

# Construction Code Communicator



State of New Jersey  
Philip D. Murphy, Governor  
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Department of Community Affairs  
Lt. Governor Sheila Y. Oliver, Commissioner  
Summer 2021

## Executive Order 103 Scheduled to Expire July 4, 2021 – Looking Ahead

On June 4, 2021, Governor Philip D. Murphy signed P.L. 2021, c. 104 into law. This Law ends the public health emergency by allowing for the expiry of Executive Order 103 while ensuring that necessary orders remain in place to provide the flexibility needed to manage the ongoing pandemic. The effective date of the expiration of Executive Order 103 is **July 4, 2021**.













In adapting to the restrictions set by the pandemic, the Division released a number of guidance memos and rule relaxations; these are also set to expire following the expiration of Executive Order 103. Please note that the expiration of these documents is included within their text. Thus, any applicable extensions, inspections, and waivers, are now subject to the expiration timelines provided within the relevant documentation. By way of example, permit applications received after **August 3, 2021** for minor work projects, as referenced in the “Ongoing Construction Guidance,” are to follow the normal operating procedures of the Uniform Construction Code, N.J.A.C. 5:23.

All guidance and regulatory information relevant to the ongoing pandemic is available on the Division’s website at [COVID-19 Information](#). The Division will be updating this webpage as expiration dates take effect.

Source: Marie Daniels  
Code Development Unit  
(609) 984-7609



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### Job Announcement: Southern Regional Office

The Division of Codes and Standards, Office of State and Local Code Inspections, Southern Regional Office based out of Hammonton is looking for full and part time subcode officials to perform work involving enforcement and administration of the Uniform Construction Code Act and Regulations, performing inspections for the building, electrical, plumbing, or fire subcodes. A valid NJ issued Uniform Construction Code HHS and subcode official license is required to perform the duties.

Job Types: Full-time, Part-time

Pay: \$31.40 - \$44.63 per hour

Please forward resumes and a copy of your license(s) to Nicole Zimmerman at [Nicole.zimmerman@dca.nj.gov](mailto:Nicole.zimmerman@dca.nj.gov).

Source: Division of Codes and Standards  
(609) 292-7899

### Building Safety Conference: Welcome Back!

Welcome Back! Please save the date: the 39<sup>th</sup> Building Safety Conference of New Jersey is returning to Atlantic City, September 8<sup>th</sup> through 10<sup>th</sup> at the Hard Rock Hotel in Atlantic City.

Conference brochures will be mailed very soon and posted on the Licensing webpage, so keep an eye on your mailbox and on our website!

Source: John Delesandro  
Supervisor of Licensing and Education  
(609) 984-7834



**ATLANTIC CITY**

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](http://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](mailto:codeassist@dca.nj.gov).

## National Electrical Code (NFPA 70) and Tentative Interim Amendments

As you all know, on September 3, 2019, the State adopted the 2017 edition of the National Electrical Code, NFPA 70, at N.J.A.C. 5:23-3.16, the electrical subcode. It was adopted as it was originally published, with the exception errata, and no tentative interim amendments (TIAs) included. This remains true today.

For reference, NFPA explains Errata and TIAs at <https://www.nfpa.org/Codes-and-Standards/Standards-development-process/How-the-process-works/TIAs-Errata-and-Fls>:

- **Errata** - A correction issued to an NFPA Standard, published in NFPA News, the National Fire Codes Subscription Service (NFCSS), and included in any further distribution of the Standard.
- **TIAs** - Amendments to an NFPA standard processed in accordance with Section 5 of the Regulations Governing the Development of NFPA Standards. TIAs have not been published in a First Draft Report and Second Draft Report for review and comment. ***An issued TIA automatically becomes a Public Input for the next edition of the standard and is then subject to all of the procedures of the standards development process.*** TIAs are published in NFPA News, the National Fire Code Subscription Service, and any further distribution of the standard after being issued by the Standards Council.

From the above, you can see why errata is accepted in all conditions, and TIAs must be adopted at N.J.A.C. 5:23-3.16. The last TIA that was adopted as part of the electrical subcode was within the 2011 edition for a modification to 680.42(B) for bonding of swimming pools, proposed at 44 N.J.R. 10(a) and adopted at 44 N.J.R. 1336(a). At that time, that was the only TIA accepted in the State, and all others, including this one, were later included in the 2014 edition.

The issue we are having today is that NFPA is publishing the current electrical subcode, the 2017 edition, with all TIAs included without showing the change or the previous text in the original publication, as the State has adopted it, with no TIAs; for reference, there are 17 TIAs listed at <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=70&year=2017>. We recognize how this is causing confusion and are working on a solution. In the meantime, please work with the permit holder if this issue arises and come to the best solution possible.

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

## Abandoned Underground Storage Oil Tank (UST) – Tank or Not A Tank?

The Code Assistance Unit has been receiving questions regarding previously abandoned underground oil storage tanks (USTs) that have had a Uniform Construction Code (UCC) permit issued and final inspections completed. There are two related questions: the first is whether it is still considered an oil tank, or if it's just a piece of steel in the ground; the second is whether a permit is required to remove that steel from the ground at a later time.

The answer to the first is simple: this is considered to be a piece of steel in the ground. As such, there is no regulation requiring a UCC permit to remove that steel later.

If someone would like a UCC permit to remove the piece of steel from the underground, please politely indicate (or remind the interested party) that there is no regulation for this and a UCC permit is not applicable. However, it would be recommended that they consider hiring a New Jersey Department of Environmental Protection (DEP) Underground Heating Oil Tank (UHOT) contractor to remove the piece of steel and to record the removal and location. This is because, when a UCC permit is applied for and issued to abandon a UST in place, the contractor performing the abandonment must be certified by the DEP to abandon UHOTS.

Source: Thomas C. Pitcherello, Code Assistance Unit  
(609) 984-7609







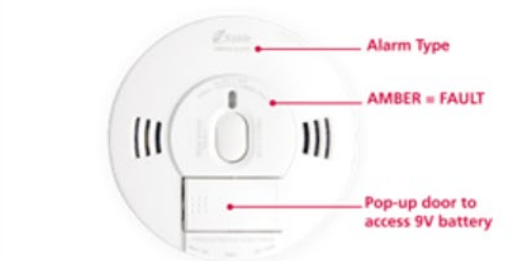



## Errors in the Fall 2020 Construction Code Communicator

It has been brought to the Division's Attention that two articles within the Fall 2020 edition of the *Construction Code Communicator* contained errors. These errors have been revised in the document on the Division's webpage at [Construction Code Communicator](#). Please download and review the corrected *Communicator*.

