Healthcare PC

Updated 5-27-2021
Updated 6-11-2021

M32-21
P102-21
E55-21
F175-21
F119-21 Part 1 – draft ready
F119-21 Part 1 – draft ready
F9-21 – draft in progress

M32-21

IMC: 505.3, 505.7 (New), 505.8 (New)
Proponents: John Williams, Chair, representing Healthcare Committee (ahc@iccsafe.org)

2021 International Mechanical Code

Revise as follows:

505.3 Exhaust ducts. Domestic cooking exhaust equipment shall discharge to the outdoors through sheet metal ducts constructed of galvanized steel, stainless steel, aluminum or copper. Such ducts shall have smooth inner walls, shall be airtight and shall be equipped with a backdraft damper. Installations in Group I-1 and I-2 *occupancies* shall be in accordance with ~~the *International Building Code* and Section 904.14 of the International Fire Code~~ this section and Section 505.7 or 505.8.

Exceptions:

1. ~~In other than Groups I-1 and I-2, where~~ Where installed in accordance with the manufacturer's instructions and where mechanical or natural ventilation is otherwise provided in accordance with Chapter 4, *listed* and *labeled* ductless range hoods shall not be required to discharge to the outdoors.

2. Ducts for domestic kitchen cooking *appliances* equipped with downdraft exhaust systems shall be permitted to be constructed of Schedule 40 PVC pipe and fittings provided that the installation complies with all of the following:
   2.1. The duct shall be installed under a concrete slab poured on grade.
   2.2. The underfloor trench in which the duct is installed shall be completely backfilled with sand or gravel.
   2.3. The PVC duct shall extend not more than 1 inch (25 mm) above the indoor concrete floor surface.
   2.4. The PVC duct shall extend not more than 1 inch (25 mm) above grade outside of the building.
   2.5. The PVC ducts shall be solvent cemented.

Add new text as follows:

505.7 Group I-1 Occupancies.
In Group I-1 occupancies, hood installations over domestic cooking equipment shall be installed in accordance with one of the following:

1. Domestic hoods over cooktops and ranges installed in accordance with Section 420.9 of the International Building Code shall comply with the following:
   1.1. Protection from fire shall be in accordance with Section 904.14 of the International Fire code.
   1.2. Mechanical ventilation shall be provided to the rooms or spaces containing the cooking facility in accordance with

1.3. Hood systems shall have a minimum air flow of 500 cfm (14,000 L/min).

1.4. Listed and labeled ductless range hoods shall have a charcoal filter to reduce smoke and odors.

2. Commercial kitchen hoods complying with Section 507 shall be provided over cooktops and ranges serving greater than 30 care recipients.

505.8 Group I-2 Occupancies.

In Group I-2 Occupancies, Hood installations over domestic cooking equipment shall be installed in accordance with one of the following:

1. Domestic hoods over cooktops and ranges installed in accordance with Section 407.2.7 of the International Building Code shall comply with the following:

1.1. Protection from fire shall be in accordance with Section 904.14 of the International Fire code.

1.2. Mechanical ventilation shall be provided to the rooms or spaces containing the cooking facility in accordance with

1.3. Hood systems shall have a minimum air flow of 500 cfm (14,000 L/min).

1.4. Listed and labeled ductless range hoods shall have a charcoal filter to reduce smoke and odors.

2. Commercial kitchen hoods complying with Section 507 shall be provided over cooktops and ranges serving greater than 30 care recipients.

Reason: In I-1 and I-2 Occupancies, Section 407.2.6 and 420.8 set up a number of safeguards that allow for meal preparation for up to 30 care recipients. These cooking operations are on a lower scale than commercial cooking facilities and do not generate the same level of smoke and vapors. The aroma of food cooking is beneficial to the care recipients who live in I-1 and I-2 occupancies as it stimulates appetite and signals them that mealtime is near.

The hoods in question are not your standard domestic range hood. Hoods for I-1 and I-2 Occupancies must comply with Section 904.14 of the *International Fire Code*. This section requires hoods that are listed and labeled per UL 300A, have fire suppression built in, and have an interlock that cuts the fuel or power source upon activation of the extinguishing system. Stovetops must also have a timer that automatically turns off the cooking device after 120 minutes, preventing unattended cooking.

Federal Guidelines that govern I-2 Occupancies permit recirculating hoods with a charcoal filter and also require a higher airflow rate. This added language is being added to allow equivalent facilitation.

For commercial cooking facilities, compliance with NFPA 96 is required. However, NFPA 96 (Chapter 13) allows for the use of re-circulating hoods in commercial cooking operations, there is no justification to prohibit the use in these domestic uses.The issue at hand is that sometimes, especially in a renovation of a multi-story building, it can be impractical or impossible to run an exhaust duct to the outside. By requiring a vented hood, it would prevent many communities from being able to provide better food quality and a social experience that can be critical to quality of life.

The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 the CHC held several virtual meeting, which included members of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at CHC.

Cost Impact:

The code change proposal will decrease the cost of construction

The cost of a domestic hood is less than a commercial hood and associate duct work.

M32-21
Committee Action: Disapproved Committee
Reason: The committee agrees that the proposal language as written is problematic in this section and is missing the option of ducted installations for domestic hoods provided over cook tops. (Vote: 11-0) Carpenter & Jewell
https://icc-hearingvideos-public.s3.amazonaws.com/2021/GroupA/CAH/Track2/M32-21.mp4

M32-21 Public Comment

Replace the proposal with the following:

505.3 Exhaust ducts. Domestic cooking exhaust equipment shall discharge to the outdoors through sheet metal ducts constructed of galvanized steel, stainless steel, aluminum or copper. Such ducts shall have smooth inner walls, shall be airtight and shall be equipped with a backdraft damper. Installations in Group I-1 and I-2 *occupancies* shall be in accordance with the *International Building Code* and Section 904.14of the International Fire Code and Section 505.7 or 505.8.

Exceptions:

1. ~~In other than Groups I-1 and I-2, where~~ Where installed in accordance with the manufacturer's instructions and where mechanical or natural ventilation is otherwise provided in accordance with Chapter 4, *listed* and *labeled* ductless range hoods shall not be required to discharge to the outdoors.

2. Ducts for domestic kitchen cooking *appliances* equipped with downdraft exhaust systems shall be permitted to be constructed of Schedule 40 PVC pipe and fittings provided that the installation complies with all of the following:
   2.1. The duct shall be installed under a concrete slab poured on grade.
   2.2. The underfloor trench in which the duct is installed shall be completely backfilled with sand or gravel.
   2.3. The PVC duct shall extend not more than 1 inch (25 mm) above the indoor concrete floor surface.
   2.4. The PVC duct shall extend not more than 1 inch (25 mm) above grade outside of the building.
   2.5. The PVC ducts shall be solvent cemented.

505.7 Group I-1 Occupancies. In Group I-1 Occupancies, hood installations over domestic cooking equipment installed in accordance with Section 420.9 of the International Building Code shall comply with the following:

1. Range hoods shall have a minimum air flow rate of 500 cfm. (14,000 L/min).
2. Mechanical ventilation shall be provided to the rooms or spaces containing the domestic cooking equipment in accordance with Section 403.3.1
3. Range hood exhaust shall discharge to the outdoors.
   Exception: A listed and labeled ductless range hood shall be permitted where a charcoal filter is provided in the hood to reduce smoke and odors.

