## PMG Code Action Committee Working Document for 2023-2026 Code Development Cycle Page 1 of 21 as of 23MAR2023

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**Item 1** DROPPED IMC Reorganization of plenums Section 602 . M55-21 was AM. No further action needed.

### Item 2 IFGC Update Hydrogen Blending Provisions

Work Group #1 Chairs: Kevin Brenton-Chair, Ken Gregory-Vice Chair

#### **Item 3** IPC Water Reuse Provisions

Work Group #2: Chris Imhoff-Chair, Ken Gregory-Vice Chair

#### Item 4 IMC Air intake termination access. See M17-21

Send out video link from CAH: https://www.cdpaccess.com/videos/3486/.

M17 addressed air intake openings (not exhaust openings)

A floor modification (Summers 1) was offered.

M17-21 was:

#### Revise as follows:

**401.4 Intake opening location.** Air intake openings shall comply with all of the following:

- 1. Intake openings shall be located not less than 10 feet (3048 mm) from lot lines or buildings on the same lot.
- 2. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet (3048 mm) horizontally from any hazardous or noxious contaminant source, such as vents, streets, alleys, parking lots and loading docks, except as specified in Item 3 or Section 501.3.1. Outdoor air intake openings shall be permitted to be located less than 10 feet (3048 mm) horizontally from streets, alleys, parking lots and loading docks provided that the openings are located not less than 25 feet (7620 mm) vertically above such locations. Where openings front on a street or public way, the distance shall be measured from the closest edge of the street or public way.
- 3. Intake openings shall be located not less than 3 feet (914 mm) below contaminant sources where such sources are located within 10 feet (3048 mm) of the opening. Separation is not required between intake air openings and living space exhaust air openings of an individual dwelling unit or sleeping unit where an approved factory-built intake/exhaust combination

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### Item 5 IMC Plant processing and extraction facility ventilation. See M27-21

Section 408.2 needs to revised or removed?

Work Group #3 established: Andrew Bevis-Chair, Kevin Brenton-Vice Chair

M17-21 was:

Add new text as follows:

#### <u>SECTION 408 PROCESSING AND EXTRACTION FACILITIES.</u>

408.1 General. Plant processing or extraction facilities shall comply with this section, the International Building Code and Chapter 39 of the International Fire Code. The extraction process includes the act of extraction of the oils and fats by use of a solvent, desolventizing of the raw material, production of the miscella, distillation of the solvent from the miscella and solvent recovery. Post-extraction processing includes winterization, solvent recovery, distillation, decarboxylation, isolation, chromatography and similar processes. The use, storage, transfilling and handling of hazardous materials in these facilities shall comply with this code, the International Building Code and the International Fire Code.

**408.2 Existing buildings or facilities.** Existing buildings or facilities used for the processing of plants shall comply with this code, the International Building Code and the International Fire Code. Existing extraction processes where the medium of extraction or solvent is changed shall comply with this section.

408.3 Mechanical ventilation. Natural ventilation shall not be permitted. Mechanical ventilation shall be designed and installed in accordance with Section 403 in this code and Chapter 39 of the International Fire Code. The exhaust airflow rate shall be provided in accordance with the requirements of 408.3.1 through 408.3.4.

408.3.1 Extraction processes using flammable gases or flammable liquids. Continuous mechanical exhaust ventilation shall provid0(.)]TJ35ovid0(.)]TJ35ov pro1.28 6(n t -0.002d(at)2(e 1210(l)2((

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502.21.2 Post-processing. Post-processing operations, including dispensing of flammable liquids between containers, shall be performed within a hazardous exhaust fume hood rated for exhausting flammable vapors and listed in accordance with UL 1805. Electrical equipment used within the hazardous exhaust fume hood shall be rated for use in flammable atmospheres. Exception: A hazardous exhaust fume hood shall not be required where an approved exhaust system is installed in accordance with NFPA 91.

#### Add New Standard:

UL

1805-2002: Standard for Laboratory Hoods and Cabinets (Ed.1)

Reason Statement: These facilities are becoming common in numerous states and these requirements are based of best practices and ensure basic fire and life safety measures. The requirements in this section provide requirements for hazardous and non-hazardous facilities. The development of these requirements was done in collaboration with the PMGCAC and FCAC. Most of these requirements are existing in current code we are only creating sections that provide an understandable path for compliance.

