heating and cooling systems.**

Interior spaces intended for human occupancy shall be provided with active or passive ~~space-~~ heating and cooling systems capable of maintaining an indoor temperature ~~of not less than 68°F (20°C)~~ between 70°F (21°C) and 82°F (28°C) (if cooled by air conditioning, and 86°F (30°C) if cooled by evaporative cooling), measured at a point 3 feet (914mm) above the floor in the center of the room. ~~on the design heating day.~~ The installation of ~~portable~~ space heaters or coolers shall not be used to achieve compliance with this section.

**Exceptions:**

1. Space heating and cooling systems are not required for interior spaces where the primary purpose is not associated with human comfort.
2. Group F, H, S, and U occupancies.

**Justification:** This amendment requires newly constructed buildings to comply with City of Phoenix Neighborhood Preservation Ordinance Sec. 39-5(B)(1)(b), which deals with buildings that are rented. All newly constructed buildings may be rented at some point in their life.

**Cost Impact:** Significant cost impact; this amendment requires cooling in all interior spaces intended for human occupancy, which the base code does not.

**Approved in previous 2018 Code Adoption process:**  YES  NO

**ACTION TAKEN:**

**2024 Code Committee** Date: 01/08/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 International Mechanical Code (IMC) Section 402.1

**Submitted by:** International Mechanical Code Committee

#### 402.1 Natural ventilation.

Natural ventilation of an occupied space in a residential dwelling unit within a commercial building shall be through windows, doors, louvers or other openings to the outdoors. The operating mechanism for such openings shall be provided with ready access so that the openings are readily controllable by the building occupants. Natural ventilation of all other occupied spaces within commercial buildings shall be through permanently fixed openings to the outdoors.

**Justification:** Natural ventilation in a residential dwelling unit within a commercial building depends on operable openings such as doors, windows, louvers, or other openings to the outdoors. Whenever a dwelling unit within a commercial building has occupants and the qualifying window or door is open to the outdoors, then the ventilation requirement of IMC 401.3 is met. All other spaces within a commercial building with space cooling and heating requirements would rarely leave windows or doors in the open position. Openings such as windows and doors in a commercial building cannot be reliably depended upon to remain open whenever occupants are present.

**Cost Impact:** Minimal cost impact.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 11/16/2024

Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025

Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB)** Date:

Approved as submitted  Modified and approved  Denied  No action taken

**Transportation, Infrastructure and Planning Subcommittee** Date:

Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:

Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL Amendment to 2024 International Mechanical Code (IMC) Section 407.1.1

**Submitted by:** International Mechanical Code Committee

### 407.1 General.

Mechanical ventilation for ambulatory care facilities and Group I-2 occupancies shall be designed and installed in accordance with this code and ASHRAE 170.

#### 407.1.1

Mechanical systems designed and installed in accordance with IMC 407.1 and ASHRAE 170 shall be verified by a qualified third party Special Inspector. The Special Inspector/testing agency shall be an independent third party individual or firm and shall not be the installing contractor. A report shall be generated by the third party individual or firm showing compliance. Special inspections shall be as specified in Chapter 17 of the International Building Code as amended.

### Justification

The ventilation systems for Group I-2 and ambulatory facilities face the possibility of communicating and perpetuating airborne diseases. Special inspections are required to ensure that life safety systems and public health standards are met. It is imperative that the ventilation systems required by IMC 407.1 are designed to control the spread of disease and operate as designed. This can only be accomplished by verification through proper testing. The Registered Design Professional in Responsible Charge shall follow the guidelines set forth in the 2024 IBC as specified in Chapter 17.

**Cost Impact:** No cost impact. Currently Arizona Department of Health Services (ADHS) requires that the ventilation systems are balanced and tested.

**Approved in previous 2018 Code Adoption process:**  YES  NO

### ACTION TAKEN:

**2024 Code Committee** Date: 01/08/2025  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 International Mechanical Code (IMC) Section 408

**Submitted by:** International Mechanical Code Committee

#### **408 MARIJUANA RELATED OCCUPANCIES**

##### **408.1 General.**

Any building used to cultivate, produce, infuse or dispense marijuana shall be designed such that there shall be no emission of dust, fumes, vapors, or odors into the environment from the premise. A ventilation system shall be designed to prevent the distribution of odors to other occupied parts of the building or adjacent properties. Design of the odor control system shall be based on accepted engineering practices. All equipment and filter media shall be listed and labeled for the application. Exhaust systems used in odor control systems shall meet the requirements of Section 501.

##### **408.1.1 Exhaust outlets.**

The termination point for exhaust outlets shall be in accordance with Section 501.3. Exhaust from cultivation and production facilities shall be in accordance with Section 501.3.1(2) and for dispensaries in accordance with Section 501.3.1(3).

**Justification:** This is a current amendment to the 2018 IMC. This new section provides design guidance for required odor control systems, per City of Phoenix Zoning Ordinance.

**Cost Impact:** Moderate cost impact due to additional equipment necessary to comply with air quality requirements mandated by the Authority Having Jurisdiction (AHJ).