505.8 Group I-2 Occupancies. In Group I-2 Occupancies, hood installations over domestic cooking equipment installed in accordance with Section 407.2.7 of the International Building Code shall comply with the following:

1. Range hoods shall have a minimum air flow rate of 500 cfm. (14,000 L/min).

2. Mechanical ventilation shall be provided to the rooms or spaces containing the domestic cooking equipment in accordance with Section 403.3.1
3. Range hood exhaust shall discharge to the outdoors.
Exception: A listed and labeled ductless range hood shall be permitted where a charcoal filter is provided in the hood to reduce smoke and odors.

Reason: The CHC has been working on this proposal for the last three cycles. This is the last part of a package of code changes around cooking that recognize what has been "done for years" in I-1 Assisted Living and I-2 Nursing Home occupancies but to get it in the codes as a consistent and safe application nationwide and so that AHJ's have one set of rules that are easier to enforce. The Center for Medicare and Medicaid Services (CMS), who oversee Hospitals, Nursing Homes and Ambulatory Care Occupancies has allowed these cooking applications with re-circulating domestic range hoods since 2012. The CHC was established to work towards bringing the I-Codes in line with the Federal Guidelines and enable the I-codes to stand as an equivalent option. This code change is a needed piece to this equivalency status.

Please keep in mind that, by referencing Section 420.9 and Section 407.2.7 of the International Building Code, the range hoods in question are used only over domestic cooking appliances (cooktops and ranges) and are located either within individual dwelling units (I-1 only), in kitchens serving 30 or fewer care recipients, or in areas like a Physical Therapy or Activity room. The sections referenced also require certain additional safeguards like staff access to turn on the appliance and a timer that shuts off the appliance after 120 minutes, if not attended. These cooking provisions have been in the Codes since 2015, for nursing homes.

Further, the reference to the International Fire Code points to the requirement for fire suppression to be built into the hood, with manual activation and interconnection that turns off the cooking appliance. As I-1 and I-2 Occupancies are already required to be sprinkled, this brings another level of safety.

This Public Comment proposal addresses the comments we heard from the committee and opponents:

First, we were told it was confusing to bring the language referencing commercial kitchen hoods into Section 505, which only addresses domestic cooking, so we have removed that language. This doesn't change any requirements when using commercial appliances, or prevent a designer from choosing to provide a type 1 hood over a domestic range.

Secondly, we heard that it was not clear in the initial proposal that it was a choice between ducting to the outdoors OR using a ductless (re-circulating) exhaust hood in these applications. For this reason, we have changed the ductless hood to be an exception to the requirement to vent to the outdoors. There are some conditions that arise, that make it difficult, or impossible, to vent a hood to the outdoors. We feel that this proposal is providing the appropriate levels of safety for I-1 and I-2 care recipients, whether vented or ductless.

The addition of the charcoal filter in the ductless hood was meant to address the concerns from opponents on smoke, vapors and particulate matter being circulated through the space. This charcoal filtration matches the requirements in NFPA 96 for ductless (re-circulating) Commercial Kitchen hoods. Yes, NFPA 96 allows for ductless hoods in commercial cooking applications.

Setting the airflow requirement through the hood at 500 cfm, this matches the federal guidelines for this type of cooking operation and does a better job of capturing any fumes, grease laden vapors, etc from cooking operations. Standard domestic range hoods typically only provide 220 – 375 cfm so this is a significant increase. Several research studies have shown that higher air flow rates result in higher capture efficiencies and provide better indoor air quality.

Further, per Section 505.4, any exhaust hood over 400 cfm is required to be provided with equivalent make-up air systems. This ensures that sufficient fresh air is being brought into the space to offset

impacts of cooking operations. The requirement in this text for mechanical ventilation, not natural ventilation, reinforces this requirement and ensures that adequate ventilation will be provided to mitigate air quality concerns.

The EPA does raise concerns about how cooking activities can impact indoor air quality. However, typical domestic cooking activities on an electric or gas stove are not nearly the highest contributors to indoor pollution, respiratory issues and other concerns. Much higher level concerns are aimed at wood-burning fireplaces, kerosene stoves, burning candles and smoking. When the EPA talks about cooking, they are most concerned about cookstoves that burn solid fuels like wood, charcoal, dung, crop residues or coal for home cooking and heating. This is a far different situation that you would find in an Assisted Living or Nursing Home.

The EPA's Indoor Air Plus program, which is meant to be an add on to the Energy Star program, provides specifications to provide comprehensive indoor air quality protections in new homes. This checklist does not require range hoods to exhaust directly to the outdoors. However, it does require fresh air to be brought in, either throughout the home or in specific locations, to "dilute any pollutants". This recognizes that there can be a wide range of items that can impact indoor air quality.

While the EPA does say that controlling emissions at the source, by exhausting directly to the outdoors, is the most effective way to improve indoor air quality, they also state "Another approach to lowering the concentrations of indoor air pollutants in your home is to increase the amount of outdoor air coming indoors." (epa.gov website)

Since the majority of older homes have little to no mechanical ventilation, and don't have routine air changes, this code change appropriately addresses concerns about indoor air quality and safety for occupants in I-1 and I-2 uses. We also strongly believe that this proposal maintains an appropriate level of indoor air quality with a ductless range hood, balancing cost and technical issues. Those who want to go further can certainly take additional steps.

Resources:

Singer, Brett C. 2011 Experimental Evaluation of Installed Cooking Exhaust Fan Performance, Lawrence Berkeley National Lab, LBNL-4183E

EPA website: https://www.epa.gov/indoor-air-quality-iaq/improving-indoor-air-quality

EPA Indoor Air Plus Program: https://www.epa.gov/sites/production/files/2018-03/documents/indoor_airplus_fillable_verification_checklist.pdf

Notes 6-11-21: Amy to work on revised reason.

P102-21

IPC: 609.3, 609.3.1 (New), 609.2 (New)
Proponents: John Williams, Chair, representing Healthcare Committee (ahc@iccsafe.org)

2021 International Plumbing Code

Delete and substitute as follows:

~~**609.3 Hot water**. *Hot water* shall be provided to supply all of the hospital fixture, kitchen and laundry requirements. Special fixtures and equipment shall have hot water supplied at a temperature specified by the manufacturer. The hot water system shall be installed in accordance with Section 607.~~

609.3 Water. Water shall be provided in health care facilities in accordance with Section 609.3.1 and 609.3.2.

Add new text as follows:

609.3.1 Hand-washing water. Hand-washing water shall be provided to all dedicated handwashing stations. Dedicated hand-washing stations shall be permitted to be colder than tempered water.

609.3.2 Hot water. Hot water shall be provided in accordance with Section 607.

Reason: A major source of infection in the healthcare setting is the presence of waterborn contaminants, including Legionella, C-Difficile, and others that thrive in a certain water temperature. In particular, Leginella thrives in higher temperature water. Recently, outbreaks in New York City and other municipalities have highlighted the need to manage water to prevent contamination. For this reason, ASHRAE 188-2015 was implemented for water management plans in the healthcare setting.

Hand washing sinks in ares such as emergency departments and intensive care units are common, and have been required in the FGI Guidelines for many versions. This proposal seeks to make the allowance for cold hand washing in higher acuity areas at handwashing sinks.

