

Construction Code Communicator



State of New Jersey
Philip D. Murphy, Governor

Department of Community Affairs
Jacquelyn A. Suárez, Commissioner

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Summer 2025

The 42nd Annual Building Safety Conference of New Jersey












The 42nd Annual Building Safety Conference of New Jersey was held from May 14th through the 16th at the Harrah's Hotel in Atlantic City.

The Cracker Barrel kicked off the Conference, as it always does. This popular event gives our guests the opportunity to hear from a variety of presenters in a short format style with a focus on new items of particular interest to the code enforcement community. Topics included electronic permitting and many other code-related issues and as always there was an opportunity to meet with DCA staff to gain insight into all the current topics of discussion throughout the New Jersey code community. We again held a job fair running simultaneously with the Cracker Barrel which was successful for our Association partners and those seeking positions in code enforcement throughout the State. The combination of Cracker Barrel and job fair continues to rank as some of the most well-received events at the Conference.

The centerpiece of the Building Safety Conference was, of course, the opportunity to recognize and honor those selected by their associations as Code Enforcement Professionals of the Year for 2025. We were honored to have our Commissioner Jacquelyn A. Suárez present the awards at the annual awards luncheon.

The following awards were presented:

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(The 42nd Annual Building Safety Conference of New Jersey)



New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year
Ray Keeley



Municipal Construction Officials of New Jersey
Construction Official of the Year
Ken Rogers



New Jersey Association of Technical Assistants
Technical Assistant of the Year
Melissa Nelson



New Jersey Building Officials Association
Building Inspector of the Year
John McManus



Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year
Eric Sudia



New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year
Anthony Greci



*New Jersey State Plumbing Inspectors Association
2025 Plumbing Inspector of the Year – Ray Keeley*

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(The 42nd Annual Building Safety Conference of New Jersey)



*Municipal Construction Officials of New Jersey
2025 Construction Official of the Year – Ken Rogers*



*New Jersey Association of Technical Assistants
2025 Technical Assistant of the Year – Melissa Nelson*

(Continued on next page)

(The 42nd Annual Building Safety Conference of New Jersey)



*New Jersey Building Officials Association
2025 Building Inspector of the Year – John McManus*



*Municipal Electrical Inspectors Association of New Jersey
2025 Electrical Inspector of the Year – Eric Sudia*

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(The 42nd Annual Building Safety Conference of New Jersey)



*New Jersey Fire Prevention and Protection Association
2025 Fire Protection Inspector of the Year - Anthony Greci*



The 42nd Annual Building Safety Conference of New Jersey Award Winners

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(The 42nd Annual Building Safety Conference of New Jersey)

Congratulations to all for your hard work and dedication to improving code enforcement in New Jersey!

In addition to honoring the code enforcement personnel of the year, we were able to offer 18 in-person Continuing Education seminars over the two days of the conference. With the success of the online training opportunities, it is always a welcome change for both the attendees and the instructors to be able to conduct the seminars in person, and the conference provides us with a chance to provide this opportunity.

Everyone enjoyed the festive atmosphere as we celebrated our award winners with a reception in the famous Pool After Dark. All the attendees were able to relax after a long day of classes and welcomed spending time with friends.

For the 2026 Building Safety Conference we are always looking for new and exciting events to add to an already very successful event. We are proud to say that the Conference continues to grow, and the Committee always seeks to meet the ever-changing needs of our community by offering new training opportunities. We are always on the lookout for new ideas. If you have an idea, please pass that along through your association or email us at education.unit@dca.nj.gov.

For the 2026 conference. We will be returning to Harrah's Hotel and Casino from May 6th through the 8th. We hope to see you all next year as we look forward to the 43rd annual conference. Please save the date.

Source: Patrick Ryan
Office of Licensing and Education
(609) 984-7834

Modernizing Licensing and Education: New Online Portal Empowers NJ Code Professionals

Managing license applications and continuing education is about to get easier. As part of the Department of Community Affairs' (DCA) ongoing commitment to innovation and operational efficiency, a new online portal is set to launch in early fall, offering a streamlined, digital solution for licensing and continuing education for New Jersey's code officials and applicants. Developed in collaboration with CSI Technology Group, the portal represents a major step forward. It reduces paperwork, improves access to training, and enhances transparency across the construction code enforcement community.