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

#### **ACTION TAKEN:**

**2024 Code Committee**      Date: 11/16/2024  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
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**Development Advisory Board (DAB)**      Date:  
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**Transportation, Infrastructure and Planning Subcommittee**      Date:  
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**City Council Action**      Date:  
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**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

**Amendment to 2024 International Mechanical Code (IMC)**

**Section 502.14**

**Submitted by:** International Mechanical Code Committee

**502.14 Motor vehicle operation.**

In areas where motor vehicles operate, mechanical ventilation shall be provided in accordance with Section 403. Additionally, areas in which stationary motor vehicles are operated shall be provided with a *source capture system* that connects directly to the motor vehicle exhaust systems. Makeup air for the required exhaust systems in areas where motor vehicles operate shall be provided through permanent unobstructed openings to the outdoors, such as louvers and grills. Mechanical equipment and louvers used for makeup air purposes shall be electrically interlocked with the exhaust system. Such system shall be engineered by a *registered design professional* or shall be factory-built *equipment* designed and sized for the purpose.

**Exceptions:**

1. This section shall not apply where the motor vehicles being operated or repaired are electrically powered.
2. This section shall not apply to one- and two-family dwellings.
3. This section shall not apply to motor vehicle service areas where engines are operated inside the *building* only for the duration necessary to move the motor vehicles in and out of the *building*.

**Justification:** Motor vehicle operation in a building depletes oxygen and causes a build-up of carbon monoxide and other products of combustion which could be fatal to occupants. It is critical to the health of occupants to remove these emissions from the occupied space. From IMC section 403, an exhaust rate of 0.75 cfm/ft<sup>2</sup> is specified for both repair garages and enclosed parking garages. Repair garages that have stationary vehicle operation, such as engine tune-up services, radiator or transmission flushing, etc. require dedicated exhaust systems. This proposal adds specific requirements to provide permanent building openings for makeup air or use mechanical makeup air units. This eliminates the use of open doors, which cannot be reliable. It also requires any mechanical equipment or mechanical louvers used for makeup air to be electrically interlocked with the dedicated exhaust system.

**Cost Impact:** Minimal cost impact. Minimal cost increase to install openings. This requirement is also an amendment carried forward from the 2018 IMC.

Approved in previous 2018 Code Adoption process:

YES

NO

**ACTION TAKEN:**

**2024 Code Committee**

Date: 11/16/2024

Approved as submitted  Modified and approved  Denied

No action taken

**Development Advisory Board (DAB) Subcommittee**

Date: 02/13/2025

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No action taken

**Development Advisory Board (DAB)**

Date:

Approved as submitted  Modified and approved  Denied

No action taken

**Transportation, Infrastructure and Planning Subcommittee**

Date:

Approved as submitted  Modified and approved  Denied

No action taken

**City Council Action**

Date:

Approved as submitted  Modified and approved  Denied

No action taken



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**  
**Amendment to 2024 International Mechanical Code (IMC)**  
**Section 502.21**

**Submitted by:** International Mechanical Code Committee

**502.21 Storage and use of liquid carbon dioxide (CO<sub>2</sub>) systems.**

Indoor or outdoor areas that contain liquid carbon dioxide (CO<sub>2</sub>) stored in ASME pressure vessels in new and existing facilities shall be provided with mechanical exhaust ventilation in accordance with this section.

**Exception:** Outdoor storage areas in non-enclosed spaces designed to prevent the collection of vapors when approved by the *Fire Marshal*.

**502.21.1 System requirements.**

Exhaust ventilation systems for liquid carbon dioxide CO<sub>2</sub> tanks shall comply with all of the following:

1. The installation shall be in accordance with this code and the *Phoenix Fire Code, PFC Chapter 53 Compressed Gases, Section 5307.2.2, Gas Ventilation Requirements.*
2. Mechanical ventilation shall be provided at a rate of not less than 1 cfm per square foot [0.00508 m<sup>3</sup>/(s • m<sup>2</sup>)] of floor area over the storage area.
3. The system shall operate continuously unless alternate designs are approved by the *Fire Marshal*.
4. A manual start control shall be provided outside of the room in a position adjacent to the access door to the room or in another approved location. The switch shall be a break-glass or other approved type and shall be labeled: VENTILATION SYSTEM EMERGENCY ON-ONLY.
5. Exhaust ventilation shall be designed to consider the density of the potential vapors released. For liquid CO<sub>2</sub> systems, exhaust shall be taken from a point within 12 inches (305 mm) of the floor.
6. Makeup air shall be provided. The location of both the exhaust and makeup air openings shall be designed to provide air movement across all portions of the floor or room to prevent the accumulation of vapors.
7. Exhaust air shall not be recirculated to occupied areas. Exhaust termination shall be located where it will not allow for a dangerous accumulation of vapors and in accordance with Section 501.3.1 (2).
8. Sensors, controls, alarms, piping and all accessory components as prescribed by the *Phoenix Fire Department*.

**Justification:** This amendment determines the requirement for a mechanical ventilation system for liquid carbon dioxide (CO<sub>2</sub>) bulk storage systems regardless of quantity. Businesses that provide carbonated drinks have been increasingly switching from dry to liquid CO<sub>2</sub> storage systems. Liquid CO<sub>2</sub> storage systems have been deemed potentially hazardous to human health by the Phoenix Fire Department. Separate Fire Department permits are also required for CO<sub>2</sub> systems. This requirement is also an amendment carried forward from the 2018 IMC.



**Cost Impact:** Additional costs are due to the requirement for installation of dedicated mechanical exhaust system in the area of liquid CO<sub>2</sub> tanks.