The ASHRAE guideline 12 states “Conditions that are favorable for the amplification of legionellae growth include the presence of other bacteria, amoebae and other protozoan hosts, water temperatures of 25-42°C (77-108°F), stagnation, scale, sediment and biofilms.” Tempered water falls within this breeding area that is dangerous for the sensitive populations in health care facilities. Research has shown that “warm or hot” water have not significant impact on levels of bacterial reduction[1].
Common pathogens such as Escherichia coli, Salmonella typhimurium and Klebsiella pneumonia stay alive at temperatures up to 55°C (131°F) for over ten minutes and Staphylococcus aureus would require at least 50 minutes of exposure at a temperature of 60°C (140°F) to be reduced to an immeasurable level. By comparison, just 30 seconds of skin exposure to water heated to 55°C would cause deep second-degree burns, and water heated to 60°C could be tolerated for less than six seconds before causing serious harm.

Bibliography: 1. Carrico AR, Spoden M, Wallston KA, Vandenbergh MP. The Environmental Cost of Misinformation: Why the Recommendation to Use Elevated Temperatures for Handwashing is Problematic. Int J Consum Stud. 2013;37(4):433-441. doi:10.1111/ijcs.12012

Cost Impact: The code change proposal will decrease the cost of construction
Allowing for cold water decrease the cost for piping for to supply hot water and increase operational safety.

P102-21

Committee Action: Disapproved

Committee Reason: Water colder than tempered water is as cold as the incoming water supply temperature. The Committee cannot see how such a requirement could apply in every region where the code is used. In some areas, winter time incoming cold water is much too cold to hold one's hands under for needed 20 seconds for proper handwashing. The CDC recommends range of 68-75 degrees F if cold water only is to be used for handwashing. Although the intent of reducing Legionella is understood, where is the actual data to show that there are a significant number of cases coming from handwashing stations? (14-0)

Yes; Flannery & O'Neill

https://icc-hearingvideos-public.s3.amazonaws.com/2021/GroupA/CAH/Track2/P102-21.mp4

P102-21 Public Comment

Request AS

Reason:

Notes 6-11-21: Jeff to provide reason.

E55-21

IBC: SECTION 202 (New), 1010.2.15 (New) [IFC:[BE] SECTION 202 (New), 1010.2.15 (New)]
Proponents: Mike Nugent, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2021 International Building Code

Add new definition as follows:

CONTROL VESTIBULE. A space with doors in series such that when one door is open the other door is interlocked and cannot be opened.

Add new text as follows:

1010.2.15 Control vestibule. Control vestibules shall be permitted for security, clinical needs or environmental control in Groups F, H-5, and S and in Groups B, I-1, I-2, and M where the occupant load of the room or space served by the control vestibule is less than 50. Where doors in the means of egress are configured as a control vestibule, the control vestibule door locking system shall provide for egress. The control vestibule shall comply with all of the following:

1. On the egress side of each door of the control vestibule, an approved override shall be provided which deactivates the interlock of the door when that door is interlocked. Signage shall be provided with instructions on the use of the override.
2. Where an automatic sprinkler system or automatic fire detection system is provided, upon activation of such system the interlock function of the door locking system of the control vestibule shall deactivate.
3. Upon loss of power to the interlock function of the doors, the interlock function of the door locking system of the control vestibule shall deactivate.
4. The egress path from any point shall not pass through more than one control vestibule.
5. The control vestibule door interlocking system units shall be listed in accordance with UL 294.

Reason:
This proposal includes a definition for “control vestibule” and offers detailed requirements for control vestibules. This vestibule system controls egress temporarily. One door must be closed for the other to open.

Control vestibules – which have doors in series which are interlocked – are being incorporated in the means of egress in a variety of occupancies. The IBC is currently silent regarding requirements and guidance for control vestibules. This proposal offers requirements (guidance) for control vestibules in the means of egress.
The significant difference between typical doors in series in the means of egress (i.e. one after the other) and doors in the means of egress configured as a control vestibule is the doors of a control vestibule are

interlocked such that when one door of a control vestibule is open, the other door in series in the control vestibule is temporarily locked; and conversely, in the means of egress when all doors of a control vestibule are closed, any door may be opened.
Control vestibules are most commonly configured as a space with two doors in series. But, some control vestibules are configured with more than one inner door and / or more than one outer door. For example, where a control vestibule is required to help keep clean rooms clean, there may be inner doors from three different clean rooms opening into the control vestibule, and one outer door for leaving the control vestibule in the direction of egress.

It should be noted that control vestibules on the access (ingress) side of doors controlling access into a building or into a space within a building are more common that control vestibules on the egress side of doors controlling egress from a space or from a building. Requirements for access-side control vestibules is outside the scope of the IBC. Thus access-side control vestibules are not regulated or prohibited by the IBC provided all requirements for egress are complied with. This proposal addresses control vestibules in the means of egress addressing egress-side requirements.
Also, it should be noted that control vestibules may be “stacked” or combined with any of the other “shall be permitted” electrical locking arrangements of the IBC (2021 IBC sections 1010.2.11 through 1010.2.14).For example, assume both doors in the (air lock) control vestibule from an electronics manufacturing clean room are equipped with sensor release of electrically locked egress doors (IBC Section 1010.2.12) to allow no-touch exiting from the clean room through the (air-lock) control vestibule. The electrical locks on the two doors of the (air lock) control vestibule would be interlocked such that only one door is able to be open at a time. In the event of fire in the clean room, Item 2 requires the interlock function of the control vestibule to be deactivated, facilitating egress through the control vestibule with both doors open at the same time.
The proposed requirements for control vestibules are for these reasons:
Control vestibules are recommended to be permitted in the listed occupancy groups: Group B for banks and laboratories. Group F for factories. Group H for operations where contamination or atmospheric control is vital. Groups I-1 and I-2 to facilitate patient care and patient security. Group M for sales rooms for jewelry, gems, drugs, and similar highly valuable items. Group S for storage of valuables.
This proposal has no limits on occupant loads for a factory – access to factories is limited to employees, or visitors escorted by employees. Similar situation for H-5. And for storage, especially large storage areas, the calculated occupant load may be significant although the actual quantity of occupants is typically limited (i.e. employees). The other Groups – the proposed less than 50 occupant load is to be consistent with requirements for panic hardware on doors in the means of egress (occupant loads of 50 or more require panic hardware).

Control vestibules must provide for egress – which is a requirement in the charging language.

The last sentence in the charging language provides needed flexibility. For example, where casinos count money, accepted industry practices may not incorporate all of the requirements of Items 1 through 5 but may incorporate significant other security and safety provisions.

Item 1: A requirement to address the potential situation where one of the doors on the control vestibule is held open (example: a person holds the outer doorway open and other occupants need to be able to egress through the control vestibule in an emergency situation). This item requires, on the egress side of each door of the control vestibule, installation of an approved override which deactivates the interlock on that door. It is common the activation of an override would set off an alarm, and / or the activation of an override without a valid reason results in disciplinary action (i.e. employee gets fired). This item also requires signage with instruction on how to use the override.

Items 2 and 3: Requires the interlock function to be disabled in the event of fire, actuation of the fire detection system, or power loss to the interlock system renders the control vestibule equivalent to two doors in the means of egress allowing unobstructed egress.

Item 4: Requires that egressing through the control vestibule involves no more than two doors. While not common, there are situations where more than one control vestibule may be needed in the means of egress.

Item 5: Requires the units of the control vestibule locking system to be listed in accordance with UL 294, the same standard required for units for other electrical locking system units.

Together, the definition and proposed requirements provide for egress and emergency egress where control vestibules are installed.