Applicants can now submit licensing applications entirely online. By eliminating the need for physical paperwork and in-person visits, the process significantly reduces turnaround times and removes common barriers for both new and returning applicants. Renewing a license will also be faster and easier. Built-in reminders and a user-friendly interface help professionals navigate the process with confidence. The streamlined workflow minimizes errors and ensures that licensees remain in good standing without unnecessary delays.

The portal introduces a centralized hub for managing continuing education, where code officials can access course history, upcoming training opportunities, and direct registration links through *GoToTraining*. These features simplify compliance with regulatory requirements and make it easier than ever for code officials to stay current by ensuring they can easily fulfill their continuing education obligations.

Whether you're a seasoned official or a first-time applicant, the portal's intuitive design makes it accessible to users of all experience levels. The layout prioritizes ease of use, reducing the learning curve and allowing professionals to manage their credentials with minimal technical difficulty.

"This is a game-changer for code enforcement professionals," said Patrick Ryan, Supervisor of Licensing. "I'm very excited about the way this portal will eliminate unnecessary steps, reduce errors, and empower applicants to manage their licenses and continuing education from one place. It reflects our commitment to modern, efficient service and ultimately raises the standard for how we support the professionals who keep our communities safe."

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(Modernizing Licensing and Education: New Online Portal Empowers NJ Code Professionals)

By removing the need for physical mail and in-person visits, the portal saves valuable time for both professionals and municipalities. Automated workflows and centralized digital records significantly reduce administrative burdens for users and Department staff alike. Licensees can manage CEUs in one place, tracking progress and registering for training without chasing paperwork or relying on third-party confirmations. Real-time updates on application status, CEU completion, and renewal timelines foster greater accountability and reduce uncertainty throughout the process.

Please check your email for updates regarding the portal in the near future. The launch of this portal marks a significant advancement in New Jersey's approach to construction code licensing and professional development. For the code enforcement community, it offers more than just convenience; it reflects a broader mission to ensure that officials have the tools, access, and support they need to uphold building safety and serve New Jersey's communities with excellence.

As industry continues to evolve, this portal lays the foundation for a more agile, connected, and empowered workforce.

Source: Verlensky Joachim
Office of Licensing and Education
(609) 984-7834

No Jingles or Mascots – Permits

I'm not calling out NJM here, but there seems to be an uptick in calls lately where insurance companies are requiring homeowners to get UCC permit for their records, regardless of whether or not the UCC requires one. (But really, I'm calling out ALL insurance companies – NJM's slogan is just a catchy way to get your attention.) The short answer here is that if it is a project that falls under N.J.A.C. 5:23-2.7, Ordinary maintenance, then no UCC permit is issued, and no inspection occurs.

The above is based on Subchapter 2, Administration and Enforcement, and Subchapter 6, the Rehabilitation Subcode. The name of each subchapter should note that they have different applications that complement each other. Subchapter 2 details when a permit is required, and Subchapter 6 addresses how to undertake work in an existing structure. And the most notable section to reference is N.J.A.C. 5:23-6.2(d), Permits:

The requirements of this subchapter shall apply to all rehabilitation work without regard to whether a permit is required for such work. It should not be assumed that a permit is required simply because a requirement is established by this subchapter. Determinations as to whether a permit is required shall be made in accordance with the administrative provisions of the UCC contained at N.J.A.C. 5:23-2.