Source: Code Assistance Unit  
(609) 984-7609

## Kidde Recalls Smoke & Combination Smoke/Carbon Monoxide Alarms: Can Fail to Warn of a Fire

According to the U.S. Consumer Product Safety Commission website ([CPSC Recall - Kidde](https://www.cpsc.gov/Recalls/2019/01/Kidde-Recalls-Some-Combination-Smoke-Carbon-Monoxide-Alarms)), Kidde has issued a recall of approximately 262,000 TruSense Smoke and Combination Smoke/Carbon Monoxide Alarms. The details follow:

Model	Alarm	Key Feature
2040-DSR		
2050-DS10		
2060-ASR		
2070-VASR 2070-VDSR		
2070-VDSCR 2070-VASCR		

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*(Kidde Recalls Smoke and Combination Smoke/Carbon Monoxide Alarms; Can Fail to Warn of a Fire)*

**Name of Product:** Kidde TruSense Smoke Alarms and Combination Smoke/Carbon Monoxide Alarms.

**Description:** This recall involves Kidde TruSense Smoke Alarms and Combination Smoke/Carbon Monoxide Alarms. The recalled units are Kidde Model Series 2040, 2050, 2060 and 2070 Smoke and Combination Smoke/Carbon Monoxide alarms. Only alarms with the TruSense logo or "AMBER=FAULT" printed on the front of the alarm are included in this recall. The model number is printed on the back of the alarm.

**Smoke Alarm - Models:** 2040-DSR; 2050-DS10; 2060-ASR; 2070-VDSR; and 2070-VASR.

**Combination Smoke/Carbon Monoxide - Models:** 2070-VASCR; and 2070-VDSR.

**Hazard:** The smoke alarm and the combination smoke/carbon monoxide (CO) alarm can fail to alert consumers to a fire.

**Incidents/Injuries:** No incidents or injuries have been reported.

**Remedy:** Consumers should immediately contact Kidde for a free replacement alarm. Consumers should keep using the recalled alarms until they install replacement alarms.

**Consumer Contact:** Kidde toll-free at (844)796-9972 from 8 a.m. to 8 p.m. ET Monday through Friday and 9 a.m. to 3 p.m. ET on Saturday or online at [www.kiddetsalarmrecall.rsvpcomm.com](http://www.kiddetsalarmrecall.rsvpcomm.com) or [www.kidde.com](http://www.kidde.com) and click on "Support" and then "Product Alerts" for more information.

**Recall number:** 21-130

**Sellers:** Walmart, Home Depot, Menards and other department, home and hardware stores and electrical distributors nationwide, and online at Amazon.com, ShopKidde.com and other online retailers from May 2019 through September 2020 for between \$10 and \$70.

**Importer(s):** Walter Kidde Portable Equipment Company Inc., of Mebane, N.C.

**Manufactured in:** China

**Units Recalled:** About 262,000

Please make sure your fire officials are aware of this voluntary recall so the units can be identified upon inspections for resale or re-occupancy. When performing routine inspections, dwelling unit alarms should also be checked in all Residential Group R and Institutional Group I-1 occupancies. If any of these alarms were installed, the consumers need to contact Kidde for a free replacement.

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

## Transfer Switches and Current-Carrying Conductors

Since the events of Superstorm Sandy, homeowners have been installing home backup systems as an uninterrupted power source in the event of failure due to weather, etc. For new construction, installations are easy to incorporate from the start. However, for existing homes, the established wiring could become an issue without careful review; this is the focus of this article.

Starting the integration of automatic transfer switches, the installation essentially replaces the existing "main" panel, and it becomes our new service equipment (if listed as "suitable for use as service equipment"). The existing "main" circuit panel now becomes a subpanel and here is where things start to unravel. As many of you are already aware, the requirements of Article 250.140 of the electrical subcode, National Electrical Code/2017 (NEC/2017), pose a unique problem, in that there arises a need for a "3-wire" to be run to ranges and dryers, with the exception being that existing installations are permitted to remain if the wiring method originates in service equipment.

Moving further, there is no place for a branch circuit to originate within a transfer switch, thus requiring the need to run a new circuit that complies with Article 250.140 of the NEC/2017, as required per N.J.A.C. 5:23-6.8(d)3. This situation has created headaches for homeowners, contractors and code officials alike.

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*(Transfer Switches and Current-Carrying Conductors)*

As a remedy, the Department is looking to address this issue by means of an amendment to the Rehabilitation Subcode, N.J.A.C. 5:23-6 to clarify the application of condition (3) of the exception in 250.140. In short, the text “and the branch circuit originates at the service equipment” will not apply in order for the exception to apply. For existing homes, this would allow the previous wiring installation to remain that in many cases has been there for years without issue. The future amendment will look similar to the following and for those that would like to apply it now, a variation request would be required:

- N.J.A.C. 5:23-6.8(d)3i: In applying condition (3) of the exception of Section 250.140, the branch circuit may originate at a location other than the service equipment.

Of course, things aren’t that easy, and this of course leads to a follow-up question: where should this uninsulated conductor be terminated in what is now the subpanel? What you don’t want to do is terminate this conductor on the ground block, as it could possibly introduce unwanted currents on the ground conductor. To comply, the code would require the installer to insulate all exposed sections of the uninsulated conductor, in an approved manner, and terminate this conductor on the neutral bar within the original circuit panel.

If you have further questions, please contact the Code Assistance Unit at (609) 984-7609.

Source: Scott Borsos, Division of Codes and Standards

**Corridor Continuity** 

Recently, the Code Assistance Unit has been receiving inquiries regarding fire-resistance continuity as it pertains to corridors. Though every configuration is not the same, there are a few layouts that seem to be increasingly common. Below, please find the question and answer examples below. Please note that the mixed occupancies below are assumed to meet Section 508 of the International Building Code/2018 (IBC/2018) in terms of separation.

First, let’s review Section 1020.6 of the IBC/2018, Corridor continuity:

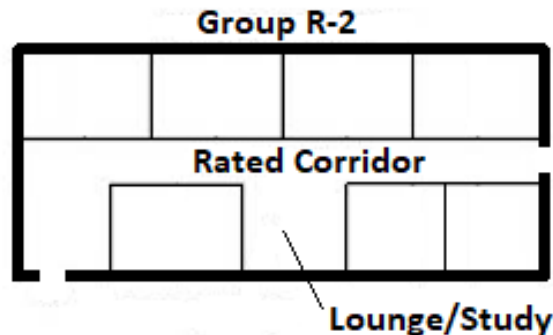
Fire-resistance-rated corridors shall be continuous from the point of entry to an exit and shall not be interrupted by intervening rooms. Where the path of egress travel within a fire-resistance-rated corridor to the exit includes travel along unenclosed exit access stairways or ramps, the fire-resistance rating shall be continuous for the length of the stairway or ramp and for the length of the connecting corridor on the adjacent floor leading to the exit.

Exceptions:

1. Foyers, lobbies or reception rooms constructed as required for corridors shall not be construed as intervening rooms.
2. Enclosed elevator lobbies as permitted by Item 1 of Section 1016.2 shall not be construed as intervening rooms.