Note: a control vestibule is different than a sallyport, which is defined in the IBC and permitted in Group I-3 occupancies. Group I-3 includes correction centers, detention centers, jails, prisons, and similar uses. A sallyport is a security vestibule which prevents unobstructed passage. A control vestibule is intended to allow unobstructed passage, but prevents more than one door of doors in series to be open at the same time.
This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at BCAC.

Cost Impact: The code change proposal will increase the cost of construction
Control vestibules are currently not addressed in the code. Where control vestibules are constructed, these requirements may include some locking requirements and interconnectedness currently not incorporated into some control vestibules.

E55-21

Committee Action: Disapproved

Committee Reason: This proposal was disapproved. The intent is good and is needed but there were still several questions. What is the maximum size of the vestibule? Is self closing needed on the doors for the exiting? What is the duration of the over ride? Would this be a hazard if used for areas with large occupant loads? (Vote: 13-1)

Yes; Woestam & O'Neill
https://icc-hearingvideos-public.s3.amazonaws.com/2021/GroupA/CAH/Track1/E55-21.mp4

E55-21

Further revise as follows:

Public Comment #1 for E55-21 – Revise occupant load limits, specify location of override switches, require doors to be self-closing and swing in direction of egress travel.

Revise as follows:

1010.2.15 Control vestibule. Control vestibules shall be permitted for security, clinical needs or environmental control in Groups F, H-5, and S, and in Groups ~~B,~~ I-1~~,~~and I-2~~, and M~~ where the occupant load of the room or space served by the control vestibule is less than 50, and in Groups B and M where the occupant load of the room or space served by the control vestibule is 10 or less. Where doors in the

means of egress are configured as a control vestibule, the control vestibule door interlocking system shall provide for egress. The control vestibule shall comply with all of the following:

1. On the egress side of each door of the control vestibule, an approved override shall be provided which deactivates the interlock of the door when that door is interlocked. The override switch shall be within 48 inches (1219 mm) of the door and between 34 inches (864 mm) and 48 inches (1219 mm) above the floor. Signage shall be provided with instructions on the use of the override.

2. Where an automatic sprinkler system or automatic ~~fire~~ smoke detection system is provided, upon activation of such system the interlock function of the ~~door locking system~~ doors of the control vestibule shall deactivate.

3. Upon loss of power to the interlock function of the doors, the interlock function of the door locking system of the control vestibule shall deactivate.

4. The egress path from any point shall not pass through more than one control vestibule.

5. The doors of the control vestibule shall be self-closing.

6. The doors of the control vestibule shall swing in the direction of egress travel.

Exception: Power-operated doors in accordance with Section 1010.3.2.

7. The control vestibule door interlocking system units shall be listed in accordance with UL 294.

Reason:

Public Comment #2 for E55-21 – Requires sprinkler system or smoke detection system.

Revise as follows:

1010.2.15 Control vestibule. Control vestibules shall be permitted for security, clinical needs or environmental control in Groups F, H-5, and S and in Groups B, I-1, I-2, and M where the occupant load of the room or space served by the control vestibule is less than 50. Control vestibules shall be permitted only in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. or an approved automatic smoke detection system installed in accordance with Section 907. Where doors in the means of egress are configured as a control vestibule, the control vestibule door interlocking system shall provide for egress. The control vestibule shall comply with all of the following:

1. On the egress side of each door of the control vestibule, an approved override shall be provided which deactivates the interlock of the door when that door is interlocked. Signage shall be provided with instructions on the use of the override.

2. ~~Where~~ Upon activation of the~~an~~ automatic sprinkler system or automatic ~~fire~~ smoke detection system ~~is provided, upon activation of such system~~ the interlock function of the ~~door locking system~~ doors of the control vestibule shall deactivate.

3. Upon loss of power to the interlock function of the doors, the interlock function of the door locking system of the control vestibule shall deactivate.

4. The egress path from any point shall not pass through more than one control vestibule.

5. The control vestibule door interlocking system units shall be listed in accordance with UL 294.

Reason:

Public Comment #3 for E55-21 - Permits not installing override switches.

Revise as follows:

1010.2.15 Control vestibule. Control vestibules shall be permitted for security, clinical needs or environmental control in Groups F, H-5, and S and in Groups B, I-1, I-2, and M where the occupant load of the room or space served by the control vestibule is less than 50. Where doors in the means of egress are configured as a control vestibule, the control vestibule door locking system shall provide for egress. The control vestibule shall comply with all of the following:

1. On the egress side of each door of the control vestibule, an approved override shall be provided which deactivates the interlock of the door when that door is interlocked. Signage shall be provided with instructions on the use of the override.

    Exception: Where approved by the building official, overrides are not required where the control vestibule is designed for security reasons to impede occupant egress.

2. Where an automatic sprinkler system or automatic fire detection system is provided, upon activation of such system the interlock function of the door locking system of the control vestibule shall deactivate.

3. Upon loss of power to the interlock function of the doors, the interlock function of the door locking system of the control vestibule shall deactivate.

4. The egress path from any point shall not pass through more than one control vestibule.

5. The control vestibule door interlocking system units shall be listed in accordance with UL 294.

Reason:

Questions and discussion during CAH:

1. Vestibules – questions as to minimum size, maximum size, adequate space between doors for wheelchairs (maneuvering clearances).
2. Occupant loads in public occupancies: concerns that occupant load up to 50 is too high for public occupancies (B and M from the list).
3. Concerns with requiring an approved override (for the interlock function) on the egress side of each door of the control vestibule.
    - If the control vestibule is used where security is important and occupant egress may need to be impeded (expensive jewelry stores, drugs dispensing, or money counting, etc.) perhaps interlock overrides should not be provided.
4. Questions re: specifics of override switch, location, type, who has control over it.
5. Question as to what deactivate means (in deactivate the interlock).
6. Door operations questions: require door closers on doors, no specifics as to minimum or maximum duration the override switch deactivates the interlock function, door locks fail-safe or fail-secure.
7. Concern that buildings w/o fire sprinkler system or smoke detection system could be quite large, and control vestibules would be permitted in all the MOEs.

Notes 6-11-21: Committee voted to support. John to send in revised reasons after working with BCAC.

F175-21

IFC: (New), SECTION 202, CHAPTER 38, 3801.1, 3802.1, 3804.1.1.6, 5003.8.3; IBC: (New), SECTION 202, [F] 307.1.1, [F] 414.2, SECTION 428, [F] 428.1

Proponents: Jeff O'Neill, representing American Society of Health Care Engineers (ASHE) (jeff.oneill@uphs.upenn.edu); Andrew W.J. Kollar, Self / Fused Studios P.C., representing Self (akollar@fusedstudios.org); Wayne Jewell, Green Oak Charter Township, representing Self (wayne.jewell@greenoaktwp.com)

2021 International Fire Code

Add new definition as follows:

HEALTH CARE LABORATORY. . Laboratories used for to support the health care facilities through testing, analysis, research or developmental activities on a nonproduction basis including diagnostic, clinical and hospital laboratories.

HIGHER EDUCATION LABORATORY. Laboratories in Group B occupancies used for educational purposes above the 12th grade. Storage, use and handling of chemicals in such laboratories shall be limited to purposes related to testing, analysis, teaching, research or developmental activities on a nonproduction basis.

Revise as follows:

LABORATORY SUITE. A fire-rated enclosed laboratory area that will provide one or more laboratory spaces, within a ~~Group B educational occupancy~~ *higher education* or *health care laboratory*, that are permitted to include ancillary uses such as offices, bathrooms and corridors that are contiguous with the laboratory area, and are constructed in accordance with Chapter 38.