**Approved in previous 2018 Code Adoption process:**  **YES**  **NO**

**ACTION TAKEN:**

**2024 Code Committee** Date: 11/16/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

**Amendment to 2024 International Mechanical Code (IMC)**

**Section 606.2.1**

**Submitted by:** International Mechanical Code Committee

**606.2 Where required.**

Smoke detectors shall be installed where indicated in Sections 606.2.1 through 606.2.3.

**Exception:** Smoke detectors shall not be required where air distribution systems are incapable of spreading smoke beyond the enclosing walls, floors and ceilings of the room or space in which the smoke is generated.

**606.2.1 ~~Return air systems.~~ Air distribution systems.**

Smoke detectors shall be installed in ~~return air systems with~~ air distribution systems downstream of the filters and ahead of any branch connections in systems having a design capacity greater than 2,000 cfm (0.9 m<sup>3</sup>/s). ~~in the return air duct or plenum upstream of any filters, exhaust air connections, outdoor air connections, or decontamination equipment and appliances.~~

**Exception:** Smoke detectors are not required ~~in the return air system~~ where all portions of the *building* served by the air distribution system are protected by area smoke detectors connected to a fire alarm system in accordance with the *International Fire Code*. The area smoke detection system shall comply with Section 606.4.

**Justification:** Committee recommends that this section be revised to correlate with NFPA 90A Installation of Air-Conditioning and Ventilating Systems. The 2024 IMC references NFPA 72 National Fire Alarm Code, which in turn references NFPA 90A for installation of smoke detectors. These NFPA Standards are generally recognized as the national standards for smoke detector installation. A large amount of air distribution systems installed in Phoenix utilize a filtered grill for return air, typically installed in a ceiling or wall. In order to place a duct detector in front of this filter without having it attached to the grill, an additional length of plenum or duct is required. This leads to added construction costs and space restraints. The duct smoke detector may also be subjected to a higher frequency of false alarms from contaminants in the room. The committee reasons that any appreciable amount of smoke entering the return air system will pass through the filtered grill and reach the probe for the smoke detector. This proposed amendment will help to keep down the design costs while still providing an equivalent level of life safety based on the national standard. This amendment is carried forward from the 2018 IMC.

**Cost Impact:** Saves cost of additional duct work.

**Approved in previous 2018 Code Adoption process:**  YES  NO

<b>ACTION TAKEN:</b>	
<b>2024 Code Committee</b>	Date: November 16, 2024
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	
<b>Development Advisory Board (DAB) Subcommittee</b>	Date: 02/13/2025
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	
<b>Development Advisory Board (DAB)</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	
<b>Transportation, Infrastructure and Planning Subcommittee</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	
<b>City Council Action</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

**Amendment to 2024 International Mechanical Code (IMC)**

**Section 606.5**

**Submitted by:** International Mechanical Code Committee

**606.5 Testing.**

Smoke detectors shall be tested by an approved testing agency or a qualified third party Special Inspector. The Special Inspector/ testing agency shall be an independent third party and shall not be the installing contractor. Special inspections shall be as specified in Chapter 17 of the International Building Code as amended.

**Justification:** Smoke detectors can save lives when they operate correctly. The Mechanical code requires that these devices be installed at specific locations in the building air distribution systems. Testing of the operation of each smoke detector is required to be completed by a special inspector that is independent of the installer. Such special inspector must also be qualified to complete the work. Special Inspections is covered in the International Building Code and has been extended in the City of Phoenix to include several life safety items related to Mechanical design. Due to the importance of these life safety devices, it is recommended by the committee that a Special Inspector submit a final report certifying that all devices operate as designed and the Registered Design Professional in Responsible Charge signs the certificate. To maintain consistency with the Special Inspections program, the testing agency and the registrant shall follow the guidelines set forth in the 2024 IBC, as specified in Chapter 17.

**Cost Impact:** Increase costs associated with hiring a Special Inspector. However, this amendment is carried forward from the 2006 IMC and has been in place for the past eighteen years.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

**ACTION TAKEN:**

**2024 Code Committee**      Date: 11/21/2024  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB)**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken

**Transportation, Infrastructure and Planning Subcommittee**      Date:  
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**City Council Action**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 International Mechanical Code (IMC) Section 607.2

**Submitted by:** International Mechanical Code Committee

**[BF] 607.2 Installation.**

*Fire dampers, smoke dampers, combination fire/smoke dampers and ceiling radiation dampers located within air distribution and smoke control systems shall be installed in accordance with the manufacturer’s instructions, the dampers’ listing and Sections 607.2.1 through 607.2.3. Dampers shall be tested by an approved testing agency or a qualified third party special inspector. The special Inspector/testing agency shall be an independent third party individual or firm and shall not be the installing contractor. Special inspections shall be as specified in Chapter 17 of the International Building Code as amended.*

**Justification:** Fire and smoke dampers can save lives when they operate correctly. The Mechanical code requires that these devices be installed at specific locations to prevent fire and smoke from spreading throughout a building. The IMC requires all dampers to be listed and tested at the factory. This proposal will verify that the dampers operate correctly after they are installed in the building. This amendment requires that testing of dampers shall be performed by a qualified third party testing agency and all results shall be verified by the professional design engineer. Special inspection requirements are listed in the 2024 IBC and a reference is provided in this proposal.