I'm a person who likes examples to explain, so let me provide two:

- A roof recovering on an existing single-family detached home. Per N.J.A.C. 5:23-2.7(c)1x, one does not need to file a permit application with the local enforcing agency. However, this does not absolve the homeowner and/or contractor from following the requirements of the Rehabilitation subcode. The reroofing section of the International Residential Code, R908, still applies per N.J.A.C. 5:23-6.8(h) and is to be followed by the homeowner/contractor regardless of permit issuance. The insurance company may insist they need a letter to close out the file on their end, but this is not your concern as an agent of the local enforcing agency. The contractor chosen should be registered with the "other DCA" – Division of Consumer Affairs within the Department of Law and Public Safety – as a Home Improvement Contractor and they should be able to attest their work with a letter to the homeowner to provide the insurance company. If the homeowner does the work themselves, potentially the insurance company will have an affidavit the homeowner can sign, but again, this is not a local enforcing agency issue.

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(No Jingles or Mascots – Permits)

- Note: the above is about a roof recover. In the progress of the recover, if it is found that some sheathing needs replacement, this would require a Minor Work permit to be filed with the local enforcing agency per N.J.A.C. 5:23-2.17A. Simply put, the permit applicant would inform the local that this was discovered and get the permit filed within five business days after finding/notification.
- Replacement receptacles in any dwelling unit. Per N.J.A.C. 5:23-2.7(c)3i, one does not need to file a permit application with the local enforcing agency. Like the example above, this simply means it is the owner or electrical contractor (also licensed by the other DCA) that would replace these items to meet UCC code, especially in locations where ground-fault circuit interrupter protection, damp/wet, or tamper-resistant are required; compliance with Section 406.4(D) of the electrical subcode is noted within N.J.A.C. 5:23-6.8(d). How the insurance company would like to close out their files would be up to them as long as it does not require a UCC permit/inspection.

Source: Rob Austin
Code Assistance/Development Unit
(609) 984-7609

How Do I Calculate the Permit Fee for an Elevated Structure?

(Updated Reprint from Spring 2015)

Anticipating the number of permit applications that may be impacted by NJPACT (<https://dep.nj.gov/njpact/>), we are reminding local enforcing agencies how to calculate the volume of the elevated structures for fee purposes. In short, N.J.A.C. 5:23-2.28, Volume computation, provides the answer.

At (b)2, the volume of the space below a structure without a basement/cellar is calculated from the floor assembly of the first story above grade to the bottom of the footing and divided by five. This distance is not to exceed 2 ½ feet below the top of the floor assembly. Because the “bottom of the footing” is the base of the pile, the calculation will most likely exceed the maximum of 2 ½ feet below the top of the floor assembly. Once the area of the space below the structure is determined (using the 2 ½ feet maximum), this area is then added to the structure’s volume for the fee calculation.

But how does this apply to existing homes that are being elevated? Realizing that the elevation of an existing home is technically an addition (due to the increase in height), this is one of the few instances where we **must** use the cost of construction to calculate the fee; the elevation does not contain volume. Only that which is regulated by the UCC should be included in the cost of construction, so, the actual cost of the house jacking and cribbing should not be included in the cost of construction. The piles are regulated by the UCC and therefore should be included in the cost of construction for the calculation of the fee.

Source: Rob Austin
Code Assistance/Development Unit
(609) 984-7609

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Please direct any comments or suggestions to the NJDCA, Division of Codes and Standards, Attention: Code Development Unit, PO Box 802, Trenton, NJ 08625-0802 or codeassist@dca.nj.gov.

Building Safety Month Proclamation



STATE OF NEW JERSEY
EXECUTIVE DEPARTMENT

Proclamation

WHEREAS, the State of New Jersey is committed to recognizing that our growth and strength depends on the safety and essential role our homes, buildings and infrastructure play, both in everyday life and when disasters strike; and

WHEREAS, our confidence in the resilience of these buildings that make up our communities is achieved through the devotion of vigilant guardians—building safety and fire prevention officials, architects, engineers, builders, tradespeople, design professionals, laborers, plumbers and others in the construction industry—who work year-round to ensure the safe construction of buildings; and

WHEREAS, these guardians are dedicated members of the International Code Council, a nonprofit that brings together local, state, territorial, tribal and federal officials who are experts in the built environment to create and implement the highest-quality codes to protect us in the buildings where we live, learn, work and play; and