CHAPTER38HIGHER EDUCATION AND HEALTH CARE LABORATORIES

3801.1 Scope. *Higher education* and *health care laboratories* complying with the requirements of this chapter shall be permitted to exceed the maximum allowable quantities of hazardous materials in *control areas* set forth in Chapter 50 without requiring classification as a Group H occupancy. Except as specified in this chapter, such laboratories shall comply with all applicable provisions of this code and the *International Building Code*.

3802.1 Definitions.
The following terms are defined in Chapter 2:
CHEMICAL FUME HOOD.
GLOVE BOX.
HEALTH CARE LABORATORY.
HIGHER EDUCTION LABORATORY.
LABORATORY SUITE.
SPECIAL EXPERT.

3804.1.1.6 Standby or emergency power. *Higher education* and *health care laboratory suites* shall be provided with emergency or standby power in accordance with Section 1203.2.14.

5003.8.3 Control areas. *Control areas* shall comply with Sections 5003.8.3.1 through 5003.8.3.5.3.
Exception: *Higher education* and *health care laboratories* in accordance with Chapter 38 of this code and Section 428 of the International Building Code.

2021 International Building Code

Add new definition as follows:

HEALTH CARE LABORATORY. . Laboratories used for to support the health care facilities through testing, analysis, research or developmental activities on a nonproduction basis including diagnostic, clinical and hospital laboratories.

Revise as follows:

[F] HIGHER EDUCATION LABORATORY. Laboratories in Group B occupancies used for educational purposes above the 12th grade. Storage, use and handling of chemicals in such laboratories shall be limited to purposes related to testing, analysis, teaching, research or developmental activities on a nonproduction basis.

[F] LABORATORY SUITE. A fire-rated, enclosed laboratory area providing one or more laboratory spaces within a a higher education laboratory or a health care laboratory ~~Group B educational occupancy~~ that includes ancillary uses such as offices, bathrooms and corridors that are contiguous with the laboratory area, and are constructed in accordance with Section 428.

[F]307.1.1 Uses other than Group H. An occupancy that stores, uses or handles *hazardous materials* as described in one or more of the following items shall not be classified as Group H, but shall be classified as the occupancy that it most nearly resembles.

1. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Section 416 and the *International Fire Code*.
2. Wholesale and retail sales and storage of flammable and combustible liquids in mercantile occupancies conforming to the *International Fire Code*.
3. Closed piping system containing *flammable or combustible liquids* or gases utilized for the operation of machinery or equipment.
4. Cleaning establishments that utilize *combustible liquid* solvents having a *flash point* of 140°F (60°C) or higher in closed systems employing equipment *listed* by an *approved* testing agency, provided that this occupancy is separated from all other areas of the building by 1-hour *fire barriers* constructed in accordance with Section 707 or 1-hour *horizontal assemblies* constructed in accordance with Section 711, or both.
5. Cleaning establishments that utilize a liquid solvent having a *flash point* at or above 200°F (93°C).
6. Liquor stores and distributors without bulk storage.
7. Refrigeration systems.
8. The storage or utilization of materials for agricultural purposes on the premises.
9. Stationary storage battery systems installed in accordance with the *International Fire Code*.
10. *Corrosive* personal or household products in their original packaging used in retail display.
11. Commonly used *corrosive* building materials.
12. Buildings and structures occupied for *aerosol product* storage, aerosol cooking spray products or plastic aerosol 3 products shall be classified as Group S-1, provided that such buildings conform to the requirements of the *International Fire Code*.
13. Display and storage of nonflammable solid and nonflammable or noncombustible liquid *hazardous materials* in quantities not exceeding the maximum allowable quantity per *control area* in Group M or S occupancies complying with Section 414.2.5.
14. The storage of black powder, smokeless propellant and small arms primers in Groups M and R-3 and special industrial *explosive* devices in Groups B, F, M and S, provided such storage conforms to the quantity limits and requirements prescribed in the *International Fire Code*.
15. Stationary fuel cell power systems installed in accordance with the *International Fire Code*.

16. Capacitor energy storage systems in accordance with the *International Fire Code*.

17. ~~Group B *higher*~~ *Higher education* and *health care laboratories* ~~*laboratory* occupancies~~ complying with Section 428 and Chapter 38 of the International Fire Code.

18. Distilling or brewing of beverages conforming to the requirements of the *International Fire Code.*

19. The storage of beer, distilled spirits and wines in barrels and casks conforming to the requirements of the *International Fire Code.*

[F]414.2 Control areas. *Control areas* shall comply with Sections 414.2.1 through 414.2.5 and the *International Fire Code*.
Exception: *Higher education* and *health care laboratories* in accordance with Section 428 and Chapter 38 of the International Fire Code.

SECTION428 HIGHER EDUCATION AND HEALTH CARE LABORATORIES

[F]428.1 Scope. *Higher education* and *health care laboratories* complying with the requirements of Sections 428.1 through 428.4 shall be permitted to exceed the maximum allowable quantities of *hazardous materials* in *control areas* set forth in Tables 307.1(1) and 307.1(2) without requiring classification as a Group H occupancy. Except as specified in Section 428, such laboratories shall comply with all applicable provisions of this code and the *International Fire Code*.

Reason:
First, we wish to acknowledge the efforts put forth by the Fire Code Action Committee (FCAC) and the people who worked to put together the original code change that introduced "higher education laboratories" in F340-16. That effect successfully put in place much needed regulations to address the use of hazardous materials in what are highly monitored conditions without production – laboratories in higher education institutions, by providing enhanced safety requirements.
But as was the situation prior to the approval of F340-16 and the introduction of regulations for higher education laboratories in what is now Chapter 38 in the IFC and Section 428 in the IBC, the I-Codes still do not do not specifically provide or address how to regulate those laboratories that by all accounts operate the same as a "higher education laboratory" but cannot be classified as a "higher education laboratories" because they are not used for educational purposes above the 12th grade." Because of this, users must try to apply general hazardous materials provisions, which oftentimes are not appropriate for clinical, diagnostic or research laboratory settings.
After being in the 2018 and 2021 codes, users have had a chance to really review and come to understand the provisions that are found in Chapter 38 of the IFC and Section 428 in the IBC. And although we do not disagree with any of the logic that the FCAC gave in the Reason statement for F340-16 for the key parameters that must be present, we do not see any technical reasons for why those provisions are should be limited to only higher education laboratories. This code change seeks to expand the application of the provisions in Chapter 38 of the IFC and Section 428 in the IBC to not just higher education laboratories but to any clinical, diagnostic or research laboratory that meets the criteria contained in those sections – what we are proposing be categorized as "health care laboratories
As was stated in the Reason statement to F340-16 "The advance of technologies, science, medicine and our knowledge of the world often relies on having vibrant and successful academic institutions." But the laboratory settings in which those advances occur are NOT limited to only those that come out of an academic institutions (high-learning institution) – they come out of laboratories found in the private sector and the nationally-funded sectors also. The perfect example is the research that is happening right now with the race to solve the COVID-19 crisis. Most of the work involved is coming out of laboratories in that are not in a higher education sector.
In their Reason statement for F340-15 the FCAC put forth what they saw as the "conditions typically present in academic laboratories that make them unique," but which when looked at on their own merits are conditions or characteristics also found in non-academic, non-production laboratories in other occupancies including hospitals, clinical, research and diagnostic areas. The FCAC included:

1. Lower chemical density in individual research laboratories.

"…there are often many small laboratories within a building that are using small quantities of hazardous materials in each location. Individually, they do not store or use a large quantity of hazardous materials, but together, they may often exceed the maximum allowable quantities for the control area. This lower chemical density often mitigates the overall risk, but the IFC currently has no provisions to recognize this condition."