**Cost Impact:** Increase costs associated with hiring a Special Inspector. However, this amendment is carried forward from the 2018 IMC and has been in place for the past twelve years.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

**ACTION TAKEN:**

**2024 Code Committee**      Date: 11/21/2024  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB)**      Date:  
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**Transportation, Infrastructure and Planning Subcommittee**      Date:  
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**City Council Action**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 International Mechanical Code (IMC) Section 608.1

**Submitted by:** International Mechanical Code Committee

#### 608.1 Balancing.

Air distribution, ventilation and exhaust systems shall be provided with means to adjust the system to achieve the design airflow rates and shall be balanced by an *approved* method. *Ventilation air* distribution shall be balanced by an *approved* method and such balancing shall verify that the air distribution system is capable of supplying and exhausting the airflow rates required by Chapter 4.

The *ventilation* air distribution system shall be provided with means to adjust the system to achieve not less than the minimum ventilation airflow rate as required by sections 403.3 and 403.3.1.2. Ventilation systems shall be balanced using a nationally accepted air balancing test method. Such balancing shall verify that the ventilation system is capable of supplying and exhausting the airflow rates required by Sections 403.3 and 403.3.1.2. A final report shall be provided to the engineer of record and the mechanical inspector.

**Justification:** This is a current amendment to the 2018 IMC 403.1.5 and is now currently located in 2024 IMC 608.1. The proposed amendment will require an approved test and balance agency / individual to perform balancing of ventilation air systems in commercial buildings. The original code language does not define what type of “approved method” is acceptable. The proposal will further require that such agency / individual follow national standards for air balancing methods.

**Cost Impact:** Minimal cost impact. Minimal impact of nationally accepted air balancing test.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

#### ACTION TAKEN:

**2024 Code Committee**      Date: 01/08/2025  
 Approved as submitted    Modified and approved    Denied    No action taken

**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
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**Development Advisory Board (DAB)**      Date:  
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**Transportation, Infrastructure and Planning Subcommittee**      Date:  
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**City Council Action**      Date:  
 Approved as submitted    Modified and approved    Denied    No action taken



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**  
**Amendment to 2024 International Mechanical Code (IMC)**  
**Section 928.1**

**Submitted by:** International Mechanical Code Committee

**SECTION 928 EVAPORATIVE COOLING EQUIPMENT**

**928.1 General.**

Evaporative cooling equipment shall:

1. Be installed in accordance with the manufacturer’s instructions.
2. Be installed on level platforms in accordance with Section 304.10.
3. Have openings in exterior walls or roofs flashed in accordance with the *International Building Code*.
4. Be provided with an *approved* water supply, sized for peak demand. The quality of water shall be provided in accordance with the *equipment* manufacturer’s recommendations. The piping system and protection of the potable water supply system shall be installed as required by the International Plumbing Code.
5. Have air intake opening locations in accordance with Section 401.4.
6. A permanent relief opening or other engineered design sufficient to assure positive airflow shall balance intake air.
7. Outside air shall be provided as specified in Section 403.2.
8. Air ducts and dampers, which are a portion of an evaporative cooling system, shall comply with Chapter 6.
9. Overflow drains shall be provided that discharge to an *approved* disposal location.

**Justification:** This amendment clarifies installation requirements for evaporative coolers.

**Cost Impact:** Minimal cost impact. Requires positive airflow design. These requirements are carried forward from the 2018 IMC.

**Approved in previous 2018 Code Adoption process:**  **YES**  **NO**

**ACTION TAKEN:**

<b>2024 Code Committee</b>	Date: 11/21/2024
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken

<b>Development Advisory Board (DAB) Subcommittee</b>	Date: 02/13/2025
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken

<b>Development Advisory Board (DAB)</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken

<b>Transportation, Infrastructure and Planning Subcommittee</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken

<b>City Council Action</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

**Amendment to 2024 International Mechanical Code (IMC)**

**Section 932**

**Submitted by:** International Mechanical Code Committee

**SECTION 932 WOOD STOVE/FIREPLACE INSTALLATION**

**DEFINITIONS.** For purposes of this section, the following words and terms shall have the meaning ascribed thereto:

**FIREPLACE:** A built-in-place masonry hearth and fire chamber or a factory-built appliance, designed to burn solid fuel or to accommodate gas or electric log insert or similar device, and which is intended for occasional recreational or aesthetic use, not for cooking, heating, or industrial processes.

**SOLID FUEL:** Includes, but is not limited to, wood, coal, or other non-gaseous or non-liquid fuels, including those fuels defined by the Maricopa County Air Pollution Control Officer as "inappropriate fuel" to burn in residential wood burning devices.

**WOODSTOVE:** A solid-fuel burning heating appliance including a pellet stove, which is either freestanding or designed to be inserted into a fireplace.

**932.1 General.**

In accordance with the Phoenix City Council adopted Ordinance G-4062, on or after December 31, 1998, no person, firm or corporation shall construct or install a fireplace or a wood stove, and the Building Official shall not approve or issue a permit to construct or install a fireplace or a wood stove, unless the fireplace or wood stove complies with one of the following:

1. A fireplace which has a permanently installed gas or electric log insert;
2. A fireplace, wood stove or other solid fuel burning appliance which has been certified by the United States Environmental Protection Agency as conforming to 40 Code of Federal Regulations part 60, subpart AAA;
3. A fireplace, woodstove or other solid fuel burning appliance that has been tested and listed by a nationally recognized testing agency to meet performance standards equivalent to those adopted by 40 Code of Federal Regulations part 60, subpart AAA;
4. A fireplace, wood stove or other solid fuel burning appliance which has been determined by the Maricopa County Air Pollution Control Officer to meet performance standards equivalent to those adopted by 40 Code of Federal Regulations part 60, subpart AAA, as in effect on July 1, 1990.
5. A fireplace which has a permanently installed wood stove insert which complies with subparagraph 2, 3, or 4 above.

