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2024-2026 Code Development Cycle, Group A (2024) Proposed Changes to the 2024 htmbnt6d

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by

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## 2024 GROUP A - PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE - FIRE SAFETY

# FIRE SAFETY CODE COMMET EE

### Jeffrey Tubbs, PE, FSFPE,

Principal Arup US Inc Northbridge, MA

### Richard Soltis, Jr.,

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### Mitchell Cady, MS

Rep: National Association of State Fire Marshals Deputy State Fire Marshal New Hampshire State Fire Marshal's Office Concord, NH

#### Matthew (Matt) Dobson, CAE

Rep: National Association of Home Builders Vice President Vinyl Siding Institute Burlington, NC

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### Lucia Ortega Gimenez

Consultancy Manager
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Copenhagen, Denmark 2100

### Raymond (Ray) Grill, PE, LEED AP

Fire Protection Engineer Ray Grill Consulting, PLLC Clifton, VA

#### Brian Killebrew, MCP

Sr. Construction Inspector Southern Methodist University Dallas, TX

## 2024 GROUP A – PROPOSED CHANGES TO THE INTERNATIONAL FUEL GAS CODE

### FUEL GAS CODE COMMITTEE

### Mark Riley,

Mechanical Inspector City of Royal Oak Building Department Berkley, MI

### Travis Lindsey, MCP,

Sr. Plans Examiner City of Scottsdale Mesa, AZ

### Scott Ayers, PE, PMP

Fire Program Area Manager US Consumer Product Safety Commission Rockville, MD

### Chris Byers, MCP, MCE

Rep:

## 2024 GROUP A – PROPOSED CHANGES TO THE INTERNATIONAL PLUMBING CODE

### PLUMBING CODE COMMITTEE

### James M. Pappas, CBO

Senior Plans Examiner City of Scottsdale Scottsdale, AZ

#### James Richardson, Jr.,

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### Joseph Ackroyd, PE

Assistant Commissioner NYC Department of Buildings New York, NY

#### **Michael Cudahy**

Codes and Regulations Plastic Pipe and Fittings Association (PPFA) Plantation, FL

### David Dukich, PE

Project Director Nelson Forensics, LLC Plano, TX

### **Ronald George**

Plumbing & Mechanical Design Consultant Plumb-Tech Design & Consulting Services LLC Newport, MI

### Robert Graham, CGB

Rep: National Association of Home Builders
President
NW Roots Construction LLC
Cle Elum, WA

### John Inks, Registered Master Plumber

Rep: United Association Training Director Plumbers Local Union No. 27 Coraopolis, PA

### McKenzie W. James

Chief Plumbing Inspector City of PortInd, Oregon Happy Valley, OR

#### **David Nickelson**

Codes Manager Uponor Winchester, VA

#### **Glen Ratliff**

Building Inspector Jefferson County Division of Building Safety Golden, CO See highlighted change to IFC Committee Roster

## TENTATIVE ORDER OF DISCUSSION 2024 PROPOSED CHANGES TO THE INTERNATIONAL FIRE CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order.

```
F87-24
F88-24
F89-24
F90-24
F91-24
F92-24
   FS96-24
   FS97-24
F93-24
F94-24
F95-24
F96-24
F97-24
F98-24
F99-24
F100-24
F101-24
F102-24
F103-24
   F13-24
F104-24
F105-24
F106-24
   G17-24
F107-24
F108-24
F109-24
F110-24
F111-24
F112-24 -
           2424242424
          F107-24
        F101 2
        F1o.110
        F101-24
        -24
          G109-24 F109-24 F107
          F
          F109-24 F103-24[Part-1Tc2 (IO Tc 0 Tw ()3.807Td()TjEMC P MCID 23 9BC -0.02 T4 0 T-02 T4 04.944
          F
          F
```

F267-24

F268-24

F269-24

F270-24

F271-24

F272-24

F273-24

F275-24

F276-24

F277-24

F278-24

F279-24

F280-24

See highlighted change to IMC Committee Roster

## TENTATIVE ORDER OF DISCUSSION 2024 PROPOSED CHANGES TO THE INTERNATIONAL MECHANICAL CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some M code change proposals may not be included on this list, as they are being heard by another committee.