WHEREAS, these modern building codes include safeguards to protect the public from hazards such as hurricanes, snowstorms, tornadoes, wildland fires, floods and earthquakes; and

WHEREAS, Building Safety Month is sponsored by the International Code Council to remind the public about the critical role of our communities' largely unknown protectors of public safety—our local code officials—who assure us of safe, sustainable and affordable buildings that are essential to our prosperity; and

WHEREAS, "Game On!," the theme for Building Safety Month 2025, encourages us all to raise awareness about building safety on a personal, local and global scale; and to get involved with Building Safety at any level

WHEREAS, each year, in observance of Building Safety Month, people all over the world are asked to consider the commitment to improve building safety, resilience and economic investment at home and in the community, and to acknowledge the essential service provided to all of us by local and state building departments, fire prevention bureaus and federal agencies in protecting lives and property;

NOW, THEREFORE, I, Philip D. Murphy, Governor of the State of New Jersey, do hereby proclaim:

**MAY 2025
AS
BUILDING SAFETY MONTH**

in New Jersey.



GIVEN, under my hand and the Great Seal of the State of New Jersey, this sixteenth day of May in the year two thousand twenty-five, the two hundred forty-ninth year of the Independence of the United States.


Lt. GOVERNOR


GOVERNOR

Bathroom Access at Phat Robbie's

Who has ever gone to a restaurant and remembered it for the food? I'm sure many, but this is not a story about food, this is story about "Phat Robbie's Burger Barn" and the reason I remember it; which is because it's so small. So small in fact that you can't fit more than, say, 15 fat Robbies in it! Oh, and another memorable moment ...there I was, eating a burger and fries when another patron of Phat Robbie's walked out of the kitchen, with a three-foot-length of toilet paper in tow. I could have been nice and stepped on the streamer for this patron, but I chose not to and stayed silent (we've all been there). But therein lies the real issue, the only bathroom in Phat Robbie's is behind the kitchen.

You now may be asking, what does this have to do with you? Well, besides the fact that you may now not want to eat at Phat Robbie's, the little blurb above highlights a health regulation that you should be aware of. Often, burger joints open in strip malls, where space is at a premium and, generally, separate restroom facilities for patrons and employees are not provided. The State Sanitary Code (N.J.A.C. 8:24) does not allow patrons to go through a food preparation area to access the bathrooms. So, when you get a set of plans and the bathroom is in the back behind the kitchen, remember that's a No-No. So, do it for Phat Robbie! Business has been kind of slow.

Now, I can't take full credit for this article. The original was written by Mike Baier (ret. 2019) and published in the Fall 1996 Communicator. The problem is, the original title, "Eat at Joe's", doesn't provide the content in which you know what the article contains – I fixed it!

Source: Rob Austin
Code Assistance/Development Unit
(609) 984-7609

Alternative Materials, Equipment and Methods of Construction: The "Grunge" of the Building World

Just like how 90s alternative rock broke the mold of mainstream music, alternative materials in construction challenge traditional methods with innovation and efficiency. N.J.A.C. 5:23-3.7 in the Uniform Construction Code (UCC) is like the indie record label of building regulations, allowing new materials to shine, provided they're just as solid as the old-school hits.

Under this section, builders can use non-traditional materials as long as they meet safety, durability, and performance standards. Think of it as a battle of the bands—alternative materials must prove they rock just as hard as their classic counterparts. Whether it's recycled plastic lumber (the Green Day of sustainability) or Cross-Laminated Timber (the Nirvana of structural integrity), these materials require approval from the Building Subcode Official. The official in this capacity acts like the ultimate record producer, ensuring only the best make the cut.

Recently, the Code Assistance Unit (CAU) has been receiving calls regarding specific products that "only some towns approve." Of course, here at the CAU, we do not approve products or plans, however, sometimes we have to remind certain local enforcing agencies that N.J.A.C. 5:23-3.7 permits alternative materials that have a field evaluation label and report or letter issued by a nationally recognized testing laboratory verifying that the specific material, equipment, or method of construction meets the identified standards or has been tested and found to be suitable for the intended use.