**Item 6** IPC Commercial pool plumbing fixture calculations.

WG #4 established: Ken Gregory-Chair, Vice Chair not assigned. Rich Anderson as Interested Party

#### From Table 403.1 MINIMUM PLUMBING FACILTIES:

Stadiums, amusement parks, bleachers and

grandstands for outdoor sporting events and

activities<sup>f</sup>

#### Notes:

f. The required number and type of plumbing fixtures for outdoor public swimming pools shall be in accordance with Section 609 of the International Swimming Pool and Spa Code.

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### **Item 7** IMC Table 403.3.1.1 – category description needs clarity

The problem is to clarify which private garages need ventilation and which don't. Private garages are defined in the code

Allow people to think about this more and come back in a future meeting with thoughts.

#### From Table 403.3.1.1 Minimum Ventilation Rates:

Private dwellings, single and multiple		
Garages, common for multiple units <sup>b</sup>	 	 0.75

Notes:

b. Mechanical exhaust required and the recirculation of air from such spaces is prohibited. Recirculation of air that is contained completely within such spaces shall not be prohibited (see Section 403.2.1, Item 3).

Add a footnote i)

Item 8 IPC Storm water flow discrepancy with IBC storm water flow

#### From IPC:

**1108.3 Sizing of secondary drains.** Secondary (emergency) roof drain systems shall be sized in accordance with Section 1106 based on the rainfall rate for which the primary system is sized. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.7. Scuppers shall have an opening dimension of 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. The flow through the primary system shall not be considered when sizing the secondary roof drain system.

The primary system is sized:

**1106.1 General.** The size of the vertical conductors and leaders, building *storm drains*, building storm *sewers* and any horizontal branches of such drains or *sewers* shall be based on the 100-year

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hourly rainfall rate indicated in Figures 1106.1(1) through 1106.1(5) or on other rainfall rates determined from approved local weather data.

#### From the IBC:

1611.1 Design rain loads. Each portion of a roof shall be designed to sustain the load of rainwater as per the requirements of Chapter 8 of ASCE 7. The design rainfall shall be based on the 100-year 15minute duration event, or on other rainfall rates determined from approved local weather data. Alternatively, a design rainfall of twice the 100-year hourly rainfall rate indicated in Figures 1611.1(1) through 1611.1(5) shall be permitted.

(Equation 16-19)

For SI:  $R = 0.0098(d_s + d_h)$ 

where:

- $d_h$  = Additional depth of water on the undeflected roof above the inlet of secondary drainage system at its design flow (in other words, the hydraulic head), in inches (mm).
- d<sub>s</sub> = Depth of water on the undeflected roof up to the inlet of secondary drainage system when the primary drainage system is blocked (in other words, the static head), in inches (mm).
- R = Rain load on the undeflected roof, in psf (kN/m<sup>2</sup>). Where the phrase "undeflected roof" is used, deflections from loads (including dead loads) shall not be considered when determining the amount of rain on the roof.

#### From Julius Ballanco:

"I thought I would alert you as to why the difference in the rainfall rate (storm selection) bn/P &MCIDa,e5002 -oiB91(5(C -)ca)4(t)

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of 3.08 inches. A 10 year return of 5 minute duration has a rainfall rate of 7.4 inches per hour and a total rainfall of 0.619 inches. Hence, ASPE Research Foundation found the numbers to be good to use. As you know, structural engineers tend to be more conservative. For Chicago a 100 year return of 15 minute duration has a rainfall rate of 6.4 inches per hour and a total rainfall amount of 1.60 inches. This equates to the 2-1/2 times factor of safety from what the plumbing engineers list.

As to which code is correct, they both are. The IBC is concerned with roof loading whereas the IPC is concerned with draining the stormormntu.63 -2ahy-0.85TJ0 -1.402 T2.8(m) Td9(o)- 0 Tw 5.63 62 Td(m) Td9w5o3v-2.9.4(e)-6C

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# **Item 9a** IMC Roof hatch size not defined for hatches that don't have stairways Ref IBC 1011.12.2

California Code has some language related to access from a ladder. California 304.3.1.1 CMC 2021 access Firefighter access dimension? Hatch size for service only?