**Exceptions:** The following installations are not regulated and are not prohibited by this section: Furnaces, boilers, incinerators, kilns, and other similar space heating or industrial process equipment, Cook stoves, barbecue grills, and similar appliances designed primarily for cooking. Fire pits, barbecue grills, and other outdoor fireplaces.



**Fireplace or wood stove alterations prohibited.**

Fireplaces constructed or installed on or after December 31, 1998, that contain a gas or electric log insert or a woodstove insert, shall not be altered to directly burn wood or any other solid fuel. On or after December 31, 1998, no person, firm, or corporation shall alter a fireplace, woodstove, or other solid-fuel burning appliance in any manner that would void its certification or operational compliance with the provisions of this section.

Fireplaces constructed or installed on or after December 31, 1998, shall not be altered without first obtaining a permit from the City to ensure compliance with this section.

**Justification:** Recommendation to include code language based on City Ordinance G-4062 and Maricopa County wood burning restriction ordinance. This amendment is carried over from the 2018 IMC and is also found in the 2018 IRC as Section R325.

**Cost Impact:** No cost impact.

**Approved in previous 2018 Code Adoption process:**  **YES**  **NO**

**ACTION TAKEN:**

**2024 Code Committee** Date: 11/21/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL Amendment to 2024 International Mechanical Code (IMC) Section 1105.10

**Submitted by:** International Mechanical Code Committee

### 1105.10 Dimensions.

Refrigeration machinery rooms shall be of such dimensions that all system parts are readily accessible with adequate space for service, maintenance, and operations. A minimum unobstructed walking space at least three (3) feet (914 mm) in width and six (6) feet eight (8) inches (2032 mm) in height or approved manufacturer's installation or required clearances shall be maintained throughout, allowing free access to at least two sides of all moving machinery and approaching each stop valve. Access to refrigeration machinery rooms shall be restricted to authorized personnel and posted with permanent signage.

**Justification:** This addition to this section is needed to ensure adequate safe working space around the equipment in a refrigeration machinery room. Previously incorporated into the 2018 IMC.

**Cost Impact:** Minimal cost impact.

**Approved in previous 2018 Code Adoption process:**  YES  NO

### ACTION TAKEN:

**2024 Code Committee** Date: 11/21/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB)** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2024 International Mechanical Code (IMC) Section 1109.2.5

**Submitted by:** International Mechanical Code Committee

#### 1109.2.5 Refrigerant pipe shafts.

Refrigerant piping that penetrates two or more floor/ceiling assemblies shall be enclosed in a fire-resistance-rated shaft enclosure. The fire-resistance-rated shaft enclosure shall comply with Section 713 of the *International Building Code*.

#### Exceptions:

1. *Refrigeration* systems using R-718 refrigerant (water).
2. Piping in a direct refrigeration system using Group A1 refrigerant where the refrigerant quantity does not exceed the limits of Table 1103.1 for the smallest occupied space through which the piping passes.
3. Piping located on the exterior of the *building* where vented to the outdoors.

**Justification:** This amendment will make IMC 1109.2.5 consistent with ASHRAE 15-2022 which is a currently approved reference standard in the 2024 IMC. IMC 1109.2.2 still requires refrigerant piping to be protected within the building or protective enclosures. *Shaft enclosures* shall have a *fire-resistance rating* of not less than 2 hours where connecting four *stories* or more, and not less than 1 hour where connecting less than four *stories*, IBC 713.4.

This section was added to the 2021 IMC before changes were completed and implemented in ASHRAE 15-2022. It has been determined that any refrigerant meeting the maximum allowable quantities of IMC Table 1103.1 are safe to install without a shaft enclosure. This amendment proposal is consistent with AHRAE 15-22

**Cost Impact:** This proposal will more than minimally decrease the cost of multistory multifamily housing due to allowing construction to continue in its current practices without introducing shaft enclosure that will alter the floor plans that are already developed and require larger lots for the same number of dwellings.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

<b>2024 Code Committee</b>	Date: 01/15/2024
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	

<b>Development Advisory Board (DAB) Subcommittee</b>	Date: 02/13/2025
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<b>Development Advisory Board (DAB)</b>	Date:
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<b>Transportation, Infrastructure and Planning Subcommittee</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	

<b>City Council Action</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied <input type="checkbox"/> No action taken	



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2022 American Society of Mechanical Engineers (ASME) A17.1 Section 2.2.5.3

**Submitted by:** ASME/Elevator Code Committee

**2.2.5.3** The light switch shall be located to be accessible from the pit access door, and:

1. Shall be mounted 50" above the access door floor.
2. Shall not be controlled by automatic means other than allowed by A17.1 section 2.1.7 or IBC 3007.5.2
3. Shall be illuminated.
4. Shall be permitted to control all pit lights in a multi-car bank of elevators sharing the same hoistway.