1. Ongoing staff oversight from "Special Experts" in laboratory safety.

"…"have a full cadre of faculty and staff with chemical expertise. These "Special Experts" often include, but are not limited to: Fire Marshals, Industrial Hygienists, Radiation Safety Officers, Biological Safety Officers, Chemical Hygiene Officers and Environmental Health and Safety Officers. These individuals are an integral part of the preparation/review of laboratory safety documentations, as well as regularly scheduled safety audits."

1. Mixed-use occupancies.

"…building will house laboratories, office space, storerooms, classrooms and lecture halls. The current limits on hazardous materials are so restrictive on upper floors that many universities are forced to locate classrooms and lecture halls on the upper floors so that they can take full advantage of the hazardous materials quantities allowed on the lower floors. This results in moving large numbers of students through hallways, past laboratories to get to the upper floors. They will also have to exit back down the same routes in the event of an emergency."

All of these are valid conditions and important principles to use when deciding which the types of laboratories should be allowed to use the provisions in IFC Chapter 38 and IBC Section 428. But these conditions and logic are not limited to only those laboratories found in higher education institutions – rather a laboratory found in an institution of higher learner is only one of many types of laboratories that meets the conditions and principles. When each of the "conditions" is reviewed it really becomes obvious that they are not unique to academic (higher education) laboratories.

This proposal is based on the fundamental concept that it should not be the laboratory "setting" which drives the scope of IFC Chapter 38 (IBC Section 428), i.e., higher education vs private clinical, but rather it should be the characteristics and design of the laboratory. The same philosophy the I-Codes uses to engage the requirements for the hazardous materials provisions in general should be used to engage the requirements for use of IFC Chapter 38. The distribution and density of materials, the physical constraints and the qualification of on-site personal are all "conditions" that are also found in non-academic laboratories which do not support production or processing.

Many non-academic laboratories (think diagnostic and clinical) are designed in the same way higher learning laboratories are, and are made up of [to quote F340-16] "…many small laboratories within a building that are using small quantities of hazardous materials in each location. Individually, they do not store or use a large quantity of hazardous materials, but together, they may often exceed the maximum allowable quantities for the control area." If so, then it is logical that they should be able to use the provisions in IFC Chapter 38?

Regarding the topic of "oversight" from special experts, the logic FCAC present is not unique to higher education laboratories. It is also very true for most non-academic laboratories (such as hospitals and testing organizations) because they are mandated through state and federal agencies.

Regarding the topic of "mixed occupancy," while most post-secondary academic laboratory do occur in what are deemed to be "mixed occupancy," so are most non-academic laboratories. A perfect example is that of a hospital – while the primary occupancy is Group I-2, almost every hospital also contains other occupancies such as storage/utility areas, kitchens, dining facilities, office space, and clinical laboratories.

The one condition FCAC included in their Reason statement that when closely examined was a double-edged sword was:

1. Limited, or "directed", funding streams. Also unique to academic institutions are the funding sources for research. In a "non-profit" teaching and research environment, the majority of research is funded through grants and endowments. Unfortunately, many grants only support the costs of research personnel and equipment, not structural upgrades to accommodate newer research processes.

While a limited funding stream is portrayed as a justification for implementing new regulations for laboratories associated with academic institutions, a good funding stream is actually a benefit because it allows a non-academic laboratory to be equipped with the newest equipment – both for laboratory

experiments and for the protection of the occupants. Logic says that because of good funding non-academic laboratories may operate in a safer environment.
We also assert that there is a fifth condition that was present in the development of the code language in F340-16, and should be acknowledged, one that is fundamental:

1. The activities in a laboratory are not part of a production process, nor in any way simulate a production process.

Without the code change contained herein, jurisdictions will still have to do the same thing for non-academic laboratories as they have been – making state or local amendments to allow for greater numbers of control areas and larger percentages of MAQs in non-production laboratories. Code Change F340-16 bought higher education laboratories into the codes and provides the AHJ with rules but there still are no unique rules for non-academic laboratories. This proposal seeks to build on the work the FCAC did in F340-16 and provide standardized model code language to address this topic for both academic (higher education) and non-academic laboratories.
To allow non-academic laboratories to use these regulations the following revisions are proposed:

- Replace the definition of "higher learning laboratories" with "non-production laboratories;"
- Revise IFC Chapter 38 to use the new designation of "non-production laboratories"
- Revise IBC Section 428 to use the new designation of "non-production laboratories"
- Coordinate the various sections in the IFC and IBC to use the new designation of "non-production laboratories"

For those interested in the history of this topic and Code change F340-16, please visit the ICC Code Development Archives at https://www.iccsafe.org/products-and-services/i-codes/code-development/2015-2017-code-development-cycle/

Cost Impact:
The code change proposal will decrease the cost of construction
By complying with the provisions in IFC Chapter 39 small non-academic, non-production laboratories will be classified as a Group B occupancies rather than a Group H occupancy. However, many of the non-production labs that this change would cover would seek variances to be in B-occupancies, thus avoiding the impacts of being classified as H-occupancies. Therefore, savings are in reality very slight for those areas (ie: hospital labs, commercial diagnostic labs such as Qwest or LabCorp).

Staff Analysis:
This proposal addresses requirements in a different or contradicting manner to those found in Code Change F176-21. The committee is urged to make their intentions clear with their actions on these proposals.

F175-21

Committee Action: Disapproved
Committee Reason: This proposal was disapproved as the increase in scope was viewed not within the original intent of the provisions. There was a concern that the increased scope would allow this concept in buildings containing non ambulatory patients. This proposal as written would not limit health care laboratories to Group I-2 occupancies. In addition, it was felt that clinical laboratories need to be defined. Finally, it was noted that the broadening of this scope was turned down in 2018. (Vote: 13-1)

Staff Analysis: This proposal addresses requirements in a different or contradicting manner to those found in Code Change F176-21. The committee is urged to make their intentions clear with their actions on these proposals.

Yes; O'Neill to talk to FCAC
https://icc-hearingvideos-public.s3.amazonaws.com/2021/GroupA/CAH/Track2/F175-21.mp4

F175-21 Public Comment

Request AS

Reason:

Notes 6-11-21: Jeff will provide reason

F119-21 Part I

PART I IFC: 1105.12 (NEW)
PART II IBC: 2701.1.1 (NEW)
Proponents: John Williams, Chair, representing Healthcare Committee (ahc@iccsafe.org)

THIS IS A TWO PART CODE CHANGE. PART 1 WILL BE HEARD BY THE FIRE CODE COMMITTEE. PART 2 WILL BE HEARD BY THE BUILDING CODE GENERAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Fire Code

Add new text as follows:

1105.12 Group I-2 Electrical Systems. Existing electrical systems shall comply with the requirements for existing electrical systems in NFPA 99.