Now, we can move along to applying these regulations to common configurations

Q1: A fully sprinklered R-2 apartment building with a rated corridor contains an adjacent lounge area open to the corridor as shown in the drawing below. Would this configuration be compliant under the corridor continuity requirements of Section 1020.6?

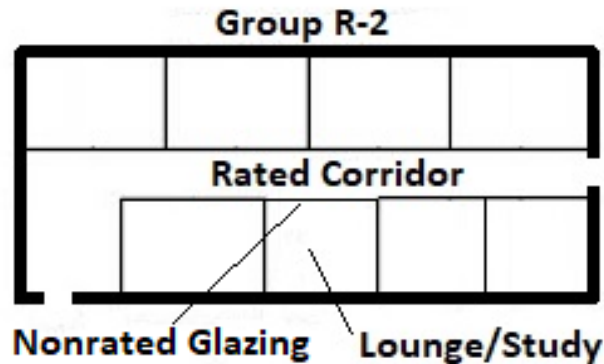


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*(Corridor Continuity)*

A1: Yes. Fire-resistance rated corridors are required to be continuous from the point of entry to an exit without being interrupted by intervening rooms. While the lounge area is open to the rated corridor, it is not considered an intervening room since the egress is neither required through the lounge area nor does it obstruct access to the required exits. This would be considered a similar level of hazard as foyers, lobbies and reception rooms permitted by Exception 1. Provided the room has the same rated walls as required for the corridor.

Q2: A fully sprinklered R-2 apartment building with a rated corridor contains an adjacent lounge area separated from the corridor by a nonrated full height glass partition as indicated in the diagram. Would this arrangement comply with the corridor continuity requirements of Section 1020.6?



A2: No. Due to the presence of the glass partition, a corridor is created which defines the path of egress travel and limits the awareness between adjacent areas. The glass partition is required to be fire-resistance rated equivalent to the required fire-resistance rating for the corridor with opening protectives.

Q3: In the same instance as Q2, would it be compliant if the lounge/gym area was bounded by a partial-height wall that essentially creates a defined path?

A3: Yes, but there are other items to consider. Although the partial-height wall does create a confined path of travel, it cannot limit the occupant's line of sight, hearing and smell that would alert them of a fire in the adjacent lounge/gym area. The code does not specifically state what is considered "enclosed" where corridors are not fire-resistance rated.

With the growing number of Group R-2 buildings with "other" uses constructed within, we feel that it is important to provide this information to code officials and designers to perhaps help prevent these issues during plan review.

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

### Reliable Power Source for Fire Pumps: Reprint

Is the electrical service from a utility company a reliable power source for fire pumps?

To analyze if the electrical service is reliable as per the codes, it is important to look at New Jersey's grid system, not the rest of the United States. Some parts of the power grid in North America have one power plant and one transmission network for half of the state or province that it services. Also, some areas have limited fire department response times and utility intervention. In New Jersey, there are multiple grid loops for power plants and transmission networks, and the response time for the fire and utility intervention is less than half an hour.

In order to determine whether there is a reliable power source, some terms referring to the grid will need to be defined.

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*(Reliable Power Source for Fire Pumps)*

**Electric power transmission** is the bulk movement of electrical energy from a generating site, such as a **power plant**, to an **electrical substation**. The interconnected lines which facilitate this movement are known as a transmission network. This is distinct from the local wiring between high-voltage substations and customers, which is typically referred to as **electric power distribution**.

A **power station** also referred to as a **power plant** or **powerhouse** and sometimes **generating station** or **generating plant**, is an industrial facility for the generation of electric power.

A **substation** is a part of an electrical generation, transmission, and distribution system. Substations transform voltage from high to low, or the reverse, or perform any of several other important functions. Between the generating station and electric power distribution, electric power may flow through several substations at different voltage levels.

**Electric power distribution** is the final stage in the delivery of electric power; it carries electricity from the transmission system to individual consumers. Distribution substations connect to the transmission system and lower the transmission voltage to medium voltage to the primary distribution lines carry this medium voltage power to distribution transformers located near the customer's premises. This is distinct from the high-voltage transmission substations and distribution to the customers' local service wiring.

(Source: Wikipedia: the free encyclopedia.)

The 2017 National Electrical Code Article 695 and 2016 edition of NFPA 20 are the codes and standards which reference to reliable power sources for fire pumps.

The related sections in the 2017 National Electrical Code are:

- 695.3(A) **Individual Sources** states "Where reliable, and where capable of carrying indefinitely the sum of the locked-rotor current of the fire pump motor(s) and the pressure maintenance pump motor(s) and the full-load current of the associated fire pump accessory equipment when connected to this power supply, the power source for an electric motor driven fire pump shall be one or more of the following."
  - 695.3(A)(1) **Electrical Utility Service Connection** states, "a fire pump shall be permitted to be supplied by a separate service, or from a connection located ahead of and not within the same cabinet, enclosure, vertical switchgear section, or vertical switchboard section as the service disconnecting means. The connection shall be located and arranged so as to minimize the possibility of damage by fire from within the premises and from exposing hazards. A tap ahead of the service disconnecting means shall comply with 230.82(5). The service equipment shall comply with the labeling requirements in 230.2 and the location requirements in 230.72(B).

The National Electrical Code does not define reliable power source, so we have to look at the 2016 edition of NFPA 20 and its Annex A for an explanation of reliable power source. Annex A is explanatory material not code, and it does not address the electrical utility or fire response.

- 9.2 **Normal Power**
- 9.2.1 Provided with a normal source of power. (per the National Electrical Code)
- 9.2.2(1) Service dedicated for the fire pump. (per the National Electrical Code)

NFPA 20/2016 Section 9.3 **Alternate Power** specifically Section **9.3.2 Other Sources**, refers you to the Annex A, A.9.3.2 "A reliable power source should possess the following characteristics."

- **9.3.2\* Other Sources.** *Except for an arrangement described in 9.3.3, at least one alternate source of power shall be provided where the **normal source is not reliable**.*
  - A.9.3.2, (1) *The source **power plant** has not experienced any shutdowns longer than 4 continuous hours in the year prior to plan submittal. NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, requires special undertakings (i.e., fire watches) when a water-based fire protection system is taken out of service for longer than 4 hours. If the normal source power plant has been intentionally shut down for longer than 4 hours in the past, it is reasonable to require a backup source of power.*
    - There may be power plants down for refueling or refitting for a year or more with no interruption of power. There are enough power plants and standby power plants available to go online in less than an hour of a shutdown of another power plant. This is not a concern for reliability for the power source in New Jersey.