E1-24 Part IV G1-24 Part VII

HEP DIYITAYAN-AOANE- | JATI | YPYGASA(1-24**CALE-T**UOL JOUNGACKABA)-N-2017/600T ((HENTIGONIY SICEZI IN<mark>AKANG GORROOO GORROOO GORROOO GORROOO JURGANA DI</mark> J**ERNAYA JARAA GORROOO GORROO**O JARAA DI JERNAYA JARAA GORROOO GORROOO JARAA DI JERNAYA JARAA GORROOO GORROOO JARAA DI JERNAYA JARAA GORROOO JARAA DI JERNAYA JARAA GORROOO JARAA DI JERNAYA JARAA J

P139-24 Part I

P140-24 Part I

P141-24

P142-24

P143-24

P144-24

P145-24

P146-24

D 1 1 7 0 2 7

P147-24

P148-24

P149-24

P150-24

130-24

P151-24

P152-24

P153-24

P154-24

P155-24

P156-24

P157-24 Part I

P158-24

P159-24 Part I

P160-24 Part I

P161-24

P162-24 Part I

P163-24

G1-24 Part VI

See highlighted change to IRC-P Committee Roster

## TENTATIVE ORDER OF DISCUSSION 2024 PROPOSED CHANGES TO THE INTERNATIONAL RESIDENTIAL CODE – PLUMBING

## TENTATIVE ORDER OF DISCUSSION 2024 PROPOSED CHANGES TO THE INTERNATIONAL SWIMMING POOL AND SPA CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some SP code change proposals may not be included on this list, as they are being heard by another committee.

```
G10-24 Part II
SP1-24
SP2-24
   G1-24 Part V
SP3-24
SP4-24
SP5-24
SP6-24
SP7-24
SP8-24
SP9-24
SP10-24
SP11-24
SP12-24
SP13-24
SP14-24
SP15-24
SP16-24
SP17-24
SP18-24
   M56-24 Part III M54-24 Part III
   P19-24 Part III
SP19-24
SP20-24
SP21-24
SP22-24
SP23-24
SP24-24
SP25-24
SP26-24
SP27-24
SP28-24
SP29-24
SP30-24
SP31-24
SP32-24
```

SP33-24

## 2024 PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE – MEANS OF EGRESS

E1-24 Part IV: Corrections to Section 603.4.1 in IMC and definition in IPC:

### E1-24 Part IV

**Proponents:** Jeff Grove, Chair, Building Code Action Committee (BCAC) (bcac@iccsafe.org); Andrew Bevis, Chair, Plumbing, Mechanical and Fuel Gas Code Action Committee (pmgcac@iccsafe.org); Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

2024 International Mechanical Code

603.4.1 Minimum fasteners. Round metallic ducts shall be mechanically fasten 927fasR.8 (1)829 MC66et)31 als

4.2 From an overhead metal duct to a ceiling diffuser within the same room in accordance with Section 603.6.2 of the International Mechanical Code.

FS76-24: The duplicate IMC sections have been added:

FS76-24

IBC: 717.6.2.1.1, 717.6.2.1.2; IMC: [BF] 607.6.2.1.1, [BF] 607.6.2.1.2

2024 International Mechanical Code

1.	Flaming on or in thngn ghng in t iamn tn gn i3.1 (ng)-1n2.3nhng20ngnhngh3 ghng (i3.15 m) (i3.1.1 (or)-6abov

## 2024 PROPOSED CHANGES TO THE INTERNATIONAL FIRE CODE

F36-24: Replace the cost impact with the following:

### F36-24

Proponents: Matthew Dobson, VSI, VSI (mdobson@vinylsiding.org)

Cost Impact: Increase

**Estimated Immediate Cost Impact:** This change could increase the cost of construction and maintenance, as non-combustible mulch can be more expensive than combustible mulch.

Based on a search of multiple retail stores the following averages can be used: \$4.00 for 2.0 cu. ft. of wood mulch and \$4.00 for 0.5 cu. ft. of pebble landscape rock or pea gravel.

Estimated Immediate Cost Impact Justification (methodology and variables): Typical retail cost of non-combustible mulch (pea gravel) vs. combustible mulch, can range from 2-5 times more expensive.

**Estimated Life Cycle Cost Impact:** However typical combustible mulch will need to be replaced every 1-2 years vs. non-combustible mulch which may last 10+ years.

Estimated Life Cycle Cost Impact Justification (methodology and variables): Based on estimated lifecycle of typical combustible mulch vs. non-combustible mulch.

F59-24: Replace the cost impact with the following:

## F59-24

Proponents: Jonathan Roberts, UL Solutions, UL Solutions (jonathan.roberts@ul.com)

Cost Impact: Increase

Estimated Immediate Cost Impact: \$0 or as explained below.

This proposal allows for the use of either listed or approved (non-listed) battery containment enclosures. The cost for obtaining listed battery containment enclosures may or may not represent an increase over obtaining non-listed battery containment enclosures that have not been independently investigated applicable product safety standards. Data is not available to accurately estimate the exact cost impact the proposal, but the factors identified below can be considered in determining cost differentials.