Reason:
In order to meet federal conditions of participation health care facilities must comply with system and equipment according to the requirements listed in NFPA 99, Health Care Facilities Code (K912). NFPA 99 is a risk based approach to system design and maintenance of key building systems. It is based upon risk to patients, visitor or staff in the healthcare facility regardless of occupancy classification. It does cover items such as routine testing of both normal and emergency power, testing of electrical systems, defining surgery operating rooms as wet locations unless approved risk assessment determines otherwise. Cover plates on life safety and critical branch receptacles are a distinct color. Requiring tamperproof receptacles in designated pediatric locations. These items are required in both new and existing healthcare facilities depending upon services and risk.These practices improve safety and reliability of electrical systems in locations at risk.

This proposal is submitted by the ICC Committee on Healthcare (CHC). The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 the CHC held several virtual meeting, which included members of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at CHC.

Cost Impact:
The code change proposal will not increase or decrease the cost of construction
This change aligns with existing federal requirements for the healthcare industry.

F119-21 Part I

Committee Action: Disapproved
Committee Reason: The proposal was disapproved with a concern that it would be too difficult for existing electrical systems to comply. (Vote: 13- 0)

Yes; Peglow; put Group I-2 in text
https://icc-hearingvideos-public.s3.amazonaws.com/2021/GroupA/CAH/Track2/F119-21-PartI.mp4

F119-21 Part I Public Comment

2021 International Fire Code

Further revise text as follows:

1105.12 Group I-2 Electrical Systems. In Group I-2 occupancies existing electrical systems in shall comply with the requirements for existing electrical systems in NFPA 99.

Reason: The change is based upon concerns raise by the committee. There are only very small sections of Chapter 6 that are applicable to existing buildings. It does cover items such as routine testing of both normal and emergency power, testing of electrical systems, defining surgery operating rooms as wet locations unless approved risk assessment determines otherwise. Cover plates on life safety and critical branch receptacles are a distinct color. Requiring tamperproof receptacles in designated pediatric locations. This change is a part of a series of changes that assure the IFC, IBC and IEBC align with the requirements of CMS facilities regulations. The changes are designed to improve the safety of existing facilities regardless of year constructed.

Note 5-27-2021: good to go forward

F119-21 Part II

IBC: 2701.1.1 (New)
Proponents: John Williams, Chair, representing Healthcare Committee (ahc@iccsafe.org)

2021 International Building Code

Add new text as follows:

2701.1.1 Group I-2 Electrical Systems. Electrical systems shall be installed in accordance with NFPA 99 and Article 517 of NFPA 70.

Reason:
In order to meet federal conditions of participation health care facilities must comply with system and equipment according to the requirements listed in NFPA 99, Health Care Facilities Code (K912). NFPA 99 is a risk based approach to system design and maintenance of key building systems. It is based upon risk to patients, visitor or staff in the healthcare facility regardless of occupancy classification. It does cover items such as routine testing of both normal and emergency power, testing of electrical systems, defining surgery operating rooms as wet locations unless approved risk assessment determines otherwise. Cover plates on life safety and critical branch receptacles are a distinct color. Requiring tamperproof receptacles in designated pediatric locations. These items are required in both new and existing healthcare facilities depending upon services and risk.These practices improve safety and reliability of electrical systems in locations at risk.

This proposal is submitted by the ICC Committee on Healthcare (CHC). The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2020 the CHC held several virtual meeting, which included members of the committees as well as any interested parties, to discuss and debate the proposed changes. Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at CHC.

Cost Impact:
The code change proposal will not increase or decrease the cost of construction
This change aligns with existing federal requirements for the healthcare industry.

F119-21 Part II

Committee Action: Disapproved
Committee Reason: The proposal was disapproved. If this requirement is for just Group I-2, this needs to be in the text, not just in the title. The committee also asked if this was not sufficiently addressed in Section 2702.2.8 and 407.11 for Group I-2? (Vote: 8-6)

There was no testimony
https://www.cdpaccess.com/videos/4077/

F119-21 Part II

2701.1.1 Group I-2 Electrical Systems. In Group I-2 occupancies, electrical systems shall be installed in accordance with NFPA 99 ~~and Article 517 of NFPA 70~~.

Reason: One of the main points in the hearing was that the requirement was covered by 2702.2.8. (407.11). The scope of both 2702.2.8 and 407.11 is essential electric systems. The provisions in NFPA 99 extend beyond strictly essential electric system into all branches of the electric system. There are requirements for normal power such as tamperproof receptacles in pediatric areas which will include normal power and guidance on power in psychiatric locations in hospitals. This change is a part of a series of changes that assure the IFC, IBC and IEBC align with the requirements of CMS facilities' regulations. NFPA 70 is also applicable as it is required in 2701.1 and NFPA 99.

Notes: 5-27-20201 Ready to public comment

F9-21

IFC: 304.3, 304.3.2 (New), 304.3.2, 304.3.4, 304.3.3, 304.3.6 (New), 304.3.6.1 (New), 304.3.6.2 (New), 304.3.7 (New), 808.1, 808.1.1, 808.1.2, 808.2
Proponents: Tim Earl, representing GBH International (tearl@gbhinternational.com)

2021 International Fire Code

Revise as follows:

304.3 Containers. ~~Combustible~~ Containers for combustible rubbish and waste material ~~kept~~ located within or near a structure shall ~~be stored in accordance~~ comply with Sections 304.3.1 through 304.3.74.

Add new text as follows:

304.3.2 Low heat release materials. Where required by this section, low heat release materials shall exhibit a peak rate of heat release not exceeding 300 kW/m2 where tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m2 in the horizontal orientation.

Revise as follows:
~~**304.3.2**~~**304.3.3 Capacity exceeding 5.33 cubic feet.** Containers with a capacity exceeding 5.33 cubic feet (40 gallons) (0.15 m^3) shall be provided with lids. Containers and lids shall be constructed of

noncombustible materials or low heat release materials in accordance with Section 304.3.2. ~~of combustible materials with a peak rate of heat release not exceeding 300 kW/m² where tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m² in the horizontal orientation.~~
~~**Exception:** Wastebaskets complying with Section 808.~~

304.3.4 Capacity of 1 cubic yard or more. Dumpsters with an individual capacity of 1.0 cubic yard [200 gallons (0.76 m^3)] or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or combustible roof eave lines unless the dumpsters are constructed of noncombustible materials or low heat release materials in accordance with Section 304.3.2.~~of combustible materials with a peak rate of heat release not exceeding 300 kW/m² where tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m² in the horizontal orientation.~~
Exceptions:
1. Dumpsters in areas protected by an *approved automatic sprinkler system* installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10 feet (3048 mm) from other buildings and used exclusively for dumpster or container storage.

~~**304.3.3**~~ **304.3.5 Capacity exceeding 1.5 cubic yards.** Dumpsters and containers with an individual capacity of 1.5 cubic yards [40.5 cubic feet (1.15 m^3)] or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or combustible roof eave lines.
Exceptions:
1. Dumpsters or containers that are placed inside buildings in areas protected by an *approved automatic sprinkler system* installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10 feet (3048 mm) from other buildings and used exclusively for dumpster or container storage.
3. Dumpsters or containers that are located adjacent to buildings where the exterior area is protected by an *approved automatic sprinkler system*.

Add new text as follows:

304.3.6 Waste and linen containers in Group I-1, I-2, and I-3 occupancies and Group B ambulatory care facilities. Waste and linen containers located in Group I-1, I-2 and I-3 occupancies and Group B ambulatory care facilities shall be constructed of noncombustible materials or low heat release materials in accordance with Section 304.3.2. Metal wastebaskets and other metal waste containers with a capacity of 20 gallons (75.7 L) or more shall be listed in accordance with UL 1315 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons(121 L) shall be stored in an area classified as a waste and linen collection room and constructed in accordance with Table 509 of the International Building Code.
Exception: Recycling containers complying with Section 304.3.6.2 are not required to be stored in waste and linen collection rooms.