**Justification:**

1. To facilitate locating the light switch when entering hazardous darkened areas.
2. To eliminate the possibility of all illumination turning off while working in these spaces.
3. To harmonize with NEC 110.26(D)

**Cost Impact:** Minimal

**Approved in previous 2018 Code Adoption process:**       YES       NO

**ACTION TAKEN:**

<b>2024 Code Committee</b>	Date: 10/28/2024
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken

<b>Development Advisory Board (DAB) Subcommittee</b>	Date: 02/13/2025
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<b>Development Advisory Board (DAB)</b>	Date:
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<b>Transportation, Infrastructure and Planning Subcommittee</b>	Date:
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<b>City Council Action</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2022 American Society of Mechanical Engineers (ASME) A17.1 Section 2.7.9.1

**Submitted by:** ASME/Elevator Code Committee

**2.7.9.1 Lighting.** Permanently installed electric lighting shall be provided in all machinery spaces, machine rooms, control spaces, and control rooms. The illumination shall be not less than 200 lx (19 fc) at the floor level, at the standing surface of a working platform (see 2.7.5.3), or at the level of the standing surface when the car is in the blocked position (see 2.7.5.1). The light switch shall be located

(a) For machinery spaces and control spaces, at the point of entry

(b) For machine rooms and control rooms, inside the room and, where practicable, on the lock-jamb side of the access door

(c) All light switches for access to any elevator or escalator machine room, control room, machine space, or control space:

1. Shall be illuminated.

2. Shall not be controlled by automatic means other than allowed by A17.1 Section 2.1.7 or IBC 3007.5.2.

**Justification:**

- (1) To facilitate locating the light switch when entering hazardous darkened areas.
- (2) To eliminate the possibility of all illumination turning off while working in these spaces
- (3) To harmonize with NEC 110.26(D)

**Cost Impact:** Minimal cost impact.

**Approved in previous 2018 Code Adoption process:**  YES  NO

**ACTION TAKEN:**

**2024 Code Committee** Date: 10/28/2024  
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**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2022 American Society of Mechanical Engineers (ASME) A17.1 Section 2.27.8

**Submitted by:** ASME/Elevator Code Committee

#### 2.27.8 Switch Keys.

The key switches required by 2.27.2 through 2.27.5 and 2.27.11 for all elevators in a building shall be operable by the ~~FEO-K1~~ same key. The keys shall be Group 3 Security (see Section 8.1). A separate key shall be provided for each switch. These keys shall be kept on the premises in a location readily accessible to firefighters and emergency personnel, but not where they are available to the public. ~~This key shall be of a tubular, 7 pin, style 137 construction and shall have a biting code of 6143521 starting at the tab sequenced clockwise as viewed from the barrel end of the key; cutting depths shall be in accordance with Figure 2.27.8.~~ The key shall be coded the FEO-K1. “AZFS” key as designated by the authority having jurisdiction. The possession of the ~~“FEO-K1”~~ “AZFS” key shall be limited to elevator personnel, emergency personnel, elevator equipment manufacturers, and authorized personnel during checking of Firefighters’ Emergency Operation (see Section 8.1 and 8.6.11.1).

Where provided, a lock box, including its lock and other components, shall conform to the requirements of UL 1037 (see Part 9).

Note (2.27.8): Local authorities may specify additional requirements for a uniform keyed lock box and its location, to contain the necessary keys.

**Justification:** Existing fire service key used by fire department and emergency personnel. This amendment reflects some wording changes with the 2022 code.

**Cost Impact:** Existing keys are already changed over to “AZFS”.

**Approved in previous 2018 Code Adoption process:**       **YES**       **NO**

#### ACTION TAKEN:

**2024 Code Committee**      Date: 11/25/2024  
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**Development Advisory Board (DAB) Subcommittee**      Date: 02/13/2025  
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**Development Advisory Board (DAB)**      Date:  
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**Transportation, Infrastructure and Planning Subcommittee**      Date:  
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**City Council Action**      Date:  
 Approved as submitted     Modified and approved     Denied       No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2022 American Society of Mechanical Engineers (ASME) A17.1 Section 5.3.1.8.1

**Submitted by:** ASME/Elevator Code Committee

**5.3.1.8.1 Hoistway Enclosure Provided.** Where a hoistway enclosure is provided landing openings shall be protected by swinging or horizontally sliding doors. The full height and width of the landing openings in solid hoistway enclosures shall be protected by solid swinging or horizontally sliding doors except

- a) For swing doors, the clearance between the door panel and the frame shall not exceed.
  - 1) 10 mm (0.375 in.) on the side and top of the door
  - 2) 13 mm (0.5 in.) at the bottom of the door
- b) For horizontally sliding doors, door panels shall.
  - 1) overlap the top and sides of the opening by not less than 13 mm (0.5 in.)
  - 2) not exceed 10 mm (0.375 in.) above the sill
  - 3) have a clearance between the panel and the frame not exceeding 10 mm (0.375 in.)

The doors' fire-protection rating shall be not less than required by the building code (see Section 1.3). The doors shall be designed to withstand a force of 670 N (150 lbf) applied horizontally, in either direction, over an area 100 mm x 100 mm (4 in. x 4 in.) in the center of the doors without permanent displacement or deformation.

Swing doors shall be of one-piece construction with no additional baffles, space guards, or elevator door guards as fillers to meet clearance specifications.