IBC section scoped by

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- 8..Landing required. The ladder shall be provided with a clear and unobstructed bottom landing area having a minimum dimension of 30 inches (762 mm) by 30 inches (762 mm) centered in front of the ladder.
- 9..Ladders shall be protected against corrosion by approved means.
- 10. Access to ladders shall be provided at all times.

Catwalks installed to provide the required access shall be not less than 24 inches (610 mm) wide and shall have railings as required for service platforms.

Exception: This section shall not apply to Group R-3 occupancies.

#### From the IBC:

1011.12.2 Roof access. Where a stairway is provided to a roof, access to the roof shall be provided through a penthouse complying with <u>Section 1511.2</u>.

Evention		
Exception:	(I. Control of the Co	

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#### 809.8 Architectural features.

Surfaces of architectural features shall not be required to comply with the 1 unit vertical in 7 units horizontal (14-percent slope) slope limitation.

Item 11 NTSB fuel gas detection monitor. IFGC proposal from last cycle.

WG#2 of FCAC has some involvement. Is it in the 2024 IFGC ? Fred to check

An IFGC proposal for fuel gas monitor was not found.

Further Staff investigation found the following information:

https://www.ntsb.gov/investigations/Pages/PLD18FR002.aspx

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### From USC FCCCHR:

https://fccchr.usc.edu/\_downloads/FRD%20Archives/PostMix.Carbonators.pdf

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## Item 14 IPC Cleanup errors in Table E103.3(1)

The reported errors are:

1. Row E states "Static Head Loss 21 x 43 psi"

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	loss– Filter						
Н	Special fixture loss— Other	0.00					
I	Total overall losses and requirem ents (Sum of Lines B through H)	45.6 4					
J	Pressure available to overcome pipe friction (Line A minus Lines B to H)	9.36			s/b 0.085	s/b 3.1	

Pipe section (from diagram) Cold water distribut

piping ion -1.307 TD [(w)-1.7(at)0.48 -1(-1.336 >m (0[(w)-10 Tc 0 .9(085)84 /CS1 cs 74 -0174 57 0.72 3.8n -

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	DE♭	132	77.0	150	<b>2</b> ¹/₂	12.00	1.62	1.9	3.08	_

Total pipe friction losses

Κ

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# **Item 17** IPC Absence of prohibition of using a water heater thermostat for final temperature control.

This is what was relayed by Ron George in the meeting chat:

Correct a past code change that removed prohibition of the water heater thermostat as the final control for purposes of preventing scalding at fixtures. The addition of ASSE listed heaters caused proponent to strike prohibitions of using the WH thermostat for meeting the scald provisions at the fixture. During the prior code cycles (2) cycles agoA code change proposal was presented to allow ASSE 1082, 1084 WHs as an exception in the code.

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#### From the IPC:

403.1.1 Fixture calculations. To determine the occupant load of each sex, the total occupant load shall be divided in half. To determine the required number of fixtures, the fixture ratio or ratios for each fixture type shall be applied to the occupant load of each sex in accordance with Table 403.1. Fractional numbers resulting from applying the fixture ratios of Table 403.1 shall be rounded up to the next whole number. For calculations involving multiple *occupancies*, such fractional numbers for each *occupancy* shall first be summed and then rounded up to the next whole number.

#### **Exceptions:**

- 1. The total occupant load shall not be required to be divided in half where *approved* statistical data indicate a distribution of the sexes of other than 50 percent of each sex.
- 2. Where multiple-user facilities are designed to serve all genders, the minimum fixture count shall be calculated 100 percent, based on total occupant load. In such multiple-user facilities, each fixture type shall be in accordance with ICC A117.1 and each urinal that is provided shall be located in a stall.
- 3. Distribution of the sexes is not required where single-user water closets and bathing room fixtures are provided in accordance with Section 403.1.2.

**Item 20** IMC Section 402 needs revised based upon how ASHRAE 62.1-2022 deals with natural ventilation.

Read-Only Versions of ASHRAE Standards Section 6.4

IMC Section 402 is scoped (controlled by) IBC Section 1202.5 which is BCAC territory.