*(continued on next page)*



*(Reliable Power Source for Fire Pumps)*

- A.9.3.2, (2) *The standard is not intended to require that the normal source of power be infallible to deem the power reliable. NFPA 20 does not intend to require a back-up source of power for every installation using an electric motor-driven fire pump.*
- A.9.3.2, (3) The first thing a fire chief does when arriving at a sprinklered building that is on fire is connect the pumper to the fire department connection, then if warranted, call the electric utility to cut power to prevent electrocution to the fire personal. Regardless if there are overhead or underground supplies this is done. If needed for safety, the chief may request the electric utility distribution along the street to be turned off. Fire equipment is not an issue and response time for utility intervention is reasonable. If the one or two pieces of fire equipment for that area are on the scene of a fire or mutual aid is over an hour away the chief may need to keep the fire pump working. How a fire chief needs or chooses to address a fire does not make the power source unreliable. The electric utility distribution along the street is more of a concern to the fire personnel than are the 50 feet or less of service drop.
- A.9.3.2(4) If the installation for the fire pump meets the Article 695 of the National Electrical Code it will meet this requirement.

It is the Department's opinion that utility services in New Jersey are reliable power sources.

Source: Code Assistance Unit  
(609) 984-7609

### **Permits and Penalties**

You discover that a contractor has installed a new deck without the required permit. This is not the first time this contractor has failed to obtain a required permit. When the contractor comes to your office with the permit application, you give him a notice of violation and an order to pay penalty. You also inform the contractor that he must pay the penalty before you will issue the permit.

The contractor protests and refuses to pay the penalty. What is wrong with this scenario?

The Office of Regulatory Affairs gets calls and written complaints about this situation regularly. Our response to the complainants is to inform them that you, the code official, should not hold up the permit until the fine is paid. However, at N.J.A.C. 5:23-2.24(a)4 (reprinted below), the Uniform Construction Code (UCC) clearly allows the certificate of occupancy/approval to be withheld until the fine is paid.

As per N.J.A.C. 5:23-2.24(a), a Certificate of occupancy shall be conditioned upon the following:

1. That the completed project meets the conditions of the construction permit, and all prior approvals and has been done substantially in accordance with the code and with those portions of the plans and specifications controlled by the code;
2. That all required fees have been paid in full;
3. That all necessary inspections have been completed and that the completed project meets the requirements of the regulations;
4. That all violations have been corrected and that any assessed penalties have been paid;
5. That all protective devices and equipment required to be installed by the regulations will continue to be operational as required by the regulations.

This regulation and the applicant's right to appeal a penalty prevent requiring the payment of a penalty prior to the issuance of a permit. Withholding the certificate of occupancy or approval until the penalty issue is resolved is the appropriate way to deal with this situation under the UCC regulations.

If you have questions or comments, please contact the Office of Regulatory Affairs at (609) 984-7672.

Source: Robert Hilzer  
Office of Regulatory Affairs

*Robert Hilzer has retired as of July 1, 2021, after 39 years of service. Please join us in wishing him a long, happy, and healthy retirement.*

## Rehabilitation Subcode – Table of Contents

The Code Assistance Unit received an email from a code official containing a table of contents for the Rehabilitation Subcode of the Uniform Construction Code. The Unit felt it could serve as a helpful reference document for Code Officials; the listing is provided below:

### Subchapter 6. Rehabilitation Subcode.

N.J.A.C. 5:23-6.1	Introduction; Using This Subcode
N.J.A.C. 5:23-6.2	Applicability and Compliance
N.J.A.C. 5:23-6.3	Definitions
N.J.A.C. 5:23-6.3A	Flood-Resistant Construction
N.J.A.C. 5:23-6.4	Repairs
N.J.A.C. 5:23-6.5	Renovations
N.J.A.C. 5:23-6.6	Alterations
N.J.A.C. 5:23-6.7	Reconstruction
N.J.A.C. 5:23-6.8	Materials and Methods
N.J.A.C. 5:23-6.9	New Building Elements
N.J.A.C. 5:23-6.10	Basic Requirements and Supplemental Requirements--General
N.J.A.C. 5:23-6.11	Basic Requirements in All Groups
N.J.A.C. 5:23-6.11A	Supplemental Requirements in All Groups
N.J.A.C. 5:23-6.12	Basic Requirements--Group A-1
N.J.A.C. 5:23-6.12A	Supplemental Requirements--Group A-1
N.J.A.C. 5:23-6.13	Basic Requirements--Group A-2 Nightclubs
N.J.A.C. 5:23-6.13A	Supplemental Requirements--Group A-2 Nightclubs
N.J.A.C. 5:23-6.14	Basic Requirements--Groups A-2 Other Than Nightclubs, A-3 and A-4
N.J.A.C. 5:23-6.14A	Supplemental Requirements--Groups A-2 Other Than Nightclubs, A-3 and A-4
N.J.A.C. 5:23-6.15	Basic Requirements--Group A-3 Places of Worship
N.J.A.C. 5:23-6.15A	Supplemental Requirements--Group A-3 Places of Worship
N.J.A.C. 5:23-6.16	Basic Requirements--Group A-5
N.J.A.C. 5:23-6.16A	Supplemental Requirements--Groups A-5
N.J.A.C. 5:23-6.17	Basic Requirements--Group B
N.J.A.C. 5:23-6.17A	Supplemental Requirements--Group B
N.J.A.C. 5:23-6.18	Basic Requirements--Group E
N.J.A.C. 5:23-6.18A	Supplemental Requirements--Group E
N.J.A.C. 5:23-6.19	Basic Requirements--Group F
N.J.A.C. 5:23-6.19A	Supplemental Requirements--Group F
N.J.A.C. 5:23-6.20	Basic Requirements--Group H
N.J.A.C. 5:23-6.20A	Supplemental Requirements--Group H
N.J.A.C. 5:23-6.21	Basic Requirements--Group I-1
N.J.A.C. 5:23-6.21A	Supplemental Requirements--Group I-1
N.J.A.C. 5:23-6.22	Basic Requirements--Groups I-2 and I-4
N.J.A.C. 5:23-6.22A	Supplemental Requirements--Groups I-2 and I-4
N.J.A.C. 5:23-6.23	Basic Requirements--Group I-3
N.J.A.C. 5:23-6.23A	Supplemental Requirements--Group I-3
N.J.A.C. 5:23-6.24	Basic Requirements--Group M
N.J.A.C. 5:23-6.24A	Supplemental Requirements--Group M
N.J.A.C. 5:23-6.25	Basic Requirements--Group R-1
N.J.A.C. 5:23-6.25A	Supplemental Requirements--Group R-1
N.J.A.C. 5:23-6.26	Basic Requirements--Groups R-2 and R-4
N.J.A.C. 5:23-6.26A	Supplemental Requirements--Groups R-2 and R-4
N.J.A.C. 5:23-6.27	Basic Requirements--Groups R-3 and R-5
N.J.A.C. 5:23-6.28	Basic Requirements--Group S
N.J.A.C. 5:23-6.28A	Supplemental Requirements--Group S
N.J.A.C. 5:23-6.29	Mixed Use Buildings
N.J.A.C. 5:23-6.30	Special Technical Requirements--All Groups
N.J.A.C. 5:23-6.31	Change of Use
N.J.A.C. 5:23-6.32	Additions
N.J.A.C. 5:23-6.33	Historic Buildings

Source: Code Assistance Unit, (609) 984-7609

### March 2021 Highlights of the New Jersey Construction Reporter

The following information is from the March 2021 Highlights. The *New Jersey Construction Reporter* is published monthly and includes highlights and summary data on building permits from local construction offices throughout the State. To view full reports, please visit <https://www.nj.gov/dca/divisions/codes/reporter>.