**Justification:** Clarification that removable panels are not to be used to meet required clearances.

**Cost Impact:** None

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

<b>2024 Code Committee</b>	Date: 11/25/2024
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken

<b>Development Advisory Board (DAB) Subcommittee</b>	Date: 02/13/2025
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<b>Development Advisory Board (DAB)</b>	Date:
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<b>Transportation, Infrastructure and Planning Subcommittee</b>	Date:
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# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2022 American Society of Mechanical Engineers (ASME) A17.1 Section 8.6.1.4.1

**Submitted by:** ASME/Elevator Code Committee

#### 8.6.1.4.1 On-Site Maintenance Records

##### (a) Maintenance Control Program Records

(1) A record that shall include the maintenance tasks listed with the associated requirements of Section 8.6 identified in the MCP (8.6.1.2.1), other tests (see 8.6.1.2.2), examinations and adjustments, and the specified scheduled intervals shall be maintained.

(2) The specified scheduled maintenance intervals (see section 1.3) shall, as applicable, be based on the criteria given in 8.6.1.2.1(e).

(3) MCP records shall be viewable on-site by elevator personnel in ~~either hard copy or electronic~~ format acceptable to the authority having jurisdiction, located in the elevator machine room or on the car top, and shall include, but are not limited to, the following:

- (-a) sight name and address
- (-b) service provider name
- (-c) conveyance identification (I.D.) and type
- (-d) date of record
- (-e) a description of the maintenance tasks, interval, and associated requirements of section 8.6
- (-f) indication of completion of maintenance task

NOTE [8.6.1.4.1(a)]: The recommended format for documenting MCP records can be found in Nonmandatory Appendix Y. This is only an example format. A specific MCP that includes all maintenance needs is required for each unit.

(b) Repair and Replacement Records. The following repairs and replacements shall be recorded and kept on-site for viewing by elevator personnel in ~~either hard copy or electronic~~ format, located in the elevator machine room or on the car top.

#### Justification:

To maximize inspection efficiency by having required documents readily accessible on-site.

**Cost Impact:** No Cost impact.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 11/25/2024  
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**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken





**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

**Amendment to 2022 American Society of Mechanical Engineers (ASME)  
A17.1 Section 8.6.1.7.2**

**Submitted by:** ASME/Elevator Code Committee

**8.6.1.7.2. Periodic Test Record.** A periodic test record for ~~each~~ all periodic test(s) containing the applicable Code requirement(s) and date(s) performed, and the name of the person or firm performing the test, shall be installed to be readily visible and adjacent to or securely attached to the controller of each unit in the form of a metal tag conforming to 8.13.3. If any of the alternative test methods contained in 8.6.4.20 were performed, then the test tag shall indicate alternative testing was used for the applicable requirement.

A written periodic test report containing the applicable code requirement(s) shall be located in the maintenance records and kept on site readily available in the machine room or the car top.

**Justification:** Remove redundant records and reduce cost of metal tags.

**Cost Impact:** None, Metal tags with code requirements required larger more expensive tags.

**Approved in previous 2018 Code Adoption process:**  YES  NO

**ACTION TAKEN:**

**2024 Code Committee** Date: 11/25/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2022 American Society of Mechanical Engineers (ASME) A17.1 Section 8.7.1.13

**Submitted by:** ASME/Elevator Code Committee

**8.7.1.13 Separation of Multiple Hoistways.** When an alteration is performed in a multiple hoistway with one or more elevators in normal use, and work is to be performed in an adjacent portion of that multiple hoistway there shall be a full separation of the elevator hoistways between the elevators. The material used for this separation shall:

1. Be as strong as or stronger than 1.110 mm (0.0437 in.) diameter wire.
2. Have openings not exceeding 25 mm (1 in.)
3. Be supported and braced so to prevent contact between the enclosure material and the car or counterweight when subjected to a pressure of 890 N (200 lbf) applied at right angles at any point on an area 100 mm x 100 mm (4 in. x 4 in.).

**Justification:** Protection of passengers and equipment of elevators running beside elevators that construction or alterations are being performed.

**Cost Impact:** Minimal

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

<b>2024 Code Committee</b>	Date: 11/25/2024
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken

<b>Development Advisory Board (DAB) Subcommittee</b>	Date: 02/13/2025
<input checked="" type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken

<b>Development Advisory Board (DAB)</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken

<b>Transportation, Infrastructure and Planning Subcommittee</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken

<b>City Council Action</b>	Date:
<input type="checkbox"/> Approved as submitted <input type="checkbox"/> Modified and approved <input type="checkbox"/> Denied	<input type="checkbox"/> No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2022 American Society of Mechanical Engineers (ASME) A17.1 Section 8.11.1.3

**Submitted by:** ASME/Elevator Code Committee

**8.11.1.3 Periodic Inspection and Test Frequency.** The frequency of periodic inspections and tests shall be established by the authority having jurisdiction. Periodic inspections shall be performed every 12 months. Periodic Tests shall be performed according to Non-Mandatory Appendix N, Table N-1-1.

**Justification:** To Clarify when the City of Phoenix performs the Periodic Inspections and when periodic tests are required.

