

Construction Code Communicator



State of New Jersey
Philip D. Murphy, Governor

Department of Community Affairs
Jacquelyn A. Suárez, Commissioner

Volume 36, Number 2

Summer 2024

The 41st Annual Building Safety Conference of New Jersey

The 41st Annual Building Safety Conference of New Jersey was held from May 8th through the 10th at the Hard Rock Hotel in Atlantic City.

The Cracker Barrel kicked off the Conference, as it always does. This popular event allows our guests 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 the electronic permitting system and many other code-related issues. As always there was an opportunity to meet with DCA staff to gain insight into all the current discussion topics 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 2024. We were honored to have our Assistant Director Kevin Luckie present the awards at the annual awards luncheon.

The following awards were presented:

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(The 41st Annual Building Safety Conference of New Jersey)



New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year
Michael Krupsky



Municipal Construction Officials of New Jersey
Construction Official of the Year
Dennis Bettler



New Jersey Association of Technical Assistants
Technical Assistant of the Year
Mary Ann Apostolico



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



Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year
Thomas E. Klich



New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year
Christopher Campion Jr.



*New Jersey State Plumbing Inspectors Association
2024 Plumbing Inspector of the Year – Michael Krupsky*

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(The 41st Annual Building Safety Conference of New Jersey)



*Municipal Construction Officials of New Jersey
2024 Construction Official of the Year – Dennis Bettler*



*New Jersey Association of Technical Assistants
2024 Technical Assistant of the Year – Mary Ann Apostolico*

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(The 41st Annual Building Safety Conference of New Jersey)



*New Jersey Building Officials Association
2024 Building Inspector of the Year – John Fiedler*



*Municipal Electrical Inspectors Association of New Jersey
2024 Electrical Inspector of the Year – Thomas E. Klich*

(Continued on next page)

(The 41st Annual Building Safety Conference of New Jersey)



*New Jersey Fire Prevention and Protection Association
2024 Fire Protection Inspector of the Year - Christopher Campion Jr.*

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

For the 2025 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, though! If you have an idea, please pass that along through your association or email us at education.unit@dca.nj.gov.

We are excited to announce that the conference will be changing venues for the 2025 conference. We will be heading over to Harrah's Hotel and Casino on May 14th through 16th. I hope to see you all next year as we look forward to the new venue, including hosting our annual awards reception in the celebrated Pool After Dark. Please save the date.

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

The Construction Code Communicator is an online publication of the New Jersey Department of Community Affairs' Division of Codes and Standards. It is typically published four times a year.

Copies may be read or downloaded from the division's website at: www.nj.gov/dca/divisions/codes.

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.

UCC Summary of Rule Changes – Spring 2024 Update

April 1, 2024, New Jersey Register

N.J.A.C. 5:23-1.4, 2.17A, 2.18, 4.4, 4.5, 4.6, 4.7, 4.8, 4.12, 4.14, 4.16, 4.17, and 4.18 – Supplemental Private On-Site Inspection Agencies – This adoption incorporates the requirements at P.L. 2022, c.139, regarding supplemental private on-site inspection agencies. Specifically, the proposed rulemaking provides for expanded use by enforcing agencies of shared services or private on-site inspection agencies, and allows for contractors to utilize private on-site inspection agencies where a municipality fails to meet the required timeframe to perform an inspection.

→ for more information, please see “Aug 07, 2023” row at

https://www.nj.gov/dca/codes/codreg/rule_proposals_adoptions.shtml

Note, within the adoption document, “Apr 01, 2024,” see comment/response 2:

COMMENT: The commenter respectfully requests “in writing” be included at N.J.A.C. 5:23-2.17A(d)1 for consistency with the language at proposed N.J.A.C. 5:23-2.18(c)1. Additionally, the commenter questions if an email would constitute a written request pursuant to N.J.A.C. 5:23-2.18(c)1.

RESPONSE: These sections are intentionally worded differently. Due to the nature of minor work projects, which entail only a final inspection, N.J.A.C. 5:23-2.17A(d)1 states the required timeline in which the final inspection must be done. As the notice for minor work, addressed at N.J.A.C. 5:23-2.17A(b), allows for the initial notice to be either oral, or in writing, that same standard applies for the related inspections. Further, a request through email does constitute a written request.

Source: Code Development Unit
(609) 984-7609

Written Requests for Inspection and Minor Work Projects

Since the adoption of P.L. 2022, c.139, this Director’s Office has received several questions regarding the regulations of the supplemental private on-site inspection agencies. More specifically, when a written request is required, and what constitutes a written request.

Under the law (P.L.2022, c.139), and the regulations adopted by the Department, requests for inspections to be performed under N.J.A.C. 5:23-2.18 must be submitted in writing. During the adoption process, the Department received comments asking whether the same is required for minor work projects pursuant to N.J.A.C. 5:23-2.17A.