For a material example (please note that we do not endorse specific products), AdvanTech Subflooring does not conform to DOC PS 1 or PS 2 which is a testing requirement found in Section R503.2.1, Identification and grade, of the 2021 International Residential Code. However, AdvanTech Subflooring is certified through an ICC-ESR Report, which is a recognized evaluation service program that is in accordance with N.J.A.C. 5:23-3.7(a)2 and shall be accepted by the Building Subcode Official. An example of a method of construction would be an alternative method to conform to Section R302.13, Fire protection of floors when using I-joists. The American Plywood Association (APA) provides a service report (SR-405) that lists multiple floor assemblies that meet the equivalent protection required in Section R302.13. This research report would be acceptable per N.J.A.C. 5:23-3.7(c).

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(Alternative Materials, Equipment and Methods of Construction: The "Grunge" of the Building World)

Testing and documentation play a key role, like a rigorous soundcheck before a big gig. The appropriate Subcode Official may require engineering evaluations, lab tests, or manufacturer certifications to confirm that the material won't turn into a one-hit-wonder. Some alternative materials that have successfully entered the mainstream include Insulated Concrete Forms (ICFs)—the Pearl Jam of energy efficiency—and Structural Insulated Panels (SIPs), which cut construction time like Weezer's three-chord magic.

Of course, taking the alternative comes with its challenges. Regulatory approval can be as tough as a hair band getting signed in the grunge era, and some contractors might resist new materials the way old-school rock fans clung to their glam bands. But with the right approach, alternative materials can bring innovation to the industry, proving that construction, like music, is always evolving. So next time you consider a new material, just remember – even Nirvana had to get past the gatekeepers before changing the game.

Source: Adam Matthews
Code Assistance Unit
(609) 984-7609

Occupied Roof, Story, or Penthouse? – 2021 IBC

As rooftop amenities continue to grow in popularity — think rooftop lounges, decks, gardens, and even fitness spaces — it's important for code officials and design professionals to understand how the 2021 International Building Code (IBC), as adopted by New Jersey, treats these spaces. Specifically, the difference between an occupied roof and a story, and the implications for egress, building height limitations, and life safety systems.

Now although the term occupied roof is not explicitly defined in Chapter 2, Definitions, its use is clearly described by Section 503.1.4, Occupied roofs, of the 2021/IBC. According to this section, a roof level or portion of a roof may be used for human occupancy—provided that the use complies with the occupancy classification requirements of the story directly below. This means that an occupied roof is essentially a roof surface intended for activities like socializing, dining, or recreation, without any enclosed occupiable space above it.

In contrast, a story is defined in Section 202 of the 2021/IBC, which reads as follows:

STORY. That portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above (see "*Basement*," "*Building height*," "*Grade plane*" and "*Mezzanine*"). A story is measured as the vertical distance from top to top of two successive tiers of beams or finished floor surfaces and, for the topmost story, from the top of the floor finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters.

In this case, a rooftop that includes enclosed occupiable space, such as a habitable penthouse apartment, would qualify as a story rather than simply an occupied roof. We know that some places like to call the swanky apartment at the top of the building a penthouse space, but this is not a building code term and is instead a real estate marketing term. See the definition below:

PENTHOUSE. An enclosed, unoccupied rooftop structure used for sheltering mechanical and electrical equipment, tanks, elevators and related machinery, stairways, and vertical shaft openings.

Further, Section 1511.2, Penthouses, as defined above, outlines when a rooftop penthouse may be excluded from the story count. But once a penthouse includes spaces intended for occupancy—like a conference room or apartment—it becomes part of the building's story count. While there is no formal definition of occupied roof in Chapter 2 of the 2021 code, the concept is understood through IBC's structure and application. Related terms such as occupiable space (defined in Section 202 as a room or enclosed space designed for human occupancy) further help clarify that an occupied roof is not a room but may still be subject to many of the same safety and access requirements.