**Cost Impact:** None

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 11/25/2024  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
 Approved as submitted  Modified and approved  Denied  No action taken

**Development Advisory Board (DAB)** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



**BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

**Amendment to American Society of Mechanical Engineers (ASME)  
A17.3 Section 3.10.12**

**Submitted by:** ASME/Elevator Code Committee

**3.10.12 System to Monitor and Prevent Automatic Operation of the Elevator With Faulty Door Contact Circuits**

Means shall be provided to monitor the position of power-operated car doors that are mechanically coupled with the landing doors while the car is in the landing zone, in order

(a) to prevent automatic operation of the car if the car door is not closed [see 3.4.2(c)], regardless of whether the portion of the circuits incorporating the car door contact or the interlock contact of the landing door coupled with the car door, or both, are closed or open, except as permitted in 3.10.7.

(b) to prevent the power closing of the doors during automatic operation if the car door is fully open and any of the following conditions exist:

(1) The car door contact is closed, or the portion of the circuit incorporating this contact is bypassed.

(2) The interlock contact of the landing door that is coupled to the opened car door is closed, or the portion of the circuit incorporating this contact is bypassed.

(3) The car door contact and the interlock contact of the door that is coupled to the opened car door are closed, or the portions of the circuits incorporating these contacts are bypassed.

(c) Compliance date to be no later than four (4) years from the date of adoption.

**Justification:** To provide owners with reasonable time to facilitate any necessary planning required to comply.

**Cost Impact:** Moderate. Cost of modifying controls to accommodate new circuitry.

**Approved in previous 2018 Code Adoption process:**  YES  NO

**ACTION TAKEN:**

**2024 Code Committee** Date: 11/13/2024  
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**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken

**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2020 American Society of Mechanical Engineers (ASME) A17.3 Section 3.13.3

Submitted by: ASME/Elevator Code Committee

#### **Section 3.13.3 Compliance**

Note: Items 3.13.1 through 3.13.2.2 shall have a compliance date to be no later than four (4) years from the date of adoption.

**Justification:** To provide owners with reasonable time to facilitate any necessary planning required to comply.

**Cost Impact:** Minimal

Approved in previous 2018 Code Adoption process:  YES  NO

#### **ACTION TAKEN:**

**2024 Code Committee** Date: 11/25/2024  
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**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to American Society of Mechanical Engineers Code (ASME) A17.3 Section 3.14

**Submitted by:** ASME/Elevator Code Committee

**3.14 Car Tops. MITIGATION OF FALL HAZARDS ON OR AROUND CAR TOPS.**

All passenger and freight elevator car tops that have a fall hazard as described by OSHA 1926.501(b) and ASME a17.1-2022 section 2.14.1.7 shall meet the requirements of ASME a17.1-2022 section 2.14.1.7, and 8.7.2.14.5.

Compliance date to be no later than four (4) years from the date of adoption.

**Justification:** To reduce the possibility of loss of life or limb to Elevator Personnel during Maintenance, Testing, and Inspections. Increase of Safety factor for buildings.

**Cost Impact:** Minimal Cost of handrail installation only on elevators with fall hazards.

**Approved in previous 2018 Code Adoption process:**  YES  NO

**ACTION TAKEN:**

**2024 Code Committee** Date: 11/13/2024  
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**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to American Society of Mechanical Engineers Code (ASME) A17.3 Section 4.10

**Submitted by:** ASME/Elevator Code Committee

**4.10 Car Tops. Mitigation of fall hazards on or around car tops.**

All passenger and freight elevator car tops that have a fall hazard as described by OSHA 1926.501(b) and ASME A17.1-2022 Section 2.14.1.7 shall meet the requirements of ASME A17.1-2022 Section 2.14.1.7, and 8.7.2.14.5.

Compliance date to be no later than four (4) years from the date of adoption.

**Justification:** To reduce the possibility of loss of life or limb to Elevator Personnel during Maintenance, Testing, and Inspections. Increase of Safety factor for buildings.

**Cost Impact:** Minimal. Cost of handrail installation only on elevators with fall hazards

**Approved in previous 2018 Code Adoption process:**  YES  NO

**ACTION TAKEN:**

**2024 Code Committee** Date: 11/13/2024  
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**Development Advisory Board (DAB) Subcommittee** Date: 02/13/2025  
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**Development Advisory Board (DAB)** Date:  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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**City Council Action** Date:  
 Approved as submitted  Modified and approved  Denied  No action taken



# City of Phoenix

PLANNING & DEVELOPMENT DEPARTMENT

## BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

### Amendment to 2023 American Society of Mechanical Engineers (ASME) A17.3 Section 5.3.13

Submitted by: ASME/Elevator Code Committee

#### 5.3.13 Combplate Vertical Safety Device

Combplate vertical safety devices shall be provided that will cause the opening of the power circuit to the escalator driving-machine motor and brake if a resultant vertical force not greater than 670 N (150 lbf) in the upward direction is applied at the center of the front of the comb-plate at each landing. These devices shall be the manual reset type.

Comb-step impact devices conforming to the requirements of ASME AI 7.1 or ASME AI 7.1/CSA B44 meet these requirements.

(a) Compliance date to be no later than four (4) years from the date of adoption.

**Justification:** To provide owners with reasonable time to facilitate any necessary planning required to comply.

**Cost Impact:** Moderate.

**Approved in previous 2018 Code Adoption process:**  YES  NO

#### ACTION TAKEN:

**2024 Code Committee** Date: 01/15/2025  
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**Transportation, Infrastructure and Planning Subcommittee** Date:  
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