Well, the simple and short of it is that current regulations at N.J.A.C. 5:23-2.17A(b) provide that the notice of minor work can be either oral or in writing and submitted in person or electronically. So, with that being the case, requests for inspections relating to minor work at N.J.A.C. 5:23-2.17A(d) fall under those same requirements. As long as the request for inspection follows the requirements stated in N.J.A.C. 5:23-2.17A(b)1, is communicated in writing or orally, and is submitted in person or electronically, it is an appropriate request.

For minor work, this can be a phone call, e-mail, voicemail, telegram, carrier pigeon, or anything, as long as it is clearly communicated by speaking or writing and all the requirements are met.

For more information, please see comment/response #2 in the adoption on the “Aug 07, 2023” row at https://www.nj.gov/dca/codes/codreg/rule_proposals_adoptions.shtml. Here, it states:

COMMENT: The commenter respectfully requests “in writing” be included at N.J.A.C. 5:23-2.17A(d)1 for consistency with the language at proposed N.J.A.C. 5:23-2.18(c)1. Additionally, the commenter questions if an email would constitute a written request pursuant to N.J.A.C. 5:23-2.18(c)1.

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(Written Requests for Inspection and Minor Work Projects)

RESPONSE: These sections are intentionally worded differently. Due to the nature of minor work projects, which entail only a final inspection, N.J.A.C. 5:23-2.17A(d)1 states the required timeline in which the final inspection must be done. As the notice for minor work, addressed at N.J.A.C. 5:23-2.17A(b), allows for the initial notice to be either oral or in writing, that same standard applies for the related inspections. Further, a request through email does constitute a written request.

Sorry for the déjà vu if you read the note in the *UCC Summary of Rule Changes – Spring 2024 Update* article above, but this is only because we want to make this clarification crystal clear.

Source: Ian Rayfield
Code Development Unit
(609) 984-7609

Residential Structural Integrity Law, P.L. 2023, c.214

Senate Bill S2760, concerning structural integrity requirements for certain residential buildings, was first introduced in 2022 and was ultimately signed into law on January 8, 2024, as P.L. 2023, c.214. This law is available online at <https://pub.njleg.state.nj.us/Bills/2022/PL23/214 .PDF>.

Under this law, “covered buildings” must have a structural inspection performed at intervals established by the law.

The law refers to a “covered building” as any residential condominium or cooperative (condo/coop) building that has a primary load bearing system that is comprised of a concrete, masonry, steel, or hybrid structure including, without limitation, heavy timber and a building with podium decks, with some structures excluded.

Within the Covered Building definition set forth in the law, the term “Primary load bearing system” means the assemblage of structural components within a building comprised of columns, beams, or bracing that by contiguous interconnection form a path by which external and internal forces applied to the building are delivered to the foundation. The foundation as well as any connected or attached balconies shall be included as part of the primary load bearing system evaluation.

For reference, this essentially amounts to the definitions of Primary Structural Members and Secondary Structural members from the International Building Code (IBC).

The following structures are excluded from the law’s definition of a covered building:

- (1) International Standardization Organization ISO Type 1 construction or frame-built construction with combustible walls or roofs, but not including a podium deck on which the frame-built construction is situated;
- (2) a building with ancillary elements that are not part of the primary load bearing system such as, but not limited to, elevator shafts or concrete, masonry, steel, or heavy timber that the primary load bearing system does not deliver a building’s load to the foundation;
- (3) a building that is not a condominium or cooperative, and consists primarily of rental dwellings; and
- (4) a single-family dwelling.

Note that ISO Type 1 construction is essentially Type V construction from the IBC, so conventional lumber residential condos and coops are exempt.

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(Residential Structural Integrity Law, P.L. 2023, c.214)

Under the law, owners of covered buildings are responsible for ensuring their buildings receive structural inspections by deadlines that vary depending upon the date on which the Certificate of Occupancy was issued. This would be performed by a licensed New Jersey engineer. Following an inspection, the engineer must provide a report assessing the covered building's condition using the protocol established by the American Society of Civil Engineers, or any similar protocol by another nationally recognized structural engineering organization. The report must identify any required maintenance needed to maintain the primary load bearing system and determined when the next structural inspection must occur. Pursuant to the law, these reports must also be shared with the local enforcing agency.

Local enforcing agencies do not enforce this law but may start to receive reports regarding covered buildings. These reports should be maintained in your files for the building. In some cases, you may see permit applications filed to undertake measures identified in the report as necessary to maintain the structural integrity of the covered building.