Source: John Lago, Division of Codes and Standards  
(609) 984-7609

- March is busy month for construction officials and technical assistants. Construction usually picks up in the spring. Activity reached new levels. Nearly 60,000 building permits were issued in March 2021 for \$2.388 billion of construction.
- The number of building permits a year ago was only 21,500, authorizing \$1.45 billion of construction.

Dollar Amount of Construction Authorized by Building Permits by Use Group, March 2021						
Source: New Jersey Department of Community Affairs, 5/10/2021						
Use Group	March			Year-to-Date		
	Permits	Estimated Construction Costs	Square Feet	Permits	Estimated Construction Costs	Square Feet
<b>RESIDENTIAL</b>	50,858	\$1,497,372,630	10,301,881	101,448	\$2,936,608,568	20,959,737
1 & 2 Family	47,488	1,129,939,518	7,160,231	94,943	2,117,768,702	13,371,881
Multifamily	3,370	367,433,112	3,141,650	6,505	818,839,866	7,587,856
<b>NONRESIDENTIAL</b>	9,078	891,031,646	5,101,434	17,092	1,767,293,896	8,373,822
Hotels, motels, guest houses	336	13,612,261	12,996	526	26,741,369	143,860
Assembly	628	52,778,555	155,571	1,185	144,242,173	282,404
Business / Office	3,071	319,447,226	631,297	6,147	629,792,287	1,035,079
Education	244	128,359,667	124,444	445	232,141,330	759,055
Hazardous uses	13	3,402,840	17,792	26	6,650,180	21,632
Industrial	95	77,679,606	842,526	193	124,201,140	950,794
Institutional	72	15,428,670	0	178	65,229,814	17,342
Retail	411	41,114,803	173,935	779	85,357,747	255,656
Storage	306	129,287,811	2,790,248	565	261,068,043	4,213,084
Signs, fences, miscellaneous	3,902	109,920,207	352,625	7,048	191,869,813	694,916
<b>New Jersey</b>	<b>59,936</b>	<b>\$2,388,404,276</b>	<b>15,403,315</b>	<b>118,540</b>	<b>\$4,703,902,464</b>	<b>29,333,559</b>
Mar 2020	21,426	\$1,452,854,305	6,948,842	77,014	\$3,878,847,756	22,540,819

Estimated cost of construction authorized by building permits, March 2021 top municipalities					
Source: New Jersey Department of Community Affairs, 5/10/2021					
rank	municipality	county	Total	Residential	Nonesidential
1	Jersey City	Hudson	\$171,260,460	\$145,754,242	\$25,506,218
2	Atlantic City	Atlantic	89,514,548	42,532,812	46,981,736
3	Montville Township	Morris	81,691,480	80,988,194	703,286
4	Bloomfield Township	Essex	53,003,337	51,622,449	1,380,888
5	Carneys Point Township	Salem	50,677,904	341,954	50,335,950
6	Newark City	Essex	43,881,800	20,006,456	23,875,344
7	Deptford Township	Gloucester	40,757,254	2,154,306	38,602,948
8	Toms River Township	Ocean	39,440,621	25,120,738	14,319,883
9	Totowa Borough	Passaic	38,829,780	188,487	38,641,293
10	Wall Township	Monmouth	35,981,676	19,445,210	16,536,466
11	Phillipsburg Town	Warren	34,486,301	533,400	33,952,901
12	Lawrence Township	Mercer	28,472,036	3,657,466	24,814,570
13	Middletown Township	Monmouth	28,400,026	26,368,074	2,031,952
14	Livingston Township	Essex	24,588,402	20,674,398	3,914,004
15	Monroe Township	Middlesex	24,118,054	18,011,846	6,106,208
16	Woodbridge Township	Middlesex	22,174,422	9,090,920	13,083,502
17	West Windsor Township	Mercer	21,800,945	3,015,659	18,785,286
18	Stafford Township	Ocean	21,644,860	14,120,020	7,524,840
19	Long Beach Township	Ocean	20,502,222	20,502,220	2
20	Trenton City	Mercer	20,066,721	19,770,538	296,183
Top municipalities			871,226,128	523,899,389	367,393,460
New Jersey			\$2,388,404,276	\$1,497,372,630	\$891,031,646
Top as a % of New Jersey			36.5%	35.0%	41.2%

Construction Indicators, New Jersey				
NJ Department of Community Affairs 5/10/2021				
	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
January - March 2021	\$4,703,902,464	9,181	1,035,079	255,656
January - March 2020	3,878,847,756	4,992	904,760	1,085,173
January - March 2019	3,350,174,335	5,276	1,414,343	148,230
January - March 2018	3,281,261,832	5,042	862,529	558,000
January - March 2017	3,829,842,898	4,039	1,908,319	825,080
January - March 2016	4,283,803,118	6,911	1,286,533	608,081
January - March 2015	2,581,154,385	3,483	623,298	488,368
January - March 2014	2,618,682,683	4,935	1,209,205	505,486
January - March 2013	2,884,918,255	4,268	1,310,528	362,068
January - March 2012	2,468,985,803	3,118	2,068,863	165,984
January - March 2011	2,518,045,519	2,830	1,696,006	416,908
January - March 2010	1,912,559,235	2,508	1,148,993	294,850
January - March 2009	2,166,226,441	2,810	843,600	515,819
January - March 2008	3,604,531,622	4,851	1,888,540	834,456
January - March 2008	3,245,111,665	5,210	2,069,894	888,396
<b>Difference</b>				
2020-21	\$825,054,708	4,189	130,319	-829,517
percent change	21.3%	83.9%	14.4%	-76.4%
2019-20	\$528,673,421	-284	-509,583	936,943
percent change	15.8%	-5.4%	-36.0%	632.1%
2018-19	\$68,912,503	234	551,814	-409,770
percent change	2.1%	4.6%	64.0%	-73.4%

(continued on next page)

(March 2021 Highlights of the New Jersey Construction Reporter)

**Year to Date**

- \$4.703 billion of construction was authorized between January and March 2021. This was \$825 million more than first quarter 2020, an increase of 21.3 percent.
- 9,181 new houses were authorized by building permits issued in the first three months of 2021. This was 4,189 houses more than first quarter 2020, an increase of 83.9 percent