304.3.6.1 Capacity Density. The average capacity density of containers located in an individual room or space, other than waste and linen collection rooms, shall not be greater than 0.5 gal/ft^2 (20.4 L/m^2).

304.3.6.2 Recycling clean waste containers. Recycling clean waste containers, including their lids, shall not exceed an individual capacity of 96 gallons (363 L).

304.3.7 Waste containers with a capacity of 20 gallons or more in Group R-2 college and university dormitories. Waste containers, including their lids, located in Group R-2 college and university dormitories, and with a capacity of 20gallons (75.7 L) or more, shall be constructed of noncombustible materials or low heat release materials in accordance with Section 304.3.2. Metal wastebaskets and other metal waste containers with a capacity of 20 gallons (75.7 L) or more shall be listed in accordance with UL 1315 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons (121

L) shall be stored in an area classified as a waste and linen collection room constructed in accordance with Table 509 of the International Building Code.

Revise as follows:

808.1 ~~Wastebaskets and l~~Linen containers in Group I-1, I-2 and I-3 occupancies and Group B ambulatory care facilities. ~~Wastebaskets, l~~Linen containers ~~and other waste containers, including their lids, l~~located in Group I-1, I-2 and I-3 occupancies and Group B ambulatory care facilities shall comply with Section 304.3.6 ~~be constructed of noncombustible materials or of materials that meet a peak rate of heat release not exceeding 300 kW/m² when tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m² in the horizontal orientation. Metal wastebaskets and other metal waste containers with a capacity of 20 gallons (75.7 L) or more shall be *listed* in accordance with UL 1315 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons (121 L) shall be stored in an area classified as a waste and linen collection room and constructed in accordance with Table 509.1 of the International Building Code~~.

~~**Exception:** Recycling containers complying with Section 808.1.2 are not required to be stored in waste and linen collection rooms.~~

Delete without substitution:

~~**808.1.1 Capacity density.** The average capacity density of containers located in an individual room or space, other than waste and linen collection rooms, shall not be greater than 0.5 gal/ft² (20.4 L/m²).~~

~~**808.1.2 Recycling clean waste containers.** Recycling clean waste containers, including their lids, shall not exceed an individual capacity of 96 gallons (363 L).~~

~~**808.2 Waste containers with a capacity of 20 gallons or more in Group R-2 college and university dormitories.** Waste containers, including their lids, located in Group R-2 college and university dormitories, and with a capacity of 20 gallons (75.7 L) or more, shall be constructed of noncombustible materials or of materials that meet a peak rate of heat release not exceeding 300 kW/m² when tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m² in the horizontal orientation. Metal wastebaskets and other metal waste containers with a capacity of 20 gallons (75.7 L) or more shall be *listed* in accordance with UL 1315 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons (121 L) shall be stored in an area classified as a waste and linen collection room constructed in accordance with Table 509.1 of the International Building Code.~~

Reason:

The intent of this proposal is to clean up the requirements for waste containers and make them easier for users to find.

Specifically:

- It eliminates some duplication between sections 304 and 808.
- It places all requirements for waste containers in Chapter 3, where they belong. When asked, code officials told me they wouldn't go looking for waste container requirements in the chapter on Interior Finish, Decorative Materials, and Furnishings. (Waste containers are none of those things). One code official stated that they didn't even know there were waste container requirements in Chapter 8.
- The heat release requirements are restated several times in different places, so I created a new label (low heat release materials) and then reference it in where applicable.
- 304 was reordered in size order, since the current language goes from small to large to medium.
- A pointer was left in 808 for linen containers, since they're not really waste containers.

Again, there are no technical changes in this proposal. It is a reorganization to make the code more user friendly. The intent is to bring more visibility to these requirements, which are often overlooked.

Cost Impact:

The code change proposal will not increase or decrease the cost of construction

This is a reorganization of information with no impact on cost.

F9-21

Committee Action: As Submitted
Committee Reason: The committee stated that the reason for approval was that it makes sense to locate and consolidate these requirements in Chapter 3 and the improvement of having the test specifications in one section that can be pointed to. (Vote: 12-2)

PC – Flannery
https://icc-hearingvideos-public.s3.amazonaws.com/2021/GroupA/CAH/Track2/F9-21.mp4

F9-21 Public comment

Further modify as follows:

304.3.6 Waste and linen containers in Group I-1, I-2, and I-3 occupancies and ~~Group B~~ ambulatory care facilities. Waste and linen containers located in Group I-1, I-2 and I-3 occupancies and ~~Group B~~ ambulatory care facilities shall be constructed of noncombustible materials or low heat release materials in accordance with Section 304.3.2. Metal ~~wastebaskets and other metal~~ waste containers with a capacity of 20 gallons (75.7 L) or more shall be listed in accordance with UL 1315 and shall be provided with a noncombustible lid. Portable waste and linen containers exceeding 32 gallons(121 L) shall be stored in an area classified as a waste and linen collection room and constructed in accordance with Table 509 of the International Building Code.

Exception: Recycling clean waste containers complying with Section 304.3.6.2 are not required to be stored in waste and linen collection rooms.

304.3.6.1 Capacity Density. The average capacity density of containers located in an individual room or space, other than waste and linen collection rooms, shall not be greater than 0.5 gal/ft^2 (20.4 L/m^2).

304.3.6.2 Recycling clean waste containers. Recycling clean waste containers, including their lids, shall not exceed an individual capacity of 96 gallons (363 L).

304.3.7 Waste containers with a capacity of 20 gallons or more in Group R-2 college and university dormitories. Waste containers, including their lids, located in Group R-2 college and university dormitories, and with a capacity of 20 gallons (75.7 L) or more, shall be constructed of noncombustible materials or low heat release materials in accordance with Section 304.3.2. Metal ~~wastebaskets and other metal~~ waste containers with a capacity of 20 gallons (75.7 L) or more shall be listed in accordance with UL 1315 and shall be provided with a noncombustible lid. Portable waste containers exceeding 32 gallons (121 L) shall be stored in an area classified as a waste ~~and linen~~ collection room constructed in accordance with Table 509 of the International Building Code.

808.1 Waste and Linen containers in Group I-1, I-2 and I-3 occupancies and ~~Group B~~ ambulatory care facilities. Waste and Linen containers located in Group I-1, I-2 and I-3 occupancies and ~~Group B~~ ambulatory care facilities shall comply with Section 304.3.6.

Reason:
In Section 808.1, the proposal removed the requirement for waste containers in this pointer. The Healthcare committee does not object to the move, but both types of containers need to remain to match federal licensure requirements.

This modifications also provides for consistent language throughout this section. The current text uses containers and wastebaskets – which leads to the question if there is a difference intended. In Section 304.3.7, there are no requirements for linen collections.

Removing 'Group B' in the text is consistent with G3-21 which was approved for IBC, IFC, IPC and IMC. When this item was first introduced to the codes, it was believed that it was needed to add 'Group B' in front of the term. This proposal removes it as no longer necessary, and will make this consistent with the

numerous other locations throughout the codes where ‘Group B’ in not included. The intent is to not appear to have two different types of ‘ambulatory care facilities’.

Notes 6-11-21: Ready to move PC forward.