Estimated Immediate Cost Impact Justification (methodology and variables):

### F63-24: Replace the cost impact with the following:

## F63-24

Proponents: Mark Chubb, ManitouNW LLC, ManitouNW LLC (mark.chubb@manitounw.com)

Cost Impact: Increase

Estimated Immediate Cost Impact: The most immediate impact involves limitations on sites where auto-

### F99-24: Replace the cost impact with the following:

## F99-24

**Proponents:** Robert Marshall, FCAC, FCAC (fcac@iccsafe.org); Robert J Davidson, Davidson Code Concepts LLC, Self (rjd@davidsoncodeconcepts.com)

**Cost Impact: Increase** 

#### F114-24: Replace the cost impact with the following:

### F114-24

Proponents: Jean-Pierre de Tourtoulon, Marioff, Marioff (jean-pierre.detourtoulon@carrier.com)

**Cost Impact:** Decrease

**Estimated Immediate Cost Impact:** Current reductions assigned to automatic sprinkler systems not allowed, change in code will have significant impact and make watermist both competitive and a better choice for clients looking for a performance based system

For a commercial or residential building, the cost of installing an automatic sprinkler system can range from \$1.50 to \$4.00 per square foot of floor area. This estimate includes the cost of materials (pipes, sprinkler heads, valves, fittings, etc.), labor, permits, engineering/design fees, and any necessary modifications to the building's plumbing system. Changing this will reduce costs by 20% but over lifetime of building system will be significantly less expensive. For comparison to an automatic sprinkler system, the cost decrease would be \$0.30 to \$0.80 per square foot of floor area.

Estimated Immediate Cost Impact Justification (methodology and variables): Current comparison to sprinklers makes watermist over 100% more expensive due to wording of 904.2.1

Small bore stainless pipework helps with coordination, installation and longevity of system. No need to replace every 25 years.

Cost source data: ChatGPT

**Estimated Life Cycle Cost Impact:** High pressure water mist systems by their design perform equal or better to traditional sprinkler systems, this is the premise of the design and pass fail criteria.

If the system proves it performs better then the damage caused, cleanup cost, impact on business continuity is clearly reduced.

Environmentally speaking 72.5% less water is used to suppress a lithium ion fire so there is 72.5% less water to clean, decontaminate and dispose of to reinstate the business.

High pressure watermist systems with stainless steel pipework outlast all sprinkler systems and with maintenance have no problems with

system degradation

Estimated Life Cycle Cost Impact Justification (methodology and variables): Replacement of sprinkler currently at 20-25 years, not needed with high pressure watermist system

### F116-24: Replace the cost impact with the following:

## F116-24

Proponents: James Carver, Self, Southern California Fire Prevention Officer's Association

Cost Impact: Increase

**Estimated Immediate Cost Impact:** The proposal could have an increase in construction cost for installation of a dedicated function fire alarm system. If the automatic fire extinguishing system is located near

F155-24:

Please see the following websites for the basis of the square footage costs.

https://www.angi.com/articles/home-fire-sprinklers-are-affordable.htm https://nfsa.org/wp-content/uploads/2019/08/Retrofit-Guide-July-2019-v6-COLOR.pdf

F270-24: Standard added

## F270-24

Proponents: Kris Jaggari, Nouryon/OPPSD Representative (kris.jaggari@nouryon.com)

Add new standard(s) as follows:

**PGS 8-21** Organic Peroxides: Storage -Guidance for the Safe Storage of Organic Peroxides.

## 2024 PROPOSED CHANGES TO THE INTERNATIONAL FUEL GAS CODE

FG8-24: Proponent information missing

FG8-24

Proponent: Austin Rivera, Centrotherm Exo Systems, Centrotherm Exo Systems

## 2024 PROPOSED CHANGES TO THE INTERNATIONAL PLUMBING CODE

### P25-24: Correction to Section 403.2 in the IPC:

## P25-24

### 2024 International Plumbing Code

**Proponents:** Julius Ballanco, P.E., JB Engineering and Code Consulting, P.C., Self (jbengineer@aol.com)

### Revise as follows:

**403.2 Separate** Toilet facilities. Where Required plumbing fixtures are required, separate toilet facilities shall be located in all gender toilet rooms or in separate toilet rooms provided for each sex.