Big permits, 2020								
Construction Reporter, 5/10/2021								
municipality	comu	county	permit no.	month	building use	permit type	dollar amt of construction	description
Bloomfield Township	0702	Essex	21-0415	03	R-2	NEW	50,065,000	Royal urban renewal; 616 Bloomfield Av; Bloomfield Twp. parking authority
Newark City	0714	Essex	21CP000006	01	R-2	NEW	45,811,000	24 McWhorter St, 406 apts
Atlantic City	0102	Atlantic	20210194	03	B	NEW	38,000,000	medical arts bldg; 7 S Ohio Av, CRDA
Montville Township	1421	Morris	21-0352	03	R-2	NEW	38,000,000	Modera Montville; 295 apt units; 340 Change Bridge Rd
Totowa Borough	1612	Passaic	20-00349+A	03	S-1	NEW	37,750,000	update; new data warehouse broke ground 10/2020; 701-03 Union Blvd
Phillipsburg Town	2119	Warren	21-0108	03	S-2	NEW	32,738,027	3000 Rand Blvd warehouse; spec warehouse
New Brunswick	1214	Middlesex	20-0263+B	01	I-2	ALT	27,400,000	RWJ University Hospital; 150 Somerset St
Jersey City	0906	Hudson	20211012	03	R-2	NEW	24,534,422	6 story, 99 unit apt bldg; 244 St Pauls Av
Raritan Borough	1816	Somerset	21-005	01	B	ALT	24,000,000	Johnson Dr & First Av; Laboratory Corp of America
Carneys Point Township	1713	Salem	000020210077	03	F-1	NEW	23,715,888	970 Harding Highway; Harding Hwy urban renewal LP
Franklin Township	1808	Somerset	20-01354+C	01	F-1	ALT	21,655,000	Legend Biotech USA Inc, 2101 Cottontail Ln
Keansburg Borough	1321	Monmouth	21-60003	01	E	ADD	20,453,704	SDA, Port Monmouth Rd school
Bogota Borough	0204	Bergen	21-042	04	R-2	NEW	18,691,560	RCB urban renewal; W Fort Lee Rd; 118 dwellings; one of four bldgs
Perth Amboy	1216	Middlesex	21-60005	02	E	NEW	18,585,000	SDA, Perth Amboy high school
Jersey City	0906	Hudson	20202825+A	03	R-2	NEW	18,461,500	St Peters University, Ignatius Hall, 762 Montgomery St, residence hall
Lawrence Township	1107	Mercer	00020201342U	04	E	NEW	18,008,000	Lawrenceville Prep
Deptford Township	0802	Gloucester	20210212	03	E	ADD	17,525,375	890 Bankbridge Rd, middle school addition
Bay Head Borough	1502	Ocean	21-90011	01	S-2	NEW	15,159,700	NJ Transit substation
Jersey City	0906	Hudson	20210371	01	R-2	NEW	14,558,000	132 Yale Av; 88 apts; Water St Devel LLC
Jersey City	0906	Hudson	20210180	01	R-2	NEW	14,400,350	39-47 High St; six-story apt bldg with 82 apts
Princeton	1114	Mercer	00020200464U	02	R-2	NEW	14,129,550	dormitory, Princeton University
Perth Amboy	1216	Middlesex	21-60002	01	E	NEW	13,382,000	SDA, Perth Amboy high school
Morristown	1424	Morris	20200636+A	04	B	NEW	12,179,149	M Station at Morristown, office development; 110 Morris St
New Brunswick	1214	Middlesex	20-0484+B	01	A-1	ALT	11,449,000	15 Livingston Av; State Theater NJ; Middlesex County
Jersey City	0906	Hudson	20194232+A	02	R-2	NEW	10,800,000	broke ground 10/2019, mixed-use bldg; 56 apt units; 132 Monitor St
Somerville Borough	1818	Somerset	20-90218+B	02	S-2	NEW	10,762,680	parking deck for transit station
Summit	2018	Union	202174250	02	B	ALT	10,500,000	Celgene Corp, 556 Morris Av
Harrison Town	0904	Hudson	000020210133	04	S-2	ALT	9,935,000	warehouse; Sprint Communications; Essex St
East Brunswick	1204	Middlesex	20CP001901	02	S-1	ALT	9,687,498	Pinnacle Materials Inc, 39 Edgeboro Rd
Princeton	1114	Mercer	00020200464U	02	R-2	NEW	9,277,350	dormitory, Princeton University
Newark	0714	Essex	21CP000184	02	B	ALT	9,163,500	One Gateway Center, 11-43 Raymond Plaza
Paulsboro	0814	Gloucester	020210001	02	F-2	NEW	9,000,000	wind mill mfg company
South Orange Village	0719	Essex	20210002	01	A-3	ADD	8,763,940	community center, South Orange Township, 5 Mead St
Franklin Lakes Borough	0220	Bergen	00020200406U	01	R-2	NEW	8,429,000	Franklin Manor Apts, 8 Tice Rd
Edison Township	1205	Middlesex	000020210597	02	S-1	ALT	8,428,118	Woodbridge Av
Morristown	1424	Morris	20200637+A	04	S-2	NEW	8,365,165	M Station urban renewal parking deck
Jersey City	0906	Hudson	20201360+A	01	R-2	NEW	8,354,300	Pine Plaza; 309 Pine St; broke ground 6/2020
East Orange	0705	Essex	20200880+A	01	R-2	NEW	8,305,000	East Orange Housing Authority; 160 Halsted St, 51 apt units
Florham Park	1411	Morris	20210137	03	B	ALT	8,265,000	office bldg; 6 Vreeland Rd
East Orange	0705	Essex	20201074	01	R-2	ALT	8,086,235	67 S Munn Av; housing rehab
Rahway	2013	Union	21/0013	01	B	ALT	8,000,000	Merk; E Scott Av
Lawrence Township	1107	Mercer	000020210284	03	B	ALT	7,787,403	10 Princess Rd
Englewood	0215	Bergen	B21-244	04	R-5	NEW	7,500,000	big house
Dunellen Borough	1203	Middlesex	21-032	02	R-2	NEW	7,375,000	Dunellen Station; 100 S Washington Av

**National Electrical Code Article 705.31: A Silly Millimeter Longer**

Yes, that title references an old advertising slogan, but one millimeter makes a difference throughout many Articles in the National Electrical Code (NEC). One of the sections where this is true is Article 705.31, which pertains to the actual conductor length, end to end. There has been confusion about how long the conductor can be, and the answer is simple: 10 feet. If the cable is 10 feet and one millimeter, you're now entering cable limiters or CTL circuit breaker territory, which becomes more costly.

So, when applying Article 705.31, keeping the cable at 10 feet keeps everyone happy. If you have any questions regarding this matter, please contact the Code Assistance Unit at (609) 984-7609.

Source: Neil Nagy  
Bureau of Construction Project Review

## Permit Extension Act 2020: Information

P.L. 2020, c. 53, signed into law by the Governor on July 1, 2020, amends the "Permit Extension Act of 2008," P.L. 2008, c.78, in response to the ongoing COVID-19 pandemic. Guidance regarding this Act was first provided on September 14, 2020 (attached).

The time for submission for extension to the Department of Environmental Protection (DEP) closed October 9, 2020. The list of all permits extended under this Act is available on DEP's website, specifically the "Other Agency Extended Permit List" link, <https://www.nj.gov/dep/covid19regulatorycompliance/>.

In short, for any projects included on the DEP list, the Act stops the clock on the running of approvals during the "extension period," which is defined as the period beginning March 9, 2020 and continuing for as long as a public health emergency, corresponding to the "Emergency Health Powers Act" (P.L. 2005, c.222 (C.26:13-1 et seq.)) is in effect. This means that any extended Uniform Construction Code (UCC) permit will remain valid through the duration of the public health emergency. Upon the formal end to the public health emergency, the permit will be valid for an additional six months.

- Per P.L. 2021, c. 104, the formal end to the public health emergency is July 4, 2021. UCC permits that expired during this time and extended per P.L. 2020, c. 53 will remain valid until January 4, 2022. If a project recommences on or before this date, the provisions at N.J.A.C. 5:23-2.16 shall apply.

During such extension, all terms and conditions of the original approval shall continue; that is the exclusions, limitations, and restrictions of the original permit continue to apply.

In addition, it's important to note that, before issuing a permit, it's necessary to check with any relevant agencies or officials to ensure that any required prior approvals still remain valid throughout the extension.

Please contact the Code Assistance Unit should you have any further questions.

### *September 14, 2020 Attachment*

#### Guidance for Local Enforcing Agencies

Permit Extension Act of 2020 – What to tell inquiring permit applicants

In accordance with the Permit Extension Act signed by Governor Murphy on July 1, the term of certain governmental permits, approvals and deadlines that were due to expire on March 9, 2020, or the specified period following it were extended. Any government approval, including permits granted pursuant to the Uniform Construction Code (UCC) Act, subject to the automatic suspension of the running period of such approval for the COVID-19 extension period must be registered with the Department of Environmental Protection (DEP)\* by October 8, 2020 by using the "request form" at <https://www.nj.gov/dep/pea2020/>.\*\* The running period of any approval not registered by October 8, 2020, shall not be suspended for the COVID-19 extension period. For additional information, please see the Department's notice of this action at 52 N.J.R. 1682(a), which can be found at <https://www.nj.gov/dca/divisions/codes/alerts/covid19.html>.

\* As noted at 52 N.J.R. 1683(a), P.L. 2020, c.53 has charged the DEP as the agency responsible for maintaining the list of ALL permits and approvals.

\*\* When using DEP's request form, select "Other" under "Permitting Issuing Agency" and specify "NJDCA, UCC" under "Permit Type."

If you require further information, please contact Code Assistance Unit.

Source: Code Assistance Unit  
(609) 984-7609



# Governor Philip D. Murphy Proclaims May as Building Safety Month



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 economic value of the homes, buildings and infrastructure that serve our citizens, both in everyday life and in times of disaster; and

Whereas, our confidence in the resilience of these buildings that make up our community 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 and federal officials that 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, our nation benefits economically and technologically from using the International Codes that are developed by a national, voluntary consensus codes and standards developing organization, our government is able to avoid the high cost and complexity of developing and maintaining these codes, which are the most widely adopted building safety and fire prevention codes in the world; 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, energy efficient and livable buildings that are essential to America's prosperity; and

Whereas, "Prevent, Prepare, Protect. Building Codes Save," the theme for Building Safety Month 2021, encourages all Americans to raise awareness about the importance of safe and resilient construction; fire prevention; disaster mitigation, energy conservation; water safety; training the next generation; and new technologies in the construction industry; and

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 2021  
AS  
BUILDING SAFETY MONTH**

in New Jersey.



GIVEN, under my hand and the Great Seal of the State of New Jersey, this twenty-sixth day of April in the year two thousand twenty-one, the two hundred forty-fifth year of the Independence of the United States.

*Richard J. DeLeon*  
L. GOVERNOR

*Philip D. Murphy*  
GOVERNOR

## Exterior Decks, Section R507/IRC

The application of Section R507, Exterior Decks, of the International Residential Code/2018 (IRC/2018) is straightforward when it comes to building an exterior wooden deck on a residential home. Some ambiguities arise, however, when one considers if section R507 is applicable to multi-level decks (i.e., a first-floor deck supporting a second-story deck) or if it provides for the construction of a wooden roof structure over a wooden deck.

A recent ICC-issued opinion confirmed that Section R507 of the IRC/2018 is limited to “single-level” exterior wood decks and is not intended for use with multi-level stacked decks unless designed. As section R507.1 states, for decks using materials and conditions not prescribed in this section, refer to section R301, Design Criteria. This is further addressed at Section R507.4 providing for prescriptive sizing of wood posts and connections and Section R507.5 for beam sizing. Lastly, the minimum sizing of concrete footing from Table R507.3.1 is based on a tributary area of a single level deck.

Likewise, solid roofs above a “R507 deck” must be designed based on Section R301. Additionally, open lattice roofs (e.g. pergolas) are not directly addressed in the IRC/2018 or International Building Code/2018 (IBC/2018) and would require similar design based on Section R301.

Section R301.1.1, Alternate provisions, states that the standards listed therein, when utilized by a design professional (or the single-family homeowner exception at N.J.A.C. 5:23-2.15(f)1ix(1)), will result in a design that complies with the IBC/2018.

Therefore, for those that would like to design something other than a prescriptive single-level deck from R507, design would be required following the standards noted above to ensure that, for example, a multi-level deck or roofed deck is structurally sound and code compliant.

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

## HVACR Contractors and Electrical Work: What are the Rules?

As summer begins, I have been receiving many questions about where the HVACR contractor’s exemption ends, as it relates to electrical work. It is a simple answer: it’s in writing – but where can one find it? N.J.A.C. 13:32A, State Board of Examiners of Heating, Ventilating, Air Conditioning, and Refrigeration (HVACR) Contractors Rules, contains the specific information, which is summarized below:

“10. In replacement cases only, the connection of the wiring from an equipment service disconnect box of adequate size to accommodate pneumatic and/or direct digital controls and control piping of automatic oil, gas, coal burning, or any other product of combustion equipment, mechanical refrigeration equipment, gasoline, or diesel oil dispensing equipment previously dedicated to that equipment, as long as:

- i. The heating or cooling capacity of each piece of equipment is 25 tons or less;
- ii. The voltage of the system is 240 volts or less; and
- iii. The connection of the wiring is performed according to all relevant provisions in the Uniform Construction Code.”