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(Occupied Roof, Story, or Penthouses? - 2021 IBC)

Please note, the 2024 code will update the definitions to include OCCUPIABLE ROOF, as follows: An exterior space on a roof that is designed for human occupancy, other than maintenance or repair, and is equipped with a means of egress system meeting the requirements of this code.

This distinction is important when determining building height, allowable number of stories, and the need for stairway access and fire protection features. Designers should carefully evaluate the intended use of roof spaces early in the project, and building officials should ensure that plans match code expectations.

Source: Keith Makai
Code Assistance Unit
(609) 984-7609

Save Room for Dessert – Radon Fans

We all love a good sundae after a fun meal, especially when you started with cocktails and appetizers. Justification... you are you are rounding out a fabulous dinner with dessert! And what better way to celebrate than a sundae with chocolate syrup, whipped cream, and a cherry on top. Delicious!

Now that we all have unbuttoned our pants to feel the gluttony of overeating, here's the real reason for this article. We have heard rumbling from our sister agency at NJ DEP that there have been designers not providing room for a future in-line fan, as required in the construction techniques for Group R buildings at N.J.A.C. 5:23-10.4(c)14: Electrical junction boxes shall be installed near the provided area, such as an accessible attic space, where a future in-line vent pipe fan and system failure alarms may be installed.

As previously explained, especially in those homes that are providing habitable attics, this item is being forgotten and not being accounted for. So, for those municipalities that are in Tier 1 areas, please keep this in mind when performing a plan review.

Now, who's ready for cake?

Source: Rob Austin
Code Assistance/Development Unit
(609) 984-7609

PFAS – Foam Based Automatic Sprinkler Systems

Since the 1970s, per- and polyfluoroalkyl substances (PFAS) have been used in aqueous film-forming foams (AFFFs) for fighting liquid fuel fires such as flammable liquids, combustible liquids, petroleum greases, tars, oils, oil-based paints, solvents, lacquers, and alcohols. However, numerous scientific studies show that PFAS are linked to harmful effects on humans and animals, and they do not degrade naturally in the environment, which gives it the moniker of a "forever chemical." On January 8, 2024, Governor Murphy signed a bill into law that prohibited the use of per- and polyfluoroalkyl substances ("PFAS") in Class B firefighting foam P.L. 2023, c.243 (Bill A4125/S2712).

In brief, the law states that beginning two years after the effective date of the act, no person shall use, sell, or offer for sale, manufacture, or distribute for sale or use in the State any class B firefighting foam containing intentionally added PFAS. The bill exempts PFAS required by federal law or regulation until revoked and provides more time for certain industries, such as oil refineries, to comply.

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(PFAS – Foam Based Automatic Sprinkler Systems)

Many facilities and industries in New Jersey, including certain flammable liquid storage areas, warehouses, oil refineries, petroleum terminals, and chemical companies, utilize foam-based sprinkler systems because of their effectiveness in preventing and controlling fires. With the deadline for the discontinuance of PFAS looming, these facilities and industries will need to provide a more environmentally sustainable alternative to the PFAS foam concentrate that is currently in use. However, the process for changing out a foam concentrate may not be as simple as dumping the old PFAS foam and adding a new PFAS-free foam concentrate.

In most cases, the foam-based sprinkler system will need to be altered in some way. As explained in NFPA 11-2016 and NFPA 16-2019 at Section 4.4.1.1 and 6.3.1.2 respectively, different types of foam concentrate shall not be mixed for storage. While some brands of the same type of foam concentrates are found to be chemically compatible, long-term storage of different foams would need to be evaluated for compatibility. In addition to chemical compatibility, one should consider effects on proportioning and discharge hardware as many listings and approvals are very specific about operating pressures, flow ranges, and materials of construction of hardware components.

As always, a permit will be required anytime a foam-based sprinkler system is altered by changing the foam concentrate and/or changing system components. However, in addition to the permit and code requirements, it is critical for Fire Protection Subcode Officials to also notify the Fire Official during the plan review phase of the permit that the foam-based sprinkler system will be impaired because of the alteration work. Notifying the Fire Official of the planned impairment during plan review will give the Fire Official enough time to implement a fire watch and direct the building impairment coordinator to follow their preplanned impairment program.

