Healthcare Public Comments for Group A

Updated 5-27-2021
Updated 6-11-2021
Updated 6-25-2021

Healthcare committee member:_____

Code change	Notes	Vote – Yes/Yes with revision/No
M32-2	PC AM	
P102-21	PC AS	
E55-21	PC1 AM	
	PC2 AM	
	PC3 AM	
F175-21	PC AS	
F119-21 Part 1	PC AM	
F119-21 Part 1	PC AM	
F9-21	PC AM	
F205-21	PC1 AM	
	PC2 AM	

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 grav
   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 a
   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 a
   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 904.14 of 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 grav
   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 intent of this code change is to allow listed and labeled ductless domestic range hoods, that meet specific criteria, over domestic cooking appliances in limited applications for I-1 and I-2 Occupancies. This Public Comment proposal addresses the comments the CHC 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 adequate levels of safety for I-1 and I-2 care recipients, whether vented or ductless.

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 staff break room. The sections referenced also require 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. NFPA data, NIST Special Report 1066 and further research by NIST (TN 1969), has shown that a single residential sprinkler head can extinguish a cooking oil fire in a skillet.

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. NFPA 96 does allow for ductless hoods in commercial cooking applications. Keep in mind that the application this proposal addresses is only serving up to 30 residents total, which is at a much lower rate of meal service than a typical restaurant or other commercial application.

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.

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.

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

---

P102-21

IPC: 609.3, 609.3.1 (New), 609.3.2 (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: The purpose of this change is to allow for maximum amount of handwashing options in a hospital setting, while considering optimal operating performance of systems. In addition to the proven effectiveness of handwashing against COVID-19, other pathogens such as Legionella are a primary concern for healthcare facilities. Water systems are constantly being optimized to In addition, use of higher water temperature increases energy consumption, and therefore having alternate options for handwashing would be beneficial from an environmental standpoint. Even if ABHR is used, it is not recommended for use when hands are heavily soiled or greasy, also per the CDC (Show Me the Science – When & How to Use Hand Sanitizer in Community Settings | Handwashing | CDC). From that article, the "CDC recommends washing hands with soap and water whenever possible because handwashing reduces the amounts of all types of germs and chemicals on hands."

Hospital water systems do not directly reflect outside weather conditions in terms of temperature. Systems generally receive water from municipal mains at about 45 degrees minimum. To combat pathogens such as Legionella, CDC recommendations are to maintain cold water temperature at approximately 68 degrees, based on standard ASHRAE 12-2020. This is achieved by simple circulation

of the water through the interior system of the hospital, where indoor air temperatures are maintained. Systems heat water, and also chilled water, to operational temperatures, but water from the cold water tap is not extreme in temperature. This dispels the notion of the "Minnesota Effect," which was a concern in the debate and discussion during the Committee Action Hearings on this code change.

Also, during proper handwashing, use of soap accounts for most of the 20 seconds recommended for hand scrubbing. Hands are only under the water briefly at the beginning, to rinse hands, and then at the end to rinse off the soap. Based on CDC observations, found at Frequent Questions About Hand Hygiene | Handwashing | CDC the effectiveness of the soap is not related to water temperature. Per the CDC, on the topic of use of warm water or cold water for handwashing, "[u]se your preferred water temperature – cold or warm – to wash your hands. Warm and cold water remove the same number of germs from your hands. The water helps create soap lather that removes germs from your skin when you wash your hands. Water itself does not usually kill germs; to kill germs, water would need to be hot enough to scald your hands." Other studies suggest that cold water handwashing is actually more effective than warm water handwashing, including elimination of a number of pathogens as noted in *Quantifying the Effects of Water Temperature, Soap Volume, Lather Time, and Antimicrobial Soap as Variables in the Removal of Escherichia coli ATCC 11229 from Hands* (https://meridian.allenpress.com/jfp/article/80/6/1022/200017/Quantifying-the-Effects-of-Water-Temperature-Soap). In brief, "the results of this study indicate that water temperature is not a critical factor for the removal of transient microorganisms from hands."

Regarding data surrounding Legionella testing, ASHRAE 188-2017 requires a testing program to determine growth of Legionella at cooling towers and domestic water systems. The purpose for testing is to treat the water before the pathogen grows to lethal levels. In 2017, as noted in Legionellosis Report 2017 (pa.gov), the top jurisdictions had a total of 7,458 cases of Legionella. The monumental Legionnaires Disease outbreak of 1976 at the Bellevue Stratford Hotel in Philadelphia had 182 reported cases with 29 deaths, for a 15.9% death rate. There have been more recent outbreaks in 2017 at Lenox Hill Hospital in New York, and in relation to the Flint, MI water crisis in 2019. Water testing programs are instituted throughout the united states to avoid such a catastrophic result, so systems can be properly cleaned before they reach an outbreak level.

The complexities of encouraging handwashing, while mitigating pathogens such as Legionella and COVID-19, are a balance that hospitals face regularly. This change to allow cold handwashing affords another tool to successfully create the safest environment possible.

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 Public Comment

Public Comment #1

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~~ electro-mechanical or electromagnetic locking devices shall be listed in accordance with either UL 294 or UL 1034.

Reason:

A wide variety of questions and suggestions were shared during the CAH and are addressed by this public comment.

Concerns were raised regarding occupancy groups B and M with a maximum occupant load of 50 – the proposed revision to a maximum occupant load of 10 or less in B and M occupancies is based on IBC 1010.1.2 that permits doors other than side-hinged swinging doors for occupant loads of 10 or less.

In Item 1, the committee questioned if the location of the override switch should be specified – the proposed revision is from the IBC requirement for emergency stop switches for revolving doors (1010.3.1 item 5).

In Item 2, the revisions address concerns raised prior to the CAH regarding the detection system.

The added Items 5 and 6 address committee concerns and questions. The proposed exception to Item 6 is important for control vestibules where the doors need to operate without touching, which may be important in numerous applications including health care.

In Item 7 (was item 5), the proposed revisions are consistent with E52-21 approved as submitted during the CAH, which revised the UL standard reference.

The committee suggested it may be desirable to specify how long the override in Item 1 overrides the interlock function of the doors in the control vestibule. Considering an override switch is required on the egress side of each door of the control vestibule, it was felt it was not necessary to specify a minimum or maximum duration the interlock is disabled upon pushing an override button.

The committee wondered if the minimum or maximum size of the control vestibule should be specified. Considering a control vestibule would be required to comply with accessibility requirements if on an accessible route, it was felt a minimum size would not need to be specified. And, considering that larger rooms take up more space and cost more to construct, and that a control vestibule would be included in the determination of travel distance, it was felt the maximum size of a control vestibule would not need to be specified.

Examples of patient care facilities that utilize secured vestibules include Behavioral Health settings, where a patient is admitted against their will and whose treatment is the responsibility of the healthcare provider. Another is a post-partum unit, where control vestibules are utilized to combat infant abduction. This arrangement is typically used at the primary entry to the unit and not secondary exits, where other locking arrangements are utilized. The primary entry points represent the most occupant traffic, and therefore the higher risk of elopement.

Public Comment #2

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 the area served by the control vestibule 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:

Concerns were raised during the CAH, and subsequent to the CAH, regarding permitting control vestibules in buildings which did not have either a fire sprinkler system or smoke detection system. This public comment attempts to address those concerns by permitting control vestibules only in buildings with an automatic sprinkler system or an automatic smoke detection system.

This public comment may be a compromise between applications for control vestibules in quite small buildings with occupants familiar with the space where an automatic sprinkler system would not otherwise be required for the building and applications of control vestibules serving more occupants where requiring the building to have a fire sprinkler system throughout is prudent.

For hospital settings, full sprinklering is required in new construction, and smoke detection is often utilized in healthcare suites, where this arrangement is typically used.

Public Comment #3

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:

During the Committee Action Hearings there was discussion that the override switches required in Item 1 would not be appropriate where the control vestibule is needed and designed for security reasons. This public comment presents that option with a proposed exception. The code official could request the over ride to be located in a supervised location as part of that approval.

For hospital settings, and per the already established requirements to allow special locking arrangements in behavioral health and infant settings, all staff are equipped with keys and access to allow egress. The use of remote release of the locks represents a vulnerability that this locking arrangement is designed to eliminate for safe care of these particularly vulnerable patients.

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: The intention of this code change is to utilize the same lab space requirements already approved, in a similar occupancy setting. This proposal does not contradict requirements approved for Higher Educational Labs, but simple expands them to clinical labs. The same requirements are routinely sought, and approved, for hospital labs.

Operationally, it was mentioned in committee debate that a lab and inpatient beds would somehow occupy the same space. This notion is false. The Incidental Use Table already requires a one-hour separation between clinical labs and all other spaces of the facility, regardless of sprinklering status. Usually, clinical labs occur in lower levels of the hospital, reserving spaces with windows for patient care, especially on bed units where an outside window is required. Labs routinely are adjacent to other support areas, and are multiple floors away from patient care.

The distinction between production labs and clinical labs is profound. The best way to paint this picture is using the COVID-19 pandemic as an example. Rapid testing, based on nasal swabs, are processed in clinical labs using non-hazardous reagents. These clinical labs are common in hospitals, and the main concern is with wasting the tissue and bodily fluid samples, and not hazardous waste. Millions of doses of vaccines, at pharmaceutical plants, are generated from production labs, where hazardous waste is the main concern.

Regulation around clinical labs is at least equal, to even greater, than Higher Educational Labs. Quantities of any hazardous chemical inventory is required to be reported to a hospital Environment of Care Committee, normally chaired by the hospital Safety Officer. The quantities regularly reported in this setting is appropriate for the conditions of this code change. This regulatory structure at a hospital is required as a Condition of Participation with the Centers for Medicare and Medicaid Services (CMS). Any clinical lab receiving reimbursement from the federal government (which is most) are subject to these regulatory conditions, without exception.

For these reasons, there is no reason that Higher Education Laboratory functions are a unique carve-out that can be subject to sound reasoning around the handling of hazardous materials in a laboratory setting.

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 304.3.7~~4~~.

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/m^2 where tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m^2 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/m^2 where tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m^2 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,~~ 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/m^2 when tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m^2 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/ft^2 (20.4 L/m^2).~~

~~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/m^2 when tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m^2 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.

F205-21

IFC: 5001.1, 5705.5, 5705.5.1

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

2021 International Fire Code

Revise as follows:

5001.1Scope. Prevention, control and mitigation of dangerous conditions related to storage, dispensing, use and handling of hazardous materials shall be in accordance with this chapter.

This chapter shall apply to all hazardous materials, including those materials regulated elsewhere in this code, except that where specific requirements are provided in other chapters, those specific requirements shall apply in accordance with the applicable chapter. Where a material has multiple hazards, all hazards shall be addressed.

Exceptions:

1. In retail or wholesale sales occupancies, medicines, foodstuff, cosmetics and commercial or institutional products containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable, provided that such materials are packaged in individual containers not exceeding 1.3 gallons (5 L).
2. Alcoholic beverages in retail or wholesale sales occupancies, provided that the liquids are packaged in individual containers not exceeding 1.3 gallons (5 L).
3. Application and release of pesticide and agricultural products and materials intended for use in weed abatement, erosion control, soil amendment or similar applications where applied in accordance with the manufacturer's instructions and label directions.
4. The off-site transportation of hazardous materials where in accordance with Department of Transportation (DOTn) regulations.
5. Building materials not otherwise regulated by this code.
6. Refrigeration systems (see Section 608).
7. Stationary storage battery systems regulated by Section 1207.
8. The display, storage, sale or use of fireworks and *explosives* in accordance with Chapter 56.
9. *Corrosives* utilized in personal and household products in the manufacturer's original consumer packaging in Group M occupancies.
10. The storage of beer, distilled spirits and wines in barrels and casks.
11. The use of ~~wall-mounted~~dispensers containing alcohol-based hand rubs classified as Class I or II liquids where in accordance with Section 5705.5.
12. Specific provisions for flammble liquids in motor fuel-dispensing facilities, repair garages, airports and marinas in Chapter 23.
13. Storage and use of fuel oil in tanks and containers connected to oil-burning equipment. Such storage and use shall be in accordance with Section 605. For abandonment of fuel oil tanks, Chapter 57 applies.
14. Storage and display of aerosol products complying with Chapter 51.
15. Storage and use of *flammable* or *combustible liquids* that do not have a fire point when tested in accordance with ASTM D92, not otherwise regulated by this code.

16. *Flammable* or *combustible liquids* with a *flash point* greater than 95°F (35°C) in a water-miscible solution or dispersion with a water and inert (noncombustible) solids content of more than 80 percent by weight, which do not sustain combustion, not otherwise regulated by this code.

17. Commercial cooking oil storage tank systems located within a building and designed and installed in accordance with Section 607 and NFPA 30.

5705.5Alcohol-based hand rubs classified as Class I or II liquids.

The use of ~~wall-mounted~~ dispensers containing alcohol-based hand rubs classified as Class I or II liquids shall be in accordance with all of the following:

1. The maximum capacity of each dispenser shall be 68 ounces (2 L).

2. The minimum separation between dispensers shall be 48 inches (1219 mm).

3. ~~The d~~Dispensers shall not be ~~installed~~located above, below, or closer than 1 inch (25 mm) to an electrical receptacle, switch, appliance, device or other ignition source. The wall space between the dispenser and the floor or intervening counter top shall be free of electrical receptacles, switches, appliances, devices or other ignition sources.

4. Dispensers shall be ~~mounted~~ located so that the bottom of the dispenser is not less than 42 inches (1067 mm) and not more than 48 inches (1219 mm) above the finished floor.

5. Dispensers shall not obstruct required means of egress or be placed within 3 feet (914 mm) of an open flame, heating device or other ignition source.

~~5.~~ Dispensers shall not release their contents except when the dispenser is manually activated.

~~.~~6. Facilities shall be permitted to install and use automatically activated "touch free" alcohol-based hand-rub dispensing devices with the following requirements:

~~5.1~~ 6.1. The facility or persons responsible for the dispensers shall test the dispensers each time a new refill is installed in accordance with the manufacturer's care and use instructions.

~~5.2~~ 6.2. Dispensers shall be designed and must operate in a manner that ensures accidental or malicious activations of the dispensing device are minimized. At a minimum, all devices subject to or used in accordance with this section shall have the following safety features:

~~5.2.1~~ 6.2.1. Any activations of the dispenser shall only occur when an object is placed within 4 i

~~5.2.2~~ 6.2.2. The dispenser shall not dispense more than the amount required for hand hygiene Drug Administration (USFDA).

~~5.2.3~~ 6.2.3. An object placed within the activation zone and left in place will cause only one acti

~~6.~~ 7. Storage and use of alcohol-based hand rubs shall be in accordance with the applicable provisions of Sections 5704 and 5705.

~~.~~

~~7.~~ 8. Dispensers installed in occupancies with carpeted floors shall only be allowed in *smoke compartments* or *fire areas* equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.

~~.~~

5705.5.1Corridor installations.

In addition to the provisions of Section 5705.5, where dispensers containing alcohol-based hand rubs are located in *corridors* or rooms and areas open to the *corridor*, they shall be in accordance with all of the following:

1. Level 2 and 3 aerosol containers shall not be allowed in *corridors*.

2. The maximum capacity of each Class I or II liquid dispenser shall be 41 ounces (1.21 L) and the maximum capacity of each Level 1 aerosol dispenser shall be 18 ounces (0.51 kg).

3. The maximum quantity allowed in a *corridor* within a *control area* shall be 10 gallons (37.85 L) of Class I or II liquids or 1135 ounces (32.2 kg) of Level 1 aerosols, or a combination of Class I or II liquids and Level 1 aerosols not to exceed, in total, the equivalent of 10 gallons (37.85 L) or 1,135 ounces (32.2 kg) such that the sum of the ratios of the liquid and aerosol quantities divided by the allowable quantity of liquids and aerosols, respectively, shall not exceed one.

~~4. The minimum *corridor* width shall be 72 inches (1829 mm).~~

~~5~~ 4. Projections into a *corridor* shall be in accordance with Section 1003.3.3.

Reason:
Pandemics such as the Covid-19 virus have led to an increased need to provide hand sanitizer dispensers. This proposal removes the term "wall-mounted" in the scope of this section in order to cover all dispensers, including wall mounted and floor supported dispensers. It is not intended to apply to individual personal use hand sanitizers.
Cost Impact:
The code change proposal will not increase or decrease the cost of construction
It introduces an option for floor supported hand sanitizers to be used.

F205-21

Committee Action: As Modified
Committee Modification:
5001.1 Scope. Prevention, control and mitigation of dangerous conditions related to storage, dispensing, use and handling of hazardous materials shall be in accordance with this chapter. This chapter shall apply to all hazardous materials, including those materials regulated elsewhere in this code, except that where specific requirements are provided in other chapters, those specific requirements shall apply in accordance with the applicable chapter. Where a material has multiple hazards, all hazards shall be addressed.
Exceptions:
1. through 10. (no change)
11. The use of ~~wall-mounted~~ dispensers containing alcohol-based hand rubs classified as Class I or II liquids where in accordance with Section 5705.5.
12. through 17. (no change)

5705.5.1 Corridor installations. In addition to the provisions of Section 5705.5, where dispensers containing alcohol-based hand rubs are located in corridors or rooms and areas open to the corridor, they shall be in accordance with all of the following:
1. through 3 (no change)
~~4. The minimum corridor width shall be 72 inches (1829 mm).~~
~~5.~~ 4. Projections into a corridor shall be in accordance with Section 1003.3.3.

Committee Reason: This proposal was approved as it provides the most enforceable language than found in the other proposals. Means of egress concerns are addressed. This proposal also better deals with practical issues such as ignition sources and controls how the dispensers operate. A key element is removing the limitation of enforcing only for wall mounted dispensers. This provides the basic tools for enforcement of all dispenser types. It is encouraged that all F190-21, F205-21, F206-21 and F207-21 be reviewed together and to come back with a coordinated public comment to address additional concerns with issues such as corridor width and enforcement. The modifications

remove an additional occurrence of "wall-mounted" that was missed and removes the corridor width limitation that is not appropriate beyond healthcare facilities. (Vote: 9-4)

Video of hearings: https://www.cdpaccess.com/videos/3871/
F190, F206, F205, F207 heard together

F205-21 Public Comment 1

Public Comment #1 – Request Approval as Modified by this Public Comment

Co-Proponents: F-CAC & Health Care Committee

2021 International Fire Code

Revise as follows:

5001.1 Scope. Prevention, control and mitigation of dangerous conditions related to storage, dispensing, use and handling of hazardous materials shall be in accordance with this chapter.

This chapter shall apply to all hazardous materials, including those materials regulated elsewhere in this code, except that where specific requirements are provided in other chapters, those specific requirements shall apply in accordance with the applicable chapter. Where a material has multiple hazards, all hazards shall be addressed.

Exceptions:
1-10 remain unchanged

11. The installation and use of dispensers containing alcohol-based hand rubs, replacement alcohol-based hand rub solution and dispensers in storage classified as Class I or II liquids where in accordance with Section 5705.5.

12. Alcohol-based hand rub dispensers in use by individuals and containing not more than 16 oz (474 ml)

5705.5 Alcohol-based hand rubs classified as Class I or II liquids. The use of dispensers containing alcohol-based hand rubs classified as Class I or II liquids shall be in accordance with all of the following:

1. The maximum capacity of each wall-mounted dispenser shall be 68 ounces (2 L) and any other dispenser shall be 1 gallon (4 L).
2. The maximum quantity allowed in within a control area shall be 30 gallons (37.85 L) of Class I or II liquids or 1135 ounces (32.2 kg) of Level 1 aerosols, or a combination of Class I or II liquids and Level 1 aerosols not to exceed, in total, the equivalent of 30 gallons (37.85 L) or 1,135 ounces (32.2 kg) such that the sum of the ratios of the liquid and aerosol quantities divided by the allowable quantity of liquids and aerosols, respectively, shall not exceed one.

3~~2~~. The minimum separation between dispensers shall be 48 inches (1219 mm).

4~~3~~. Dispensers shall not be located above, below, or closer than 1 inch (25 mm) to an electrical receptacle, switch, appliance~~,~~ or device ~~or other ignition source~~. The wall

space between the dispenser and the floor or intervening countertop shall be free of electrical receptacles, switches, appliances, devices or other ignition sources.

5~~4~~. Wall-mounted Dispensers shall be located so that the bottom of the dispenser is not less than 42 inches (1067 mm) and not more than 48 inches (1219 mm) above the finished floor.

6~~5~~. Dispensers shall not obstruct required means of egress or be placed within 3 feet (914 mm) of an open flame, heating device or other ignition source.

7~~6.~~ Dispensers shall not release their contents except when the dispenser is manually activated. Facilities shall be permitted to install and use automatically activated "touch free" alcohol-based hand-rub dispensing devices with the following requirements:

7~~6~~.1. The facility or persons responsible for the dispensers shall test the dispensers each time a new refill is installed in accordance with the manufacturer's care and use instructions.

7~~6.~~2. Dispensers shall be designed and must operate in a manner that ensures accidental or malicious activations of the dispensing device are minimized. At a minimum, all devices subject to or used in accordance with this section shall have the following safety features:

7~~6~~.2.1. Any activations of the dispenser shall only occur when an object is placed within 4 inches (98 mm) of the sensing device.

7~~6~~.2.2. The dispenser shall not dispense more than the amount required for hand hygiene consistent with label instructions as regulated by the United States Food and Drug Administration (USFDA).

7~~6~~.2.3. An object placed within the activation zone and left in place will cause only one activation.

7~~7~~. Storage ~~and use~~ of alcohol-based hand rub~~s~~ solution not in use shall be in accordance with the ~~applicable~~ provisions of Section~~s 5704 and~~ 5705.5.2.

7~~8~~. Dispensers ~~installed~~ located in ~~occupancies~~ areas with carpeted floors shall only be allowed in smoke compartments or fire areas equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

5705.5.1 Corridor installations. In addition to the provisions of Section 5705.5, where dispensers containing alcohol-based hand rubs are located in corridors or ~~rooms and~~ areas open to the corridor, they shall be in accordance with all of the following:

1. Level 2 and 3 aerosol containers shall not be allowed in corridors.
2. The maximum capacity of each ~~Class I or II liquid dispenser shall be 41 ounces (1.21 L) and the maximum capacity of each~~ Level 1 aerosol dispenser shall be 18 ounces (0.51 kg).
3. ~~The maximum quantity allowed in a corridor within a control area shall be 10 gallons (37.85 L) of Class I or II liquids or 1135 ounces (32.2 kg) of Level 1 aerosols, or a combination of Class I or II liquids and Level 1 aerosols not to exceed, in total, the equivalent of 10 gallons (37.85 L) or 1,135 ounces (32.2 kg) such that the sum of the ratios of the liquid and aerosol quantities divided by the allowable quantity of liquids and aerosols, respectively, shall not exceed one.~~

3~~4~~. Projections into a corridor shall be in accordance with Section 1003.3.3.

5705.5.2 Storage of alcohol-based hand rub solutions classified as Class I or II liquids. The indoor storage of alcohol-based hand rub solution in liquid or gel form, classified as Class I or II liquids, shall be in accordance with all of the following:

1. The maximum quantity of individual alcohol-based hand solution storage container shall be 1 gallon (4 L) or less and the container shall be constructed of a material compatible with the alcohol-based solution.

2. Storage of alcohol-based hand rub solution in basements or below grade shall be in basements protected throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.
3. Storage of alcohol-based hand rub solution shall be less than or equal to the amounts in Table 5705.5.2.

TABLE 5705.5.2
ALLOWABLE QUANTITY OF ALCOHOL-BASED HAND RUB SOLUTION IN STORAGE

Storage Location	SPRINKLERED[df]	NONSPRINKLERED[e]
Open storage areas[c]	120 Gal	5 Gal
Non-dedicated storage room[a]	240 Gal	120 Gal
Non-dedicated storage room; 1-HR fire separation[ag]	360 Gal	240 Gal
Non-dedicated storage room; 2-HR fire separation[ag]	480 Gal	360 Gal
Dedicated storage room[b]	360 Gal	240 Gal
Dedicated storage room; 1-HR fire separation[bg]	600 Gal	360 Gal
Dedicated storage room; 2-HR fire separation[bg]	720 Gal	480 Gal

NP = Not permitted
a. Non-dedicated storage room is an enclosed storage area complying with the applicable storage requirements of this code.
b. Dedicated storage room is an enclosed storage area complying with the applicable storage requirements of this code used only for the storage of alcohol-based hand rub solution.
c. The number of open storage areas is limited to 1 per story or fire area with a maximum, of 4 per building
d. The number of non-dedicated storage rooms is limited to 2 per story; the number of dedicated storage rooms is limited to 4 per story
e. The number of non-dedicated storage rooms is limited to 1 per story; the number of dedicated storage rooms is limited to 2 per story.
f. Sprinkler design density for a minimum of Ordinary Hazard Group 2.
g. Fire separation with a fire wall, fire barrier or fire partition and a fire resistance-rated horizontal barrier

IFC Table 5003.3.3(1)

p. The following shall not be included in determining maximum allowable quantities:

5. Alcohol-based hand rubs classified as Class I or II liquids in dispensers that are installed in accordance with Sections 5705.5 and 5705.5.1. ~~The location of the alcohol-based hand rub (ABHR) dispensers shall be provided in the construction documents.~~
6. Alcohol-based hand rub solutions classified as Class I or II liquids in storage in accordance with Section 5705.5.2

IBC Table 307.1(1)

p. The following shall not be included in determining maximum allowable quantities:

5. Alcohol-based hand rubs classified as Class I or II liquids in dispensers that are installed in accordance with Sections 5705.5 and 5705.5.1 of the *International Fire Code*. ~~The location of the alcohol-based hand rub (ABHR) dispensers shall be provided in the construction documents~~.
6. Alcohol-based hand rub solutions classified as Class I or II liquids in storage in accordance with Section 5705.5.2

Reason Statement

1. The addition of “storage” in Exception 11 of Section 5001.1 (Scope) is consistent with the IFC Committee Action on proposal F190-21; This modification simply ensures that the intention of the exception is for both the alcohol-based hand rub dispensers and the storage of alcohol-based sanitizer solutions awaiting use.
2. This Public Comments add an exception from IFC requirements for personal use hand sanitizer in quantities of 16 oz or less. It is not the intention of this section to impose any requirements on individual use hand sanitizers carried for personal sanitizing.
3. The higher quantity of allowable alcohol-based hand rub solution in dispensers is increased from 10 Gallons to 30 Gallons per control area. This is a reasonable increase in MAQ and is supported by the increased quantities that have been safely utilized in all public buildings during the pandemic.
4. Provides “clean-up” of requirements to differentiate permanent wall-mounted dispenser requirements which have been in the IFC for many cycles from other types of dispensers such as floor-supported, desktop or counter located that are currently being used.
5. Eliminating the additional quantity restrictions for dispensers used in corridors as unnecessary and overly restrictive
6. Adding a new Section (5705.5.2) for storage requirements and quantity limitations. This new section adds reasonable storage quantities limits and requirements based on experience over the past 1 ½ years of the pandemic.

   The proposal addresses storage of alcohol-based sanitizer solutions in a maximum individual container size of 1 gallon; provides maximum storage qualities for sprinklered and nonsprinklered buildings and incorporates allowances for higher storage quantities based on whether the storage room is for only alcohol-based sanitizer solutions and whether the storage room has 1 or 2 hour fire resistance rated construction for compartmentation of the hazard.

   The current MAQs for Class IB flammable liquids (typical classification for an alcohol-based hand sanitizer solution) is 120 gallons with 100% increase for sprinklers and approved storage cabinets) . The quantities in Table 5705.5.2 are modeled after these MAQ allowances recognizing: the storage challenges created during the pandemic and the experience of storage inn these amounts without unreasonable fire risk or notable fire incidents; the benefit of fire aprinkler protection and fire separations for hazard mitigation for sanitizer solution in storage.

7. To correct Footnote “p” in the IBC and IFC MAQ table.

F205-21 Public Comment #2 – Request Approval as Modified by this Public Comment

Co-Proponents: F-CAC & Health Care Committee

2021 International Fire Code

Revise as follows:

5705.5 Alcohol-based hand rubs classified as Class I or II liquids. The use of dispensers containing alcohol-based hand rubs classified as Class I or II liquids shall be in accordance with all of the following:
1-t remain unchanged

8~~. Dispensers installed in occupancies with carpeted floors shall only be allowed in smoke compartments or fire areas equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.~~

Reason Statement

Removes the requirement for the use of dispensers in carpeted occupancies to only be permitted where the smoke compartment of fire area is protected with a NFPA 13 or NFPA 13R automatic fire sprinkler system.

Carpets in buildings are regulated by the IFC have interior finish requirements for floor carpeting. There has been no documented data showing a higher fire risk for dispensers in carpeted areas or buildings when compared to non-carpeted areas.