To see the full requirements of N.J.A.C. 13:32A, please visit the “laws and regulations” section of the State Board of HVACR Contractors website, <https://www.njconsumeraffairs.gov/hvacr/Pages/regulations.aspx>.

Any other work must be performed by a licensed electrical contractor or his or her direct employee. For example, replacement of disconnects, new/different fusing or circuit breakers, changes to a HVACR rated circuit breaker, or change of conductors, would all require a licensed electrical contractor.

Hopefully, this article has been helpful in clearing up some of the confusion surrounding this topic. For other licensure exemptions, please see “License Check” on page 6 within the Spring 2019 CCC, <https://www.nj.gov/dca/divisions/codes/resources/ccc.html>. Should you have any questions, please do not hesitate to contact the Code Assistance Unit at (609) 984-7609.

Source: Neil Nagy  
Bureau of Construction Project Review

## When Are Emergency Responder Radio Coverage Systems Required?

(updated from the Spring 2015 edition)

[https://www.nj.gov/dca/divisions/codes/publications/pdf\\_ccc/ccc\\_2015\\_spring.pdf](https://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/ccc_2015_spring.pdf)

Since this article was originally published, the emergency responder coverage from the 2009 International Building Code (IBC), via the International Fire Code (IFC) have changed from just three short subsections to six lengthy subsections within the 2018 code. In other words, much has changed in installation methods but the end result, per Section 918 of the 2018 IBC, an emergency responder radio coverage system is required for all new buildings and are to be installed per Section 510 of the 2018 IFC.

So, what did the 2009 IFC have back then when compared to the 2018 IFC? In short, a general section that provided two exceptions, a radio signal strength section (max into and out of the building), and an existing building coverage section. Now that the Uniform Construction Code (UCC) references the 2018 I-codes (Sept 03, 2019), this section of the IFC has been expanded as noted above. The general section remains (still Section 510.1), now with a third exception, as does the existing building coverage section (Section 510.2). What this means is, the 2018 IFC more or less swelled in relation to the radio signal strength section for design and performance.

History and timeline to today...

These 2009 IFC requirements were very basic and simply required what is noted above. For the 2012 edition, which NJ did not adopt, the technical requirements of Appendix J of the 2009 IFC were relocated into Section 510 and Chapter 11, "Construction Requirements for Existing Buildings," was established. The requirements for in-building emergency radio communication enhancement systems in existing buildings were added to this Chapter in Section 1103.2, clarifying the intent that this was to be mandated, retroactive requirements unless the fire official waived the requirement based on a determination that the enhanced communication system was not needed.

Moving to today, further modifications to 2015 IFC and now 2018 IFC address technical issues that arose as more systems were being installed in both new and existing buildings. Other changes were made to embrace new technology and better clarify the intent and understanding of the code for the design, installation and testing. Additionally, the inspection and maintenance requirements necessary to ensure system reliability were incorporated, requirements covering in-building emergency radio communication enhancement systems were added and a cross reference for these systems to be designed and installed in accordance with NFPA 1221.

The technical requirements for design, installation, commissioning, inspection, testing, and maintenance of in-building emergency radio communication enhancement systems included in the 2018 IFC and NFPA 1221 are summarized as follows:

- Typical system operation is continuous or automatic.
- Requires specified signal strength into and out of the building with a Delivered Audio Quality (DAQ) of 3.0 in 95 percent in all areas. Note: DAQ is simply a qualitative measurement of voice intelligibility or clarity.
- Equipment must be approved and the system design/operation must be specifically designated for use as an in-building emergency radio communication enhancement system by the manufacturer.
- The system must meet specific survivability requirements to ensure it will continue to operate during a fire. Examples: single boosters and emergency batteries in NEMA rated cabinets; Bi-Directional Amplifiers (BDAs) used are to have oscillation prevention circuitry; isolation maintained between the donor antenna and all inside antennas.
- The system must have redundant primary power sources and stand-by or backup power to operate at 100% capacity for at least 12 hours.
- The system must be monitored through the building's fire alarm system for loss of power; failure of the battery charger; low-battery capacity indication when 70% of the 12-hour operating capacity has been depleted; malfunction of the donor antenna and active RF-emitting device(s); and failure of any critical system components and provide either an audible warning or "trouble" signal.

The above is mostly from Section 510.4 of the 2018 IFC but it is recommended you review all the requirements at <https://codes.iccsafe.org/content/IFC2018P5> (select Chapter 5).

Source: Code Assistance  
(609) 984-7609



## Conflicting Requirements

(reprint from Spring 2015 edition)

Occasionally, there are conflicts between requirements contained in different documents. There is a relatively simple hierarchy for deciding which provision would govern. By operation of law, the provisions of a statute (the Uniform Construction Code Act) trump the provisions of an administrative rule (the Uniform Construction Code itself.) In theory, there should never be a conflict between a rule and the enabling statute, but were this to happen, the statute would govern. To continue down the hierarchy, the provisions of the rules, the Uniform Construction Code, trump the provisions of a model code adopted by reference in those rules. The provisions of a model code trump the provisions of a referenced standard. (For example, the provisions of the International Building Code would trump the provisions of a referenced NFPA standard.) And the provisions of a referenced standard trump the provisions of manufacturer's instructions.

When a conflict arises between two adopted model codes, the provisions of the model code that is the primary subcode for the subject in question would govern. For example, in a conflict between the building subcode and the electrical subcode, it is necessary to decide first whether this is primarily a building issue or primarily an electrical issue. The conflict would be resolved in favor of the provisions of the primary subcode.

Source: Code Assistance Unit  
(609) 984-7609

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## Approvals for Generator Installations

Over the past few weeks, I have been witness to some confusion regarding how to obtain a Certificate of Approval for new generators. I have discussed this issue with many callers, and also brought the issue to the attention of the Electrical Subcode Committee of the Uniform Construction Code Advisory Board, and this article seeks to provide some guidance in applying the electrical subcode to these projects:

Contrary to some urban legends, Article 702.12 of the 2017 National Electrical Code (NEC) is adopted pursuant to the electrical subcode of the UCC, N.J.A.C. 5:23-3.16. In particular, Article 702.12(A) has always been enforceable.

Optional standby systems over 15 KW are required to have a disconnecting means in accordance with Article 445.18 of the NEC. Some generators are manufactured in such a way that they are already compliant with this Section. However, for those that are not, it is the contractor's responsibility to provide the disconnecting means.

Cut-in-cards are required for all generator installations, and whenever the meter seal is cut.

Of course, the generators themselves are subject to compliance with Nationally Recognized Testing Laboratories' requirements. Because of this, should you have specific questions about an installation, please do not hesitate to contact the Code Assistance Unit at (609) 984-7609.

Source: Neil Nagy  
Bureau of Construction Project Review



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