Source: Keith Thedinga
Code Assistance Unit
(609) 984-7609

Energy Storage Systems, Fire Detection, and Rehab

(Updated reprint from Summer 2023)

As you may have noticed, the Energy Storage Systems (ESS) section of the International Residential Code (IRC) has been expanded for the 2021 edition. More specifically, Section R328.7, Fire detection, is new and has specific language for detection in the space where the ESS is installed. For reference, the requirement for new construction is as follows:

R328.7, Fire detection. Rooms and areas within dwelling units, basements and attached garages in which ESS are installed shall be protected by smoke alarms in accordance with Section R314. A heat detector, listed and interconnected to the smoke alarms, shall be installed in locations within dwelling units and attached garages where smoke alarms cannot be installed based on their listing.

The bigger question is, how does this apply to an existing dwelling? For this, one should visit the “residential materials and methods” at N.J.A.C. 5:23-6.8(h), although more specifically, N.J.A.C. 5:23-6.8(h)1xiv, which states:

Section R328 shall apply to newly installed and completely replaced stationary storage battery systems.

Applying N.J.A.C. 5:23-6.2(b), to the above means that if one installs an ESS in an existing dwelling, the space (i.e., room or area) where the actual ESS is installed is subject to the smoke alarms provision of Section R314. However, it would not require the entire dwelling to be brought up to the current code.

Example: If this is an older dwelling with only battery-operated devices, they are not part of the scope of the project and the battery-operated devices can remain as-is.

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(Energy Storage Systems, Fire Detection, and Rehab)

In dwellings with existing interconnected hardwired smoke alarms, the new hardwired device installed in the room or area containing the ESS must be interconnected to the existing interconnected hardwired devices in accordance with Section R314.4. This can be accomplished with either physical or wireless interconnection. Regardless of the interconnection method, all devices must be compatible, and all alarms must sound upon activation of one alarm. Likewise, dwellings containing a fire alarm system instead of smoke alarms, must install an additional fire alarm system device within the room or area containing the ESS.

Source: Keith Thedinga
Code Assistance Unit
(609) 984-7609

Automatic Sprinkler System Backflow Preventers: Forward Flow Test

It was brought to the Division's attention that some automatic sprinkler systems may not have been installed with a means to forward flow test backflow preventers. Section 16.14.5.1, Backflow Prevention Valves, of NFPA 13-2019 states that, "Means shall be provided downstream of all backflow prevention valves for forward flow tests at a minimum flow rate of the system demand including hose allowance where applicable."

Why is providing a means to forward flow test backflow preventers important? Well, Section 13.7.2.1 of NFPA 25 requires annual forward flow testing of backflow preventers at the minimum flow rate, which exercises the valves' opening/closing mechanisms. Without the ability for annual forward flow testing, the mechanisms used to keep valves closed may not allow the valves in the backflow preventer to open to the necessary position to allow enough water to supply the automatic sprinkler system during a fire.

Now what is considered an acceptable means for forward flow testing? NFPA 13 provides enhanced information and guidance in Section A16.14.5.1. Here it states, "The full flow test of the backflow prevention valve can be performed with a test header or other connection downstream of the valve. A bypass around the check valve in the fire department connector line with a control valve in the normally closed position can be an acceptable arrangement. When flow to a visible drain cannot be accomplished, closed-loop flow can be acceptable if a flowmeter or site glass is incorporated into the system to ensure flow." NFPA 13 goes on to state in Section 16.14.5.1.1, "the arrangement required in 16.14.5.1 shall be serviceable without requiring the owner to modify the system to perform the test."

And who receives the results of these tests? This information can be found in the UCC Bulletins, [Bulletin 99-2](#) states that the plumbing subcode should ensure that backflow preventers are tested prior to final inspection and annually, as required by the regulations. Bulletin 99-2 provides an attachment where the results of annual testing, including the forward flow test, are recorded. The form attached to Bulletin 99-2 is recommended for use to document the testing of backflow preventers. Other forms may be used to document backflow preventer tests; however, they may not contain all the information needed to comply with NFPA 25, including the results of the forward flow test. A Certificate of Compliance is issued when the form or similar is filled out, demonstrating that the backflow preventer is compliant. As stated in Bulletin 99-2, "On dedicated fire water service lines, the fire official will accept a current Certificate of Compliance issued in accordance with this bulletin. This will meet the requirement of National Fire Protection Association Standard 25 for the backflow annual test."

Please note, for further information about Periodic Inspections and Bulletin 99-2, see pages 3 and 4 of the [Fall 2023 Communicator](#).

Source: Keith Thedinga
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Fireplace Log Sets

According to the Mechanical Matrix posted in the 2024 Fall Construction Code Communicator, direct replacement of domestic gas fireplace log sets in existing R-3 and R-5 dwelling units would require a mechanical technical section, and the work type would be Minor Work.

After much discussion, it has been determined this should be treated as an Ordinary Maintenance project. N.J.A.C. 5:23-2.7(c)5vii and viii both cover replacement of domestic fuel-fired appliances such as clothes dryers, stoves, and ovens, but do not specifically cite fireplace log sets. In our opinion, the domestic replacement gas fireplace log sets are very much in line with the domestic clothes dryers, stoves, and ovens, and should also be considered as ordinary maintenance. Please refer to this article should there be any questions regarding domestic replacements of gas fireplace log sets moving forward.

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Plumbing Fixture Counts

Plumbing fixture counts seem hard to determine, even though they appear to be clearly called out in the National Standard Plumbing Code (NSPC), as well as the Rehab code. However, in order to bring some clarity to the issue, let's look into the specifics.

Prior to the adoption of the International Building Code (IBC), the BOCA National Building Code was adopted as the building subcode. In either case, the use groups and occupancy classifications of the building subcode never fully mimic the NSPC...close, but not quite, especially in terms of assembly occupancies, Group A. This is why in the past, we have stated, utilize the NSPC occupancy group descriptions to best fit the Group designations of the IBC.

For example, IBC Sections 303.1.1 and 303.1.2 have been overlooked in their requiring Assembly Use Group A to be classified as a Group B occupancy as follows:

303.1.1 Small buildings and tenant spaces.

A building or tenant space used for assembly purposes with an occupant load of less than 50 persons shall be classified as a Group B occupancy.

303.1.2 Small assembly spaces.

The following rooms and spaces shall not be classified as Assembly occupancies:

1. A room or space used for assembly purposes with an occupant load of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.
2. A room or space used for assembly purposes that is less than 750 square feet (70 m²) in area and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

As you can see from above, the IBC description does not reflect the intent of the NSPC to classify a Group A occupancy as a Group B occupancy. If that was the case, this would cause more plumbing fixtures for the Group B than are required for the Group A, in most cases. When this occurs, one should design for per the applicable assembly description per the NSPC for plumbing fixture counts.

When it comes to an existing building, refer to the Rehab code as there are times that the existing building construction code actually allows more occupants for the same number of fixtures than if it were a new building. For example, per N.J.A.C. 5:23-6.17(k) note #2, in a B use group, the Rehab code allows up to 25 occupants to utilize one unisex bathroom as long as not more than 15 of those occupants are employees. However, a new building application would only allow 15 total occupants. This is often overlooked and allows more relief.

(Continued on next page)

(Plumbing Fixture Counts)

Additionally, according to the 2021 NSPC, Section 7.21.2a allows you to base the occupant load on plumbing fixtures by limiting the occupant load on supplied plumbing fixtures while maintaining the egress requirements for the total load allowable based on the size of the building. If you set the fixture requirements to be based on the total occupancy load, according to 2021 NSPC, Section 7.21.2b, you may only reduce the occupancy load by one-third of that for life safety purposes. Meaning, that the egress requirements would be for the total allowable occupants based on the size criteria, but the posted occupancy load would be a one-third reduction. For example, in a building that allows 100 occupants based on the sizing criteria of the space, the posted occupant load would be 67.

I hope that this helps!

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