Source: Code Assistance Unit
(609) 984-7609

Plan Review Reserved to the Department

As you all know, the Bureau of Construction Project Review performs plan review and issues releases of plans for specific types of buildings throughout the State, such as those projects noted at N.J.A.C. 5:23-3.11. Once those plans have been released, either fully or through partial release, to the local enforcing agency, the enforcing agency can issue permits for the segment of work that has been released and undertake inspections.

It has recently come to the Bureau's attention that there are a number of local enforcing agencies who are issuing permits and, in some cases, even certificates of approval or occupancy, before the Bureau has completed review and released the plans in whole or through partial release. The plan review process is vital to ensuring the building meets all necessary Uniform Construction Code requirements; without having those released plans, there is no way to ensure that the work inspected meets the plans, or the portions of the plans, as released.

This article just serves as a friendly reminder of the process. Permits are not to be issued, and construction cannot ensue, until the plans have been released, either in full or through partial release, by the Department.

If you have any questions regarding this process, please do not hesitate to contact the Bureau.

Source: Bureau of Construction Project Review
(609) 984-7850

Gazebos, Sheds, and Pergolas: Do You Need a Permit?

(Updated reprint from Summer 2018)

As we gear up for backyard fun this summer, let's get real about those fancy backyard structures. You know, the gazebos where you sip lemonade, the sheds where you hide your lawnmower, and those airy pergolas that make your neighbors jealous. But before you start hammering away, let's talk Uniform Construction Code (UCC), N.J.A.C. 5:23, permits!

Please note that the following descriptions pertain to "DETACHED" accessory structures for use in residential group R-2, R-3, R-4, or R-5:

(Continued on next page)

(Gazebos, Sheds, and Pergolas: Do You Need a Permit?)

Gazebos: These are like your outdoor living rooms, perfect for lounging or hosting a backyard shindig. But wait—when the wind picks up, they can get a bit flighty. To keep your gazebo grounded (literally), you'll need a permit to ensure it's properly anchored. Safety first, folks!

Sheds: Ah, the humble shed—a sanctuary for tools, bikes, and maybe that old sofa you can't throw out. Unlike gazebos, persons do not lounge here and they are sturdy with walls that help them stand up to the breeze. Good news: for most sheds under 200 square feet and not too tall (10' or less in height), you can skip the permit hassle. Just keep them "utility-free" and you're golden.

Pergolas: Think of these structures as your outdoor canopy, perfect for dappled sunlight and dramatic vine growth. They've got those open-beam roofs that let in the rays but won't take off in a gust. Like sheds, small ones (and their mini-me, arbors) often don't need a permit if they play by the same rules.

The Fine Print: Before you get too excited with your hammer and nails, always check with your local zoning wizards. They'll tell you if your dream gazebo, shed, or pergola can hang out on your turf legally.

So, there you have it! Backyard building made breezy (literally). Just remember, even if you don't need a UCC permit, it's always a good idea to play by the rules and keep those outdoor havens safe and snug. Happy building!

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

Open Permits and Change of Owner



(Reprint from Summer 2017)

The Code Assistance Unit frequently receives questions regarding what one should do when a property owner has open permits for work being performed on a building that the owner is selling or has sold.

In short, a change in owner requires a new permit. The new owner must file a permit application with a signed affidavit, etc. (If this were only a change of contractor(s), then the change could be handled through a permit update.) The new owner may or may not hire different contractors. However, the new owner must sign a permit application taking responsibility for compliance with the law. The contractors, whether there are changes in contractors or not, act as agents of the owner. It is the owner who ultimately is responsible.

It should be suggested that the old permit be closed out as suspended/abandoned and a new permit be opened by the new owner. This can be done at no fee since the fees were already paid by the previous owner. All the inspection reports, open violations, etc. should be transferred to the new permit, and the new (or old) contractors are responsible for correcting any non-compliant items identified on the old permit. The new permit application may continue to rely on the codes in effect when the permit was initially approved. Please note that all of this advice is fact-sensitive. If the new owner is making radical changes to the project that was the subject of the open permit, necessitating new or revised plans, then payment of a fee and review of the plans under the code in effect at the time of this new (revised) application may be required. The specifics (what has been done and what, if any, changes are planned) matter.

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

Special Inspections Background

As you may recall from my other newsletter articles, I attempt to write technical articles that contain some form of comedic relief (or even some silly song lyrics). I do think it helps people remember the article if there were some humor attached to it. However, this article starts not with a comedy, but with a tragedy.

Those in the Atlantic City area will probably recall an event in October 2003 that took the lives of four construction workers. This was the Tropicana Parking Garage Collapse, and it became the subject of the largest construction lawsuit settlement in history. Because the suit was settled, the theories about the collapse were not fully sorted out, however, the Department's investigation uncovered some serious concerns about how the construction was being monitored.

Since the 1990s, the code has recognized that the spot checks afforded by the municipal building inspector are insufficient for larger buildings with detailed masonry, concrete, welding, and bolting details. The code official simply cannot be on the site to oversee every critical concrete pour, structural weld, or the correct torque on every bolt. The concept of special inspections was incorporated into the Uniform Construction Code (UCC) to overcome this. Essentially, special inspections are inspections that are performed by a third party who is responsible for dedicating the time necessary to keep an eye on what's going on while the building is being built.

The need for special inspections was in the UCC when the Tropicana Garage was built. The good news is that inspections were being done. The bad news is that the reports lacked sufficient detail and frequency. In addition, those completing the reports had minimal construction experience. The arrangement was the equivalent of having someone who took a CPR course oversee open heart surgery.

To ensure that special inspectors were properly qualified, the Department developed a certification program for special inspectors that became effective on November 6, 2008. With the adoption of the 2021 International Building Code (IBC), mass timber and soil special inspectors were added to N.J.A.C. 5:23-5.23B, which makes this an opportune time to remind everyone of the special inspection process and the fact that those performing special inspections must be certified.

The Special Inspection Process includes the following:

- Originally, this applied to any Class 1 building, N.J.A.C. 5:23-4.3A(d), that would use any of the construction techniques listed in Chapter 17 of the IBC to require a special inspection. Today, N.J.A.C. 5:23-2.20(b) also requires special inspections of the smoke control system installed in any building and mass timber elements in Type IV-A, IV-B, and IV-C construction.
- The applicant is required to give the construction official a list of special inspections that will be needed at the time of the permit application. The list is to be prepared by the design professional for the project.
- Before work begins, the applicant must supply the names and certification numbers of the people who will be performing the special inspection.
- The names and certification numbers can be verified by checking the DCA website (<https://www.nj.gov/dca/codes/index.shtml>).
- In addition, the certified special inspectors are issued wallet cards by the Department. The building subcode official can ask the special inspector to produce the wallet card.
- If the special inspector changes during the job, a permit update must be completed.
- The special inspector is required to prepare periodic reports during the progress of work and submit them to the building subcode official for review.
- At the completion of the job, the special inspector(s) is/are required to submit a final report to the construction official.

For further information regarding Special Inspections, please see UCC Bulletin 03-5 (rev Sep. 2022), <https://www.nj.gov/dca/codes/resources/bulletins.shtml>.

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

Lateral Deck Connection – 2021 Update

Well, summer is here, and it's time to build and enjoy those decks—because nothing says "I love sunshine" quite like an elaborate wooden structure that will eventually be covered in BBQ sauce and mystery stains. So, I figured it was the perfect moment to update one of the Code Assistance Unit's most popular deck articles to date. Grab your tools, your sunscreen, and maybe a drink with an umbrella in it—let's dive in!

We've written about this topic a few times (Fall 2020, Winter 2018, and Fall 2011) and originally, there was a "Dear Construction Official" letter issued by then-Director William Connolly.

The International Residential Code (IRC)/2021 (and previous editions), as amended by N.J.A.C. 5:23-3.21, did not require the SPECIFIC deck attachment(s) for lateral loads as demonstrated in Figures R507.9.2(1) and R507.9.2(2), Deck Attachment for Lateral Loads, of the IRC/2021. This is because these figures are rooted in Federal Emergency Management Agency (FEMA) 232, entitled "Homebuilders' Guide to Earthquake Resistant Design and Construction," and is clearly a seismic requirement. Section R301.2.2, Seismic Provisions, of the IRC/2021, again as amended by N.J.A.C. 5:23-3.21, states "Detached one-and two-family dwellings and attached single-family townhouses are exempt from the seismic requirements of this code."

Based on this, a lateral connection is required, but those specific lateral deck attachments like the ones illustrated in Figures R507.9.2(1) and R507.2.3(2) are not required for a detached one- or two-family dwelling or attached single-family townhouse in New Jersey that is designed and built in accordance with the IRC/2021.

Please note that the 2018 edition of the IRC, Section R507.9.2 was updated and uses the words, "Where the lateral load connection is provided in accordance with Figure R507.9.2(1)." On the national level, they corrected this oversight and IRC/2018 now states generically that the lateral load connection is required. It then states, that if the designer opts to use one of the two illustrated deck connections (e.g. where provided), this is how they are to be installed. The language remains unchanged in the IRC/2021. Otherwise, the designer can demonstrate the lateral load connection/attachment generically.

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

Canterbury Tales – Defining a Rehabilitation Project

So yeah, I grew up in a small town in South Jersey and was raised in a single-family detached home on a street named Canterbury Ave (yay, Pitman). Dad "enjoyed" projects around the house, especially when we kids caused them (note the sarcasm). The following are some examples in an attempt to help you define basic rehabilitation projects properly between repair, renovation, alteration, and reconstruction. These examples/stories may or may not be based on personal experiences (hint, they are).

1. Sibling Spat: Robbie, age 11, and younger brother Matt, age 7, are playing a game of tag in the backyard. In a game of tag, Robbie runs away from his brother Matt and heads into the house locking the door behind him. This upset Matt and it didn't help that his older brother was laughing at him from the other side of the door. So, Matt put his fist through the glass portion of the door. Now... how could Robbie and Matt's Dad fix this? Dad could:

- a) Leave the door assembly and replace the window pane – Repair.
- b) Replace the entire door – Renovation.
- c) Look at this as an opportunity to complete one of his "Honey-Do" tasks and enlarge the opening to install French doors – Alteration.
- d) Say, "What the heck, let's redo the whole house and gut this place!" – Reconstruction.

(Continued on next page)

(Canterbury Tales – Defining a Rehabilitation Project)

2. Parents Know Best: Heather, age 15, and Dad, age 40-something, were having a conversation about her desire to go to a friend's house and hang out. Dad said "No." Heather became so upset that she kicked a hole in the half-wall between the kitchen and the dining room. Knowing that this would upset Mom; Dad and Heather came up with a quick fix and made sure the lights were off when Mom returned home that evening. Taking Mom out of the equation, what could Dad have done? Dad could:

- a) Go to the hardware store and buy a sheetrock patch, spackle, and touch-up paint – Repair.
- b) Replace the remaining plaster where the hole was with sheetrock – Renovation.
- c) Look at this as an opportunity to complete one of the "Honey-Do" tasks and knock down the half-wall between the kitchen and dining room and combine the two rooms – Alteration.
- d) Say, "What the heck, let's redo the whole house and gut this place!" – Reconstruction.

Yes, defining repair, renovation, and alteration projects seems pretty simple. But for those who still have questions regarding a reconstruction project, let's start with its basic definition. As per N.J.A.C. 5:23-6.3, a reconstruction means "any project where the extent and nature of the work is such that the work area cannot be occupied while the work is in progress and where a new certificate of occupancy is required before the work area can be reoccupied. Reconstruction may include repair, renovation, alteration, or any combination thereof. Reconstruction shall not include projects comprised only of floor finish replacement, painting or wallpapering, or the replacement of equipment or furnishings. Asbestos hazard abatement and lead hazard abatement projects shall not be classified as reconstruction solely because occupancy of the work area is not permitted."

Within this definition, another defined term is used: work area. This term is defined as, "any entire use, primary function space, or tenancy comprising all, or part of a reconstruction project as delineated on the approved permit application and/or plans."

For example, if the entire home is non-habitable while the project takes place, it is essentially a reconstruction project. However, gutting a kitchen and possibly other rooms while maintaining a place to sleep (could be the living room) and a microwave to "cook" would not be a reconstruction, but most likely a renovation or alteration. (Our kitchen was redone in 1994, which included the wonderful color mauve everywhere, and was only a renovation since all items were replaced in kind, even though mom wanted a newly installed island, which would have then pushed the project an alteration.)

And last but not least, the term de minimis. Yes, N.J.A.C. 5:23-6.2(b)2i uses this in relation to a replacement structure, but it is not defined. A simple way to explain this is to apply it to taking a home down to the foundation. Obviously, the foundation is being preserved to be reutilized with the replacement home meeting the new code. The design professional would certify that the existing foundation can be used for the new home installed above it. Thankfully, Dad did not go to this extent in any of our Rehab projects growing up.

Note that a Rehab project does not necessarily dictate a permit. This is done within the administrative provisions at N.J.A.C. 5:23-2. For the easy step, see N.J.A.C. 5:23-2.7, Ordinary Maintenance, to find when a permit is not required. If the project does not meet this section, a permit is required per N.J.A.C. 5:23-2.14 or 2.17A, and one should follow up with N.J.A.C. 5:23-2.23 to determine whether the project would require a Certificate of Approval (e.g. alteration) or a Certificate of Occupancy (e.g. reconstruction).

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

Replacement Stairs

There is no greater embarrassment in life than tripping and falling up the stairs. While I don't speak from experience, since I'm very coordinated, Marie Daniels in this office can say firsthand that stairs – especially steep, skinny, old, and uneven ones – are a menace to clumsy people everywhere.

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(Replacement Stairs)

I say this because Marie, like many other ungraceful people, has issues dealing with rickety old stairs. This is especially an issue in older houses. The good news is, since we live in New Jersey, we can utilize the Rehabilitation Subcode, N.J.A.C. 5:23-6, to update stairs in their current location with minimum effort as a renovation project.

You'll note that N.J.A.C. 5:23-6.5, and the applicable materials and methods of N.J.A.C. 5:23-6.8, the stair geometry sections of the one- and two-family dwelling subcode (6.8(h)), and those of the building subcode (6.8(b)), are purposely not listed and thus, stairs may be replaced in-kind.

In other words, recognizing the potential constraints, the idea is to make the replacement stair as safe as possible within the original space. This is why Section R311.7 of the International Residential Code or Section 1011 of the International Building Code are not listed within the materials and methods.

So, rather than dread every trip up and down your skinny and steep stairs that likely do not meet the minimum tread, the max rise, or even minimum width, you could replace that stair in-kind, with flat and consistent shapes and sizes, creating a graceful cadence. This helps gawky people (Marie) fall fewer times in their daily lives.

The obvious answer here is to get the best possible stair within the existing space constraints.

P.S. Like the final comment of a political commercial, Marie Daniels approves this message!

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

New and Existing Emergency Escape and Rescue Openings

Based on the number of calls received by the Code Assistance Unit, it is evident that there is still some confusion regarding emergency escape rescue openings (EEROs) in dwelling units for both new construction and rehabilitation projects.

New Construction

For new construction, the requirements are fairly straightforward, and most people are familiar with Section R310 of the 2021 International Residential Code (IRC) for dwelling units of Group R-5 and Section 1031 of the International Building Code (IBC) for all other dwelling units. However, some clarity can be provided for Section R310.2.1 and Section 1031.3.1, which specifies the minimum size for EEROs. The code states that the net clear opening must be at least 5.7 square feet or 5.0 square feet for grade-floor windows.

Additionally, Formal Technical Opinion 5, issued by the Department in November 1992, offers guidance on removable sash windows in new construction and additions. It states that if the bottom sash can be removed without the use of any key, tool, or excessive force, the net clear opening can be measured with the bottom sash removed. This does not apply to the removal of both sashes. Typically, the bottom sash can only be raised a limited amount due to sash stops at the top, usually between 1 to 6 inches. Removing the bottom sash can increase the clear opening by this additional height multiplied by the window's width.

Existing Buildings (Rehabilitation Projects)

For EEROs in existing buildings, the Rehabilitation Subcode must be followed, as its requirements differ from those for new buildings. When a permit applicant proposes to alter the size of a window opening in a bedroom, create a new window opening in a bedroom, or perform work that creates a bedroom below the fourth floor, the Rehabilitation Subcode mandates specific requirements:

Continued on next page)

(New and Existing Emergency Escape and Rescue Openings)

- One window must be operable.
- The sill height must not exceed 44 inches.
- The window must have a minimum width of 20 inches and a height of 24 inches.
- The total area of the window must be at least 5.7 square feet.

These dimensions are measured from head to sill and side to side and do not apply to the net opening, meaning the net opening is not regulated.

Exceptions (to Rehab)

There is an important exception to these requirements, detailed in sections N.J.A.C. 5:23-6.5(h)1i(4) for renovations, N.J.A.C. 5:23-6.6(i)1i(4) for alterations, and N.J.A.C. 5:23-6.7(g)2i(4) for reconstructions. New openings in sleeping rooms are not required to meet the above requirements if:

- The sleeping room has a door leading to a corridor with access to two remote exits, or
- The building is fully equipped with an automatic sprinkler system.

The corridor exception is derived from BOCA 96 Section 1010.4, which defines a corridor as an enclosed passageway that restricts the means of egress to a single path of travel. According to the commentary on the corridor definition, the walls must extend from the floor to the ceiling but do not need to extend above the ceiling or have doors unless a fire-resistance rating is required. The enclosed nature of the corridor limits the sensory perception of the user. The path of travel through the corridor should never be interrupted by any room and must lead directly to two remote EEROs.

In summary, understanding and adhering to these distinctions and requirements can help clarify the standards for EEROs and improve safety in both new and existing residential buildings.

Source: Adam Matthews
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Emergency Responder Communication Coverage – 2021 IBC & IFC

In the dynamic landscape of building safety, ensuring effective communications for emergency responders is paramount. It's important to keep in mind that "emergency responders" within the context of this code section includes police, fire, E.M.S., and O.E.M. personnel based on the needs of the local jurisdiction. Section 918 of the 2021 International Building Code (IBC) outlines the requirements for Emergency Responder Communication Coverage (ERCC), while Section 510 of the 2021 International Fire Code (IFC) provides detailed technical requirements for its implementation. These regulations aim to ensure that emergency responders can communicate into, out of, and within buildings, thereby enhancing overall safety and response operations.

Mandates and Scope: Section 918.1 of the 2021/IBC establishes the general requirement for in-building two-way emergency responder communication coverage in all new buildings, referring to Section 510 of the 2021/IFC for specifics. Section 510.1 of the 2021/IFC further mandates the provision of approved ERCC systems in new buildings, aligning with the coverage levels of existing public safety communication systems utilized by the jurisdiction.

Technical Requirements and System Design: To ensure effective ERCC, Section 510.4 of 2021/IFC outlines specific technical requirements and system design criteria. Equipment must comply with UL 2524 standards and shall have acceptable in-building, two-way emergency responder communication system coverage in areas designated as critical areas by the fire code official on each floor of the building that meet the signal strength requirements set forth in section 510.4.1 of the 2021/IFC. Additionally, system design must adhere to NFPA 1221 reference standard requirements which include provisions for wiring methods, coverage in critical areas, amplification systems, primary and secondary power, signal boosters, and system monitoring.

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(Emergency Responder Communication Coverage – 2021 IBC & IFC)

Code Compliance and Exceptions: While the code emphasizes compliance with ERCC standards, exceptions exist under Section 510.1 of the 2021/IFC. These exceptions allow for flexibility, permitting alternatives such as wired communication systems or exemptions when the fire code official deems an ERCC unnecessary because of building design and/or potentially disruptive to a facility's operations.

Installation and Testing: Section 510.5 details requirements for ERCC system installation, design documents, emphasizing proper mounting of donor antennas, standby power, coordination with fire code officials, compliance with federal regulations, and qualifications of personnel involved. Upon installation completion, acceptance testing is mandated to verify adequate coverage on each floor and area of a building, with pass/fail criteria outlined in the test procedures.

Maintenance and Compliance: Maintenance of ERCC systems is crucial for ensuring ongoing operational readiness. Section 510.6 mandates annual testing and inspection to verify compliance with coverage standards, functionality of signal boosters and backup power supplies, and overall system integrity. Building owners are also responsible for accommodating frequency changes and addressing nonpublic safety systems that may interfere with ERCC functionality. The continued inspection, testing, and maintenance is the responsibility of the Fire Official/Fire Marshal pursuant to N.J.A.C. 5:70-3.

Issuance of a Temporary Certificate of Occupancy (TCO): Generally speaking, guidance for the issuance of a Temporary Certificate of Occupancy (TCO) is provided in the Uniform Construction Code (UCC), N.J.A.C. 5:23, Bulletin 01-2, Temporary Certificate of Occupancy. According to the Bulletin, a TCO cannot be granted if essential "health and life-safety systems", being integral components of a construction project, have not been fully provided and tested.

Notably, ERCC coverage testing is typically contingent upon the completion of the building construction in order to gain an accurate determination of how finished building construction elements; i.e., steel, concrete, Low-E glass, and other building elements can block radio signals. This poses a unique challenge. To address this, the Department recommends the issuance of a TCO as a reasonable solution to allow for the design, permitting, installation, and acceptance testing of this critical safety system.

Local code officials play a crucial role in ensuring adequate communications coverage within buildings in their respective jurisdictions. When informed of radio communication issues encountered by emergency responders within existing structures, code officials are advised to incorporate provisions for ERCC during the plan review stage of similar building designs. By addressing this concern proactively during the planning phase, potential complications during the final inspection can be mitigated. This proactive approach minimizes the likelihood of disruptive measures such as the removal of ceiling and wall finishes to accommodate system wiring, streamlining the inspection process, and enhancing overall safety compliance.

Conclusion: Emergency Responder Communication Coverage is a vital component of building safety because it enables effective communication channels for responders during critical situations. By adhering to the requirements outlined in the reference standards, stakeholders can ensure the implementation, maintenance, and compliance of ERCC systems, ultimately enhancing the safety and resilience of built environments.

Source: Keith Makai
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Fire Watch During Construction – Update

Section 3314 of the 2021 International Building Code (IBC) recognizes that hazards exist where larger structures are being constructed and that when a fire occurs during a large-scale construction project, the loss can be a socio-economic disaster for a community. To mitigate the impacts of losses created by such fires, the provisions of Section 3314 seek to minimize the potential damage by initiating faster notification of a fire to the fire department by providing a fire watch.

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(Fire Watch During Construction – Update)

The 2018 IBC, adopted as the building subcode on September 3, 2019, introduced Section 3314, Fire Watch During Construction, and set forth the requirements that, where required by the fire official, a fire watch shall be provided during nonworking hours for combustible construction (Type III, IV, and V) when construction reaches 40 feet in height or more above lowest adjacent grade. The purpose of this section's introduction in the 2018 IBC, fire watches at a construction site, was to ensure that there is surveillance to identify and control fire hazards during construction while the structure is not occupied after hours.

Fast forward to September 6, 2022, the 2021 IBC was adopted as the building subcode, and revisions on the national level were added to Section 3314. One notable change is that fire watches are now mandatory in the 2021 IBC and are no longer at the discretion of the fire official. The trigger for when a fire watch is required was also expanded on in the 2021 IBC. A mandatory fire watch is now required for:

Construction that exceeds 40 feet in height above the lowest adjacent grade at any point along the building perimeter, or for new multi-story construction with an aggregate area exceeding 50,000 square feet per story or as required by the fire code official.

Section 3314 of the 2021 IBC also deviates slightly from the original in the 2018 IBC. While the intent of the 2018 IBC, as suggested in the 2018 IBC commentary, was to provide a fire watch during combustible construction (Type III, IV, and V); the 2021 IBC commentary broadens the scope of construction types to include both combustible and noncombustible construction, as the activities and materials at a construction site make all types of construction susceptible to fire.

Finally, as always, it is important for Uniform Construction Code and Uniform Fire Code officials/inspectors to communicate with each other during construction projects that require a fire watch. While the requirement to provide a fire watch is found in Section 3314 of the 2021 IBC, the specific requirements, such as personnel, duties, and means of notification, are found in the New Jersey Uniform Fire Code, NJ 2015 International Fire Code, as adopted at N.J.A.C. 5:70. Involving the fire official in pre-construction meetings and all stages of a construction project will help prevent issues from arising after a construction project is well underway.

Source: Keith Thedinga (The new kid on the block)
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Emergency Disconnects and Fee Schedules

The 2020 National Electrical Code (NEC), as adopted at N.J.A.C 5:23-3.16, requires that complete service changes/upgrades include the addition of an emergency disconnect switch in compliance with NEC Article 230.85, Emergency Disconnects, mounted at a readily accessible, exterior location on one- and two-family dwellings. Many municipalities require applicants to include this emergency disconnect on the electrical tech section as a separate line item with its own fee attached, in addition to the fee for the service itself. Additionally, NEC Article 230.67, Surge Protection, requires a surge protective device (SPD) installation. Municipalities are also charging an additional fee for this SPD installation, similar to the above.

The fee for a service should include all necessary conductors/equipment required for a code-compliant job. Since the emergency disconnect and SPD are now required, this also should be included within the set fee for a service, rather than establishing a separate, additional fee. Additionally, local enforcing agencies should not be renaming the existing load center as a "subpanel" as a means of charging an additional line-item fee, as the Department has heard that some local officials are doing.

Instead, municipalities may now need to revisit their fee schedule to reflect the need to inspect this additional piece of equipment and/or create a new line-item fee for services in structures other than one- and two-family dwellings.

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(Emergency Disconnects and Fee Schedules)

Source: Scott Borsos & Michael Szwed
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Building Safety Month Proclamation



Source: Code Development Unit
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Sewer Linings



The National Standard Plumbing Code (NSPC) does not recognize sewer linings as an acceptable method because the NSPC does not recognize sewer linings as an acceptable method of repair; however, the Cure-in-Place method designed to meet or exceed the ASTM F1216 Standard is an acceptable option that has been proven outside of New Jersey.

Should a contractor want to utilize this ASTM F1216 Standard method, I suggest they apply for a variation per N.J.A.C. 5:23-2.9 and provide all of the necessary documentation showing that the product they plan on using meets

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(Sewer Linings)

or exceeds the ASTM F1216 Standard. Of course, the ultimate decision is on the Plumbing Subcode official to allow this; however, I would urge all officials to be open-minded when reviewing these variations so that we may also accept an industry-standard practice allowed in most States already. The National Standard Plumbing Code committee is aware of this method and will consider recommendations allowing it in future editions of the NSPC. Keep in mind that this installation requires a permit and inspection as Minor Work similar to sewer line repairs already being performed in New Jersey.

Source: Anthony Menafo
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Vacuum Relief Valves for Water Heaters



There seems to be a lot of confusion and misunderstanding regarding when a vacuum relief valve is required to be installed on a water heater. The language in the 2021 National Standard Plumbing Code (NSPC), section 10.16.7a, calls for a vacuum relief valve on water heaters subject to siphonage. Meaning, that where water distribution piping can siphon water from a water heater and cause dry-firing, a vacuum relief valve shall be installed on the cold water piping to the water heater.

Specifically, as per the 2021 NSPC, Section 10.16.7c, vacuum relief valves shall be installed at an elevation above the top of the water heater, downstream of the shutoff valve. The intention of the installation of the vacuum relief valve is for when water heaters are installed above the fixtures that they serve, not above the water main supply to the water heater. We hope that this article clarifies what has become a very misunderstood application of vacuum relief valves.

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