### **Exceptions:**

1. Separate toilet

P42-24 Part I: Proponent did not display:

## P42-24 Part I

2024 International Plumbing Code

Proponents: Justin Cassamassino, ASME, A112 Main Committee (cassamassinoj@asme.org)

P157-24 Part I: Quality Tier column missing from Table 1301.2(1):

## P157-24 Part I

**Proponents:** Andrew Bevis, Chair, Plumbing, Mechanical and Fuel Gas Code Action Committee (pmg-cac@iccsafe.org)

Add new text as follows:

## TABLE 1301.2(1) REQUIRED WATER QUALITY FOR REUSE APPLICATIONS

<u>Use Category</u>	<u>Application</u>	Exposure	
	• • • • • • • • • • • • • • • • • • • •	·	

	Ornamental nursery stock	AC/LC	<u>3/1</u>
	Seed Crops	AC/LC	<u>3/1</u>
	Silviculture / Tree Farms	AC/LC	3/1
	Sod/Turf Crops	AC/LC	<u>3/1</u>
	<u>Tobacco</u>	AC/LC	<u>3/1</u>
Landscape Irrigation (Spray/Drip)	Athletic Fields	AC/LC	3/1
	Cemeteries	AC/LC	<u>3/1</u>
	College and University Campuses	AC/LC	3/1
	Commercial Campuses	AC/LC	<u>3/1</u>

## 2024 PROPOSED CHANGES TO THE INTERNATIONAL WILDLAND -URBAN INTERFACE CODE

For ALL the WUIC proposals listed, the cost impacts are being replaced with the following:

## WUIC21-24

Proponents: Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

Cost Impact: Increase

Estimated Immediate Cost Impact: The cost for construction in a Moderate Hazard Fire Severity zone with a conforming water supply provided with the 1.5x required defensible space is estimated to add approximately 1% to the total cost of construction materials for the building.

Key changes are the need for at least a Class B roof, upgraded roof valleys, Underfloor enclosures, protection of gutters and downspouts and addressing attic vents. Construction costs vary between \$90-\$150 per (ns)-814U150t ti ecy t 150t:

by the code. The application of this Table as currently written allows for a reduction in required IR Construction materials when the water supply complies with what is already required by this code,

The cost of construction will be increased based on this proposal as compared to the cost reduction (allowance) that is currently provided. That cost will be based on the difference of IR 3 construction vs. IR 2 or IR 2 vs IR1.

Summarized from ChatGPT: The cost of adding fire mains for a subdivision can vary widely depending on several factors such as the size of the subdivision, the existing infrastructure, local building codes and regulations, terrain, distance to the nearest water source, and the type of fire suppression system being installed. This provides a general estimate. Installing fire mains typically involves laying underground water pipes to supply water for firefighting purposes. Costs may include excavation, piping materials, valves, hydrants, backflow prevention devices, labor, permits, engineering/design fees, and any necessary road or sidewalk repairs.

The cost of installing fire mains for a subdivision could range from \$50,000 to \$200,000 or more per mile of pipe, depending on various factors. Based upon the information obtained from ChatGPT an estimate of cost per structure has been developed. This estimate assumes a relatively straightforward installation with minimal obstacles. So assuming a subdivision of 20 house subdivision with generous spacing is about .1 mile distance. \$5000-\$20,000 for the subdivision based upon that distance. For each home an overall \$25wof \$250-\$1000 per structure. However, since they will have a conforming water supply as currently shown in the table they will not be required to upgrade the ignition resistant construction type.

It's important to note that these costs can vary significantly based on local cone c

x Roofs: Roofing costs depend on factors such as the type of roofing material (asphalt shingles, metal, tile, etc.), roof slope, complexity of the roof design, and regional labor rates. On average, the cost of roofing can range from \$3 to \$10 per square foot for materials and installation. Therefore, resulting in an increase ranging from \$0.30 dollars to \$1.00 a square foot.

Estimated Immediate Cost Impact Justification (methodology and variables): The cost estimates for exterior walls, decks and roofs were obtained from ChatGPT.

### WUIC27-24

Proponents: Robert Marshall, FCAC, FCAC (fcac@iccsafe.org)

Cost Impact: Increase

Estimated Immediate Cost Impact: Eliminating the option of allowing single-pane tempered that has been in the IWUIC since 2003, will increase costs for manufacturers shifting to provide multilayered glazed panels with at least one tempered pane. Multilayered glazed panels are readily available in the industry and being installed to meet other code requirements. However, this proposal will increase the cost

Estimated Immediate Cost Impact Justification (methodology and variables): The existing code mandates that exterior walls should be built with either a one-hour fire-resistant rated assembly or an ignition-resistant exterior surface. In contrast, the proposed amendment will necessitate exterior walls to be constructed with both a one-hour fire-resistant rated assembly and an ignition-resistant exterior surface where provisions of Section 603 (defensible space requirement) are not met.

### Bibliography

[3] Headwaters Economics and Insurance Institute for Business & Home Safety, 2022, Construction costs for a wildfire-resistant home, California Edition. <a href="https://headwaterseconomics.org/wp-content/uploads/2022\_HE\_IBHS\_Wiil">https://headwaterseconomics.org/wp-content/uploads/2022\_HE\_IBHS\_Wiil</a>

## WUIC66-24

Proponents: