

Healthcare New ideas for 2027 code –

1) General/MOE

Sound transmission between hospital/nursing homes rooms – it is in FGI best practice guidelines; should it be in the code? Not only walls, but for ‘borrowed lite’ assemblies in ICU and CCU areas?

**SECTION 1206
SOUND TRANSMISSION**

1206.1 Scope. This section shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent *dwelling units* and *sleeping units* or between *dwelling units* and *sleeping units* and adjacent public areas.

(G169-21 AS)

1206.2 Airborne sound. Walls, partitions and floor-ceiling assemblies separating *dwelling units* and *sleeping units* from each other or from public or service areas shall have a sound transmission class of not less than 50 where tested in accordance with ASTM E90, or have a Normalized Noise Isolation Class (NNIC) rating of not less than 45 if field tested, in accordance with ASTM E336 for airborne noise. Alternatively, the sound transmission class of walls, partitions and floor-ceiling assemblies shall be established by engineering analysis based on a comparison of walls, partitions and floor-ceiling assemblies having sound transmission class ratings as determined by the test procedures set forth in ASTM E90. Engineering analysis shall be performed by a registered design professional. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings. This requirement shall not apply to entrance doors; however, such doors shall be tight fitting to the frame and sill.

1206.2.1 Masonry. The sound transmission class of concrete masonry and clay masonry assemblies shall be calculated in accordance with TMS 302 or determined through testing in accordance with ASTM E90.

(G169-21 AS)

1206.3 Structure-borne sound. Floor-ceiling assemblies between *dwelling units* and *sleeping units* or between a *dwelling unit* or *sleeping unit* and a public or service area within the structure shall have an impact insulation class rating of not less than 50 where tested in accordance with ASTM E492, or have a Normalized Impact Sound Rating (NISR) of not less than 45 if field tested in accordance with ASTM E1007. Alternatively, the impact insulation class of floor-ceiling assemblies shall be established by engineering analysis based on a comparison of floor-ceiling assemblies having impact insulation class ratings as determined by the test procedures in ASTM E492. Engineering analysis shall be performed by a registered design professional.

2) MEP

From Tim Peglow - Look at waiver in CMS for microgrids for electrical. Is this in the latest edition of NFPA 99? Conflict with NFPA110 requirement for generator.

3) G/MOE

From Wayne Jewell (G5-21 AM)

LIMITED VERBAL OR PHYSICAL ASSISTANCE. Describes persons who, because of age, physical limitations, cognitive limitations, treatment or chemical dependency, and **may not** independently recognize, respond or evacuate ~~without limited verbal or physical assistance~~ during an emergency situation. Limited verbal assistance includes prompting, giving and repeating instructions. Limited physical assistance includes assistance with transfers to walking aids or mobility devices and assistance with egress.

My thought was leaving may not – meant that they absolutely wouldn’t but might not recognize, respond or evacuate during and emergency situation. To address that limited verbal or physical assistance as described was acceptable to provide and not consider such persons as absolutely not able in any manner to get out. Thus require a higher level of assistance or resources was needed to evacuate them, such as; moving them in a bed, push the wheel chair totally out of the building – no ability to operate a wheel chair.

Haven't looked it up but doesn't the code text basically use these terms to a person while they are responding? So don't we expect them to have some for of a response and need some supplemental input.

4) Fire

FCAC Haz Mat Work Group: Sub-group ABHR Storage

Trask Group had consensus to draft a new IFC change proposal based on F205-21 PC2 and PC3; addressing comments raised during the Public Comment Hearings (Testimony video link: <https://www.cdpassess.com/videos/4606/>) Plan is to present to F-CAC and Health Care Committees to submit as co-proponents.

5) Fire

Richard Roberts Richard.roberts@systemsensor.com. – FCAC – Carbon Monoxide (CO) Working Group

I am the Chair of the above referenced WG. I seem to remember the Healthcare Ad hoc group had some concerns with the new CO detection requirements in the 2024 edition of the IFC. Who should I reach out to make sure the WG coordinates with the Healthcare group?

6) G/MOE

Editorial suggestion –

AMBULATORY CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to persons who are rendered incapable of self-preservation by the services provided or staff has accepted responsibility for care recipients already incapable.

I have not fully digested but I think it makes sense. His suggestion is to revise the end as follows:

"to care recipients already incapable for whom staff has accepted responsibility."

7) Fire

From Henry –

I wanted to link you in on the email below. Tina highlighted a possible gap in the code that "could" or might be applicable to I-2. One approach that we use is an occupancy separation where a Group B classifies the two story entry lobby space in a hospital. I tried to chart a path through the code as it stands today. I don't recall this being a significant conversation with our committee (heck, I may be just blanking it out). The IBC says shaft required unless... then the two story opportunity always said and says except in an I-2. Now we have a pointer over to atriums.hmmmm

Flad

Henry Kosarzycki AIA

Code Architect

[D] 608-232-1261 [C] 414-308-6586

From: Henry Kosarzycki

Sent: Thursday, October 13, 2022 6:00 PM

To: Duncan, Tina <tduncan@hksinc.com>; jeffrey.oneill@rwjbh.org; Gary Hamilton <gary.hamilton@wsp.com>; John Williams <John.Williams@DOH.WA.GOV>

Subject: RE: 2021 IBC Atrium changes

Hi,

I did some digging and put on my regulator hat to find the language that maintains that two stories cannot be open to each other in an I-2. I'm sending my work off to ya'll tonight to save you some time as I've been doing this between project work. If you connect the dots from section 712.1.7 to section 404.5 there may be a gap in the code(?). More to come.

So following the code path here is where I go...

Section 712 Vertical Openings

712.1 General.

Each vertical opening shall **comply in accordance with one of the protection methods** in Sections 712.1.1 through 712.1.16.

712.1.1 Shaft enclosures. Vertical openings contained entirely within a shaft enclosure complying with Section 713 shall be permitted.

(section rewritten)

2018 language...

712.1.7 Atriums. In other than Group H occupancies, atriums complying with Section 404 shall be permitted.

2021 language... this just verifies that an atrium in an I-2 is permitted. Other occupancies have options to two stories open to each other.

712.1.7 Atriums.

Atriums complying with Section 404 that connect two or more stories in Group I-2 or I-3 occupancies or three or more stories in other occupancies shall be permitted.

Exceptions:

1. Atriums shall not be permitted within Group H occupancies.
2. Balconies or stories within Groups A-1, A-4 and A-5 and mezzanines that comply with Section 505 shall not be considered a story as it applies to this section.

Next, section 404.

(exception #2 is new)

404.5 Smoke control.

A smoke control system shall be installed in accordance with Section 909.

Exceptions:

1. **In other than Group I-2**, and Group I-1, Condition 2, smoke control is not required for atriums that connect only two stories.

2. A smoke control system is not required for atriums connecting more than two stories **when all of the following are met:**

2.1. Only the two lowest stories shall be permitted to be open to the atrium.

2.2. All stories above the lowest two stories shall be separated from the atrium in accordance with the provisions for a shaft in Section 713.4.

But then we have this; at the same time it is a “separate” provision under section 712.

712.1.9 Two-story openings.

In other than Groups I-2 and I-3, a vertical opening that is not used as one of the applications specified in this section shall be permitted if the opening complies with all of the following items:

1. Does not connect more than two stories.

2. Does not penetrate a horizontal assembly that separates fire areas or smoke barriers that separate smoke compartments.

3. Is not concealed within the construction of a wall or a floor/ceiling assembly.

4. Is not open to a corridor in Group I and R occupancies. 5. Is not open to a corridor on nonsprinklered floors.

5. Is not open to a corridor on nonsprinklered floors.

6. Is separated from floor openings and air transfer openings serving other floors by construction conforming to required shaft enclosures.

Flad

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From: Duncan, Tina <tduncan@hksinc.com>

Sent: Thursday, October 13, 2022 8:32 AM

To: jeffrey.oneill@rwjbh.org; Henry Kosarzycki <HKosarzycki@flad.com>; Gary Hamilton <gary.hamilton@wsp.com>; John Williams <John.Williams@DOH.WA.GOV>

Subject: 2021 IBC Atrium changes

Morning all-

I just realized that the 2021 IBC made a change to the definition of atrium.

Do you know if it was intentional to allow a two story ‘high hat’ atrium in I-2 without smoke control? 404.5 exception 2. If not, I can absolutely see this taken advantage of.

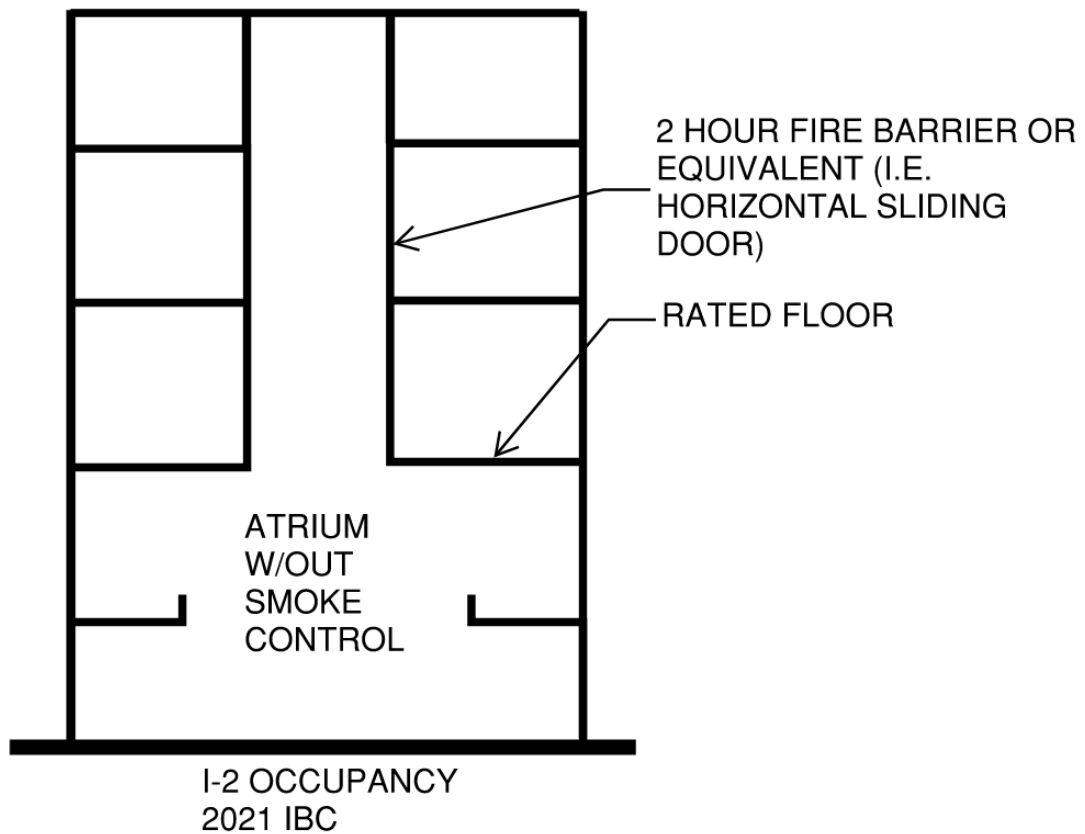
404.5 Smoke control. A smoke control system shall be installed in accordance with Section 909.

Exceptions:

1. In other than Group I-2, and Group I-1, Condition 2, smoke control is not required for *atriums* that connect only two *stories*.
2. A smoke control system is not required for *atriums* connecting more than two *stories* when all of the following are met:
 - 2.1. Only the two lowest *stories* shall be permitted to be open to the *atrium*.
 - 2.2. All *stories* above the lowest two *stories* shall be separated from the *atrium* in accordance with the provisions for a *shaft* in Section 713.4.

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Simple sketch of what I envision this saying (and people doing). For what it's worth, if this is the intent, I know a lot of designers that are going to throw a parade (assuming they can comply with LSC too)!



8) General/MOE

IFC has an appendix K

CONSTRUCTION REQUIREMENTS FOR EXISTING AMBULATORY CARE FACILITIES

9) Fire (see Item 7)

RE: G62-21

Let me take a few more minutes and see if I can figure it out.

My initial reaction is “They screwed up”

It seems like they are under the impression that exception 5 will be a specific condition and thus be the one that I-2 Condition 2 would have to follow. But in the world of exceptions, you can pick any that are applicable and so I agree with you that Exception 3 is still possible to use. (That does not comply with Life Safety Code, but it would be OK under our code.)

It really seems like they should have put the “in other than Group I-2 and Group I-1, Condition 2” into the beginning of Exception 3 also.

The issue with Exception 4 is tricky and I can see this one several ways. I generally agree that the added text in Exception 4 is not really necessary since the intent of code and previous atrium requirements is that you need a smoke control system in any atrium in an I-2 or I-1 Condition 2. However, it may be that this exclusion is important here due to the new Exception 2 in 404.5. Since Exception 2 in 404.5 and that new option for “shaft” separation can eliminate smoke control system it may be important that Exception 4 in 404.6 does exclude the I-2 and I-1 Condition 1.

It almost seems like Exception 2 in 404.5 should also have the “in other than....” wording inserted there. May have been better to put the “in other than....” wording into Exception 2 in 404.5 and not in Exception 4 of 404.6. I know this is NOT the intent, but.....Exception 2 in 404.5 would seemingly let you eliminate the smoke control system in an I-2 or I-1 Condition 1 (nothing says you cannot use it for them). So if you don't need the smoke control in an I-2 because only the lower two levels are open, can I have a 5 story atrium in an I-2 without smoke control using Exception 2 in 404.5? That certainly was not the intent, but if it is acceptable then perhaps it is best to have Exception 4 limited like G62 did.

I may see if the videos help, but I think they screwed G62 up and did not really accomplish what they wanted it to do.

Jay

Hi Jay. When you have a minute, can you take a look at G62. I am trying to finish up my loose ends on Sig Chngs and this one seems messed up. What is the value of new Exception 5 since Exception 3 allows the same thing without the conditions set forth in #5? It seems like they should have added "In other than Group I-2 and Group I-1, Condition 2," so that only exception 5 would make sense. Plus, was Exception 4 even necessary due to the requirement for smoke control in all multi-story Group I-2 and Group I-1, Condition 2 occupancies?

Am I missing something? Thanks.

Doug Thornburg, AIA, CBO

10) General/MOE

From Henry

These are a couple things that came up over the last year...

- ✓ (Kimberly was going to share this with Beth Tubbs)...So here is something that just came up during our WHEA...Wisconsin version of ASHE meeting.

This occurred a few times here in Wisconsin where the FD comes in after walls and infrastructure is installed to see if their radios work. That often leads to the requirement to install Emergency Responder Radio Coverage...the how to is in the IFC. So... building plans and subsequent review "typically" may not have this covered (except for some general note?)

Maybe a small group discussion regarding administration of that rule or where it is better addressed.

- ✓ Sound attenuation email string attached. Submitted by Tina Duncan, director of codes and regs at HKS... **My question: Do you believe it is IBC's intent to require a higher STC rating between patient rooms and between patient rooms and corridors than what is required by commonly accepted/adopted health care specific codes?**

- ✓ I also figured that we could take a real quick look at the atrium question that came up but I'm thinking that it may not be a thing...

- ✓ One last thing came up with the AIA AAH (Academy of Architecture for Health) code committee meeting.

The concern is that the current language in the IBC regarding suite egress has taken away the opportunity to move through an adjoining suite within 100'; whereas the life safety code maintains that opportunity.

2021 IBC s. 407.4.4.3 Access to corridor:

Every care suite shall have a door leading directly to an exit access corridor or horizontal exit. Movement from habitable rooms within a care suite shall not require more than 100 feet (30 480 mm) of travel within the care suite to a door leading to the exit access corridor or horizontal exit. Where a care suite is required to have more than one exit access door by Section 407.4.4.5.2 or 407.4.4.6.2, the additional door shall lead directly to an exit access corridor, exit or an adjacent suite.

2021 IBC s. 407.4.4.3 Commentary: In previous editions of the code, travel distance was controlled within suites by limiting the number of intervening rooms. The approach was confusing and led to inconsistent application of the care suite provisions. Travel distance within the suite is limited to 100 feet (30 480 mm) and is measured from the most remote point in the suite to the closest door to a corridor outside the suite or a horizontal exit. If the suite is large enough that it needs two ways out, the second path can be through another suite. Table 1017.2 limits the total travel distance within Group I-2 occupancies to 200 feet (60 960 mm). Therefore, where you have 100 feet (30 480 mm) of travel within the suite, you only have 100 feet (30 480 mm) outside of the care suite before your travel must reach an exit. The Section 407.4.2 limit of a maximum 50-foot (15 240 mm) travel distance within a patient sleeping room to an exit access door does not apply to patient rooms within care suites.

11) Fire
from Henry

NFPA 101-2012 section 18.3.1.2 points to s. 8.6.9.1 and provides a narrow application for a convenience opening between two adjoining floors. Six points to meet but the big one is not open to corridor.

IBC section 712.1.9 two-story openings starts out with “in other than Groups I-2...” Is this something that we should look at? Or like I said, maybe I’m not remembering a recent journey down this code path.

12) General/MOE
from Amy

1010.2.4 locking doors for ‘clinical needs’ – what is a clinical need? Maybe a definition

13) Fire
from Amy

Group I-1 – removal of door closers due to possible resident injury – consistent with NFPA 101 board and care

13) General/MOE
from Wayne

When does a apartment building with senior care change to and I-1 because of in-home care

15) General/MOE
from Dan

Sleeping unit definition – trying to not allow for sleeping units to have unlimited number of bedrooms.

16) MEP

From Tim –IECC updates related to hospitals?

17) General/MOE

from John Woestman – control egress door